Zoological Catalogue of Australia

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A. Wells
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Vol. 19.3A

CRUSTACEA: MALACOSTRACA
PHYLLOCARIDA, HOPLOCARIDA, EUCARIDA (PART 1)

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Australian Biological Resources Study

ZOOLOGICAL CATALOGUE OF AUSTRALIA

19.3A

CRUSTACEA: MALACOSTRACA

PHYLLOCARIDA, HOPLOCARIDA, EUCARIDA (PART 1)

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Department of the Environment and Heritage

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The malacostracan Crustacea are divided between volumes of the *Zoological Catalogue of Australia* as listed here, with names of the principal authors.

VOLUMES 19.2A and 19.2B **Authors** G. Poore and J. Lowry

SUBCLASS: Eumalacostraca:
SUPERORDER: Peracarida
Syncarida

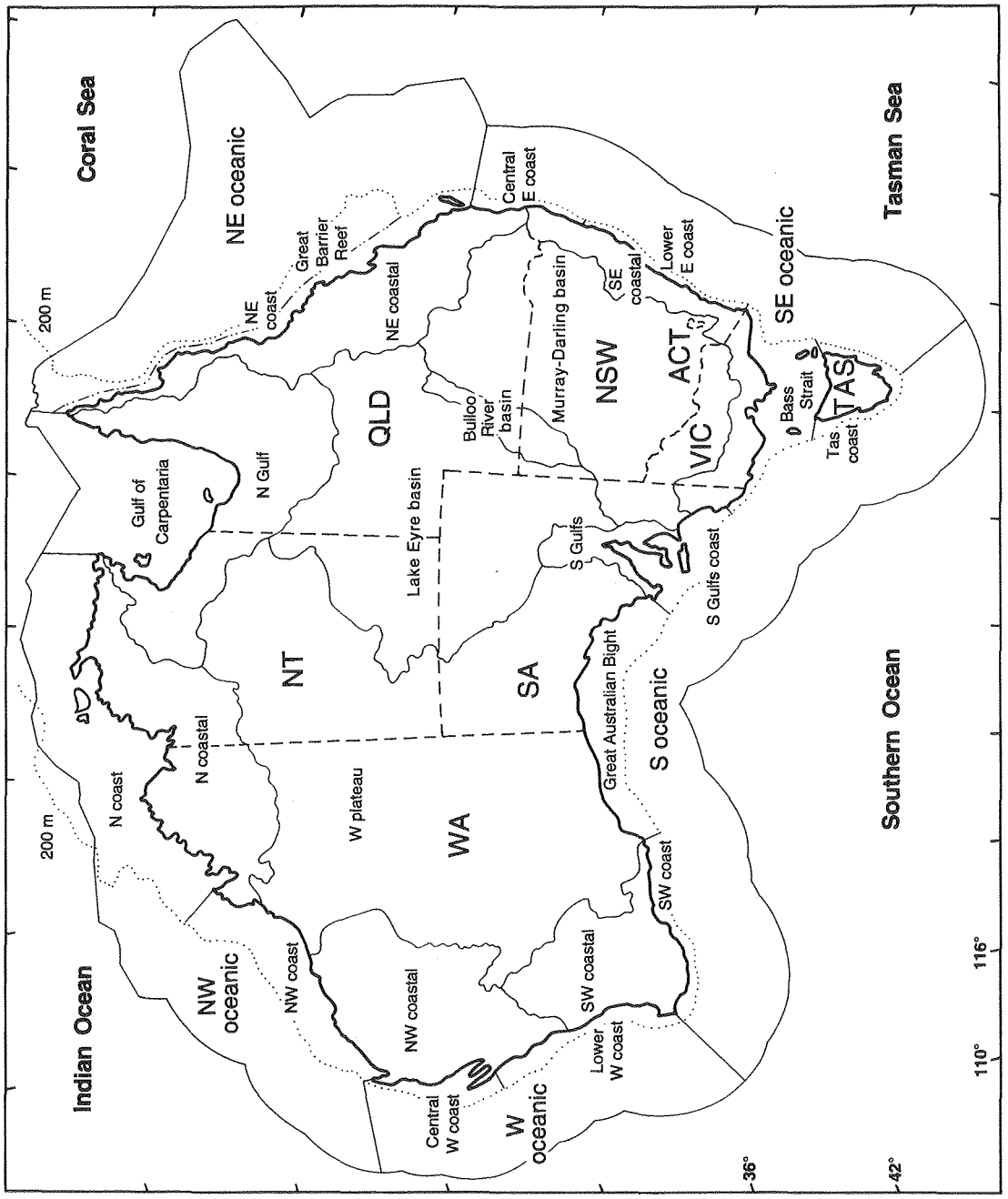
VOLUME 19.3A **Author** P. Davie

SUBCLASS: Phyllocarida
Hoplocarida*
Eumalacostraca:
SUPERORDER: Eucarida:
ORDER: Euphausiacea
Amphionidacea
Decapoda:
SUBORDER: Dendrobranchiata
Pleocyemata:
INFRAORDER: Stenopodidea
Caridea
Astacidea
Palinura
Thalassinidea

VOLUME 19.3B **Author** P. Davie

SUBCLASS: Eumalacostraca:
SUPERORDER: Eucarida:
ORDER: Decapoda:
SUBORDER: Pleocyemata:
INFRAORDER: Anomura
Brachyura

*Joint authors P. Davie & S. Ahyong



Map 1. States, standard drainage basins, coastal zones within the 200 m bathymetric contour, and the 200 nautical mile Australian fishing zones. Simple conic projection with two standard parallels (18°S and 36°S).

EDITORIAL PREFACE

INTRODUCTION

An objective of the Australian Biological Resources Study is to stimulate research and disseminate knowledge on the taxonomy and distribution of the Australian fauna and flora. Consistent with this aim, the *Zoological Catalogue of Australia* was conceived as a concise, computer database of current taxonomic and biological knowledge of the Australian fauna, accessible to all interested in such information. The database is a substantial assessment of current knowledge, and electronic and hard copy publications derived from it should stimulate interest and provide a foundation for future investigations. The *Catalogue* is designed to serve as a bibliographic directory to the most comprehensive and recent information available on each species.

The published volumes of the *Catalogue*, treating specific taxa, cite by name and original reference species known to occur in Australia. Australia is defined as including Lord Howe Is., Norfolk Is., Cocos (Keeling) Ils, Christmas Is., Ashmore and Cartier Ils, Macquarie Is., Australian Antarctic Territory, Heard and McDonald Ils, and the waters associated with these land areas of Australian political responsibility. This volume is one of four dealing with the malacostracan Crustacea. The higher level taxa included in each of the four volumes are outlined briefly in the table on p. vii.

Compilation of this volume was commenced using the old *Catalogue* compilation system of a six file structure. The data were subsequently transferred to and compilation completed on *Platypus*, a software program developed by the Australian Biological Resources Study for taxonomic work. *Platypus* is a comprehensive, relational database package for taxon-based, faunal work. The built-in logic and comprehensive data validation that follow the rules and recommendations set out in the *International Code of Zoological Nomenclature* greatly assist the accurate documentation of a wide range of taxonomic, biological and bibliographic information. *Platypus* is also used to generate the Internet files.

The *Platypus* catalogue style report, automatically typeset and indexed, is exported to a desktop publishing package for final layout. This method, although resulting in repetitive text, yields a standard and comprehensive format and aims to provide consistency in the presentation of the data throughout the volume. The format of this volume differs slightly from most previous volumes; this will also allow data derived from the *Catalogue* database to be loaded and searched on the Internet. The format and style of presentation are, therefore, the responsibility of the Australian Biological Resources Study. The authors are responsible only for the information content. Further modifications to the *Catalogue* database format to accommodate electronic access, and upgrades to *Platypus* are in progress. The publication of *Catalogue* volumes as hard-copy will cease shortly. Sections of the *Catalogue* database are available on the Internet in the Australian Biological Information Facility (ABIF). Others will be added as they become available.

TAXONOMIC INFORMATION

Nomenclature in the *Catalogue* adheres to the provisions established in the *International Code of Zoological Nomenclature,* 3rd edn (1985), and recently revised in the *International Code of Zoological Nomenclature,* 4th edn (1999). The author and date of all names appearing in the *Catalogue* are presented so that the user may understand the nature and relationships of the names. The valid genus and species group names and their allocation to families are determined by the contributors. No new taxa are described in the *Catalogue* although new combinations, new replacement names, *stat. rev., stat. nov.,* synonymy and lectotype designations may be proposed. New distributional and other biological information may be included. Synonymies do not include combinational changes.

A useful overview of nomenclature, for both the specialist and the non-specialist, may be found in Cogger, H.G. (1987). Classification and Nomenclature. pp. 266–286 *in* Dyne, G.R. & Walton, D.W. (eds) *Fauna of Australia.* General Articles. Canberra : Australian Government Publishing Service Vol. 1A.

FORMAT OF THE CATALOGUE

An example of the basic format used in the *Catalogue*, based on data from Vol. 4 Coleoptera, is given below. The numbers in the left margin refer to brief explanatory notes which follow the example.

1. ***Hypharpax*** W.S. Macleay, 1825

2. ***Hypharpax*** Macleay, W.S. (1825). *Annulosa Javanica,* or an attempt to illustrate the natural affinities and analogies of the insects. London : Kingsbury, Parbury & Allen 52 pp. [22]
3. [proposed with subgeneric rank in *Harpalus* Latreille, 1802].
4. Type species: *Harpalus (Hypharpax) lateralis* Macleay, 1825 by monotypy.

2. ***Sagraemerus*** Redtenbacher, L. (1867). Coleopteren. *In, Reise der österreichischen Frigatte* Novara *um die Erde in den Jahren 1857, 1858, 1859*, unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zoologischer Theil. Wien : Karl Gerold's Sohn Vol. 2 249 pp. 5 pls [13].
4. Type species: *Sagraemerus javanus* Redtenbacher, 1867 (= *Hypharpax dentipes* Wiedemann, 1823) by monotypy.

5. Taxonomic decision for synonymy: Andrewes, H.E. (1924). On the Oriental Carabidae of the "Reise Novara". *Trans. Entomol. Soc. Lond.* **1923**: 459–468 [467] [15 April 1924].

6. Extralimital distribution: New Guinea, Sulawesi, Java, Sumatra and New Zealand, see Noonan, G.R. (1976). Synopsis of the supra-specific taxa of the tribe Harpalini (Coleoptera: Carabidae). *Quaest. Entomol.* **13**: 3–87 [9].

7. ***Hypharpax aereus*** (Dejean, 1829)

8. ***Harpalus aereus*** Dejean, P.F.M.A. (1829). *Species général des Coléoptères, de la Collection de M. le Comte Dejean.* Paris : Méquignon-Marvis Vol. IV vii 520 pp. [384].
9. Type data: holotype MNHP ♂.
10. Type locality: Australia (as Nouvelle Hollande).

8. ***Harpalus boisduvalii*** Castelnau, F.L. Laporte de (1867). *Notes on Australian Coleoptera.* Melbourne : R. Soc. Vict. 139 pp. [110]
3. [separates available prior to publication in *Trans. R. Soc. Vict.* **8:** 30–38 (1867), 95–225 (1868)].
9. Type data: syntypes MCG*.
10. Type locality: Swan River, WA.

5. Taxonomic decision for synonymy: Chaudoir, M. de (1878). Les Harpaliens d'Australia d'après la collection de M. le Compte de Castelnau et la mienne. *Ann. Mus. Civ. Stor. Nat. Genova* **12**: 475–517 [487].

11. Distribution: WA (NW coastal, SW coastal), SA (S Gulfs), NSW (Murray-Darling basin).
    Ecology: terrestrial, volant, granivore*, omnivore.
12. Reference: Blackburn, T. (1888). Further notes on Australian Coleoptera, with descriptions of new species. *Trans. R. Soc. S. Aust.* **10**: 177–287 [183].

Explanatory Notes

1. Genus Valid Name, Author and year of publication. Genus and subgenus names are given in full, with subgenus names in parentheses. Author's initials are used only where there may be ambiguity. Where there are subgenera, those that occur in Australia are given in alphabetical order.

2. Genus Available Name, Author, year of publication, and work and page where the name was first made available. Genus Available Names, in synonymy, are listed in chronological order. Each name is given in its legitimate form, without diacritic marks or hyphenation. Published names judged to be not available may be included in the synonymies where clarification is needed to preclude future confusion on the status of these names.

3. Qualifications, if any, concerning the name are given in brackets after the bibliographic citation.

4. Type species of the genus available name, given in its original combination, followed if necessary by the form used by the nominator, and followed by the method of designation. If no type species was designated or indicated, the names of all originally included species are listed in chronological order.

5. Bibliographic Reference to the Synonymy adopted by the author(s) of the volume or an appropriate statement if the synonymy is new and by the author(s).

6. Extralimital distribution. If a species contained in the genus occurs outside Australia, a brief descriptive phrase of its distribution is given together with a bibliographic reference to a work which leads the reader to literature defining that distribution.

7. Species Valid Name, Author and year of publication. A subgeneric name, if present, is given in parentheses. If the valid name of the species is a changed combination, the author and year of publication of the species are in parentheses. Where there are subspecies, those that occur in Australia are given in alphabetical order.

8. Species Available Name, Author, year of publication, and work and page where the name was first made available. Species available names, in synonymy, are listed in chronological order. Each name is given in its legitimate form, without diacritic marks, capitalisation or hyphenation except as regulated by the *Code*. Published names judged to be not available may be included in the synonymies where clarification is needed to preclude future confusion on the status of these names.

9. Type data includes nature of type specimen(s) and institution(s) in which the type(s) is held. An asterisk indicates that the type(s) has not been examined and its identity established personally by the author. The museum acronyms, and the institutions to which they refer, are listed in Appendix II. If the primary type is a lectotype or neotype, a reference to the subsequent designation follows.

10. Type locality is the place(s) where the primary type(s) (includes lectotype and neotype) was collected. Geographical place names are given in their modern form wherever possible, followed by the original name if different.

11. Distribution and Ecology. The known distribution and ecology of each species are summarised according to approved lists of descriptors established by the Australian Biological Resources Study. The descriptors also serve as computer search terms for the Internet-based ABIF: *Australian Faunal Directory* (which incorporates the *Zoological Catalogue of Australia* database). An asterisk implies that the information is unconfirmed but, in the opinion of the author(s), likely to be correct. If the author qualifies the distribution or ecological data, that additional information is separated from the keywords by a semicolon.

The political and geographic region descriptors are given in the map on p. viii (Map. 1). Political areas include the adjacent waters. Terrestrial geographical terms are based on the drainage systems of continental Australia, while marine terms are self-explanatory except as follows:

the boundary between the coastal and oceanic zones is the 200 m contour; the Arafura Sea extends from Cape York to 124°E; and the boundary between the Tasman and Coral Seas is considered to be the latitude of Fraser Island, also regarded as the southern terminus of the Great Barrier Reef.

Ecological Descriptors selected by the author to define ecological traits characteristic of a group are listed in the General Introduction. Generally, terms for terrestrial habitat or vegetation type follow Specht, R.L. (1970). Vegetation. pp. 44–67 *in* Leeper, G.W. (ed.) *The Australian Environment.* 4th edn Melbourne : CSIRO-Melbourne Univ. Press.

12. References, where entered, are selected to provide a useful lead into the literature on the species. Each reference may be followed with a word or words in parentheses indicating the nature of the content, if this is not obvious from the title.

13. Miscellaneous Items. Families may be placed in alphabetical or phylogenetic order. Genera and species are in alphabetical order within family, subfamily or tribe. Information for each species includes synonymy, literature citation, location and status of the type material and type locality for each available name, a brief summary of geographical distribution and ecological attributes, and important references on various aspects, especially biology.

Common abbreviations, contractions and symbols are listed in Appendix I. Taxonomic decisions made in this volume, such as new combinations, are indicated by the term 'this work' and are listed also in Appendix III.

Literature citations throughout the *Catalogue* are given in full. Older works with extended subtitles may have been shortened, but only if their identity is preserved. Serial titles are abbreviated in a manner designed to facilitate library research. References or titles originally issued in script other than Roman and lacking a Romanised translation are transliterated with the original language shown in brackets.

If an author has not confirmed the information by examination of the original publications listed, the secondary source(s), *e.g.* bibliographical reference(s) or pers. comm., from which the data were derived, is given.

14. Index. All valid and available names are indexed and in each appropriate combination, even though they may appear in the text in only one combination. Thus a trinomen used once will be indexed three times. Taxa of all names above the genus level are indexed also and are given in bold type; families with Australian taxa in the volume are given in upper case, other taxa in lower case.

ACKNOWLEDGEMENTS

The editors wish to thank staff of the Australian Biological Resources Study for assistance with the preparation of this volume. For assistance with bibliographic references we thank staff of the Australian National Botanic Gardens Library and CSIRO Black Mountain Library.

Alice Wells & Keith Houston

CRUSTACEA: MALACOSTRACA: PHYLLOCARIDA, HOPLOCARIDA, EUCARIDA (PART 1)

P.J.F. Davie

INTRODUCTION

The Malacostraca is the largest class of the phylum Crustacea, comprising more than 21,000 species worldwide, over 4,600 of which are recorded for Australia and its external territories. This volume of the *Zoological Catalogue* includes all Australian malacostracans other than members of the superorders Peracarida and Syncarida and the decapod infraorders Anomura and Brachyura. These groups are the subject of separate volumes in this series.

The great majority of malacostracan Crustacea are marine, but most other environments have been invaded, such as inland freshwaters, estuaries, intertidal mangrove swamps and sandy beaches. In marine waters they are found in both pelagic and benthic environments from shallow coastal waters to hadal depths. The majority of species in Australian seas are tropical, their closest affinities being with the fauna of the Indo-Malaysian Archipelago directly to the north, and then more broadly with faunas of the rest of the Indo-west Pacific region. There is, however, a marked overlap zone on both the eastern and western coasts marking the transition to a relatively strongly indigenous temperate fauna, including a significant proportion of endemic genera. Perhaps not surprisingly, the freshwater decapod fauna is also largely indigenous, with parastacid crayfish having undergone a particularly extensive radiation.

In the only previous 'Catalogue of Australian Crustacea', published in 1882, William Haswell recorded 390 species of non-Peracarida or Syncarida Malacostraca. In the subsequent 120 years this number has grown to 2,445 species, more than a six-fold increase. In 1968, Des Griffin and John Yaldwyn prepared an unpublished 'Checklist of Australian Decapoda'. From this they developed a review paper on the 'constitution, distribution and relationships of the Australian decapod Crustacea' for the 1967 Australia/New Zealand Meeting on Decapod Crustacea, in Sydney (Griffin & Yaldwyn 1968). In this paper they estimated a fauna of approximately 1,200 decapods in Australian waters, representing 361 genera and 57 families. At the present count, in 2001, some 2,228 decapod species in 695 genera and 105 families are recorded, approaching double the estimates of 1968. While the Decapoda are often dismissed as being 'well known', even this figure significantly underestimates the true number of species present in Australian waters. At current rate of discovery, a total approaching some 3,000 species within the next 20–30 years seems quite realistic. As an indication of the relative diversity of decapods in Australian seas, it is calculated that of around 6,500 valid crab species known worldwide, over 950, or around 15% are recorded officially for Australia.

The golden age of decapod taxonomy started in the 1830s, but, as apparent from the figures below, there have been two periods of particularly strong taxonomic effort during which the number of new species described consistently exceeded 100 species a year (of those now found in Australia). The first was the 50 year period from 1870 to 1920, and the second, the period 1960s to the present.

1750–1830	158 species
1830–1870	467 species
1870–1920	588 species
1920–1960	276 species
1960–2000	670 species

While the Australian fauna has a comparatively large endemic component, it is dominated by widespread Indo-west Pacific forms, and therefore the yearly statistics for when Australian species were described, are probably a reasonable surrogate for the greater Indo-west Pacific taxonomic effort.

Historical Overview

The following account, by no means exhaustive, highlights many of the most important contributions made by a large group of carcinologists over the last 200 years.

Despite the English conquest and occupancy of Australia, the French undertook the most important and significant scientific expedition of the early years of the new colony. *Le Géographe* and *Le Naturaliste* under the command of Nicolas Baudin spent three years in Australian waters from 1801–1804, returning to the Paris Museum with an astonishing 100,000 specimens of 2,500 species. The vessels arrived at Cape Leeuwin, in May 1801, thence sailing northwards along the Western Australian coast to Timor, across northern Australia to the north-eastern tip of Arnhem Land, and returning via the westerly route across southern Australia to Sydney Harbour where they spent several months, before slowly returning to France. Amongst the scientific complement of *Le Géographe* was the naturalist **François Péron**, and at his service, the painter **Charles Alexandre Lesueur**. Between them, Péron and Lesueur amassed and illustrated the first significant collection of Australian Crustacea. Many of the decapod species they found were later documented and described by the great French carcinologist **Henri Milne Edwards**. An account of this great expedition of discovery was published in the *Voyage de découvertes aux Terres Australes 1800–4*, which included an Atlas with Lesueur's beautiful paintings of the Australian fauna. Many of Lesueur's drawings and sketches were never published, and these were catalogued and reproduced recently by Bonnemains & Jones (1990). Two other French expeditions also returned smaller but equally valuable collections to Paris. The corvettes *L'Uranie* and *La Physicienne* under the command of Louis de Freycinet spent time in Shark Bay, WA, and in New South Wales during 1818 and 1819. The surgeon naturalists **Jean René Quoy** and **Joseph Gaimard** made good collections and described the new species of ghost crab, *Ocypode convexa*, from Shark Bay. Finally, *L'Astrolabe* (1826–1829), Dumont d'Urville commanding, also returned collections of Australian Crustacea to Paris (see Clark & Crosnier (2000) for a history of publication).

Henri Milne Edwards (1800–1885) was a professor of Entomology and later Mammalogy at the Paris Museum. He was the pre-eminent French carcinologist of the nineteenth century, only approached in the second half of that century by his son Alphonse. His *Histoire naturelle des Crustacés* published from 1834 to 1840 is one of the classic works of carcinological literature, and still deserves attention. H. Milne Edwards was responsible for describing many forms from the early French Expeditions to the Australian and Indo-west Pacific regions. **Alphonse Milne Edwards** (1835–1900) also had a distinguished career in the scientific life of France, and became the Director of the Paris Museum in 1891. Amongst his prodigious output, his 1873 paper on New Caledonia described many species later found to be in common with tropical northern Australia. For short biographical notes on these two scientists see Fransen *et al.* (1997: 262–263). Note that Forest (1996) pointed out that, to be strictly correct, the name A. Milne-Edwards should be hyphenated, as it was habitually spelt this way by the scientist himself; the name of his father, Henri, however, should be unhyphenated. Nevertheless, in the present work, for simplicity, I have chosen to standardise both mens' names without the hyphen.

As in Europe, the United States was also showing an increasing enthusiasm and thirst for scientific knowledge, and in November 1839 the United States Exploring Expedition under Lieutenant Charles Wilkes reached Sydney. Aboard ship was a mineralogist-geologist, **James Dwight Dana**, who was to become a professor of natural history at Yale College, and a major figure of American science. His 1852 account of the Crustacea of the U.S. Exploring Expedition would cement his place as one of his countries most famous and important

carcinologists. The several months that he stayed in New South Wales were mainly occupied with geological pursuits, but there is little doubt that he would have collected a variety of crustaceans. Unfortunately, the greater part of his collections were tragically destroyed during the 1871 great fire of Chicago, while on loan to an equally important American carcinologist, **William Stimpson** (1832–1872) (see Evans (1967) for biographical sketch). Stimpson also had, on loan from the Smithsonian Institution, the large collections of Crustacea made during the North Pacific Exploring Expedition (1853–1856). His manuscript on the Anomura and Brachyura of this expedition was published many years after his death (Stimpson 1907). In this paper, he described a number of species, and many that were later to be recorded in Australia. The loss of both Dana's and Stimpson's type material has greatly complicated Indo-west Pacific crustacean taxonomy. A small amount of material was exchanged with European Museums and still survives (see Evans 1967; Diess & Manning 1981).

The Australian connections of one eminent British scientist and carcinologist, **William Sharp Macleay** (1792–1864), are perhaps not well known. Macleay's father Alexander, also an eminent scientist, was offered the position of Colonial Secretary in New South Wales, and was later joined by his son William. Both men were influential in the scientific life of Sydney, with Alexander helping to instigate the building of the Australian Museum; both men gave long and valuable service as Trustees, with periods as the Chairman. W.S. Macleay was instrumental in preparing the Museum Act of 1853. William Macleay spent some of his formative scientific years in Paris and was greatly influenced by some of the leading French scientists of the time including Latreille and Cuvier. Macleay did not publish on Crustacea after moving to Sydney, but his classic work of 1838, *Illustrations of the Annulosa of South Africa*, was an insightful attempt to establish a natural classification system for the Brachyura based on an analytical study of 'affinities and analogies', and indeed we owe a huge number of family and subfamily names to this crucial work. In 1888 the Macleay Museum was opened at the Sydney University and this became the home of the large personal collections of both Alexander and William Macleay (see Griffin & Stanbury (1970) for a list of decapod type specimens held in this collection). Only very recently were the Crustacea from this collection transferred to the Australian Museum. A biography of the Macleays was published by Stanbury & Holland (1988).

Wilhelm Hess of the Museum Göttingen published an important paper in 1865 on the decapods of eastern Australia, describing many new species and providing a list of 98 species known from Australia. Some syntypes from Hess's collection were exchanged with de Man in Leiden around 1880, and what was left of the remaining collection was transferred to the Senckenberg Museum in Frankfurt, in 1985. Many of the specimens sent to Hess were recorded as coming from 'Sydney', but it is now evident that a number of species either came from other Australian localities, or were collected from elsewhere in parts of the south-west Pacific that were visited by trading ships of the time.

William Aitcheson Haswell (1854–1925) holds a special place in the history of science in Australia. Haswell had impeccable credentials, having studied at the University of Edinburgh under, among others, Thomas Henry Huxley and Charles Wyville Thomson. Upon arrival in Sydney in 1878, Haswell was immediately welcomed and fostered by William Macleay, and he responded by throwing himself into research. In December 1879 he was appointed a curator in the Queensland Museum, in Brisbane, but this lasted only until November of 1880, when he returned to Sydney. In 1881, Haswell joined the cruise of *H.M.S. Alert* on a survey to the Great Barrier Reef. In 1882, he joined the staff of the University of Sydney rising quickly to become, in 1889, the first Challis Professor of Biology. Haswell always maintained a close relationship with the Australian Museum, where he was employed as a curator for a short time from March 1883 to February 1884; he served for many years as a member of the Board of Trustees until his resignation two years before his death in 1923. Between 1879 and 1882 Haswell published eight papers on decapod crustaceans, culminating in 1882 in his *Catalogue of the Australian Stalk- and Sessile-eyed Crustacea*. Apart from his crustacean and other research work,

Haswell will long be remembered by several generations of zoologists throughout the English-speaking world for his collaboration with Professor T. Jeffrey Parker in writing the monumental *Text book of Zoology* in 1899. This was revised and reprinted many times and was a standard university text for at least 70 years. Carter (1928) wrote an interesting biography of Haswell, complete with a bibliography.

Most of the decapods from the cruise of *H.M.S. Alert* were returned to the British Museum of Natural History in London, and formed the basis of the important 1884 report on the expedition by the great taxonomist **Edward J. Miers** (Miers 1884). Two years later Miers (1886) produced a large paper on the Brachyura collected by the 1873–76 *Challenger* Expedition. These two works greatly added to Haswell's 1882 list of Australian decapods. Edward Miers (1851–1930) was a Curator at the Natural History Museum, London, between 1872 and 1885 and published extensively on Crustacea (for biographical details see Gordon (1971)).

Further expanding knowledge of the tropical fauna were the important papers on brachyurans from Torres Strait by **A. Ortmann** (1894) and Calman (1900). **William T. Calman** (1871–1952) was one of a long line of British Museum carcinologists who had a major impact on our understanding of the Indo-west Pacific crustacean fauna (for obituary see Gordon (1954), and for biographical notes on Calman and other early carcinologists of the Natural History Museum, London, see Ingle 1991).

Haswell's work at the Australian Museum was followed by that of **Thomas Whitelegge** (1850–1927) whose report on the Crustacea collected off eastern Australia by the *Thetis* (Whitelegge 1900) was particularly significant. Whitelegge arrived in Sydney in 1883 from England, after enduring a poverty stricken childhood. He had gained some recognition in his home country as an amateur naturalist, and within a year of his arrival had become a member of the Linnean Society of New South Wales under the sponsorship of Sir William Macleay, the founder of the society. Membership of the Royal Society of New South Wales quickly followed, and, after ever-growing recognition of his scientific abilities, he was appointed as a senior scientific assistant in charge of the Department of Lower Invertebrates at the Australian Museum. Arguably, Whitelegge's greatest scientific achievement was his 1889 'List of the Marine and Fresh-water Invertebrate fauna of Port Jackson and Neighbourhood' which was referred to as 'the marine zoologists' bible', and earned for its author a special gold medal and prize presented by the Royal Society of New South Wales. A fascinating biography of Whitelegge was published by McNeill (1929a), and a bibliography by Whitley (1929).

The first and second decades of the 1900s saw contributions from **W.H. Baker** dealing with South Australian Brachyura, and works by **S.W. Fulton**, **F.E. Grant** and **Alan R. McCulloch** on SE Australian species. **Alan Riverstone McCulloch** (1885–1925), the Australian Museum's ichthyologist, took over the crustacean collection responsibilities from 1905 to 1921. Despite his primary interest in fish, and the fact that he died tragically at the age of forty, McCulloch produced a number of significant papers on decapods. For his obituary and bibliography, see Anderson (1926). From 1914 McCulloch was assisted by **Francis (Frank) Alexander McNeill** (1896–1969) who was placed in charge of Crustacea from 1922 until 1961. Frank excelled at popularisation of science, writing numerous magazine articles, but also produced a number of important taxonomic papers between 1920 and 1930. Among others was his account with Stephenson of Australian stomatopods (Stephenson & McNeill 1955), and a large work in 1968 on the results of the British Great Barrier Reef Expedition of 1928, in which he had participated. For an obituary and bibliography, see Whitley (1969).

Herbert M. Hale (1895–1963) had a long and illustrious career in science in South Australia, particularly as Director of the South Australian Museum from 1928 until his retirement in 1960 (for obituary and bibliography, see Mitchell 1965). Hale's greatest taxonomic effort was on the taxonomy of Australian Cumacea, but nevertheless he produced some notable papers (Hale 1924, 1927, 1929, 1941), reporting on southern and western decapod species.

His 1927 book the 'The Crustaceans of South Australia (Part I)' was the first real attempt to popularise Australian Crustacea, and its interesting natural history notes and good illustrations have ensured its relevance into the twenty-first century.

Mary Rathbun (1860–1943) of the United States National Museum, was one of the most influential brachyuran taxonomists of the late nineteenth and early twentieth centuries (for biography and bibliography, see Schmitt (1973)). While many of her papers are crucial for any student of the Australian fauna, two reports (Rathbun 1914, 1924) dealt directly with collections from Western Australia.

Other important early works on crabs of western and south-western Australia are those of **S.K. Montgomery** on the Percy Sladen Trust Expedition to the Abrolhos (Montgomery 1931), and that of the great German taxonomist **Heinrich Balss** on the material collected by the Hamburg Museum's expedition to southwestern Australia in 1905 (Balss 1935a, 1935b).

Two other English scientists who made an important contribution to Australian carcinology through their study of the *H.M.S. Challenger* collections were **Charles Spencer Bate's** (1888) report on the Macrura, and **J.R. Henderson's** (1888) report on the Anomura.

Waldo Schmitt (1887–1977) was an eminent American carcinologist. His most significant contribution to the Australian scene was his 1926 report on the families Penaeidae, Campylonotidae and Pandalidae obtained by the *F.I.S. Endeavour* while in Australian waters.

John Yaldwyn held the post of Curator of Crustacea and Coelenterata at the Australian Museum from 1962 to 1968. His chief research concerned the taxonomy and distribution of the Decapoda of New Zealand, Antarctica, and the Subantarctic islands. He was, however, an active collector, and greatly enhanced his museum's collection of tropical species as well. His popular book, *Australian Crustaceans in Colour* (1970) co-authored with photographer Anthony Healey, brought the love of crustaceans into many an Australian household. He left the Australian Museum to become the Assistant Director and later Director of the Dominion Museum, Wellington (now the National Museum of New Zealand).

Desmond 'Des' J.G. Griffin replaced John Yaldwyn as Curator of Crustacea at the Australian Museum, later becoming Director of the Museum. Des specialised in majid crabs, amongst other valuable contributions across a variety of decapod groups. Of many papers from the 1960s to the 1980s, his review of Australian majid spider crabs (Griffin 1966) was a pivotal work, for the first time facilitating identification of species in this difficult group. This was superceded by the monumental Griffin & Tranter (1986) 'Siboga' report, that reviewed the taxonomy of the Majidae for the Indo-west Pacific region.

Melbourne Ward (1903–1966) was a particularly colourful carcinological character. The son of a theatrical entrepreneur, Mel was interested in crabs from early childhood, but started his career on the stage as an acrobatic dancer. At about age 24 Mel decided the call of the crabs was too enticing, and left the theatre to pursue his hobby as a carcinologist. He travelled and collected widely both in Australia and overseas. In 1933 he and his wife moved to live on Lindeman Island on the Great Barrier Reef, the type locality for a number of his new species For several years he worked there in his own laboratory and tourist museum. While a number of his taxa have failed to stand the test of time, nevertheless his most important papers (Ward 1933a, 1933b, 1934, 1936, 1945) are an important legacy. Whitley (1967) gave an interesting account of his life and a full bibliography.

Michael W.F. Tweedie based at the Raffles Museum in Singapore produced two important papers (1947, 1950) on the Brachyura and Stomatopoda of the Australian Indian Ocean protectorates, Christmas and Cocos-Keeling Islands.

Eric R. Guiler from the University of Tasmania, published on various invertebrate groups, and made a notable compilation of the crustaceans of Tasmania (1952).

Although predominantly a peracarid worker, **Gary Poore**, at Museum Victoria, in partnership with Des Griffin, produced an important revision of Australian thalassinideans (Poore & Griffin 1979). Poore followed this with several other significant papers describing new taxa, and examining the phylogeny of the group. The Thalassinidea can now be considered to be one of the better known groups of Australian decapods, thanks also to considerable attention from two other modern workers **Katsushi Sakai** (Shikoku University, Japan) and **Nguyen Ngoc-Ho** (MNHP, Paris).

The late American scientist, **Janet Haig,** made a major contribution to our understanding of the Anomura. Her papers covered a number of families including the Albuneidae, Hippidae, Galatheidae, Paguridae and Diogenidae, but in particular she was one of the very few workers to deal extensively with the Porcellanidae. **Keiji Baba** (Kumamoto Univ., Japan), has also published several important papers on the Galatheidae.

Freshwater decapods have been very well studied. Works include a series of papers by **E. Clark** from 1936 to 1941 on parastacid crayfish; **E.F. Riek** from 1951 to 1972 on the full range of freshwater decapods, but with major revisions of the crayfish; **J. Bishop** (1963) on parthelphusid crabs; and more recently by **Gary Morgan** on crayfish of the genus *Euastacus*; and **Pierre Horwitz** on *Engaeus* and *Engaewa* crayfish.

Raymond Manning (1934–2000) was the greatest taxonomist ever to work on the Stomatopoda, and during the course of his career described an enormous number of species and genera, as well as 19 new families (for biography and bibliography, see Lemaitre & Reed 2000). Two papers (Manning 1966, 1970) directly concerned the Australian fauna. **Shane Ahyong,** currently working at the Australian Museum, has received the baton passed from Stephenson and Manning, and recently published a major revision of the Australian Stomatopoda which nearly doubled the species previously known to occur here (Ahyong 2001).

A.J. 'Sandy' Bruce studied as a medical doctor before turning his back on medicine to pursue his true love, the taxonomy of shrimps, particularly of the Palaemonidae. Sandy has held a variety of research positions worldwide, but finally settled in Australia in the 1970s to become the Director of Heron Island Research Station on the southern end of the Great Barrier Reef. After two terms there he moved to Darwin, becoming the Curator of Crustacea, and head of the Natural Science program in the Northern Territory Museum. Sandy helped to forge a strong group of marine taxonomists to work on the poorly known fauna of the Northern Territory; upon retirement, he moved to Brisbane where he holds an honorary research position at the Queensland Museum. Sandy has been a prolific author, by any standards, and has contributed more than any other worker to the taxonomic understanding of Australian carid shrimps.

At the Western Australian Museum, the first Curator of Crustacea, **R.W. George** was appointed in 1965. Ray published widely on a number of groups, but his great love and specialty was the Palinuridae. In 1962, Ray described the commercial rock lobster of Western Australia, *Panulirus cygnus*, and this paper was soon followed by several others (George & Holthuis 1965; George 1968; George & Kensler 1970). Later in his career (1982), he co-authored with his then technical assistant, Diana Jones, a superb revision of Australian fiddler crabs (*Uca*). Ray retired in 1984 and was succeeded by **Gary J. Morgan**. Gary, currently the Director of the Western Australian Museum, distinguished himself through the 1980s and early 1990s with his excellent work on the freshwater parastacid crayfish genus *Euastacus* and later extensive work on Australian hermit crabs. The current curator **Diana Jones** has specialised in the systematics of the Cirripedia, but has published a number of papers on decapods, especially on fiddler crabs. Her 1994 book, *A Field Guide to Crustaceans of Australian Waters*, with Gary Morgan, has proved to be a very popular and useful field guide to Australian Crustacea.

John Lucas of James Cook University, Townsville, no longer an active carcinologist, made a major contribution to the systematics of the false spider-crabs (Hymenosomatidae) (Lucas 1980; Lucas & Davie 1982).

William 'Bill' Stephenson (1921–1997) came to Australia from Britain to take up a position as Lecturer at the University of Queensland in Brisbane. Professor Stephenson was eventually appointed to the inaugural chair in zoology, and was an influential figure in championing the study of marine biology and ecology in Queensland. During the first part of his tenure in the 1950s, he produced a number of papers on the taxonomy of the Stomatopoda, culminating in his 1955 work that included a checklist and key to the known Australian species. From 1955 onwards, his taxonomic efforts were directed almost exclusively to the swimming crabs of the family Portunidae, on which he produced a succession of papers, alone, and with various co-authors. These are the benchmark for studies on this family in Australia, and are the single largest body of work on this family by any worker (see especially Stephenson & Hudson (1957); Stephenson & Campbell (1959, 1960); Stephenson (1961, 1972); Stephenson & Rees (1968a, 1968b, 1968c); Stephenson & Cook (1970). In his later years, Bill gave up taxonomy in pursuit of ecological studies of soft-bottom macrobenthic communities, in which field he also made his characteristic mark.

William 'Bill' Dall, was an early student of Professor Stephenson in Brisbane. Bill produced some important early papers on the taxonomy of Australian Penaeidae (Dall 1957; Racek & Dall 1965), before leaving taxonomy to pursue an illustrious research career in the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Since retirement, he has been an honorary research scientist at the Queensland Museum, and is once again producing some important revisionary taxonomic studies (Dall 1999).

Bruce M. Campbell came to the Queensland Museum as Curator of Zoology in 1964. Having previously worked with, and been a postgraduate student of, Professor Stephenson, Bruce continued his passion with crabs, particularly the mangrove Grapsidae. Bruce laid the foundations of the Queensland Museum's strength in brachyurans. Another student of Stephenson, and originally a technical assistant to Campbell, the current Curator of Crustacea, **Peter J.F. Davie**, has published widely on a variety of brachyuran families, as well as dabbling in a few other decapod groups. He has particular expertise in grapsoid, ocypodoid, and xanthoid crabs. Peter's technical assistant and collection manager, **John Short**, has developed a strong expertise in freshwater decapods, including the atyid and palaemonid prawns, and parastacid crayfish.

NOTES ON THE CATALOGUE

Every effort has been made to include all relevant literature published before 30 June 2001 relating to the description of new taxa of Australian Malacostracans (excluding Peracaridea and Syncaridea dealt with in separate volumes). However, because Australia is part of the much larger Indo-west Pacific faunal province, it is possible that publications which could impact on the taxonomy and systematics of Australian species may have been missed despite the best efforts to embrace them.

Nomenclature and Classification

In general, Volumes 19.3A and 19.3B of the *Catalogue* are intended to be a summary of the systematics of major groups among Australian malacostacans, without being used as vehicles for new information on Australian species and their distribution. However, a number of decisions regarding synonymies, type species designations, and higher classification have been taken for the first time, and where these are not based on my own experience, I have endeavoured to give due credit to the authority or authorities followed. Every effort possible has been made to present full synonymies for all taxa.

The arrangement of taxa within these Volumes is not intended to reflect a phylogenetic classification. Families are arranged alphabetically to simplify access for all users (see Table 1). The introduction to each higher level taxon contains general references and comments on phylogenetic relationships and recent investigations where such information has been

uncovered and/or deemed useful. The 'Reference for Synonymy' often refers to the latest review paper that is being followed, and does not necessarily mean that the cited author was responsible for creating the original synonymy. This decision was taken for pragmatic reasons, but also recognising that, typically, a synonymy consisting of multiple names includes decisions taken by several authors. Apologies are hereby tended if an author has not been given due credit for his or her original research leading to a new synonymy. Numbers of taxa catalogued in the two volumes are listed in Table 2.

Table 1. Higher level classification of malacostracan crustacean families recorded in the Australian fauna, excluding superorders Syncarida and Peracarida, ordered phylogenetically by higher taxa, and alphabetically by family.

Class MALACOSTRACA Latreille, 1802

Subclass PHYLLOCARIDA Packard, 1879

Order LEPTOSTRACA Claus, 1880

Nebaliidae Samouelle, 1819
Paranebaliidae Walker-Smith & Poore, 2001

Subclass HOPLOCARIDA Calman, 1904

Order STOMATOPODA Latreille, 1817

Bathysquillidae Manning, 1967
Eurysquillidae Manning, 1977
Erythrosquillidae Manning & Bruce, 1984
Gonodactylidae Giesbrecht, 1910
Hemisquillidae Manning, 1980
Lysiosquillidae Giesbrecht, 1910
Nannosquillidae Manning, 1980
Odontodactylidae Manning, 1980
Parasquillidae Manning, 1995
Protosquillidae Manning, 1980
Pseudosquillidae Manning, 1977
Squillidae Latreille, 1803
Takuidae Manning, 1995
Tetrasquillidae Manning & Camp, 1993

Subclass EUMALACOSTRACA Grobben, 1892

Superorder EUCARIDA Calman, 1904

Order EUPHAUSIACEA Dana, 1850

Bentheuphausiidae Holt & Tattersall, 1905
Euphausiidae Dana, 1850

Order AMPHIONIDACEA Williamson, 1973

Amphionididae Holthuis, 1955

Order DECAPODA Latreille, 1803

Suborder DENDROBRANCHIATA Bate, 1888

Aristeidae Wood-Mason, 1891
Benthesicymidae Wood-Mason, 1891
Luciferidae De Haan, 1849
Penaeidae Rafinesque-Schmaltz, 1815
Sergestidae Dana, 1852
Sicyoniidae Ortmann, 1898
Solenoceridae Wood-Mason, 1891

Suborder PLEOCYEMATA Burkenroad, 1963

Infraorder STENOPODIDEA Bate, 1888

Spongicolidae Schram, 1986
Stenopodidae Claus, 1872

Infraorder CARIDEA Dana, 1852

Alpheidae Rafinesque, 1815
Anchistioididae Borradaile, 1915
Atyidae De Haan, 1849
Bathypalaemonellidae de Saint Laurent, 1985
Bresiliidae Calman, 1896
Campylonotidae Sollaud, 1913
Crangonidae Haworth, 1825
Eugonatonotidae Chace, 1937
Glyphocrangonidae Smith, 1884
Gnathophyllidae Dana, 1852
Hippolytidae Bate, 1888
Hymenoceridae Ortmann, 1890
Kakaducarididae Bruce, 1993
Nematocarcinidae Smith, 1884
Ogyrididae Holthuis, 1955
Oplophoridae Dana, 1852
Palaemonidae Rafinesque, 1815
  Palaemoninae Rafinesque, 1815
  Pontoniinae Kingsley, 1878
Pandalidae Haworth, 1825
Pasiphaeidae Dana, 1852
Physetocarididae Chace, 1940
Processidae Ortmann, 1890
Psalidopodidae Wood-Mason & Alcock, 1892
Rhynchocinetidae Ortmann, 1890
Stylodactylidae Bate, 1888
Thalassocarididae Bate, 1888

Infraorder ASTACIDEA Latreille, 1802

Enoplometopidae de Saint Laurent, 1988
Glypheidae Zittel, 1885
Nephropidae Dana, 1852
Parastacidae Huxley, 1879
Thaumastochelidae Bate, 1888

Infraorder PALINURA Latreille, 1802

Palinuridae Latreille, 1802
Polychelidae Wood-Mason, 1875
Scyllaridae Latreille, 1825
  Arctidinae Holthuis, 1985
  Ibacinae Holthuis, 1985
  Scyllarinae Latreille, 1825
  Theninae Holthuis, 1985

Infraorder THALASSINIDEA Latreille, 1831

Axiidae Huxley, 1879
Callianassidae Dana, 1852
Ctenochelidae Manning & Felder, 1991
Laomediidae Borradaile, 1903
Micheleidae Sakai, 1992
Strahlaxiidae Poore, 1994
Thalassinidae Latreille, 1831
Thomassiniidae de Saint Laurent, 1979
Upogebiidae Borradaile, 1903

Infraorder ANOMURA MacLeay, 1838

Albuneidae Stimpson, 1858
Chirostylidae Ortmann, 1892
Coenobitidae Dana, 1852
Diogenidae Ortmann, 1892
Galatheidae Samouelle, 1819
Hippidae Stimpson, 1858
Lithodidae Samouelle, 1819
Lomisidae Bouvier, 1895
Paguridae Latreille, 1802
Parapaguridae Smith, 1882
Porcellanidae Haworth, 1825
Pylochelidae Bate, 1888
  Pylochelinae Bate, 1888
  Trizochelinae Forest, 1987

Infraorder BRACHYURA Latreille, 1802

Aethridae Dana, 1851
Atelecyclidae Ortmann, 1893
Calappidae De Haan, 1833
Camptandriidae Stimpson, 1858
Cancridae Latreille, 1803
Carpiliidae Ortmann, 1893
Corystidae Samouelle, 1819
Cryptochiridae Paul'son, 1875

Cyclodorippidae Ortmann, 1892
  Cyclodorippinae Ortmann, 1892
  Xeinostomatinae Tavares, 1992
Cymonomidae Bouvier, 1897
Dairidae Ng & Rodriguez, 1986
Domeciidae Ortmann, 1893
Dorippidae Macleay, 1838
  Dorippinae Macleay, 1838
Dromiidae De Haan, 1833
Dynomenidae Ortmann, 1892
Eriphiidae Macleay, 1838
  Dacryopilumninae Serène, 1984
  Eriphiinae Macleay, 1838
  Menippinae Ortmann, 1893
  Oziinae Dana, 1851
Gecarcinidae Macleay, 1838
Geryonidae Colosi, 1923
Goneplacidae Macleay, 1838
  Carcinoplacinae H. Milne Edwards, 1852
  Chasmocarcininae Serène, 1964
  Euryplacinae Stimpson, 1871
  Goneplacinae Macleay, 1838
  Planopilumninae Serène, 1984
  Pseudoziinae Alcock, 1898
Grapsidae Macleay, 1838
  Cyclograpsinae H. Milne Edwards, 1853
  Grapsinae Macleay, 1838
  Sesarminae Dana, 1851
  Varuninae H. Milne Edwards, 1853
Hexapodidae Miers, 1886
Homolidae De Haan, 1839
Homolodromiidae Alcock, 1900
Hymenosomatidae Macleay, 1838
Latreilliidae Stimpson, 1858
Leucosiidae Samouelle, 1819
  Cryptocneminae Stimpson, 1907
  Ebaliinae Stimpson, 1907
  Leucosiinae Samouelle, 1819
  Philyrinae Rathbun, 1937
Majidae Samouelle, 1819
  Epialtinae Macleay, 1838
  Inachinae Macleay, 1838
  Inachoidinae Dana, 1851
  Majinae Samouelle, 1819
  Mithracinae Macleay, 1838
  Pisinae Dana, 1851
  Planoterginae Stevcic, 1991
  Tychinae Dana, 1851
Matutidae De Haan, 1835
Mictyridae Dana, 1851
Ocypodidae Rafinesque, 1815
  Dotillinae Stimpson, 1858
  Heloecinae H. Milne Edwards, 1852
  Macrophthalminae Dana, 1851
  Ocypodinae Rafinesque, 1815
Palicidae Bouvier, 1898
  Crossotonotinae Moosa & Serène, 1981
  Palicinae Bouvier, 1898
Panopeidae Ortmann, 1893
  Eucratopsinae Stimpson, 1871
Parathelphusidae Alcock, 1910
Parthenopidae Macleay, 1838
  Cryptopodiinae Stimpson, 1871
  Daldorphiinae Ng & Rodriguez, 1986
  Parthenopinae Macleay, 1838
Pilumnidae Samouelle, 1819
  Calmaniinae Stevcic, 1991
  Eumedoninae Dana, 1853
  Galeninae Alcock, 1898
  Halimedinae Alcock, 1898
  Pilumninae Samouelle, 1819
  Rhizopinae Stimpson, 1858
Pinnotheridae De Haan, 1833
  Pinnotherelinae Alcock, 1900
  Pinnotherinae De Haan, 1833
  Xenophthalminae Stimpson, 1858
Plagusiidae Dana, 1851
Portunidae Rafinesque, 1815
  Caphyrinae Paul'son, 1875
  Carcininae Macleay, 1838
  Carupinae Paul'son, 1875
  Podophthalminae Dana, 1851
  Polybiinae Ortmann, 1893
  Portuninae Rafinesque, 1815
  Thalamitinae Paul'son, 1875
Raninidae De Haan, 1839
  Lyreidinae Guinot, 1993
  Notopodinae Serène & Umali, 1972
  Raninae De Haan, 1839
  Raninoidinae Lörenthey & Beurlen, 1929
Trapeziidae Miers, 1886
Trogloplacidae Guinot, 1986
Xanthidae Macleay, 1838
  Actaeinae Alcock, 1898
  Chlorodiinae Dana, 1851
  Cymoinae Alcock, 1898
  Etisinae Ortmann, 1893
  Euxanthinae Alcock, 1898
  Kraussiinae Ng, 1993
  Liomerinae Sakai, 1976
  Polydectinae Dana, 1851
  Xanthinae Macleay, 1838
  Zalasiinae Serène, 1968
  Zosiminae Alcock, 1898

Common names

Common names have been derived from a variety of sources, but efforts to find such names have not been exhaustive. A nationwide acceptance of common names for the majority of species is still lacking, even for the most well known species. For species of commercial importance, the official name used by FAO has been included (see Holthuis 1980, 1991; Chan 1998; Ng 1998), as well as one or two of the names more commonly used within the fishing industry (see, especially, Commonwealth of Australia 1995; Grey *et al.* 1983).

Type Specimens

Information on type material has been taken from the original publication when it was listed there. If no holotype designation was made specifically, and the number of specimens examined was not explicitly stated, then I have treated them as syntypes, or sometimes as 'status unknown'. I have also used information from published and unpublished type catalogues and lists, some of the more significant being Zimsen (1964), Evans (1967), Griffin & Stanbury (1970), Jones (1986), Lew Ton & Poore (1987), Springthorpe & Lowry (1994), Fransen *et al.* (1997), and Sakai (1999). In a few cases I have verified type information directly with relevant curators, but generally this has been logistically impossible. Where a Museum registration number is accompanied by an '*', it means that the information has not been recently verified. In many cases I have made an informed guess where material should have been deposited, knowing the history of the individual worker, and where he/she generally deposited their material. Where I was uncertain, I qualified the museum cited with the statement 'probable depository institution'.

Table 2. Statistics on families, genera and species of the groups covered in the *Zoological Catalogue of Australia*, Volumes 19.3A and 19.3B.

Taxon	Families	Genera	Valid Species	Available Species Names
VOLUME 19.3A				
Phyllocarida	2	4	4	4
Hoplocarida	14	63	146	226
Euphausiacea	2	9	55	83
Amphionidacea	1	1	1	4
Decapoda				
Dendrobrachiata	7	37	141	201
Pleocyemata				
Astacidea	5	16	137	171
Caridea	25	159	605	921
Palinura	3	14	50	104
Stenopodidea	2	3	6	13
Thalassinidea	9	38	80	94
Total	**70**	**343**	**1225**	**1821**
VOLUME 19.3B				
Decapoda				
Pleocyemata				
Anomura	13	69	274	368
Brachyura	42	369	969	1549
Total	**55**	**438**	**1243**	**1917**

Distributions

Distributions within Australia are given in a rather broad-brush following the State and biogeographic zones as defined on Map 1 (p. viii); this was the original charter from ABRS. Many species are only known from one or two specific localities, and there was some attempt as the project evolved to record these as a qualification, or to give more precise geographic

detail of distributional limits. Unfortunately, many species entries were not revisited to add this information. Similarly, often a reference was added that will allow individual Australian records to be isolated, but this was not done in every case. In some instances distributional information from the literature was augmented with personal knowledge based on unpublished museum records, but no systematic attempt was made to review the data in Australian museum collections for new records or range extensions.

'Australia' for the purposes of the *Catalogue*, includes all Australian territories and protectorates, e.g. Norfolk and Lord Howe Island, Elizabeth and Middleton Reefs, Coral Sea Islands Territory, Cartier and Hibernia Reefs, Christmas and Cocos Keeling Islands, Australian Antarctic Territory and Subantarctic islands.

For the largely oceanic Euphausiacea, Australian distributions were inferred if the available review literature included Australia or its territories within the known range of the species. Thus, for this group, inclusion in the *Catalogue* does not necessarily mean that an Australian point locality is known for that species.

Unless a species is an Australian endemic, an indication of the broader distribution is given. At the beginning of the project, this was kept to a relatively vague general category such as 'central Indo-west Pacific', but increasingly I added a more useful qualifying statement, defining the geographic boundaries more precisely. However, there has been no attempt to list all countries in which a species is to be found.

Reference Citation

Every endeavour was made to check original literature for correct citations, but this was not always possible. Further, dates of publication of some older works are not noted on the original work. Some works were published over an extended time period, and repeatedly have been wrongly cited. The following is a list of papers in which the author has endeavoured to sort out the problems associated with publications of many of the more important carcinological authors.

White, Adam—White's output was truly prodigious, but the dates of publication of many of his papers have caused considerable confusion; his April 1847, *List of Species in the Collections of the British Museum*, created a large number of *nomina nuda*, most of which (fortunately) were validated by White himself in a succession of papers soon thereafter. P.F. Clark and B. Presswell have published an exhaustive biographic and bibliographic study of White (Clark & Presswell 2001), the unpublished manuscript of which was generously made available to me. I have followed their decisions throughout.

Bell, Thomas—*A History of the British Stalk-eyed Crustacea*—for details on dates of publication of individual parts, see Gordon (1960: 191).

Shaw, G. & Nodder, F.P. (1802–1803)—for dates of publication, see Sherborn (1895).

Leach, W.E.—correct date and reference citations follow an as yet unpublished bibliography compiled by Dr Keith Harrison. I am very grateful for his generosity in making his manuscript available to me.

Guérin-Méneville, F.É. (1829–1844)—for dates of publication of *Iconographie du règne animal de G. Cuvier* ..., see Cowan (1971).

Milne Edwards, H. (1834–1840)—for dates of publication of *Histoire naturelle des Crustacés*, see Holthuis (1979).

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Hombron, J.B., Jacquinot, H. and **Lucas, H.**, or combinations of these authors, as they relate to the zoology of the *Voyage au pôle sud et dans l'Océanie sur les Corvettes l'*Astrolabe *et la* Zélée ...—for publication dates see Clark & Crosnier (2000) who undertook an exhaustive analysis of the publication history of the expedition.

Latreille, P.A.—for dates of publication of *Encyclopédie méthodique*, see Sherborn & Woodward (1899).

de Man, J.G. (1888)—*Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden*, for dates of publication see Clark *et al.* (1990).

One problem of developing a catalogue in a database, is that in a moment of inattention, it is all too easy to mistakenly 'pick' the wrong reference from the reference table. I am confident that the obvious mistakes of this nature have been identified and corrected, but it is possible that a wrong paper is occasionally cited, and for this please accept my apologies.

Ecological Descriptors

The following ecological descriptors are used in this database to summarise the ecology of taxa at species-group level:

Feeding: detritivore, filter-feeder, folivore, frugivore, grazer, herbivore, omnivore, predator

Freshwater: freshwater, interstitial waters, lake, littoral, permanent pond, swamp, temporary pond, underground water

Life History: arboreal, burrowing, catadromous, crepuscular, cryptozoic, diurnal, gregarious, noctidiurnal, nocturnal

Marine: abyssal, abyssopelagic, bathyal, bathypelagic, benthic, continental rise, continental shelf, continental slope, coral reef, epipelagic, estuarine, euryhaline, high intertidal, intertidal, low intertidal, mangrove, marine, mesopelagic, mid intertidal, neritic, oceanic province, pelagic, rock reef, shallow intertidal, shallow subtidal, subtidal, supratidal

Terrestrial & Miscellaneous: terrestrial, caves, coastal, coastal sand dunes

Vegetation Growth Forms: closed forest

User Defined: anchialine, commensal, coral, coral rubble, ectocommensal, intertidal flats, mud bottom, mud flats, mud substrate, muddy sand bottom, muddy-sand, reef, reef flat, rock platforms, rocks, rocky shore, rubble, sand beaches, sand bottom, sand flats, sand or shell bottom, sand substrate, sandy mud bottom, shell bottom, sheltered rocky shore, silt bottom, soft bottom, sublittoral, symbiotic

CLOSING DATE

The closing date for entries in this section of the *Catalogue* was 30 June, 2001.

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CLASS: MALACOSTRACA

INTRODUCTION

All forms fitting the popular concept of a crustacean, including the large edible species, are members of the Malacostraca. In recent invertebrate texts opinion on subclass composition has differed. Here we recognise three subclasses: Phyllocarida, Hoplocarida, and Eumalocostraca. Brusca & Brusca (1990), however, treated the Hoplocarida as a super-order within the Eumalocostraca, while Greenaway (1998) recognised Hoplocarida and Eumalocostraca, but treated the Phyllocarida within a separate class Phyllopoda. The basic body plan of the Eumalocostraca consists of a 5-segmented cephalon, an 8-segmented thorax, and a 6-segmented abdomen, plus telson—the 'caridoid facies' of W.T. Calman (1909). Phyllocarids typically have been seen as representing the primitive malacostracan condition, differing from the usual body plan in having an extra abdominal segment, and foliaceous, multiramous limbs (this latter character shared with branchiopods and cephalocarids). This hypothesis received support from recent work of Spears & Abele (1999) who used 18S rDNA data to define a malacostracan clade that included a species of the phyllocarid leptostracan *Nebalia* as a basal lineage. The Malacostraca is presumed to have arisen during the Early Devonian.

Diagnosis

Carapace highly variable in form; mostly a single piece fused dorsally with thoracic somites, but may be formed of two valves hinged dorsally; more or less entirely covers head and thoracic regions, but sometimes vestigial. Head typically with paired compound eyes, usually at ends of movable stalks, but occasionally greatly reduced or lacking, and/or stalks immovable. Eyes followed by five pairs of appendages including: biramous antennules (or first antennae), antennae (or second antennae) with flattened scale-like exopod, mandibles, maxillules, and maxillae. Thorax and abdomen distinctly differentiated; thorax with eight segments; abdomen typically with six segments (excluding telson), but seven segments in Phyllocarida; all thoracic and abdominal somites bearing paired appendages except seventh abdominal somite, if present. Male genital apertures located on eight thoracic somite or its appendages (rarely on seventh); female genital openings invariably on sixth thoracic somite or its appendages. Development usually involves metamorphosis; free-swimming nauplius stage in primitive forms.

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SUBCLASS: PHYLLOCARIDA

INTRODUCTION

The subclass Phyllocarida is represented by a single Recent order, the Leptostraca with three recognised families, apparently containing less than 40 described species worldwide. The fossil record indicates a much richer earlier fauna, however, and extends back to the Lower Cambrian. Two extinct orders, the Hymenostraca Rolfe, 1969, and Archaeostraca Claus, 1888, are represented by an interesting and diverse array of forms (Rolfe 1969).

Diagnosis

Malacostraca with large carapace of two valves, with or without hinge line dorsally; valves connected by adductor muscle; produced anteriorly into movably articulated lanceolate rostral plate. Thorax of eight short free somites; abdomen of seven somites plus telson; seventh abdominal somite without appendages; telson bearing unsegmented, movably articulated furca. (After Rolfe 1969).

References

Rolfe, W.D.I. (1969). Phyllocarida. pp. R296–R331 *in* Moore, R.C. (ed.) *Treatise on Invertebrate Paleontology.* Part R. Arthropoda 4 Crustacea (except Ostracoda) Myriapoda — Hexapoda. Laurence, Kansas : The University of Kansas and The Geological Society of America, Inc. Vol. 1 xxxvi R398 pp.

ORDER: LEPTOSTRACA

INTRODUCTION

This is a small, poorly known group of crustaceans including only three extant families, Nebaliidae Samouelle, 1819, Nebaliopsididae Hessler, 1984, and Paranebaliidae Walker-Smith & Poore, 2001. These families together encompass only seven genera and 38 species. Walker-Smith & Poore (2001) have provided a key to families and genera, and a listing of known species.

There is an extensive fossil record for Leptostraca with more than 50 fossil genera (Glaessner 1969). Schram (1986) considered the Phyllocarida to be a separate lineage from the Malacostraca, a view strongly contested by Dahl (1987). Recent work by Spears & Abele (1999), using 18S rDNA, provided very strong evidence that phyllocarids are true malacostracans, albeit a lineage that diverged very early.

Diagnosis

Malacostracans with separate head, thorax and abdomen; head consisting of five somites, thorax with eight, and abdomen with seven excluding telson. Carapace bivalved, laterally compressed, with adductor muscle, but lacking hinge or hinge line; enclosing thorax but not cephalon; rostrum articulated. Eyes stalked, compound (not functional in some genera), ocular scales sometimes present. Antennules usually biramous, exopod scale or plate-like, occasionally markedly reduced or absent; antennae uniramous, well developed, may be sexually dimorphic. Mandibles with palp, molar and incisor processes usually well developed, occasionally reduced; maxillulae with paired endites and flagelliform palp, latter occasionally reduced; maxillae protopod usually with four endites, endopod and exopod usually well developed, sometimes endopod reduced and exopod vestigial. Maxillipeds absent. Eight pairs of biramous, foliaceous, thoracic appendages (thoracopods), usually well developed, but sometimes reduced, with or without epipods. Six pairs of abdominal appendages, first four pairs large and biramous, last two pairs uniramous and reduced; telson bearing pair of broad, oval, setose caudal rami. Gonopores on coxae of sixth thoracopods of female, and on eighth coxae of males. (After McLaughlin 1980; Schram 1986).

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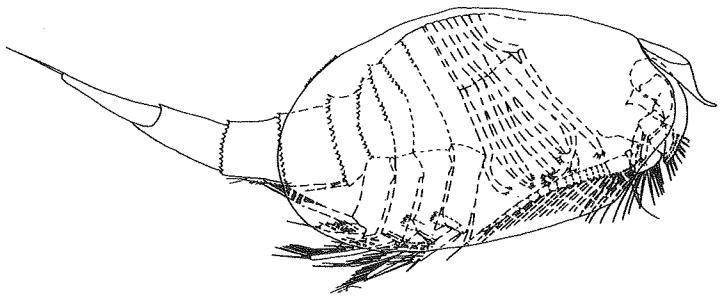
Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410

NEBALIIDAE



Nebaliella declivatas (♀) [from Walker-Smith 1998: fig. 2]

INTRODUCTION

Nebaliids are typically small, marine, benthic, filter-feeding crustaceans that seem to prefer soft mud or muddy sand substrates that are low in oxygen. They are found from shallow nearshore waters into abyssal depths. Most species have been described from the Atlantic, but there appears to have been a paucity of critical taxonomic investigation of the Indo-Pacific fauna, with species often being ascribed too quickly to Atlantic forms. Thus, there may be considerably higher diversity than apparent from present records (see Dahl 1990; Walker-Smith 1998). Walker-Smith & Poore (2001) have split off *Paranebalia* and *Levinebalia* to form a new family Paranebaliidae. Thus two of the five remaining genera of Nebaliidae are now recorded from Australia. Martin *et al.* (1996) and Walker-Smith & Poore (2001) provided keys to genera.

Diagnosis

Subterminal rostral spine rarely present; keel sometimes present. Visual elements present or absent. Supra-ocular scale sometimes present. Antenna 1, anterodenticulate fourth article absent; male, flagellum not swollen, but may have numerous aesthetascs. Antenna 2, peduncle without cuticular outgrowths or minute denticles; articles 3 and 4 sometimes fused; male antenna 2 greatly elongate, reaching to the caudal furca (unknown for *Dahlella*). Mandible incisor, present (except for *Speonebalia*). Molar process well developed, without setal brush; without accessory process; sometimes with accessory tooth/spine. Maxilla 1 palp long, well developed. Maxilla 2 with at least first three endites well developed; much smaller than thoracopod 1. Thoracopods not extending well beyond ventral margin of carapace; closely spaced. Thoracopod 1 differing only slightly from thoracopods 2–7. Thoracopods 2–5 epipod longer than exopod, or absent; endopods showing a degree of articulation. Pleonites 4–7 crenate over entire margin. Pleopod 1 exopod generally with comb-row. Pleopod 2–4 exopod with parallel margins or slightly expanded medially; outer margins with setae sometimes in pairs. Pleopod 5 longer or shorter than pleopod 6. Pleopod 6 uni- or biarticulate. Caudal rami tapering evenly to tip. Thorax not inflated, body cuticle firm. Carapace strongly emarginate mid-sagittally. Entire body length less than 20 mm. (After Walker-Smith & Poore 2001)

References

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Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410

NEBALIIDAE Samouelle, 1819

Nebaliidae Samouelle, G. (1819). *The Entomologist's Useful Compendium*; or an introduction to the knowledge of British Insects, comprising the best means of obtaining and preserving them, and a description of the apparatus generally used; together with the genera of Linné, and modern methods of arranging the Classes Crustacea, Myriapoda, spiders, mites and insects, from the affinities and structure, according to the views of Dr. Leach. Also an explanation of the terms used in entomology; a calendar of the times of appearance and usual situations of near 3,000 species of British Insects; with instructions for collecting and fitting up objects for the microscope. London : Thomas Boys 496 pp. 12 pls [100].
Type genus: *Nebalia* Leach, 1814 by monotypy.

Nebalia Leach, 1814

Nebalia Leach, W.E. (1814). *The Zoological Miscellany*; being descriptions of new or interesting animals ... illustrated with coloured figures drawn from nature by R.P. Nodder &c. London : E. Nodder & Son Vol. 1 149 pp. 60 pls [99].
Type species: *Nebalia herbstii* Leach, 1814 by monotypy.

Epinebalia Clark, A.E. (1932). *Nebaliella caboti* n. sp., with observations on other Nebaliacea. *Trans. R. Soc. Can.* **26**: 217–235 [225].
Type species: *Epinebalia pugettensis* Clark, 1932 by monotypy.

Sarsinebalia Dahl, E. (1985). Crustacea Leptostraca, principles of taxonomy and a revision of European shelf species. *Sarsia* **70**: 135–165 [160].
Type species: *Nebalia typhlops* Sars, 1870 by original designation.

Taxonomic decision for synonymy: Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410.

Extralimital distribution: Antarctic Region—Antarctica (Australian Antarctic Territory), Australian Region—New Zealand; all oceans.

Nebalia antarctica Dahl, 1990

Nebalia antarctica Dahl, E. (1990). Records of *Nebalia* (Crustacea Leptostraca) from the Southern Hemisphere — a critical review. *Bull. Br. Mus. Nat. Hist. Zool.* **56**(1): 73–91 [82 figs 45–63].
Type data: holotype BMNH 1988:95 ♀, paratype(s) BMNH 1988:95 84 specimens.
Type locality: Ross Sea, Antarctica.

Distribution: S oceanic, southern circumpolar.
Ecology: benthic, shallow subtidal.
Reference: Ledoyer, M. (1969). Sur divers Crustacés Antarctiques (Leptostracés, Cumacés, Mysidacés et Caridés) recueillis en Terre Adélie en 1961–1963. *Crustaceana* **17**: 88–96.

Nebaliella Thiele, 1904

Nebaliella Thiele, J. (1904). Die Leptostraken. *Wiss. Ergeb. deutschen Tiefsee-Exped. Valdivia 1898–1899* **8**: 1–26 [4, 24].
Type species: *Nebaliella antarctica* Thiele, 1904 by original designation.

Extralimital distribution: Kerguelen, Antarctica, Atlantic coast of Canada and USA, Ireland, SE Australia.

Generic reference: Walker-Smith, G.K. (1998). A review of *Nebaliella* (Crustacea: Leptostraca) with the description of a new species from the continental slope of southeastern Australia. *Mem. Mus. Vic.* **57**(1): 39–56 (review and key to known species).

Nebaliella declivatas Walker-Smith, 1998

Nebaliella declivatas Walker-Smith, G.K. (1998). A review of *Nebaliella* (Crustacea: Leptostraca) with the description of a new species from the continental slope of southeastern Australia. *Mem. Mus. Vic.* **57**(1): 39–56 [44 figs 2–10].

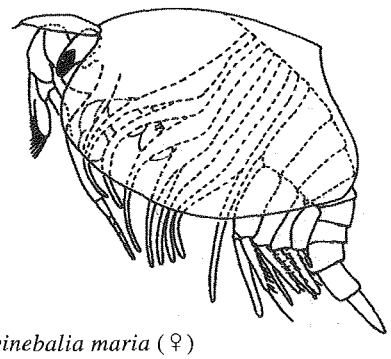
Type data: holotype NMV J34659 ♀, paratypes NMV J34664 ♂ (as allotype), NMV J34592 3 specimens, NMV J34594 1 specimen, NMV J34595 2 specimens.
Type locality: 76 km S of Point Hicks, VIC.

Distribution: NSW (Lower E coast), TAS (SE oceanic), VIC (S oceanic); known only from limital area.

Ecology: abyssal, benthic, continental slope, sublittoral; found from 996–1840 m depth.

PARANEBALIIDAE

INTRODUCTION



Levinebalia maria (♀)
[from Walker-Smith 2000: fig. 1]

Paranebaliids are similar in habits to nebaliids. Only two genera are currently assigned to the family and both are found in Australian waters. *Paranebalia* is represented by a single species *P. longipes* (Willemöes-Suhm, 1875), that has been recorded from the Torres Strait, and from South Australia. Both of these records are now believed to represent new species (Walker-Smith, pers. comm.). *Paranebalia longipes* was described from the Caribbean, and it is highly unlikely that its range will extend to the central Indo-west Pacific, particularly when other species that have been assessed critically are far more insular in distribution.

Diagnosis

Subterminal rostral spine present; keel absent. Eye shorter than rostrum; visual elements present. Eye sometimes with denticles; without dorsal papilla; ventral margin not extremely convex. Supra-ocular scale absent. Antenna 1 with anterodenticulate fourth article; article 4 without robust setae; male flagellum modified, either swollen (juveniles) or transformed into callynophore. Antenna 2 peduncle articles 3 and 4 fused; peduncle with two rounded cuticular outgrowths and sometimes with minute cuticular denticles or spines; without dorsal spine. Antenna 2 male not greatly elongate, only half body length. Mandible incisor with one tooth. Molar process well developed; with or without setal brush and sometimes with large accessory process. Maxilla 1 palp, long, well developed; second endite elongate. Maxilla 2 with at least first three endites well developed; much smaller than thoracopod 1; endopod without organelles; exopod greater than half length of endopod. Thoracopods long, extending beyond ventral margin of the carapace; closely spaced. Thoracopod 1 differing only slightly from thoracopods 2–7. Thoracopod exopod heavily setose and without proximal lobe. Thoracopods 2–5 epipod shorter than exopod; endopods showing a degree of articulation. Pleonites 4 and 5 with smooth margins. Pleonites 6 and 7 dorsal margins sometimes crenate. Pleopod 1, exopod comb-row present. Pleopods 2–4 exopod with parallel margins; outer margins with setae in pairs. Pleopod 5 longer than pleopod 6. Pleopod 6 uniarticulate. Caudal rami tapering evenly to tip. Thorax not inflated; body cuticle and carapace firm. Carapace not sculptured; emarginate; without carina on anterolateral lower corner. Entire length of female less than 20 mm.
(After Walker-Smith & Poore, 2001)

References

Walker-Smith, G.K. (2000). *Levinebalia maria*, a new genus and new species of Leptostraca (Crustacea) from Australia. *Mem. Mus. Vic.* **58**(1): 137–148, figs 1–6

Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410

PARANEBALIIDAE Walker-Smith & Poore, 2001

Paranebaliidae Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410.
Type genus: *Paranebalia* Claus, 1880.

Levinebalia Walker-Smith, 2000

Levinebalia Walker-Smith, G.K. (2000). *Levinebalia maria*, a new genus and new species of Leptostraca (Crustacea) from Australia. *Mem. Mus. Vic.* **58**(1): 137–148, figs 1–6 [138].
Type species: *Levinebalia maria* Walker-Smith, 2000 by original designation.

Extralimital distribution: Australia and New Zealand. See: Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410.

Levinebalia maria Walker-Smith, 2000

Levinebalia maria Walker-Smith, G.K. (2000). *Levinebalia maria*, a new genus and new species of Leptostraca (Crustacea) from Australia. *Mem. Mus. Vic.* **58**(1): 137–148, figs 1–6 [139 figs 1–6].
Type data: holotype NMV J34661 ♀, paratypes NMV J34663 ♂ (as allotype), NMV J34256 ♂ 10♀, NMV J34573 1 specimen, NMV J34574 19♂, NMV J34576 3 specimens, NMV J34580 4 specimens, NMV J13282 40 specimens, NMV J13283 4 specimens.
Type locality: 15 km E of Maria Is., Tasmania, Tasman Sea [42°37'S 148°20'E].

Distribution: 200 m bathymetric (Tas. Coast), 200 mile fishing zone (SE oceanic); known only from limital area.
Ecology: bathyal, benthic, continental shelf, continental slope; bottoms of fine muddy sand to coarse shelly sand, depth 100–800 m.

Paranebalia Claus, 1880

Paranebalia Claus, C.F.W. (1880). *Grundzüge der Zoologie.* Marburg und Leipzig : Elwert Vol. i 4th Edn 576 pp. [576].
Type species: *Nebalia longipes* Willemöes-Suhm, 1875 by monotypy.

Extralimital distribution: central America, Bermuda, New Caledonia. See: Walker-Smith, G.K. & Poore, G.C.B. (2001). A phylogeny of the Leptostraca (Crustacea) with keys to families and genera. *Mem. Mus. Vic.* **58**(2): 383–410.

Paranebalia longipes (Willemöes-Suhm, 1875)

Nebalia longipes Willemoes-Suhm, R. von. (1875). On some Atlantic Crustacea from the Challenger Expedition. *Trans. Linn. Soc. Lond. Zool. (2)***1**: 23–59 pls 6–13.
Type data: type status unknown BMNH*.
Type locality: Bermuda.

Distribution: QLD (NE coast), SA (S Gulfs coast); Torres Strait, and Atlantic and Indo-west Pacific Oceans (Bermuda, Virgin Islands, southern Florida, Japan, Gulf of Thailand).
Ecology: benthic, subtidal.
Reference: Walker-Smith, G.K. (2000). *Levinebalia maria*, a new genus and new species of Leptostraca (Crustacea) from Australia. *Mem. Mus. Vic.* **58**(1): 137–148, figs 1–6 [139] (strongly suggested that Australian records of *P. longipes* probably belong to one or more undescribed species).

SUBCLASS: HOPLOCARIDA

S.T. Ahyong & P.J.F. Davie

INTRODUCTION

The subclass Hoplocarida includes the 'mantis-shrimps' and is represented only by a single Recent order, the Stomatopoda. Their fossil record is poor, but hoplocarid ancestors appear to have diverged from other malacostracans during the Devonian (Hof 1998).

Diagnosis

Head with two movable anterior somites bearing pedunculate eyes and triramous antennules; antennae with protopod of two segments; mandible without lacinia mobilis. Cephalothorax partly covered by well-developed carapace; first five pairs of thoracic appendages subchelate, second to fifth pairs subequal, or with second pair developed as powerful raptorial claws and distinctly larger than others; posterior thoracic appendages with protopod of three segments. Abdomen with biramous pleopods; telson with fixed median spine and with or without styliform furca, or with broad carinate tailpiece lacking fixed spine and furca. Development with metamorphosis, free-swimming nauplius stage not present.
(Modified after Moore 1969).

References

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Moore, R.C. (1969). Hoplocarida. p. R533 *in* Moore, R.C. (ed.) *Treatise on Invertebrate Paleontology.* Part R. Arthropoda 4 Crustacea (except Ostracoda) Myriapoda — Hexapoda. Laurence, Kansas : The University of Kansas and The Geological Society of America, Inc. Vol. 2 pp. R399–R651

ORDER: STOMATOPODA

INTRODUCTION

The Stomatopoda is an order of exclusively marine, predatory malacostracans, the only living representatives of the subclass Hoplocarida (Schram 1986). Their fossil record is poor, but hoplocarid ancestors appear to have diverged from other malacostracans during the Devonian (Hof 1998). The suborder Unipeltata includes all the modern (or 'Recent') families and superfamilies of stomatopods. These groups have their origin in the Cretaceous (Schram 1986; Reaka & Manning 1987), and have remained remarkably similar in morphology for 100 million years.

Modern stomatopods are commonly known as mantis-shrimps because of the extraordinary development of the second maxilliped to form a large raptorial claw, similar in appearance to the claws of mantid insects (Order Mantodea). Another common name, 'Prawn-killers', alludes to their frequent appearance in prawn trawler catches. While stomatopods are assigned to many families and superfamilies, they form only two functional ecological groups known as 'spearers' and 'smashers' (Caldwell & Dingle 1976). 'Spearers' have the dactylus (finger) of the claw variously armed with a row of long forwardly directed spines which effectively penetrate and hold mobile prey species while they are killed. 'Smashers' generally lack such spines on the dactylus which is kept closed during the strike. Instead the swollen basal part of the finger is struck suddenly and forcefully against the shells of prey species to kill or stun the victim into immobility.

Over the past 30 years stomatopod taxonomy has undergone a revolution, largely at the hands of one man, the late Raymond Manning of the Smithsonian Institution, Washington, DC. Prior to his work a single family, Squillidae, was recognised for modern species, whereas Manning (1995) in his last major work, presented a checklist of Indo-west Pacific taxa which recognised five superfamilies (Bathysquilloidea, Squilloidea, Gonodactyloidea, Lysiosquilloidea, and Erythrosquilloidea), and nineteen families. Two additional superfamilies, Eurysquilloidea and Parasquilloidea, were recognised by Ahyong & Harling (2000). Prior to the work of Manning, Kemp (1913) was the most significant revisionary work. He recognised six genera and 126 species. There are now in excess of 100 genera and over 450 species worldwide. Sixty-three genera and 146 species are listed for the Australian fauna.

The many genera, each containing relatively few species, have been considered to represent relict distributional patterns consistent with the antiquity of the Stomatopoda and a former Tethyan distribution (Reaka & Manning 1987). There have been relatively few attempts to understand the phylogenetic relationships of the Stomatopoda, but recently Ahyong (1997), Hof (1998) and Ahyong & Harling (2000) published the results of cladistic analyses.

The most comprehensive modern treatment of the Stomatopoda, including keys, is that of Ahyong (2001), who revised the Australian stomatopod fauna. Previous works dealing with Australian genera and species are: Stephenson (1952, 1953a, 1953b, 1955, 1960, 1962, 1967); Stephenson & McNeill (1955); Manning (1966); Ahyong & Norrington (1997); Ahyong (1998); Ahyong & Manning (1998); Ahyong *et al.* (1998, 2000), and Ahyong & Naiyanetr (2000).

Diagnosis

Antennules triramous. Carapace reduced so as to expose fifth to eighth thoracic somites. Thorax highly tagmatised; anterior 5 segments fused with various sized subchelate appendages, with merus equal to or longer than carpus; posterior three segments with stilt-like stenopods. Pleopods biramous and flap-like, with gills carried on proximal part of exopods. Tailfan typically elaborate, forming, with uropods, a specialised structure that supports abdomen off substrate.

References

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Ahyong, S.T. & Harling, C. (2000). The phylogeny of the stomatopod Crustacea. *Aust. J. Zool.* **48**: 607–642

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Ahyong, S.T., Chan, T.-Y. & Liao, Y.J. (2000). *Oratosquillina manningi*, a new species of stomatopod from Taiwan and Australia. *J. Crust. Biol.* **20**: 42–47 figs 1, 2

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Reaka, M.L. & Manning, R.B. (1987). The significance of body size, dispersal potential, and habitat, for rates of morphological evolution in stomatopod Crustacea. *Smithson. Contr. Zool.* **No. 448**: 1–46

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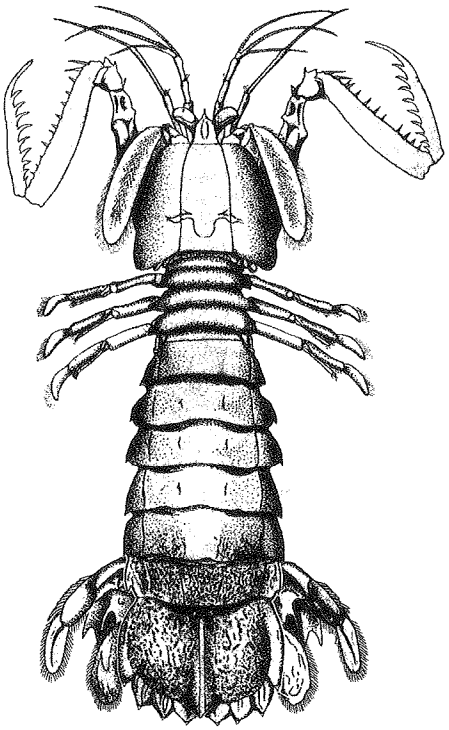
BATHYSQUILLIDAE

INTRODUCTION



Bathysquilla crassispinosa
[from Fukuda 1910: pl. 4 fig. 4]

Bathysquillids are 'spearers'. Two genera are described for the family, *Altosquilla* Bruce, 1985, and *Bathysquilla* Manning, 1963, and both are known from Australia. All species live in relatively deep outer shelf waters (170 to greater than 1000 metres). Manning *et al.* (1990) discussed the biogeography of the family.

Diagnosis

Cornea lacking rows of midband ommatidia. Corneal facets hexagonal, but poorly defined. Maxillipeds 3–4 with propodi ovate, not ribbed or beaded ventrally. Raptorial claw with ischiomeral articulation terminal, dactylus uninflated basally, with spinous inner margin. Body depressed, articulation compact. Abdominal somite 5 lacking long, posteriorly directed median spine. Telson broader than long; with distinct median carina; all primary teeth with movable apices; intermediate denticles absent. Segments of uropodal exopod fully articulated; distal segment longer than proximal; articulation of exopod segments terminal, or distal segment separated from proximal by diaeresis. Uropodal protopod with two primary spines.

References

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Manning, R.B. (1963). Preliminary revision of the genera *Pseudosquilla* and *Lysiosquilla* with descriptions of six new genera (Crustacea: Stomatopoda). *Bull. Mar. Sci. Gulf Caribb.* **13**(2): 308–328

Manning, R.B., Kropp, R.K. & Dominguez, J. (1990). Biogeography of deep-sea stomatopod Crustacea, family Bathysquillidae. *Prog. Oceanog.* **24**: 311–316

BATHYSQUILLIDAE Manning, 1967

Bathysquillidae Manning, R.B. (1967). Preliminary account of a new genus and a new family of Stomatopoda. *Crustaceana* **13**(2): 238–239 [238].
Type genus: *Bathysquilla* Manning, 1963.

Altosquilla Bruce, 1985

Altosquilla Bruce, A.J. (1985). *Altosquilla soela*, new genus, new species, a bathysquillid stomatopod from the Australian Northwest Shelf. *J. Crust. Biol.* **5**(3): 468–475 [468].
Type species: *Altosquilla soelae* Bruce, 1985 by original designation.

Range: known only from NW Australia.

Altosquilla soelae Bruce, 1985

Altosquilla soelae Bruce, A.J. (1985). *Altosquilla soela*, new genus, new species, a bathysquillid stomatopod from the Australian Northwest Shelf. *J. Crust. Biol.* **5**(3): 468–475 [469 figs 1–3, 4A, 5].
Type data: holotype NTM Cr.000612A ♂, paratype(s) NTM Cr.000612B ♀ (as allotype).
Type locality: Northwest Shelf, WA.

Distribution: WA (NW oceanic, W oceanic); known only from limital area.
Ecology: benthic, continental slope, predator; soft substrates, depths between 399 m and 400–600 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [9–10 fig. 5] (new records).

Bathysquilla Manning, 1963

Bathysquilla Manning, R.B. (1963). Preliminary revision of the genera *Pseudosquilla* and *Lysiosquilla* with descriptions of six new genera (Crustacea: Stomatopoda). *Bull. Mar. Sci. Gulf Caribb.* **13**(2): 308–328 [323] [gender feminine].
Type species: *Lysiosquilla microps* Manning, 1961 by original designation.

Extralimital distribution: Indo-west central Pacific and Caribbean. See: Bruce, A.J. (1988). Two Mantis Shrimps new to the Australian fauna (Crustacea: Stomatopoda: Bathysquillidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **5**(1): 87–95.

Bathysquilla crassispinosa (Fukuda, 1909)

Lysiosquilla crassispinosa Fukuda, T. (1909). Japanese Stomatopoda. *Dobutsegaku Zasshi* **21**: 54–62, 167–174, 5 pls [61 pl. 5 fig. H].
Type data: neotype AM P60098 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [11 fig. 6].
Type locality: Sagami Bay, Japan.

Distribution: QLD (NE oceanic); Indo-west Pacific Oceans (Indo-West Pacific from Japan, Madagascar, South Africa, the Philippines, South China Sea).
Ecology: benthic, continental slope, predator; soft bottom, depths between 240 m and 260–264 m.
References: Bruce, A.J. (1988). Two Mantis Shrimps new to the Australian fauna (Crustacea: Stomatopoda: Bathysquillidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **5**(1): 87–95 [87]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [11 fig. 6] (new records).

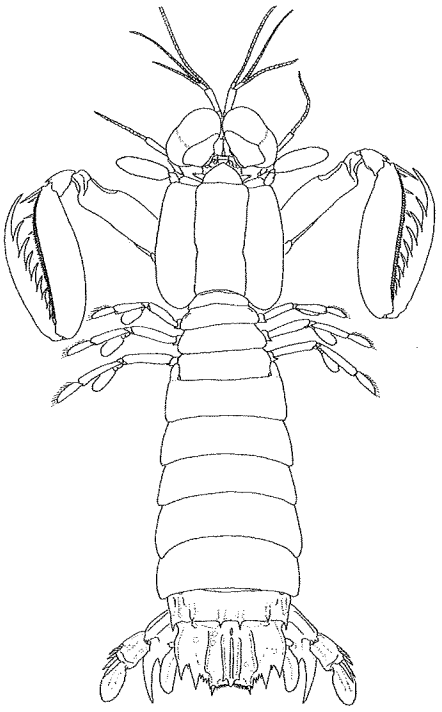
Bathysquilla microps (Manning, 1961)

Lysiosquilla microps Manning, R.B. (1961). A new deep water species of *Lysiosquilla* (Crustacea, Stomatopoda) from Gulf of Mexico. *Ann. Mag. Nat. Hist.* **3**: 693–697 fig. 5 pl. 10 [693 fig. 5, pls 10–11].
Type data: holotype USNM 104109 ♂, paratype(s) UMML ♀*.
Type locality: SE of Tortugas, Florida Straits, Gulf of Mexico.

Distribution: QLD (NE oceanic, SE oceanic), NSW (SE oceanic); east Atlantic-Indo-west central Pacific Oceans (Caribbean region, Hawai'i, Philippines).
Ecology: benthic, continental shelf, predator, sub-littoral; soft bottom, depths of 728 m to 990–1006 m.
References: Bruce, A.J. (1988). Two Mantis Shrimps new to the Australian fauna (Crustacea: Stomatopoda: Bathysquillidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **5**(1): 87–95 [90]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [12–14 fig. 7] (new records).

ERYTHROSQUILLIDAE

INTRODUCTION



Erythrosquilla hamano [S. Ahyong]

Erythrosquillidae is the sole family in the Erythrosquilloidea. Members of the family share with lysiosquilloids the subquadrate, distally ribbed propodi of maxillipeds 3-4, but differ in bearing a distinct median carina on the telson. In addition, the dorsal processes of the antennular somite in lysiosquilloids are present as a slender curved spine or dorsoventrally flattened lobe, whereas in erythrosquilloids, the dorsal processes are short, anteriorly compressed and laterally rounded.

Erythrosquilla species closely resemble those of several of the Tetrasquillidae genera (in the Lysiosquilloidea) in the ovate pereiopodal endopods and uropod structure. As in the tetrasquillid genera *Acaenosquilla*, *Heterosquilla*, *Heterosquillopsis* and *Tetrasquilla*, the terminal spines of the uropodal protopod in *Erythrosquilla* are flattened with the outer spine longest and with a short spine adjacent to the endopodal articulation. The similarities between erythrosquillids and tetrasquillids suggest a possible close relationship between the two groups, warranting further investigation. The most recent phylogenetic studies, however, suggest that the erythrosquilloids are the sister group to all lysiosquilloids (Ahyong 1997; Ahyong & Harling 2000).

Diagnosis

Cornea with hexagonal facets; number of mid band rows unknown. First antennular somite dorsal processes short, anteriorly compressed, rounded laterally. Maxillipeds 3–4 with propodi subquadrate, ribbed distally. Body flattened. Raptorial claw with ischiomeral articulation terminal, dactylus uninflated basally; propodus with three or four proximal movable spines. Telson with distinct median carina; submedian teeth with movable apices; with two true intermediate denticles, arising marginally. Uropodal protopod with two primary teeth; articulation of exopod segments terminal. (After Ahyong 2001).

References

Ahyong, S.T. (1997). A phylogenetic analysis of the Stomatopoda (Crustacea: Malacostraca). *J. Crust. Biol.* **17**(4): 695–715

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Ahyong, S.T. & Harling, C. (2000). The phylogeny of the stomatopod Crustacea. *Aust. J. Zool.* **48**: 607–642

ERYTHROSQUILLIDAE Manning & Bruce, 1984

Erythrosquillidae Manning, R.B. & Bruce, A.J. (1984). *Erythrosquilla megalops*, a remarkable new stomatopod from the western Indian Ocean. *J. Crust. Biol.* **4**(2): 329–332 [332].
Type genus: *Erythrosquilla* Manning & Bruce, 1984.

Erythrosquilla Manning & Bruce, 1984

Erythrosquilla Manning, R.B. & Bruce, A.J. (1984). *Erythrosquilla megalops*, a remarkable new stomatopod from the western Indian Ocean. *J. Crust. Biol.* **4**(2): 329–332 [332].
Type species: *Erythrosquilla megalops* Manning & Bruce, 1984 by monotypy.

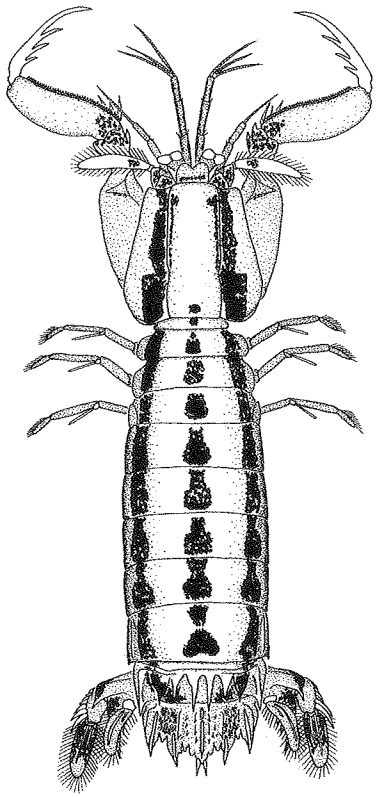
Erythrosquilla hamano Ahyong, 2001

Erythrosquilla hamano Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [15–16 fig. 8].
Type data: holotype AM P60244 ♂.
Type locality: East China Sea, Japan.

Distribution: WA (Lower W coast); East China Sea.
Ecology: benthic, continental shelf, soft bottom; depth between 137 and 142 m.

EURYSQUILLIDAE

INTRODUCTION



Manningia raymondi [S. Ahyong]

This family comprises six described genera: *Coronidopsis* Hansen, 1926, *Eurysquilla* Manning, 1963, *Eurysquilloides* Manning, 1963, *Manningia* Serène, 1962, *Raysquilla* Ahyong, 2000, and *Sinosquilla* Liu & Wang, 1978, all of which are 'spearers'. All but *Eurysquilla* are are recorded from Australia. Ahyong (2001) provided keys for identification.

Diagnosis

Cornea with two or six rows of hexagonal ommatidia in the midband. Maxillipeds 3 and 4 with propodi ovate, not ribbed or beaded ventrally; body depressed, loosely articulated or compact. Raptorial claw with ischiomeral articulation terminal, dactylus with four or more teeth, uninflated basally. Telson with distinct median carina; submedian teeth with movable apices; at most with two intermediate denticles, outermost arising ventrally. Uropodal protopod with two primary spines; articulation of exopod segments terminal.

Reference

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

EURYSQUILLIDAE Manning, 1977

Eurysquillidae Manning, R.B. (1977). A monograph of the West African stomatopod Crustacea. *Atlantide Rep.* **12**: 25–181 [33].
Type genus: *Eurysquilla* Manning, 1963.

Coronidopsis Hansen, 1926

Coronidopsis Hansen, H.J. (1926). The Stomatopoda of the Siboga Expedition. *Siboga Exped.* **35**: 1–48 pls 1–2 [19].
Type species: *Coronidopsis bicuspis* Hansen, 1926 by monotypy.

Extralimital distibution: N South China Sea, Indonesia, Philippines.

Coronidopsis serenei Moosa, 1973

Coronidopsis serenei Moosa, M.K. (1973). The stomatopod Crustacea collected by the Mariel King memorial expedition in Malaku waters. *Mar. Res. Indonesia* **13**: 1–30 [2, 5 fig. 1].
Type data: holotype LIPI S647 ♂*.
Type locality: off Elat Bay, Tjut Il., Kai [Kei] Ils, Indonesia [5°40'S 132°59'].

Coronidopsis nudus Blumstein, R. (1974). Stomatopod crustaceans from the Gulf of Tonkin with the description of new species. *Crustaceana* **26**(2): 113–126 [124–126 fig. 10].
Type data: holotype INPA.
Type locality: Gulf of Tonkin, Vietnam [20°00'N 108°13'E].

Coronidopsis gurjanovae Makarov, R.R. (1978). New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from the Tonkin Bay (Vietnam). *Zool. Zh.* **57**: 176–189 [181 fig. 3] [published Feb., 1978].
Type data: holotype VNIRO ♂, paratype(s) VNIRO 3 ♂ 2 ♀.
Type locality: Tonkin Bay, Vietnam [20°14'N 111°12'E].

Taxonomic decision for synonymy: Manning, R.B. & Garcia, R. (1982). Notes on species of the genus *Coronidopsis* (Crustacea, Stomatopoda, Eurysquillidae) *J. Crust. Biol.* **2**(4): 593–599 [595].

Distribution: QLD (Gulf of Carpentaria, NE coastal); northern South China Sea, Indonesia, Philippines.
Ecology: bethic, continental shelf, sandy mud bottom; depths of 45–60 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [18–20] (first Australian records).

Eurysquilloides Manning, 1963

Eurysquilloides Manning, R.B. (1963). Preliminary revision of the genera *Pseudosquilla* and *Lysiosquilla* with descriptions of six new genera (Crustacea: Stomatopoda). *Bull. Mar. Sci. Gulf Caribb.* **13**(2): 308–328 [315].
Type species: *Squilla sibogae* Hansen, 1926 by original designation.

Extralimital distribution: New Caledonia, Indonesia, Vietnam, Philippines.

Generic reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [20].

Eurysquilloides sibogae (Hansen, 1926)

Squilla sibogae Hansen, H.J. (1926). The Stomatopoda of the Siboga Expedition. *Siboga Exped.* **35**: 1–48 pls 1–2 [15 pl. 1figs 6a–c].
Type data: holotype ZMA De 103.017 ♂.
Type locality: Timor Sea, Indonesia [9°0.3'S 126°24.5'E].

Distribution: 200 mile fishing zone (NE oceanic).
Ecology: bethic, continental shelf, muddy-sand, shell bottom; depth between 112 m and 124–228 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [20 fig. 10].

Manningia Serène, 1962

Manningia Serène, R. (1962). Révision du genre *Pseudosquilla* (Stomatopoda) et définition de genres nouveaux. *Bull. Inst. Oceanogr. Monaco* **1241**: 1–27 figs 1–5 [20] [gender feminine].
Type species: *Pseudosquilla pilaensis* de Man, 1888 by original designation and monotypy.

Extralimital distribution: Australian Region—New Caledonia, Oriental Region—Thailand, Vietnam; Indo-west Pacific Oceans and Eastern Atlantic Ocean.
See: Bruce, A.J. (1985). *Manningia raymondi* sp. nov., a new eurysquillid stomatopod from the Northern Territory, Australia. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **2**(1): 17–21.

Manningia australiensis Manning, 1970

Manningia australiensis Manning, R.B. (1970). Two new stomatopod crustaceans from Australia. *Rec. Aust. Mus.* **28**(4): 77–85 figs 1, 2 [78 fig. 1].
Type data: holotype AM P16288 ♀.
Type locality: off Gillett Cay, Swains Reef, QLD.

Manningia vinogradovi Makarov, R.R. (1978). New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from the Tonkin Bay (Vietnam). *Zool. Zh.* **57**: 176–189 [183 fig. 4] [published Feb., 1978].
Type data: holotype VNIRO ♀.
Type locality: Tonkin Bay, Vietnam.

Manningia thorsoni Naiyanetr, P. (1987). Two new stomatopod crustaceans from Thailand with a key to the genus *Manningia* Serène, 1962. *Crustaceana* **53**(3): 237–242 [239 figs 2, 3].
Type data: holotype RMNH S1042 ♂*, paratype(s) RMNH ♀*.
Type locality: Airport Beach, Phuket Province, Thailand.

Taxonomic decision for synonymy: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [34].

Distribution: QLD (NE coast); Phuket, Thailand, Gulf of Tonkin, Vietnam, New Caledonia.
Ecology: benthic, coral reef, predator, sublittoral; sand or coarse sand and shell substrates, depths from 30–72 m.

Manningia notialis Manning, 1966

Manningia notialis Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [103 fig. 6].
Type data: holotype AM P14788 ♀, paratypes QM W1782 ♂, USNM 112436 ♂.
Type locality: Yirrkala, NW of Cape Arnhem, NT.

Distribution: NT (Gulf of Carpentaria), QLD (Gulf of Carpentaria, NE coast); known only from limital area.
Ecology: benthic, predator, silt bottom, sublittoral; muddy or sandy intertidal pools under rocks and macrophytes, or soft level substrates, intertidal to 10.4 m.
References: Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 (also recorded from Australia under the earlier misidentification of *Pseudosquilla pilaensis* de Man, 1888);

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [23–26 fig. 12].

Manningia raymondi Bruce, 1985

Manningia raymondi Bruce, A.J. (1985). *Manningia raymondi* sp. nov., a new eurysquillid stomatopod from the Northern Territory, Australia. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **2**(1): 17–21 [17 figs 1–3].
Type data: holotype NTM Cr.001306 ♂, paratypes NTM Cr.001308 ♀, NTM Cr.001526 ♀, NTM Cr.001374 ♂.
Type locality: off Groote Eylandt, Gulf of Carpentaria.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (NW coast); known only from limital area.
Ecology: benthic, continental shelf, predator, sublittoral; soft bottoms, 27–120 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [26 fig. 13] (new records).

Manningia wilsoni Ahyong, 2001

Manningia wilsoni Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [26–28 fig. 14].
Type data: holotype AM P56817 ♂.
Type locality: Shelburne Bay, Queensland.

Distribution: QLD (NE coast); known only from type locality.
Ecology: bethic, subtidal, sandy mud bottom; at 21 m depth.

Raysquilla Ahyong, 2000

Raysquilla Ahyong, S.T. (2000). *Raysquilla manningi*, a new genus and species of stomatopod from the Australian Northwest Shelf. *J. Crust. Biol.* **20**: 37–41 fig. 1 [37–38] [gender feminine].
Type species: *Raysquilla manningi* Ahyong, 2000 by original designation.

Raysquilla manningi Ahyong, 2000

Raysquilla manningi Ahyong, S.T. (2000). *Raysquilla manningi*, a new genus and species of stomatopod from the Australian Northwest Shelf. *J. Crust. Biol.* **20**: 37–41 fig. 1 [38–41 fig. 1].
Type data: holotype NMV J37789 ♂, paratype(s) NMV J39294–5 2♂.
Type locality: Northwest Shelf, WA.

Distribution: WA (NW coast).
Ecology: benthic, muddy-sand, predator, soft bottom, sublittoral; 134 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [29–30 fig. 15].

Sinosquilla Liu & Wang, 1978

Sinosquilla Liu, J.-Y. & Wang, Y. (1978). Description of a new genus and two new species of Stomatopod Crustacea from the South China Sea. *Oceanol. Limnol. Sinica* **9**(1): 89–92 [Chinese text], 93–94 [English text], pl. 1 [89, 93] [published Jan., 1978; gender feminine].
Type species: *Sinosquilla sinica* Liu & Wang, 1978 by original designation.

Eurysquillopsis Makarov, R.R. (1978). New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from the Tonkin Bay (Vietnam). *Zool. Zh.* **57**: 176–189 [78] [gender feminine; published Feb., 1978].
Type species: *Eurysquillopsis angustirostris* Makarov, 1978 by monotypy.

Taxonomic decision for synonymy: Moosa, M.K. (1986). Stomatopod Crustacea. pp. 367–441 figs 1–11 pl. 1 *in* Forest, J. Résultats des Campagnes MUSORSTOM I & II, Philippines. *Mém. Mus. natn. Hist. nat. Paris* **133**: 1–525.

Extralimital distribution: South China Sea (China, Vietnam, Philippines).

Generic reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [30].

Sinosquilla sinica Liu & Wang, 1978

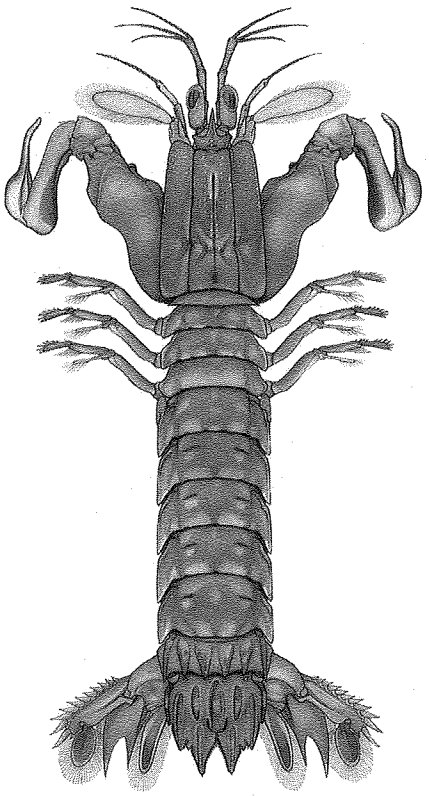
Sinosquilla sinica Liu, J.-Y. & Wang, Y. (1978). Description of a new genus and two new species of Stomatopod Crustacea from the South China Sea. *Oceanol. Limnol. Sinica* **9**(1): 89–92 [Chinese text], 93–94 [English text], pl. 1 [89, 90, 94 fig. 1, pl. 1 figs 1–3] [published Jan., 1978].
Type data: holotype CAS K44B-55 ♀, paratypes CAS S13B-1 ♂, CAS N96B-45 ♀.
Type locality: South China Sea, off Guangdong Province, China [21°00'N 113°30'E].

Eurysquillopsis angustirostris Makarov, R.R. (1978). New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from the Tonkin Bay (Vietnam). *Zool. Zh.* **57**: 176–189 [185 figs 5, 6] [published Feb., 1978].
Type data: holotype VNIRO ♀.
Type locality: Tonkin Bay, Vietnam [18°00'N 110°08'E].

Taxonomic decision for synonymy: Moosa, M.K. (1986). Stomatopod Crustacea. pp. 367–441 figs 1–11 pl. 1 *in* Forest, J. Résultats des Campagnes Musorstom I & II, Philippines. *Mém. Mus. natn. Hist. nat. Paris* **133**: 1–525

Distribution: QLD (NE oceanic); South China Sea, Vietnam, Philippines.
Ecology: continental slope, sandy mud bottom; depths between 250–252 m and 300–304 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [30–32 fig. 16] (first Australian records).

GONODACTYLIDAE



Gonodactylus chiragra
[from Manning 1995: pl. 6]

INTRODUCTION

This family was treated most recently by Ahyong (2001), who provided keys for identification. All gonodactylids are 'smashers'. They are most abundant in the tropics on hard substrates such as coral and rocky reefs, and are the most common stomatopods on coral reefs.

Species of most gonodactylid genera (except *Neogonodactylus*) occur exclusively in the Indo-West Pacific. Species of *Neogonodactylus* occur only in the eastern Pacific and western Atlantic, and no gonodactylids are known from the eastern Atlantic. Four genera are recognised in Australian waters.

Diagnosis

Cornea with six rows of rectangular ommatidia in the midband. Protopod of antenna with fixed, anteriorly directed spine dorsally. Third and fourth maxillipeds with propodi ovate, not ribbed or beaded ventrally; body subcylindrical, articulation compact. Raptorial claw with ischiomeral articulation subterminal, dactylus without teeth on inner margin, outer margin inflated basally into blunt heel. Sixth abdominal somite articulating with telson. Telson with distinct median carina; submedian teeth with movable apices; at most with three 'intermediate' denticles, arising marginally. Uropodal protopod with two primary spines; articulation of exopod segments subterminal. Distal spines on outer margin of uropodal exopod slender, straight, or slightly curved, not strongly recurved anteriorly.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

GONODACTYLIDAE Giesbrecht, 1910

Gonodactylinae Giesbrecht, W (1910). Stomatopoden, Erste Theil. *Fauna und Flora des Golfes von Neapel, Monographie* **33**: 1–239 pls 1–11 [148].
Type genus: *Gonodactylus* Berthold, 1827.

Gonodactylaceus Manning, 1995

Gonodactylaceus Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [42–43] [gender masculine].
Type species: *Gonodactylus ternatensis* de Man, 1902 by original designation.

Extralimital distribution: Indo-west Pacific Oceans. See: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Gonodactylaceus falcatus (Forskål, 1775)

Cancer falcatus Forskål, P. (1775). *Descriptiones animalium avium, amphibiorum, piscium, insectorum, vermium*; quae in itinere orientali observavit Petrus Forskål. Hafniae : Mölleri 19, xxxiv, 164 pp. [96].
Type data: neotype RMNH S874 ♀.
Subsequent designation: Manning, R.B. & Lewinsohn, C. (1981). Selection of a neotype for *Cancer falcatus* Forskål, 1775 (Stomatopoda). *Crustaceana* **41**(3): 314–316.
Type locality: Djeddah, Saudia Arabia.

Gonodactylus chiragra mutatus Lanchester, W.F. (1903). Marine crustaceans, VIII: Stomatopoda, with an account of the varieties of *Gonodactylus chiragra*. pp. 444–459 pl. 23 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*: Being an account of the work carried on and of the collections made by an expedition during the years 1899 and 1900. Cambridge : Cambridge University Press Vol. 1 [450] [as *Gonodactylus chiragra* var. *mutatus*].
Type data: lectotype UMZC ♀, paralectotype(s) UMZC 4♂ 1♀.
Subsequent designation: Manning, R.B. (1978). Notes on some species of the *Falcatus* group of *Gonodactylus* (Crustacea: Stomatopoda: Gonodactylidae). *Smithson. Contr. Zool.* **No. 258**: 1–15 [7 figs 4, 5, 11].
Type locality: Furnadu Velu, Miladummadulu Atoll, Maldive Islands.

Gonodactylus glaber rotundus Borradaile, L.A. (1907). Stomatopoda from the western Indian Ocean. The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of J. Stanley Gardiner. *Trans. Linn. Soc. Lond.* **12**(Zool.): 209–216 pl. 22 [211 pl. 22 fig. 2] [as *Gonodactylus glaber* var. *rotundus*].
Type data: syntypes UMZC 2♂.
Type locality: Coetivy, Seychelle Ils and Zanzibar.

Gonodactylus aloha Manning, R.B. & Reaka, M.L. (1981). *Gonodactylus aloha*, a new stomatopod crustacean from the Hawaiian Islands. *J. Crust. Biol.* **1**(2): 190–200 figs 1–3.
Type data: holotype USNM 113724 ♀, paratypes USNM 124734 ♂, USNM 124735 ♀, USNM 124736 ♀, USNM 169595 ♀, BPBM 10 ♂ 14♀, USNM 181675 175 specimens, USNM 181522 ♂ 3♀.
Type locality: Oahu, Hawai'ian Islands.

Gonodactylus siamensis Manning, R.B. & Reaka, M.L. (1981). *Gonodactylus siamensis*, a new stomatopod crustacean from Thailand. *Proc. Biol. Soc. Wash.* **94**(2): 479–482 [190–200 figs 1–3].
Type data: holotype USNM 1891673 ♀, paratype(s) USNM 181674 10♂ 12♀.
Type locality: Sattahip, Gulf of Thailand [12°40'N 100°52'E].

Gonodactylus insularis Manning, R.B. & Reaka, M.L. (1982). *Gonodactylus insularis*, a new stomatopod crustacean from Enewetak Atoll, Pacific Ocean. *Proc. Biol. Soc. Wash.* **95**(2): 347–351 [347–351 figs 1, 2].
Type data: holotype USNM 135632 ♀, paratypes USNM 139883 2♀, USNM 189383 3♂ 10♀, USNM 189384 6♂ 5♀.
Type locality: Kidrenen Is., Eniwetok [11°22'50"N 162°10'30"E].

Gonodactylus takedai Moosa, M.K. (1989). Some stomatopods from Japanese waters, with description of a new species. *Bull. Natn. Sci. Mus., Tokyo* **15**(4): 223–229 [227].
Type data: holotype NSMT Cr9332 ♂.
Type locality: Miyanohama, Chichi-jima, Ogasawara Ils.

Gonodactylaceus gravieri Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [42, 43, 46–48 fig. 13].
Type data: holotype MNHP St 68 ♂*, paratype(s) USNM 266611 ♀.
Type locality: Poulo Condore, Vietnam.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [35–38 fig. 17].

Distribution: Cocos (Keeling) Islands, Lord Howe Island, NSW (SE oceanic), NT (N coast), QLD (NE coast, SE oceanic), WA (Central W coast, Lower W coast, NW coast, NW oceanic); Middleton and Elizabeth Reef, Indo-west Pacific (western Indian Ocean, Red Sea to Indonesia, New Caledonia, Japan and Hawai'i).
Ecology: benthic, coral reef, intertidal, predator, rock reef, sublittoral; usually under boulders and coral rubble, or in crevices in rock and sponge.
References: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [42]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [35–38 fig. 17].

Gonodactylaceus glabrous (Brooks, 1886)

Gonodactylus glabrous Brooks, W.K. (1886). Report on the Stomatopoda collected by the H.M.S. *Challenger* during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **16**: 1–116 pls 1–16 [22, 64 pl. 14 fig. 5, pl. 15 figs 7, 9].

Type data: holotype BMNH 1894.10.17.23 ♀.
Type locality: Samboangan reefs, Philippines.

Gonodactylus bossorotundus Roxas, H.A. & Estampador, E. (1930). Stomatopoda of the Philippines. *Nat. App. Sci. Manila* **1**: 93–131 pls 1–6 [94, 122 pl. 6 figs 1, 2].
Type data: neotype BMNH 1894.10.17.23 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [38–40 fig. 18].
Type locality: Samboangan reefs, Philippines.

Gonodactylus chiragra crescentus Roxas, H.A. & Estampador, E. (1930). Stomatopoda of the Philippines. *Nat. App. Sci. Manila* **1**: 93–131 pls 1–6 [94, 120 pl. 5 fig. 3] [as *Gonodactylus chiragra* var. *crescentus*].
Type data: neotype BMNH 1894.10.17.23 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [38–40 fig. 18].
Type locality: Samboangan reefs, Philippines.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [38–40 fig. 18].

Distribution: WA (NW coast); Philippines, Indonesia, Vietnam.
Ecology: coral reef; intertidal to shallow subtidal; usually amongst dead coral rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [38–40 fig. 18] (new records).

Gonodactylaceus graphurus (Miers, 1875)

Gonodactylus graphurus White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [85] [*nom. nud.*].

Gonodactylus graphurus Miers, E.J. (1875). On some new or undescribed species of Crustacea from the Samoa Islands. *Ann. Mag. Nat. Hist.* **16**: 341–344 [344].
Type data: lectotype BMNH 1970.202 ♂, paralectotype(s) BMNH 1970.203 ♀.
Subsequent designation: Ingle, R.W. (1971). On the nomenclature of *Gonodactylus graphurus* White, 1847 (nomen nudem), Miers, 1875 (Stomatopoda, Gonodactylidae). *Crustaceana* **21**(2): 220–221 [220].
Type locality: Torres Strait, QLD.

Distribution: Lord Howe Island, Norfolk Island, NT (N coast), QLD (Central E coast, NE coast), WA (NW coast); New Hebrides and southern Indonesia.
Ecology: benthic, intertidal, predator, rock bottom, sublittoral; amongst coral rubble, under boulders, and in sponges on nearshore tidal and coral reef flats and on seagrass (*Zostera*) beds.
References: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [42]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [40–42 fig. 19].

Gonodactylaceus ternatensis (de Man, 1902)

Gonodactylus ternatensis de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [914].
Type data: lectotype SMF 5779 ♀, paralectotype(s) SMF 25780 ♀.
Subsequent designation: Manning, R.B. (1978). Notes on some species of the *Falcatus* group of *Gonodactylus* (Crustacea: Stomatopoda: Gonodactylidae). *Smithson. Contr. Zool.* **No. 258**: 1–15 [11]
Type locality: Ternate, Indonesia.

Distribution: Cocos (Keeling) Islands (Aust. Terr.), QLD (Great Barrier Reef, NE coast), WA (NW coast); WA records from near Ashmore Reef; central Pacific to southern China, Indonesia, Vietnam, Thailand, Andaman Sea.
Ecology: coral reef; amongst live coral, from the intertidal to shallow subtidal zone.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [42–43 fig. 20] (new records).

Gonodactylellus Manning, 1995

Gonodactylellus Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [56–57] [gender masculine].
Type species: *Gonodactylus affinis* de Man, 1902 by original designation.

Gonodactylinus Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [66] [gender masculine].
Type species: *Gonodactylus chiragra viridis* Serène, 1954 by monotypy.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [44].

Extralimital distribution: Indo-Pacific Oceans.

Gonodactylellus affinis (de Man, 1902)

Gonodactylus chiragra affinis de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [912] [as *Gonodactylus chiragra* var. *affinis*].
Type data: lectotype SMF 5766 ♂, paralectotype(s) SMF 5766 1♂ 1♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [46–48 fig. 21].
Type locality: Ternate, Indonesia.

Gonodactylus chiragra confinis de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungs-

reise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [912 pl. 27 fig. 66] [*Gonodactylus chiragra* var. *confinis*].
Type data: holotype SMF 5771 ♂.
Type locality: Ternate, Molucca Islands, Indonesia.

Gonodactylus chiragra segregatus Lanchester, W.F. (1903). Marine crustaceans, VIII: Stomatopoda, with an account of the varieties of *Gonodactylus chiragra*. pp. 444–459 pl. 23 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*: Being an account of the work carried on and of the collections made by an expedition during the years 1899 and 1900. Cambridge : Cambridge University Press Vol. 1 [448 pl. 23 figs 6, 7] [as *Gonodactylus chiragra* var. *segregatus*, includes subspecies *segregatus* 'a' and 'b'].
Type data: lectotype UMZC ♀, paralectotype(s) UMZC 4 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [46–48 fig. 21].
Type locality: Maldive Islands, Laccadive Islands, Macclesfield Bank, South China Sea.

Taxonomic decision for synonymy: Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [2 fig. 1].

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); west Pacific Ocean, Philippines, Macclesfield Bank, South China Sea, Vietnam, Thailand, Indonesia.
Ecology: benthic, coral reef, predator, rock reef, sublittoral; crevices in rock, coral, sponge or coralline algae, reef flat 60–80 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [46–48 fig. 21] (new records).

Gonodactylellus annularis Erdmann & Manning, 1998

Gonodactylellus annularis Erdmann, M.V. & Manning, R.B. (1998). Preliminary descriptions of nine new stomatopod crustaceans from coral reef habitats in Indonesia and Australia. *Raffles Bull. Zool.* **46**(2): 615–626 [617–618 fig. 1b].
Type data: holotype USNM 260908 ♂, paratype(s) LIPI ♂ ♀.
Type locality: Greater Sunda Is., Kapoposang, Spermonde Archipelago, Indonesia [04°41'42"S 110°57'00"E].

Distribution: NT (N coast), QLD (Great Barrier Reef), WA (N coast); Andaman Sea, Indonesia, possibly from New Caledonia.
Ecology: coral reef; amongst rubble, live corals, and algae to a depth of at least 18 m in Australia.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [48–49 fig. 22] (new records).

Gonodactylellus caldwelli Erdmann & Manning, 1998

Gonodactylellus caldwelli Erdmann, M.V. & Manning, R.B. (1998). Preliminary descriptions of nine new stomatopod crustaceans from coral reef habitats in Indonesia and Australia. *Raffles Bull. Zool.* **46**(2): 615–626 [618–619 fig 1c].
Type data: holotype USNM 260910 ♂, paratypes LIPI ♂, USNM ♂, AM P58560 ♂.
Type locality: Spermonde, Indonesia.

Distribution: QLD (NE coast), WA (NW coast); Indonesia.
Ecology: benthic, coral reef, predator, sublittoral; shallow water (1 m or less) on coral reefs exposed to relatively strong wave action.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [49–51 fig. 23].

Gonodactylellus erdmanni Ahyong, 2001

Gonodactylellus erdmanni Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [51–53 fig. 24].
Type data: holotype AM P57028, paratypes AM P57029 1♂ 1♀, AM P17732 ♂, AM P56155 1 ♂ 1♀, NMV J37807 ♀, QM W14409 ♀, QM W14472 ♀, QM W22264 ♀.
Type locality: near Townsville.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indonesia, and Vietnam to the central Pacific and Moorea, French Polynesia.
Ecology: coral reef, rock reef; common in rock and coral crevices and amongst rubble and epiphytes from the reef flat to depths exceeding 30 m.

Gonodactylellus espinosus (Borradaile, 1898)

Gonodactylus espinosus Borradaile, L. A. (1898). On some Crustaceans from the South Pacific-Part I: Stomatopoda. *Proc. Zool. Soc. Lond.* **1898**: 32–38 pls 5–6 [35 figs 5a–b, pl. 5].
Type data: holotype UMZC 15.09.1897 ♂.
Type locality: Rotuma.

Distribution: Cocos (Keeling) Islands (Aust. Terr.); central Pacific from Rotuma, Fiji, the Line Islands, French Polynesia.
Ecology: intertidal, shallow subtidal; coral reef flats, notably in high-energy surge zones.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [53–55 fig. 25] (new records).

Gonodactylellus incipiens (Lanchester, 1903)

Gonodactylus chiragra incipiens Lanchester, W.F. (1903). Marine crustaceans, VIII: Stomatopoda, with an account of the varieties of *Gonodactylus chiragra*. pp. 444–459 pl. 23 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*: Being an account of the work carried on and of the collections made by an

expedition during the years 1899 and 1900. Cambridge : Cambridge University Press Vol. 1 [451 pl. 23 fig. 10].
Type data: lectotype UMZC 11.01.1897 ♀, paralectotype(s) UMZC.
Subsequent designation: Manning, R.B. (1967). Notes on the *demanii* section of genus *Gonodactylus* Berthold with descriptions of three new species (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **123**(3618): 1–27 figs 1–8.
Type locality: Funafuti Is., Ellice Ils [Tuvalu], SW Pacific.

Distribution: Coral Sea Territories (Herald Group); Pacific Ocean (Eniwetok Atoll, the Phoenix Islands and French Polynesia).
Ecology: benthic, coral reef, littoral, predator, rock reef, sublittoral; reef flats amongst rubble and rock.
References: Manning, R.B. (1967). Notes on the *demanii* section of genus *Gonodactylus* Berthold with descriptions of three new species (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **123**(3618): 1–27 figs 1–8; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [55–56 fig. 26] (new records).

Gonodactylellus micronesicus (Manning, 1971)

Gonodactylus micronesica Manning, R.B. (1971). Two new species of *Gonodactylus* (Crustacea, Stomatopoda) from Eniwetok Atoll, Pacific Ocean. *Proc. Biol. Soc. Wash.* **84**: 73–80 [77–79 fig. 2].
Type data: holotype USNM 135628 ♀.
Type locality: W of Parry (Elmer) Is., Eniwetok Atoll [11°24'05"S 162°19'05"E].

Distribution: Territory of Ashmore & Cartier Islands, Coral Sea Territories, Cocos (Keeling) Islands (Aust. Terr.), QLD (Great Barrier Reef, NE coast); Enewetok Atoll.
Ecology: benthic, coral reef, low intertidal, shallow subtidal; from live coral and coral rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [56–58 fig. 27] (new records).

Gonodactylellus molyneux Ahyong, 2001

Gonodactylellus molyneux Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [58–59 fig. 28].
Type data: holotype AM P56159 ♂, paratypes AM P56160 2♂ 4♀, AM P56161 ♂, AM P56811 ♂, AM P57030–57032 1♂ 2♀.
Type locality: Queensland, Arlington Reef [16°43'S 146°05'E].

Distribution: QLD (NE coast, Great Barrier Reef); known only from limital area.
Ecology: coral reef; amongst rubble and in cavities in sponge and algae encrusted reef rock from the reef flat to less than 5 m depth.

Gonodactylellus rubriguttatus Erdmann & Manning, 1998

Gonodactylellus rubriguttatus Erdmann, M.V. & Manning, R.B. (1998). Preliminary descriptions of nine new stomatopod crustaceans from coral reef habitats in Indonesia and Australia. *Raffles Bull. Zool.* **46**(2): 615–626 [619–620 fig. 1d].
Type data: holotype USNM 260912 ♂, paratypes LIPI ♂ ♀, USNM 260913 ♂ ♀.
Type locality: Tanjung Torosie, Komodo, Indonesia.

Distribution: NSW (SE oceanic), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indonesia, New Caledonia.
Ecology: coral reef; amongst coral rubble, bryozoans, sponge, live coral in depths between 6–20 m and 120 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [60–61 fig. 29] (new records).

Gonodactylellus snidsvongi (Naiyanetr, 1987)

Gonodactylus snidsvongi Naiyanetr, P. (1987). Two new stomatopod crustaceans from Thailand with a key to the genus *Manningia* Serène, 1962. *Crustaceana* **53**(3): 237–242 [237 fig. 1].
Type data: holotype RMNH S1041 ♀.
Type locality: Ko Kangkao, Chonburi Province, Thailand [12°35'N 101°31'E].

Distribution: WA (N coast); Western Pacific from the Gulf of Thailand, Vietnam, Indonesia, Japan, possibly Hawai'i.
Ecology: coral reef; shallow water amongst rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [61–63 fig. 30] (new records).

Gonodactylellus viridis (Serène, 1954)

Gonodactylus chiragra viridis Serène, R. (1954). Observations Biologiques sur les Stomatopodes. *Mém. Inst. Océanogr. Nhatrang* **8**: 1–93 figs 1–15 pls 1–10 [6, 7, 10, 74–76, 87 fig. 13–3] [as *Gonodactylus chiragra* var. *viridis*].
Type data: lectotype USNM 266628 ♂.
Subsequent designation: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [66–68].
Type locality: Station Cauda, Cauda Bay, Vietnam.

Distribution: WA (N coast); Andaman Sea to Malaysia, Indonesia, Vietnam, Japan, the Philippines, New Caledonia, Samoa.
Ecology: intertidal, reef flat; Australian record from a cavity in *Spongodes* (Porifera), elsewhere a common intertidal species.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [63–64 fig. 31] (new records, revised status).

Gonodactyloideus Manning, 1984

Gonodactyloideus Manning, R.B. (1984). *Gonodactyloideus cracens* n.gen., n.sp., a new Stomatopod Crustacean from Western Australia. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(9): 83–86 [84] [gender masculine].
Type species: *Gonodactyloideus cracens* Manning, 1984 by original designation.

Extralimital distribution: Oriental Region—Philippines, Indonesia. See: Moosa, M.K. (1986). Stomatopod Crustacea. pp. 367–441 figs 1–11 pl. 1 *in* Forest, J. Résultats des Campagnes Musorstom I & II, Philippines. *Mém. Mus. natn. Hist. nat. Paris* **133**: 1–525.

Gonodactyloideus cracens Manning, 1984

Gonodactyloideus cracens Manning, R.B. (1984). *Gonodactyloideus cracens* n.gen., n.sp., a new Stomatopod Crustacean from Western Australia. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(9): 83–86 [84 fig. 1].
Type data: holotype NTM Cr.000473 ♀*.
Type locality: N of Dampier Archipelago, WA.

Distribution: WA (NW coast); Indonesia.
Ecology: benthic, predator, sublittoral; from depths of 80 m to 96–107 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [65 fig. 32].

Gonodactylus Berthold, 1827

Gonodactylus Berthold, A.A. (1827). *Latreille's Natürliche Familien des Thierreichs, aus dem Französischen met Ammerkungen und Zusätzen.* Weimar : Landes-Industrie-Comtoirs 606 pp. [271] [gender masculine].
Type species: *Squilla chiragra* Fabricius, 1781 by subsequent designation, see International Commission of Zoological Nomenclature (1966). Opinion 785. *Pseudosquilla* Dana, 1852, and *Gonodactylus* Berthold, 1827 (Crustacea, Stomatopoda): designation of type species under the Plenary Powers. *Bull. Zool. Nomencl.* **23**: 204–206 (name placed on *Official List* of I.C.Z.N.).

Extralimital distribution: Indo-Pacific Oceans. See: Moosa, M.K. (1986). Stomatopod Crustacea. pp. 367–441 figs 1–11 pl. 1 *in* Forest, J. Résultats des Campagnes Musorstom I & II, Philippines. *Mém. Mus. natn. Hist. nat. Paris* **133**: 1–525.

Gonodactylus childi Manning, 1971

Gonodactylus childi Manning, R.B. (1971). Two new species of *Gonodactylus* (Crustacea, Stomatopoda) from Eniwetok Atoll, Pacific Ocean. *Proc. Biol. Soc. Wash.* **84**: 73–80 [75–77].
Type data: holotype USNM 135624 ♂, paratype(s) USNM 135625 2♂.
Type locality: Runit (Yvonne) Is., Eniwetok Atoll [11°32'47"S 162°21'56"E].

Distribution: QLD (Great Barrier Reef, NE coast), WA (N coast); Eniwetok Atoll, central Pacific Ocean, French Polynesia, Indonesia.
Ecology: coral reef, reef flat; in tide pools and amongst coral rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [67 fig. 33] (new records).

Gonodactylus chiragra (Fabricius, 1781)

Squilla chiragra Fabricius, J.C. (1781). *Species Insectorum* exhibentes eorum Differentias, specificas, Synonyma auctorum, Loca natalia, Metamorphosia adiectis Observationibus, Descriptionibus. Hamburg & Kilonii : C.E. Bohnii Vol. 2 viii 552 pp. [515].
Type data: neotype RMNH S860 ♂.
Subsequent designation: Manning, R.B. (1981). Neotype selection for the stomatopod *Squilla chiragra* Fabricius, 1781. *Crustaceana* **40**(2): 217–219.
Type locality: Amboina [Ambon], Indonesia.

Distribution: NT (N coast), QLD (NE coast), WA (Central W coast, Lower W coast, NW coast, NW oceanic); Indo-west Pacific Oceans.
Ecology: benthic, coral reef, intertidal, predator, rock reef, sublittoral; common on onshore and offshore reef flats under boulders or among coral rubble, especially in upper intertidal zone, but also into shallow subtidal.

Gonodactylus platysoma Wood-Mason, 1895

Gonodactylus platysoma Wood-Mason, J. (1895). *Figures and Descriptions of Nine species of Squillidae from the Collection in the Indian Museum.* Calcutta : Indian Museum i 11 pp. 4 pls [11 pl. III figs 3–9].
Type data: lectotype ZSI 3033/5 ♀, paralectotype(s) ZSI 3039/5 2♀.
Subsequent designation: Ghosh, H.C. & Manning, R.B. (1988). Types of stomatopod crustaceans in the Zoological Survey of India. *Proc. Biol. Soc. Wash.* **101**(3): 653–661.
Type locality: Society Islands.

Gonodactylus chiragra acutus Lanchester, W.F. (1903). Marine crustaceans, VIII: Stomatopoda, with an account of the varieties of *Gonodactylus chiragra*. pp. 444–459 pl. 23 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*: Being an account of the work carried on and of the collections made by an expedition during the years 1899 and 1900. Cambridge : Cambridge University Press Vol. 1 [447, 456 pl. 23 fig. 3] [as *Gonodactylus chiragra* var. *acutus*].
Type data: type status and whereabouts unknown* (probably UMZC).
Type locality: Minikoi, Laccadive Islands [Lakshadweep].

Gonodactylus chiragra tumidus Lanchester, W.F. (1903). Marine crustaceans, VIII: Stomatopoda, with an account of the varieties of *Gonodactylus chiragra*. pp. 444–459 pl. 23 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*: Being an account of the work carried on and of the collections made by an expedition during the years 1899 and 1900. Cambridge : Cambridge University Press Vol. 1 [447, 456 pl. 23 fig. 1] [as *Gonodactylus chiragra* var. *tumidus*].
Type data: type status and whereabouts unknown* (probably UMZC).
Type locality: Minikoi, Laccadive Islands [Lakshadweep].

Taxonomic decision for synonymy: Manning, R.B. (1968). Stomatopod Crustacea from Madagascar. *Proc. U.S. Natn. Mus.* **124**(3641): 1–61 figs 1–16 [44].

Distribution: Christmas Island (Aust. Terr.), Cocos (Keeling) Islands, Lord Howe Island, NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW oceanic); French Polynesia to Okinawa, Australia, Indo-Malayan region to western Indian Ocean.
Ecology: benthic, coral reef, intertidal, predator, sublittoral; coral reef flats under coral boulders or live coral heads.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [71–72 fig. 35].

Gonodactylus smithii Pocock, 1893

Gonodactylus smithii Pocock, R.I. (1893). Report upon the Stomatopod crustaceans obtained by P.W. Basset-Smith Esq., surgeon R.N. during the cruise, in the Australia and China Sea, of H.M.S. "Penguin", commander W.V. Moore. *Ann. Mag. Nat. Hist.* **6**: 473–479 pl. 20B [475 pl. 20B fig. 1].
Type data: syntypes BMNH 1892.4.18.231–232 1♂ 1♀.
Type locality: Arafura Sea.

Gonodactylus chiragra anancyrus Borradaile, L.A. (1900). On the Stomatopoda and Macrura brought by Dr. Willey from the South seas. pp. 395–428 *in* Willey, A. (ed.) *On the Stomatopoda and Macrura brought by Dr Willey from the South Seas.* Cambridge : Cambridge University Press Pt 4 [395, 397, 401].
Type data: type status and whereabouts unknown* (probably UMZC).
Type locality: Talili Bay, New Britain, and Lifu, Loyalty Islands.

Gonodactylus arabica Ghosh, H.C. (1990). Crustacea: Stomatopoda. Fauna of Lakshadweep. *State Fauna Series* **2**: 199–212 [201, 205 figs 2, 3e].
Type data: holotype ZSI C4142/2 ♀*.
Type locality: Kavaratti, Lakshadweep, western Indian Ocean.

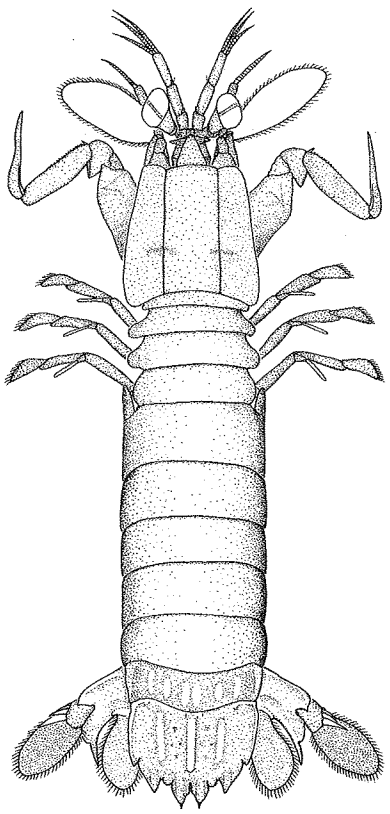
Gonodactylus minikoiensis Ghosh, H.C. (1990). Crustacea: Stomatopoda. Fauna of Lakshadweep. *State Fauna Series* **2**: 199–212 [201, 202 fig. 1].
Type data: holotype ZSI C4141/2 ♀*.
Type locality: Minikoy, Lakshadweep, western Indian Ocean.

Taxonomic decision for synonymy: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [76] (for *Gonodactylus chiragra anancyrus*); Cappola, V. & Manning, R.B. (1995). Crustacea Stomatopoda. Research on the coast of Somalia. *Trop. Zool.* **7**(2): 271–291.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Okinawa and New Caledonia to Vietnam and Australia and westward to the western Indian Ocean, including Persian Gulf.
Ecology: benthic, coral reef, intertidal, predator, sublittoral; amongst dead coral rubble and live coral, to 80 m depth.

HEMISQUILLIDAE

INTRODUCTION



Hemisquilla australiensis

[S. Ahyong]

Manning (1980) recognised this family for a single genus, *Hemisquilla*. Species of *Hemisquilla* are 'smashers', but unlike gonodactylids and takuids, occur only in temperate waters and occupy soft substrates in which they construct burrows.

Diagnosis

Eye with cornea subglobular to subcuboid, set obliquely on stalk. Cornea with six rows of rectangular ommatidia in the midband. Protopod of antenna with flattened, articulated plate dorsally. Rostral plate triangular. Maxillipeds three and four with propodi ovate, not ribbed or beaded ventrally; body subcylindrical, articulation compact. Raptorial claw with ischiomeral articulation terminal; dactylus unarmed, with outer basal margin inflated; propodus opposable margin with two movable spines proximally. Abdominal somites one to five each with marginal carina only; somite six with dorsal carinae unarmed. Telson with distinct median carina and anterior submedian carina in addition to carinae of primary teeth; submedian teeth with movable apices; submedian denticles present in adults. Uropodal protopod terminating in a single primary spine; outer margin with strongly convex lobe with at most a minute outer spine; articulation of exopod segments terminal; outer margin of proximal segment of exopod with straight movable spines.

Reference

Manning, R.B. (1980). The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proc. Biol. Soc. Wash.* **93**(2): 362–372

HEMISQUILLIDAE Manning, 1980

Hemisquillidae Manning, R.B. (1980). The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proc. Biol. Soc. Wash.* **93**(2): 362–372 [366, 369].
Type genus: *Hemisquilla* Hansen, 1895.

Hemisquilla Hansen, 1895

Hemisquilla Hansen, H.J. (1895). Isopoden, Cumaceen, und Stomatopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gc): 1–105 pls 1–8 [72] [gender feminine].
Type species: *Gonodactylus styliferus* H. Milne Edwards, 1837 (= *Gonodactylus ensigera* Owen, 1832) by monotypy.

Extralimital distribution: Australian Region, Nearctic Region, Neotropical Region; eastern Pacific and western Atlantic.

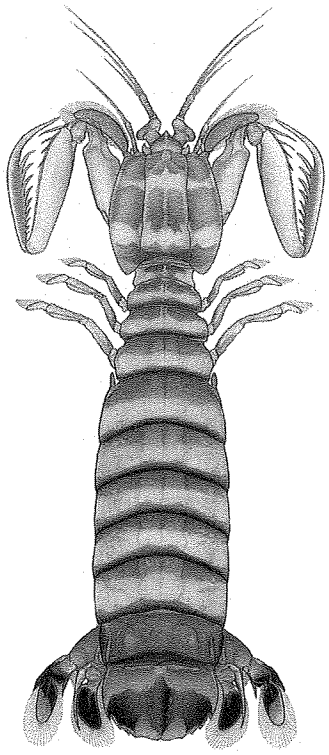
Hemisquilla australiensis Stephenson, 1967

Hemisquilla australiensis Stephenson, W. (1967). A comparison of Australasian and American specimens of *Hemisquilla ensigera* (Owen, 1832) (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **120**(3564): 1–18.
Type data: holotype AM P11695 ♂.
Type locality: East of Broken Bay, NSW.

Distribution: NSW (Central E coast, Lower E coast), TAS (Bass Strait), VIC (Bass Strait); New Zealand.
Ecology: benthic, burrowing, continental shelf, continental slope; soft sandy-mud substrates in depths between 18 m and 439–476 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [76–78 fig. 37].

LYSIOSQUILLIDAE

INTRODUCTION



Lysiosquilla tredecimdentata
[from Manning 1995: pl. 24]

This family comprises three genera, *Lysiosquilla* Dana, 1852, *Lysiosquillina* Manning, 1995, and *Lysiosquilloides* Manning, 1977, all of which are 'spearers'. Lysiosquillids feed primarily on fish and live in monogamous pairs in burrows on coral reefs, and in intertidal and subtidal sand and mudflats. All three lysiosquillid genera are represented in Australian waters and can be identified using the key provided by Ahyong (2001).

Diagnosis

Cornea strongly bilobed, set obliquely on stalk; typically with six rows of hexagonal ommatidia in the mid-band. Antennal protopod with one mesial and two ventral papillae. Third and fourth maxillipeds with propodi ribbed or beaded ventrally. Abdominal segments depressed, loosely articulated. Raptorial claw with ischiomeral articulation terminal, dactylus uninflated basally. Pereiopods 1–3 with slender or ovate endopods. Telson lacking distinct median carina; primary teeth fused into margin, presenting at most appearance of short projections. Uropodal protopod with at most two primary spines; dorsal margin of uropodal endopod lacking strong dorsal proximal fold; exopod segments articulate terminally.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

LYSIOSQUILLIDAE Giesbrecht, 1910

Lysiosquillinae Giesbrecht, W (1910). Stomatopoden, Erste Theil. *Fauna und Flora des Golfes von Neapel, Monographie* **33**: 1–239 pls 1–11 [148].
Type genus: *Lysiosquilla* Dana, 1852.

Lysiosquilla Dana, 1852

Lysiosquilla Dana, J.D. (1852). *Crustacea. U.S. Exploring Expedition. During the years 1838, 1839, 1840, 1841, 1842.* Under the command of Charles Wilkes, U.S.N. Philadelphia : C. Sherman Vol. 13 1618 pp. [Pt 1: 1–685; Pt 2: 686–1618; gender feminine].
Type species: *Lysiosquilla inornata* Dana, 1852 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [539] (name on Official List of International Commission on Zoological Nomenclature).

Extralimital distribution: Atlantic-Indo-Pacific Oceans. See: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Lysiosquilla colemani Ahyong, 2001

Lysiosquilla colemani Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [130–132 fig. 63].
Type data: holotype AM P42760 ♂, paratypes AM P14917 ♂, AM P16227 ♂, AM P16228 ♂, AM P12379 ♂.
Type locality: NSW, E of Long Reef [33°45'S 151°19'E].

Distribution: NSW (Central E coast), QLD (Central E coast).
Ecology: benthic, continental shelf; soft, level, sandy-mud substrates from 36–280 m depth.

Lysiosquilla sulcirostris Kemp, 1913

Lysiosquilla maculata sulcirostris Kemp, S. (1913). An account of the Crustacea Stomatopoda of the Indo-Pacific Region based on the collection in the Indian Museum. *Mem. Indian Museum* **4**(1): 1–217, 9 pls [4, 10, 110, 116 pl. 8: figs 92, 93] [as *Lysiosquilla maculata* var. *sulcirostris*].
Type data: holotype ZSI 7564/10 ♂.
Type locality: Andaman Ils [12°30'N 92°45'E].

Distribution: WA (NW coast); Indo-West Pacific from scattered localities between Madagascar and Japan.
Ecology: benthic, soft bottom, subtidal; to a depth of 33 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [132–133 fig. 64].

Lysiosquilla suthersi Ahyong, 2001

Lysiosquilla suthersi Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [134–135 fig. 65].
Type data: holotype QM W24225 ♂.
Type locality: off Cairns, Queensland [17°00.0'S 146°24.5'E].

Distribution: QLD (NE coast); Gulf of Thailand, and Andaman Sea.
Ecology: benthic, continental shelf, subtidal; trawled from level substrates, presumably sand or mud.

Lysiosquilla tredecimdentata Holthuis, 1941

Lysiosquilla maculata tredecimdentata Holthuis, L.B. (1941). The Stomatopoda of the Snellius Expedition. Biological results of the Snellius Expedition XII. *Temminckia* **6**: 241–294 [273 fig. 6] [as *Lysiosquilla maculata* var. *tredecimdentata*].
Type data: holotype RMNH S 76 ♀.
Type locality: Hedjaff, near Aden.

Distribution: NSW (Central E coast), QLD (NE coast), WA (N coast); western Indian Ocean to India, Thailand, Vietnam, the central Pacific.
Ecology: benthic, intertidal, predator, sublittoral; occupies deep burrows on intertidal sand and mudflats, and level subtidal substrates.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [135–137 fig. 66].

Lysiosquillina Manning, 1995

Lysiosquillina Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [133] [gender feminine].
Type species: *Squilla maculata* Fabricius, 1793 by original designation.

Extralimital distribution: western Atlantic, Indo-west Pacific Oceans. See: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust.*

Lysiosquillina maculata (Fabricius, 1793)

Squilla maculata Fabricius, J.C. (1793). *Entomologica systemica emendata et acuta*, Secundum classes, ordines, genera, species, adjectis synonymis, locis, observationibus, descriptionibus. Hafniae : C.G. Proft Vol. 2 viii 519 pp. [511].
Type data: neotype AM P58558 ♂ (TL 195 mm).
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [137–139 fig. 67].
Type locality: Manado, Indonesia [01°29'N 124°51'E].

Lysiosquilla miersii De Vis, C.W. (1883). Description of a species of *Squilla* from Moreton Bay. *Proc. Linn. Soc. N.S.W.* **7**(3): 321–322 [321] [as *Lysiosquilla Miersii*].
Type data: holotype QM G653 ♀.
Type locality: Moreton Bay, QLD.

Taxonomic decision for synonymy: Stephenson, W. (1953). Notes on Australian Stomatopoda (Crustacea) in collections of the Queensland Museum. *Mem. Qld Mus.* **13**(1): 40–49 [44].

Distribution: Cocos (Keeling) Islands (Aust. Terr.), QLD (Central E coast, NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: benthic, intertidal, littoral, predator, sand bottom, sublittoral; constructs deep burrows in intertidal to shallow subtidal sand and mud flats.

Lysiosquillina sulcata (Manning, 1978)

Lysiosquilla sulcata Manning, R.B. (1978). Synopses of the Indo-West Pacific species of *Lysiosquilla* Dana, 1852 (Crustacea: Stomatopoda: Lysiosquillidae). *Smithson. Contr. Zool.* **259**: 1–16 [7–10 figs 4–6, 10].
Type data: holotype USNM 156253 ♂, paratypes BMNH 1935.5.28.2-3 ♂, MNHP ♂, RMNH ♂, SMF ♂ 2♀, USNM 124770 ♀.
Type locality: between Mafilefuri and Mara Ils, Fadittolu Atoll, Maldive Ils [5°21'30"N 73°25'15"E].

Distribution: QLD (NE coast); western Indian Ocean to Indonesia, Irian Jaya, Saipan, Gilbert Islands.
Ecology: benthic, burrowing, sand bottom, subtidal; occupies deep burrows in sand, often in association with coral reefs, to a depth of at least 6 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [139–140 fig. 68] (new records).

Lysiosquilloides Manning, 1977

Lysiosquilloides Manning, R.B. (1977). A monograph of the West African stomatopod Crustacea. *Atlantide Rep.* **12**: 25–181 [84–85] [gender masculine].
Type species: *Lysiosquilla aulacorhynchus* Cadenat, 1957 by monotypy.

Extralimital distribution: E Atlantic and Indo-west Pacific Oceans.

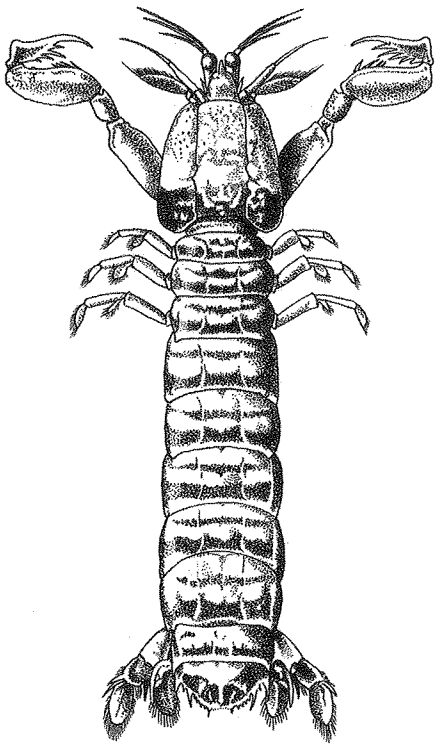
Lysiosquilloides siamensis (Naiyanetr, 1980)

Lysiosquilla siamensis Naiyanetr, P. (1987). Two new stomatopod crustaceans from Thailand with a key to the genus *Manningia* Serène, 1962. *Crustaceana* **53**(3): 237–242 [35–37 pl. 34 figs a–d].
Type data: holotype SMF 10745 ♂, paratypes SMF 10746 ♂, USNM 189295 ♂.
Type locality: Gulf of Thailand, Thailand.

Distribution: NT (N coast), QLD (Gulf of Carpentaria); Gulf of Thailand.
Ecology: unknown.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [140–141 fig. 69] (new records).

NANNOSQUILLIDAE

INTRODUCTION



Acanthosquilla multifasciata
[from Wood-Mason 1895]

This family includes 13 genera, of which eight are represented in the Indo-west Pacific, and six, *Acanthosquilla*, *Alachosquilla*, *Austrosquilla*, *Bigelowina*, *Hadrosquilla* and *Pullosquilla*, have been recorded from Australian waters. All are 'spearers'. Like lysiosquillids, nannosquillids occupy burrows in soft substrates and may be abundant on intertidal sand and mudflats. Ahyong (2001) provided identification keys.

Diagnosis

Cornea subglobular; typically with six rows of hexagonal ommatidia in the mid-band. Third and fourth maxillipeds with propodi ribbed or beaded ventrally. Abdominal segments loosely articulated. Raptorial claw with ischiomeral articulation terminal, dactylus uninflated basally; ischium usually exceeding half merus length. Pereiopods 1–2 with subcircular endopods; pereiopod 3 with ovate endopod. Telson lacking distinct median carina; primary teeth and denticles distinct. Uropodal protopod with at most two primary spines; dorsal margin of uropodal endopod with strong dorsal proximal fold; exopod segments articulate terminally.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Wood-Mason, J. (1895). *Figures and Descriptions of Nine species of Squillidae from the Collection in the Indian Museum.* Calcutta : Indian Museum i 11 pp. 4 pls

NANNOSQUILLIDAE Manning, 1980

Nannosquillidae Manning, R.B. (1980). The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proc. Biol. Soc. Wash.* **93**(2): 362–372 [368].
Type genus: *Nannosquilla* Manning, 1963.

Acanthosquilla Manning, 1963

Acanthosquilla Manning, R.B. (1963). Preliminary revision of the genera *Pseudosquilla* and *Lysiosquilla* with descriptions of six new genera (Crustacea: Stomatopoda). *Bull. Mar. Sci. Gulf Caribb.* **13**(2): 308–328 [319] [gender feminine].
Type species: *Lysiosquilla multifasciata* Wood-Mason, 1895 by original designation.

Extralimital distribution: Atlantic-Indo-Pacific Oceans.

Acanthosquilla derijardi Manning, 1970

Acanthosquilla derijardi Manning, R.B. (1970). Some stomatopod crustaceans from Tuléar, Madagascar. *Bull. Mus. Natn. Hist. Nat. Paris (2)***41**(6): 1429–1441 [1434–1438 fig. 2] [dated 1969, published 1970].
Type data: holotype MNHP ♀, paratype(s) USNM 127452 2♂ 1♀.
Type locality: Grand Recif, Tulear, Madagascar.

Acanthosquilla multispinosa Blumstein, R. (1974). Stomatopod crustaceans from the Gulf of Tonkin with the description of new species. *Crustaceana* **26**(2): 113–126 [113].
Type data: holotype ZIL ♀.
Type locality: Gulf of Tonkin, Vietnam [19°00'N 107°30'E].

Acanthosquilla manningi Makarov, R.R. (1978). New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from the Tonkin Bay (Vietnam). *Zool. Zh.* **57**: 176–189 [177 fig. 1] [published Feb., 1978].
Type data: holotype VNIRO ♂, paratype(s) VNIRO 2 ♀.
Type locality: Tonkin Bay, Vietnam [15°58'N 109°22'E].

Acanthosquilla sirindhorn Naiyanetr, P. (1995). *Acanthosquilla sirindhorn* n.sp., a new mantis shrimp from Thailand (Stomatopoda, Nannosquillidae). *Crustaceana* **68**(4): 409–417 [409–417 pl. 1,figs 1, 2].
Type data: holotype RMNH S1155 ♀, paratype(s) CUMZB ♀.
Type locality: Pattani, Gulf of Thailand.

Taxonomic decision for synonymy: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [141–143]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [144 fig. 70].

Distribution: QLD (NE coast); western Indian Ocean and the Red Sea to the Indo-Malayan region, Japan, New Caledonia.
Ecology: benthic, soft bottom, subtidal; to a depth of 33 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [144 fig. 70] (new records).

Acanthosquilla multifasciata (Wood-Mason, 1895)

Lysiosquilla multifasciata Wood-Mason, J. (1895). *Figures and Descriptions of Nine species of Squillidae from the Collection in the Indian Museum.* Calcutta : Indian Museum i 11 pp. 4 pls [2 pl. 1 fig. 4–7].
Type data: holotype ZSI 3342/7 ♀*.
Type locality: Bombay, India.

Lysiosquilla biminiensis pacificus Borradaile, L.A. (1900). On the Stomatopoda and Macrura brought by Dr. Willey from the South seas. pp. 395–428 *in* Willey, A. (ed.) *On the Stomatopoda and Macrura brought by Dr Willey from the South Seas.* Cambridge : Cambridge University Press Pt 4 [395, 398, 403] [as *Lysiosquilla biminiensis* var. *pacificus*].
Type data: holotype UMZC ♂*.
Type locality: Blanche Bay, New Britain.

Lysiosquilla valdiviensis Jurich, B. (1904). Die Stomatopoden der deutschen Tiefsee-Expedition. *Wiss. Ergeb. deutschen Tiefsee-Exped. Valdivia 1898–1899* **7**: 359–408 pls 25–30 [372 pl. 26 fig. 2] [as *Lysiosquilla Valdiviensis*].
Type data: type status and whereabouts unknown* (probably deposited in ZMB).
Type locality: unknown.

Taxonomic decision for synonymy: Manning, R.B. (1962). A redescription of *Lysiosquilla biminiensis pacificus* Borradaile (Stomatopoda). *Crustaceana* 4(4): 301–306 [301–306]; Kemp, S. (1913). An account of the Crustacea Stomatopoda of the Indo-Pacific Region based on the collection in the Indian Museum. *Mem. Indian Museum* **4**(1): 1–217, 9 pls [122–123].

Distribution: QLD (Gulf of Carpentaria, NE coast), WA (NW coast); Red Sea to Vietnam, Australia, Japan and Hawai'i.
Ecology: benthic, littoral, mangrove, sublittoral; burrows constructed in mud or sand substrates, from shore down to 43 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [144–146 fig. 71].

Alachosquilla Schotte & Manning, 1993

Alachosquilla Schotte, M. & Manning, R.B. (1993). Stomatopod Crustacea from Tobago, West Indies. *Proc. Biol. Soc. Wash.* **106**(3): 566–581 [572–573].
Type species *Lysiosquilla digueti* Coutière, 1905, by original designation.

Extralimital distribution: W Atlantic, E Pacific and Indo-west Pacific Oceans.

Alachosquilla vicina (Nobili, 1904)

Lysiosquilla vicina Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [229].
Type data: holotype MNHP (probable depository institution).
Type locality: Obock, Red Sea.

Distribution: NT (N coast), QLD (NE coast); Red Sea and Gulf of Aden to the Philippines.
Ecology: intertidal, shallow subtidal; constructs U-shaped burrows, live in male-female pairs.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [147–148 fig. 72] (new records).

Austrosquilla Manning, 1966

Austrosquilla Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [127] [gender feminine].
Type species: *Lysiosquilla vercoi* Hale, 1924 by original designation.

Range: endemic to temperate Australia.

Austrosquilla melanocauda (Kunze, 1981)

Hadrosquilla melanocauda Kunze, J.C. (1981). A new species of *Hadrosquilla* Manning, 1966 from eastern Australia (Stomatopoda: Lysiosquillidae). *Crustaceana* **40**(1): 1–4 [1–4 fig. 1].
Type data: holotype AM P28297 ♀.
Type locality: Botany Bay, New South Wales.

Distribution: NSW (Central E coast); known only from type locality.
Ecology: unknown.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [149–150 fig. 73].

Austrosquilla middletoni Ahyong, 2001

Austrosquilla middletoni Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [150–152 fig. 74].
Type data: holotype AM P57123 ♂, paratypes AM P57124 6♂ 6♀, AM P57125 3♂ 2♀, AM P57126 1♂ 1♀, AM P57127 1♂ 1♀, SAMA C5745 2♂ 1♀, SAMA C5748 1♂ 2♀, SAMA C5784 4♂ 6♀, SAMA C5789, SAMA C5790 ♀, SAMA C5791 2♂ 2♀, SAMA C5793 2♂ 3♀, AM C5794 ♂, SAMA C5795 ♂ ♀, SAMA C5804 5♂ 5♀.
Type locality: N end Foreshore Beach, Whyalla.

Distribution: SA (S Gulfs coast); known only from limital area, from Spencer Gulf and Kingston Southeast.
Ecology: burrowing, intertidal, sand flats; on intertidal anoxic sand-flats.

Austrosquilla osculans (Hale, 1924)

Slender Mantis-shrimp

Lysiosquilla vercoi osculans Hale, H. (1924). Family Squillidae. Notes on Australian Crustacea, No. 1. *Rec. S. Aust. Mus.* **2**(4): 491–502 pls 32–33 [497, 501 pl. 33 fig. 3].
Type data: holotype SAMA C186 ♀.
Type locality: South Australia.

Distribution: SA (S Gulfs coast), TAS, VIC (Bass Strait), WA (SW coast); known only from limital area.
Ecology: benthic, intertidal, predator, sand bottom, sublittoral; soft sandy substrates to 110 m depth.
Reference: Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [127].

Austrosquilla rachelae Ahyong, 2001

Austrosquilla rachelae Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [154–156 fig. 76].
Type data: holotype AM P57109 ♂, paratypes AM P57110 3♀, AM P57111 1♂ 4♀, AM P57027 1♂ 5♀.
Type locality: Brighton Beach, Adelaide.

Distribution: SA (S Gulfs coast), VIC (Bass Strait), WA (SW coast); known only from limital area, from Victoria to south-western Australia.
Ecology: intertidal flats, sand flats; in clean, fine, well-oxygenated intertidal sand flats at the lowest tide line, constructs U-shaped burrows to a depth of about 35 cm.

Austrosquilla tsangi Ahyong, 2001

Austrosquilla tsangi Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [156–157 fig. 77].
Type data: holotype AM P56777 ♂, paratypes AM P56776 2♂ 4♀, AM P56774–56775, AM P56778 1♂ 4♀.
Type locality: NSW, N end Seven Mile Beach, Gerroa, S of creek runout [34°47'S 150°47'E].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast); from Southport, southern Queensland, to southern New South Wales.
Ecology: intertidal, sand bottom; burrows in fine sand in the low intertidal zone on exposed and semi-exposed, longshore-drift beaches, burrows simple, U-shaped, with entrances of adults typically 10–12 mm in diameter and approximately 30 cm apart.

Austrosquilla vercoi (Hale, 1924)

Verco's Mantis-shrimp

Lysiosquilla vercoi Hale, H. (1924). Family Squillidae. Notes on Australian Crustacea, No. 1. *Rec. S. Aust. Mus.* **2**(4): 491–502 pls 32–33 [499 pl. 33 fig. 2].
Type data: holotype SAMA C185 ♀.
Type locality: Robe, SA.

Distribution: SA (S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait); endemic.
Ecology: benthic, predator, sublittoral.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [157–159 fig. 78].

Bigelowina Schotte & Manning, 1993

Bigelowina Schotte, M. & Manning, R.B. (1993). Stomatopod Crustacea from Tobago, West Indies. *Proc. Biol. Soc. Wash.* **106**(3): 566–581 [574] [gender feminine].
Type species: *Lysiosquilla biminiensis* Bigelow, 1893 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Bigelowina phalangium (Fabricius, 1798)

Squilla phalangium Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [416].
Type data: neotype RMNH S1163 ♂.
Subsequent designation: Holthuis, L.B. (2000). Nomenclatural notes on eighteenth century Stomatopoda (Hoplocarida). *J. Crust. Biol.* **20**(Spec. No. 2): 12–19 [16 fig. 1].
Type locality: Bombay, India.

Coronis acanthocarpus White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [85] [*nom. nud.*].

Coronis acanthocarpus Claus, C. (1871). Die Metamorphose der Squilliden. *Abh. Ges. Wiss. Gottingen* **16**(1): 111–163 pls 1–8 [129].
Type data: holotype BMNH 957 ♀.
Type locality: NT, Port Essington [11°10'S 132°08'E].

Acanthosquilla sarasinorum Müller, F. (1886). Zur Crustaceenfauna von Trincomali. *Ber. Verh. Naturforsch. Ges. Basel* **8**(1): 470–479 pl. 4 [471, 478 pl. 4: fig. 3].
Type data: holotype NHMB (probable depository institution).
Type locality: Trincomali, Ceylon [Sri Lanka] [8°34'N 81°14'E].

Acanthosquilla humesi Manning, R.B. (1968). Stomatopod Crustacea from Madagascar. *Proc. U.S. Natn. Mus.* **124**(3641): 1–61 figs 1–16 [33–36 fig. 11].
Type data: holotype USNM 124095 ♀, paratype(s) USNM 124096 ♂ ♀.
Type locality: Ambatozavary, Nosy Bé, Madagascar.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [159–161].

Distribution: NT (N coast), QLD (NE coast), WA (N coast).
Ecology: burrowing, intertidal flats, mud flats, sand flats; constructs U-shaped burrows in intertidal sand or sandy-mud flats to less than 10 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [159–161 fig. 79].

Hadrosquilla Manning, 1966

Hadrosquilla Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [115] [gender feminine].
Type species: *Lysiosquilla perpasta* Hale, 1924 by monotypy.

Range: Australian endemic.

Hadrosquilla edgari Ahyong, 2001

Hadrosquilla edgari Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [161–162 fig. 80].
Type data: holotype AM P52768 ♂, paratypes AM P52767 ♀, SAMA C5798 ♀, TMH 14401/G-145 2♂ 1♀.
Type locality: TAS, Cloudy Bay Lagoon [43°26'S 147°13'E].

Distribution: TAS; known only from limital area.
Ecology: intertidal, shallow subtidal; burrows in sand or under rocks on sand, intertidal to shallow sublittoral.

Hadrosquilla perpasta (Hale, 1924)

Plump Mantis-shrimp

Lysiosquilla perpasta Hale, H. (1924). Family Squillidae. Notes on Australian Crustacea, No. 1. *Rec. S. Aust. Mus.* **2**(4): 491–502 pls 32–33 [497 pl. 33 fig. 1].
Type data: holotype SAMA C184 ♀.
Type locality: Beare's Point, Queenscliff, Kangaroo Island, SA.

Distribution: NSW (Lower E coast), QLD (Central E coast), SA (S Gulfs coast), VIC (Bass Strait); known only from limital area.
Ecology: benthic, intertidal, predator, sand bottom, sublittoral; burrows in sand or sandy-mud flats under rocks, debris, or amongst *Zostera*, to 5 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [163–164 fig. 81].

Pullosquilla Manning, 1978

Pullosquilla Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [18–19].
Type species: *Austrosquilla litoralis* Michel & Manning, 1971 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Pullosquilla litoralis (Michel & Manning, 1971)

Austrosquilla litoralis Michel, A & Manning, R.B. (1971). A new *Austrosquilla* (Stomatopoda) from the Marquesas Islands. *Crustaceana* **20**(3): 237–240 [237 fig. 1].
Type data: holotype USNM 127453 ♀.
Type locality: Atiheu Bay, Nuku Hiva Is., Marquesas.

Distribution: QLD (NE coast); French Polynesia to western Indian Ocean.
Ecology: sand beaches, seagrass; burrows in sand beaches, seagrass beds and reef flats in shallow water.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [165 fig. 82] (new records).

Pullosquilla pardus Moosa, 1991

Pullosquilla pardus Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [184–185 fig. 8].
Type data: holotype MNHP St.1626 ♂.
Type locality: New Caledonia.

Distribution: WA (NW coast); New Caledonia.
Ecology: benthic, subtidal; level sandy substrates in 6–50 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [165–168 fig. 83] (new records).

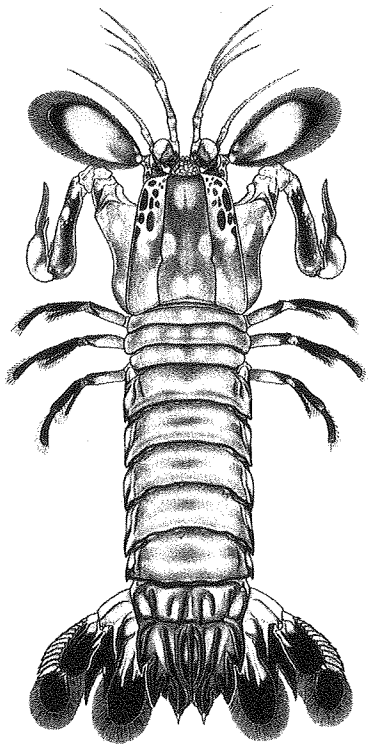
Pullosquilla thomassini Manning, 1978

Pullosquilla thomassini Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [20–21 fig. 9].
Type data: holotype MNHP ♂, paratypes USNM 156254 ♀, USNM 156276 ♂, USNM 156194 ♀, USNM 156196 2 ♀, MNHP ♂, SME 2 ♀.
Type locality: Grand Recif, Tulear, Madagascar.

Distribution: QLD (NE coast); widely distributed in Indo-West Pacific from Madagascar, Red Sea, Ogasawara Islands, French Polynesia.
Ecology: benthic, sand bottom, subtidal; burrows in sand from shore to 40 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [168 fig. 84].

ODONTODACTYLIDAE

INTRODUCTION



Odontodactylus scyllarus
[from Manning 1995: pl. 13]

Ahyong (2001) recognised a single genus in the family. Odontodactylids include the largest of the 'smashers' and occupy a range of habitats from coral reefs to soft, level substrates.

Diagnosis

Eye subglobular; cornea with six rows of rectangular ommatidia in the midband. Protopod of antenna with flattened, articulated plate dorsally. Third and fourth maxillipeds with propodi ovate, not ribbed or beaded ventrally; body subcylindrical, articulation compact. Raptorial claw with ischiomeral articulation subterminal; ischium with ventrally directed, triangular lobe; dactylus with small, short teeth on inner margin, strongly inflated basally; propodus lacking proximal movable spine or pectinations on opposable margin. Sixth abdominal somite articulating with telson. Telson with distinct median carina, and submedian denticles in adults; submedian teeth with movable apices. Uropodal protopod with two primary spines; articulation of exopod segments terminal; distal spines on outer margin of uropodal exopod straight or slightly curved, not strongly recurved anteriorly.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

ODONTODACTYLIDAE Manning, 1980

Odontodactylidae Manning, R.B. (1980). The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proc. Biol. Soc. Wash.* **93**(2): 362–372 [366, 369].
Type genus: *Odontodactylus* Bigelow, 1893.

Odontodactylus Bigelow, 1893

Odontodactylus Bigelow, R.P. (1893). Preliminary notes on the Stomatopoda of the Albatross collections and on other specimens in the National Museum. *Johns Hopk. Univ. Circ.* **12**: 100–102 [100] [gender masculine].
Type species: *Cancer scyllarus* Linnaeus, 1758 by subsequent designation, see Bigelow, R.P. (1931). Stomatopoda of the southern and eastern Pacific Ocean and the Hawaiian Islands. *Bull. Mus. Comp. Zool.* **72**(4): 105–191 figs 1–10 pls 1–2 [144].

Raoulius Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [86] [gender masculine].
Type species: *Gonodactylus cultrifer* White, 1851 by original designation.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [78].

Extralimital distribution: Atlantic-Indo-west Pacific Oceans. See: Manning, R.B. (1967). Review of the Genus *Odontodactylus* (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **123**(3606): 1–35 figs 1–8 pl. 1.

Odontodactylus cultrifer (White, 1851)

Gonodactylus cultrifer White, A. (1851). Descriptions of two species of Crustacea in the British Museum. *Proc. Zool. Soc. Lond.* **18**: 95–97 pls 15, 16 [96 pl. 16 figs 1, 2] [dated 1850, published 1851, see Waterhouse, F.H. (1893). List of the Dates of Delivery of the Sheets of the 'Proceedings' of the Zoological Society of London, from the commencement in 1830 to 1859 inclusive. *In*, May 2, 1893. Sir W.H. Flower, K.C.B., LL.D., F.R.S., President, in the Chair. *Proc. Zool. Soc. Lond.* **1893, XXX**: 436–440; Duncan, F.D. (1937). On the Dates of Publication of the Society's 'Proceedings', 1859–1926. With an Appendix containing the dates of Publication of 'Proceedings', 1830-1858, compiled by the late F. H. Waterhouse, and the late Henry Peavot, originally published in P.Z.S. 1893, 1913. *Proc. Zool. Soc. Lond. (A)***1937**(1): 71–83].
Type data: syntypes BMNH 49.55 2♂.
Type locality: China.

Gonodactylus carinifer Pocock, R.I. (1893). Report upon the Stomatopod crustaceans obtained by P.W. Basset-Smith Esq., surgeon R.N. during the cruise, in the Australia and China Sea, of H.M.S. "Penguin", commander W.V. Moore. *Ann. Mag. Nat. Hist.* **6**: 473–479 pl. 20B [478 pl. 20B fig. 4a,b].
Type data: holotype BMNH 92.3.26.460 ♂.
Type locality: Holothuria Bank [13°25'S 126°00'E].

Odontodactylus mindanaoensis Roxas, H.A. & Estampador, E. (1930). Stomatopoda of the Philippines. *Nat. App. Sci. Manila* **1**: 93–131 pls 1–6 [94, 115 pl. 4 figs 1–3].
Type data: type lost.
Type locality: south coast of Cotabato, Mindanao, Philippines.

Odontodactylus cultrifer tridentata Serène, R. (1954). Observations Biologiques sur les Stomatopodes. *Mém. Inst. Océanogr. Nhatrang* **8**: 1–93 figs 1–15 pls 1–10 [6, 7, 8, 72 pl. 6 figs 7, 8].
Type data: syntypes AM P12154 1♂ 1♀, USNM 3♂ 1♀*, MNHP 3♂*.
Type locality: Baie de Cauda and Baie de Nhatrang, Vietnam.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [79–80].

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (NW coast); Andaman Sea, China, the Philippines, Vietnam, the Indo-Malayan region to New Caledonia.
Ecology: benthic, subtidal; level, sandy mud substrates from 7–51 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [79–81].

Odontodactylus japonicus (De Haan, 1844)

Gonodactylus japonicus De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [225 pl. 51 fig. 7] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH 32 ♀, paralectotype(s) RMNH D465 1♂ 1♀.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc.
Type locality: Japan.

Gonodactylus edwardsii Berthold, A.A. (1845). Ueber verschiedene neue oder seltene Reptilien aus Neu Granada und Crustaceen aus China. *Nachr. Ges. Wiss. Gottingen* **1845**: 37–49 [48] [as *Gonodactylus Edwardsii*].
Type data: type status and whereabouts unknown*.
Type locality: China.

Taxonomic decision for synonymy: Manning, R.B. (1967). Review of the genus *Odontodactylus* (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **123**(3606): 1–35 figs 1–8 pl. 1 [7].

Distribution: NSW (Lower E coast), QLD (NE coast), WA (Central W coast, NW coast); Indo-West Pacific, from the western Indian Ocean to Australia and Japan.
Ecology: benthic, predator, sand bottom, sublittoral; level sand or shelly sand substrates, 30–82 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [81–83 fig. 39].

Odontodactylus latirostris (Borradaile, 1907)

Odontodactylus latirostris Borradaile, L.A. (1907). Stomatopoda from the western Indian Ocean. The Percy Sladen Trust Expedition to the Indian Ocean in 1905,

under the leadership of J. Stanley Gardiner. *Trans. Linn. Soc. Lond.* **12**(Zool.): 209–216 pl. 22 [212 pl. 22 figs 3, 3a].
Type data: lectotype UMZC 12.11.1907 ♀, paralectotype(s) UMZC 12.11.1907 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [83–84].
Type locality: Amirante Ils, Seychelles.

Odontodactylus southwelli Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [94] [published May].
Type data: syntypes ZSI 3526/10 ♀, ZSI 3502/10 ♂ ♀, ZSI 9747/6 ♂, ZSI 7313/10 ♀.
Type locality: Andaman Ils.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [84] (also new records).

Distribution: QLD (Great Barrier Reef), WA (NW coast); Amirante Islands to the Andaman Sea, Indonesia, New Caledonia.
Ecology: benthic, subtidal; from depths of 20–30 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [83–84 fig. 40].

Odontodactylus scyllarus (Linnaeus, 1758)

Cancer scyllarus Linnaeus, C. (1758). Cancer. pp. 625–634 *in, Systema naturae per Regna Tria Naturae*, Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis. 10th edn Holmiae : L. Salvius 824 pp. [633] [as *Cancer Scyllarus*].
Type data: neotype USNM 274325 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [85–86 fig. 41].
Type locality: Rinca, Greater Sunda Is., Indonesia.

Gonodactylus bleekerii Milne Edwards, A. (1868). Observations sur la faune carcinologique des îles du Cap.-Vert. *Nouv. Arch. Mus. Hist. Nat. Paris* **4**: 49–68 [65 footnote] [as *Gonodactylus Bleekerii*].
Type data: holotype MNHP 1 specimen* (Manning, R.B. (1967). Review of the Genus *Odontodactylus* (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **123**(3606): 1–35 figs 1–8 pl. 1 [15] noted that a specimen collected by Bleeker from Batavia is most likely the type although it is not labelled as such).
Type locality: Batavia [Jakarta, Indonesia].

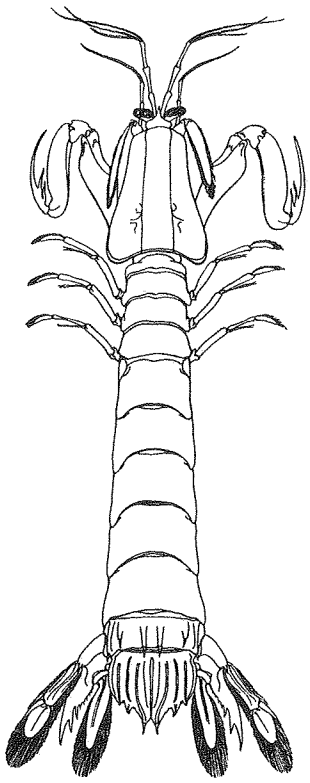
Gonodactylus elegans Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2*. Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [566, 575 pl. 52 fig. b].
Type data: syntypes BMNH 183 1 specimen, BMNH 215 1 specimen.
Type locality: Providence Island and Providence Reef, Seychelles.

Taxonomic decision for synonymy: Manning, R.B. (1967). Review of the Genus *Odontodactylus* (Crustacea: Stomatopoda). *Proc. U.S. Natn. Mus.* **123**(3606): 1–35 figs 1–8 pl. 1 [10].

Distribution: Christmas Island (Aust. Terr.), NSW (Central E coast), NT (N coast), QLD (Central E coast, NE coast); Japan to eastern Africa, New Caledonia.
Ecology: benthic, coral reef, intertidal, predator, rock reef, sublittoral; from reef flat to base of rocky or coral reefs where it burrows under coral and boulders to a depth of 30 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [85–86 fig. 41].

PARASQUILLIDAE

INTRODUCTION



Pseudosquillopsis dofleini
[from Balss 1910: fig. 1]

Parasquillidae is the sole family in the Parasquilloidea, and comprises three genera of which two are represented in Australia. All are 'spearers' and bear three teeth on the dactylus of the raptorial claw and three primary spines on the uropodal protopod. Ahyong (2001) provided identification keys.

Diagnosis

Cornea with two or three rows of hexagonal ommatidia in the mid-band. Third and fourth maxillipeds with propodi ovate, not ribbed ventrally. Body subcylindrical, compact. Raptorial claw with ischiomeral articulation terminal, dactylus uninflated basally, with three teeth on inner margin. Telson with distinct median carina; submedian teeth with movable apices; with two intermediate denticles. Uropodal protopod with three primary spines; articulation of exopod segments terminal.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Balss, H. (1910). Ostasiatische Stomatopoden. Beiträge zur Naturgeschichte Ostasiens. Herausgegeben von Dr. F. Doflein. *Abh. Wiss. Math.-Naturwiss. Klasse, Munich (Suppl.2)***2**: 1–11

PARASQUILLIDAE Manning, 1995

Parasquillidae Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [91].
Type genus: *Parasquilla* Manning, 1961.

Faughnia Serène, 1962

Faughnia Serène, R. (1962). Révision du genre *Pseudosquilla* (Stomatopoda) et définition de genres nouveaux. *Bull. Inst. Oceanogr. Monaco* **1241**: 1–27 figs 1–5 [12].
Type species: *Pseudosquilla haani* Holthuis, 1959 by original designation.

Faughnia haani (Holthuis, 1959)

Squilla empusa De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 51 fig. 6] [published from 1833–1850, Atlas dated 1844; junior homonym of *Squilla empusa* Say, 1818; as *Squilla Empusa*].
Type data: holotype RMNH ♀.
Type locality: Japan.

Pseudosquilla haani Holthuis, L.B. (1959). Stomatopod Crustacea of Suriname. *Studies on the Fauna of Suriname and other Guyanas* **10**: 173–191 [179] [*nom. nov.* for *Squilla empusa* De Haan, 1844].

Distribution: NT (N coast), WA (NW coast); Japan, Taiwan, Hong Kong, the Northwest Shelf and Arafura Sea, Australia.
Ecology: benthic, continental shelf; sand and mud substrates at depths between 78–88 m and 110–111 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [179–181 fig. 89] (new records).

Faughnia serenei Moosa, 1982

Faughnia serenei Moosa, M.K. (1982). *Faughnia serenei*, new species, a stomatopod from the South China Sea. *J. Crust. Biol.* **2**(4): 600–604 [600 figs 1–5].
Type data: holotype LIPI S1729 ♀.
Type locality: Gulf of Thailand, South China Sea [15°40'N 109°22.9–28.4'E].

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Japan, Taiwan, Philippines, Gulf of Thailand.
Ecology: benthic, continental slope; sand and mud substrates at depths of 200–310 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [181–182 fig. 90] (new records).

Pseudosquillopsis Serène, 1962

Pseudosquillopsis Serène, R. (1962). Révision du genre *Pseudosquilla* (Stomatopoda) et définition de genres nouveaux. *Bull. Inst. Oceanogr. Monaco* **1241**: 1–27 figs 1–5 [12].
Type species: *Squilla cerisii* Roux, 1828 by original designation.

Extralimital distribution: Indo-Pacific Ocean.

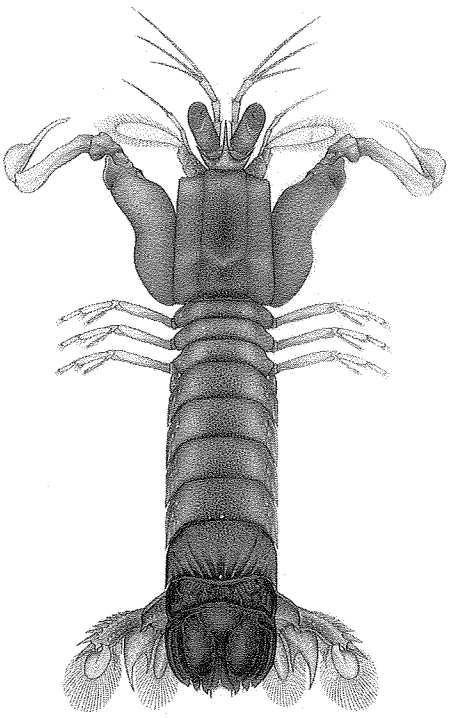
Pseudosquillopsis dofleini (Balss, 1910)

Pseudosquilla dofleini Balss, H. (1910). Ostasiatische Stomatopoden. Beiträge zur Naturgeschichte Ostasiens. Herausgegeben von Dr. F. Doflein. *Abh. Wiss. Math.-Naturwiss. Klasse, Munich (Suppl. 2)***2**: 1–11 [7 fig. 1].
Type data: type status and whereabouts unknown.
Type locality: Misaki, Japan.

Distribution: WA (Lower W coast); Japan.
Ecology: rocky shore.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [182–183 fig. 91] (new records).

PROTOSQUILLIDAE

INTRODUCTION



Haptosquilla glyptocercus
[from Manning 1995: pl. 18]

This family comprises five genera of 'smashers', four of which, *Chorisquilla*, *Echinosquilla, Haptosquilla* and *Siamosquilla*, have been recorded from Australia. Protosquillids occupy pre-formed cavities in coral and rocky reefs, from which they snatch passing prey items. Ahyong (2001) provided keys for identification.

Diagnosis

Cornea with six rows of rectangular ommatidia in the midband. Protopod of antenna with fixed anteriorly directed spine dorsally. Third and fourth maxillipeds with propodi ovate, not ribbed or beaded ventrally; body subcylindrical, articulation compact. Raptorial claw with ischiomeral articulation subterminal; dactylus without teeth on inner margin, strongly inflated basally. Sixth abdominal somite fused with telson. Telson with distinct median boss, lacking distinct carina; submedian teeth with movable apices. Uropodal protopod with two primary spines; articulation of exopod segments terminal; distal spines on outer margin of uropodal exopod slender, straight or slightly curved, not strongly recurved anteriorly.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

PROTOSQUILLIDAE Manning, 1980

Protosquillidae Manning, R.B. (1980). The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proc. Biol. Soc. Wash.* **93**(2): 362–372 [366, 369].
Type genus: *Protosquilla* Brooks, 1886.

Chorisquilla Manning, 1969

Chorisquilla Manning, R.B. (1969). Notes on the *Gonodactylus* section of the family Gonodactylidae (Crustacea, Stomatopoda), with descriptions of four new genera and a new species. *Proc. Biol. Soc. Wash.* **82**: 143–166 [157] [gender feminine].
Type species: *Gonodactylus excavatus* Miers, 1880 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Chorisquilla brooksii (de Man, 1888)

Protosquilla brooksii de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [579 pl. 22a fig. 8] .
Type data: lectotype ZMG 966 ♂, paralectotype(s) ZMG 966 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [88–89 fig. 42].
Type locality: Edam Is., Jakarta Bay, Indonesia.

Distribution: Territory of Ashmore & Cartier Islands; Cartier Reef, South China Sea, Vietnam, Indonesia.
Ecology: coral reef; coral reef flats amongst rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [88–89 fig. 42].

Chorisquilla convoluta Ahyong, 2001

Chorisquilla convoluta Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [89–91 fig. 43].
Type data: holotype WAM C7828 ♀, paratypes NMV J37798 ♀, NTM Cr005206 ♀, NTM Cr009128 2♀.
Type locality: WA, 3.2 km SW of Peek Is.

Distribution: WA (NW coast); known only from limital area.
Ecology: coral reef, rubble; shallow coral reef habitats amongst rubble to a depth of 108 m on silty sand.

Chorisquilla hystrix (Nobili, 1899)

Protosquilla hystrix Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, delle Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**: 230–282, 358, 473–523 [276].
Type data: neotype AM P58557 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [92–93 fig. 44].
Type locality: Wongat Is., Madang, Papua New Guinea.

Distribution: QLD (NE coast), Territory of Ashmore & Cartier Islands; Cartier Reef, Indian Ocean, and the Western Pacific Ocean from Australia, Papua New Guinea, eastern Indonesia and New Caledonia.
Ecology: coral reef, reef flat; rock or coral crevices on coral reefs, from the reef flat, reef slope, and vertical drop-offs down to at least 60 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [92–93 fig. 44].

Chorisquilla quinquelobata (Gordon, 1935)

Gonodactylus quinquelobatus Gordon, I. (1935). On two new species of Crustacea from Christmas Island. *Ann. Mag. Nat. Hist.* **16**: 629–637 37 figs [635].
Type data: holotype BMNH 1935.8.10.1 ♀, paratype(s) BMNH 1935.8.10.2–4 2♂ 1♀.
Type locality: Flying Fish Cove, Christmas Island, Indian Ocean.

Distribution: Christmas Island (Indian Ocean); known only from type locality.
Ecology: benthic, predator, sublittoral; known only from pier pilings.

Chorisquilla spinosissima (Pfeffer, 1888)

Gonodactylus spinosissimus Pfeffer, G. (1888). Ubersicht d.v. Herrn Dr. F. Stuhlmann in Egypten, auf Sansibar u.d. Gegenüber. Festlande ges. Reptilien, Amphibien, Fische, Mollusken und Krebse. *Mitt. Naturhist. Mus. Hamb.* **6**(4): 35 [35].
Type data: neotype ZMUC CRU 3671 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [95–97 fig. 46].
Type locality: Mombasa, Kenya [04°05'S 39°41'E].

Chorisquilla longispinosa Sun, X. & Yang, S. (1998). Studies on stomatopod Crustacea from Nansha Islands, China. Part 1, Protosquillidae and Pseudosquillidae, with descriptions of a new genus and two new species. *Stud. Mar. Fauna Flora Biogeog. Nansha Ils Neighb. Waters* **3**: 142–155 [144–145, 151–152].
Type data: holotype BNM J97004 ♀.
Type locality: Sanjiao Reef, Nansha Is., South China Sea.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [95–97 fig. 46].

Distribution: NT (N coast); South China Sea, New Guinea and Australia to the western Indian Ocean and Red Sea.
Ecology: benthic, coral reef, intertidal, predator, sublittoral; usually in crevices down to 14 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [95–97 fig. 46].

Chorisquilla tweediei (Serène, 1950)

Gonodactylus tweediei Serène, R. (1950). Deux nouvelles espèces Indo-Pacifiques de Stomatopodes. *Bull. Mus. Natn. Hist. Nat. Paris (2)***22**(5): 571–572 [571].
Type data: lectotype AM P10805 ♂, paralectotypes AM P5273 2♀, AM P10070 ♀, AM P10340 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [97–99 fig. 47].
Type locality: Elizabeth Reef, N of Lord Howe Island, Tasman Sea.

Distribution: Lord Howe Island, QLD (NE coast, SE oceanic); Middleton and Elizabeth Reef, New Caledonia.
Ecology: benthic, coral reef, intertidal, predator, sand bottom; amongst coral rubble on sand or silty sand.
References: Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [164]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [97–99 fig. 47].

Echinosquilla Manning, 1969

Echinosquilla Manning, R.B. (1969). Notes on the *Gonodactylus* section of the family Gonodactylidae (Crustacea, Stomatopoda), with descriptions of four new genera and a new species. *Proc. Biol. Soc. Wash.* **82**: 143–166 [155] [gender feminine].
Type species: *Gonodactylus guerini* White, 1861 by original designation.

Extralimital distribution: W Indian Ocean to central Pacific Ocean.

Echinosquilla guerinii (White, 1861)

Gonodactylus guerini White, A. (1861). Descriptions of two species of Crustacea belonging to the families Callianassidae and Squillidae. *Proc. Zool. Soc. Lond.* **1861**: 42–44 pls 6, 7 [4 pl. 7].
Type data: syntypes BMNH.
Type locality: Fiji.

Distribution: WA (Central W coast); Western Indian Ocean to central Pacific.
Ecology: muddy-sand, reef; reef habitats and level muddy sand.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [99–100 fig. 48].

Haptosquilla Manning, 1969

Haptosquilla Manning, R.B. (1969). Notes on the *Gonodactylus* section of the family Gonodactylidae (Crustacea, Stomatopoda), with descriptions of four new genera and a new species. *Proc. Biol. Soc. Wash.* **82**: 143–166 [159] [gender feminine].
Type species: *Gonodactylus trispinosus pulchellus* Miers, 1880 by original designation.

Extralimital distribution: Oriental Region; Indo-west Pacific Oceans.

Haptosquilla corrugata Ahyong, 2001

Haptosquilla corrugata Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [102–103 fig. 49].
Type data: holotype AM P13544 ♀, paratypes AM P14196 ♀, AM P57026 ♂, NTM Cr012373 ♀, NTM Cr012399 ♂ ♀, WAM C23545 ♂, BMNH 92.3.26.458 ♂.
Type locality: off Gantheaume Point, Broome.

Distribution: NT (N coast), WA (N coast, NW coast); known only from limital area.
Ecology: benthic, low intertidal, reef, subtidal; onshore reefs from tide pools and amongst boulders to a depth of 37 m.

Haptosquilla glyptocercus (Wood-Mason, 1875)

Gonodactylus glyptocercus Wood-Mason, J. (1875). Exhibition by Mr. Wood-Mason of new Crustaceans of the genera *Paratelphusa*, *Astacus*, *Coronis*, *Gonodactylus*, *Squilla* and *Cloridae*, with remarks theron. *Proc. Asiat. Soc. Bengal* **1875**: 230–232 [232].
Type data: holotype ZSI 3038/5 ♀.
Type locality: Nicobar Islands.

Protosquilla cerebralis Brooks, W.K. (1886). Report on the Stomatopoda collected by the H.M.S. *Challenger* during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **16**: 1–116 pls 1–16 [22, 72 pl. 14: 2, 3, pl. 16: 2, 3].
Type data: holotype BMNH 1908.3.5.1 ♀.
Type locality: Levuka, Fiji Is.

Taxonomic decision for synonymy: Kemp, S. (1913). An account of the Crustacea Stomatopoda of the Indo-Pacific Region based on the collection in the Indian Museum. *Mem. Indian Museum* **4**(1): 1–217, 9 pls [186].

Distribution: QLD (NE coast); Japan to the Andaman Sea, New Caledonia, the Philippines and Vietnam.
Ecology: benthic, coral reef, intertidal, predator, sublittoral; reef flats, in preformed cavities in coral rock.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [104–105 fig. 50].

Haptosquilla stoliura (Müller, 1887)

Protosquilla stoliura Müller, F. (1887). Zur Crustaceenfauna von Trincomali. *Verh. Naturf. Ges. Basel* **8**: 470–485 pls 4, 5 [477 pl. iv fig. 2].
Type data: syntypes NHMB 172a 2 ♀.
Type locality: Amboina [Ambon], Indonesia.

Distribution: WA (Central W coast, NW coast); western Indian Ocean, Singapore, Philippines, Vietnam.
Ecology: benthic, coral reef, intertidal, predator, rock reef, sublittoral; shallow coastal or near-shore reefs in tidal pools.
References: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [104]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [105–107 fig. 51].

Haptosquilla trispinosa (Dana, 1852)

Gonodactylus trispinosus White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [85] [*nom. nud.*].

Gonodactylus trispinosus Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685 [623].
Type data: lectotype BMNH 710 ♂; White (1847) originally used the name *trispinosus* for material from Swan River, Western Australia, and Mauritius, but his name is a *nom. nud.*; Dana (1852) later validated the name and is therefore its author, but as Dana attributed authorship to White, White's material must be considered type, not that of Dana from Fiji; White's (1847) Swan River locality is an error for a locality from north-eastern Australia.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [107–108 fig. 52].
Type locality: North-eastern Australia.

Distribution: QLD (Great Barrier Reef, NE coast); central Pacific, New Caledonia, eastern Indonesia.
Ecology: benthic, coral reef, intertidal, predator, rock reef, sand bottom, sublittoral; in preformed cavities in reef rock, to 8 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [107–108 fig. 52].

Haptosquilla tuberosa (Pocock, 1893)

Gonodactylus tuberosa Pocock, R.I. (1893). Report upon the Stomatopod crustaceans obtained by P.W. Basset-Smith Esq., surgeon R.N. during the cruise, in the Australia and China Sea, of H.M.S. "Penguin", commander W.V. Moore. *Ann. Mag. Nat. Hist.* **6**: 473–479 pl. 20B.
Type data: lectotype BMNH 92.8.28.11 ♂, paralectotype(s) BMNH 92.8.28.12 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [109–110 fig. 53].
Type locality: Macclesfield Bank, South China Sea [15°50'S 114°20'E].

Gonodactylus nefandus Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [93] [published May].
Type data: syntypes AM P3974 ♀, ZSI 3045/5 6 ♂ 16 ♀, ZSI 3040/5 ♀, ZSI 9025/6 ♀, ZSI 2825-6/7 2 ♂, ZSI 2546/3 3 ♀.
Type locality: Andaman Ils, Cheduba, and the Straits of Malacca.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [109–110 fig. 53].

Distribution: WA (Central W coast, NW coast); Macclesfield Bank, South China Sea, Vietnam, Indonesia, the Bay of Bengal, Andaman Sea.
Ecology: rubble, sand bottom; from depths of 30–82 m on sand and rubble or coarse shell substrates.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [109–110 fig. 53].

Siamosquilla Naiyanetr, 1989

Siamosquilla Naiyanetr, P. (1989). *Siamosquilla hyllebergi*, a new genus and new species of stomatopod crustacean from Thailand. *In* Ferrero, E.A. (ed.) *Biology of Stomatopods.* Selected symposia and monographs. U.Z.I. **3**: 281–284 Modena : Mucchi [281, 283] [gender feminine].
Type species: *Siamosquilla hyllebergi* Naiyanetr, 1989 by monotypy.

Laevosquilla Sun, X. & Yang, S. (1998). Studies on stomatopod Crustacea from Nansha Islands, China. Part 1, Protosquillidae and Pseudosquillidae, with descriptions of a new genus and two new species. *Stud. Mar. Fauna Flora Biogeog. Nansha Ils Neighb. Waters* **3**: 142–155 [gender feminine].
Type species: *Laevosquilla laevicaudata* Sun & Yang, 1998 by monotypy.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [110].

Extralimital distribution: Indo-west Pacific Oceans.

Siamosquilla laevicaudata (Sun & Yang, 1998)

Laevosquilla laevicaudata Sun, X. & Yang, S. (1998). Studies on stomatopod Crustacea from Nansha Islands, China. Part 1, Protosquillidae and Pseudosquillidae, with descriptions of a new genus and two new species. *Stud. Mar. Fauna Flora Biogeog. Nansha Ils Neighb. Waters* **3**: 142–155 [147, 153–156 fig. 3].
Type data: holotype BNM J97013 ♀, paratypes BNM J97014 ♂ 3♀, BNM J97015 ♂, BNM J97016 3♂, BNM J97017 ♂.
Type locality: Huanglu Reef, Nansha Ils, South China Sea [6°56'N 113°35'E].

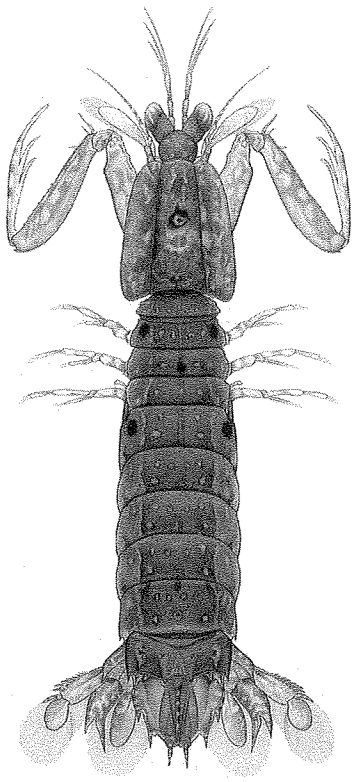
Siamosquilla sexava Erdmann, M.V. & Manning, R.B. (1999). A new species of *Siamosquilla* from Indonesia (Crustacea: Stomatopoda: Protosquillidae). *Proc. Biol. Soc. Wash.* **112**(1): 94–96.
Type data: holotype USNM 260927 ♀, paratypes LIPI 2 ♀, USNM 260928 ♂ ♀, USNM 260929 ♀, USNM 260930 ♂.
Type locality: Moromaho, Tukang Besi, Indonesia.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [111–112 fig. 54].

Distribution: WA (N coast); Indonesia, South China Sea.
Ecology: reef flat; coral reefs flats from cavities in rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [111–112 fig. 54].

PSEUDOSQUILLIDAE

INTRODUCTION



Pseudosquilla ciliata
[from Manning 1995: pl. 20]

This family includes four genera of 'spearers', *Pseudosquilla*, *Pseudosquillisma*, *Pseudosquillana* and *Raoulserenea*, all recorded from Australia. Pseudosquillids occupy a diverse range of habitats, from rocky and coral reefs to sand or mudflats and seagrass beds. Keys to all genera and species of the Pseudosquillidae are provided by Ahyong (2001).

Diagnosis

Cornea with six rows of rectangular ommatidia in the midband. Protopod of antenna with articulated, ventrally carinate plate dorsally. Third and fourth maxillipeds with propodi ovate, not ribbed or beaded ventrally; body subcylindrical, articulation compact. Mandibular palp 3-segmented. Maxillipeds 1 to 5 with an epipod. Raptorial claw with ischiomeral articulation terminal; propodus with three movable spines proximally, becoming sparsely pectinate distally; dactylus slender with three teeth, uninflated basally. Abdominal somite 6 articulating with telson. Telson with distinct, slender, median carina; submedian denticles absent in adults; submedian teeth with movable apices. Articulation of uropodal exopod segments terminal; distal spines on outer margin of uropodal exopod slender, straight, or slightly curved, but not strongly recurved anteriorly.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

PSEUDOSQUILLIDAE Manning, 1977

Pseudosquillidae Manning, R.B. (1977). A monograph of the West African stomatopod Crustacea. *Atlantide Rep.* **12**: 25–181 [95]
Type species: *Pseudosquilla* Dana, 1852.

Pseudosquilla Dana, 1852

Pseudosquilla Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685 [615] [gender feminine].
Type species: *Squilla ciliata* Fabricius, 1787 by subsequent designation, see International Commission of Zoological Nomenclature (1966). Opinion 785. *Pseudosquilla* Dana, 1852, and *Gonodactylus* Berthold, 1827 (Crustacea, Stomatopoda): designation of type species under the Plenary Powers. *Bull. Zool. Nomencl.* **23**: 204–206 (name on *Official List* of I.C.Z.N.).

Extralimital distribution: Atlantic-Indo-Pacific Oceans. See: Manning, R.B. (1963). Preliminary revision of the genera *Pseudosquilla* and *Lysiosquilla* with descriptions of six new genera (Crustacea: Stomatopoda). *Bull. Mar. Sci. Gulf Caribb.* **13**(2): 308–328.

Pseudosquilla ciliata (Fabricius, 1787)

Squilla ciliata Fabricius, J.C. (1787). *Mantissa Insectorum* sistens eorum Species nuper detectas, adiectis Characteribus genericis, Differentiis specificis, Emendationibus, Observationibus. Hafniae : C.G. Proft Vol. 1 xx 382 pp. [333].
Type data: neotype AM P58255 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [112–115 fig. 55].
Type locality: Bundagi Reef, Exmouth Gulf, WA.

Squilla stylifera Lamarck, J.B.P.A. (1818). *Histoire Naturelle des Animaux sans vertèbres*, présentant les caractères généraux et particuliers de ces animaux, leur distribution, leurs classes, leurs familles, leurs genres, et la citation des principales espèces qui s'y rapportent; précédée d'une Introduction offrant la Détermination des caractères essentiels de l'Animal, sa distinction du végétal et des autres corps naturelles, enfin, l'Exposition des Principes fondamentaux de la Zoologie. Vol. 5. 612 pp. [189].
Type data: type status unknown*.
Type locality: unknown.

Squilla quadrispinosa Eydoux, F. & Souleyet, L.F.A. (1842). Crustacés. pp. 219–274, atlas, pls 1–5 *in, Voyage autour du monde exécuté pendant les années 1836 et 1837 sur la corvette la Bonite*, commandée par M. Vaillant, Capitaine de Vaisseau, Zoologie. Paris [362 pl. 5 fig. 1].
Type data: type status unknown*.
Type locality: Sandwich Isles [Hawai'i].

Pseudosquilla ciliata occidentalis Borradaile, L.A. (1900). On the Stomatopoda and Macrura brought by Dr. Willey from the South seas. pp. 395–428 *in* Willey, A. (ed.) *On the Stomatopoda and Macrura brought by Dr Willey from the South Seas.* Cambridge : Cambridge University Press Pt 4 [398, 402].
Type data: type status unknown* (probably UMZC).
Type locality: West Indies.

Taxonomic decision for synonymy: Kemp, S. (1913). An account of the Crustacea Stomatopoda of the Indo-Pacific Region based on the collection in the Indian Museum. *Mem. Indian Museum* **4**(1): 1–217, 9 pls [96].

Distribution: Cocos (Keeling) Islands, Lord Howe Island, QLD (Central E coast, NE coast, SE oceanic), WA (NW oceanic); all tropical oceans except the E Pacific.
Ecology: benthic, coral reefs, intertidal, predator, rock reef, sand bottom, sublittoral; under boulders and coral rubble on reef flats to 33 m depth.

Pseudosquillana Cappola & Manning, 1995

Pseudosquillana Cappola, V. & Manning, R.B. (1995). Crustacea Stomatopoda. Research on the coast of Somalia. *Trop. Zool.* **7**(2): 271–291 [284].
Type species: *Pseudosquilla megalophthalma* Bigelow, 1893 by original designation.

Extralimital distribution: Indo-west Pacific.

Pseudosquillana richeri Moosa, 1991

Pseudosquillana richeri Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [175–176 fig. 5].
Type data: holotype MNHP St.1419 ♂.
Type locality: New Caledonia.

Distribution: QLD (Coral Sea); Western Indian Ocean to central Pacific.
Ecology: benthic, coral reef, predator, rubble; amongst algae and live corals, sublittoral to 62 m.
Reference: Ahyong, S.T., Manning, R.B. & Reed, K. (2000). Revision of *Pseudosquillana* Cappola & Manning, 1995 (Crustacea: Stomatopoda: Pseudosquillidae). *Raffles Bull. Zool.* **48**: 301–311.

Pseudosquillisma Cappola & Manning, 1995

Pseudosquillisma Cappola, V. & Manning, R.B. (1995). Crustacea Stomatopoda. Research on the coast of Somalia. *Trop. Zool.* **7**(2): 271–291 [284].
Type species: *Squilla oculata* Brullé, 1837 by original designation.

Extralimital distribution: Eastern and Western Atlantic, East Pacific, Indo-west Pacific.

Pseudosquillisma oculata (Brullé, 1837)

Squilla oculata Brullé, G.A. (1837). Crustacés. pp. 13–18 *in* Barker-Webb, P. & Berthelot, S. *Histoire Naturelle des Iles Canaries*, Zoologie, 2 (2, Entomologie). Atlas: plate unique [1837]; text [1839]. Paris : Publisher unknown [pl. unique figs 3, 18].
Type data: type status unknown MNHP*.
Type locality: Canary Islands.

Squilla monodactyla Milne Edwards, A. (1878). Notes sur quelques Crustacés nouveaux appartenant au groupe des Oxyrhyniques. *Bull. Soc. philomath. Paris (7)***2**: 222–225 [232].
Type data: type status unknown MNHP*.
Type locality: Cape Verde Is.

Taxonomic decision for synonymy: Manning, R.B. (1977). A monograph of the West African stomatopod Crustacea. *Atlantide Rep.* **12**: 25–181 [103].

Distribution: Cocos (Keeling) Islands, WA (NW oceanic); Atlantic-Indo-west central Pacific Oceans.
Ecology: benthic, coral reef, predator, rock reef, sublittoral; under boulders and amongst algae and live corals.

Raoulserenea Manning, 1995

Raoulserenea Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [116] [gender feminine].
Type species: *Pseudosquilla ornata* Miers, 1880 by original designation.

Extralimital distribution: Indo-Pacific Oceans. See: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Raoulserenea hieroglyphica (Manning, 1972)

Pseudosquilla hieroglyphica Manning, R.B. (1972). Two new species of *Pseudosquilla* (Crustacea, Stomatopoda) from the Pacific Ocean. *Am. Mus. Novit.* **2484**: 1–11 [2–6, 9 fig. 1].
Type data: holotype USNM 124096 ♀, paratypes USNM 64891 ♀, USNM 109624 ♂.
Type locality: Latoback Is., Rongerik Atoll, Pacific Ocean.

Raoulserenea pygmaea Caldwell, R.L. & Manning, R.B. (2000). A new dwarf pseudosquillid of the genus *Raoulserenea* from French Polynesia (Crustacea: Stomatopoda). *Zoosystema* **22**(1): 101–106.
Type data: holotype USNM 260953 ♀, paratypes MNHP St 1978 2♂ ♀, MNHP St 1979 ♀, USNM 260953 ♀, USNM 260954 5♂ 2♀, USNM 260955 ♂ 2♀, USNM 260956 ♂, USNM 260957 ♂ ♀, USNM 260958 ♂ ♀, USNM 260959 3 ♀, USNM 260960 ♀.
Type locality: Moorea, Society Islands, French Polynesia.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [119–121 fig. 58].

Distribution: QLD (Great Barrier Reef), WA (Central W coast); French Polynesia to Japan, New Caledonia and western Indian Ocean.
Ecology: coral reef; from the reef flat to 133 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [119–121 fig. 58].

Raoulserenea komaii (Moosa, 1991)

Pseudosquilla komaii Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [171–173 fig. 4].
Type data: holotype MNHP St.1411 ♀.
Type locality: Chesterfield Ils, New Caledonia [19°03.00'E 158°53.93'S].

Distribution: Cocos (Keeling) Islands (Aust. Terr.); French Polynesia, New Caledonia.
Ecology: coral reef; amongst rubble and live coral to a depth of at least 8 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [121–122 fig. 59].

Raoulserenea ornata (Miers, 1880)

Pseudosquilla ornata Miers, E.J. (1880). On the Squillidae. *Ann. Mag. Nat. Hist.* **5**: 108–126 [111 pl. 3 fig. 5, 6].
Type data: syntypes BMNH 156e ♀, BMNH ♂.
Type locality: Philippines.

Distribution: Christmas Is. (Indian Ocean), Cocos (Keeling) Islands, QLD (Great Barrier Reef); French Polynesia, Southern China, and Vietnam to the western Indian Ocean.
Ecology: benthic, coral reef, intertidal, predator, sublittoral; under boulders and amongst live coral, reef flat to 18 m depth.
References: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [118]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [122–123 fig. 60].

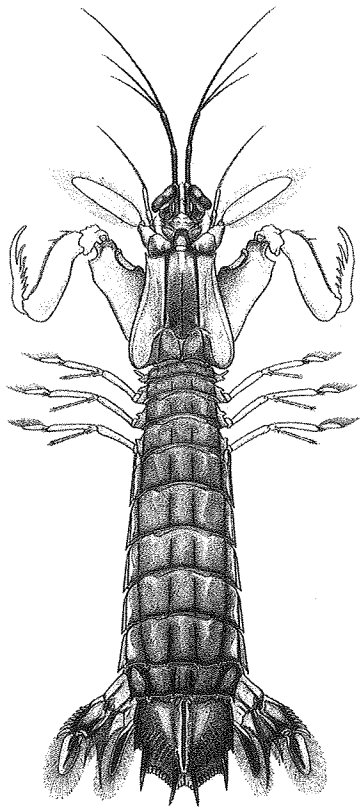
Raoulserenea oxyrhyncha (Borradaile, 1898)

Pseudosquilla oxyrhyncha Borradaile, L. A. (1898). On some Crustaceans from the South Pacific-Part I: Stomatopoda. *Proc. Zool. Soc. Lond.* **1898**: 32–38 pls 5–6 [37 pl. 6 figs 9–9d].
Type data: holotype UMZC 15.09.1897 ♂.
Type locality: Rotuma.

Distribution: Cocos (Keeling) Islands (Aust. Terr.); central Pacific from Rotuma to Indonesia, Papua New Guinea.
Ecology: coral reef.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [123–125 fig. 61].

SQUILLIDAE

INTRODUCTION



Erugosquilla woodmasoni
[from Manning 1995: pl. 36]

The Squillidae was the first named of the stomatopod families and is the largest. It comprises 44 described genera worldwide, 37 in the Indo-west Pacific, and 25 from Australia. Fifty-nine species are reported from Australia, but ongoing revisionary work will expand the Australian faunal list markedly.

Squillids occupy burrows in soft substrates and forage actively at night. Hence, squillids are the most common stomatopods encountered by trawl fishermen, and several species are fished commercially on the east coast of Australia.

Ahyong (2001) provided keys to all squilloid genera and keys to all species of genera represented in Australia.

Diagnosis

Cornea with two rows of hexagonal ommatidia in the mid-band. Third and fourth maxillipeds with propodi slender, not ribbed ventrally. Body depressed, compact. Raptorial claw with ischiomeral articulation terminal, dactylus uninflated basally, with spined inner margin. Telson with distinct median carina; submedian teeth with fixed or movable apices; with four or more intermediate denticles. Uropodal protopod with one or two primary spines; articulation of exopod segments terminal.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

SQUILLIDAE Latreille, 1803

Squillares Latreille, P.A. (1803). *Histoire naturelle, générale et particulière, des Crustacés et des Insectes.* Paris : F. Dufart Vol. 3 467 pp. [36].
Type genus: *Squilla* Fabricius, 1787.

Harpiosquillidae Manning, R.B. (1980). The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proc. Biol. Soc. Wash.* **93**(2): 362–372 [367, 369].
Type genus: *Harpiosquilla* Holthuis, 1964.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [184].

Alima Leach, 1817

Alima Leach, W.E. (1817). A general notice of the animals taken by Mr. John Cranch, during the expedition to explore the source of the river Zaire. 1 unnumbered plate (1817), Appendix 4 (1818). pp. 407–419 *in* Tuckey, J.K. *Narrative of an Expedition to Explore the River Zaire,* Usually called the Congo, in South Africa, in 1816, under the direction of Captain J.K. Tuckey, R.N., to which is added, the Journal of Professor Smith, Some general observations on the country and its inhabitants, and an Appendix: Containing the natural history of that part of the Kingdom of Congo through which the Zaire flows. London : John Murray 498 pp. [plate] [gender feminine].
Type species: *Alima hyalina* Leach, 1817 by monotypy.

Extralimital distribution: Atlantic-Indo-west Pacific Oceans. See: Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10.

Alima orientalis Manning, 1978

Alima orientalis Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [21–23 fig. 10].
Type data: holotype ZSMB ♀, paratype(s) MRAC 52.236.
Type locality: Takao, Taiwan.

Distribution: QLD (NE coast), WA (NW coast); Indo-West Pacific, from Taiwan, the Seychelles, Gulf of Thailand.
Ecology: sandy mud bottom; depths of 41–43 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [189–191 fig. 92].

Alima pacifica Ahyong, 2001

Alima pacifica Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [191–192 fig. 93].
Type data: holotype USNM 169142 ♂, paratype(s) AM P60105 ♂.
Type locality: Lizard Is., Queensland, Australia [14°40'S 145°27'E].

Distribution: QLD (NE coast); Indonesia.
Ecology: coral reef, reef flat; from shallow pools amongst rubble.

Alimopsoides Moosa, 1991

Alimopsoides Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [191] [gender masculine].
Type species: *Alimopsoides tuberculatus* Moosa, 1991 by monotypy.

Alimopsoides tuberculatus Moosa, 1991

Alimopsoides tuberculatus Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [191–193 fig. 11].
Type data: holotype MNHP St.1878 ♂.
Type locality: Loop Is., Chesterfield plate, New Caledonia.

Distribution: WA (NW coast); New Caledonia.
Ecology: from depths of 78–82 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [193 fig. 94].

Anchisquilla Manning, 1968

Anchisquilla Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [120, 127–128] [gender feminine].
Type species: *Squilla fasciata* De Haan, 1844 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Anchisquilla chani Ahyong, 2001

Anchisquilla chani Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [195–196 fig. 95].
Type data: holotype AM P55598 ♂, paratypes AM P55593 ♀, AM P55595 ♀, QM W25513 ♂.
Type locality: Gulf of Carpentaria [12°06.9'S 139°59'E].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria); possibly from the Gulf of Tonkin, Vietnam, and the Gulf of Oman.
Ecology: benthic, continental shelf; sand and mud substrates to 49 m depth.

Anchisquilla fasciata (De Haan, 1844)

Banded Mantis-shrimp

Squilla fasciata De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam,* Jussu et Auspiciis Superiorum, qui Summum

in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [224 pl. 51 fig. 4] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: holotype RMNH D472 ♀.
Type locality: Japan.

Squilla subfasciata Tate, R. (1883). Description of some new species of *Squilla* from South Australia. *Trans. R. Soc. S. Aust.* **6**: 48–53 pl. 2 [52 pl. 2 fig. 1a–d].
Type data: holotype SAMA C182 ♂.
Type locality: Gulf St Vincent, SA.

Taxonomic decision for synonymy: Hale, H. (1924). Family Squillidae. Notes on Australian Crustacea, No. 1. *Rec. S. Aust. Mus.* **2**(4): 491–502 pls 32–33 [496].

Distribution: NT (Gulf of Carpentaria, N coastal), QLD (Central E coast, Gulf of Carpentaria, NE coast), SA (S Gulfs coast); Western Indian Ocean to the Philippines, Vietnam, Taiwan, Japan, New Caledonia.
Ecology: benthic, predator, sand bottom, sublittoral; sandy, shelly or gritty mud substrates, 7–90 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [196–198 fig. 96].

Anchisquilloides Manning, 1977

Anchisquilloides Manning, R.B. (1977). Preliminary accounts of five new genera of stomatopod crustaceans. *Proc. Biol. Soc. Wash.* **90**(2): 420–423 [421] [gender masculine].
Type species: *Squilla mcneilli* Stephenson, 1953 by monotypy.

Extralimital distribution: Philippines.

Anchisquilloides mcneilli (Stephenson, 1953)

McNeill's Mantis-shrimp

Squilla mcneilli Stephenson, W. (1953). Three new Stomatopoda (Crustacea) from Eastern Australia. *Aust. J. Mar. Freshwat. Res.* **4**(1): 201–218 [213 fig. 4A–F].
Type data: holotype AM P8808 ♀, paratypes AM P4442 ♂ (as allotype), AM P5796 ♀, AM P9677 ♂.
Type locality: off coast between Merimbula and Tathra, NSW.

Distribution: NSW (Lower E coast), QLD (Central E coast), SA (Great Australian Bight), WA (Lower W coast, SW coast); known only from limital area.
Ecology: benthic, continental shelf, predator, sand bottom, sublittoral; sandy inshore waters to outer continental shelf or upper slope in depths between 14 m and 302–308 m, but usually greater than 90 m.

Belosquilla Ahyong, 2001

Belosquilla Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [201].
Type species: *Squilla laevis* Hess, 1865 by original designation.

Belosquilla laevis (Hess, 1865)

Smooth Mantis-shrimp

Squilla laevis Hess, W. (1865). Beiträge zur Kenntniss der Decapoden-Krebse Ost-Australiens. *Arch. Naturgesch.* **31**: 127–173 pls 6–7 [170 pl. vii fig. 22].
Type data: holotype SMF ♂ (Hess's material was originally deposited in the ZMG, Reg, no. 961, but is now in the SMF).
Type locality: Sydney, NSW.

Distribution: NSW (Lower E coast), QLD (Central E coast), SA (S Gulfs coast), VIC (Bass Strait), WA (Central W coast, Lower W coast, NW coast, SW coast); known only from limital area, most common shallow water squilloid in temperate Australian waters, frequently taken by commercial prawn trawlers.
Ecology: benthic, intertidal, littoral, predator, sublittoral; shallow embayments or other sheltered coastal waters, burrows are simple and U-shaped, constructed in sand-mud substrates, often in association with seagrass or rubble, intertidal to 40 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [201–203 fig. 98].

Busquilla Manning, 1978

Busquilla Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [23] [gender feminine].
Type species: *Busquilla plantei* Manning, 1978 by original designation.

Busquilla plantei Manning, 1978

Busquilla plantei Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [23–24 fig. 11].
Type data: holotype MNHP St.761 ♂, paratype(s) USNM 56192 ♂.
Type locality: Passe Lokobe, Madagascar.

Distribution: QLD (NE coast), WA (NW coast); Madagascar.
Ecology: benthic, subtidal; soft, sandy substrates to at least 17 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [204 fig. 99].

Busquilla quadraticauda (Fukuda, 1911)

Squilla quadraticauda Fukuda, T. (1911). Supplement to Japanese Stomatopoda. *Dobutsegaku Zasshi* **23**: 173–175 pl. 1 [174 fig. 1] [published April 15; in Japanese; published in English, 1911].
Type data: neotype AM P60114 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [205–207].
Type locality: Tungkang, Pingtung County, Taiwan.

Squilla boopis Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [97] [published May].
Type data: holotype ZSI 1710/10 ♀.
Type locality: Gulf of Martaban, Burma [14°26'N 96°23'E].

Anchisquilla punctata Blumstein, R. (1970). New stomatopod crustaceans from the Gulf of Tonkin, South China Sea. *Crustaceana* **18**(2): 218–224 [218 fig. 1].
Type data: holotype ZIL I/58179 ♂.
Type locality: Gulf of Tonkin [17°48'N 109°32'E].

Alima guinotae Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [186–188 fig. 9].
Type data: holotype MNHP St 1657 ♂.
Type locality: St Vincent Bay, New Caledonia [21°51'S 165°45'E].

Taxonomic decision for synonymy: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [170]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [205–207 fig. 100].

Distribution: WA (NW coast); Japan, Vietnam, Burma, Indonesia, New Caledonia, Hawai'i.
Ecology: benthic, continental shelf; depths 42–120 m, presumably on soft substrates.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [205–207 fig. 100].

Carinosquilla Manning, 1968

Carinosquilla Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [121, 135] [gender feminine].
Type species: *Squilla multicarinata* White, 1849 by original designation.

Keijia Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [204–205] [gender feminine].
Type species: *Squilla lirata* Kemp & Chopra, 1921 by original designation.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [207].

Extralimital distribution: Indo-west Pacific Oceans.

Carinosquilla australiensis Ahyong, 2001

Carinosquilla australiensis Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [208–210 fig. 101].
Type data: holotype AM P54468 ♂, paratypes AM P56893 ♀, AM P56894 ♂, AM P56895 2♀, AM P56896 ♂, AM P56898 ♂, QM W25505 2♀, QM W12864 ♀.
Type locality: Queensland, Princess Charlotte Bay [14°45'S 145°29'E].

Distribution: QLD (NE coast); known only from limital area.
Ecology: benthic, continental shelf; trawlable substrates at depths of 20–30 m.

Carinosquilla carita Ahyong, 2001

Carinosquilla carita Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [210–212 fig. 102].
Type data: holotype AM P43212 ♂, paratypes AM P56887 ♀, AM P56888 ♀, AM P56889 ♂, AM P57025 ♂, NMV J37818 2♀, NTM Cr012376 ♂.
Type locality: WA, 43 km NNE of Dampier [20°14.6-14.5'S 116°50.9-50.6'E].

Distribution: NT (N coast), QLD (Gulf of Carpentaria), WA (NW coast); known only from limital area.
Ecology: benthic, continental shelf, subtidal; sand or coarse sandy shell substrates at 17–51 m depth.

Carinosquilla redacta Ahyong, 2001

Carinosquilla redacta Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [212–214 fig. 103].
Type data: holotype AM P54470 ♂, paratypes ♀, AM P56945 ♂, AM P56946, AM P56947 2♂, AM P56943 3♀.
Type locality: QLD, Shelburne Bay [11°52.8'S 143°09.8'E].

Distribution: QLD (Gulf of Carpentaria, NE coast); known only from limital area.
Ecology: benthic, continental shelf; sandy-mud substrates, depths 20–45 m.

Carinosquilla thailandensis Naiyanetr, 1983

Carinosquilla thailandensis Naiyanetr, P. (1983). Two stomatopod crustaceans from the Gulf of Thailand with a key to the genus *Carinosquilla* Manning, 1968. *Senckenb. Biol.* **63**(5/6): 393–399 [394–399 figs 2, 4] [dated 1982, published 1983].
Type data: holotype SMF 10747 ♂, paratype(s) ZRC 1985.1-2 ♂ ♀.
Type locality: Ko Phai, Chon Buri Province, Gulf of Thailand.

Distribution: QLD (Gulf of Carpentaria, NE coast); Gulf of Thailand.
Ecology: mud bottom, sand bottom, shell bottom; sand, mud and shelly substrates at depths of 11–51 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [214–215 fig. 104].

Clorida Eydoux & Souleyet, 1842

Clorida Eydoux, F. & Souleyet, L.F.A. (1842). Crustacés. pp. 219–274, atlas, pls 1–5 *in, Voyage autour du monde exécuté pendant les années 1836 et 1837 sur la corvette la Bonite,* commandée par M. Vaillant, Capitaine de Vaisseau, Zoologie. Paris [264] [gender feminine].

Type species: *Clorida latreillei* Eydoux & Souleyet, 1842 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [302].

Extralimital distribution: Indo-west Pacific Oceans.

Clorida albolitura Ahyong & Naiyanetr, 2000

Clorida albolitura Ahyong, S.T. & Naiyanetr, P. (2000). Revision of the *Clorida latreillei* species complex with description of a new species (Stomatopoda: Squillidae). *Raffles Bull. Zool.* **48**: 313–325, figs 1–4 [317–320 fig. 2].
Type data: holotype AM P59110 ♂, paratypes ZRC 1999.2179 ♀, ZRC 1999.2180 ♀, ZRC 1999.2302 ♂ ♀.
Type locality: Ang Sila, Gulf of Thailand.

Distribution: NT (Gulf of Carpentaria), QLD (Gulf of Carpentaria), WA (Central W coast); western Indian Ocean to Vietnam, Japan, Taiwan.
Ecology: benthic, intertidal, mud bottom, predator, sand bottom, sublittoral; depths 31–110 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [217–219 fig. 105].

Clorida bombayensis (Chhapgar & Sane, 1967)

Squilla bombayensis Chhapgar, B.F. & Sane, S.R. (1967). Two new species of *Squilla* (Stomatopoda) from Bombay. *Crustaceana* **12**(1): 1–8 [1 fig. 1].
Type data: holotype ZSI C4621/1 ♀, paratype(s) RMNH H S443 1 specimen.
Type locality: Bombay, India [18°58'N 72°50'E].

Clorida latispina Manning, R.B. (1968). Three new stomatopod crustaceans from the Indo-Malayan area. *Proc. Biol. Soc. Wash.* **81**: 241–250 [247–249 fig. 3].
Type data: holotype USNM 77929 ♀, paratype(s) UMZC 30.11.1899 ♂.
Type locality: Khota Bharu, Kelantan, Malaysia.

Taxonomic decision for synonymy: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [182].

Distribution: QLD (Gulf of Carpentaria); Bombay, India, to Vietnam, Hong Kong.
Ecology: benthic, continental shelf, subtidal; muddy sand substrates to a depth of at least 47 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [219 fig. 106].

Clorida daviei Ahyong, 2001

Clorida daviei Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [219–222 fig. 107].
Type data: holotype AM P56965 ♂, paratypes AM P56966 ♂ ♀, QM W25528, AM P56996 ♀, AM P56998 ♂, AM P56999 2♂ 4♀, NTM Cr009570 2♀.
Type locality: NE of Groote Eylandt, Gulf of Carpentaria [12°58.7'S 137°11.8'E].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria); known only from limital area.
Ecology: benthic, continental shelf, from trawlable substrates at depths of 45–59 m.

Clorida depressa (Miers, 1880)

Chloridella depressa Miers, E.J. (1880). On the Squillidae. *Ann. Mag. Nat. Hist.* **5**: 1–30 [14 pl. 2 figs 1–4].
Type data: holotype BMNH 1957.12.21.1 ♂.
Type locality: Port Essington, NT.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast); known only from limital area.
Ecology: benthic, intertidal, predator, sublittoral, sandy mud bottom; burrows in sandy-mud flats, usually intertidally, but also to about 10 m depth.
References: Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [86]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [222–224 fig. 108].

Clorida granti (Stephenson, 1953)

Squilla granti Stephenson, W. (1953). Three new Stomatopoda (Crustacea) from Eastern Australia. *Aust. J. Mar. Freshwat. Res.* **4**(1): 201–218 [201 figs 1A–D, 2A,B,D,F].
Type data: holotype QM W1789 ♂, paratypes QM W1840 ♀ (as allotype), QM W2001–3 3♂, QM W1790 ♂, AM P12077 ♂, AM P12078 ♂, AM P12277 ♀.
Type locality: 9 km NNE Woody Point Pier, Moreton Bay, QLD.

Distribution: QLD (Central E coast, Gulf of Carpentaria); known only from limital area.
Ecology: benthic, predator, sand bottom, sublittoral; in embayments and sheltered waters to 18 m depth, usually below 5 m.
Reference: Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10.

Clorida obtusa Ahyong, 2001

Clorida obtusa Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [226 fig. 110].
Type data: holotype AM P21654 ♂, paratypes AM P57164 ♂ ♀, QM W25522 ♀, AM P57161 ♂ ♀, AM P57163 ♂, AM P57166 ♂.
Type locality: SE Gulf of Carpentaria [17°20'00"S 139°40'50"E].

Distribution: QLD (Gulf of Carpentaria, NE coast), WA (NW coast); known only from limital area.
Ecology: benthic, continental shelf, subtidal; level, sandy-mud substrates at depths of 8–63 m.

Clorida seversi Moosa, 1973

Clorida seversi Moosa, M.K. (1973). The stomatopod Crustacea collected by the Mariel King memorial expedition in Malaku waters. *Mar. Res. Indonesia* **13**: 1–30 [22–24 fig. 4].
Type data: holotype LIPI S850 ♂, paratypes LIPI S845 ♂, LIPI S847-849 ♂ 2♀.
Type locality: N of Du Rowa Is., N of Nuhu Rowa, Kai [Kei], Indonesia [5°32'S 132°41'E].

Distribution: QLD (NE coast); Indonesia, Vietnam.
Ecology: benthic, subtidal, soft bottom; soft coral reef lagoon substrates; 9–15 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [226–228 fig. 111].

Clorida wassenbergi Ahyong, 2001

Clorida wassenbergi Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [229–230 fig. 112].
Type data: holotype AM P54462 ♂, paratypes QM W6442 7♀, AM P55589 ♂ 5♀.
Type locality: QLD, near Weipa, Gulf of Carpentaria [12°39'S 141°50'E].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria).
Ecology: benthic, subtidal; soft sandy mud substrates, depths of 21–30 m.

Cloridina Manning, 1995

Cloridina Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [191] [gender feminine].
Type species: *Squilla microphthalma* H. Milne Edwards, 1837 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Cloridina chlorida (Brooks, 1886)

Squilla chlorida Brooks, W.K. (1886). Report on the Stomatopoda collected by the H.M.S. *Challenger* during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **16**: 1–116 pls 1–16 [21, 40 pl. 2 figs 1–5].
Type data: holotype BMNH 1894.I0.16.11 ♂.
Type locality: Amboina, Indonesia [3°43'S 128°12'E].

Distribution: QLD (NE coast), WA (NW coast); Madagascar.
Ecology: mud bottom; from muddy substrates at depths of 30–64 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [232–233 fig. 113].

Cloridina inflata (Moosa, 1991)

Clorida inflata Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [199–202 fig. 13].
Type data: holotype MNHP St.1279 ♀, paratypes USNM 243957 ♀, LIPI S 2556 ♂, MNHP St 1282 ♂ ♀, MNHP St 1281 ♂.
Type locality: New Caledonia.

Distribution: NT (Gulf of Carpentaria); New Caledonia.
Ecology: benthic, continental shelf; sandy mud substrates at depths of 44–50 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [233 fig. 114].

Cloridina moluccensis (Moosa, 1973)

Clorida malaccensis moluccensis Moosa, M.K. (1973). The stomatopod Crustacea collected by the Mariel King memorial expedition in Malaku waters. *Mar. Res. Indonesia* **13**: 1–30 [19–22 fig. 3] [as *Clorida malaccensis* var. *moluccensis*].
Type data: holotype LIPI S846 ♂, paratype(s) LIPI S022 ♀.
Type locality: W of Udjir Is., Wokam, Aru, Indonesia [05°37'S 134°10'E].

Distribution: QLD (Gulf of Carpentaria); Indonesia, New Caledonia.
Ecology: benthic, continental shelf, sand bottom, shell bottom; trawlable substrates to at least 58 m depth, non-Australian specimens from mud, sand and shelly grit substrates at depths of 55–90 m and 26–29 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [233–236 fig. 115].

Cloridina pelamidae (Blumstein, 1970)

Clorida pelamidae Blumstein, R. (1970). New stomatopod crustaceans from the Gulf of Tonkin, South China Sea. *Crustaceana* **18**(2): 218–224 [220 figs 2, 3].
Type data: holotype ZIL I/57967 ♀.
Type locality: Gulf of Tonkin, Vietnam [20°20'N 106°47'E].

Clorida thailandica Naiyanetr, P. (1980). *Stomatopoda of Thailand.* Bangkok : Chulalongkorn University, Bangkok pp. 1–95 35 pls [38 pl. 35].
Type data: holotype SMF 10749 ♂.
Type locality: Ko Sichang, Chonburi Province, Thailand.

Taxonomic decision for synonymy: Naiyanetr, P. & Tuerkay, M. (1983). On the status of *Clorida pelamidae* Blumstein, 1970 and its presumed identity with *C. thailandica* Naiyanetr 1980 (Crustacea: Stomatopoda). *Senckenberg. Biol.* **63**(5/6): 401–405 [401–405] [dated 1982, publ. 1983].

Distribution: NT (Gulf of Carpentaria); Vietnam, the Gulf of Thailand, Andaman Sea.
Ecology: benthic, subtidal; level soft substrates, at a depth of 18.9 m in Andaman Sea off Phuket.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [236 fig. 116].

Cloridina stephensoni Ahyong, 2001

Cloridina stephensoni Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [236–239 fig. 117].

Type data: holotype BMNH 1932.11.30.191 ♂, paratypes AM P13540 ♂, AM P13541 ♂ ♀.
Type locality: WA, Roebuck Bay.

Distribution: NT (N coast), QLD (NE coast); known only from limital area.
Ecology: intertidal; sand flats and tide pools.

Cloridina verrucosa (Hansen, 1926)

Squilla verrucosa Hansen, H.J. (1926). The Stomatopoda of the Siboga Expedition. *Siboga Exped.* **35**: 1–48 pls 1–2 [3 pl. 1 figs 1a-d].
Type data: lectotype ZMA ♂.
Subsequent designation: Manning, R.B. (1976). Redescriptions of *Oratosquilla indica* (Hansen), with accounts of a new genus and two new species (Crustacea, Stomatopoda). *Beaufortia* **25**(318): 1–13.
Type locality: Lesser Sunda Ils, Indonesia, *Siboga* Expedition Stn 306 [8°27'S 122°54.5'E].

Squilla merguiensis Tiwari, K.K. & Biswas, S. (1952). On two new species of the genus *Squilla* Fabr., with notes on other stomatopods in the collections of the Zoological Survey of India. *Rec. Indian Mus.* **49**(3–4): 349–363.
Type data: holotype ZSI C302/1 ♂.
Type locality: 4 miles NNE of Kabusa Island, Burma.

Taxonomic decision for synonymy: Manning, R.B. (1991). Stomatopod Crustacea collected by the *Galathea* Expedition, 1950–1952, with a list of Stomatopoda known from depths below 400 meters. *Smithson. Contr. Zool.* **No. 521**: 1–18 [10].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria); Indonesia, Philippines, New Caledonia, the Mergui Archipelago, Vietnam.
Ecology: benthic, continental shelf; muddy or shelly sand at depths of 23–123 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [239–241 fig. 118].

Cloridopsis Manning, 1968

Cloridopsis Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [120, 128] [gender masculine].
Type species: *Squilla scorpio* Latreille, 1828 by original designation.

Extralimital distribution: west Atlantic, eastern Pacific, Indo-west Pacific Oceans.

Cloridopsis terrareginensis (Stephenson, 1953)

Squilla terrareginensis Stephenson, W. (1953). Three new Stomatopoda (Crustacea) from Eastern Australia. *Aust. J. Mar. Freshwat. Res.* **4**(1): 201–218 [208 fig. 3A,B].
Type data: holotype AM P9070 ♂, paratypes AM P3794 1♂ 1♀, QM W1841 ♂.
Type locality: near mouth of Barron River, Cairns, QLD.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast); New Guinea.
Ecology: benthic, burrowing, estuarine, subtidal; burrows in intertidal and subtidal mudflats to a depth of 25 m.
References: Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [128]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [242–243 fig. 119].

Dictyosquilla Manning, 1968

Dictyosquilla Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [120, 131–133] [gender feminine].
Type species: *Squilla foveolata* Wood-Mason, 1895 by original designation.

Extralimital distribution: Indo-west Pacific Oceans, Borneo north to Burma, Vietnam and Hong Kong.

Dictyosquilla tuberculata Ahyong, 2001

Dictyosquilla tuberculata Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [244–246 fig. 120A–K].
Type data: holotype AM P56763 ♂, paratypes QM W6450 ♀, AM P21644 2♂ ♀, AM P21646 ♂ 5♀, AM P21645 2♂ 2♀, AM P56764 ♀.
Type locality: SE Gulf of Carpentaria.

Distribution: NT (Gulf of Carpentaria), QLD (Gulf of Carpentaria, NE coast), WA (N coast); known only from limital area.
Ecology: benthic, continental shelf, subtidal; trawlable substrates between 5.5–9.1 m and 56–57 m depth.

Distosquilla Manning, 1977

Distosquilla Manning, R.B. (1977). Preliminary accounts of five new genera of stomatopod crustaceans. *Proc. Biol. Soc. Wash.* **90**(2): 420–423 [421] [gender feminine].
Type species: *Squilla miles* Hess, 1865 by monotypy.

Range: Australian endemic.

Distosquilla miles (Hess, 1865)

Martial Mantis-shrimp

Squilla miles Hess, W. (1865). Beiträge zur Kenntniss der Decapoden-Krebse Ost-Australiens. *Arch. Naturgesch.* **31**: 127–173 pls 6–7 [169 pl. 7 fig. 21].
Type data: type SMF ♀ (Hess's material was originally deposited in the ZMG, Reg. no. ZMG 962, but is now in the SMF).
Type locality: Sydney, NSW.

Squilla pectinata Tate, R. (1883). Description of some new species of *Squilla* from South Australia. *Trans. R. Soc. S. Aust.* **6**: 48–53 pl. 2 [50].
Type data: syntypes SAMA C172 1♂ 1♀.
Type locality: Port Adelaide Creek, Gulf St Vincent and Fowlers Bay, SA.

Taxonomic decision for synonymy: Hale, H. (1924). Family Squillidae. Notes on Australian Crustacea, No. 1. *Rec. S. Aust. Mus.* **2**(4): 491–502 pls 32–33 [492].

Distribution: NSW (Central E coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Central W coast, Lower W coast, SW coast); endemic.
Ecology: benthic, continental shelf, continental slope, intertidal, predator, sublittoral; usually from the shore or shallow subtidal, often in association with algae, seagrass and detritus, to 1040 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [246–248 fig. 121].

Erugosquilla Manning, 1995

Erugosquilla Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [197] [gender feminine].
Type species: *Squilla massavensis* Kossmann, 1880 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Erugosquilla grahami Ahyong & Manning, 1998

Erugosquilla grahami Ahyong, S.T. & Manning, R.B. (1998). Two new species of *Erugosquilla* from the Indo-West Pacific (Crustacea: Stomatopoda: Squillidae). *Proc. Biol. Soc. Wash.* **111**(3): 653–662 [653, 660 figs 1, 2, 3].
Type data: holotype AM P42761 ♂, paratypes AM P42767 1♂ (subsequently transferred to USNM), AM P42762-66 3♂ 2♀, AM P42768-70 3♂.
Type locality: off Patonga, NSW.

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coastal), QLD (Gulf of Carpentaria), WA (N coastal, NW coastal); Taiwan.
Ecology: benthic, predator, sand bottom, sublittoral; sand or sandy-mud substrates in shallow coastal embayments or protected waters, to 66 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [249–251 fig. 122].

Erugosquilla woodmasoni (Kemp, 1911)

Squilla woodmasoni Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [74] [published May; as *Squilla wood-masoni*].
Type data: lectotype USNM 143580 ♂, paralectotypes USNM 125746 ♂, USNM 143581 ♂, BMNH 1910.11.14.11-12 1♂ 1♀, ZSI 7513/10 ♀, ZSI 7294/10 ♀*, ZSI 3098/5 3♂ 2♀, ZSI 3078/5 2♂, ZSI 3087/5 2♂, ZSI 7295/10 ♀, ZSI 7297-8/10 9♂ 3♀, ZSI 7992/9 ♀, ZSMB ♀, MSNM 1♂ 1♀, AM P3976 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [251–253].
Type locality: Madras, India.

Oratosquilla tweediei Manning, R.B. (1971). Keys to the species of *Oratosquilla* (Crustacea: Stomatopoda), with descriptions of two new species. *Smithson. Contr. Zool.* **No. 71**: 1–16 figs 1–4 [12 fig. 4].
Type data: holotype USNM 76026 ♀, paratype(s) USNM 127449 ♀.
Type locality: Singapore.

Oratosquilla jakartensis Moosa, M.K. (1975). Notes on stomatopod Crustacea from Seribu Islands and adjacent waters with a description of a new species. *Penelitian Laut di Indonesia (Marine Research in Indonesia)***15**: 1–20 fig. 1 [13 fig. 1].
Type data: holotype LIPI CS160 ♀, paratype(s) LIPI CS162 ♂.
Type locality: Jakarta Bay, Indonesia.

Taxonomic decision for synonymy: Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [36].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (N coast, NW coast); Taiwan, Hong Kong, Philippines, Vietnam, Indonesia and Australia to the western Indian Ocean.
Ecology: benthic, intertidal, predator, sublittoral; level sandy-mud substrates in shallow embayments or other sheltered coastal waters, intertidal to about 50 m depth.
Reference: Ghosh, H.C. & Manning, R.B. (1988). Types of stomatopod crustaceans in the Zoological Survey of India. *Proc. Biol. Soc. Wash.* **101**(3): 653–661 [660] (type data for *S. woodmasoni*).

Fallosquilla Manning, 1995

Fallosquilla Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [204] [gender feminine].
Type species: *Squilla fallax* Bouvier, 1914 by original designation.

Extralimital distribution: Indo-west central Pacific Oceans.

Fallosquilla fallax (Bouvier, 1914)

Squilla fallax Bouvier, E.L. (1914). Sur la fauna carcinologique de l'Ile Maurice. *C. R. Séances Acad. Sci.* **159**: 698–704 [699].
Type data: lectotype MNHP St.441 ♀, paralectotype(s) MNHP ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [254].
Type locality: Port Louis, Mauritius.

Squilla ambigua Hansen, H.J. (1926). The Stomatopoda of the Siboga Expedition. *Siboga Exped.* **35**: 1–48 pls 1–2 [6 pl. 1].
Type data: holotype ZMA ♂.
Type locality: Anchorage east of Dangar Besar, Saleh-Bay, Indonesia.

Taxonomic decision for synonymy: Manning, R.B. (1968). Stomatopod Crustacea from Madagascar. *Proc. U.S. Natn. Mus.* **124**(3641): 1–61 figs 1–16 [8].

Distribution: QLD (Gulf of Carpentaria), WA (NW coast); Indo-west Pacific from Mauritius and the Comoro Islands, Red Sea, Indonesia, Vietnam, Solomon Islands, and New Caledonia.
Ecology: benthic, predator, sublittoral; sandy-mud substrates, 31–78 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [254 fig. 124].

Harpiosquilla Holthuis, 1964

Harpiosquilla Holthuis, L.B. (1964). Preliminary note on two new genera of Stomatopoda. *Crustaceana* **7**(2): 140–141 [140] [gender feminine].
Type species: *Squilla harpax* De Haan, 1844 by original designation.

Extralimital distribution: Indo-west Pacific Oceans. See: Manning, R.B. (1969). A review of the genus *Harpiosquilla* (Crustacea, Stomatopoda), with descriptions of three new species. *Smithson. Contr. Zool.* **No. 36**: 1–41.

Harpiosquilla annandalei (Kemp, 1911)

Squilla annandalei Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [99] [published May].
Type data: syntypes BMNH ♀, ZSI 7563/10 ♀, ZSI 1748/10 ♂, ZSI 1749 /10 ♀.
Type locality: Gulf of Martaban, Burma [14°48'N 95°52'E].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria); western Indian Ocean to Philippines, Japan, Taiwan, Vietnam.
Ecology: benthic, continental shelf, sand bottom, silty sand; depths 47–128 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [257 fig. 125].

Harpiosquilla harpax (De Haan, 1844)

Squilla harpax De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [222 pl. 51 fig.1] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH 28 1♂, paralectotypes RMNH D460 1 specimen, RMNH D478 3 specimen.
Subsequent designation: Manning, R.B. (1968). Stomatopod Crustacea from Madagascar. *Proc. U.S. Natn. Mus.* **124**(3641): 1–61 figs 1–16 [15–18].
Type locality: Japan.

Harpiosquilla japonica Manning, R.B. (1969). A review of the genus *Harpiosquilla* (Crustacea, Stomatopoda), with descriptions of three new species. *Smithson. Contr. Zool.* **No. 36**: 1–41 [15–17 figs 10–11].
Type data: holotype USNM 26340 ♀, paratype(s) USNM 125718.
Type locality: Wakanoura, Kii, Japan.

Harpiosquilla intermedia Manning, R.B. (1973). *Harpiosquilla intermedia*, a new stomatopod Crustacean from New Caledonia. *Proc. Biol. Soc. Wash.* **86**(9): 113–116 [113–116 figs 1, 2b].
Type data: holotype USNM 141791 ♂, paratypes USNM 141792 ♀, MNHP ♂ ♀.
Type locality: Baie de Ducos, New Caledonia.

Harpiosquilla malagasiensis Manning, R.B. (1978). New and rare stomatopod Crustacea from the Indo-West Pacific region. *Smithson. Contr. Zool.* **No. 264**: 1–36 [30 fig. 15].
Type data: holotype MGH K7364 ♀.
Type locality: Tamatave, Madagascar.

Harpiosquilla paradipa Ghosh, H.C. (1987). Stomatopoda: Crustacea. Fauna of Orissa. *State Fauna Series* **1**: 305–318 [306–308 fig. 1].
Type data: holotype ZSI C4070/2 ♂.
Type locality: Paradip, India.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [257–260 fig. 126].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (N coast); widely distributed in the Indo-West Pacific from the Red Sea and western Indian Ocean to Taiwan, Philippines, Vietnam, Japan, New Caledonia.
Ecology: benthic, intertidal, littoral, predator, sublittoral; sandy-mud to shelly substrates in shallow coastal waters including estuaries and embayments, depth to 93 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326.

Harpiosquilla melanoura Manning, 1968

Harpiosquilla melanoura Manning, R.B. (1968). Stomatopod Crustacea from Madagascar. *Proc. U.S. Natn. Mus.* **124**(3641): 1–61 figs 1–16 [14 (key), 18–21 fig. 5].
Type data: holotype USNM 124092 ♂, paratypes USNM 124093 ♀, MNHP ♂.
Type locality: Banc de Pracel, western coast of Madagascar.

Distribution: NSW (Central E coast), NT (N coast), QLD (NE coast); Japan, the Philippines, Vietnam and Australia to the western Indian Ocean.
Ecology: benthic, predator, sand bottom, sublittoral; muddy sand substrates from 10–80 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [261–263 fig. 127].

Harpiosquilla sinensis Liu & Wang, 1998

Harpiosquilla sinensis Liu, J.-Y. & Wang, Y. (1998). On two new species of the Squillidae and Harpiosquillidae (Crustacea Stomatopoda) from the South China Sea. *Oceanol. Limnol. Sinica* **29**(6): 588–592 [Chinese text], 592–596 [English text], figs 1, 2 [590–592, 594–596 fig. 2] [published Nov. 1998].
Type data: holotype CAS 93NS17-4 ♀, paratypes CAS 93N67-2 ♀, CAS 93NS53-4 3♂, CAS 93N67-6 ♀.
Type locality: Nansha Ils, South China Sea [5°13.32'N 108°53.06'S].

Harpiosquilla ocellata Ahyong, S.T., Chan, T.-Y. & Liao, Y.J. (1998). A new stomatopod (Crustacea: Malacostraca) of the genus *Harpiosquilla* Holthuis, 1964, from Taiwan and Australia. *Proc. Biol. Soc. Wash.* **111**(4): 929–935 figs 1, 2 [published Dec. 1998].
Type data: holotype NTOU H-1995-12-2 ♂, paratypes NTOU P-1995-11-9 1♂ 1♀, NTOU P-1994-1-26 ♂, NTOU P-1995-12-2 ♀, NTOU 1996-8-5 2♂, AM P51185 ♂, AM P51184 ♂.
Type locality: Taiwan.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [263–264 fig. 128].

Distribution: NSW (Central E coast), QLD (NE coast); Taiwan to the southern South China Sea.
Ecology: benthic, continental shelf, subtidal; sandy-mud substrates, depths of 63–212 m.

Harpiosquilla stephensoni Manning, 1969

Harpiosquilla stephensoni Manning, R.B. (1969). A review of the genus *Harpiosquilla* (Crustacea, Stomatopoda), with descriptions of three new species. *Smithson. Contr. Zool.* **No. 36**: 1–41 [17 figs 12–17].
Type data: holotype AM P9664 ♀, paratypes AM P9685 ♀, AM P12382 ♀, AM P12770 ♀, AM P14924–6 3♀, AM P15503–7 4♂ 1♀, AM P15509 ♂.
Type locality: Port Curtis, QLD.

Distribution: NT (N coast), QLD (Gulf of Carpentaria, NE coast), WA (N coast); endemic.
Ecology: benthic, sublittoral.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [264–266 fig. 129].

Kempina Manning, 1978

Kempina Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [39] [gender feminine].
Type species: *Squilla mikado* Kemp & Chopra, 1921 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Kempina mikado (Kemp & Chopra, 1921)

Squilla mikado Kemp, S. & Chopra, B. (1921). Notes on Stomatopoda. *Rec. Indian Mus.* **22**: 297–311 [301 fig. 2].
Type data: holotype ZSI 7685/10 ♂, paratype(s) ZSI C304/1 ♂.
Type locality: Misaki, Japan.

Squilla zanzibarica Chopra, B. (1939). Stomatopoda. *Sci. Rep. John Murray Exped.* **5**: 137–181, figs 1–13 [143 figs 2, 4].
Type data: holotype BMNH 1952.4.15.5 ♂.
Type locality: off Zanzibar.

Taxonomic decision for synonymy: Moosa, M.K. (1986). Stomatopod Crustacea. pp. 367–441 figs 1–11 pl. 1 *in* Forest, J. Résultats des Campagnes Musorstom I & II, Philippines. *Mém. Mus. natn. Hist. nat. Paris* **133**: 1–525 [400].

Distribution: NSW (Central E coast), NT (N coast), QLD (Central E coast, NE coast), WA (NW coast); Indo-west Pacific Oceans, western Indian Ocean to Vietnam, Japan, the Philippines, New Caledonia.
Ecology: benthic, continental shelf, continental slope, predator, soft bottom, sublittoral; sandy or sandy-mud substrates, 58–804 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [267–268 fig. 130].

Lenisquilla Manning, 1977

Lenisquilla Manning, R.B. (1977). Preliminary accounts of five new genera of stomatopod crustaceans. *Proc. Biol. Soc. Wash.* **90**(2): 420–423 [422] [gender feminine].
Type species: *Squilla lata* Brooks, 1886 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Lenisquilla lata (Brooks, 1886)

Squilla lata Brooks, W.K. (1886). Report on the Stomatopoda collected by the H.M.S. *Challenger* during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **16**: 1–116 pls 1–16 [21, 34 pl. 3 figs 1–3].
Type data: lectotype BMNH 94.10.16.8 ♂, paralectotype(s) BMNH 94.10.16.9 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [269].
Type locality: Arafura Sea.

Squilloides latus spinosus Blumstein, R. (1970). New stomatopod crustaceans from the Gulf of Tonkin, South China Sea. *Crustaceana* **18**(2): 218–224.
Type data: holotype ZIL 11/57960 ♀.
Type locality: Gulf of Tonkin, South China Sea.

Squilloides espinosus Blumstein, R. (1974). Stomatopod crustaceans from the Gulf of Tonkin with the description of new species. *Crustaceana* **26**(2): 113–126 [121 fig. 7].
Type data: holotype ZIL 1/58432 ♂.
Type locality: Gulf of Tonkin.

Lenisquilla pentadactyla Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [205–207 fig. 14].

Type data: holotype MNHP St 1202 ♂.
Type locality: New Caledonia [20°46.8'S 165°17.3'E].

Taxonomic decision for synonymy: Manning, R.B. (1991). Stomatopod Crustacea collected by the *Galathea* Expedition, 1950–1952, with a list of Stomatopoda known from depths below 400 meters. *Smithson. Contr. Zool.* **No. 521**: 1–18 [10]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [269 fig. 131].

Distribution: NSW (Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria), WA (NW coast); Indo-west Pacific Oceans, western Indian Ocean to Japan, New Caledonia and Australia.
Ecology: benthic, predator, sublittoral, sandy mud bottom; sandy-mud substrates, 45–220 m depth.

Levisquilla Manning, 1977

Levisquilla Manning, R.B. (1977). Preliminary accounts of five new genera of stomatopod crustaceans. *Proc. Biol. Soc. Wash.* **90**(2): 420–423 [422] [gender masculine].
Type species: *Squilla inermis* Manning, 1965 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Levisquilla inermis (Manning, 1965)

Squilla inermis Manning, R.B. (1965). Stomatopoda from the collection of His Majesty the Emperor of Japan. *Crustaceana* **9**(3): 249–262 figs 1–2 pls XI, XII [255–257 fig. 2].
Type data: holotype BLIH 284 ♀.
Type locality: Enoshima, Sagami Bay, Japan.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (NW coast); Japan to Vietnam.
Ecology: benthic, continental shelf; silty sand substrates in depths of 53–108 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [271 fig. 132].

Levisquilla jurichi (Makarov, 1979)

Clorida jurichi Makarov, R.R. (1979). A collection of stomatopod crustaceans of the genus *Clorida* Eydoux & Souleyet, 1842, from Tonkin Bay, Vietnam. *Crustaceana* **37**(1): 39–56 [40 fig. 1].
Type data: holotype VNIRO ♀.
Type locality: Tonkin Bay, Vietnam [21°13.5'N 109°45.8'E].

Distribution: NSW (Central E coast), QLD (NE coast), WA (NW coast); Andaman Sea, Vietnam, New Caledonia.
Ecology: benthic, continental shelf; sand and mud substrates; 9–43 m in Australia.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [271–274 fig. 133].

Lophosquilla Manning, 1968

Lophosquilla Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [133] [gender feminine].
Type species: *Squilla costata* De Haan, 1844 by original designation.

Toshimitsu Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [234-235] [gender masculine].
Type species: *Lophosquilla tiwarii* Blumstein, 1974 by original designation.

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [274].

Extralimital distribution: Indo-west Pacific Oceans.

Lophosquilla costata (De Haan, 1844)

Squilla costata De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [223 pl. 51 fig. 5] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH 452 ♀, paralectotypes RMNH 23 1 ♂ 3 ♀, RMNH D470 ♀, MNHP St.424 1 specimen.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc.
Type locality: Japan.

Distribution: NSW (Lower E coast), QLD (NE coast); Indo-west Pacific Oceans.
Ecology: benthic, predator, sublittoral; to 24 m depth.
Reference: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Lophosquilla tiwarii (Blumstein, 1974)

Lophosquilla tiwarii Blumstein, R. (1974). Stomatopod crustaceans from the Gulf of Tonkin with the description of new species. *Crustaceana* **26**(2): 113–126 [123–124 fig. 8].
Type data: holotype ZIL 10/57426 ♀, paratype(s) ZSI C332/1 ♀.
Type locality: Gulf of Tonkin, Vietnam [20°20'N 108°25'E].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria); Burma to the Gulf of Tonkin, Vietnam, Philippines.
Ecology: benthic, continental shelf; sandy-mud or shelly substrates at depths of 42–53 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [275–278 fig. 135].

Miyakea Manning, 1995

Miyakea Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [213].
Type species: *Squilla nepa* Latreille, 1828 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Miyakea nepa (Latreille, 1828)

Squilla nepa Latreille, P.A. (1828). *Encyclopédie Méthodique. Histoire Naturelle. Entomologie, ou Histoire naturelle des Crustacés, des Arachnides et des Insectes.* Serville et Guérin : Le Peletier de St-Fargeau Vol. 10(2) pp. 345–852 [471].
Type data: neotype ZRC 1999.2082 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [279–280 fig. 136].
Type locality: Xiamen, China.

Squilla edwardsi Giebel, C. (1861). Neue *Squilla* von der Insel Banka. *Zeit. Ges. Naturwiss.* **18**: 319–320 [320].
Type data: type status and whereabouts unknown.
Type locality: Insel Banka, Indonesia [2°15'S 106°00'E].

Taxonomic decision for synonymy: Bigelow, R.P. (1894). Report on the Crustacea of the Order Stomatopoda collected by the steamer *Albatross* between 1885 and 1891, and on other specimens in the U.S. National Museum. *Proc. U.S. Natn. Mus.* **17, No. 1017**: 489–550.

Distribution: QLD (NE coast); Taiwan and Hong Kong to the western Indian Ocean and the Red Sea, including the Philippines, Vietnam and Australia.
Ecology: mud bottom, predator, sand bottom, sublittoral; to 25 m depth.
Reference: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Neoanchisquilla Moosa, 1991

Neoanchisquilla Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [208].
Type species: *Neoanchisquilla semblatae* Moosa, 1991 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.
Generic reference: Ahyong, S.T. (1998). Review of *Neoanchisquilla* Moosa, 1991 and *Neclorida* Manning, 1995 (Crustacea: Stomatopoda: Squilloidea), with descriptions of two new species of *Neoanchisquilla* from the Indian Ocean. *Rec. Aust. Mus.* **50**: 217–229 (review of genus).

Neoanchisquilla australiensis Ahyong, 1998

Neoanchisquilla australiensis Ahyong, S.T. (1998). Review of *Neoanchisquilla* Moosa, 1991 and *Neclorida* Manning, 1995 (Crustacea: Stomatopoda: Squilloidea), with descriptions of two new species of *Neoanchisquilla* from the Indian Ocean. *Rec. Aust. Mus.* **50**: 217–229 [219 fig. 2].
Type data: holotype NTM Cr.012355 ♀.
Type locality: Northwest Shelf, WA.

Distribution: WA (NW coastal); known only from type locality.
Ecology: benthic, predator, sublittoral; trawled from 43 m depth.

Oratosquilla Manning, 1968

Oratosquilla Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [120, 133] [gender feminine].
Type species: *Squilla oratoria* De Haan, 1844 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Oratosquilla oratoria (De Haan, 1844)

Squilla oratoria De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam,* Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 51 fig. 2] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH 451 ♂, paralectotypes RMNH 19 3♂ ♀, RMNH 84 26♂ 19♀, RMNH 475d 25 specimens, RMNH 476d 1 specimen, MNHP St 503 2 specimens, MNHP St 504 2 specimens.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc.
Type locality: Japan.

Squilla affinis Berthold, A.A. (1845). Ueber verschiedene neue oder seltene Reptilien aus Neu Granada und Crustaceen aus China. *Nachr. Ges. Wiss. Gottingen* **1845**: 37–49 [46].
Type data: type status and whereabouts unknown.
Type locality: China.

Taxonomic decision for synonymy: Kemp, S. (1913). Crustacea Stomatopoda of the Indo-Pacific region, based on the collectionin the Indian Museum. *Mem. Indian Museum* **4**(1): 1–217 [66–69].

Distribution: NSW (Central E coast), VIC; VIC (Gippsland Lakes), southern Russia, Japan, China, southward to Hong Kong and Vietnam.
Ecology: benthic, estuarine; sheltered embay-ments or estuaries, muddy sand in depths of 10–20 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [283–285 fig. 138].

Oratosquillina Manning, 1995

Oratosquillina Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [224] [gender feminine].
Type species: *Squilla interrupta* Kemp, 1911 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Oratosquillina berentsae Ahyong, 2001

Oratosquillina berentsae Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [287–288 fig. 139].
Type data: holotype AM P56782 ♀, paratypes AM P56783 ♀, AM P56784 ♀.
Type locality: NSW, SE of Evans Head [29°24–25'S 153°28–29'E].

Distribution: NSW (Central E coast); known only from limital area.
Ecology: benthic, subtidal; level muddy sand substrates, depths of 15–51 m.

Oratosquillina gravieri (Manning, 1978)

Oratosquilla gravieri Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [7, 14–15 fig. 6].
Type data: holotype MNHP St.716 ♂.
Type locality: Hongay, Baie d'Along, Gulf of Tonkin.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Vietnam to Philippines, New Caledonia and Australia.
Ecology: subtidal, soft bottom; soft sand and mud substrates, shallow subtidal to at least 59 m depth.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [288–291 fig. 140].

Oratosquillina inornata (Tate, 1883)

Plain Mantis-shrimp

Squilla inornata Tate, R. (1883). Description of some new species of *Squilla* from South Australia. *Trans. R. Soc. S. Aust.* **6**: 48–53 pl. 2 [51 pl. 2 fig. 3a–c].
Type data: lectotype SAMA C180 ♀, paralectotype(s) SAMA C4163 ♀.
Type locality: Gulf St Vincent, SA.

Oratosquilla hindustanica Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [15–17 figs 7, 15].
Type data: holotype ZSI 7037-41/10 ♂, paratypes USNM 125069 2♀, USNM 143576 ♂ ♀, ZSI ex 7037-41/10 12♂ 17♀.
Type locality: Tuticorin, Madras, Gulf of Manaar, India [8°47'N 78°08'E].

Oratosquilla solicitans Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [25–28 figs 13–15].
Type data: holotype USNM 125743 ♀, paratypes USNM 4♂ 2♀, USNM 143578 ♀, ZMB 12879 2♂.
Type locality: Sandakan, Sabah, Malaysia [5°50'N 118°07'E].

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [291–293 fig. 141].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), SA (S Gulfs coast), WA (N coast, NW coast); Indo-west Pacific, India, Vietnam, Thailand, Malaysia, Indonesia, Taiwan.
Ecology: benthic, intertidal, mud bottom, predator, sublittoral; mud or sandy-mud substrates.
Reference: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Oratosquillina interrupta (Kemp, 1911)

Squilla interrupta Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [98] [published May].
Type data: lectotype AM P3982 ♂, paralectotypes ZSI 9827-8/6 1♂ 1♀, ZSI 3329/9 3♂ 3♀, ZSI 3095/5 ♀, ZSI 3094/5 ♀, ZSI 7982-91/9 5♂ 5♀, ZSI 1284-6/7 2♂ 1♀, ZSI 7783/10 ♂, ZSI 7268-74/10 5♂ 5♀, ZSI 3080/5 ♂, ZSI 8043/10 1♂ 1♀, ZSI 3335-7/7 3♂, ZSI 5830/9 ♂, ZSI 7557/6 4 ♂ 14 ♀, ZSI 7559/9 4♂ 14♀, ZSI 7272-8/10 2♂ 4♀, ZSI 7004/10 ♂ ♀, ZSI 3047/5 4 ♂ 4 ♀, ZSI 3067/5 4♂ 4♀, ZSI 647/10 ♀, ZSI 7282-3/10 2♂ 1♀, ZSI 7279-81/10 2♂ 1♀, AM P3976 ♂, AM P3981 ♀.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [293–295 fig. 142].
Type locality: Hong Kong.

Oratosquilla arabica Ahmed, M.M. (1971). A new species of *Oratosquilla* (Crustacea: Stomatopoda) from the Arabian Gulf. *Pakistan J. Scient. Indust. Res.* **14**(3): 251–253 [251 fig. 1].
Type data: type status unknown*.
Type locality: Arabian Gulf off Iraq.

Taxonomic decision for synonymy: Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [6].

Distribution: NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast); Taiwan, Hong Kong, Vietnam and Australia westward to the Persian Gulf.
Ecology: benthic, intertidal, mud bottom, predator, sand bottom, sublittoral; sheltered coastal waters and bays, to 25 m depth.
Reference: Ghosh, H.C. & Manning, R.B. (1988). Types of stomatopod crustaceans in the Zoological Survey of India. *Proc. Biol. Soc. Wash.* **101**(3): 653–661 [657] (type data for *S. interrupta*).

Oratosquillina manningi Ahyong, Chan & Liao, 2000

Oratosquillina manningi Ahyong, S.T., Chan, T.-Y. & Liao, Y.J. (2000). *Oratosquillina manningi*, a new species of stomatopod from Taiwan and Australia. *J. Crust. Biol.* **20**: 42–47 figs 1, 2 [42–47 figs 1–2].
Type data: holotype NTOU H 1996-8-4 ♂, paratypes NTOU P 1997-12-1 ♀, AM P53856 ♀.
Type locality: Northeastern Taiwan.

Distribution: WA (Central W coast); Taiwan.
Ecology: benthic, predator, sandy mud bottom, sublittoral; depths of 53–78 m.

Oratosquillina quinquedentata (Brooks, 1886)

Squilla quinquedentata Brooks, W.K. (1886). Report on the Stomatopoda collected by the H.M.S. *Challenger* during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **16**: 1–116 pls 1–16 [21, 26 pl. 1 fig. 3, pl. 6].
Type data: holotype BMNH 94.10.16.6 ♂.
Type locality: Arafura Sea.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); Arafura Sea, Gulf of Thailand, Bombay, India.
Ecology: benthic, intertidal, mud bottom, predator, sublittoral; sandy-mud to mud substrates, shore to 51 m depth.
Reference: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.

Oratosquillina stephensoni (Manning, 1978)

Oratosquilla stephensoni Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [29–30 fig. 16].
Type data: holotype USNM 125754 ♂, paratypes USNM 156527 9♂ 8♀, USNM 125752–3 3♂ 5♀, USNM 125067 ♂, AM P24776 1♂ 1♀, QM W5767 1♂ 1♀.
Type locality: E of St Helena Island, Moreton Bay, QLD.

Distribution: NT (N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast); known only from limital area, endemic.
Ecology: benthic, mud bottom, predator, sublittoral; level sandy-mud to mud substrates, 5.5–43 m depth.
References: Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [298–300 fig. 145] (*Squilla perpensa*, Kemp, 1911 [= *Oratosquillina*] recorded from Darwin by Manning (1966), was a mis-identification, and correctly belongs to *O. stephensoni*).

Quollastria Ahyong, 2001

Quollastria Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [300–301].
Type species: *Quollastria capricornae* Ahyong, 2001 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Quollastria capricornae Ahyong, 2001

Quollastria capricornae Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [302–304 fig. 146].
Type data: holotype AM P56912 ♂, paratypes AM P56873 4♂ 3♀, AM P56879, AM P56916 4♀, AM P56917 2♀, AM P57101 ♂.
Type locality: QLD, E of Mooloolaba [26°52.74'S 153°35.34'E].

Distribution: NSW (Central E coast), QLD (NE coast, NE oceanic), WA (Central W coast); known only from limital area.
Ecology: benthic, continental shelf; level sandy substrates in depths of 71–212 m.

Quollastria gonypetes (Kemp, 1911)

Squilla gonypetes Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [96].
Type data: lectotype ZSI 3359/7 ♂, paralectotypes ZSI 4421/10 ♀, ZSI 3476/10 ♂ ♀.
Subsequent designation: Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [13].
Type locality: off Cheduba Is., Arakan coast, Burma [18°48'N 93°38'E].

Distribution: NSW (Central E coast), NT (N coast), WA (Central W coast), Coral Sea Island Territories; widely distributed throughout the Indo-West Pacific from the western Indian Ocean, India, Australia, Indonesia, Philippines, Vietnam to Japan.
Ecology: benthic, predator, sand bottom, sublittoral; sandy-mud substrates at depths of 40–110 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326.

Quollastria kapala Ahyong, 2001

Quollastria kapala Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [306–308 fig. 148].
Type data: holotype AM P56781 ♂, paratypes AM P29444 2♂, AM P56779 ♂, AM P56780 ♀.
Type locality: NSW, SE of Point Danger [28°13'S 153°50'E].

Distribution: NSW (Central E coast), QLD (Central E coast); known only from limital area.
Ecology: benthic, continental shelf, continental slope; on trawlable substrates, depths 131–411 m.

Quollastria subtilis (Manning, 1978)

Oratosquilla subtilis Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [33–34 fig. 19].

Type data: holotype ZSI 7536/10 ♀ ♂, paratypes USNM 77989 ♂ (*Albatross* Stn 5642), USNM 77990 ♂ (*Albatross* Stn 5220), ZMA ♂, ZSI ex C320/1 ♂ ♀.
Type locality: off Visakhapatnam coast, Madras, India.

Oratosquilla turbata Manning, R.B. (1978). Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithson. Contr. Zool.* **No. 272**: 1–43 [35–36 fig. 20].
Type data: holotype USNM 124672 ♂, paratypes MNHP 2♂ ♀, USNM 124671 ♂, USNM 155310 ♀.
Type locality: Banc de Pracel, W coast of Madagascar [17°00'S 43°30'E].

Taxonomic decision for synonymy: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [308–310 fig. 149].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast); New Caledonia, Philippines, Indonesia, Burma to India, Madagascar.
Ecology: benthic, continental shelf; sand or silty substrates, depths of 31–111 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [308–310 fig. 149].

Squilloides Manning, 1968

Squilloides Manning, R.B. (1968). A revision of the Family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bull. Mar. Sci.* **18**(1): 105–142 figs 1–10 [131] [gender feminine].
Type species: *Squilla leptosquilla* Brooks, 1886 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Squilloides leptosquilla (Brooks, 1886)

Squilla leptosquilla Brooks, W.K. (1886). Report on the Stomatopoda collected by the H.M.S. *Challenger* during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **16**: 1–116 pls 1–16 [30–34 pl. 1 figs 1–2].
Type data: holotype BMNH 1894.10.16.7 ♂ (*Challenger* Stn 204B).
Type locality: Philippine Islands [12°46'N 122°10'E].

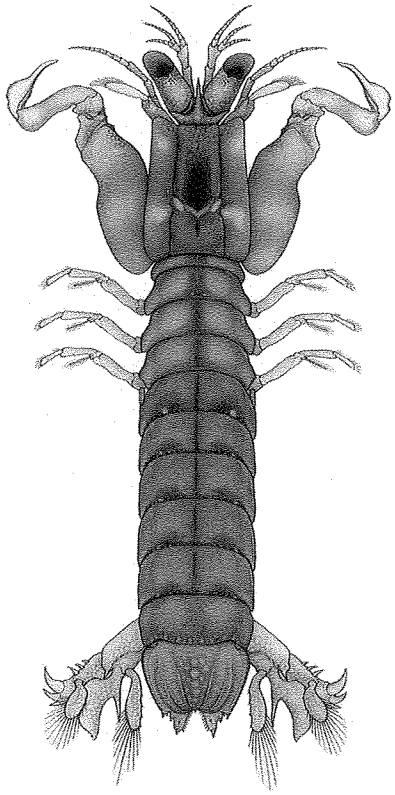
Squilla leptosquilla dentata Jurich, B. (1904). Die Stomatopoden der deutschen Tiefsee-Expedition. *Wiss. Ergeb. deutschen Tiefsee-Exped. Valdivia 1898–1899* **7**: 359–408 pls 25–30 [372 pl. 25(I) fig. 2] [as *Squilla leptosquilla* var. *dentata*].
Type data: type status and whereabouts unknown* (ZMB probable depository institution).
Type locality: unknown.

Taxonomic decision for synonymy: Kemp, S. (1913). Crustacea Stomatopoda of the Indo-Pacific region, based on the collectionin the Indian Museum. *Mem. Indian Museum* **4**(1): 1–217 [46–48].

Distribution: WA (Central W coast); Indo-Australian region from the Philippines, Indonesia and the Andaman Islands.
Ecology: benthic, continental shelf, continental slope; depths from 170–754 m.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [310–312 fig. 150].

TAKUIDAE

INTRODUCTION



Taku spinosocarinatus
[from Manning 1995: pl. 23]

The Takuidae include three genera of 'smashers', but only *Taku* has been recorded from Australia. Like gonodactylids, takuids occupy cavities in rock or coral substrates, commonly on coral reefs.

Diagnosis

Cornea with six rows of rectangular ommatidia in the midband. Protopod of antenna with fixed, anteriorly directed spine dorsally. Third and fourth maxillipeds with ovate propodi, not ribbed or beaded ventrally; body subcylindrical, articulation compact. Raptorial claw with ischiomeral articulation subterminal; dactylus without teeth on inner margin, strongly inflated basally to form a blunt heel. Abdominal somite 6 articulating with telson. Telson with distinct median carina; submedian teeth with movable apices; at most with three 'intermediate' denticles, arising marginally. Uropodal protopod with two primary spines; articulation of exopod segments subterminal. Distal spines on outer margin of uropodal exopod strongly recurved anteriorly.

Reference

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

TAKUIDAE Manning, 1995

Takuidae Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [119].
Type genus: *Taku* Manning, 1995.

Taku Manning, 1995

Taku Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [119] [gender masculine].
Type species: *Gonodactylus spinosocarinatus* Fukuda, 1909 by original designation and monotypy.

Extralimital distribution: Indo-west Pacific Oceans.

Taku spinosocarinatus (Fukuda, 1909)

Gonodactylus spinosocarinatus Fukuda, T. (1909). Japanese Stomatopoda. *Dobutsegaku Zasshi* **21**: 54–62, 167–174, 5 pls [54].
Type data: neotype AM P60104 ♂.
Subsequent designation: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [125–127 fig. 62].
Type locality: Nakamoto, Kuroshima Is., Okinawa Prefecture, Japan [24°19'N 124°05'E].

Gonodactylus strigatus Hansen, H.J. (1926). The Stomatopoda of the Siboga Expedition. *Siboga Exped.* **35**: 1–48 pls 1–2 [31 pl. 2 figs 2a,b].
Type data: type status unknown ZMA.
Type locality: Zuid Island, near Saleyer, Indonesia [6°05'S 120°30'E].

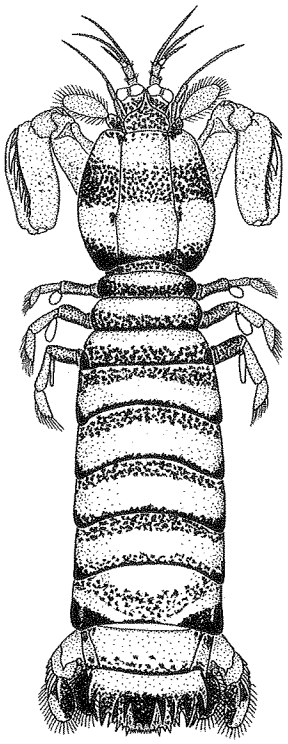
Gonodactylus demani pruvotae Gravier, C. (1930). Sur une collection de Crustacés (Stomatopodes) recueillis par Mme Pruvot sur les cotes de la Nouvelle-Calédonie. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(2): 214–216 fig. 1 [214 fig. 1] [as *Gonodactylus demani* var. *pruvotae*].
Type data: lectotype MNHP St.128, paralectotype(s) MNHP St.129 2 specimens.
Subsequent designation: Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [161].
Type locality: Ile de Pins, New Caledonia.

Taxonomic decision for synonymy: Moosa, M.K. (1991). The Stomatopoda of New Caledonia and Chesterfield Islands. pp. 149–219 *in* Richer de Forges, B. (ed.) *Le benthos des fonds meubles des lagon de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 1 [161].

Distribution: QLD (NE coast); West Pacific (Japan, Vietnam, Indonesia, New Caledonia and Australia).
Ecology: benthic, coral reef, intertidal, predator, sublittoral; coral reef flats amongst rubble.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [125–127 fig. 62] (redescription).

TETRASQUILLIDAE

INTRODUCTION



Acaenosquilla brazieri [S. Ahyong]

The known Australian genera in this family, *Acaenosquilla* and *Kasim*, were placed in the Heterosquillidae by Manning (1995), but revisionary work shows that family is a junior synonym of Tetrasquillidae (Ahyong & Harling 2000; Ahyong 2001).

Like lysiosquillids, tetrasquillids occupy burrows on soft substrates, but usually in relatively deeper waters exceeding 50–60 metres.

Diagnosis

Cornea bilobed; typically with six rows of hexagonal ommatidia in the mid-band. Third and fourth maxillipeds with propodi ribbed or beaded ventrally. Abdominal articulation compact. Raptorial claw with dactylus uninflated basally. Pereiopod 3 with slender or elongate-oval endopod. Telson with primary teeth and denticles distinct, slender, not fused into margin. Dorsal margin of uropodal endopod with weak dorsal proximal fold.

References

Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326

Ahyong, S.T. & Harling, C. (2000). The phylogeny of the stomatopod Crustacea. *Aust. J. Zool.* **48**: 607–642

Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339

Manning, R.B. & Camp, D.K. (1993). Erythrosquilloidea, a new superfamily and Tetrasquillidae, a new family of stomatopod crustaceans. *Proc. Biol. Soc. Wash.* **106**(1): 85–91

TETRASQUILLIDAE Manning & Camp, 1993

Tetrasquillidae Manning, R.B. & Camp, D.K. (1993). Erythrosquilloidea, a new superfamily and Tetrasquillidae, a new family of stomatopod crustaceans. *Proc. Biol. Soc. Wash.* **106**(1): 85–91 [88, 89].
Type genus: *Tetrasquilla* Manning & Chace, 1990.

Heterosquillidae Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339.
Type genus: *Heterosquilla* Manning, 1963.

Taxonomic decision for synonymy: Ahyong, S.T. & Harling, C. (2000). The phylogeny of the stomatopod Crustacea. *Aust. J. Zool.* **48**: 607–642 [626].

Acaenosquilla Manning, 1991

Acaenosquilla Manning, R.B. (1991). Stomatopod Crustacea collected by the *Galathea* Expedition, 1950–1952, with a list of Stomatopoda known from depths below 400 meters. *Smithson. Contr. Zool.* **No. 521**: 1–18 [6] [gender feminine].
Type species: *Lysiosquilla latifrons* De Haan, 1844 by original designation.

Extralimital distribution: Japan, Coral Sea, New Zealand.

Acaenosquilla brazieri (Miers, 1880)

Lysiosquilla brazieri Miers, E.J. (1880). On the Squillidae. *Ann. Mag. Nat. Hist.* **5**: 1–30 [11 pl. 1 figs 3–6] [as *Lysiosquilla Brazieri*].
Type data: holotype BMNH 79.8 ♀.
Type locality: Port Jackson, NSW.

Distribution: NSW (Lower E coast), QLD (Central E coast); Coral Sea, New Zealand.
Ecology: benthic, predator, sublittoral; trawled and dredged from 36–59 m depth.
References: Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [125–127] (previous records of *Lysiosquilla latifrons* from Australia were misidentifications of this species); Manning, R.B. (1991). Stomatopod Crustacea collected by the *Galathea* Expedition, 1950–1952, with a list of Stomatopoda known from depths below 400 meters. *Smithson. Contr. Zool.* **No. 521**: 1–18 [6]; Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [171–172 fig. 85].

Heterosquilla Manning, 1963

Heterosquilla Manning, R.B. (1963). Preliminary revision of the genera *Pseudosquilla* and *Lysiosquilla* with descriptions of six new genera (Crustacea: Stomatopoda). *Bull. Mar. Sci. Gulf Caribb.* **13**(2): 308–328 [6] [gender feminine].
Type species: *Lysiosquilla latifrons* De Haan, 1844 by original designation.

Extralimital distribution: Indo-Pacific Oceans.

Heterosquilla pentadactyla Ahyong, 2001

Heterosquilla pentadactyla Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [173–175 fig. 86].
Type data: holotype NMV J13877.
Type locality: western Bass Strait, 55 km SW of Cape Otway [39°16.7'S 143°06.7'E].

Distribution: VIC (Bass Strait); known only from type locality.
Ecology: benthic, continental shelf; shelly sand substrates at a depth of 95 m.

Heterosquilloides Manning, 1966

Heterosquilloides Manning, R.B. (1966). Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Rec. Aust. Mus.* **27**(4): 79–137 figs 1–10 [124] [gender masculine].
Type species: *Lysiosquilla insolita* Manning, 1963 by original designation.

Extralimital distribution: South Africa, Andaman Islands, Philippines to Vietnam, Galapagos Islands.

Heterosquilloides insignis (Kemp, 1911)

Lysiosquilla insignis Kemp, S. (1911). Preliminary description of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Rec. Indian Mus.* **6**(2): 93–100 [94–95] [published May].
Type data: holotype ZSI 7568/10 ♂.
Type locality: off North Andaman Ils [14°27'N 93°50'].

Heterosquilla (Heterosquilloides) zarenkovi Makarov, R.R. (1978). New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from the Tonkin Bay (Vietnam). *Zool. Zh.* **57**: 176–189 [179 fig. 2] [published Feb., 1978].
Type data: holotype VNIRO ♀.
Type locality: Tonkin Bay, Vietnam [14°57'N 109°42.8'E].

Taxonomic decision for synonymy: Manning, R.B. (1991). Stomatopod Crustacea collected by the *Galathea* Expedition, 1950–1952, with a list of Stomatopoda known from depths below 400 meters. *Smithson. Contr. Zool.* **No. 521**: 1–18 [6].

Distribution: WA (Central W coast); widely distributed, from South Africa and the Andaman Islands, Philippines, to Vietnam, Galapagos Islands.
Ecology: benthic, continental slope; in Australian waters from depths of 384–434 m, presumably on soft substrates.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [175–175 fig. 87].

Kasim Manning, 1995

Kasim Manning, R.B. (1995). Stomatopod Crustacea of Vietnam: The Legacy of Raoul Serène. *Crust. Res.* **Spec. No. 4**: ii–ix 1–339 [124] [gender masculine].
Type species: *Heterosquilloides philippinensis* Moosa, 1986 by original designation.

Extralimital distribution: Philippines.

Kasim insuetus (Manning, 1970)

Heterosquilla insueta Manning, R.B. (1970). Two new stomatopod crustaceans from Australia. *Rec. Aust. Mus.* **28**(4): 77–85 figs 1, 2 [81 fig. 2].
Type data: holotype AM P16286 ♂.
Type locality: Great Australian Bight, WA [33°43'S 125°04'E].

Distribution: WA (Great Australian Bight, SW coast).
Ecology: benthic, predator, sublittoral; trawled or dredged from 77–151 m depth, presumably on soft bottom.
Reference: Ahyong, S.T. (2001). Revision of the Australian Stomatopod Crustacea. *Rec. Aust. Mus. (Suppl.)***26**: 1–326 [177 fig. 88].

SUBCLASS: EUMALACOSTRACA

INTRODUCTION

This subclass is by far the largest group of malacostracans, and includes three superorders: Syncarida, Peracarida and Eucarida. The syncarids and peracarids are dealt with in Volumes 19.2a and 19.2b of the *Zoological Catalogue of Australia* and are not further mentioned here. The Superorder Eucarida had an extremely successful radiation, producing a remarkable diversity of shapes and forms, including the possum-shrimps, shrimps, prawns, crabs and lobsters. Eucarids inhabit almost all environments from the poles to the tropics, and from freshwaters to marine abyssal depths. They can be so abundant as to form the staple diet of some of the great whale species, or so rare that they are still known only from single specimens, despite years of searching.

Diagnosis

Malacostracans of highly variable morphology, but with 'caridoid facies' body plan of five-segmented cephalon, eight-segmented thorax, and six-segmented abdomen, plus telson; zero to three thoracic somites fused with head, their respective appendages usually modified as maxillipeds; antennules and antennae primitively biramous; antennae often with scale-like exopod; most with well developed carapace, but secondarily reduced in syncarids and some peracarids; gills primitively as thoracic epipods; tail fan composed of telson plus paired uropods (typically lost in Brachyura); abdomen typically long and muscular, but greatly reduced, shortened, and little visible dorsally in Brachyura.
(Modified after Brusca & Brusca 1990).

Reference

Brusca, R.C. & Brusca, G.J. (1990). *Invertebrates*. Sinauer Associates, Inc.: Sunderland, Massachusetts. 922 pp.

SUPERORDER: EUCARIDA

INTRODUCTION

The Superorder Eucarida comprises highly evolved and developed eumalacostracans. Although very diverse in form, they are united by the presence of a complete carapace fused to all the thoracic segments to form a cephalothorax. The group includes the orders Euphausiacea (krill), the monotypic Amphionidacea, and the Decapoda (shrimps, lobsters, crabs, and allies).

Diagnosis

Highly developed eumalocostracans having carapace fused dorsally with all thoracic somites; compound eyes located on movable stalks; protopodite of antenna consisting of 2 segments; 0, 1, or 3 pairs of maxillipeds; telson without caudal rami; adults without lacinia mobilis on mandibles, eggs usually attached to abdominal appendages, young typically developing with metamorphosis, free-swimming nauplius stage in primitive forms.
(Modified after Moore 1969).

Reference

Moore, R.C. (1969). Eucarida. p. R393 *in* Moore, R.C. (ed.) *Treatise on Invertebrate Paleontology*. Part R. Arthropoda 4 Crustacea (except Ostracoda) Myriapoda — Hexapoda. Laurence, Kansas : The University of Kansas and The Geological Society of America, Inc. Vol. 1 xxxvi R398 pp.

ORDER: EUPHAUSIACEA

INTRODUCTION

The order takes its name from the genus *Euphausia* and is derived from the Greek *eu* meaning 'good' or 'true', and *phausia* for 'shining' or 'light emitting'. This refers to the bright photophores typically present on the eyestalk, thoracic appendages and between the pleopods under the abdomen. The common name for the group, 'Krill', was first used by Norwegian whalers who applied it to the swarming little fish (krill) which signalled whale feeding grounds.

Euphausiids are exclusively marine, and occur in all the world's oceans, ranging in depth from the surface to 4000 metres. There are 86 known species in 11 genera and two families, the Euphausiidae and the Bentheuphausiidae, although the latter comprises only a single genus and species. Distributions are often wide-ranging—many of the deeper-living species occur circumglobally, whereas the distibutions of those living in waters shallower than 300 metres tend to be more influenced by factors such as current patterns, water temperatures, and salinity.

Euphausiids spend their entire lives in the water column. They are primarily omnivorous filter-feeders with their diet consisting principally of zooplankton, phytoplankton, and suspended detritus they generate by disturbing bottom sediments. They generally disperse for feeding at night, but in the pre-dawn often form dense aggregations which can undergo deep vertical migrations. During the day these aggregations may form narrow or deep layers at varying depths in response to environmental factors such as thermoclines or oxyclines, but like *Nyctiphanes australis*, they can also form tight balls (Mauchline & Fisher 1969).

Besides being a crucial food source for whales, their high protein content has led to them being harvested commercially as food for aquarium and farm animals. There is also an increasing interest in fishing *Euphausia* species for direct human consumption, and small fisheries already exist in waters off Japan, Canada, and the Antarctic.

Other important general references on biology and taxonomy of relevance to the Australian fauna include: Tattersall (1936a, 1936b), Boden *et al.* (1955), Brinton (1975); Mauchline (1980); Baker *et al.* (1990); and Brinton *et al.* (1999).

Diagnosis

Carapace covering entire thorax, fused to underlying thoracic segments; single series of prominent exposed feathery gills in form of podobranches attached to exopodites of thoracic limbs; in some genera thoracic limbs all similar in structure with none obviously modified into maxillipeds, but in others (*Nematoscelis*, *Nematobrachion*, *Stylocheiron*, *Tessarabrachion*, and some *Thysanoessa* species) second and third throacic endopods (corresponding to maxillipeds) are extrememly elongate, and sometimes raptorial, while fourth to eighth endopods are reduced; first maxilla with pseudexopod in most genera (true larval exopod persists only in *Pseudeuphausia sinica*), second maxilla with relatively small exopod; complex movable photophores typically present at least on abdomen (except in certain bathypelagic species); statocysts absent; no special brooding structures, eggs generally shed free, young hatch as nauplii in the first of a long series of larval stages. (After Schram 1986; Brinton *et al.* 1999).

References

Baker, A. de C., Boden, B.P. & Brinton, E. (1990). *A Practical Guide to the Euphausiids of the World.* London : British Museum (Natural History) 96 pp.

Boden, B.P., Johnson, M.W. & Brinton, E. (1955). The Euphausiacea (Crustacea) of the North Pacific. *Bull. Scripps Instit. Oceanogr.* **6**: 287–400

Brinton, E. (1975). Euphausiids of Southeast Asian Waters. *Naga Rep.* **4**(5): 1–287

Brinton, E., Ohman, M.D., Townsend, A.W., Knight, M.D. & Bridgeman, A.L. (1999). Euphausiids of the World Ocean. Version 1.0 (Mac). ETI CD-ROM, University of Amsterdam

Mauchline, J. (1980). The biology of mysids and euphausiids. *Adv. Mar. Biol.* **18**: 1–681

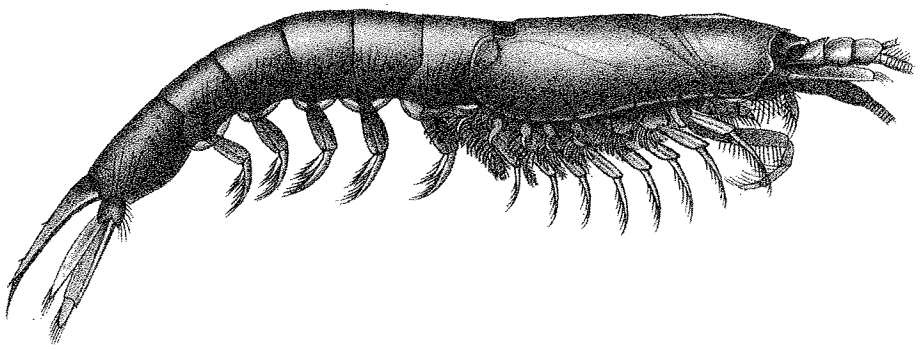
Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454

Schram, F.R. (1986). *Crustacea.* London, New York : Oxford University Press 606 pp.

Tattersall, W.M. (1936a). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176

Tattersall, W.M. (1936b). The zooplankton. V. The occurrence and seasonal distribution of the Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **2**: 277–289

BENTHEUPHAUSIIDAE



Bentheuphausia amblyops [from Sars 1885: pl. 19 fig. 1]

INTRODUCTION

This monotypic family was erected for *Bentheuphausia amblyops* Sars, 1885. It is generally considered to be the more primitive of the two euphausidean families because the seventh and eighth thoracic legs are distinctly retained (may be present as 'nobs' in some euphausid species), and a petasma and well-developed eyes are lacking. Biology, distribution and larval development are discussed by Baker *et al.* (1990), Boden *et al.* (1955), Mauchline & Fisher (1969), Brinton (1975) and Mauchline (1980).

The authorship of the Bentheuphausiidae has been widely attributed to Colosi (1917), but clearly the taxon was first proposed by Holt & Tattersall (1905: 112).

Diagnosis

Male with endopod of first pair of pleopods not modified as a complex petasma. Basipod of first pair of pleopods carrying 1–6 spines. Endopod of first maxilla two-jointed. Endopod of second maxilla three-jointed. Outer uropod with a sub-distal transverse suture. Eyes poorly developed. All eight thoracic legs well developed. Photophores absent. (After Brinton *et al.* 1999).

References

Baker, A. de C., Boden, B.P. & Brinton, E. (1990). *A Practical Guide to the Euphausiids of the World.* London : British Museum (Natural History) 96 pp.

Boden, B.P., Johnson, M.W. & Brinton, E. (1955). The Euphausiacea (Crustacea) of the North Pacific. *Bull. Scripps Instit. Oceanogr.* **6**: 287–400

Brinton, E. (1975). Euphausiids of Southeast Asian Waters. *Naga Rep.* **4**(5): 1–287

Brinton, E., Ohman, M.D., Townsend, A.W., Knight, M.D. & Bridgeman, A.L. (1999). Euphausiids of the World Ocean. Version 1.0 (Mac). ETI CD-ROM, University of Amsterdam

Colosi, G. (1917). *Crostacei. Part II. Eufausiacei. Raccolte planctoniche fatte dalla R. Nave "Liguria".* Firenze : Pubblic Ist. St. Sup. 2 pt 7 pp. 165–205 pls xiv–xvi

Holt, E.W.L. & Tattersall, W.M. (1905). Schizopodous Crustacea from the north-east Atlantic slope. *Sci. Invest. Fish. Branch Irel.* **1902–1903**(II, App. IV): 99–152

Mauchline, J. (1980). The biology of mysids and euphausiids. *Adv. Mar. Biol.* **18**: 1–681

Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454

Sars, G.O. (1885). Report on the Schizopoda collected by H.M.S. "Challenger" during the years 1873–76. *Challenger Rep. Zool.* **13**(37): 1–228

BENTHEUPHAUSIIDAE Holt & Tattersall, 1905

Bentheuphausinae Holt, E.W.L. & Tattersall, W.M. (1905). Schizopodous Crustacea from the north-east Atlantic slope. *Sci. Invest. Fish. Branch Irel.* **1902–1903**(II, App. IV): 99–152 [112].
Type genus: *Bentheuphausia* Sars, 1885.

Bentheuphausia Sars, 1885

Bentheuphausia Sars, G.O. (1885). Report on the Schizopoda collected by H.M.S. "Challenger" during the years 1873–76. *Challenger Rep. Zool.* **13**(37): 1–228 [108].
Type species: *Thysanopoda amblyops* Sars, 1885 by original designation.

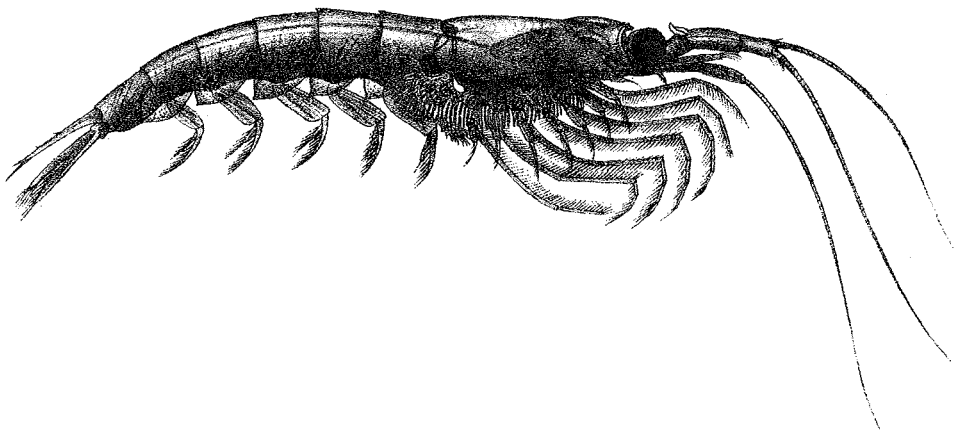
Extralimital distribution: east-Atlantic-Indo-Pacific Oceans. See: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454.

Bentheuphausia amblyops (Sars, 1883)

Thysanopoda amblyops Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [23].
Type data: holotype BMNH 1 specimen*.
Type locality: off Tristan da Cunha, South Atlantic Ocean.

Distribution: SA (S oceanic); Aust. Antarctic Terr., east Atlantic-Indo-Pacific Oceans.
Ecology: bathypelagic, abyssopelagic; depths of 1000 and 5000 m, but has been caught at lesser depths.
Reference: Boden, B.P. (1954). The Euphausiid crustaceans of southern African waters. *Trans. R. Soc. S. Afr.* **34**: 181–243 [185].

EUPHAUSIIDAE



Nyctiphanes australis [from Sars 1885: pl. 21 fig. 1]

INTRODUCTION

Euphausiids are represented in Australian waters by eight genera and 54 species. The list of included species has been based, at least in part, on distributional data given by Mauchline & Fisher (1969), Mauchline (1980) and Brinton *et al.* (1999). I have also relied heavily on these authors for ecological information. Some species are included that occur in the Southern Ocean between Australia and Antarctica, even though this area may not be strictly within Australian Territorial waters. Two interesting papers on the tropical east Australian fauna are those of Tattersall (1936a, 1936b).

The authorship of the Euphausiidae has been widely attributed to Holt & Tattersall (1905), but the earliest use of the name is by Dana (1850: 130). Although Dana used the spelling 'Euphausidae', the name in its corrected form, is an available name under the International Code of Zoological Nomenclature (1999). Holt & Tattersall (1905) were the first to recognise the subfamily Euphausiinae. Again, however, the authorship for the subfamily name must be attributed to Dana (1850).

Diagnosis

Seventh and eighth thoracic legs with reduced number of segments or rudimentary (with exception of *Thysanopoda* that has seventh normally segmented but distinctly shorter). First to eighth thoracic legs bearing gills that are retained on last pair irrespective of degree of reduction. Gills on anterior thoracic legs with a single main branch; posterior gills having several branches. Males with inner rami of first and second pairs of pleopods modified to form a petasma and an appendix masculina, respectively. Bell-shaped luminescent organs present, typically one on each eyestalk, a pair on base of second and seventh thoracic appendages, and one ventrallly on the first four segments of abdomen between pleopods. (After Brinton *et al.* 1999).

References

Brinton, E., Ohman, M.D., Townsend, A.W., Knight, M.D. & Bridgeman, A.L. (1999). Euphausiids of the World Ocean. Version 1.0 (Mac). ETI CD-ROM, University of Amsterdam

Dana, J.D. (1850). Synopsis generum crustaceorum ordinis "Schizopoda". *Am. J. Sci.* **9**: 129–133

Holt, E.W.L. & Tattersall, W.M. (1905). Schizopodous Crustacea from the north-east Atlantic slope. *Sci. Invest. Fish. Branch Irel.* **1902–1903**(II, App. IV): 99–152

International Commission on Zoological Nomenclature (1999). *International Code of Zoological Nomenclature.* London : International Trust for Zoological Nomenclature 4th Edn 306 pp.

Mauchline, J. (1980). The biology of mysids and euphausiids. *Adv. Mar. Biol.* **18**: 1–681

Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454

Sars, G.O. (1885). Report on the Schizopoda collected by H.M.S. "Challenger" during the years 1873–76. *Challenger Rep. Zool.* **13**(37): 1–228

Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176

Tattersall, W.M. (1936). The zooplankton. V. The occurrence and seasonal distribution of the Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **2**: 277–289

EUPHAUSIIDAE Dana, 1850

Euphausidae Dana, J.D. (1850). Synopsis generum crustaceorum ordinis "Schizopoda". *Am. J. Sci.* **9**: 129–133 [130].
Type genus: *Euphausia* Dana, 1850.

Thysanopodea Claus, C. (1863). Uebereinige Schizopoden und niedere Malacostraken Messina's. *Z. Wiss. Zool.* **13**(3): 422–454 pls 25–29 [442] [name used in corrected form, Thysanopodidae, by Stebbing, T.R.R. (1905). South African Crustacea. Part III. *Mar. Invest. S. Afr.* **4**: 21–123 pls 17–26 [111].

Nematoscelinae Holt, E.W.L. & Tattersall, W.M. (1905). Schizopodous Crustacea from the north-east Atlantic slope. *Sci. Invest. Fish. Branch Irel.* 1902–1903(II, App. IV): 99–152 [107].

Stylocheirinae Colosi, G. (1917) Crostacei. Part II. Eufausiacei. *Raccolte planctoniche fatte dalla R. Nave "Liguria"* **2** (7): 165–205 [168].

Taxonomic decision for synonymy: Colosi, G. (1917). *Crostacei. Part II. Eufausiacei. Raccolte planctoniche fatte dalla R. Nave "Liguria".* Firenze : Pubblic Ist. St. Sup. 2 pt 7 pp. 165–205 pls xiv–xvi.

Euphausia Dana, 1850

Euphausia Dana, J.D. (1850). Synopsis generum crustaceorum ordinis "Schizopoda". *Am. J. Sci.* **9**: 129–133 [133].
Type species: *Euphausia superba* Dana, 1850, method of fixation not determined.

Extralimital distribution: Antarctic Region—Antarctica (Australian Antarctic Territory); Atlantic-Indo-Pacific and Southern Oceans. See: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454.

Euphausia brevis Hansen, 1905

Euphausia brevis Hansen, H.J. (1905). Further notes on the Schizopoda. *Bull. Mus. Océanogr. Monaco* **42**: 1–32 [15].
Type data: syntypes MOM ♂*, ZMUC ♀*.
Type locality: stations within triangle of Banc de Gorringe, the Azores and the Canary Islands, NE Atlantic Ocean, within triangle of Banc de Gorringe, the Azores and the Canary Islands, NE Atlantic Ocean.

Distribution: circum-subtropical, extending into tropics in Indian Ocean and on western sides of Atlantic and Pacific, absent from the eastern boundary currents of the Pacific.

Ecology: diurnal, epipelagic, meso-pelagic, oceanic province; adults often at 300–500 m depth during the day, rising to shallower than 100 m at night.

Euphausia crystallorophias Holt & Tattersall, 1906

Euphausia crystallorophias Holt, E.W.L. & Tattersall, W.M. (1906). Preliminary notice of the Schizopoda collected by H.M.S. "Discovery" in the Antarctic region. *Ann. Mag. Nat. Hist.* **17**: 1–11 [3].
Type data: syntypes BMNH* (probable depository institution).
Type locality: Atlantic Ocean.

Distribution: Australian Antarctic Territory; S oceanic, South Shetland Islands, southern circumpolar.
Ecology: continental slope, detritivore, neritic, pelagic, continental shelf, neritic; aggregates and is a food source for whales and seals, can feed on detrital material, commonest in bays and straits in depths less than 300 m.

Euphausia diomedeae Ortmann, 1894

Euphausia diomedeae Ortmann, A.E. (1894). Reports on the dredging operations off the west coast of Central America to the Galàpagos to the west coast of Mexico, and the Gulf of California, in charge of Alexander Agassiz, by the U.S. Fish Commission steamer "Albatross" during 1891. XIV. The pelagic Schizopoda. *Bull. Mus. Comp. Zool.* **25**: 99–111 [102 pl. 1 fig. 3].
Type data: syntypes MCZ 2 specimens.
Type locality: Bindloe Is., Galapagos Islands (*Albatross* Stn 3409).

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Indo-Pacific Oceans.
Ecology: pelagic, neritic, oceanic province; depth below 140 m, comes to surface at night.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [167] (Queensland records).

Euphausia fallax Hansen, 1916

Euphausia fallax Hansen, H.J. (1916). The euphausiacean crustaceans of the "Albatross" Expedition to the Philippines. *Proc. U.S. Natn. Mus.* **49**: 635–654 [645 pl. 83 fig. 1a–d].
Type data: holotype USNM 47890 ♂, paratype USNM 47889 ♀.
Type locality: off Gigantangan Is., between Masbate and Leyte, Philippines [11°36'39"N 124°13'30"E].

Euphausia consuelae Boone, L. (1935). Crustacea and Echinodermata. Scientific results of the world cruise of the yacht *Alva*, 1931, William K. Vanderbilt, commanding. *Bull. Vanderbilt Mar. Mus.* **6**: 1–263, 96 pls, 13 text–figs [206 pls 58–59].
Type data: syntypes VMM 13 specimens*.
Type locality: off Ametejum Island, New Hebrides.

Taxonomic decision for synonymy: Sheard, K. (1953). Taxonomy, distribution and development of the Euphausiacea (Crustacea). *Rep. B.A.N.Z. Antarct. Res. Exped., Ser. B (Zool. and Bot.)* **8**: 1–72 [13].

Distribution: QLD (NE oceanic); Indo-west Pacific (Indo-Australian Archipelago from Philippines to Coral Sea), Andaman Sea, south of Sri Lanka, north of Madagascar.
Ecology: neritic, oceanic province, pelagic; eaten by fish, near surface at night, daytime depths not known.

Euphausia frigida Hansen, 1911

Euphausia frigida Hansen, H.J. (1911). The genera and species of the order Euphausiacea, with account of remarkable variation. *Bull. Inst. Oceanogr. Monaco* **1911**(210): 1–54 [27 fig. 9].
Type data: type status unknown*.
Type locality: Swedish Antarctic Expedition, area between 49° and 53°10'S longitude 48° and 36°W, Southern Atlantic Ocean.

Distribution: Australian Antarctic Territory; S oceanic, southern circumpolar between 45°–60°S, with distribution centred near Antarctic Convergence.
Ecology: epipelagic, mesopelagic, oceanic province; forms aggregations, food source for whales, found above depths of about 300 m.

Euphausia gibba Sars, 1883

Euphausia gibba Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [17].
Type data: syntypes BMNH numerous specimens*.
Type locality: three separate localities: Atlantic, between Tenerife and St Thomas; Pacific Ocean, off Kandavu, Fiji Islands; West Pacific, Api to Cape York.

Distribution: NSW (SE oceanic), QLD (NE oceanic); subtropical South Pacific Ocean.
Ecology: mesopelagic, oceanic province; eaten by whales and fish, depth 280–500 m, rising to shallower depths at night.

Euphausia hemigibba Hansen, 1910

Euphausia hemigibba Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [100 pl. 14 figs 5a–f].
Type data: type status unknown ZMA*.
Type locality: Indonesia (*Siboga* Expedition Stn 148) [0°17'06"S 129°14'05"E].

Distribution: WA (NW oceanic, W oceanic); Atlantic-Indo-Pacific Oceans (subtropical in North Pacific Ocean, Indian Ocean and North and South Atlantic).
Ecology: mesopelagic, epipelagic, oceanic province; depth 280–700 m, above 140 m at night.

Euphausia longirostris Hansen, 1908

Euphausia longirostris Hansen, H.J. (1908). Schizopoda and Cumacea. pp. 1–20 *in, Result. Voyage S.Y. Belgica, Rapp. Sci., Zool.* [4 pl. i figs 1a–c].
Type data: type status unknown*.
Type locality: Antarctic waters, south of Falkland Islands.

Distribution: NSW (SE oceanic), SA (S oceanic), TAS (S oceanic, SE oceanic), WA (S oceanic); sub-Antarctic between about 30°S and 55°S, not reported south of Antarctic Convergence, but does occur north of Subtropical Convergence.
Ecology: epipelagic, mesopelagic, oceanic province.

Euphausia lucens Hansen, 1905

Euphausia lucens Hansen, H.J. (1905). Further notes on the Schizopoda. *Bull. Mus. Océanogr. Monaco* **42**: 1–32 [9].
Type data: syntypes ZMUC numerous specimens*; Hansen (1905: 9) established that the 'Challenger' specimens recorded by Sars, G.O. (1885). Report on the Schizopoda collected by H.M.S. "Challenger" during the years 1873–76. *Challenger Rep. Zool.* **13**(37): 1–228 as *E. splendens* Dana, 1850 (see Dana, J.D. (1850). Synopsis generum crustaceorum ordinis "Schizopoda". *Am. J. Sci.* **9**: 129–133), could not belong to that species and required a new name, *E. lucens*; he ostensibly referred to Sars' material as the basis of his new species, but states, 'the Copenhagen Museum possesses numerous specimens from three places south of or far south-west of the Cape of Good Hope and from various localities in the Pacific'; because these are the specimens that Hansen actually examined, then they must be considered the syntypes.
Type locality: off Cape of Good Hope, and unnamed localities in Pacific Ocean.

Euphausia uncinata Colosi, G. (1917). *Crostacei. Part II. Eufausiacei. Raccolte planctoniche fatte dalla R. Nave "Liguria"*. Firenze : Pubblic Ist. St. Sup. 2 pt 7 pp. 165–205 pls xiv–xvi [186 pl. 14 figs 9, 10].
Type data: type status unknown*.
Type locality: not determined.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [64].

Distribution: SA (Great Australian Bight), TAS (S oceanic, Tas. coast), VIC (Bass Strait), WA (S oceanic); circumpolar in southern temperate waters between about 40°S and 47°S.
Ecology: epipelagic, mesopelagic, oceanic province; forms aggregations, preyed on by whales, migrates vertically between 0–300 m depth.

Euphausia mutica Hansen, 1905

Euphausia mutica Hansen, H.J. (1905). Further notes on the Schizopoda. *Bull. Mus. Océanogr. Monaco* **42**: 1–32 [14] [part].
Type data: syntypes MOM*, ZMUC*, ZMA 11 specimens*.
Type locality: Sargasso Sea; Red Sea; various localities in Indian Ocean; various localities from Gulf of Siam to southern Japan to Philippines, *Siboga* Stn 177 [2°30'S 129°28'E], *Siboga* Stn 128 [4°27'N 125°25.7'E].

Distribution: QLD (NE oceanic, SE oceanic), WA (W oceanic); Atlantic-Indo-Pacific Oceans (subtropical in all ocean basins, but extends into tropical Caribbean Sea, eastern Atlantic, Indian Ocean, and western Pacific—in mid-South Pacific between 90–170°W, it is restricted to 10–20°S).

Ecology: epipelagic, mesopelagic, oceanic province; 300–400 m depth during day, above 50 m at night.
References: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [167] (Queensland records); Davie, P., this work (Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [94] noted that the original syntypic series also contained specimens of *E. diomedeae* Ortmann, 1894, but the Monaco and Siboga material is definitely attributable to *E. mutica*).

Euphausia pseudogibba Ortmann, 1893

Euphausia pseudogibba Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [12 pl. 1 fig. 6].
Type data: syntypes ZMB* (probable depository institution).
Type locality: Atlantic Ocean.

Distribution: NT (N coast), QLD (NE oceanic), WA (NW oceanic); Atlantic-Indo-west central Pacific Oceans (tropical Atlantic and Gulf Stream, Indo-Australian Archipelago, South China Sea, the Kuroshio Current, a narrow zone (2–10°N) in Indian Ocean, and east-west belt of 10–20°S across South Pacific).
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by whales and fish, depth 280–500 m, rising to surface at night.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [167] (Queensland records).

Euphausia recurva Hansen, 1905

Euphausia recurva Hansen, H.J. (1905). Further notes on the Schizopoda. *Bull. Mus. Océanogr. Monaco* **42**: 1–32 [13].
Type data: type status unknown ZMUC numerous specimens*.
Type locality: South Atlantic Ocean, southern Indian Ocean, and southern end of Japan.

Distribution: 200 mile fishing zone (S oceanic, SE oceanic, W oceanic); Atlantic-Indo-Pacific Oceans, subtropical in all ocean basins, but needs to be confirmed from North Atlantic.
Ecology: mesopelagic, epipelagic, oceanic province; important prey species for whales and fish, depth 140–700 m during the day, at night found above thermocline up to surface.

Euphausia sanzoi Torelli, 1934

Euphausia sanzoi Torrelli, B. (1934). Eufausiacei del Mar Rosso. *Memorie R. Comitato Talassografico Italiano* **208**: 1–17 [7 figs 2–5].
Type data: type status unknown*.
Type locality: Red Sea.

Distribution: QLD (NE oceanic); western Indian Ocean (Red Sea and Arabian Sea to Madagascar, basins of East Indian Archipelago, and near the Philippines).

Ecology: oceanic province, pelagic; have been recorded on surface at night, but daytime depths not known.

Euphausia sibogae Hansen, 1908

Euphausia sibogae Hansen, H.J. (1908). Sur quelques Crustacés pélagiques d'Amboine. *Revue Suisse Zool.* **16**: 157–159 [158].
Type data: syntypes ZMA 3 'young specimens'*.
Type locality: Amboina [Ambon], north of Java, Indonesia.

Distribution: QLD (Great Barrier Reef, NE oceanic); central Indo-west Pacific (Red Sea, Arabian Sea, Bay of Bengal, Indonesia, north to southern Japan).
Ecology: oceanic province, pelagic; tropical regions characterised by high productivity and oxygen-deficiency below the thermocline, vertical distribution not known, but probably lives close to surface.
References: Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [101] (full description and figures); Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [168] (Queensland records).

Euphausia similis Sars, 1883

Taxonomic decision for subspecific arrangement: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [67].

Distribution: 200 mile fishing zone (S oceanic, SE oceanic, W oceanic); circumglobal southern temperate ocean basins, between about 25°–55°S, tropical Indian Ocean, western Northern Pacific, East China Sea.

Euphausia similis armata Hansen, 1911

Euphausia similis crassirostris Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [94 pl. 14 figs 2a–c] [there appears to be some doubt as to the identity of this subspecies; Mauchline & Fisher (1969) include it as a synonym of *E. similis armata*, but if this is true, then *E. similis crassirostris* is the older name and thus should be the valid name for this taxon; Boden (1954: 210) comments, however, that '[t]he variety *crassirostris* ... may have been founded on deformed specimens', and he did not include it in his synonymy of *E. similis armata*; it should perhaps be considered a *nom. dub.* and excluded from the synonymy until conclusive evidence is presented (Davie, P., this work)].
Type data: syntypes ZMA 1 specimen and 1♂ 1♀ (immature)*.
Type locality: Indonesia (*Siboga* Stn 85) [0°36.5'S 119°29.5'E], Indonesia (*Siboga* Stn 276) [6°47.5'S 128°40.5'E], Indonesia (*Siboga* Stn 243) [4°30.2'S 129°25'E].

Euphausia similis armata Hansen, H.J. (1911). The genera and species of the order Euphausiacea, with account of remarkable variation. *Bull. Inst. Oceanogr. Monaco* **1911**(210): 1–54 [25 fig. 7].
Type data: syntypes ZMUC 11 specimens*.
Type locality: four separate localities: South Atlantic at 40°9'S and 37.5°S; eastern Indian Ocean at 13°S 103.3°E; and between New Zealand and Tasmania.

Euphausia similis lobata Zimmer, C. (1914). Die Schizopoden der Deutschen Sudpolar-Exped., 1901–1903. *Dt. Südpol. Exped.* **15**(7): 377–445 [425 pl. 26 fig. 59].
Type data: syntypes whereabouts unknown*.
Type locality: Pacific, tropical Atlantic and Indian Ocean.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [68].

Distribution: 200 mile fishing zone (S oceanic, SE oceanic); circumglobal in southern temperate oceans, between about 25°–55°S, equatorial waters around Indonesia and eastern Bay of Bengal.
Ecology: epipelagic, mesopelagic, oceanic province; not known if vertically migrates, important prey species for whales and fish, surface to 300 m.
Reference: Boden, B.P. (1954). The Euphausiid crustaceans of southern African waters. *Trans. R. Soc. S. Afr.* **34**: 181–243 [210].

Euphausia similis similis Sars, 1883

Euphausia similis Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [13].
Type data: holotype BMNH ♂*.
Type locality: South Atlantic Ocean, south-east of Buenos Aires (*Challenger* Stn 320) [37°17'S 53°52'W].

Distribution: 200 mile fishing zone (S oceanic, SE oceanic, W oceanic); circumglobal southern temperate ocean basins, between about 25°–55°S, tropical Indian Ocean, western Northern Pacific, East China Sea.
Ecology: mesopelagic, epipelagic, oceanic province; important prey species for whales and fish, surface to 300 m, but only beneath the thermocline in the tropics, not known if vertically migrates.

Euphausia spinifera Sars, 1883

Euphausia spinifera Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [18].
Type data: syntypes BMNH 4 specimens*.
Type locality: three separate localities: south of Australia (48°18'S 30°11'E); South Pacific about midway between New Zealand and Chile; and 'South Pacific'.

Euphausia schotti Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [13 pl. 7 figs 8, 8a].
Type data: type status unknown*.
Type locality: South Atlantic.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [75].

Distribution: 200 mile fishing zone (S oceanic, SE oceanic, W oceanic); southern Atlantic, Pacific and Indian Oceans between about 35°S and 50°S.
Ecology: epipelagic, mesopelagic, oceanic province; forms aggregations, preyed on by whales, found in upper 300 m.

Euphausia superba Dana, 1850

Antarctic Krill

Euphausia superba Dana, J.D. (1850). Synopsis generum crustaceorum ordinis "Schizopoda". *Am. J. Sci.* **9**: 129–133 [133].
Type data: type status unknown ANSP* (probable depository institution).
Type locality: Antarctica [60°S 150°E].

Euphausia murrayi Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [14].
Type data: holotype BMNH ♀*.
Type locality: Antarctic Ocean, near ice barrier (*Challenger* Expedition Stn 154).

Euphausia antarctica Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [16].
Type data: syntypes BMNH numerous specimens*.
Type locality: at the ice barrier in Antarctic Ocean (*Challenger* Stn 153) [65°42'S 79°49'E].

Euphausia glacialis Hodgson, T.V. (1902). Crustacea. *In, Report on the Collections of Natural History made in the Antarctic Regions during the Voyage of the "Southern Cross"*. London : British Museum pp. 228–261 [236 pl. 30 figs 1–8].
Type data: syntypes BMNH 20 to 30 specimens*.
Type locality: Antarctica [65°52'S 162°32'E].

Euphausia australis Hodgson, T.V. (1902). Crustacea. *In, Report on the Collections of Natural History made in the Antarctic Regions during the Voyage of the "Southern Cross"*. London : British Museum pp. 228–261 [238 pl. 30 fig. 9].
Type data: syntypes BMNH*.
Type locality: between ice floes in lat. 62°S, Antarctic waters.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [62].

Distribution: Australian Antarctic Territory; southern circumpolar north to about Antarctic Convergence, between 50°S and 60°S.
Ecology: epipelagic, mesopelagic, oceanic province; important prey species for whales, seals, fish, squid, decapods and birds, forms dense swarms at the surface, particularly in continental slope waters, depth above 250 m.
Reference: Hamner, W.M., Hamner, P.P., Strand, S.W. & Gilmer, R.W. (1983). Behaviour of Antarctic krill, *Euphausia superba*: chemoreception, feeding, schooling, and molting. *Science* **433**: 433–435.

Euphausia tenera Hansen, 1905

Euphausia tenera Hansen, H.J. (1905). Further notes on the Schizopoda. *Bull. Mus. Océanogr. Monaco* **42**: 1–32 [9].
Type data: no type designated.

Distribution: 200 m bathymetric (Central E coast, Great Barrier Reef, Gulf of Carp., Lower E coast, N coast, NW coast), 200 mile fishing zone (NE oceanic, NW oceanic, SE oceanic, W oceanic); Atlantic-Indo-Pacific Oceans (tropical species extending into subtropical parts of the western North Pacific, western North Atlantic, and eastern South Atlantic).
Ecology: mesopelagic, epipelagic, oceanic province; important prey species for whales and fish, 150–500 m depth during day, above 140 m at night (mostly near 50–75 m), has been found in Great Barrier Reef lagoon waters in small numbers from August to October.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [167] (Queensland records).

Euphausia triacantha Holt & Tattersall, 1906

Euphausia triacantha Holt, E.W.L. & Tattersall, W.M. (1906). Preliminary notice of the Schizopoda collected by H.M.S. "Discovery" in the Antarctic region. *Ann. Mag. Nat. Hist.* **17**: 1–11 [4].
Type data: type status unknown BMNH*.
Type locality: Antarctic Region [66°52'9"S 178°8'15"E].

Distribution: Australian Antarctic Territory; southern circumpolar between 50°S and 65°S, in Subantarctic waters southwards to northern limits of East Wind and Weddell Drifts, occasionally in coastal waters of Antarctic Continent.
Ecology: mesopelagic, epipelagic, oceanic province; depth 250–750 m, above 250 m at night.

Euphausia vallentini Stebbing, 1900

Euphausia vallentini Stebbing, T.R.R, (1900). On some Crustaceans from the Falkland Islands coll. by Mr. Rupert Valletin. *Proc. Zool. Soc. Lond.* **1900**: 517–568 [545 pl. 37].
Type data: type status unknown SAM*.
Type locality: Stanley Harbour, Falkland Is.

Euphausia patachonica Colosi, G. (1917). *Crostacei. Part II. Eufausiacei. Raccolte planctoniche fatte dalla R. Nave "Liguria"*. Firenze : Pubblic Ist. St. Sup. 2 pt 7 pp. 165–205 pls xiv–xvi [187 pl. 14 figs 11–14, pl. 15 figs 15–20].
Type data: type status unknown*.
Type locality: off Falkland Islands, SW Atlantic.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [64].

Distribution: 200 mile fishing zone (S oceanic, SE oceanic); southern circumpolar in Subantarctic zone, typically between 50°S–60°S and the sub-tropical convergence around 40°S, but reported as far north as 32°15'S.
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by whales, depths of 100–250 m during the day, rising to surface at night.

Nematobrachion Calman, 1905

Nematodactylus Calman, W.T. (1896). On deep sea Crustacea from the South-west of Ireland. *Trans. Roy. Irish. Acad.* **31**(1): 1–20 pls 1–2 [16] [junior homonym of *Nematodactylus* Gill, 1863 (Pisces)].

Type species: *Nematodactylus boopis* Calman, 1896 by original designation.

Nematobrachion Calman, W.T. (1905). Note on a genus of euphausiid crustacean. *Fish. Ireland Sci. Invest. 1902–3* **4**(ii): 153–155 1 pl. [153] [*nom. nov.* for *Nematodactylus* Calman, 1896].

Extralimital distribution: worldwide. See: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454.

Generic reference: Boden, B.P. (1954). The Euphausiid crustaceans of southern African waters. *Trans. R. Soc. S. Afr.* **34**: 181–243 [227].

Nematobrachion boopis (Calman, 1896)

Nematodactylus boopis Calman, W.T. (1896). On deep sea Crustacea from the South-west of Ireland. *Trans. Roy. Irish. Acad.* **31**(1): 1–20 pls 1–2 [17 figs 19–28].
Type data: holotype INM 1 specimen.
Type locality: North Atlantic, south of Ireland [50°52'N 11°52'W].

Distribution: 200 mile fishing zone (S oceanic, SE oceanic); north to Tasmanian waters, North and South Pacific from 42°N–53°S, Atlantic from 65°N–53°S, and Indian Ocean between 10°N to about 50°S.
Ecology: mesopelagic, oceanic province; usually below 300 m depth, not vertical migrators.

Nematobrachion flexipes (Ortmann, 1893)

Stylocheiron flexipes Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [18 pl. 1 fig. vii].
Type data: syntypes ZMB* (probable depository institution) 2 specimens.
Type locality: southern Equatorial Current.

Taxonomic decision for new combination: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [90] (as *Nematobrachion flexipes*).

Distribution: NSW (SE oceanic), QLD (NE oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: mesopelagic, oceanic province; eaten by fish, depth 100–700 m during the day, above 280 m at night.

Nematobrachion sexspinosum Hansen, 1911

Nematobrachion sexspinosum Hansen, H.J. (1911). The genera and species of the order Euphausiacea, with account of remarkable variation. *Bull. Inst. Oceanogr. Monaco* **1911**(210): 1–54 [51].
Type data: syntypes MCZ 2♂*, MOM ♂*.
Type locality: tropical East Pacific (Agassiz Exped. Stn 4699), temperate North Atlantic Ocean (Monaco Stn 2105).

Distribution: QLD (NE oceanic); west central Pacific Ocean (30°N–30°S), Indian Ocean (5°N–30°S), western Atlantic Ocean (about 35°N–30°S), and Gulf of Mexico.
Ecology: epipelagic, mesopelagic, oceanic province; preyed on by fish, 100–200 m depth.

Nematoscelis Sars, 1883

Nematoscelis Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [27].
Type species: *Nematoscelis megalops* Sars, 1883 by subsequent designation, see Sars, G.O. (1885). Report on the Schizopoda collected by H.M.S. "Challenger" during the years 1873–76. *Challenger Rep. Zool.* **13**(37): 1–228 [127].

Extralimital distribution: worldwide.

Nematoscelis atlantica Hansen, 1910

Nematoscelis atlantica Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [106] [name proposed, and distinguishing characters given as part of key, but precise details of material not mentioned].
Type data: type status unknown*.
Type locality: Atlantic Ocean.

Distribution: 200 mile fishing zone (NW oceanic); circumglobal (antitropical in Pacific—between about 20°–40°), Indian Ocean (between about 10–35°S), Atlantic (approx. between 40° parallels), Mediterranean Sea.
Ecology: epipelagic, mesopelagic, oceanic province; preyed on by fish, below 250 m depth by day, shallower at night, immatures and larvae mostly above 50 m.
Reference: Brinton, E., Ohman, M.D., Townsend, A.W., Knight, M.D. & Bridgeman, A.L. (1999). Euphausiids of the World Ocean. Version 1.0 (Mac). ETI CD-ROM, University of Amsterdam.

Nematoscelis difficilis Hansen, 1911

Nematoscelis difficilis Hansen, H.J. (1911). The genera and species of the order Euphausiacea, with account of remarkable variation. *Bull. Inst. Oceanogr. Monaco* **1911**(210): 1–54 [48 fig. 18].
Type data: syntypes whereabouts unknown 3♂*.
Type locality: temperate East Pacific Ocean.

Distribution: 200 mile fishing zone (SE oceanic); North Pacific, recorded from SE Australia by Sheard, K. (1953). Taxonomy, distribution and development of the Euphausiacea (Crustacea). *Rep. B.A.N.Z. Antarct. Res. Exped., Ser. B (Zool. and Bot.)* **8**: 1–72, but record requires confirmation.
Ecology: epipelagic, oceanic province; above about 200 m depth, but within thermocline.

Nematoscelis gracilis Hansen, 1910

Nematoscelis gracilis Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [109 pl. 15 fig. 3a–g].
Type data: syntypes ZMA 8♂ 14♀ numerous immature*.
Type locality: various localities in Indonesia (*Siboga* Expedition Stns 118, 128, 141, 143, 148, 165, 185, 203, 216, 243, 276).

Distribution: 200 mile fishing zone (NE oceanic, NW oceanic); Indo-Pacific Oceans (mostly between 20°N–20°S but extending to 40°N within the Kuroshio Current, near Japan).
Ecology: mesopelagic, epipelagic, oceanic province; depth 300–500 m during day, 100–300 m at night.

Nematoscelis megalops Sars, 1883

Nematoscelis megalops Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [27].
Type data: syntypes BMNH numerous specimens*.
Type locality: South Atlantic (*Challenger* Stns 332, 333).

Distribution: 200 mile fishing zone (S oceanic, SE oceanic); Atlantic-Indo-south Pacific Oceans.
Ecology: mesopelagic, epipelagic, oceanic province; commonly about 140 m depth within the thermocline but down to 300 m.

Nematoscelis microps Sars, 1883

Nematoscelis microps Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [28].
Type data: syntypes BMNH 2 ♀*, BMNH ♀*.
Type locality: North Atlantic, Pacific Ocean, north of Sandwich Islands [Hawai'i].

Nematoscelis rostrata Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [29].
Type data: syntypes BMNH a few specimens*.
Type locality: tropical Atlantic (*Challenger* Stn 348).

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [86].

Distribution: 200 mile fishing zone (NE oceanic, SE oceanic), QLD (Great Barrier Reef); Atlantic-Indo-west central Pacific Oceans (north-south distribution limited by 13°C isotherm at 200 m depth).
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by fish, depth 200–700 m during day rising to surface at night.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [174] (Queensland records).

Nematoscelis tenella Sars, 1883

Nematoscelis tenella Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [28].
Type data: syntypes BMNH a few specimens*.
Type locality: tropical Atlantic; Pacific Ocean south of the Cape of Good Hope.

Nematoscelis mantis Chun, C. (1896). Atlantis. Biologische Studien über pelagische Organismen. V: Über pelagishe Tiefsee Schizopoden. *Zoologica (Stuttg.)* **7**: 137–190 pls 8–15 [165].
Type data: type status unknown.
Type locality: off Funchal, Madeira, North Atlantic.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [86].

Distribution: 200 mile fishing zone (NE oceanic); North Atlantic-Indo-Pacific Oceans, tropical to subtropical, in depths exceeding 300 m.
Ecology: mesopelagic, epipelagic, oceanic province; eaten by fish, 100–450 m by night (maximum 300–400 m, below thermocline) and 200–450 m by day, larvae found above thermocline at 100–150 m.

Nyctiphanes Sars, 1883

Nyctiphanes Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [23].
Type species: none designated; originally included nominotypical species: *Nyctiphanes australis* Sars, 1883; *Thysanopoda couchii* Bell, 1853; *Thysanopoda norvegica* Sars, 1857.

Extralimital distribution: east-Atlantic-Indo-Pacific Oceans. See: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454.

Nyctiphanes australis Sars, 1883

Nyctiphanes australis Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [24].
Type data: syntypes (probable) BMNH*.
Type locality: off east Moncoeur Island, Bass Strait, off Cape Howe, SE Australia, and off Port Jackson [NSW].

Distribution: NSW (Lower E coast), SA (S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait); E Australia south of about 30°S, southern coast of Australia to about 132°E, New Zealand south to Snares Islands (48°S).
Ecology: epipelagic, neritic; forms swarms near surface, feeds both in water column and upon near-bottom detritus, prey species for squid, birds (e.g. short-tailed shearwater *Puffinus tenuirostris*, and various terns), and fishes (barracuda, southern bluefin and skipjack tunas, tiger flat-head), to about 100 m depth.
Reference: Sheard, K. (1953). Taxonomy, distribution and development of the Euphausiacea (Crustacea). *Rep. B.A.N.Z. Antarct. Res. Exped., Ser. B (Zool. and Bot.)* **8**: 1–72 (biology and feeding).

Pseudeuphausia Hansen, 1910

Pseudeuphausia Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [103].
Type species: *Pseudeuphausia latifrons* Sars, 1883 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans.

Pseudeuphausia latifrons (Sars, 1883)

Euphausia latifrons Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [19].
Type data: syntypes BMNH* (a few specimens).
Type locality: off Port Jackson, NSW, Arafura Sea, and Celebes Sea off Mindanao [Philippines].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (N coast, NW coast); Indo-west Pacific Oceans (Madagascar north to Red Sea extending eastwards to Indonesia, Philippines, and Samoa).
Ecology: epipelagic, neritic; abundant in gulfs less than 100 m depth, but will disperse over deeper water, this is the dominant species in the shallow waters of the lagoon and reef flats of the Great Barrier Reef.
References: Tattersall, W.M. (1936). The zooplankton. V. The occurrence and seasonal distribution of the Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **2**: 277–289 [287] (notes on seasonal abundance and ecology); Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [168] (description of larval development); Mauchline, J. (1980). The biology of mysids and euphausiids. *Adv. Mar. Biol.* **18**: 1–681 [391].

Stylocheiron Sars, 1883

Stylocheiron Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [29].
Type species: *Stylocheiron carinatum* Sars, 1883 by subsequent designation, see Sars, G.O. (1885). Report on the Schizopoda collected by H.M.S. "Challenger" during the years 1873–76. *Challenger Rep. Zool.* **13**(37): 1–228 [138].

Extralimital distribution: tropical Atlantic-Indo-Pacific Oceans. See: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454.

Stylocheiron abbreviatum Sars, 1883

Stylocheiron abbreviatum Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [33].
Type data: syntypes BMNH*.
Type locality: three localities: Pacific, north of Sandwich Islands [Hawai'i]; Tropical Atlantic; North Atlantic.

Stylocheiron chelifer Chun, C. (1896). Atlantis. Biologische Studien über pelagische Organismen. V: Über pelagishe Tiefsee Schizopoden. *Zoologica (Stuttg.)* **7**: 137–190 pls 8–15 [161 pl. 1 figs 1–8].
Type data: syntypes whereabouts unknown*.
Type locality: off Funchal, Madeira, North Atlantic, and in the Mediterranean.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [100].

Distribution: 200 mile fishing zone (NE oceanic, NW oceanic, SE oceanic); Atlantic-Indo-Pacific Oceans (mostly between 40°N–40°S, in Indian Ocean extends to about 12°N, and in Red Sea, and Gulf of Eilat).
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by fish, depth 50–300 m.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [175] (Queensland records).

Stylocheiron affine Hansen, 1910

Stylocheiron affine Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [118 pl. 26 figs 4a–d].
Type data: syntypes ZMA numerous specimens*.
Type locality: eastern Indonesia (*Siboga* Expedition Stns 66, 118, 129, 141, 143, 148, 157, 185, 203, 220, 276).

Distribution: 200 mile fishing zone (NE oceanic, NW oceanic); circumtropical and subtropical.
Ecology: mesopelagic, oceanic province; preyed on by fish, depth usually above 300 m (in and above the thermocline), and beyond the continental shelf.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [175] (Queensland records).

Stylocheiron carinatum Sars, 1883

Stylocheiron carinatum Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [31].
Type data: syntypes BMNH several ♂ and ♀*.
Type locality: Pacific off Kandavu, Fiji; off Mindanao, Philippines.

Distribution: 200 m bathymetric (N coast, NW coast), 200 mile fishing zone (NE oceanic, NW oceanic, SE oceanic), QLD (Great Barrier Reef); Atlantic-Indo-Pacific Oceans (between about 40°N and 35°S).
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by fish, depth 50–300 m (mostly above 140 m) moving towards surface at night.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [174] (Queensland records).

Stylocheiron elongatum Sars, 1883

Stylocheiron elongatum Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [32].
Type data: syntypes BMNH ♂ ♀*.
Type locality: South Atlantic.

Distribution: 200 mile fishing zone (NE oceanic, SE oceanic); Atlantic Ocean (mostly from 40°N–40°S but to 65°N in Gulf Stream), Pacific Ocean (from 40°N–35°S), Indian Ocean (from about 10°N–40°S).

Ecology: mesopelagic, epipelagic, oceanic province; absent from oxygen-deficient waters such as parts of eastern tropical Pacific, Bay of Bengal and Arabian Sea, preyed on by fish, depth 200–500 m.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [175] (Queensland records).

Stylocheiron insulare Hansen, 1910

Stylocheiron insulare Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [115 pl. 16 fig. 2a–I].
Type data: syntypes ZMA 4 ♂ 5 ♀, 1 immature*.
Type locality: eastern Indonesia (*Siboga* Stns 118, 141, 143, 185, 203, 220, 243).

Distribution: NT (N coast); oceanic off northern Australia, Indo-Australian Archipelago (north to southern Philippines), eastwards in equatorial Pacific to about 165°E, in Indian Ocean near Andaman Islands and off southern Sumatra and Java.
Ecology: epipelagic, neritic, oceanic province; above 200 m depth.

Stylocheiron longicorne Sars, 1883

Stylocheiron longicorne Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [32].
Type data: holotype BMNH ♀*.
Type locality: south of Cape of Good Hope.

Distribution: QLD (NE oceanic); Atlantic-Indo-Pacific Oceans (tropical to warm temperate waters).
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by fish, 140–500 m depth.

Stylocheiron maximum Hansen, 1908

Stylocheiron maximum Hansen, H.J. (1908). Crustacea Malacostraca. *Dan. Ingolf Exped.* **3**(2): 1–120 [92].
Type data: type status unknown ZMUC ♂* (probable depository institution).
Type locality: North Atlantic.

Distribution: 200 mile fishing zone (NE oceanic, S oceanic, SE oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by fish, rarely above 140 m, mostly below 400 m depth.

Stylocheiron microphthalma Hansen, 1910

Stylocheiron microphthalma Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [117 pl. 16 figs 3a–d].
Type data: syntypes ZMA 26 specimens (♂ and ♀)*.
Type locality: eastern Indonesia (*Siboga* Stns 104–108, 128, 129, 184, 276).

Distribution: QLD (NE oceanic); Indo-west central Pacific Oceans.
Ecology: mesopelagic, oceanic province; depth above 700 m and often above 200 m.

Stylocheiron robustum Brinton, 1962

Stylocheiron robustum Brinton, E. (1962). Two new species of Euphausiacea, *Euphausia nana* and *Stylocheiron robustum* from the Pacific. *Crustaceana* **4**: 167–179 [174 figs 4, 5].
Type data: holotype USNM ♂*, paratypes USNM ♀* (as allotype), USNM ♂ ♀*.
Type locality: North-east Pacific Ocean (*Norpac* cruise Stn 141) [21°52'N 133°51'W].

Distribution: QLD (NE oceanic); North and South Pacific, Indian Ocean, North and South Atlantic Ocean including Gulf of Mexico.
Ecology: mesopelagic, oceanic province; depths above 280 m.

Stylocheiron suhmii Sars, 1883

Stylocheiron suhmii Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [31].
Type data: holotype BMNH*.
Type locality: Pacific Ocean, north of New Guinea.

Distribution: 200 mile fishing zone (NE oceanic, SE oceanic); Atlantic-east Indo-west Central Pacific (Atlantic Ocean from about 40°N–30°S, Indian Ocean from equator to 30°S, North Pacific from 40°N to about 5°N, South Pacific from 10 to 35°S).
Ecology: mesopelagic, epipelagic, oceanic province; preyed on by fish, depth to 300 m, but most common above 140 m.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [175] (Queensland records).

Thysanoessa Brandt, 1851

Thysanoessa Brandt, J.F. (1851). Krebse. pp. 79–148 *in* Middendorff, A.T. *Reise in den äussersten Norden und Osten Sibiriens während ... 1843 und 1844*: auf Veranstaltung der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg ausgeführt und ... herausgegeben von ... A.T. v. Middendorff. 516 32 pls pp. [128].
Type species: *Thysanoessa longipes* Brandt, 1851 by original designation.

Rhoda Sim, G. (1872). The stalk-eyed Crustacea of the north-east coast of Scotland: with descriptions of new genera and species. *Scott. Nat.* **1**: 182–190, 2 pls [187].
Type species: *Rhoda jardineana* Sim, 1872 (= *Thysanoessa raschii* (M. Sars, 1864)) by monotypy.

Boreophausia Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [11].
Type species: none designated; originally included nominotypical species: *Thysanopoda inermis* Krøyer, 1846; *Thysanopoda longicaudata* Krøyer, 1846; *Thysanopoda neglecta* Krøyer, 1846.

Taxonomic decision for synonymy: Boden, B.P. (1954). The Euphausiid crustaceans of southern African waters. *Trans. R. Soc. S. Afr.* **34**: 181–243 [219].

Extralimital distribution: worldwide. See: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454.

Thysanoessa gregaria Sars, 1883

Thysanoessa gregaria Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [26].
Type data: syntypes BMNH numerous specimens*.
Type locality: South Atlantic Ocean; Subantarctic Ocean south of Cape of Good Hope and Australia.

Distribution: 200 mile fishing zone (S oceanic, SE oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: bathypelagic, epipelagic, filter-feeder, meso pelagic, oceanic province; prey species for fish, birds, and whales, depth to 1200 m, but usually above 500 m during the day.

Thysanoessa macrura Sars, 1883

Thysanoessa macrura Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [26].
Type data: syntypes BMNH numerous specimens*.
Type locality: Southern Ocean off Kerguelen and Antarctic Ocean near the ice barrier.

Distribution: Antarctic circumpolar south of about 55°S, extending to Antarctic coastal waters.
Ecology: epipelagic, mesopelagic, oceanic province; preyed on by whales, 0–400 m layer, concentrating above 200 m at night.

Thysanoessa vicina Hansen, 1911

Thysanoessa vicina Hansen, H.J. (1911). The genera and species of the order Euphausiacea, with account of remarkable variation. *Bull. Inst. Oceanogr. Monaco* **1911**(210): 1–54 [40, 45].
Type data: syntypes BMNH numerous specimens*, NHRM numerous specimens* (probable depository institution).
Type locality: Antarctic waters ('Discovery' Expedition) [61°13.5'S 173°33'E], Antarctic waters (Swedish Antarctic Expedition).

Distribution: circumpolar Antarctic, south of 50°S or 55°S, but not extending near to Antarctic continent.
Ecology: epipelagic, mesopelagic, oceanic province; preyed on by whales, depths above 350 m.

Thysanopoda H. Milne Edwards, 1830

Thysanopoda Milne Edwards, H. (1830). Mémoire sur une disposition particuliére d'appareil branchial chez quelques Crustacea. *Ann. Sci. Nat.* **19**: 451–460 [451].
Type species: *Thysanopoda tricuspidata* H. Milne Edwards, 1837 by monotypy.

Parathysanopoda Illig, G. (1909). Ein weiterer Bericht über die Schizopoden der Deutschen Tiefsee-Exped. *Parathysanopoda foliifera* n. gen. et spec. *Zool. Anz.* **35**: 225–227 [225].
Type species: *Parathysanopoda foliifera* Illig, 1909 by monotypy.

Taxonomic decision for synonymy: Brinton, E. (1975). Euphausiids of Southeast Asian Waters. *Naga Rep.* **4**(5): 1–287 [154].

Extralimital distribution: worldwide oceanic. See: Sheard, K. (1942). The genus *Thysanopoda* (Crustacea, Euphausiacea). *Trans. R. Soc. S. Aust.* **66**(1): 60–65.

Thysanopoda acutifrons Holt & Tattersall, 1905

Thysanopoda acutifrons Holt, E.W.L. & Tattersall, W.M. (1905). Schizopodous Crustacea from the north-east Atlantic slope. *Sci. Invest. Fish. Branch Irel.* **1902–1903**(II, App. IV): 99–152 [102, 134].
Type data: syntypes INM 5 specimens* (of 23 specimens listed 5 at least are lodged in INM).
Type locality: NW of Eagle Island, Co. Mayo, NE Atlantic Slope.

Thysanopoda pectinata Hansen, H.J. (1905). Preliminary report on the Schizopoda collected by H.S.H. Prince Albert of Monaco during the cruise of the "Princess Alice" in the year 1904. *Bull. Mus. Océanogr. Monaco* **30**: 1–32 [16 fig. 12].
Type data: type status unknown MOM*.
Type locality: west of France, N Atlantic Ocean [46°15'N 7°09'W].

Thysanopoda johnstoni Sheard, K. (1942). The genus *Thysanopoda* (Crustacea, Euphausiacea). *Trans. R. Soc. S. Aust.* **66**(1): 60–65 [63 figs A–Q].
Type data: syntypes ♂ ♀*.
Type locality: B.A.N.Z.A.R.E. Stn 111, Southern Aust. Oceans, Stn 25/38, Tasmania and Investigator Straits, SA.

Thysanopoda dubia Banner, A.H. (1950). A taxonomic study of the Mysidacea and Euphausiacea (Crustacea) of the northeastern Pacific. Part III. Euphausiacea. *Trans. R. Can. Inst.* **28**: 1–62 [9 pl. 1 fig. 20a–c, pl. 2 fig. 20d–h].
Type data: syntypes USNM 19 specimens.
Type locality: north-eastern Pacific off Washington, British Colombia, and Alaska.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [48].

Distribution: TAS (SE oceanic), VIC (SE oceanic); north Atlantic-Indo-Pacific Oceans, Subarctic and Subantarctic (in Pacific between about 35°–50°N and 40°–60°S, in the Atlantic from 35°–70°N, and from South African waters near 30°–40°S).
Ecology: epipelagic, mesopelagic, oceanic province; prey species for whales and fish, mostly above 140 m at night but not in mixed surface layer, probably descend below 500 m by day.

Thysanopoda aequalis Hansen, 1905

Thysanopoda aequalis Hansen, H.J. (1905). Further notes on the Schizopoda. *Bull. Mus. Océanogr. Monaco* **42**: 1–32 [18].
Type data: type status unknown MOM*.
Type locality: off Monaco.

Thysanopoda subaequalis Boden, B.P. (1954). The Euphausiid crustaceans of southern African waters. *Trans. R. Soc. S. Afr.* **34**: 181–243 [190 figs 5a–d].
Type data: holotype BMNH 1951.iv.2.1 ♂*.
Type locality: Straits of Mozambique.

Taxonomic decision for synonymy: Brinton, E. (1975). Euphausiids of Southeast Asian Waters. *Naga Rep.* **4**(5): 1–287 [165].

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic); Atlantic, Mediterranean, Indo-Pacific (between about 50°N and 30°S latitude, but avoiding the equatorial belt).
Ecology: epipelagic, mesopelagic, oceanic province; adults migrate between upper part of thermocline (night) and depth of deep scattering layer, about 300–600 m (day).
Reference: Boden, B.P. & Brinton, E. (1957). The euphausiid crustaceans *Thysanopoda aequalis* Hansen and *Thysanopoda subaequalis* Boden, their taxonomy and distribution in the Pacific. *Limnol. Océanogr.* **2**: 337–341.

Thysanopoda astylata Brinton, 1975

Thysanopoda astylata Brinton, E. (1975). Euphausiids of Southeast Asian Waters. *Naga Rep.* **4**(5): 1–287 [168 figs 80 d–f, 119n,o].
Type data: holotype SIO ♂*, paratype(s) SIO ♀*.
Type locality: north of Nauru, western Pacific (Equapac Exped., R/V *Horizon*, Stn 8) [2°N 164°E].

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic), Tasman Sea; Indo-Pacific Oceans.
Ecology: epipelagic, mesopelagic, neritic, oceanic province; adults at 300–600 m during day, migrate vertically to 25–200 m at night.

Thysanopoda cristata Sars, 1883

Thysanopoda cristata Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [22].
Type data: holotype BMNH ♂*.
Type locality: Celebes Sea, south of Mindanao, Philippines (*Challenger* Stn 213) [5°47'N 124°1'E].

Thysanopoda biproducta Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [8 pl. 1 fig. 1].
Type data: holotype whereabouts unknown.
Type locality: Sargasso Sea.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [41].

Distribution: 200 mile fishing zone (NE oceanic, SE oceanic); Atlantic-Indo-west Pacific Oceans (between about 30°N and 30°S in Atlantic and Pacific, in Indian Ocean mostly from equator to 30°S).
Ecology: mesopelagic, epipelagic, oceanic province; depth 150–1000 m, adults below 280 m, larvae and juveniles from 150–300 m, probably in thermocline.

Thysanopoda egregia Hansen, 1905

Thysanopoda egregia Hansen, H.J. (1905). Preliminary report on the Schizopoda collected by H.S.H. Prince Albert of Monaco during the cruise of the "Princess Alice" in the year 1904. *Bull. Mus. Océanogr. Monaco* **30**: 1–32 [22 figs 20–21].
Type data: type status unknown MOM*.
Type locality: NE Atlantic Ocean [30°4'N 17°46'W].

Thysanopoda megalops Illig, G. (1908). *Thysanopoda megalops* spec. nov. Erbeutet auf der Deutschen Tiefsee-Expedition, 1898–99. *Zool. Anz.* **33**: 54–55 [54 figs 1–2].
Type data: type status unknown ZMB*.
Type locality: near Capetown, South Africa (Stn 91 Deutschen Tiefsee-Expedition).

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [50].

Distribution: confirmed record from Southern Ocean south of Australia, east Atlantic-Indo-Pacific Oceans (from 40°N–53°S in Pacific, from 3°S–45°S in Indian Ocean, in Atlantic, from Gulf of Mexico and west of North Africa).
Ecology: bathypelagic, mesopelagic, oceanic province; adults from 800–2000 m depth, larvae as shallow as 300 m.

Thysanopoda monacantha Ortmann, 1893

Thysanopoda monacantha Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [9 pl. 1 fig. 2].
Type data: holotype (probable) ZMB 22543.
Type locality: Atlantic Ocean off Guinea, West Africa.

Thysanopoda agassizi Ortmann, A.E. (1894). Reports on the dredging operations off the west coast of Central America to the Galàpagos to the west coast of Mexico, and the Gulf of California, in charge of Alexander Agassiz, by the U.S. Fish Commission steamer "Albatross" during 1891. XIV. The pelagic Schizopoda. *Bull. Mus. Comp. Zool.* **25**: 99–111 [99 pl. figs 1–2].
Type data: syntypes MCZ 2 specimens*.
Type locality: Gulf of Panama and between Galapagos and Acapulco.

Thysanopoda lateralis Hansen, H.J. (1905). Preliminary report on the Schizopoda collected by H.S.H. Prince Albert of Monaco during the cruise of the "Princess Alice" in the year 1904. *Bull. Mus. Océanogr. Monaco* **30**: 1–32 [18 figs 14–16].
Type data: holotype MOM ♀*.
Type locality: off Canary Is., NE Atlantic Ocean [27°43'N 18°28'W].

Thysanopoda ctenophora Illig, G. (1908). Ein weiterer Bericht über die Schizopoden der Deutschen Tiefsee-Exped. 1898–1899. Gattung *Thysanopoda* (Fortsetzung). *Zool. Anz.* **33**: 112–115 [112 fig. 1].
Type data: type status unknown ZMB*.
Type locality: 'Golf von Guinea'.

Thysanopoda mansui Marukawa, H. (1928). Über neue 5 Arten der Schizopoden. *Annotn. Oceanogr. Res. Tokyo* **2**(1): 4–8, 3 pls.
Type data: type status unknown*.
Type locality: Japan Seas.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [41].

Distribution: 200 mile fishing zone (NE oceanic, NW oceanic, SE oceanic); Atlantic-Indo-Pacific Oceans (between the 35° north and south, but not in oxygen deficient waters north of 10°N in Indian and East Pacific Oceans).
Ecology: mesopelagic, epipelagic, oceanic province; adults in 100–500 m depth, mostly 300–400 m, and not above thermocline.

Thysanopoda obtusifrons Sars, 1883

Thysanopoda obtusifrons Sars, G.O. (1883). Preliminary notices on the Schizopoda of H.M.S. "Challenger" Expedition. *Forh. VidenskSelsk. Krist* **7**: 1–43 [21].
Type data: syntypes BMNH 2 specimens*.
Type locality: South Pacific (*Challenger* Expedition Stn 285).

Thysanopoda vulgaris Hansen, H.J. (1905). Preliminary report on the Schizopoda collected by H.S.H. Prince Albert of Monaco during the cruise of the "Princess Alice" in the year 1904. *Bull. Mus. Océanogr. Monaco* **30**: 1–32 [15].
Type data: syntypes MOM 28 specimens*.
Type locality: off NW Africa, NE Atlantic Ocean (*Princesse Alice* Cruise Stn 1676) [35°44'N 11°52'W], off NW Africa, NE Atlantic Ocean (Stn 1736) [28°38'45"N 17°59'40"W], off NW Africa, NE Atlantic Ocean (Stn 1760) [29°16'N 16°11'W], off NW Africa, NE Atlantic Ocean (Stn 1768) [27°43'N 18°28'W], off NW Africa, NE Atlantic Ocean (Stn 1800) [32°18'N 23°58'W], off NW Africa, NE Atlantic Ocean (Stn 1802) [33°06'N 25°07'W], off NW Africa, NE Atlantic Ocean (Stn 1849) [36°17'N 28°53'W], off NW Africa, NE Atlantic Ocean (Stn 1856) [36°46'N 26°41'W].

Thysanopoda distinguenda Hansen, H.J. (1905). Preliminary report on the Schizopoda collected by H.S.H. Prince Albert of Monaco during the cruise of the "Princess Alice" in the year 1904. *Bull. Mus. Océanogr. Monaco* **30**: 1–32 [17 fig. 13].
Type data: syntypes MOM 5 specimens*.
Type locality: NE Atlantic Ocean (*Princesse Alice Cruise* Stn 1760) [29°16'N 16°11'W], NE Atlantic Ocean (Stn 1800) [32°18'N 23°58'W], NE Atlantic Ocean (Stn 1849) [36°17'N 28°53'W], NE Atlantic Ocean (Stn 1856) [36°46'N 26°41'W].

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [1969].

Distribution: 200 mile fishing zone (NW oceanic, SE oceanic, W oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: mesopelagic, epipelagic, oceanic province; adults within thermocline, below 140 m, at night, mainly below about 300 m during day.

Thysanopoda orientalis Hansen, 1910

Thysanopoda orientalis Hansen, H.J. (1910). The Schizopoda of the Siboga Expedition. *Siboga Exped.* **37**: 1–123 [85 pl. 13 figs 2a–i].
Type data: syntypes ZMA 3 juveniles, 2 larvae, 1 immature ♂, 1♀*.
Type locality: Indonesia (*Siboga* Stn 128) [4°27'S 125°25.7'E], Indonesia (*Siboga* Stn 143) [1°4.5'S 127°52.6'E], Indonesia (*Siboga* Stn 185) [3°20'S 127°22.9'E], Indonesia (*Siboga* Stn 203) [3°32.5'S 124°15.5'E].

Distribution: 200 mile fishing zone (NE oceanic, SE oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: mesopelagic, epipelagic, oceanic province; adults mostly from 300–500 m depth, day and night, larvae rise to 140 m.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [166] (Queensland records).

Thysanopoda pectinata Ortmann, 1893

Thysanopoda pectinata Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [10 pl. 1 fig. 4].
Type data: holotype (probable) ZMB 22545.
Type locality: northern Equatorial Current.

Parathysanopoda foliifera Illig, G. (1909). Ein weiterer Bericht über die Schizopoden der Deutschen Tiefsee-Exped. *Parathysanopoda foliifera* n. gen. et spec. *Zool. Anz.* **35**: 225–227 [225].
Type data: type status unknown ZMB*.
Type locality: Benguela-Current west of Angra-Pequene, South Africa (Deutschen Tiefsee-Expedition Stn 85c).

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [46].

Distribution: 200 mile fishing zone (SE oceanic, W oceanic); east Atlantic-Indo-Pacific Oceans (Atlantic from 45°N–30°S, Indian Ocean from 10°N–40°S, in Pacific from about 35°N–35°S—excluding eastern boundary waters).
Ecology: mesopelagic, epipelagic, oceanic province; adults below the thermocline from 150–700 m depth, larvae above 200 m.

Thysanopoda tricuspidata H. Milne Edwards, 1837

Thysanopoda tricuspidata Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [466 pl. 26 figs 1–6].
Type data: type status unknown MNHP*.
Type locality: Atlantic Ocean.

Cyrtopia rostrata Dana, J.D. (1852). *Crustacea. U.S. Exploring Expedition. During the years 1838, 1839, 1840, 1841, 1842.* Under the command of Charles Wilkes, U.S.N. Philadelphia : C. Sherman Vol. 13 1618 pp. [648 pl. 43 figs 2a,b] [Pt 1: 1–685; Pt 2: 686–1618].

Type data: type status unknown* (probably lost).
Type locality: Kingsmills Group, near Pitt's Island, Pacific Ocean.

Taxonomic decision for synonymy: Mauchline, J. & Fisher, L.R. (1969). The biology of euphausiids. *Adv. Mar. Biol.* **7**: 1–454 [44].

Distribution: 200 mile fishing zone (NE oceanic, NW oceanic), QLD (Great Barrier Reef); Atlantic-Indo-Pacific (mostly tropical from 20°N–20°S).

Ecology: epipelagic, mesopelagic, oceanic province; adults undergo vertical migrations, being above thermocline at night and below 300 m by day, larval stages recorded from Great Barrier Reef lagoon.
Reference: Tattersall, W.M. (1936). Mysidacea and Euphausiacea. *Scient. Rep. Gt Barrier Reef Exped.* **5**: 143–176 [165] (notes on larval development and seasonal occurrence).

ORDER: AMPHIONIDACEA

INTRODUCTION

The order Amphionidacea is represented by a single, rather variable, pelagic species, *Amphionides reynaudii* (H. Milne Edwards, 1833). For many years the relationships of this species caused much taxonomic confusion. This was due, in part, to the fact that there are at least 13 developmental stages (Heergaard 1969), and that it was over 70 years before the adult was described (Zimmer 1904). Even then, a new genus, *Amphionides*, was created because the relationship with the larval genus *Amphion* was not recognised. Most authors assigned the group to the Caridea. The decision that a separate order was needed was made only relatively recently by Williamson (1973), and this now has wide acceptance.

Diagnosis

Carapace thin, fused to thorax, greatly developed laterally in females; first thoracic appendage forming a functional maxilliped; second to seventh thoracic appendages essentially uniramous in adults, with exopods reduced to stumps, eighth thoracic appendage absent in females; first pleopod in female large, extending towards anterior of thorax so as to form brood pouch with sides of carapace.
(After Schram 1986).

References

Heegaard, P. (1969). The larvae of decapod Crustacea. The Amphionidae. *'Dana' Repts* **12**: 392–399

Schram, F.R. (1986). *Crustacea.* London, New York : Oxford University Press 606 pp.

Williamson, D.I. (1973). *Amphionides reynaudii* (H. Milne-Edwards), representative of a proposed new order of eucaridan Malacostraca. *Crustaceana* **25**(1): 35–50 5 figs

Zimmer, C. (1904). *Amphionides valdiviae* n.g. n.sp. *Zool. Anz.* **28**: 225–228

AMPHIONIDACEA Williamson, 1973

Amphionidacea Williamson, D.I. (1973). *Amphionides reynaudii* (H. Milne-Edwards), representative of a proposed new order of eucaridan Malacostraca. *Crustaceana* **25**(1): 35–50 5 figs [47].

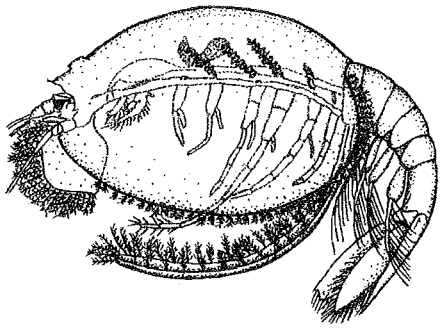
Amphionidea Dana, J.D. (1852). *Crustacea. U.S. Exploring Expedition. During the years 1838, 1839, 1840, 1841, 1842.* Under the command of Charles Wilkes, U.S.N. Philadelphia : C. Sherman Vol. 13 1618 pp. [614, 1435] [Pt 1: 1–685; Pt 2: 686–1618].

Amphionelloidea Balss, H. (1957). *Dr. H. G. Bronn's Klassen und Ordnungen des Tierreichs.* Edn 2 5(1)(7)(12) pp. 1505–1672 [1525].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [316].

AMPHIONIDIDAE

INTRODUCTION



Amphionides reynaudii
[P. Davie, after Heegaard 1969]

This is the only family included in the order Amphionidacea. It includes a single genus and species, *Amphionides reynaudii* (H. Milne Edwards).

Diagnosis

Carapace thin, fused to thorax, greatly developed laterally in females; first thoracic appendage forming a functional maxilliped; second to seventh thoracic appendages essentially uniramous in adults, with exopods reduced to stumps, eighth thoracic appendage absent in females; first pleopod in female large, extending towards anterior of thorax so as to form brood pouch with sides of carapace. (After Schram 1986).

References

Heegaard, P. (1969). The larvae of decapod Crustacea. The Amphionidae. *Dana Reports* **77**: 1–82

Schram, F.R. (1986). *Crustacea.* London, New York : Oxford University Press 606 pp.

AMPHIONIDIDAE Holthuis, 1955

Amphionidae Dana, J.D. (1852). *Crustacea. U.S. Exploring Expedition. During the years 1838, 1839, 1840, 1841, 1842.* Under the command of Charles Wilkes, U.S.N. Philadelphia : C. Sherman Vol. 13 1618 pp. [1435] [Pt 1: 1–685; Pt 2: 686–1618].

Amphionididae Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [139].

Amphionellidae Balss, H. (1957). *Dr. H. G. Bronn's Klassen und Ordnungen des Tierreichs.* Edn 2 5(1)(7)(12) pp. 1505–1672 [1525].

Amphionidea De Haan, W. (1849). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam,* Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [242].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [317].

Amphionides Zimmer, 1904

Amphion Milne Edwards, H. (1833). Note sur un nouveau genre de Crustacés de l'ordre des Stomapodes. *Ann. Soc. Entomol. Fr.* **1**: 336–340 pl. 12 [336] [junior homonym of *Amphion* Hübner, 1819 (Lepidoptera), and *Amphion* Pander, 1830 (Trilobita)].
Type species: *Amphion reynaudii* H. Milne Edwards, 1833 (emendation of *Amphion Reinaudii*) by monotypy.

Amphionides Zimmer, C. (1904). *Amphionides valdiviae* n.g. n.sp. *Zool. Anz.* **28**: 225–228 [225] [gender masculine].
Type species: *Amphionides valdiviae* Zimmmer, 1904 by monotypy.

Amphionella Balss, H. (1957). *Dr. H. G. Bronn's Klassen und Ordnungen des Tierreichs.* Edn 2 5(1)(7)(12) pp. 1505–1672 [1525] [*nom. nov.* for *Amphion* H. Milne Edwards, 1833].

Taxonomic decision for synonymy: Williamson, D.I. (1973). *Amphionides reynaudii* (H. Milne-Edwards), representative of a proposed new order of eucaridan Malacostraca. *Crustaceana* **25**(1): 35–50 5 figs [35].

Extralimital distribution: circumglobal between 35°N and 35°S.

Amphionides reynaudii (H. Milne Edwards, 1833)

Amphion reynaudii Milne Edwards, H. (1833). Note sur un nouveau genre de Crustacés de l'ordre des Stomapodes. *Ann. Soc. Entomol. Fr.* **1**: 336–340 pl. 12 [339 pl. 12A] [as *Amphion Reinaudii* (automatic emendation, see ICZN 1985, Art. 32c(ii))].
Type data: type status unknown MNHP* (probable depository institution).
Type locality: 'des mers d'Asie' (replaced by 'l'Océan indien' by Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls), see Williamson, D.I. (1973). *Amphionides reynaudii* (H. Milne-Edwards), representative of a proposed new order of eucaridan Malacostraca. *Crustaceana* **25**(1): 35–50 5 figs [36].

Amphion provocatoris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [347, 913 pl. 148].
Type data: type status unknown BMNH*.
Type locality: south of the Azores, Atlantic Ocean.

Amphion armata Koeppel, E. (1902). Beiträge zur Kenntnis der Gattung Amphion. *Arch. Naturgesch.* **68**: 262–298 pls 12, 13 [295].
Type data: type status and whereabouts unknown.
Type locality: no type locality given.

Amphionides valdiviae Zimmer, C. (1904). *Amphionides valdiviae* n.g. n.sp. *Zool. Anz.* **28**: 225–228 [225].
Type data: type status and whereabouts unknown.
Type locality: south east of Madeira, south of Cape Palmas and between Seychelle Is. and Dar es Salam.

Taxonomic decision for synonymy: Williamson, D.I. (1973). *Amphionides reynaudii* (H. Milne-Edwards), representative of a proposed new order of eucaridan Malacostraca. *Crustaceana* **25**(1): 35–50 5 figs [36].

Distribution: NSW (SE oceanic), WA (S oceanic); circum-global (between 35°N and 35°S).
Ecology: abyssopelagic, bathypelagic, oceanic province, pelagic, sublittoral; depths 0–3760 m.

ORDER: DECAPODA

INTRODUCTION

The Decapoda is the most diverse of the eucaridean orders. It contains almost all of the best known, edible and commercially important crustacean species, including the shrimps, prawns, lobsters and crabs. Decapoda literally means ten-legs, and takes its name from the five pairs of pereiopods.

Decapods are primarily marine, but have conquered most environments from the abyssal depths (even including hydrothermal vents), to the intertidal, freshwater, mountain and desert habitats. Jones & Morgan (1994) provided a good popular account of the diversity of Australian decapods. McLaughlin (1980) provided an excellent overview of decapod morphology. Higher classification follows Bowman & Abele (1982), but has been modified at the family level to take account of more recent views.

Diagnosis

Eucarid malacostracans having first three pairs of thoracic appendages modified as maxillipeds; remaining five pairs forming pereiopods for locomotion; usually one or more pairs of pereiopods terminating in chelae; first pair, or sometimes second pair, often enlarged and stronger (termed chelipeds); pereiopods mostly without exopods in adults, but these may be present in larvae. Head and thoracic segments fused dorsally, with carapace overhanging laterally to enclose gills in lateral branchial chambers. Abdomen may be well developed, elongate, and end in a tailfan formed by telson and uropods, or may be variously reduced and flattened, ultimately being folded under the thorax, with tailfan lost. Abdomen bearing paired ventral pleopods that may be lost or reduced to varying degrees; males often with first one or two pairs modified for copulation (gonopods). In natant taxa, pleopods used for locomotion. In suborder Pleocyemata female pleopods used for egg-attachment, the eggs hatch as zoea; in suborder Dendrobranchiata eggs not carried by female, hatch as nauplius.

References

Bowman, T.E. & Abele, L.G. (1982). Classification of Recent Crustacea. pp. 1–27 *in* Abele, L.G. (ed.) *The Biology of Crustacea.* Vol. 1. Systematics, the Fossil Record, and Biogeography. New York : Academic Press

Jones, D.S. & Morgan, G.J. (1994). *A Field Guide to Crustaceans of Australian Waters.* Chatswood, NSW : Reed 216 pp.

McLaughlin, P.A. (1980). *Comparative Morphology of Recent Crustacea.* San Francisco : W.H. Freeman & Co. 177 pp.

SUBORDER: DENDROBRANCHIATA

INTRODUCTION

This suborder comprises less than 500 shrimp species worldwide, falling into two superfamilies: the Penaeoidea (Aristeidae, Benthesicymidae, Penaeidae, Sicyoniidae, Solenoceridae), and the Sergestoidea (Sergestidae, Luciferidae). These groups are united by the unique synapomorphy of dendrobranchiate gills (two principle branches off the main axis, each of which is divided into multiple secondary branches). Amongst a number of other characters separating dendrobranchiate shrimps from the pleocyemate shrimps, is the possession of chelae on the first three pairs of pereiopods (versus the first two pairs in the Caridea). Penaeids may be pelagic or benthic in habit, and while typically marine, some species will penetrate estuaries almost into freshwater. Sergestids are pelagic and always marine. Dendrobranchiate shrimps form the basis of the most important commercial shrimp fisheries. Pérez Farfante & Kensley (1997) published a major review of the group with keys to families and genera.

Diagnosis

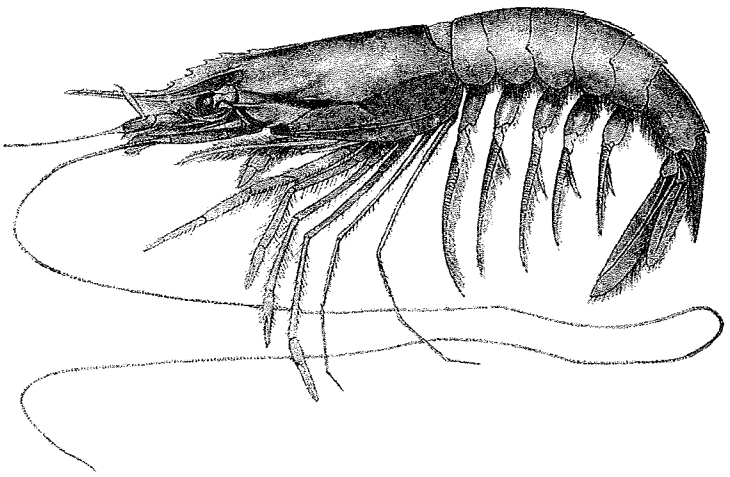
Carapace laterally compressed or cylindrical. Eyes stalked, compound; rarely reduced. Antennules biramous; with stylocerite. Antennae with 5-segmented peduncle and scaphocerite. Mandibles with palp. Maxillulae with segmented endopodal palp. Maxillae biramous; with two bilobed endites. Endopods of first maxillipeds with five segments; without *crista dentata*. First three pairs of pereiopods chelate; sometimes without exopods. Abdomen with biramous pleopods; usually with petasma, sometimes also with appendix masculina; without appendix interna. Telson together with broad biramous uropods forms tailfan. Eight thoracic appendages consisting of 3 maxillipeds + 5 pereiopods (fourth and fifth sometimes reduced or absent). Abdomen 6-segmented (excluding telson). Gills dendrobranchiate. Sexes separate; gonopores on coxae of third pereiopods of female, fifth of males; male with petasma, female with thelycum. Eggs not carried by female; hatch as nauplii. (After McLaughlin 1980).

References

McLaughlin, P.A. (1980). *Comparative Morphology of Recent Crustacea.* San Francisco : W.H. Freeman & Co. 177 pp.

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

ARISTEIDAE



Aristaeomorpha foliacea [from Schmitt 1926: pl. 57]

INTRODUCTION

This family of pelagic shrimps is represented in Australian waters by 13 species and all nine recognised genera. Aristeids typically live in waters off the continental shelf down to abyssal depths, with one species, *Plesiopenaeus armatus* (Bate), having been found to a depth of over 5400 m. Few works have dealt directly with Australian aristeids, the most notable being by Grey *et al.* (1983) who provided accounts and colour pictures for several Australian species; Kensley *et al.* (1987) who reported a number of new Australian records; and, most recently, Dall (2001) who doubled the number of species known and provided a key to genera.

Diagnosis

Rostrum usually elongate in females, sexually dimorphic in several genera, being elongate in females and juvenile males, short in adult males; usually with only three dorsal rostral/ postrostral teeth (more only in *Aristaeomorpha*); lacking ventral teeth. Carapace lacking postorbital and pterygostomian spines; antennal and branchiostegal spines always present; postantennal spine rarely present and hepatic spines often lacking; cervical and postcervical sulci sometimes present, most often reaching dorsal midline, or almost absent and visible only laterally. Third abdominal somite sometimes carinate, fourth to sixth somites always carinate. Telson apically acute, bearing three or four pairs of movable lateral spines. Eye with optic calathus bearing mesial tubercle; ocular scale and styliform projection lacking. Antennule with prosartema reduced to setose boss; flagella unequal, dorsal flagellum short, flattened for most of its length, inserted proximally on third segment; ventral flagellum sexually dimorphic in some genera. Palp of first maxilla consisting of single curved article. Exopods present on all maxillipeds, present or absent on pereiopods. Third through fifth pleopods biramous. Pleurobranchia on somites IX to XIV; one arthrobranchia on somite VII, two on somites VIII through XIII; podobranchia on second maxilliped through second or third pereiopods; epipod present on maxillipeds and first to third or fourth pereiopods. Petasma open; ventral costa usually projecting free for variable fraction of its length, often extending as far as distal margin of dorsolateral lobule. Second pleopod of male bearing appendix masculina and appendix interna, lacking distolateral projection. Thelycum open; sternite XIV with deep concavity, sternite XIII with variously shaped shield-like median protuberance. (After Pérez Farfante & Kensley 1997).

References

Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441

Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls

Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68

ARISTEIDAE Wood-Mason, 1891

Aristeinae Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [278] [as Aristaeina; name in the corrected spelling, Aristeinae, placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (141)].

For taxonomic arrangement, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [33].

Aristaeomorpha Wood Mason, 1891

Aristaeomorpha Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [286] [gender feminine].
Type species: *Aristeus rostridentatus* Bate, 1881 (= *Aristaeomorpha foliacea* (Risso, 1827)) by original designation.

Extralimital distribution: Atlantic, Mediterranean, Indo-west Pacific.

Generic reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [421 fig. 9] (diagnosis).

Aristaeomorpha foliacea (Risso, 1827)

Giant Red Prawn, Red Prawn, Royal Red Prawn

Penaeus foliaceus Risso, A. (1827). *Histoire naturelle des principales productions de l'Europe méridionale et particulièrement de celles des environs de Nice et des Alpes-Maritimes.* Paris : F.-G. Levrault Vol. 5 pp. i–vii, 1–403 pls 1–3 [69 pl. 2 fig. 6].
Type data: syntypes whereabouts unknown.
Type locality: Mediterranean Sea.

Aristeus rostridentatus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [189].
Type data: syntypes BMNH*.
Type locality: near Fiji.

Aristaeomorpha giglioliana Wood-Mason, J. (1892). *Illustrations of the Zoology of the Royal Indian Marine Surveying Steamer "Investigator".* Crustacea, Pt 1, pls 1–5 [pl. 2 fig. 2].
Type data: syntypes IM*.
Type locality: unknown (presumably from Indian waters).

Aristaeomorpha mediterranea Adensamer, T. (1898). Decapoden gesammelt auf S.M. Schiff "Pola" in den Jahren 1890–1894. Berichte der Commission für Erforschung des östlichen Mittelmeeres. XXII. Zoologische Ergebnisse. XI. *Denkschr. Akad. Wiss. Wien Math.-Naturwiss. Kl.* **65**: 597–628 1 fig. [627].
Type data: syntypes NHMW* (probable depository institution).
Type locality: Mediterranean Sea.

Aristeus japonicus Yokoya, Y. (1933). On the distribution of decapod crustaceans inhabiting the continental shelf around Japan, chiefly based upon the materials collected by S.S. Sôyô-Maru, during the years 1923–1930. *J. Coll. Agric. Imp. Univ. Tokyo* **12**(1): 1–226 text-figs 1–71 tables 1–4 [3 fig. 1].
Type data: syntypes 2 ♂* (probably lost).
Type locality: E of Owase, Mie-ken, Japan.

Taxonomic decision for synonymy: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [54].

Distribution: NSW (SE oceanic), SA (Great Australian Bight), TAS (SE oceanic), WA (NW oceanic, W oceanic); Arafura Sea; Atlantic, Mediterranean, Indo-west central Pacific Oceans.
Ecology: bathypelagic, continental shelf, continental slope, mesopelagic; depths of 61–2000 m, in Australia typically from 250–700 m, on mud to muddy sand.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [279]; Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [412 fig. 2].

Aristaeopsis Wood-Mason, 1891

Aristaeopsis Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [282] [gender feminine].
Type species: *Penaeus edwardsianus* Johnson, 1867 by original designation.

Extralimital distribution: Atlantic, Indo-west Pacific Oceans.
Generic references: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [36] (re-established *Aristaeopsis* as a valid genus); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [413] (diagnosis and remarks).

Aristaeopsis edwardsiana (Johnson, 1867)

Scarlet Prawn

Penaeus edwardsianus Johnson, J.Y. (1867). Description of a new genus and a new species of macrurous decapod crustaceans, belonging to the Penaeidae, discovered at Madeira. *Proc. Zool. Soc. Lond.* **1867**: 895–901 [897].
Type data: type status unknown BMNH ♀*.
Type locality: off Madeira, NE Atlantic Ocean.

Aristeus coralinus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [xxxii fig. 10].
Type data: type status and whereabouts unknown*.
Type locality: collected during the 'Talisman' voyage, precise locality not stated.

Aristeus splendens Richard, J. (1900). *Les campagnes scientifiques de S.A.S. le Prince Albert Ier de Monaco.* Monaco : Imprimerie de Monaco 140 pp. 60 figs [89] [described in reference to an unpublished manuscript name of A. Milne Edwards].
Type data: syntypes MNHP Na 1802 ♀, MNHP Na 7563 ♀, MNHP NA 383 ♀ (3 specimens were found in the MNHP labelled as *Aristeus splendens* n. sp., one with a handwritten label by A. Milne Edwards).
Type locality: Azores, *Talisman* Stn 1442; off Morocco, *Talisman* Stn 1883; off Cape Spartel, *Talisman* Expedition.

Taxonomic decision for synonymy: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [88]; taxonomic decision for new combination: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [36].

Distribution: NSW (Central E coast, Lower E coast), QLD (NE oceanic), WA (NW oceanic, W oceanic); Arafura Sea; Atlantic-Indo-Pacific Oceans.
Ecology: bathypelagic, continental slope, mesopelagic, soft bottom; muddy substrates, depths of 200–1850 m, mainly 450–600 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [281] (as *Plesiopenaeus edwardsianus*); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441[413–414 fig. 3].

Aristeus Duvernoy, 1840

Aristeus Duvernoy, G.L. (1840). Note sur une nouvelle forme de branchies, découverte dans une espèce de Crustacé décapode macroure, *Aristeus antennatus. C. R. Séances Acad. Sci.* **11**: 217–220 [217] [gender masculine].
Type species: *Penaeus antennatus* Risso, 1816 by original designation.

Extralimital distribution: Atlantic, Mediterranean, Indo-west Pacific Oceans.
Generic references: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the

families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [39] (diagnosis and list of included species); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441[415] (key to Indo-west Pacific species).

Aristeus mabahissae Ramadan, 1938

Shiny Pink-striped Prawn

Aristeus mabahissae Ramadan, M.M. (1938). Crustacea, Penaeidae. *Sci. Rep. John Murray Exped.* **5**: 35–76 [43 figs 2b, 3b, 4a–c].
Type data: syntypes BMNH 2 ♀ *, BMNH 2 ♂ 2 ♀ *.
Type locality: vicinity of the Maldives (John Murray Stns 143, 145).

Distribution: NSW (SE oceanic), WA (NW oceanic, W oceanic); Indo-west Pacific Oceans (Madagascar, Maldive Islands, Saya de Malha Bank, Indonesia, Japan, New Caledonia, Wallis and Futuna Islands).
Ecology: mesopelagic, bathypelagic, continental slope; depth 366–1097 m, but mainly 500–750 m.
References: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [65] (diagnostic characters, figures); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [415–416 fig. 4A].

Aristeus semidentatus Bate, 1881

Aristeus semidentatus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [189].
Type data: holotype BMNH ♀, paratype(s) BMNH ♀.
Type locality: N of Kermadec Ils (*Challenger* Stn 171) [28°33'S 177°50'W].

Distribution: NSW (SE oceanic); Indo-west Pacific Oceans (Madagascar, SW India, Indonesia, Kermadec Islands, Hawai'i).
Ecology: bathypelagic, continental slope, mesopelagic; depth 329–1479 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331; Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [421 fig. 9] (believes that the specimens identified by Kensley *et. al.* belong to *A. mabahissae*, and that the presence of *A. semidentatus* in Australian waters is uncertain).

Aristeus virilis (Bate, 1881)

Stout Red Shrimp

Hemipenaeus virilis Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [187].
Type data: syntypes BMNH.
Type locality: Philippines.

Aristeus tomentosus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [189].
Type data: syntypes BMNH*.
Type locality: S of Philippines.

Taxonomic decision for synonymy: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [61].

Distribution: NSW (SE oceanic), NT (N coast), QLD (NE oceanic, SE oceanic), WA (NW oceanic, W oceanic); Arafura Sea, Indo-west Pacific Oceans (South Africa, Madagascar, Andaman Islands, Indonesia, South China, Philippines, Japan, New Caledonia, New Hebrides, Wallis and Futuna Islands).
Ecology: bathypelagic, continental slope, mesopelagic; depths of 188–1050 m, mainly 350–550 m.
Reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [416 fig. 4B].

Austropenaeus Pérez Farfante & Kensley, 1997

Austropenaeus Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [41] [gender masculine].
Type species: *Plesiopenaeus nitidus* Barnard, 1947 by original designation.

Extralimital distribution: South Atlantic, S Indian Ocean, southern Australia.

Austropenaeus nitidus (Barnard, 1947)

Plesiopenaeus nitidus Barnard, K.H. (1947). Descriptions of new species of South African decapod Crustacea, with notes on synonymy and new records. *Ann. Mag. Nat. Hist. (11)***13**: 361–392 [383].
Type data: holotype SAM*.
Type locality: off Cape Point, South Africa.

Taxonomic decision for new combination: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [41].

Distribution: NSW (SE oceanic), SA (Great Australian Bight, S oceanic), VIC (Bass Strait, SE oceanic, S oceanic), WA (W oceanic); South Atlantic, southern Indian Ocean.
Ecology: abyssopelagic, bathypelagic, continental shelf, continental slope, soft bottom; depth 457–1300, usually 1000–1300 m in Australian waters.
References: Crosnier, A. (1990). Présence de la crevette pénéide *Plesiopenaeus nitidus* Barnard, 1947, aux Îsles Saint Paul et Amsterdam et au large du Détroit de Bass (Australie). *Crustaceana* **59**(1): 100–101 [100] (first Australian record); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441[417 figs 1, 5A, B].

Hemipenaeus Bate, 1881

Hemipenaeus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [171, 186] [gender masculine].
Type species: *Hemipenaeus spinidorsalis* Bate, 1881 by subsequent designation, see Faxon, W. (1895). Stalk-eyed Crustacea of the "Albatross". *Mem. Mus. Comp. Zool. Harvard* **18**: 1–292, 56 pls [198].

Extralimital distribution: Atlantic and Indo-Pacific Oceans.

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [43] (diagnosis and species distributions).

Hemipenaeus carpenteri Wood-Mason, 1891

Hemipenaeus carpenteri Wood-Mason, J. *in* Woodmason, J. & Alcock, A. (1891). Natural History notes from H.M. Indian Marine Survey Steamer 'Investigator', Commander R.F. Hoskyn, R.N., commanding. No 21. Note on the results of the last season's deep-sea dredging. *Ann. Mag. Nat. Hist. (6)***7**: 1–19, 186–202, 258–272 [189].
Type data: holotype IM ♀*.
Type locality: Bay of Bengal.

Distribution: QLD (NE oceanic), WA (NW oceanic); Indo-Pacific Oceans (Madagascar to Indonesia, Japan, Wallis and Furuna Ils, Gulf of Panama, and Galapagos Ils); W. Atlantic Ocean.
Ecology: bathypelagic, continental slope, oceanic province; 900–3900 m depth, 1100–1700 m in Australian waters.
Reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [418 fig. 6] (first Australian records).

Hepomadus Bate, 1881

Hepomadus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [171, 189] [name placed on Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 [139]; gender masculine].
Type species: *Hepomadus glacialis* Fowler, 1912 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650.

Extralimital distribution: Atlantic, Indian, western and central Pacific Oceans.

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [46–48] (diagnosis and species distributions).

Hepomadus tener Smith, 1884

Hepomadus tener Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Rep. U.S. Fish Comm.* **10**: 345–426 [409 pl. 9 figs 7, 8].
Type data: holotype USNM ♂*.
Type locality: NW Atlantic, off eastern United States.

Distribution: WA (NW oceanic).
Ecology: abyssopelagic, bathypelagic, continental slope, oceanic province; depth 765–5400 m, but taken from 1460–1700 m off NW Australia.
Reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [419 fig. 7] (first Australian record, diagnosis and figure).

Plesiopenaeus Bate, 1881

Plesiopenaeus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [187] [gender masculine].
Type species: *Aristeus armatus* Bate, 1881 by subsequent designation, see Faxon, W. (1895). Stalk-eyed Crustacea of the "Albatross". *Mem. Mus. Comp. Zool. Harvard* **18**: 1–292, 56 pls.

Extralimital distribution: Indo-west Pacific and Atlantic Oceans. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [50] (also diagnosis).

Plesiopenaeus armatus (Bate, 1881)

Aristeus armatus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [188].
Type data: syntypes AM P3159, BMNH*.
Type locality: off Torres Strait, QLD [12°08'S 145°10'E], off Buenos Aires, Argentina; off Tristan da Cunha, South Atlantic Ocean; off Philippines; off Yokohama, Japan; central N Pacific Ocean; off Low Archipelago, central S Pacific Ocean.

Distribution: QLD (NE oceanic); Lord Howe Rise, Indo-Pacific and Atlantic Oceans.
Ecology: abyssopelagic, bathypelagic, mesopelagic; depth 752–5413 m, 1880–2930 m in Australian waters.
References: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [92] (full synonymy and figures); Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [50] (figure); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [421 fig. 9].

Plesiopenaeus coruscans (Wood-Mason, 1891)

Aristeus coruscans Wood-Mason, J. *in* Woodmason, J. & Alcock, A. (1891). Natural History notes from H.M. Indian Marine Survey Steamer 'Investigator', Commander R.F. Hoskyn, R.N., commanding. No 21. Note on the results of the last season's deep-sea dredging. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [280 fig. 6].
Type data: holotype IM ♀*.
Type locality: Bay of Bengal [13°47'30"N 92°36'E].

Distribution: WA (NW oceanic); Indian Ocean (Madagascar, Arabian Sea, Bay of Bengal), Atlantic Ocean (near Bahamas).
Ecology: bathypelagic, mesopelagic, oceanic province; depth 900–2367 m.
References: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [94 fig. 33c–f]; Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [422] (first Australian record).

Parahepomadus Crosnier, 1978

Parahepomadus Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [47] [gender masculine].
Type species: *Parahepomadus vaubani* Crosnier, 1978 by original designation.

Extralimital distribution: Indo-west Pacific Oceans (Madagascar, Indonesia, Philippines).

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [48] (diagnosis and figures).

Parahepomadus vaubani Crosnier, 1978

Parahepomadus vaubani Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [48–52 figs 20–22].
Type data: holotype MNHP ♀*, paratype(s) MNHP 5♂ 5♀*.
Type locality: off SW Madagascar.

Distribution: WA (NW oceanic); Indo-west Pacific Oceans (Madagascar, Indonesia, Philippines).
Ecology: bathypelagic, mesopelagic, oceanic province; depth 750–1525 m.
References: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [48 fig. 17]; Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [420 fig. 8] (first Australian record).

Pseudaristeus Crosnier, 1978

Pseudaristeus Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [81] [gender masculine].
Type species: *Aristeus crassipes* Wood-Mason, 1891 by original designation.

Extralimital distribution: Indo-west Pacific and SW Atlantic (Argentina Basin) Oceans.

Generic references: Pérez-Farfante, I. (1987). Revision of the gamba prawn genus *Pseudaristeus*, with description of two new species (Crustacea: Decapoda: Penaeoidea). *Fish. Bull.* **85**(2): 311–338; Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [422-423] (key to Indo-west Pacific species).

Pseudaristeus kathleenae Pérez Farfante, 1987

Pseudaristeus kathleenae Pérez-Farfante, I. (1987). Revision of the gamba prawn genus *Pseudaristeus*, with description of two new species (Crustacea: Decapoda: Penaeoidea). *Fish. Bull.* **85**(2): 311–338 [314 figs 1–9].
Type data: holotype USNM 216710 ♂ (*Albatross* Stn 5657), paratypes USNM 216711 ♀, ZSI 7806/10 ♂, ZSI 2♂, ZMB ♀, ZMA ♂, USNM 3♂ 20♀
Type locality: Teluk Bone, Sulawesi, Indonesia [3°19'40"S 120°36'30"E].

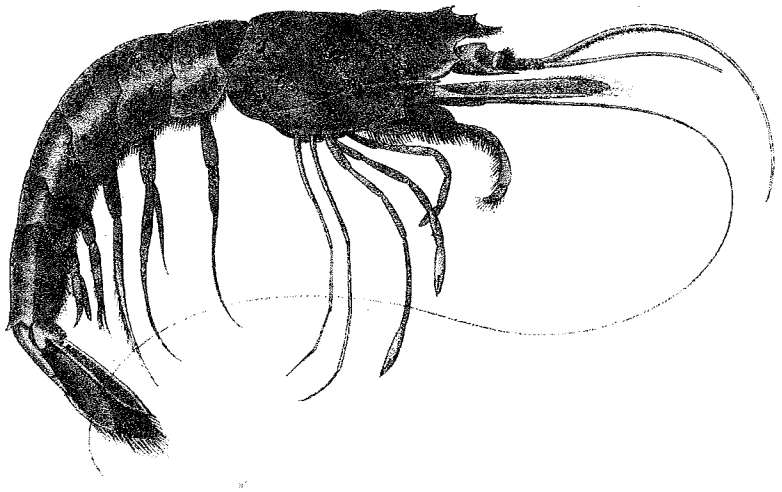
Distribution: NT (N coast); Arafura Sea; Indo-west Pacific (S India, Indonesia, Arafura Sea, Philippines).
Ecology: mesopelagic, oceanic province; depth 297–1225 m, Australian specimens from 297 m.
Reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [423 fig. 10] (first Australian records).

Pseudaristeus sibogae (de Man, 1911)

Hemipenaeus sibogae de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131 [25–27].
Type data: holotype ZMA ♀*.
Type locality: Savu Sea, Indonesia [9°3.4'S 119°56.7'E].

Distribution: SA (Great Australian Bight), WA (NW oceanic, W oceanic); Indian Ocean (from South Africa to Indonesia).
Ecology: bathypelagic, mesopelagic, oceanic province; depth 834–1305 m.
Reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [424 fig. 11] (first Australian records).

BENTHESICYMIDAE



Benthesicymus altus [from Bate 1888: pl. 58 fig. 1]

INTRODUCTION

This family of pelagic deep water shrimps is represented worldwide by four genera. Two genera, *Benthesicymus* and *Gennadas*, are found in Australian waters. A species of a third genus, *Benthonectes filipes* Smith, 1885, was identified in the collections of the Northern Territory Museum by Dr A. Crosnier (MNHP), but not formally published. This specimen was subsequently examined by Dall (2000), who noted that the specimen is too badly damaged for identification to be certain. The most recent papers dealing with the taxonomy of Australian species are those of Kensley *et al.* (1987) and Dall (2001), the latter providing a key to genera. Griffiths & Brandt (1983) made interesting ecological observations on benthesicymids in the Tasman Sea, and Dall (2001) discussed the zoogeography of the family.

Diagnosis

Integument thin, soft, flexible. Rostrum short, not reaching beyond eyes, laterally compressed, dorsal rostral/postrostral teeth no more than three, usually two or less, ventrally unarmed. Carapace with branchiostegal spine; hepatic spine present or absent; postorbital and postantennal spines lacking; cervical and postcervical sulcus reaching middorsal line; branchiocardiac and hepatic sulci usually well defined. Abdominal somites variously carinate, occasionally ending in posterior spine. Telson bearing one to four pairs of lateral movable spines; apex usually truncate, sometimes acute. Eye with optic calathus bearing mesial tubercle; ocular scale and styliform projection lacking. Antennule with prosartema usually represented by tuft of setae; with two elongate filiform flagella. Second pleopod of males with appendix masculina and appendix interna, lacking distolateral projection. Third through fifth pleopods biramous. Exopods on first to third maxillipeds, present or absent on first to fifth pereiopods. Pleurobranchia present on somites IX to XIV; one arthrobranchia on somite VII, two on somites VIII to XIII; podobranchia on second and third maxillipeds and first to third pereiopods, but only on second maxilliped in *Gennadas*; epipod present on second maxilliped to fourth or fifth pereiopod. Petasma open, generally broadly lamellar, with flexible part of ventrolateral lobule attached to dorsolateral for

much of, or for its entire length; ventral costa entirely attached. Thelycum open or sometimes closed; in latter case having shallow seminal receptacles formed by sternal invaginations between sternites XII and XIII at base of third pereiopods.
(After Pérez Farfante & Kensley 1997).

References

Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–15

Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441

Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184

Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

BENTHESICYMIDAE Wood-Mason, 1891

Benthesicyminae Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [286] [as Benthesicymina; name in the corrected spelling, Benthesicyminae, placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (141)].

For taxonomic arrangement, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [56].

Benthesicymus Bate, 1881

Benthesicymus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [190] [gender masculine].
Type species: *Benthesicymus crenatus* Bate, 1881 by subsequent designation, see Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [329].

Benthoecetes Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [391].
Type species: *Benthesicymus bartletti* Smith, 1882 by monotypy.

Taxonomic decision for synonymy: Tirmizi, N.M. (1960). Crustacea: Penaeidae Part II. Series Benthesicymae. *John Murray Exped. Scient. Rep.* **10**(7): 319–383 [322].

Extralimital distribution: Atlantic-Indo-Pacific Oceans. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [60] (review of species composition and distributions).
Generic reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [426-427] (diagnosis and key to Indo-west Pacific species).

Benthesicymus altus Bate, 1888

Benthesicymus altus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [336].
Type data: holotype (probable) BMNH 88.22 ♀.
Type locality: between Australia and New Guinea (*Challenger* Stn 184).

Distribution: QLD (NE oceanic); Indo-Pacific Oceans (Madagascar to Japan and east to California).
Ecology: bathypelagic, continental slope, oceanic province; depth to 3385 m.

Benthesicymus investigatoris Alcock & Anderson, 1899

Benthesicymus investigatoris Alcock, A.W. & Anderson, A.R.S. (1899). Natural history notes from H.M. royal Indian marine survey ship "Investigator", commander T.H. Heming, R.N., commanding. Ser. III, No. 2. An account of the deep-sea Crustacea dredged during the surveying-season of 1897–1898. *Ann. Mag. Nat. Hist. (7)***3**: 1–27, 278–292 [282].
Type data: syntypes IM 3♂ 4♀ (presumed depository institution).
Type locality: Bay of Bengal (*Investigator* Stns 222, 228, 234, 235).

Distribution: NSW (SE oceanic), QLD (NE oceanic), WA (NW oceanic, W oceanic); Indo-west central Pacific Oceans (East Africa to Japan, Philippines, Fiji, Wallis and Futuna Islands, and east to Hawai'i).
Ecology: bathypelagic, continental slope, mesopelagic, oceanic province; depth 580–1690 m.

Benthesicymus urinator Burkenroad, 1936

Taxonomic decision for subspecific arrangement: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [428].

Distribution: Lord Howe Island, QLD (NE oceanic); Indo-west Pacific Oceans (Comoro Islands, Réunion, NW and SW Pacific, Hawai'i).

Benthesicymus urinator howensis Dall, 2001

Benthesicymus urinator howensis Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [428–429 fig. 13A–D].
Type data: syntypes AM P40648 2♀.
Type locality: Lord Howe Rise, Tasman Sea.

Distribution: Lord Howe Island; known only from type locality.
Ecology: bathypelagic, oceanic province; 1325 m depth.

Benthesicymus urinator urinator Burkenroad, 1936

Benthesicymus urinator Burkenroad, M.D. (1936). The Aristaeinae, Solenocerinae and pelagic Penaeinae of the Bingham Oceanographic collection. *Bull. Bingham Oceanogr. Coll.* **5**(2): 1–151 [29, 45 figs 4, 5, 8, 9, 17,18, 22, 39, 40, 45].
Type data: holotype BMNH 88.22 ♂, paratype(s) BMNH 88.22 1♂ 2♀.
Type locality: near Torres Straits (*Challenger* Stn 184).

Distribution: QLD (NE oceanic); Indo-west Pacific Oceans (Comoro Islands, Réunion, NW and SW Pacific, Hawai'i).
Ecology: abyssopelagic, bathypelagic, continental slope, oceanic province; depth 2500–4200 m.

Gennadas Bate, 1881

Gennadas Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [191].
Type species: *Gennadas parvus* Bate, 1881 by monotypy.

Amalopenaeus Smith, S.I. (1882). Report on the Crustacea. Part 1. Decapoda. Reports on the results of dredging, under the supervision of Alexander Agassiz, on the east coast of the United States, during the summer of 1880, by the U.S. Coast Survey Steamer "Blake", Commander J.R. Bartlett, U.S.N., commanding. *Bull. Mus. Comp. Zool.* **10**(1): 1–108 [86].
Type species: *Amalopenaeus elegans* Smith, 1882 by monotypy.

Pasiphodes Filhol, H. (1885). *La vie au fond des mers. Les explorations sous-marines et les voyages du Travailleur et du Talisman. Bibliothèque de la Nature.* Paris : G. Masson 303 pp. [pl. 3].
Type species: *Pasiphodes purpureus* Filhol, 1885 by monotypy.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [63].

Extralimital distribution: Antarctic Region; Atlantic-Indo-Pacific Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.
Generic reference: Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [429–430] (diagnosis and key to Indo-west Pacific species).

Gennadas bouvieri Kemp, 1909

Gennadas bouvieri Kemp, S. (1909). The decapods of the genus *Gennadas* collected by H.M.S. 'Challenger'. *Proc. Zool. Soc. Lond.* **11**: 718–730 [726 pl. 74 figs 1–4, pl. 75 figs 6, 7].
Type data: syntypes BMNH 3♀*.
Type locality: W of Manila and N of New Guinea.

Distribution: NSW (SE oceanic); off eastern Australia between 17° and 39°S; east Atlantic-Indo-Pacific Oceans.
Ecology: bathypelagic, continental slope, mesopelagic, oceanic province; depths of 250–1988 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [430 fig. 14] (diagnosis).

Gennadas capensis Calman, 1925

Gennadas capensis Calman, W.T. (1925). On macrurous decapod Crustacea collected in South African waters by the S.S. 'Pickle'. *Report of the Fisheries and Marine Biological Survey of the Union of South Africa* 4(special report 3) 26 pp. [5 pl. 1 figs 1, 2].

Type data: syntypes BMNH 2♂.
Type locality: 'off Cape' South Africa.

Distribution: NSW (SE oceanic); off eastern Australia between 22° and 39°S, Western Indian Ocean, east and west Pacific Ocean, and Atlantic Ocean.
Ecology: bathypelagic, continental slope, mesopelagic, oceanic province; depth to 2000 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [430 fig. 15] (diagnosis).

Gennadas gilchristi Calman, 1925

Gennadas gilchristi Calman, W.T. (1925). On macrurous decapod Crustacea collected in South African waters by the S.S. 'Pickle'. *Report of the Fisheries and Marine Biological Survey of the Union of South Africa* 4(special report 3) 26 pp. [6 pl. 1 figs 3, 4].
Type data: syntypes BMNH 5♂.
Type locality: 'off Cape', South Africa (SS *Pickle* Stns 77, 84, 87, 357).

Distribution: Australian Antarctic Territory, NSW (SE oceanic), SA (S oceanic), TAS (SE oceanic); off south-eastern Australia between 33° and 42°S, west coast of South Africa, S Indian Ocean, New Zealand, Tasman Sea, New Caledonia, and subtropical and Subantarctic zones of Southern Ocean mostly south of latitude 30°S.
Ecology: pelagic, bathypelagic, continental slope, mesopelagic, oceanic province; depths of 0–3400 m, but mostly 500–700 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [431 fig. 16] (diagnosis).

Gennadas incertus (Balss, 1927)

Amalopenaeus incertus Balss, H. (1927). Macrura der Deutschen Tiefsee-Expedition. 3. Natantia, Teil B. *Wiss. Ergeb. deutschen Tiefsee-Exped. Valdivia 1898–1899* **23**: 245–275 [265 figs 24–29].
Type data: holotype ZSMB ♂* (probable depository institution).
Type locality: W Indian Ocean.

Amalopenaeus gardineri Balss, H. (1927). Macrura der Deutschen Tiefsee-Expedition. 3. Natantia, Teil B. *Wiss. Ergeb. deutschen Tiefsee-Exped. Valdivia 1898–1899* **23**: 245–275 [267 fig. 31].
Type data: holotype ZSMB ♀* (probable depository institution).
Type locality: W Indian Ocean [4°38'S 51°16'E].

Taxonomic decision for synonymy: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [37].

Distribution: NSW (SE oceanic); off eastern Australia between 17° and 34°S, east Atlantic-Indo-Pacific Oceans (Indian Ocean, New Caledonia, Japan, NW Pacific, E Pacific, SE Atlantic).
Ecology: bathypelagic, continental slope, epipelagic, mesopelagic, oceanic province; depth 100–1406 m, in Australia only found deeper than 220 m, undergoes diurnal vertical migration.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184; Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [278] (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [432 fig. 17] (diagnosis).

Gennadas kempi Stebbing, 1914

Gennadas kempi Stebbing, T.R.R. (1914). South African Crustacea. Part VII. *Ann. S. Afr. Mus.* **15**: 1–112 [12].
Type data: syntypes SAM*.
Type locality: Cape Point, South Africa.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), QLD (SE oceanic), TAS (S oceanic), off southern Australia between 33° and 42°S, S of latitude 32°S, off South Africa, SE Atlantic, S Indian Ocean, Tasman Sea, off New Zealand, Antarctic Ocean.
Ecology: bathypelagic, continental slope, mesopelagic, oceanic province; depths of 250–3400 m, but 550–640 m off Australia.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [432 fig. 18] (diagnosis).

Gennadas propinquus Rathbun, 1906

Gennadas propinquus Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text-figs 1–79 pls 1–24 [907 fig. 61].
Type data: syntypes USNM 30541 ♂ ♀*.
Type locality: between Erben Bank and Kaiwi Channel, Hawai'ian Islands.

Distribution: NSW (SE oceanic); Indo-Pacific and Atlantic Oceans (Arabian Sea, Gulf of Aden, China Sea, Philippines, NW Pacific, New Caledonia, Wallis and Futuna Islands, E Pacific, SE Atlantic).

Ecology: bathypelagic, continental slope, mesopelagic, oceanic province; depths to 1200 m, 150–950 m off Australia, migrate to shallower depths, 100–200 m, at night.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184 (misidentified as *G. clavicarpus*); Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [433–434 fig. 19] (diagnosis).

Gennadas scutatus Bouvier, 1906

Gennadas scutatus Bouvier, E.L. (1906). Suite aux observations sur les *Gennadas* ou Peneides bathypelagiques. *C. R. Hebd. Séances Acad. Sci.* **142**: 746–749 [748].
Type data: holotype MOM ♀.
Type locality: Atlantic Ocean.

Distribution: Distribution: NSW (SE oceanic); off eastern Australia between 17° and 38°S, widespread Indo-Pacific and Atlantic Oceans.
Ecology: bathypelagic, continental slope, epipelagic, mesopelagic, oceanic province; depths surface to 3400 m, 92–1192 m in Australian waters.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184; Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [434–435 fig. 20] (diagnosis).

Gennadas tinayrei Bouvier, 1906

Gennadas tinayrei Bouvier, E.L. (1906). Suite aux observations sur les *Gennadas* ou Peneides bathypelagiques. *C. R. Hebd. Séances Acad. Sci.* **142**: 746–749 [749].
Type data: syntypes MOM ♂, 1 incomplete specimen, MNHP ♂.
Type locality: E Atlantic Ocean, between the Azores and the Gorringe Bank, NE Atlantic (*Princesse Alice* Stn 2264).

Distribution: NSW (SE oceanic); off south-eastern Australia between 33° and 42°S, widespread Indo-Pacific and Atlantic Oceans.
Ecology: continental slope, epipelagic, mesopelagic, oceanic province; depth 92–950 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 (Australian records); Dall, W. (2001). Australian species of Aristeidae and Benthesicymidae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **46**(2): 409–441 [435–436 fig. 21] (diagnosis).

LUCIFERIDAE

Lucifer typus [from Bate 1888 pl. 83 fig. 1]

INTRODUCTION

This small family comprises a single genus, *Lucifer*, and only seven species worldwide. *Lucifer* species are instantly recognisable by the elongate, tube-like frontal extension of the carapace, and the complete absence of gills. The phylogenetic position of the family has been a matter of some debate, but I here follow Pérez Farfante & Kensley (1997) in treating it as a close relative of the Sergestidae in the superfamily Sergestoidea Dana.

Diagnosis

Carapace extremely laterally compressed, anteriorly elongate, with mandibles widely separated from antennae and eyes; rostrum short, acute. Antennules lacking ventral flagellum in both sexes. Mandible lacking palp. Maxillae lacking palp; with exopod in form of small plate. First maxilliped lacking epipod and exopod. Second maxilliped lacking epipod. Chelae lacking or imperfect, chela having no fixed finger present only on third pereiopod. Fourth and fifth pereiopods absent. Branchiae absent. Genital aperture single in both sexes. Petasma sessile, attached proximally to first pleopodal peduncle. Second pleopod in male with unilamellate appendix masculina. Sixth abdominal somite in male bearing two ventral processes; telson in male with strong protuberance on ventral surface.
(After Pérez Farfante & Kensley 1997).

References

Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–15

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

LUCIFERIDAE De Haan, 1849

Luciferidae De Haan, W. (1849). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [242] [placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147, but authorship attributed incorrectly to Dana (1850)].
Type genus: *Lucifer* Thompson, 1829.

Lucifer Thompson, 1829

Lucifer Thompson, V. (1829). *Zoological Researches, and Illustrations*; or, natural history of nondescript or imperfectly known animals, in a series of memoirs, illustrated by numerous figures. Memoir 3. On the luminosity of the Ocean, with descriptions of some remarkable species of luminous animals (*Pyrosoma pigmaea* and *Sapphirina indicator*) and particularly of the four new genera, *Noctiluca*, *Cynthia*, *Lucifer* and *Podopsis*, of the Shizopodae. Cork : J. Hennessy, French Church Street Press pp. 37–66 pls 5–8 [37] [the correct spelling of *Lucifer* was clarified by Bowman, T.E. & Holthuis, L.B. (1968). *Lucifer* or *Leucifer*: which is correct? *Crustaceana* **14**(2): 216–217, *Leucifer* as used by H. Milne Edwards (1837) is a junior synonym; gender masculine].
Type species: *Leucifer typus* H. Milne Edwards, 1837 by subsequent monotypy, see Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [469].

Lucifer hanseni Nobili, 1905

Lucifer hanseni Nobili, G. (1905). Diagnoses préliminaires de 34 espèces et variétés nouvelles, et de 2 genres nouveaux de Décapodes de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **11**(6): 393–411 [394].
Type data: syntypes MNHP*.
Type locality: Bay of Djibouti, Red Sea.

Distribution: TAS (Bass Strait), VIC (Bass Strait); Indo-west Pacific Oceans (Madagascar, Red Sea, India, South China Sea).
Ecology: pelagic, sublittoral; coastal embayments and weedbeds.

Lucifer penicillifer Hansen, 1919

Lucifer penicillifer Hansen, H.J. (1919). The Sergestidae of the Siboga-Expedition. *Siboga Exped.* **38**: 1–65 5 pls [59 pl. 5 fig. 2a–k].
Type data: syntypes RMNH D3183 106 specimens.
Type locality: Indonesia, near Kwandang Bay, N Coast of Celebes [Sulawesi].

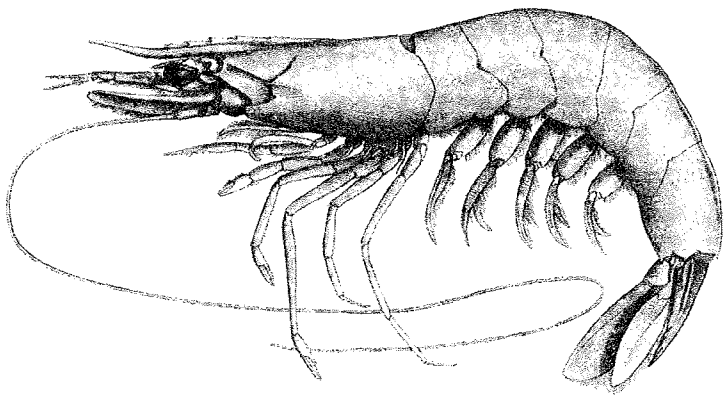
Distribution: QLD (Great Barrier Reef); Indo-west Pacific (South Africa east to Philippines and north to Japan).
Ecology: pelagic, sublittoral.

Lucifer typus H. Milne Edwards, 1837

Leucifer typus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [469].
Type data: type status unknown MNHP* (lost).
Type locality: none given.

Distribution: QLD (Great Barrier Reef); Atlantic-Indo-Pacific Oceans.
Ecology: pelagic, sublittoral.

PENAEIDAE



Metapenaeus macleayi [from Schmitt 1926: pl. 60]

INTRODUCTION

This family includes most of the commercially important prawn species fished in Australia.

Pérez Farfante & Kensley (1997) provided the most recent revisionary work on the genera, a summary of currently recognised species, and a key to genera. There has been some controversy over their generic treatment, in particular their splitting of *Penaeus sensu lato* into six genera, and *Trachypenaeus sensu lato* into three genera. As yet, no clear taxonomic consensus has developed. However, ongoing and unpublished molecular phylogeny studies using mDNA techniques promise to provide important new information on the groupings within the Penaeidae in general, and within *Penaeus*, in particular. Baldwin *et al.* (1998) were the first to publish an analysis of Pérez Farfante & Kensley's (1997) taxa. These authors analysed 13 species in the six recognised subgenera, and found that the subgeneric assignments did not reflect evolutionary partitions within *Penaeus*. Maggioni *et al.* (2001) were critical of the results of Baldwin *et al.* (1998) reporting that the earlier paper had been partially based on misidentifications. Working on western Atlantic species only, they found there was support for the clades *Farfantepenaeus* and *Litopenaeus* of Pérez Farfante & Kensley. However because of the limited nature of the study, monophyly or otherwise of *Penaeus sensu lato* is still not resolved. Conversely, Gusmao *et al.* (2000), using both nuclear (allozymes) and mitochondrial (cytochrome oxidase subunit 1) data to compare species of south-western Atlantic penaeids, found *Farfantepenaeus* to be polyphyletic, thus supporting the conclusions of Baldwin *et al.* (1998).

Another group, Lavery, Chan & Chu (S. Lavery, pers. comm.), are preparing a paper in which they analyse nearly all species within *Penaeus sensu lato* using mDNA. So far their research does not support the division of the genus into six sub-genera, but into two groups, the grooved penaeids (*Melicertus*, *Farfantepenaeus*) and non-grooved species (*Penaeus*, *Fenneropenaeus*), including the American species. Nevertheless, they do caution that further work is needed. As Maggioni *et al.* (2001) show, *Litopenaeus* may also be a valid taxon, but as yet there does not appear to be any genetic support for the recognition of *Marsupenaeus*.

Because of this uncertainty over generic status, and because of the enormous commercial importance of these species and the consequent desirability of retaining some nomenclatural conservatism with regard to legislation and marketing, I therefore continue, provisionally, to use *Penaeus* and *Trachypenaeus* in their traditional sense, each containing a number of subgenera.

A major work summarising what is known of the biology of the Penaeidae is that of Dall *et al.* (1990). Dall (1991) provided a thorough analysis of zoogeographical patterns. Important taxonomic works in relation to Australian Penaeidae include: Dall (1957); Racek & Dall (1965); Grey *et al.* (1983).

Diagnosis

Body compressed, comparatively slender. Rostrum well developed, extending to or beyond distal margin of eye; armed with dorsal and sometimes also with ventral teeth. Carapace without postorbital spine; antennal and hepatic spines usually present; cervical sulcus ending well ventral to dorsal midline. Posterior abdominal somites carinate. Telson sharply pointed, with or without lateral spines. Eye with optic calathus almost always lacking mesial tubercle; basal article of eyestalk produced into moderately to slightly developed, never freely projecting, distomesial scale; ocular plate lacking styliform projection. Antennule with foliaceous prosartema, flagella of about same length, borne on apex of third segment. Exopod present on second maxilliped (except in *Artemesia*, *Macropetasma*, and *Protrachypene*) and third maxilliped (absent only in *Macropetasma*), and first four pereiopods. Third through fifth pleopods biramous. Pleurobranchia on somites IX through XII, and sometimes on XIII and XIV; rudimentary arthrobranchia usually present on somite VII, two arthrobranchiae on VIII through XII, and posterodorsal one on XIII (sometimes rudimentary anteroventral one also present on XIII); podobranchia on second maxilliped only. Epipods borne on first maxilliped and usually on second, lacking on fourth and fifth pereiopods. Petasma semi-open or semi-closed. Second pleopod of males bearing appendix masculina only, lacking appendix interna and distolateral projection. Thelycum open or closed. (After Pérez Farfante & Kensley 1997).

References

Baldwin, J.D., Bass, A.L., Bowen, B.W. & Clark, W.H. (1998). Molecular phylogeny and biogeography of the marine shrimp *Penaeus*. *Mol. Phylog. Evol.* **10**: 399–407

Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29

Dall, W. (1991). Zoogeography of the Penaeidae. *Mem. Qld Mus.* **31**: 39–50

Dall, W., Hill, B.J., Rothlisberg, P.C. & Staples, D.J. (1990). The biology of the Penaeidae. *Adv. Mar. Biol.* **27**: 1–489

Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls

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Maggioni, R., Rogers, A.D., Maclean, N. & D'Incao, F. (2001). Molecular phylogeny of Western Atlantic *Farfantepenaeus* and *Litopenaeus* shrimp based on mitochondrial 16S partial sequences. *Mol. Phylog. Evol.* **18**(1): 66–73

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13

Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68

PENAEIDAE Rafinesque-Schmaltz, 1815

Penaeidae Rafinesque-Schmaltz, C.S. (1815). *Analyse de la nature ou tableau de l'univers et de corps organisés*. Palermo 224 pp. [98] [as Penedia; name in the corrected spelling, Penaeidae, Name No. 308 on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1955). Direction 15. Correction of an erroneous entry on the *Official List of Generic Names in Zoology* relating to the generic name *Penaeus* (emend. of *Peneus*) Weber, 1795 (Crustacea, Order Decapoda) (correction of an error in *Opinion* 104). *Opin. Declar. Int. Comm. Zool. Nomencl.* **1C**(5): 67–80 (70)].

Parapenaeinae Ortmann, A.E. (1898). Gliederfüssler: Arthropoda. *in Dr. H. G. Bronn's Klassen und Ordnungen des Tierreichs* Vol. 5(2), Crustacea, Malacostraca, (47–52) [Systematik] pp. 1057–1168 [1120] [Name No. 308 on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1961). Opinion 611. *Parapenaeus* S.I. Smith, 1885 (Crustacea, Decapoda); validation under the Plenary Powers and interpretation of *Peneus membranaceus* Risso, 1816. *Bull. Zool. Nomencl.* **18**(5): 306–308 (307)].

Funchaliae Bouvier, E.L. (1908). Crustacés décapodes (Pénéides) provenant des campagnes de l'Hirondelle et de la Princesse-Alice (1886–1907). *Résult. Camp. scient. Prince Albert I Monaco* **33**: 1–122 pls 1–16 [6].

Haliporae Bouvier, E.L. (1908). Crustacés décapodes (Pénéides) provenant des campagnes de l'Hirondelle et de la Princesse-Alice (1886–1907). *Résult. Camp. scient. Prince Albert I Monaco* **33**: 1–122 pls 1–16 [6].

For taxonomic arrangement, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [67].

Atypopenaeus Alcock, 1905

Atypopenaeus Alcock, A. (1905). A revision of the "Genus" Penaeus with diagnoses of some new species and varieties. *Ann. Mag. Nat. Hist.* **16**(7): 508–532 [524] [emendation of *Atypopeneus* Alcock, 1905, under the plenary powers of the ICZN, placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147, Name No. 1807 (138); gender masculine].
Type species: *Penaeus compressipes* Henderson, 1893 by original designation.

Extralimital distribution: Indo-west Pacific and East Atlantic. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [77].

Generic reference: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [13].

Atypopenaeus bicornis Racek & Dall, 1965

Go Home Prawn (Aust)

Atypopenaeus bicornis Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [85 fig. 14, pls 7, 12].
Type data: holotype AM P14418 ♂, paratypes AM P14419 ♀ (as allotype), AM P14420 2♀, AM P14421 1♀, AM P14422 1♂, RMNH D23292 ♀.
Type locality: off Fly River mouth, Papua New Guinea.

Distribution: NT (N coast); New Guinea.
Ecology: sublittoral, epipelagic; often adjacent to river mouths, depth 8–22 m.

Atypopenaeus compressipes (Henderson, 1893)

Penaeus compressipes Henderson, J.B. (1893). A contribution to Indian Carcinology. *Trans. Linn. Soc. Lond. (Ser. 2, Zool.)***5**(1): 325–458 pls 36–40 [450].
Type data: syntypes BMNH ♀*.
Type locality: Gulf of Martaban, India.

Parapenaeopsis brevirostris Kubo, I. (1936). On Japanese Penaeid Crustacea belonging to genus *Parapeneopsis* with descriptions of one new species. *J. Imp. Fish. Bur. Tokyo* **31**: 55–61 [55 pl. 16].
Type data: syntypes 24 specimens*.
Type locality: inland Sea of Japan.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [84].

Distribution: NT (N coast); east Indo-west Pacific Oceans (India to Malaysia, Indonesia, Hong Kong, Philippines, Japan, New Guinea).
Ecology: epipelagic; mud to sandy mud substrates.

Atypopenaeus dearmatus de Man, 1907

Atypopenaeus dearmatus de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the "Siboga-Expedition" II. *Notes Leyden Mus.* **29**: 127–145 [135].
Type data: syntypes (probable) ZMA 1 ♀*, ZMA 1 ♂ 10 ♀*, ZMA 11 ♀*.
Type locality: near Roti Is., Indonesia (*Siboga* Stn 302) [10°27.9'S 123°28.7'E], Saleh Bay, N coast of Sumbawa, Indonesia (*Siboga* Stn 312) [8°19'S 117°41'E], Lobetobi Strait, Indonesia (*Siboga* Stn 306) [8°27'S 122°54'E].

Distribution: NT (N coast); Indonesia, Philippines.
Ecology: epipelagic, mesopelagic; sand, coral sand and sandy mud substrates, depth to 274 m.
Reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [77] (distribution).

Atypopenaeus formosus Dall, 1957

Go Home Prawn (Aust), Orange Prawn (Aust), Orange Shrimp (FAO)

Atypopenaeus formosus Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [199 figs 21a–h].
Type data: holotype AM P12700 ♂, paratypes AM P39906 ♀ (as allotype), AM P12701 5 specimens, RMNH D23289 ♂ ♀.
Type locality: 5 km E of Sandgate, Moreton Bay, QLD.

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast); Irian Jaya, southern Papua New Guinea.
Ecology: sublittoral; typically over soft mud substrates, predominantly shallow inshore waters, depth to 30 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [106] (colour photograph).

Atypopenaeus stenodactylus (Stimpson, 1860)

Periscope Shrimp (FAO)

Penaeus stenodactylus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [43].
Type data: syntypes ♀* (presumed lost).
Type locality: Hong Kong.

Penaeus podophthalmus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem,a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [43].
Type data: syntypes whereabouts unknown* (presumed lost).
Type locality: Hong Kong.

Miyadiella pedunculata Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [264].
Type data: holotype ♂, paratype(s) ♂.
Type locality: Osaka-wan.

Taxonomic decision for synonymy: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [13] (with *A. compressipes* and its synonym removed).

Distribution: NT (N coast); Van Diemen Gulf, NT, Indo-west Pacific Oceans (India to Hong Kong and Japan).
Ecology: sublittoral; trawled over mud substrates, depths to 27 m.

Funchalia Johnson, 1867

Funchalia Johnson, J.Y. (1867). Description of a new genus and a new species of macrurous decapod crustaceans, belonging to the Penaeidae, discovered at Madeira. *Proc. Zool. Soc. Lond.* **1867**: 895–901 [895].
Type species: *Funchalia woodwardi* Johnson, 1867 by monotypy.

Grimaldiella Bouvier, E.-L. (1905). Sur les Pénéides et les Sténopides recueillis par les expéditions françaises et monégasques dans l'Atlantique oriental. *C. R. Séances Acad. Sci.* **140**: 980–983 [981, 982].
Type species: *Grimaldiella richardi* Bouvier, 1905 (= *Funchalia woodwardi* Johnson, 1867) by monotypy.

Hemipenaeopsis Bouvier, E.-L. (1905). Sur les Pénéides et les Sténopides recueillis par les expéditions françaises et monégasques dans l'Atlantique oriental. *C. R. Séances Acad. Sci.* **140**: 980–983 [981].
Type species: *Hemipenaeopsis villosus* Bouvier, 1905 by monotypy.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [82].

Extralimital distribution: Atlantic-Indo-Pacific Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Funchalia villosa (Bouvier, 1905)

Hemipenaeopsis villosus Bouvier, E.-L. (1905). Sur les Pénéides et les Sténopides recueillis par les expéditions françaises et monégasques dans l'Atlantique oriental. *C. R. Séances Acad. Sci.* **140**: 980–983 [981].
Type data: syntypes MNHP* (probable depository institution).
Type locality: between Canary Ils and Azores, N Atlantic.

Funchalia vanhoffeni Lenz, H. & Strunck, K. (1914). Die Decapoden der Deutschen Südpolar-Expedition 1901–1903. I. Brachyuren und Macruren mit Ausschluss der Sergestiden. *Dt. Südpol. Exped.* **15**(Zool. 7): 257–345 5 pls figs 12–22 [306].
Type data: syntypes whereabouts unknown*.
Type locality: Tristan da Cunha.

Taxonomic decision for synonymy: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [163].

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast, SE oceanic); Atlantic-Indo-west Pacific Oceans (Caribbean, Canary Islands, Mediterranean, S Atlantic off Tristan da Cunha, Antarctic, SW Indian Ocean off Agulhas Bank to Natal South Africa, E Indian Ocean).
Ecology: continental shelf, continental slope, epipelagic, mesopelagic, oceanic province; depths of 50–666 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [281].

Funchalia woodwardi Johnson, 1867

Funchalia woodwardi Johnson, J.Y. (1867). Description of a new genus and a new species of macrurous decapod crustaceans, belonging to the Penaeidae, discovered at Madeira. *Proc. Zool. Soc. Lond.* **1867**: 895–901 [895].
Type data: holotype BMNH ♀*.
Type locality: Madeira, N Atlantic.

Grimaldiella richardi Bouvier, E.-L. (1905). Sur les Pénéides et les Sténopides recueillis par les expéditions françaises et monégasques dans l'Atlantique oriental. *C. R. Séances Acad. Sci.* **140**: 980–983 [982].
Type data: syntypes MNHP* (probable depository).
Type locality: off Ile Saint-Michel, Azores.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [82–83].

Distribution: NSW (Central E coast, Lower E coast), WA (SW coast); Atlantic and Indo-west Pacific Oceans (Outer Hebrides north-eastern Atlantic, Azores, Madeira, Mediterranean, SE Atlantic off Cape of Good Hope, South Africa, Arabian Sea).
Ecology: continental slope, mesopelagic, oceanic province; depths of 250–540 m.

Heteropenaeus de Man, 1896

Heteropenaeus de Man, J.G. (1896). *Heteropenaeus longimanus* nov. gen. n. sp., eine neue Penaeide aus der Java-See. *Zool. Anz.* **19**(498): 111–113 [111] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (139); gender masculine].
Type species: *Heteropenaeus longimanus* de Man, 1896 by monotypy.

Extralimital distribution: central Indo-west Pacific (N Australia, New Guinea, Indonesia, Singapore Philippines, Japan, Palau, Caroline Islands).

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [85].

Heteropenaeus longimanus de Man, 1896

Heteropenaeus longimanus de Man, J.G. (1896). *Heteropenaeus longimanus* nov. gen. n. sp., eine neue Penaeide aus der Java-See. *Zool. Anz.* **19**(498): 111–113 [111].
Type data: syntypes 1 ♂ ♀*.
Type locality: Java Sea.

Distribution: NT (N coast); central Indo-west Pacific (northern Australia, New Guinea, Indonesia, Singapore Philippines, Japan, Palau, Caroline Ils).
Ecology: soft bottom, subtidal.
Reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [86] (figured).

Metapenaeopsis Bouvier, 1905

Archipenaeopsis Bouvier, E.L. (1905). Sur les Macroures nageurs (abstraction faite des Carides), recueillis par les expéditions américaines du *Hassler* et du *Blake*. *C. R. Séances Acad. Sci.* **141**: 746–749 [747].
Type species: *Archipenaeopsis vestitus* Bouvier, 1905 (= *Metapenaeopsis goodei* (Smith, 1885)) by monotypy.

Metapenaeopsis Bouvier, E.-L. (1905). Sur les Pénéides et les Sténopides recueillis par les expéditions françaises et monégasques dans l'Atlantique oriental. *C. R. Séances Acad. Sci.* **140**: 980–983 [981] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147, Name No. 1819 (139); gender feminine].
Type species: *Penaeus pubescens* Stimpson, 1871 (= *Penaeopsis miersi* Holthuis, 1952) by monotypy.

Ceratopenaeus Kishinouye, K. (1929). Penaeid crustaceans with asymmetrical petasma. *Proc. Imp. Acad. Japan* **5**: 280–283 [282].
Type species: *Parapenaeus mogiensis* Rathbun, 1902 (= *Ceratopenaeus mogiensis* (Rathbun, 1902)) by subsequent designation, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [102].

Leptopenaeus Kishinouye, K. (1929). Penaeid crustaceans with asymmetrical petasma. *Proc. Imp. Acad. Japan* **5**: 280–283 [282].
Type species: *Penaeus philippii* Bate, 1881 (= *Leptopenaeus philippinensis* (Bate, 1881)) by subsequent designation, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [102].

Erythropenaeus Kishinouye, K. (1929). Penaeid crustaceans with asymmetrical petasma. *Proc. Imp. Acad. Japan* **5**: 280–283 [283].
Type species: *Parapenaeus akayebi* Rathbun, 1902 (= *Erythropenaeus akayebi* (Rathbun, 1902)) by subsequent designation, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [102].

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [102].

Extralimital distribution: Indo-Pacific, West Atlantic. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [104] (full list of species and their distributions).

Generic references: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 (key to species); Crosnier, A. (1994). Crustacea Decapoda: Penaeoidea récoltés lors de la campagne Karubar en Indonésie. pp. 367–373 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 12. *Mém. Mus. natn. Hist. nat. Paris* **161**: 1–569 (key to species).

Metapenaeopsis commensalis Borradaile, 1898

Reef Shrimp (FAO)

Metapenaeopsis commensalis Borradaile, L.A. (1898). On some Crustaceans from the Pacific. Part III. Macrura. *Proc. Zool. Soc. Lond.* **1898**: 1000–1015 pls 63–65 [1001].
Type data: holotype UMZC ♂ adult.
Type locality: Ellice Ils [Rotuma].

Penaeopsis borradailei de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131 [73].
Type data: lectotype ZMA ♀, paralectotype(s) ZMA 2 ♀.
Subsequent designation: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [173].
Type locality: anchorage off Beo, Karakelang Ils, Indonesia (*Siboga* Stn 131).

Taxonomic decision for synonymy: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [172].

Distribution: QLD (NE coast), Territory of Ashmore & Cartier Islands; Murray Island, Torres Strait, east Indo-west Pacific Oceans (Maldive & Laccadive Ils, Indonesia, Philippines, Taiwan, Loyalty Ils).
Ecology: coral reef, sand bottom, benthic, shallow subtidal; depths 1–3 m.

Metapenaeopsis crassissima Racek & Dall, 1965

Stout Velvet Shrimp (FAO)

Metapenaeopsis crassissima Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [26 fig. 2c, pls 2, 4, 9].
Type data: holotype AM P14333 ♂, paratypes AM P14334 ♀ (as allotype), AM P12779, AM P12781, AM P14219–21, AM P14223–24, AM P14228, RMNH D23299 3 specimens.
Type locality: Shark Bay, WA.

Distribution: NT (N coast), SA (S Gulfs coast), WA (Central W coast, N coast); known only from limital area.
Ecology: benthic, pelagic; taken over muddy substrates, depths to 30 m.
References: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [168] (description and figures, but misidentified as *M. durus* Kubo, 1949); Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [74] (colour photograph).

Metapenaeopsis fusca Manning, 1988

Metapenaeopsis fusca Manning, R.B. (1988). Two new species of *Metapenaeopsis* (Crustacea: Decapoda: Penaeidae) from south Western Australia. *Rec. West. Aust. Mus.* **14**(1): 91–103 [91 fig. 1A–D, tables 1, 2].
Type data: holotype WAM 369-87 ♀, paratypes WAM 370-87, WAM 371-87, WAM 372-87.
Type locality: Boocock, Singleton, S WA.

Distribution: QLD (Gulf of Carpentaria), WA (Lower W coast); known only from limital area, QLD record from Torres Strait.
Ecology: benthic, pelagic; taken over sand and seagrass substrates, depth 1–20 m.

Metapenaeopsis gallensis (Pearson, 1905)

Parapenaeus gallensis Pearson, J. (1905). Report on the Macrura collected by Professor Herdman, at Ceylon, in 1902. *In, Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar.* Part 4, suppl. Rep. 24: 65–92 2 pls [72 pl. 1 fig. 3].
Type data: syntypes LIVCM many specimens (apparently lost).
Type locality: S of Galle, Sri Lanka (Stn 39), see Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [236].

Distribution: WA (NW coast); Indo-west Pacific Oceans (East Africa, Madagascar, S India, Sri Lanka, Indo-Malaysia, Philippines, New Caledonia.
Ecology: benthic, pelagic; depths of 12–78 m.
Reference: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [233] (redescribed and figured).

Metapenaeopsis hilarula (de Man, 1911)

Penaeopsis hilarulus de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131 [71].
Type data: lectotype ZMA ♀, paralectotype(s) ZMA 11♂ 5♀.
Subsequent designation: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Vol. 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [228].
Type locality: Banda anchorage, Indonesia (*Siboga* Stn 240).

Distribution: QLD (NE coast); Indo-west Pacific Oceans (South Africa to Philippines, New Guinea, New Caledonia and east to Tahiti).
Ecology: benthic, pelagic; depth 15–120 m.
References: Davie, P., this work (presence in Australian waters needs to be confirmed, listed as being present in Queensland, but without specific locality, by Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [106]); Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [226] (redescribed and figured).

Metapenaeopsis lamellata (De Haan, 1844)

Hunchback Prawn (Aust), Hunchback Shrimp (FAO), Rooster Prawn (Aust)

Penaeus lamellatus De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [193 pl. 46 figs 4, 5] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH D1120 1 specimen, paralectotypes RMNH 2464 10 specimens, RMNH D1120 3 specimens, RMNH 555d 2 dry specimens, SMF SMG–1 1 specimens*, MNHP Na153 1 specimen.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc. [207].
Type locality: Japan.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast, N coast, NW coast); Shark Bay, WA to NE QLD, east Indo-west Pacific Oceans (E coast of Thailand, Indonesia, Malaysia, Philippines, Taiwan, China, Japan, New Caledonia).
Ecology: coral reef, benthic, pelagic; typically in association with hard substrates (rock and coral reefs, coral rubble), depths 4–200 m.
References: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [78] (colour photograph); Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [175] (described and figured).

Metapenaeopsis lindae Manning, 1988

Metapenaeopsis lindae Manning, R.B. (1988). Two new species of *Metapenaeopsis* (Crustacea: Decapoda: Penaeidae) from south Western Australia. *Rec. West. Aust. Mus.* **14**(1): 91–103 [97 fig. 2A–D, tables 3, 4].
Type data: holotype WAM 373-87 ♀, paratypes WAM 374-87, WAM 375-87, WAM 376-87.
Type locality: Bell Bouy, NW Rottnest Island, S WA.

Distribution: SA (S Gulfs coast), WA (Lower W coast, SW coast); known only from limital area.
Ecology: benthic, pelagic; taken over sand, seagrass meadows, and limestone reefs.

Metapenaeopsis liui Crosnier, 1987

Metapenaeopsis liui Crosnier, A. (1987). Les espèces indo-ouest-pacifiques d'eau profonde du genre *Metapenaeopsis* (Crustacea Decapoda Penaeidae). *Bull. Mus. Natn. Hist. Nat. Paris (4)***9**(A2): 409–453 [434 figs 3d, 10b–d, 13d–f, 14a, 15].
Type data: holotype MNHP Na9355 ♀, paratypes MNHP Na9354 ♂ (as allotype), MNHP Na9358 4♂ 4♀.
Type locality: Philippines (MUSORSTOM Stn 40) [13°57.4'N 120°27.8'E].

Distribution: WA (NW oceanic); Indonesia, Philippines.
Ecology: benthic, oceanic province, pelagic; depth 130–550 m.

Metapenaeopsis mannarensis de Bruin, 1965

Metapenaeopsis mannarensis de Bruin, G.H.P. (1965). Penaeid prawns of Ceylon (Crustace-Decapoda Penaeidae). *Zool. Meded. (Leiden)* **41**(4): 73–104 figs 1–3 [88].
Type data: holotype RMNH D21236 1 specimen, paratypes RMNH D19810 4 specimens, RMNH D21237 1 specimen.
Type locality: off Mannar, Ceylon.

Distribution: WA (NW coast); Indo-west Pacific Oceans (Sri Lanka, Indonesia, New Caledonia).
Ecology: benthic, pelagic; trawled over sand to sandy gravel and shell substrates, depth 11–78 m.
Reference: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [262] (redescribed and figured).

Metapenaeopsis menoui Crosnier, 1991

Metapenaeopsis menoui Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [180 figs 6c, d, 8, 9].
Type data: holotype MNHP Na12574 ♀, paratypes MNHP Na12575 ♂ (as allotype), MNHP Na12670 ♀, MNHP Na7314 ♀, USNM 250829 ♀.
Type locality: Seychelles [5°54.5'S 56°19.4'E].

Distribution: Territory of Ashmore & Cartier Islands; Indo-west Pacific Oceans (Seychelles, Indonesia, Philippines, Papua New Guinea, New Caledonia).
Ecology: benthic, pelagic; sand to sand and shell substrates, depth typically 0.5–50 m, exceptionally to 400 m.

Metapenaeopsis mogiensis Crosnier, 1991

Taxonomic decision for subspecific arrangement: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [223] (remarks on subspecies, distribution map).

Distribution: Indo-west Pacific Oceans.

Metapenaeopsis mogiensis complanata Crosnier, 1991

Coral Prawn (Aust), North Velvet Shrimp (FAO), Velvet Prawn (Aust)

Metapenaeopsis mogiensis complanata Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [219 figs 37o–r, 38d].
Type data: holotype NTM 1♂, paratypes NTM 5♂ 3♀, MNHP Na12660 2♂ 3♀.
Type locality: North West Shelf, Australia (*Soela* Stn 128) [19°07.9'S 119°06.7'E].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (N coast, NW coast); Coral Sea, New Caledonia.
Ecology: benthic, pelagic; trawled from hard substrates adjacent to coral reefs, depth 8–90 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [80] (colour photograph, as *M. mogiensis*).

Metapenaeopsis novaeguineae (Haswell, 1879)

New Guinea Prawn, Northern Velvet Shrimp (FAO)

Penaeus novaeguineae Haswell, W.A. (1879). On the Australian species of Penaeus, in the Macleay Museum, Sydney. *Proc. Linn. Soc. N.S.W.* **4, 1880**: 38–44 [43] [as *Penaeus Novae-Guineae*].
Type data: holotype AM P40468 ♂.
Type locality: Katow, Papua New Guinea (Chevert Expedition), see Springthorpe, R.T. & Lowry, J.K. (1993). Catalogue of Crustacean type specimens in the Australian Museum: Malacostraca. *Tech. Rep. Aust. Mus.* **11**: 1–134.

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), SA (S Gulfs coast), WA (Central W coast, N coast, NW coast); east Indo-west Pacific Oceans.

Ecology: benthic, pelagic; trawled over muddy to sandy substrates, depths 5–30 m.
References: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [21] (holotype re-examined); Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [70] (colour photograph).

Metapenaeopsis palmensis (Haswell, 1879)

Southern Velvet Prawn, Southern Velvet Shrimp (FAO)

Penaeus palmensis Haswell, W.A. (1879). On the Australian species of Penaeus, in the Macleay Museum, Sydney. *Proc. Linn. Soc. N.S.W.* **4, 1880**: 38–44 [43].
Type data: syntypes AM P40467 ♀ (invalid designation of holotype status by Griffin, D.J.G. & Stanbury, P.J. (1970). Type Specimens in the Macleay Museum, University of Sydney. V. Decapod Crustaceans. *Proc. Linn. Soc. N.S.W.* **95**(1): 122–131 [126]).
Type locality: Palm Island, QLD.

Metapenaeopsis barbeensis Hall, H.M. (1962). Observations on the taxonomy and biology of some Indo-West Pacific Penaeidae (Crustacea Decapoda). *Fishery Publs Colon. Off.* **17**: 1–229 [32 figs 118–118f].
Type data: holotype BMNH 1959.10.27.6–7 1 ♀.
Type locality: ESE of St Barbe [Pejantan], Malaysia.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [23].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, N coast, NW coast); Shark Bay, WA to Sydney, NSW, central Indo-west Pacific Oceans (Indonesia, southern New Guinea).
Ecology: benthic, pelagic; trawled over muddy to sandy substrates, depths of 5–30 m.
References: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [72] (colour photograph); Watson, R.A. & Keating, J.A. (1989). Velvet shrimps (*Metapenaeopsis* spp.) of Torres Strait, Queensland, Australia. *Asian Fish. Sci.* **3**(1): 45–56 (biology and population dynamics).

Metapenaeopsis provocatoria Racek & Dall, 1965

Taxonomic decision for subspecific arrangement: Crosnier, A. (1987). Les espèces indo-ouest-pacifiques d'eau profonde du genre *Metapenaeopsis* (Crustacea Decapoda Penaeidae). *Bull. Mus. Natn. Hist. Nat. Paris (4)***9**(A2): 409–453 [425].

Distribution: QLD (Central E coast), WA (NW coast); central Indo-west Pacific Ocean.

Metapenaeopsis provocatoria longirostris Crosnier, 1987

Metapenaeopsis provocatoria longirostris Crosnier, A. (1987). Les espèces indo-ouest-pacifiques d'eau profonde du genre *Metapenaeopsis* (Crustacea Decapoda Penaeidae). *Bull. Mus. Natn. Hist. Nat. Paris (4)***9**(A2): 409–453 [425 figs 1d, 7g–j, 8m–o].
Type data: holotype NTM ♀, paratypes NTM ♂ (as allotype), MNHP Na9501 1 ♂ 1 ♀.
Type locality: North West Shelf, WA [19°20.2'S 115°44.1'E].

Distribution: WA (NW coast); central Indo-west Pacific (Taiwan, Japan, Korea).
Ecology: benthic, pelagic; depth 80–310 m.

Metapenaeopsis provocatoria provocatoria Racek & Dall, 1965

Metapenaeopsis provocatoria Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [48 figs 10a–d].
Type data: holotype AM P14336 ♀, paratypes AM P14337 1 ♂, AM P14338 1 ♂, RMNH D23287 ♂ ♀.
Type locality: NNE of Cape Moreton, QLD.

Distribution: QLD (Central E coast); west Pacific Ocean (New Caledonia, Indonesia, Philippines).
Ecology: benthic, pelagic; depth 90–390 m.
Reference: Crosnier, A. (1987). Les espèces indo-ouest-pacifiques d'eau profonde du genre *Metapenaeopsis* (Crustacea Decapoda Penaeidae). *Bull. Mus. Natn. Hist. Nat. Paris (4)***9**(A2): 409–453 [422] (described and figured).

Metapenaeopsis rosea Racek & Dall, 1965

Rosy Prawn (Aust)

Metapenaeopsis rosea Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [29 figs 2d, 3, pls 1, 4].
Type data: holotype AM P14207 ♂, paratypes AM P14208 ♀ (as allotype), AM P14332 ♂, AM P14218 2 ♀, RMNH D23305 ♂ 2 ♀.
Type locality: off Mackay, QLD.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Darawin, NT, to Mackay, QLD, southern New Guinea.
Ecology: pelagic, benthic; trawled over muddy substrates, depth to 30 m.
References: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [76] (colour photograph); Watson, R.A. & Keating, J.A. (1989). Velvet shrimps (*Metapenaeopsis* spp.) of Torres Strait, Queensland, Australia. *Asian Fish. Sci.* **3**(1): 45–56 (biology and population dynamics).

Metapenaeopsis sinica Liu & Zhong, 1988

Metapenaeopsis sinica Liu, J.Y. & Zhong, Z. (1988). *Penaeoid Shrimps of the South China Sea.* Beijing : Agricultural Publishing House 278 pp. [224 fig. 136, English translation p. 270].
Type data: holotype SCSFI K106B-22 ♂*, paratypes SCSFI K50B-43 ♀, SCSFI Q32B-33 ♂.
Type locality: western Guangdong, China.

Distribution: QLD (NE coast); central Indo-west Pacific Ocean (Indonesia, Malaysia, South China Sea, Philippines, Taiwan, Japan, Coral Sea, New Caledonia).
Ecology: benthic, pelagic; trawled over muddy to sandy substrates, depth to 142 m.
Reference: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520.

Metapenaeopsis sinuosa Dall, 1957

Metapenaeopsis sinuosus Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [176 figs 14a–f].
Type data: holotype AM P12223 ♂, paratype(s) AM P39905 ♀.
Type locality: off Shore Island, Kennedy Sound, Cumberland Group, QLD.

Distribution: NT (N coast), QLD (NE coast); known only from limital area, from near Linderman Island, QLD, and Van Diemen Diemen Gulf, NT.
Ecology: benthic, pelagic; trawled over hard substrates and coarse mud, depths of 12–24 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [68] (figured).

Metapenaeopsis tarawensis Racek & Dall, 1965

Metapenaeopsis tarawensis Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [46 fig. 9a–d].
Type data: holotype AM P14246 ♀, paratypes AM P14246 1♂, AM P14247 1♀.
Type locality: Tarawa Group, Gilbert Island.

Distribution: Territory of Ashmore & Cartier Islands; Ashmore Reef, Indo-west Pacific Oceans (Maldive Islands, New Caledonia, Gilbert Islands, French Polynesia).
Ecology: benthic, pelagic; taken over sand and coral rubble substrates in reef areas, from low intertidal to 23 m depth.
Reference: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [241] (redescribed and figured).

Metapenaeopsis toloensis Hall, 1962

Metapenaeopsis toloensis Hall, H.M. (1962). Observations on the taxonomy and biology of some Indo-West Pacific Penaeidae (Crustacea Decapoda). *Fishery Publs Colon. Off.* **17**: 1–229 [33 fig. 119a–d].
Type data: holotype BMNH*.
Type locality: South China Sea.

Distribution: QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans (Arabian Sea to Hong Kong, South China Sea, Philippines, Chesterfield Islands, Coral Sea).
Ecology: benthic, pelagic; depth 20–65 m.
Reference: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520.

Metapenaeopsis velutina (Dana, 1852)

Penaeus velutinus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [27] [also Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685 (604)].
Type data: neotype USNM 250833 ♀.
Subsequent designation: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [248].
Type locality: Hawai'i (*Albatross* Stn 3853).

Metapenaeopsis insona Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [41 fig. 6, pl. 2 fig. 3].
Type data: holotype AM P14363 ♀, paratypes AM P14364 ♂ (as allotype), RMNH D23290 ♀.
Type locality: 11 km off Long Reef, of Broken Bay, NSW.

Metapenaeopsis caliper Liu, J.Y. & Zhong, Z. (1988). *Penaeoid Shrimps of the South China Sea.* Beijing : Agricultural Publishing House 278 pp. [238, 269 fig. 145] [English translation].
Type data: holotype SCSFI 005 ♀, paratype(s) SCSFI 005a ♂ (as allotype).
Type locality: S of mouth of Pearl River, China.

Taxonomic decision for synonymy: Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième

partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [247].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), WA (Central W coast); Indo-west Pacific Oceans (Seychelles, South China Sea, Philippines, New Caledonia, Polynesia, Hawai'i).
Ecology: benthic, pelagic; trawled over sandy substrates, depths of 55–320 m.

Metapenaeopsis wellsi Racek, 1967

Coral Prawn (Aust)

Metapenaeopsis wellsi Racek, A.A. (1967). A new species of *Metapenaeopsis* (Crustacea-Decapoda) from the northern Australian waters. *Proc. Linn. Soc. N.S.W.* **92**(3): 251–253 pls 12–13 [251 pls 12–13].
Type data: holotype AM P15518 ♀, paratypes AM P15519 ♂ (as allotype), AM P15520 ♀.
Type locality: Exmouth Gulf, WA.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria), WA (N coast, NW coast); Exmouth Gulf, WA to Gulf of Carpentaria and southern New Guinea.
Ecology: benthic, pelagic, trade (minor commercial importance in NT).
References: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [82] (colour photograph); Crosnier, A. (1991). Crustacea Decapoda: Les *Metapenaeopsis* indo-ouest-pacifiques sans appareil stridulant (Penaeidae). Deuxième partie. pp. 155–297 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [271] (redescribed and figured).

Metapenaeus Wood-Mason, 1891

Mangalura Miers, E.J. (1878). Notes on the Penaeidae in the collection of the British Museum, with descriptions of some new species. *Proc. Zool. Soc. Lond.* **1878**: 289–310 [303] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (140), ruled under the plenary powers not to be given precedence over *Metapenaeus* Wood-Mason, 1891; gender feminine].
Type species: *Mangalura dobsoni* Miers, 1878 by monotypy.

Metapenaeus Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [271] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (140), ruled under the plenary powers to be given precedence over *Mangalura* Miers, 1878; gender masculine].

Type species: *Penaeus affinis* H. Milne Edwards, 1837 by original designation.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [108].

Extralimital distribution: Indo-west Pacific. See: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [19].
Generic references: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 (Australian citation); Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 (generic revision, English key to species on p. 129).

Metapenaeus bennettae Racek & Dall, 1965

Bay Prawn, Greentail Prawn, Greentail Shrimp (FAO), Inshore Greasy Back Prawn, River Prawn

Metapenaeus bennettae Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [74].
Type data: holotype AM P14645 ♂, paratypes AM P14644 1 ♀, AM P940 specimens, AM P941–44 16 specimens, AM P12525 99 specimens, RMNH D23293 4 specimens.
Type locality: Lake Budgewoi, Tuggerah Lake, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), VIC (Bass Strait); known only from limital area, from Bass Strait, VIC, to about Hervey Bay, QLD.
Ecology: benthic, estuarine, neritic, pelagic, trade (food); adults found in coastal rivers up to 15 km from the mouth, tolerates salinities from 0–35‰, depth 0–30 m.
References: Davie, P., this work (very similar to *Metapenaeus dalli,* but that species only occurs in WA); Morris, M.C. & Bennett, I. (1952). The life-history of a penaeid prawn (*Metapenaeus*) breeding in a coastal lake (Tuggerah, New South Wales). *J. Linn. Soc. N.S.W.* **76**: 164–182; Dall, W. (1958). Observations on the biology of the greentail prawn *Metapenaeus mastersii* (Haswell) (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **9**(1): 111–134 (species misidentified); Kirkegaard, I. & Walker, R.H. (1970). Synopsis of biological data on the greentail prawn *Metapenaeus bennettae* Racek and Dall, 1965. *Aust. CSIRO Div. Fish. Oceanogr. Fish. Synop.* **6**: 1–25; Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [58] (rediagnosed and figured).

Metapenaeus conjunctus Racek & Dall, 1965

Metapenaeus conjunctus Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [64 fig. 12, pl. 5 figs 8, 9, pl. 11 fig. 1].
Type data: holotype AM ♂, paratypes AM 2 ♀, RMNH 23294 ♂.
Type locality: mouth of Tuaran R., Sabah, Malaysia.

Distribution: NT (N coast); Indo-Malaysian region (E coast of Peninsula Malaysia, Indonesia, Philippines).
Ecology: benthic, estuarine, pelagic; typically brackish inshore waters, depth to about 15 m.
Reference: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [66] (Australian record, diagnosis and figure).

Metapenaeus dalli Racek, 1957

Metapenaeus dalli Racek, A.A. (1957). The systematic position of the school prawn from W.A. *Fish. Bull. W.A.* **6**: 1–14 [4 pl. 1 figs 1–3].
Type data: holotype AM P12898 ♂, paratypes AM P12899 ♀, AM P12900 1 ♂ 1 ♀, RMNH D23303 ♂ ♀.
Type locality: Peel Inlet, Murray River, WA.

Distribution: NT (N coast), WA (Central W coast, Lower W coast, N coast, NW coast); Indonesia (SE Java) and Philippines.
Ecology: benthic, estuarine, pelagic, trade (minor fishery in SW Australian estuaries); depths of 9–33 m.
Reference: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [69] (diagosis and figures).

Metapenaeus demani (Roux, 1921)

Demon Prawn, Demon Shrimp (FAO), Greentail Prawn (Aust)

Taxonomic decision for subspecific arrangement: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [71].

Distribution: 200 m bathymetric (N coast, NE coast), NT (N coast), QLD (NE coast), WA (Central W coast, NW coast); confined to the waters of northern Australia and southern New Guinea.

Metapenaeus demani demani (Roux, 1921)

Penaeopsis demani Roux, J. (1921). Crustacés. *Nova Guin.* **XIII**: 585–606 1 pl. [599].
Type data: syntypes RMNH 5 ♂ 2 ♀, RMNH 1 ♂ 1 ♀.
Type locality: New Guinea: Varen River and Lorentz River.

Distribution: NT (N coast); from Cambridge Gulf, WA, to Darwin, NT, and Indonesia (southern Irian Jaya).
Ecology: benthic, estuarine, pelagic, trade (minor importance in trawl catches); shallow waters of coastal rivers and bays.
Reference: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [71].

Metapenaeus demani stephani Miquel, 1982

Metapenaeus demani stephani Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [74 figs 24, 25a,c, 26a–e].
Type data: holotype RMNH D33828 ♀, paratypes RMNH D33828 ♂ (as allotype), RMNH D34701 9 ♂ 12 ♀, AM 3 ♀.
Type locality: Port Moresby, Gulf of Papua, New Guinea.

Distribution: QLD (NE coast); S Papua New Guinea.
Ecology: benthic, pelagic, trade (minor trawl catches); shallow, silty, coastal waters, to 50 m depth but rarely deeper than 30 m.
Reference: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [75] (described and figured as *M. demani*).

Metapenaeus eboracensis Dall, 1957

York Prawn

Metapenaeus eboracensis Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [183, 193 figs 19a–g].
Type data: holotype AM P12699 ♂, paratypes AM P39907 ♀ (as allotype), AM P4293 ♀, AM P11663 ♀, RMNH D23285 ♀.
Type locality: Norman River mouth, Gulf of Carpentaria, QLD.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Darwin, NT to Gulf of Carpentaria, Cape York and south to Townsville, QLD, and southern New Guinea.
Ecology: benthic, estuarine, pelagic; inshore waters in rivers and estuaries out to 30 m, depth 2–27 m.
Reference: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [81] (diagnosis and figures).

Metapenaeus endeavouri (Schmitt, 1926)

Brown Prawn (Aust), Endeavour Prawn (Aust), Endeavour Shrimp (FAO)

Penaeopsis endeavouri Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68 [329 pl. 59 figs 1–3, p] [corrigenda et addenda unnumbered].

Type data: holotype AM E3199 ♀, paratypes AM E3198, AM E3199, AM E6687, AM E6688, AM P3583, AM P3585 9♂ 4♀, RMNH D23298 ♂ ♀.
Type locality: off S QLD (FIS *Endeavour* Expedition).

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); from Shark Bay, WA, to N NSW, Gulf of Papua, New Guinea.
Ecology: benthic, estuarine, pelagic; juveniles in shallow estuarine areas, depth 44–50 m.
References: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [187]; Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [86] (diagnosis and figures).

Metapenaeus ensis (De Haan, 1844)

Greasyback Shrimp (FAO), Offshore Greasyback Prawn

Penaeus ensis De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 46 fig.2] [published from 1833–1850, Atlas dated 1844].
Type data: lectotype RMNH D5581 1 ♀ dry, paralectotypes RMNH 1124 5 specimens, RMNH D1121 2 specimens.
Subsequent designation: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [59].
Type locality: Japan.

Penaeus mastersii Haswell, W.A. (1879). On the Australian species of Penaeus, in the Macleay Museum, Sydney. *Proc. Linn. Soc. N.S.W.* **4, 1880**: 38–44 [42].
Type data: neotype AM P14394 ♂.
Subsequent designation: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [60].
Type locality: 80 km WNW of Darwin, NT.

Penaeus incisipes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [257].
Type data: syntypes BMNH 3♂ 1♀*.
Type locality: off Panay, Philippines.

Taxonomic decision for synonymy: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [89].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); Indo-west Pacific Oceans (India and Sri Lanka through Indo-Malaysia to Japan, Taiwan, Philipppines and New Guinea).
Ecology: benthic, estuarine, pelagic; juveniles inhabit estuaries or rivers, adults inhabit estuaries or marine, depth 3–64 m.
References: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [58]; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [90] (colour photograph).

Metapenaeus insolitus Racek & Dall, 1965

Emerald Shrimp (FAO), Greasyback Prawn (Aust)

Metapenaeus insolitus Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [69 fig. 13a–c, pls 6, 11].
Type data: holotype AM P14398 ♀, paratypes AM P14399 ♂ (as allotype), AM P14400 2♂ 7♀, AM P14349 1♂, AM P14717–18 13 specimens, RMNH D23306 4 specimens.
Type locality: Chambers Bay, NT.

Distribution: NT (N coast), QLD (Gulf of Carpentaria); known only from limital area.
Ecology: estuarine, pelagic, benthic, marine, trade (minor commercial importance); found from brackish into coastal waters over sandy to muddy substrates, depths of 4 to 35 m, but commonly less than 8 m.
References: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [94] (diagnosis and figures); Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [94] (colour photograph).

Metapenaeus macleayi (Haswell, 1879)

Eastern School Shrimp (FAO), School Prawn (Aust)

Penaeus macleayi Haswell, W.A. (1879). On the Australian species of Penaeus, in the Macleay Museum, Sydney. *Proc. Linn. Soc. N.S.W.* **4, 1880**: 38–44 [40].
Type data: syntypes AM P40462 2♀, AM P1437–38 (possible syntypes).
Type locality: Port Jackson, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast), VIC (Bass Strait); known only from limital area, eastern Australia between Moreton Bay, SE QLD and NE Victoria.
Ecology: benthic, estuarine, marine, pelagic, trade (important commercial fishery); juveniles in shallower water, preference for turbid water and soft sediments, depth to 60 m.

References: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [196]; Kirkegaard, I. & Walker, R.H. (1970). Synopsis of biological data on the school prawn *Metapenaeus macleayi* (Haswell, 1879). *Aust. CSIRO Div. Fish. Oceanogr. Fish. Synop.* **5**: 1–22; Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [107] (diagnosis and figures); Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [88] (colour photograph).

Metapenaeus moyebi (Kishinouye, 1896)

Penaeus moyebi Kishinouye, K. (1896). Note on a Japanese *Penaeus* and its classification. *Zool. Mag. (Tokyo)* **8**: 372 [373].
Type data: syntypes RMNH D3192 1 specimen, RMNH D3193 3 specimens.
Type locality: Japan, Makassar [Ujung Pandang], Celebes [Sulawesi], Indonesia.

Metapenaeus burkenroadi Kubo, I. (1954). On 2 Penaeids *Metapenaeus affinis* and *Metapenaeus burkenroadi* erected on the Japanese form known as *M. affinis*. *J. Tokyo Univ. Fish.* **41**: 89–93 [92 fig. 1a–d].
Type data: holotype whereabouts unknown.
Type locality: Japan.

Taxonomic decision for synonymy: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [27].

Distribution: QLD (NE coast); in Australia only known from Thursday Is, Torres Straits, also Indo-west Pacific Oceans (S India through Indo-Malaysia to Taiwan, Philippines and Japan).
Ecology: estuarine, pelagic, benthic, marine; depths of 5–45 m.
Reference: Miquel, J.C. (1982). Le genre *Metapenaeus* (Crustacea, Penaeidae): taxonomie, biologie et pêches mondiales. *Zool. Verh.* **195**: 1–137 [114] (diagnosis and figures).

Parapenaeopsis Alcock, 1901

Parapenaeopsis Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [14] [name emended from *Parapeneopsis* to *Parapenaeopsis* under the plenary powers of the ICZN, placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (139); gender feminine].
Type species: *Penaeus styliferus* H. Milne Edwards, 1837 by original designation.

Extralimital distribution: Indo-west Pacific, E Atlantic.
See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.

Parapenaeopsis arafurica Racek & Dall, 1965

Arafura Shrimp (FAO)

Parapenaeopsis arafurica Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [102 fig. 16, pls 8, 13].
Type data: holotype AM P14794 ♂, paratypes AM P14795 ♀, AM P14796 3 specimens, RMNH D23291 ♂ ♀.
Type locality: off Fly River mouth, Gulf of Papua, Papua New Guinea.

Distribution: NT (N coast); southern New Guinea.
Ecology: benthic, pelagic; trawled over soft mud substrates, depth 5–30 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [114] (colour photograph).

Parapenaeopsis cornuta (Kishinouye, 1900)

Coral Prawn (Aust), Coral Shrimp (FAO)

Penaeus cornutus Kishinouye, K. (1900). Japanese species of the genus *Penaeus*. *J. Imp. Fish. Bur. Tokyo* **8**: 1–34 [23].
Type data: syntypes whereabouts unknown*.
Type locality: Ariake-wan, Kyushu, Japan.

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (N coast, NW coast); Exmouth Gulf, WA, to N NSW, Indo-west Pacific Oceans (W India to Japan, Philippines, Indonesia and southern New Guinea).
Ecology: benthic, estuarine, pelagic, trade (minor commercial importance); trawled over mud to sandy mud substrates, very shallow, inshore waters, often abundant in river mouths and estuaries, depth 1–37 m.
References: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [98]; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [112] (colour photograph).

Parapenaeopsis maxillipedo Alcock, 1905

Torpedo Shrimp (FAO)

Parapenaeopsis maxillipedo Alcock, A. (1905). A revision of the "Genus" Penaeus with diagnoses of some new species and varieties. *Ann. Mag. Nat. Hist.* **16**(7): 508–532 [522, 527].
Type data: syntypes IM*.
Type locality: Bombay, Madras, Arakan coast(?), India.

Distribution: NSW (Central E coast), QLD (Central E coast, NE coast); Indo-west Pacific Oceans (western India to Indonesia, Malaysia, Philippines and New Guinea).
Ecology: pelagic, benthic; trawled over muddy substrates, depths of 9–11 m.
Reference: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [99] (Australian records).

Parapenaeopsis sculptilis (Heller, 1862)

Coral Prawn (Aust), Rainbow Prawn (Aust), Rainbow Shrimp (FAO)

Penaeus sculptilis Heller, C. (1862). Neue Crustaceen, gesammelt während der Weltumseglung der k.k. Fregatte Novarra: Zweiter vorläufiger Bericht. *Verh. Zool.-Bot. Ges. Wien* **12**: 519–528 [528].
Type data: syntypes NHMW*.
Type locality: Java, Indonesia.

Parapenaeopsis sculptilis cultrirostris Alcock, A. (1906). *Catalogue of the Indian Decapod Crustacea in the Collection of the Indian Museum.* Part III. Macrura. Fasc. 1 The prawns of the *Penaeus* group. Calcutta : Trustees of the Indian Museum ii 55 pp. 9 pls [39].
Type data: syntypes IM 4060-66/9, 7237-44/9, 4474/9 13 specimens*.
Type locality: Orissa and Ganjam; Sunderbunds, Hooghly River.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [100].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (NW coast); Indo-west Pacific Oceans (W coast of India east to Hong Kong, Philippines and southern New Guinea).
Ecology: benthic, pelagic; trawled over coarse sand to fine mud substrates, most abundant in waters to 16 m, but found to 90 m.
References: Kirkegaard, I. & Walker, R.H. (1970). Synopsis of biological data on the rainbow prawn *Parapenaeopsis sculptilis* (Heller, 1862). *Aust. CSIRO Div. Fish. Oceanogr. Fish. Synop.* **4**: 1–24; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [108] (colour photograph).

Parapenaeopsis tenella (Bate, 1888)

Smoothshell Shrimp (FAO)

Penaeus tenellus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [270].
Type data: syntypes BMNH 1 ♀*.
Type locality: Bay of Kobe, Japan (*Challenger* Stn 235).

Penaeus crucifer Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [451].
Type data: syntypes MS 2 ♂ 4 ♀*.
Type locality: Maizuru, Japan.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [108].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Darwin, NT, to Princess Charlotte Bay, NE QLD, Indo-west Pacific Oceans (Pakistan east to Korea, Japan, Philippines, southern New Guinea).
Ecology: benthic, pelagic; trawled over mud to sandy mud substrates, inshore waters to 35 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [110] (colour photograph).

Parapenaeopsis venusta de Man, 1907

Adonis Shrimp (FAO)

Parapenaeopsis venusta de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the "Siboga-Expedition" II. *Notes Leyden Mus.* **29**: 127–145 [134].
Type data: syntypes (probable) ZMA 2 ♀*.
Type locality: anchorage off Pulu Jedan, east coast of Aru Ils, Indonesia.

Distribution: QLD (NE coast); only recorded in Australia from Albany Passage, Cape York, also from Indonesia, Malaysia.
Ecology: benthic, pelagic; trawled over substrates of sand, shells, stones and mud, depth 11–44 m.
Reference: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [220] (Australian record).

Parapenaeus Smith, 1885

Parapenaeus Smith, S.F. (1885). On some genera and species of Penaeidae, mostly from recent dredgings of the United States Fish Commission. *Proc. U.S. Natn. Mus.* **8**: 170–176 [170] [placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1961). Opinion 611. *Parapenaeus* S.I. Smith, 1885 (Crustacea, Decapoda); validation under the Plenary Powers and interpretation of *Peneus membranaceus* Risso, 1816. *Bull. Zool. Nomencl.* **18**(5): 306–308 (306)].
Type species: *Penaeus longirostris* Lucas, 1846 by original designation.

Neopenaeopsis Bouvier, E.L. (1905). Sur les Macroures nageurs (abstraction faite des Carides), recueillis par les expéditions américaines du *Hassler* et du *Blake*. *C. R. Séances Acad. Sci.* **141**: 746–749 [747] [gender feminine].
Type species: *Neopenaeopsis paradoxus* Bouvier, 1905 by original designation.

Taxonomic decision for synonymy: Bouvier, E.L. (1908). Quelques observations systématiques sur la sous-famille des Penaeinae Alcock. *Bull. Mus. Océanogr. Monaco* **119**: 1–10.

Extralimital distribution: Indo-west Pacific Ocean.

Species excluded from limital area: PENAEIDAE: *Parapenaeus fissurus* (Bate, 1881), Davie, P., this work (this species cited as being rare in Australia, but without specific localities mentioned, by Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [23]; however, according to W. Dall (pers. comm.) these records are based on a mis-identification); PENAEIDAE: *Parapenaeus longipes* Alcock, 1905, Davie, P., this work (this species cited as being rare in Australia, but without specific localities mentioned, by Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [23]; however, according to W. Dall (pers. comm.) these records are based on a misidentification).

Generic reference: Crosnier, A. (1986). Crustacés Décapodes: Penaeidae. Les espèces indo-ouest-pacifiques du genre *Parapenaeus*. pp. 303–353 figs 1–14 *in* Crosnier, A. (ed.) Résultats des campagnes MUSORSTOM I et II. Philippines (1976, 1980), Tome 2. *Mém. Mus. natn. Hist. nat. Paris (Ser A Zool.)***133**: 1–525 (generic revision and key to species).

Parapenaeus australiensis Dall, 1957

Australian Rose Shrimp (FAO), Red Prawn (Aust)

Parapenaeus australiensis Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [179 figs 15a–f].
Type data: holotype AM PI2329 ♂, paratypes AM PI2328 ♀, AM P4445, RMNH D23297 ♀.
Type locality: off Newcastle, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast); from Cape Howe, NSW, to Heron Island, QLD, western Pacific Ocean (Papua New Guinea, Java Sea, Indonesia, Philippines, Fiji).
Ecology: continental shelf, epipelagic; over soft mud, depth 124–180 m.
References: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [84] (photograph, diagnostic characters); Crosnier, A. (1986). Crustacés Décapodes: Penaeidae. Les espèces indo-ouest-pacifiques du genre *Parapenaeus*. pp. 303–353 figs 1–14 *in* Crosnier, A. (ed.) Résultats des campagnes MUSORSTOM I et II. Philippines (1976, 1980), Tome 2. *Mém. Mus. natn. Hist. nat. Paris (Ser A Zool.)***133**: 1–525 [335] (discussed and figured; provisionally identifies material from the Philippines as belonging to a new 'form' *nodosa*, but this has no nomenclatural standing).

Parapenaeus lanceolatus Kubo, 1949

Lance Prawn

Parapenaeus lanceolatus Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [405 figs 4C, 7D, 21C, 28G–I, 61C, 75C, I, 78I, 143C, G, 144].
Type data: holotype whereabouts unknown ♂, paratype(s) whereabouts unknown 4 ♂.
Type locality: Heta, Shizuoka Pref. and Kumano-nada off Owase, Mie Pref., Japan.

Distribution: WA (NW coast, NW oceanic); Indonesia, Japan, Philippines, South China Sea.
Ecology: continental shelf, continental slope, epipelagic, mesopelagic, oceanic province; depth 183–407 m.
Reference: Crosnier, A. (1986). Crustacés Décapodes: Penaeidae. Les espèces indo-ouest-pacifiques du genre *Parapenaeus*. pp. 303–353 figs 1–14 *in* Crosnier, A. (ed.) Résultats des campagnes MUSORSTOM I et II. Philippines (1976, 1980), Tome 2. *Mém. Mus. natn. Hist. nat. Paris (Ser A Zool.)***133**: 1–525 [318] (full synonymy, diagnosis and figures).

Parapenaeus sextuberculatus Kubo, 1949

Parapenaeus sextuberculatus Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [403 figs 7F, 21B, 28D–F, 7R, 61A, 75B, H, 143B, F].
Type data: holotype whereabouts unknown ♂, paratype(s) whereabouts unknown 3 ♂ 2 ♀.
Type locality: Heta and Maisaka, Shizuoka Pref., Japan.

Distribution: NSW (SE oceanic); Indo-west Pacific Oceans (Madagascar, India, Indonesia, Japan, Philippines).
Ecology: continental slope, mesopelagic, oceanic province; depth 250–350 m.
References: Crosnier, A. (1986). Crustacés Décapodes: Penaeidae. Les espèces indo-ouest-pacifiques du genre *Parapenaeus*. pp. 303–353 figs 1–14 *in* Crosnier, A. (ed.) Résultats des campagnes MUSORSTOM I et II. Philippines (1976, 1980), Tome 2. *Mém. Mus. natn. Hist. nat. Paris (Ser A Zool.)***133**: 1–525 [330] (full synonymy, diagnosis and figures); Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [282] (Australian records).

Penaeopsis Bate, 1881

Penaeopsis Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [182] [placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (139), Name No. 1821; gender feminine].
Type species: *Penaeopsis serratus* Bate, 1881 by subsequent designation, see Bouvier, E.-L. (1905). Sur les Pénéides et les Sténopides recueillis par les expéditions françaises et monégasques dans l'Atlantique oriental. *C. R. Séances Acad. Sci.* **140**: 980–983 [981].

Extralimital distribution: Indo-west Pacific, North Atlantic.

Generic references: Pérez Farfante, I. (1980). Revision of the Penaeid shrimp genus *Penaeopsis* (Crustacea: Decapoda). *Fish. Bull. Fish Wildl. Serv. U.S.* **77**(4): 721–763 (includes key to species); Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [126] (diagnosis and list of species).

Penaeopsis eduardoi Pérez Farfante, 1977

Red-flecked Prawn

Penaeopsis eduardoi Pérez Farfante, I. (1977). *Penaeopsis eduardoi*, a new species of shrimp (Crustacea: Penaeidae) from the Indo-west Pacific. *Proc. Biol. Soc. Wash.* **90**(1): 172–182 [172 figs 1–4].
Type data: holotype USNM 168298 ♀, paratype(s) USNM 168299 9♂ 7♀.
Type locality: Balayan Bay, Luzon Island, Philippines.

Distribution: NSW (SE oceanic), NT (N coast), WA (NW oceanic); east Indo-west Pacific Oceans.
Ecology: continental slope, mesopelagic, oceanic province; depths of 250–570 m, mainly 250–400 m.
References: Pérez Farfante, I. (1980). Revision of the Penaeid shrimp genus *Penaeopsis* (Crustacea: Decapoda). *Fish. Bull. Fish Wildl. Serv. U.S.* **77**(4): 721–763 [734] (redescribed and figured); Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [282].

Penaeopsis rectacuta (Bate, 1881)

Banded Red-Flecked Prawn

Penaeus rectacutus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [180].
Type data: holotype BMNH ♀.
Type locality: between Bohol and Cebu, Philippines.

Distribution: NT (N coast), WA (NW oceanic); worldwide.
Ecology: mesopelagic, continental slope, oceanic province; depth 250–320 m.
Reference: Pérez Farfante, I. (1980). Revision of the Penaeid shrimp genus *Penaeopsis* (Crustacea: Decapoda). *Fish. Bull. Fish Wildl. Serv. U.S.* **77**(4): 721–763 [741] (redescribed and figured).

Incertae sedis

Penaeopsis batei Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2*. Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [296 pl. 32 fig. D] [this species is poorly known and its identity is uncertain; it was listed by De Man (1911: 8) as one of a group of *Penaeopsis* species that have marginal spines on the telson, and because of this it would now probably belong to *Metapenaeopsis*, see Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29(136) and de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131].
Type data: holotype BMNH ♀*.
Type locality: Albany Island, E of tip of Cape York, QLD.

Penaeus Fabricius, 1798

Taxonomic decision for subgeneric arrangement: Davie, P., this work; Pérez Farfante, I. (1969). Western Atlantic Shrimps of the genus *Penaeus*. *Fishery Bulletin* **67**(3): iii–x 461–591; Tirmizi, N.M. (1971). *Marsupenaeus*, a new subgenus of *Penaeus* Fabricius, 1798 (Decapoda, Natantia). *Pakistan J. Zool.* **3**(2): 193–194.

Penaeus (Fenneropenaeus) Pérez Farfante, 1969

Fenneropenaeus Pérez Farfante, I. (1969). Western Atlantic Shrimps of the genus *Penaeus*. *Fishery Bulletin* **67**(3): iii–x 461–591 [506] [provisionally maintained here as a subgenus, but given full generic status by Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 (79); gender masculine].
Type species: *Penaeus indicus* H. Milne Edwards, 1837 by original designation.

Extralimital distribution: Indo-west Pacific.

Penaeus (Fenneropenaeus) indicus H. Milne Edwards, 1837

Banana Prawn (Aust), Indian Prawn (Aust), Indian White Prawn (FAO), Red Legged Banana Prawn (Aust)

Penaeus indicus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [415].
Type data: syntypes MNHP*.
Type locality: Ganges Delta, India.

Penaeus indicus longirostris de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien.* Leiden : E.J. Brill Vol. 2 [511 pl. 29 fig. 53].

Type data: holotype ZMA ♂*.
Type locality: Makassar, Indonesia.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [15].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (N coast, NW coast); Indo-west Pacific Oceans (South Africa to Indo-Malaysia, southern China, Philippines, southern New Guinea).
Ecology: pelagic, benthic, estuarine, adults—marine, juveniles—estuarine; trawled over muddy to sandy substrates, adults marine, juveniles estuarine, depth 2–90 m.
References: Mohamed, K.H. (1970). Synopsis of biological data on the Indian prawn *Penaeus indicus* H. Milne Edwards, 1837. *FAO Fish. Rep.* **57**: 1267–1288; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [60] (colour photograph).

Penaeus (Fenneropenaeus) merguiensis de Man, 1888

Banana Prawn (Aust & FAO), White Prawn (Aust)

Penaeus merguiensis de Man, J.G. (1888). Report on the Podophthalmous Crustacea of the Mergui Archipelago, collected for the Trustees of the Indian Museum, Calcutta, by Dr John Anderson, F.R.S., Superintendent of the Museum. Parts I–V. *J. Linn. Soc.* **22**(136–140): 1–312 pls 1–19 [287].
Type data: syntypes RMNH D1183 ♀*.
Type locality: Mergui Archipelago, Burma.

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, N coast, NW coast); Shark Bay, WA, to N NSW, Indo-west Pacific Oceans (Persian Gulf to Thailand, Indonesia, Hong Kong, Philippines, New Guinea, New Caledonia).
Ecology: estuarine, benthic, marine, pelagic, trade (major commercial importance); trawled over muddy substrates, juveniles enter shallow rivers and estuaries as part of life cycle, depth 10–45 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [58] (colour photograph).

Penaeus (Marsupenaeus) Tirmizi, 1971

Marsupenaeus Tirmizi, N.M. (1971). *Marsupenaeus*, a new subgenus of *Penaeus* Fabricius, 1798 (Decapoda, Natantia). *Pakistan J. Zool.* **3**(2): 193–194 [193] [provisionally maintained here as a subgenus, but given full generic status by Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 (92); gender masculine].
Type species: *Penaeus canaliculatus japonicus* Bate, 1888 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans, eastern Mediterranean.

Penaeus (Marsupenaeus) japonicus Bate, 1888

Japanese King Prawn (Aust), Kuruma Prawn (FAO)

Penaeus canaliculatus japonicus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [245 pls 31, 32 fig. 4, 37 fig. 2].
Type data: syntypes BMNH ♀*.
Type locality: Japan.

Penaeus pulchricaudatus Stebbing, T.R.R. (1914). South African Crustacea. Part VII. *Ann. S. Afr. Mus.* **15**: 1–112 [14].
Type data: syntypes SAM A1046*.
Type locality: Great Fish Point Lighthouse (Cape Colony), South Africa.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [12].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Indo-west Pacific Oceans (South Africa to Korea, Japan, Taiwan, Philippines, southern New Guinea, Fiji), eastern Mediterranean.
Ecology: benthic, pelagic; trawled over sandy mud to sand substrates, inshore waters to 90 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [54] (colour photograph).

Penaeus (Melicertus) Rafinesque, 1814

Melicertus Rafinesque-Schmaltz, C.S. (1814). *Précis des découvertes et travaux somiologiques de M. r. C. S. Rafinesque-Schmaltz entre 1800 et 1814.* Ou choix raisonné de ses principales découvertes en zoologie et en botanique, pour servir d'introduction à ses ouvrages futurs. Palermo : Royale Typographie Militaire 55 pp. + errata [22] [provisionally maintained here as a subgenus, but given full generic status by Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 (99); gender masculine].
Type species: *Melicertus tigrinus* Rafinesque, 1814 (= *Cancer kerathurus* Forskål, 1775) by monotypy.

Extralimital distribution: Indo-west Pacific, eastern Atlantic, Mediterranean.

Penaeus (Melicertus) canaliculatus (Olivier, 1811)

Striped Prawn, Witch Prawn (FAO)

Palaemon canaliculatus Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [660].
Type data: neotype RMNH D5829 1 ♂.
Subsequent designation: Pérez Farfante, I. (1976). A redescription of *Penaeus (Melicertus) canaliculatus* (Olivier, 1811), a wide ranging Indo-west Pacific shrimp (Crustacea, Decapoda, Penaeidae). *Zool. Meded. (Leiden)* **50**(2): 23–37 [25].
Type locality: Weh Island, N Sumatra.

Distribution: QLD (NE coast); in Australia recorded only from Torres Strait, also Indo-west Pacific Oceans (SE Africa to Taiwan Philippines, southern New Guinea and Polynesia).
Ecology: benthic, pelagic; depth 33–46 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [46] (colour photograph).

Penaeus (Melicertus) latisulcatus Kishinouye, 1896

Blue-legged King Prawn, Western King Prawn (Aust & FAO)

Penaeus latisulcatus Kishinouye, K. (1896). Note on a Japanese *Penaeus* and its classification. *Zool. Mag. (Tokyo)* **8**: 372 [372].
Type data: syntypes whereabouts unknown*.
Type locality: Kagoshima, Tokyo Bay, Japan.

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), SA (S Gulfs coast), WA (Central W coast, Lower W coast, N coast, NW coast, SW coast); Indo-west Pacific Oceans (East Africa to Korea, Japan, Indo-Malaysia, southern New Guinea).
Ecology: benthic, pelagic, trade (commercially important in SA and WA); trawled over hard substrates, sand, sandy mud or gravel, depths of 0–90 m, juveniles can occupy nursery areas in shallow waters of high salinity.
References: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs (illustration and description); Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [56] (colour photograph).

Penaeus (Melicertus) longistylus Kubo, 1943

Redspot King Prawn (Aust & FAO), Red-spotted Prawn (Aust)

Penaeus (Melicertus) longistylus Kubo, I. (1943). Diagnoses of a new species of the genus *Penaeus*. *Suisan Kenkyusi* **38**: 18–24 [20].
Type data: syntypes whereabouts unknown 1 ♂ 1 ♀*.
Type locality: off SE coast of Hainan Is., China.

Penaeus (Melicertus) jejunus Hall, D.N.F. (1956). The Malayan Penaeidae (Crustacea, Decapoda) Part 1. Introductory notes on the species of the genus *Solenocera*, *Penaeus* and *Metapenaeus*. *Bull. Raffles Mus. Singapore* **27**: 68–90 [75].
Type data: holotype BMNH ♀ (juvenile)* (probable depository institution).
Type locality: Malaysia.

Penaeus (Melicertus) caesius Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [143 figs 2a–g].
Type data: holotype AM P12703 ♂, paratypes AM P5703 ♀, AM P12702 2 ♀.
Type locality: 20 km NNW of Bowen, QLD.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [13].

Distribution: Lord Howe Island, NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, N coast, NW coast); Shark Bay, WA, to QLD, and central Indo-west Pacific Oceans (Indonesia, Malaysia, South China Sea, Philippines, southern New Guinea).
Ecology: benthic, pelagic, trade (moderate commercial significance); trawled over hard substrates near reefs, depth 35–55 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [50] (colour photograph).

Penaeus (Melicertus) marginatus Randall, 1840

Aloha Prawn (FAO)

Penaeus (Melicertus) marginatus Randall, J.W. (1840). Catalogue of the Crustacea brought by Thomas Nuttall and J.K. Townsend, from the West Coast of North America and the Sandwich Islands, with descriptions of such species as are apparently new, among which are included several species of different localities, previously existing in the Collection of the Academy. *J. Acad. Nat. Sci. Philad.* **8**(1): 106–147 pls 3–7 [146] [described within the species account of *P. canaliculatus* (Oliv.)].
Type data: syntypes ANSP many specimens* (probable depository institution).
Type locality: Hawai'ian Islands (as Sandwich Islands).

Penaeus teraoi Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [288].
Type data: holotype whereabouts unknown ♂, paratypes ♀ (as allotype), 6 ♂ 4 ♀.
Type locality: Miya, Aiti Prefecture, Japan.

Taxonomic decision for synonymy: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [49].

Distribution: QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans (East Africa and Madagascar to Japan and east to Hawai'i).
Ecology: pelagic, benthic, continental shelf, continental slope; trawled over sand to muddy sand substrates, from inshore waters to 300 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [48] (colour photograph).

Penaeus (Melicertus) plebejus Hess, 1865

Eastern King Prawn (Aust & FAO), King Prawn (Aust), Sand Prawn (Aust)

Penaeus plebejus Hess, W. (1865). Beiträge zur Kenntniss der Decapoden-Krebse Ost-Australiens. *Arch. Naturgesch.* **31**: 127–173 pls 6–7 [168].
Type data: syntypes RMNH D1127 1 specimen, ZMG 8 & 9 2 specimens (now housed in SMF).
Type locality: Sydney, NSW.

Penaeus canaliculatus australiensis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [248 pl. 32 fig. 3].
Type data: holotype BMNH ♀.
Type locality: Port Jackson, NSW.

Penaeus macculloch Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68 [370 pl. 66 figs 1–3] [corrigenda et addenda unnumbered].
Type data: holotype AM E6619 ♂.
Type locality: 21 km NE of North Reef, QLD.

Taxonomic decision for synonymy: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [147].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), VIC (Bass Strait); known only from limital area.
Ecology: benthic, pelagic, adults—marine, juveniles—estuarine; trawled over sandy substrates, depth 2–220 m.
References: Kirkegaard, I. & Walker, R.H. (1970). Synopsis of biological data on the eastern king prawn *Penaeus plebejus* Hess, 1865. *Aust. CSIRO Div. Fish. Oceanogr. Fish. Synop.* **7**: 1–22; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [52] (colour photograph).

Penaeus (Penaeus) Fabricius, 1798

Penaeus Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [408] [placed on the Official List of Generic Names in Zoology, see International Commission of Zoological Nomenclature (1928). Opinions and declarations rendered by the International Commission on Zoological Nomenclature. *Smithson. Misc. Collect.* **73**(5): 1–28 (25); gender masculine].
Type species: *Penaeus monodon* Fabricius, 1798 by subsequent designation, see Latreille, P.A. (1810). *Considérations générales sur l'ordre naturel des animaux composant les classes de Crustacés, des Arachnides, et des Insectes,* avec un tableau méthodique de leurs genres, disposés en familles. Paris 444 pp. [422].

Extralimital distribution: Indo-Pacific and west Atlantic Oceans. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233.

Penaeus (Penaeus) esculentus Haswell, 1879

Brown Tiger Prawn (Aust & FAO), Common Tiger Prawn

Penaeus esculentus Haswell, W.A. (1879). On the Australian species of Penaeus, in the Macleay Museum, Sydney. *Proc. Linn. Soc. N.S.W.* **4, 1880**: 38–44 [38].
Type data: syntypes AM P40460 2 specimens, AM P40461; other possible syntype AM P40875.
Type locality: Port Jackson, NSW.

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); known only from limital area.
Ecology: benthic, estuarine, marine, pelagic, trade (commercially important); typically trawled over mud or sandy mud substrates in 10–22 m depth, juveniles occupy shallow waters in estuaries, adults found offshore to 200 m.
References: Kirkegaard, I. & Walker, R.H. (1969). Synopsis of biological data on the tiger prawn, *Penaeus esculentus* Haswell, 1879. *Aust. CSIRO Div. Fish. Oceanogr. Fish. Synop.* **3**: 1–23; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [66] (colour photograph).

Penaeus (Penaeus) monodon Fabricius, 1798

Blue Tiger Prawn (Aust & FAO), Giant Tiger Prawn (Aust & FAO), Jumbo Tiger Prawn (Aust), Leader Prawn, Panda Prawn (Aust)

Penaeus monodon Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [408].
Type data: neotype RMNH D5734 ♂.
Subsequent designation: Holthuis, L.B. (1949). The identity of *Penaeus monodon* Fabr. *Proc. Acad. Sci. Amst.* **52**: 1051–1071.

Type locality: Indonesia, Java, Bay of Batavia [Jakarta], see Zimsen, E. (1964). Crustacea. pp. 643–656 *in, The Type Material of I.C. Fabricius*. Copenhagen : Munksgaard.

Penaeus carinatus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [27].
Type data: syntypes* (presumed lost).
Type locality: Singapore.

Penaeus tahitensis Heller, C. (1862). Neue Crustaceen, gesammelt während der Weltumseglung der k.k. Fregatte Novarra: Zweiter vorläufiger Bericht. *Verh. Zool.-Bot. Ges. Wien* **12**: 519–528 [528].
Type data: syntypes NHMW*.
Type locality: Tahiti.

Penaeus semisculcatus exsulcatus Hilgendorf, F. (1879). Die von Herrn W. Peters in Moçambique gesammelten Crustaceen, bearbeitet von Herrn Dr. F. Hilgendorf. *Mber. dt. Akad. Wiss. Berl.* **1878**: 782–851 pls 1–4 [843].
Type data: syntypes MB 59313 ♂ 5 ♀ *.
Type locality: Quelimane, Mozambique.

Penaeus coeruleus Stebbing, T.R.R. (1905). South African Crustacea, Pt III. *Mar. Invest. S. Afr.* **IV**: 21–123 pls xvii–xxvi [77 pl. 21].
Type data: syntypes SAM 3 ♀ *.
Type locality: Nahoon River on E coast near East London, South Africa.

Penaeus bubulus Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [296 figs 1G 7B 15U–B 24K–M 37 49C 53 58D 67N–Q, 73F, L 77P, 113, 114].
Type data: syntypes whereabouts unknown 27 ♂, 51 ♀ *.
Type locality: Tainan, Formosa [Taiwan]; Japan: Hatazawa, Chiba Pref., Miya, Aichi Pref.; Indonesia: Palau, Batavia [Java], Menado, Celebes [Sulawesi].

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [10].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, N coast, NW coast); Exmouth Gulf, WA, to Moreton Bay, QLD, Indo-west Pacific Oceans (South Africa to Japan, Philippines and southern New Guinea).
Ecology: benthic, estuarine, marine, pelagic, trade (minor commercial importance); trawled over mud to sand substrates, juveniles occasionally enter rivers, depths to 110 m.
References: Mohamed, K.H. (1970). Synopsis of biological data on the jumbo tiger prawn *Penaeus monodon* Fabricius, 1798. *FAO Fish. Rep.* **57**: 1251–1266; Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [64] (colour photograph).

Penaeus (Penaeus) semisulcatus De Haan, 1844

Green Tiger Prawn (Aust & FAO), Grooved Tiger Prawn, Northern Tiger Prawn (Aus)

Penaeus semisulcatus De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [191 pl. 46 fig. 1] [published from 1833–1850, Atlas dated 1844].
Type data: lectotype RMNH D1129 1 ♀, paralectotypes RMNH D1744 2 specimens, RMNH D1129 2 specimens, RMNH D5550 1 dry specimen.
Type locality: Japan.

Penaeus ashiaka Kishinouye, K. (1900). Japanese species of the genus *Penaeus*. *J. Imp. Fish. Bur. Tokyo* **8**: 1–34 [7, 14 pls 3, 7 fig. 4].
Type data: syntypes whereabouts unknown*.
Type locality: southern Japan.

Penaeus monodon manillensis Villaluz, D.K. & Arriola, F.J. (1938). Five other known species of *Penaeus* in the Philippines. *Philipp. J. Sci.* **66**(1): 35–41, 4 pls [39] [treated as a synonym of *Penaeus monodon* Fabricius, 1798, by Motoh, H. & Buri, P. (1984). Studies on the penaeoid prawns of the Philippines. *Res. Crust.* **13–14**: 1–120 (24)].
Type data: syntypes NMPh no. 200 1 ♀* (probable depository institution).
Type locality: Manila Bay.

Taxonomic decision for synonymy: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [11].

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (N coast, NW coast); Indo-west Pacific Oceans (East Africa and Madagascar to Japan, Philippines, New Guinea and east to Fiji).
Ecology: benthic, pelagic, trade (minor commercial importance); trawled over sand to mud substrates, juveniles found in shallow waters generally associated with seagrass beds, depth 2–130 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns*. Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [62] (colour photograph).

Trachypenaeus Alcock, 1901

Taxonomic decision for subgeneric arrangement: Davie, P., this work (*Megokris* is here provisionally treated as a subgenus of *Trachypenaeus* rather than being accorded full generic status).

Extralimital distribution: Indo-Pacific, Atlantic. See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.

Trachypenaeus (Megokris) Pérez Farfante & Kensley, 1997

Megokris Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [95].
Type species: *Penaeus granulosus* Haswell, 1879 by original designation.

Extralimital distribution: Indo-west Pacific.

Trachypenaeus (Megokris) gonospinifer Racek & Dall, 1965

Hardback Prawn (Aust), Northern Rough Shrimp (FAO), Rough Prawn

Trachypenaeus gonospinifer Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [89 fig. 15, pls 7, 12].
Type data: holotype AM P14654 ♀, paratypes AM P14657 2 ♀, AM P14658 1 ♀, AM P14656 3 ♂ 1 ♀, AM P14655 1 ♂, RMNH D23288 ♂ ♀.
Type locality: S of Port Romilly, New Guinea.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria); from Joseph Bonaparte Gulf through the Arafura Sea to the Gulf of Papua, New Guinea.
Ecology: benthic, pelagic; trawled over muddy substrates, depth 13–52 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [116] (colour photograph).

Trachypenaeus (Megokris) granulosus (Haswell, 1879)

Coarse Shrimp (FAO), Hardback Prawn (Aust)

Penaeus granulosus Haswell, W.A. (1879). On the Australian species of Penaeus, in the Macleay Museum, Sydney. *Proc. Linn. Soc. N.S.W.* **4, 1880**: 38–44 [41].
Type data: lectotype AM P40464 ♀, paralectotype(s) AM P40463 2 ♀.
Subsequent designation: Griffin, D.J.G. (1970). A re-examination of the type material of *Penaeus granulosus* Haswell, 1879 (Decapoda, Penaeidae). *Crustaceana* **19**(1): 99–102.
Type locality: Darnley Island, Cape Grenville, Torres Strait, N QLD.

Trachypenaeus salaco de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the "Siboga-Expedition" II. *Notes Leyden Mus.* **29**: 127–145 [135].
Type data: syntypes ZMA ♂*, ZMA ♂*.
Type locality: Tual Anchorage, Kei Ils, Indonesia (*Siboga* Stn 205), Lohio Bay, Buton Strait, Indonesia (*Siboga* Stn 205).

Trachypenaeus furcilla Hall, D.N.F. (1961). Further taxonomic notes on the Malayan species. The Malayan Penaeidae (Crustacea, Decapoda) Part 2. *Bull. Raffles Mus. Singapore* **26**: 76–119 [102].
Type data: holotype BMNH B45 ♂ adult, paratype(s) BMNH B73 1 ♂ adult*.
Type locality: Outer Shoal, Malaysia.

Taxonomic decision for synonymy: Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [211] (but *T. pescadoreensis* Schmitt, 1931, is removed from synonymy as this species is considered valid by Motoh, H. & Buri, P. (1984). Studies on the penaeoid prawns of the Philippines. *Res. Crust.* **13–14**: 1–120 [92]).

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); from NW Cape York to Princess Charlotte Bay, QLD, also Indo-west Pacific Oceans (Arabian Gulf east through Indo-Malaysia, to Taiwan, Philippines and southern New Guinea).
Ecology: benthic, pelagic, trade (little commercial significance); trawled over mud substrates, depth 9–81 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [118] (colour photograph).

Trachypenaeus (Trachypenaeus) Alcock, 1901

Trachypenaeus Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [15] [name emended from *Trachypeneus* to *Trachypenaeus* under the plenary powers of the International Commission on Zoological Nomenclature, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147 (139), Name No. 1820; gender masculine].
Type species: *Penaeus anchoralis* Bate, 1881 by original designation.

Trachypenaeus (Trachypenaeus) anchoralis (Bate, 1881)

Hardback Shrimp (FAO), Northern Rough Prawn (Aust)

Penaeus anchoralis Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [181] [numerous authors have misquoted the year as Bate, 1888].
Type data: syntypes BMNH*.
Type locality: Arafura Sea, S of Papua.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); known only from limital area, from Shark Bay, WA, to Keppel Bay, QLD.

Ecology: benthic, pelagic; trawled over varying bottom types from mud to coral debris, depth to 60 m.
References: Racek, A.A. & Dall, W. (1965). Littoral Penaeinae (Crustacea Decapoda) from northern Australia, New Guinea and adjacent waters. *Verh. K. Akad. Wet. Amst. Tweede Sect.* **56**(3): 1–119 figs 1–16 pls 1–13 [98] (description and figures); Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [122] (colour photograph).

Trachypenaeus (Trachysalambria) Burkenroad, 1934

Trachysalambria Burkenroad, M.D. (1934). Littoral Penaeidea chiefly from the Bingham Oceanographic Collection, with a revision of *Penaeopsis* and descriptions of two new genera and eleven new American species. *Bull. Bingham Oceanogr. Coll.* **4**(7): 1–109 [49] [first introduced as a subgenus of *Trachypenaeus* Alcock, 1901].
Type species: *Penaeus curvirostris* Stimpson, 1860 by original designation.

For alternative taxonomic arrangement, see Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [146] (elevated to generic level).

Extralimital distribution: Indo-Pacific Oceans, E Mediterranean.

Trachypenaeus (Trachysalambria) curvirostris (Stimpson, 1860)

Hardback Prawn, Southern Rough Prawn, Southern Rough Shrimp (FAO)

Penaeus curvirostris Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [44].
Type data: syntypes whereabouts unknown* (presumed lost).
Type locality: Port 'Simoda' [Shimoda Ko], Japan.

Metapenaeus palaestinensis Steinitz, W. (1932). Eine neue Garnelenart: meta pal. *Zool. Anz.* **100**: 161–164 [161].
Type data: syntypes whereabouts unknown 2♂ 5♀*.
Type locality: Bay of Haifa, Mediterranean.

Taxonomic decision for synonymy: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [53] (but removing *T. longipes* Paulson, 1875, *T. asper* Alcock, 1905 and *T. malaiana* Balss, 1933, as valid species, following Motoh, H. & Buri, P. (1984). Studies on the penaeoid prawns of the Philippines. *Res. Crust.* **13–14**: 1–120 [80]).

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); from Shark Bay, WA, through northern waters to Sydney, NSW, Indo-west Pacific Oceans (East Africa to Japan), through Suez to Mediterranean (Egypt, Israel and Turkey).
Ecology: pelagic, benthic, trade (minor commercial importance); trawled over muddy sand substrates, depths 13–150 m.
Reference: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [124] (colour photograph).

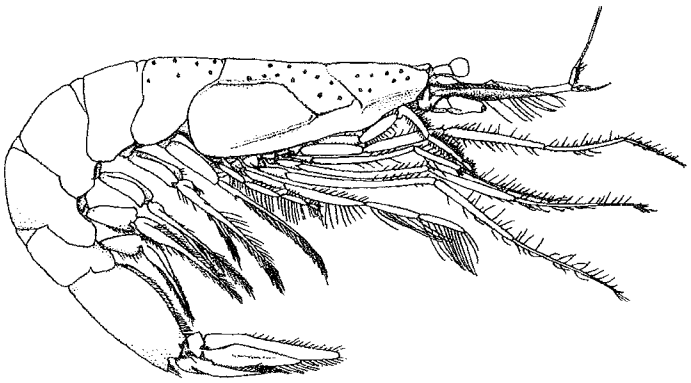
Trachypenaeus (Trachysalambria) fulvus Dall, 1957

Brown Rough Prawn (Aust)

Trachypenaeus fulvus Dall, W. (1957). A revision of the Australian species of Penaeinae (Crustacea Decapoda: Penaeidae). *Aust. J. Mar. Freshwat. Res.* **8**(2): 136–230 figs 1–29 [203, 206 figs 23a–g].
Type data: holotype AM P12773 ♂, paratypes AM P39908 ♀ (as allotype), AM P12774 3♂ 1♀, AM P12772 15 specimens, RMNH D23296 ♂ ♀.
Type locality: Townsville, QLD.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); known only from limital area, from Shark Bay, WA, through NT to Moreton Bay, QLD.
Ecology: pelagic, benthic, trade (minor commercial importance); trawled over muddy substrates, depth to 60 m.
References: Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls [120] (colour photograph); Motoh, H. & Buri, P. (1984). Studies on the penaeoid prawns of the Philippines. *Res. Crust.* **13–14**: 1–120 [81] (attributed records of *T. fulvus* from New Guinea and SE Asia to *T. malaianus* Balss, 1933, which they resurrected from the synonymy of *T. curvirostris* (Stimpson, 1860); also included in synonymy of *T. malaianus* is *T. unicus* Hall, 1961, previously referred to *T. fulvus*; following these authors, it therefore appears that *T. fulvus* is restricted in distribution to northern Australian waters).

SERGESTIDAE



Sergestes seminudus (antennal flagellum not shown) [from Sakai & Nakano 1985]

INTRODUCTION

Sergestid shrimps are mostly small, and can often be extremely abundant. The Australian Paste Shrimp (*Acetes sibogae*) forms large swarms in brackish estuarine waters along the eastern Australian coast, but the greatest number of species are oceanic and occur in meso- or bathypelagic depths. The most useful recent references dealing with the deep water Australian species include Griffith & Brandt (1983a, 1983b), Griffiths & Wadley (1986) and Wasmer (1993).

The Sergestidae is grouped with the Luciferidae in the superfamily Sergestoidea. Pérez Farfante & Kensley (1997: 187) provided a key to the six recognised genera.

Diagnosis

Integument thin, often very soft, in two genera bearing photophores. Carapace moderately compressed; rostrum shorter than eyestalks, often small to rudimentary; supra-orbital spine and hepatic spine present in some species of some genera; antennal, branchio-stegal, and pterygostomian spines absent; cervical sulcus well marked, weak, or absent. Ventral antennular flagellum modified in male to form clasping organ. Antennal flagellum bipartite, consisting of stiff proximal portion and more flexible distal portion. Mandibular palp of three articles. First maxilliped with exopod and epipod; second maxilliped with epipod; second and third maxillipeds and all pereiopods lacking exopods. Second and third pereiopods with minute chela (*Sergestes pectinatus* lacking chela on third pereiopod). Fourth and fifth pereiopods reduced (except in *Sicyonella*) or absent. Branchiae present. First to fifth abdominal somites rounded dorsally, sixth somite weakly carinate. Telson with no more than three pairs, or lacking, lateral movable spines. Petasma variously composed of lobus accessorius, lobus armatus, lobus connectens, lobus inermis, lobus terminalis, processus ventralis, processus uncifer; lobes often bearing hooks. Appendix masculina unilamellate. Thelycum with sternite XII and sometimes sternite XIII and coxae of third pereiopod modified; seminal receptacles present, small, varying from simple shallow pockets to sac-like invaginations situated submesially at base of third pereiopods.
(After Pérez Farfante & Kensley 1997).

References

Griffiths, F.B. & Brandt, B. (1983a). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184

Griffiths, F.B. & Brandt, S.B. (1983b). Mesopelagic Crustacea in and around a warm-core eddy in the Tasman Sea off eastern Australia. *Aust. J. Mar. Freshwat. Res.* **34**(4): 609–623

Griffiths, F.B. & Wadley, V.A. (1986). A synoptic comparison of fishes and crustaceans from a warm-core eddy, the East-Australian Current, the Coral Sea and the Tasman Sea. *Deep Sea Res.* **33**(11/12): 1907–1922

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

Sakai, K. & Nakano, T. (1985). Studies on the genus *Sergestes* (Crustacea, Decapoda) II. *Sergestes seminudus* Hansen, 1919 and *Sergestes prehensilis* Bate, 1881. *Bull. Shikoku Women's Univ., Tokushima* **4**(2): 17–35

Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91

SERGESTIDAE Dana, 1852

Sergestidae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [18] [placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1969). Opinion 864. Penaeid generic names (Crustacea, Decapoda): addition of twenty-eight to the Official List. *Bull. Zool. Nomencl.* **25**: 138–147].
Type genus: *Sergestes* H. Milne Edwards, 1830.

Acetes H. Milne Edwards, 1830

Acetes Milne Edwards, H. (1830). Description des genres *Glaucothoe*, *Sicyonie*, *Sergeste* et *Acète*. *Ann. Sci. Nat.* **19**: 333–352, 4 pls [350].
Type species: *Acetes indicus* H. Milne Edwards, 1830 by monotypy.

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [187].

Acetes erythraeus Nobili, 1905

Tsivakihini Paste Shrimp (FAO)

Acetes erythraeus Nobili, G. (1905). Diagnoses préliminaires de 34 espèces et variétés nouvelles, et de 2 genres nouveaux de Décapodes de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **11**(6): 393–411 [394].
Type data: syntypes MZUT Cr.773, MZUT Cr.339, MNHP*.
Type locality: Red Sea, Djibouti and Abdelkader, see Omori, M. (1975). The systematics, biogeography, and fishery of epipelagic shrimps of the genus *Acetes* (Crustacea, Decapoda, Sergestidae). *Bull. Ocean. Res. Inst.* **7**: 1–91.
Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: estuarine, marine, pelagic; usually found in brackish water, mud to sand substrates, depth 0–55 m.
Reference: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [64] (review of interest to fisheries).

Acetes sibogae Hansen, 1919

Australian Paste Shrimp (FAO)

Acetes sibogae Hansen, H.J. (1919). The Sergestidae of the Siboga-Expedition. *Siboga Exped.* **38**: 1–65 5 pls [38 pl. 3 fig. 4a–h].
Type data: syntypes ZMA 16 specimens*, ZMA 22 specimens (immature)*.
Type locality: Indonesia: near south fort, Bay of Bima (*Siboga* Stn 47), Sangkapura-roads, Bawean Is. (*Siboga* Stn 323).

Acetes australis Colefax, A.N. (1940). An Australian species of *Acetes* (Crustacea Macrura, Sergestidae) with remarks on the distribution and literature of the genus. *Rec. Aust. Mus.* **20**: 341–352 [345 figs 1–19].

Type data: syntypes AM P15075 149♂, AM P15076 104♀.
Type locality: Folly Point, Middle Harbour, Port Jackson, NSW.

Taxonomic decision for synonymy: Hanamura, Y. (1999). Occurrence of *Acetes sibogae* Hansen (Crustacea: Decapoda: Sergestidae) in Western Australia, with notes on the northern Australian population. *Rec. West. Aust. Mus.* **19**: 465–468 [465].

Distribution: NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, NE coast), WA (Lower W coast); Indo-west Pacific Ocean (SW India to Indonesia and Philippines).
Ecology: estuarine, pelagic; shallow coastal waters, marine and brackish.
Reference: Davie, P. (1998). *Wild Guide to Moreton Bay.* Wildlife and habitats of a beautiful Australian coast — Noosa to the Tweed. Brisbane : Queensland Museum xxiv 408 pp. [42] (colour photograph, as *A. australis*).

Petalidium Bate, 1881

Petalidium Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [172, 194] [gender masculine].
Type species: *Petalidium foliaceum* Bate, 1881 by monotypy.

Extralimital distribution: Atlantic, Indo-Pacific Oceans, Antarctica.

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [191].

Petalidium foliaceum Bate, 1881

Petalidium foliaceum Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [194].
Type data: syntypes BMNH*.
Type locality: off Marion Is., S Indian Ocean [46°46'S 45°31'E], south of Australia [47°25'S 130°22'E].

Distribution: TAS (S oceanic); Aust. Antarctic Terr., southern circumpolar, South Atlantic and S Indian Oceans off South Africa.
Ecology: bathypelagic, mesopelagic, oceanic province.
References: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [63] (synonymy and review of distribution); Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [192] (figure).

Sergestes H. Milne Edwards, 1830

Sergestes Milne Edwards, H. (1830). Description des genres *Glaucothoe, Sicyonie, Sergeste* et *Acète*. *Ann. Sci. Nat.* **19**: 333–352, 4 pls [348] [gender masculine].
Type species: *Sergestes atlanticus* Milne Edwards, 1830 by monotypy.

Acheles Cocco, A. (1832). Su di alcuni nuovi crustacei de' mari di Messina. Lettera del dott. Anastasio Cocco al celebre dott. William Elford Leach uno de' conservatori del Museo Britannico in Londra. *Effem. scient. letter. Sicilia* **2**: 203–209 [204].
Type species: *Acheles arachnipodus* Cocco, 1832 by monotypy.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [194].

Extralimital distribution: Atlantic-Indo-west Pacific Oceans. See: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91.

Sergestes arcticus Krøyer, 1859

Sergestes arcticus Krøyer, H. (1859). Forsög til en monographisk Fremstilling af Kraebsdyrslaegten *Sergestes*. Med. Bemaerkninger om Dekapodernes Höreredskaber. *K. Dan. Vidensk. Selsk. Skr. (5)***4**: 217–303 [240].
Type data: type status unknown ZMUC* .
Type locality: N Atlantic.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), SA (S oceanic), TAS (S oceanic), WA (S oceanic); Atlantic, Mediterranean, off South Africa, E Pacific off Chile, New Zealand, Tasman Sea.
Ecology: pelagic, bathypelagic, mesopelagic.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Progr. Ser.* **12**: 175–184 (Australian distribution); Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [55] (review of literature).

Sergestes armatus Krøyer, 1855

Sergestes armatus Krøyer, H. (1855). Bidrag til Kundskab om Kraebsdyrslaegten *Sergestes* Edw. *K. Dan. Vidensk. Selsk. Skr.* **1855**: 1–13 [10].
Type data: type status unknown ZMUC* .
Type locality: tropical Atlantic.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), WA (S oceanic); S oceanic, Atlantic, south-west Indian Ocean, north of the Crozet Islands, east Indian Ocean from south of Australia, west and central Pacific, Tasman Sea.

Ecology: bathypelagic, epipelagic, mesopelagic, oceanic province; day depth 280–2046 m, night depth 130–172 m.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184; Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [57] (review of distribution).

Sergestes atlanticus H. Milne Edwards, 1830

Sergestes atlanticus Milne Edwards, H. (1830). Description des genres *Glaucothoe*, *Sicyonie*, *Sergeste* et *Acète*. *Ann. Sci. Nat.* **19**: 333–352, 4 pls [349].
Type data: syntypes MNHP*.
Type locality: N Atlantic.

Sergestes frisii Krøyer, H. (1859). Forsög til en monographisk Fremstilling af Kraebsdyrslaegten *Sergestes*. Med. Bemaerkninger om Dekapodernes Höreredskaber. *K. Dan. Vidensk. Selsk. Skr. (5)***4**: 217–303 [235 tab. 1, fig. 1a–v].
Type data: syntypes ZMUC CRU5296.
Type locality: Atlantic Ocean (4°30'N 21°30'W; 20°N 36°W; 29°N 32°W; 34°N 34°W).

Sergestes ancylops Krøyer, H. (1859). Forsög til en monographisk Fremstilling af Kraebsdyrslaegten *Sergestes*. Med. Bemaerkninger om Dekapodernes Höreredskaber. *K. Dan. Vidensk. Selsk. Skr. (5)***4**: 217–303 [262 Tab. 3 fig. 8a–e].
Type data: syntypes ZMUC CRU6470.
Type locality: 'open Atlantic Ocean' at 13°N 27.5°W.

Sergestes ovatoculus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [408 pl. 74 fig. 2].
Type data: syntypes BMNH*.
Type locality: N Atlantic.

Taxonomic decision for synonymy: Hansen, H.J. (1919). The Sergestidae of the Siboga-Expedition. *Siboga Exped.* **38**: 1–65 5 pls [8].

Distribution: NSW (SE oceanic); Atlantic, SW Indian and W Pacific Oceans.
Ecology: bathypelagic, epipelagic, mesopelagic, oceanic province.
Reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [196] (recorded from 'eastern Australia').

Sergestes disjunctus Burkenroad, 1940

Sergestes disjunctus Burkenroad, M.D. (1940). Preliminary descriptions of twenty-one new species of pelagic Penaeidea (Crustacea Decapoda) from the Danish Oceanographic Expedition. *Ann. Mag. Nat. Hist.* **6**: 35–54 [38].
Type data: holotype ZMUC ♂*.
Type locality: off New Zealand (*Dana* Stn 3630).

Distribution: Australian Antarctic Territory, NSW (SE oceanic), SA (S oceanic), WA (S oceanic); off New Zealand, off E Australia, in the Tasman Sea, south of WA and off South Africa, SE Atlantic.
Ecology: epipelagic, mesopelagic, oceanic province.
Reference: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [57] (Australian records).

Sergestes pectinatus Sund, 1920

Sergestes pectinatus Sund, O. (1920). Peneides and stenopides from the "*Michael Sars*" North Atlantic Deep-Sea Expedition 1910. *Rep. Scient. Results Michael Sars N. Atlant. Deep* **3**(7): 1–32 [24 figs 42, 43].
Type data: syntypes*.
Type locality: N Atlantic Ocean.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), WA (S oceanic); SW Indian Ocean, E Pacific, E Atlantic.
Ecology: epipelagic, mesopelagic, oceanic province.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184 (Australian records); Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [58] (synonymy and review of distribution).

Sergestes sargassi Ortmann, 1893

Sergestes sargassi Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [34 pl. 3 fig. 1].
Type data: type status unknown*.
Type locality: Atlantic Ocean.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), SA (Great Australian Bight, S Gulfs coast, S oceanic); Atlantic, off Madeira and in Mediterranean Sea, Indo-Pacific Oceans.
Ecology: epipelagic, mesopelagic, oceanic province.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184 (Australian record); Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [59] (synonymy and review of distribution).

Sergestes seminudus Hansen, 1919

Sergestes seminudus Hansen, H.J. (1919). The Sergestidae of the Siboga-Expedition. *Siboga Exped.* **38**: 1–65 5 pls [18 pl. 1 figs 7a–c, pl. 2 figs 1a–f].
Type data: syntypes ZMA numerous specimens*.
Type locality: Indonesia (*Siboga* Stns 66, 144, 148, 157, 168, 177, 185, 189, 194–197, 203, 223, 230, 276).

Distribution: QLD (NE oceanic); Arabian Sea, Indonesia, Japan, NW Pacific.
Ecology: bathypelagic, epipelagic, mesopelagic.
References: Sakai, K. & Nakano, T. (1985). Studies on the genus *Sergestes* (Crustacea, Decapoda) II. *Sergestes seminudus* Hansen, 1919 and *Sergestes prehensilis* Bate, 1881. *Bull. Shikoku Women's Univ., Tokushima* **4**(2): 17–35 [18] (redescribed and figured); Davie, P., this work (it appears that the record by Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 of *S. corniculum* Krøyer from 'Cape York' is attibutable to this closely related species; *S. corniculum* is now considered to be a synonym of *S. arachnipodus* (Cocco, 1832) which is restricted to the Atlantic Ocean and Mediterranean).

Sergestes stimulator Burkenroad, 1940

Sergestes stimulator Burkenroad, M.D. (1940). Preliminary descriptions of twenty-one new species of pelagic Penaeidea (Crustacea Decapoda) from the Danish Oceanographic Expedition. *Ann. Mag. Nat. Hist.* **6**: 35–54 [41].
Type data: holotype ZMUC ♂*.
Type locality: off New South Wales, Australia (*Dana* Stn 3656).

Distribution: NSW (SE oceanic); known only from limital area.
Ecology: oceanic province, pelagic.

Incertae sedis

Sergestes dorsispinalis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [394 pl. 72 fig. 1].
Type data: holotype BMNH (could not be located as part of revisionary studies by T. Kikuchi (in litt.); Dr Kikuchi believes, from Bate's description, that the original material was probably a juvenile stage of *Sergestes arcticus* Krøyer).
Type locality: S of Australia.

Sergestes laterodentatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [395].
Type data: holotype BMNH (could not be located as part of revisionary studies by T. Kikuchi (in litt.); Dr Kikuchi believes, from Bate's description, that the original material was probably the mastigopus stage of *Sergestes arcticus* Krøyer).
Type locality: S of Australia.

Sergestes parvidens Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [409 pl. 74 fig. 3].

Type data: syntypes (probable) BMNH (BMNH 1 specimen bottle label indicates identified by Hansen as mastigopus stage of *Sergestes vigilax*; BMNH 1 specimen (bottle label indicates identified by Hansen as probably *Sergestes oculatus* or *S. incertus*; T. Kikuchi (in litt.) has reported examining the two remaining syntypes and believes them to be impossible to identify to species).
Type locality: Atlantic Ocean, Hawai'i (as Sandwich Islands), Sydney and Wellington, Teneriffe to St Thomas, Canary Islands, NE Atlantic (Challenger Expedition), Cape York (Challenger Expedition).

Sergia Stimpson, 1860

Sergia Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [46] [gender feminine].
Type species: *Sergia remipes* Stimpson, 1860 by monotypy.

Extralimital distribution: tropical and temperate seas worldwide.

Generic reference: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [198].

Sergia japonica (Bate, 1881)

Sergestes japonicus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [194].
Type data: syntypes BMNH 88.22.3 ♀.
Type locality: Japan and Philippines.

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: continental slope, mesopelagic, oceanic province; to 1000 m depth.
References: Sakai, K. & Nakano, T. (1983). Studies on the genus *Sergestes* (Crustacea, Decapoda) I. *Sergestes* (*Sergia*) *japonicus* Bate, 1881 and *Sergestes* (*Sergia*) *mollis* Smith, 1884. *Res. Crust.* **12**: 97–110 [98] (redescribed and figured); Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [200] (distribution information).

Sergia laminata (Burkenroad, 1940)

Sergestes laminatus Burkenroad, M.D. (1940). Preliminary descriptions of twenty-one new species of pelagic Penaeidea (Crustacea Decapoda) from the Danish Oceanographic Expedition. *Ann. Mag. Nat. Hist.* **6**: 35–54 [53].
Type data: holotype ZMUC ♂*.
Type locality: Indian Ocean off Madagascar (*Dana* Stn 3933).

Sergestes (Sergia) guineensis Crosnier, A. & Forest, J. (1973). Les crevettes profondes de l'Atlantique oriental tropical. *Faune Trop.* **19**: 1–409 [343 fig. 118].
Type data: holotype MNHP ♂, paratype(s) MNHP ♂.
Type locality: off the Congo, W coast of Africa, Atlantic Ocean [5°25'S 10°00'E].

Taxonomic decision for synonymy: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [60].

Distribution: NSW (SE oceanic), WA (S oceanic); Atlantic and Indo-west to central Pacific Oceans.
Ecology: bathypelagic, mesopelagic, oceanic province; to 2500 m depth.
Reference: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184.

Sergia potens (Burkenroad, 1940)

Sergestes potens Burkenroad, M.D. (1940). Preliminary descriptions of twenty-one new species of pelagic Penaeidea (Crustacea Decapoda) from the Danish Oceanographic Expedition. *Ann. Mag. Nat. Hist.* **6**: 35–54 [48].
Type data: holotype ZMUC ♂.
Type locality: off South Africa (*Dana* Stn 3975).

Distribution: Australian Antarctic Territory, WA (S oceanic); off South Africa, off Mozambique in the Indian Ocean, SE Indian Ocean south of Australia, off New Zealand.
Ecology: bathypelagic, mesopelagic, oceanic province.
Reference: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [61].

Sergia prehensilis (Bate, 1881)

Sergestes prehensilis Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [193].
Type data: syntypes BMNH*.
Type locality: off Japan.

Sergestes gloriosus Stebbing, T.R.R. (1905). South African Crustacea, Pt III. *Mar. Invest. S. Afr.* **IV**: 21–123 pls 17–26 [84 pls 22, 23].
Type data: holotype SAM*.
Type locality: off South Africa.

Sergestes fujiyamaensis Nakazawa, K. (1932). On three species of *Sergestes* found in Suruga Bay. *Zool. Mag. (Tokyo)* **44**: 31–32 [32].
Type data: type status unknown*.
Type locality: Suruga Bay, Japan.

Taxonomic decision for synonymy: Sakai, K. & Nakano, T. (1985). Studies on the genus *Sergestes* (Crustacea, Decapoda) II. *Sergestes seminudus* Hansen, 1919 and *Sergestes prehensilis* Bate, 1881. *Bull. Shikoku Women's Univ., Tokushima* **4**(2): 17–35 [26] (also redescribed and figured).

Distribution: Australian Antarctic Territory, NSW (SE oceanic), WA (S oceanic); SE Atlantic Ocean, off South Africa, S Indian Ocean off Mozambique, NW Pacific off Japan, west and central Pacific Ocean.
Ecology: abyssopelagic, bathypelagic, mesopelagic, oceanic province.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184; Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [62].

Sergia scintillans (Burkenroad, 1940)

Sergestes scintillans Burkenroad, M.D. (1940). Preliminary descriptions of twenty-one new species of pelagic Penaeidea (Crustacea Decapoda) from the Danish Oceanographic Expedition. *Ann. Mag. Nat. Hist.* **6**: 35–54 [43].
Type data: holotype ZMUC ♂*.
Type locality: off western Sumatra (*Dana* Stn 3622).

Distribution: Australian Antarctic Territory, NSW (SE oceanic), WA (S oceanic); Tasman Sea, off South Africa, off W Sumatra, Japan, central Pacific and near Hawai'i, off Baja California.
Ecology: bathypelagic, mesopelagic, oceanic province.
References: Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184; Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [62].

Sicyonella Borradaile, 1910

Aphareus Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [117] [reissued and translated by F.D. Por, 1961; junior homonym of *Aphareus* Cuvier & Valenciennes, 1830 (Pisces)].
Type species: *Aphareus inermis* Paul'son, 1875 by monotypy.

Sicyonella Borradaile, L.A. (1910). Penaeidae, Stenopidea and Reptantia from the Western Indian Ocean. *Trans. Linn. Soc. Lond.* **13**(2): 257–264 16 pls [259] [gender feminine].
Type species: *Sicyonella maldivensis* Borradaile, 1910 by monotypy.

Aphareocaris Calman, W.T. (1913). On *Aphareocaris* nom. nov. (*Aphareus*, Paul'son), a genus of the Crustacean family Sergestidae. *J. Linn. Soc. Lond. Zool.* **32**: 219–223 [219] [*nom. nov.* for *Aphareus* Paul'son, 1875].

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [200].

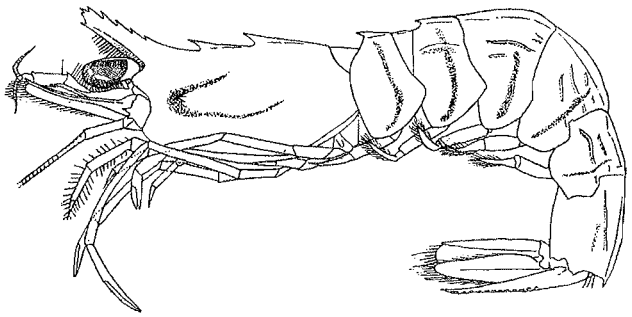
Extralimital distribution: Indo-west Pacific (Red Sea to Micronesia).

Sicyonella elegans (Calman, 1913)

Aphareocaris elegans Calman, W.T. (1913). On *Aphareocaris* nom. nov. (*Aphareus*, Paul'son), a genus of the Crustacean family Sergestidae. *J. Linn. Soc. Lond. Zool.* **32**: 219–223 [219 pl. 16 figs 1–16].
Type data: holotype BMNH ♂.
Type locality: Thursday Is., Torres Straits.

Distribution: QLD (NE coast); known only from type locality.
Ecology: pelagic.

SICYONIIDAE



Sicyonia australiensis [from Hanamura & Wadley 1998: fig. 1]

INTRODUCTION

This family contains a single genus, *Sicyonia*, with four species in Australian waters. Hanamura & Wadley (1998) provided a key to the Indo-West Pacific species.

Diagnosis

Body thickset. Integument rigid, pubescent. Rostrum armed with dorsal and usually apical teeth, lacking ventral teeth, short, not overreaching antennular peduncle. Carapace without postorbital and pterygostomian spines, bearing or lacking antennal spine; cervical sulcus very weak or absent; hepatic carina weak, branchiocardiac carina strong to barely distinct. Abdomen marked by transverse sulci, often tuberculate. Telson armed with pair of lateral fixed subterminal spines. Eye with optic calathus articulated directly to basal segment of eyestalk, intermediate segment not apparent, without mesial tubercle; basal segment without ocular scale; ocular plate bearing styliform mesial projection (stylet). Antennule with prosartema rudimentary, flagella short, cylindrical. Third through fifth pleopods uniramous, lacking endopods (unique in Penaeoidea). Exopod on first maxilliped, absent from second and third maxillipeds and all pereiopods. Pleurobranchia on somite IX only; rudimentary arthrobranchia on somite VII, two arthrobranchiae on somites VIII through XIII, antero-ventral one of XIII rudimentary; podobranchia on second maxilliped; epipods on first and second maxillipeds and first three pereiopods. Petasma closed, its lateral lobes heavily sclerotised. Second pleopods in male bearing appendix masculina only. Thelycum closed. (After Pérez Farfante & Kensley 1997).

References

Hanamura, Y. & Wadley, V. (1998). A new species of the rock shrimp genus *Sicyonia* (Decapoda, Sicyoniidae) from South-Eastern Australia, with a key to the Indo-West Pacific species. *Crustaceana* **71**(6): 700–711

Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233

SICYONIIDAE Ortmann, 1898

Sicyoninae Ortmann, A.E. (1898). Gliederfüssler: Arthropoda. *in Dr. H. G. Bronn's Klassen und Ordnungen des Tierreichs* Vol. 5(2), Crustacea, Malacostraca, (47–52) [Systematik] pp. 1057–1168 [1121] [placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1956). Direction 54. Addition to the *Official List of Family-Group Names in Zoology*, or as the case may be, to the *Official Index of Rejected and Invalid Family-Group Names in Zoology* of the family-group names involved in the cases dealt with in Volume 12 of the *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature*, other than family-group names already dealt with in those *Opinions*. *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**(26): 457–470 (460)].

Sicyonia H. Milne Edwards, 1830

Sicyonia Milne Edwards, H. (1830). Description des genres *Glaucothoe*, *Sicyonie*, *Sergeste* et *Acète*. *Ann. Sci. Nat.* **19**: 333–352, 4 pls [339] [placed on the Official List of Generic Names in Zoology, Name No. 922, see International Commission on Zoological Nomenclature (1956). Opinion 382. Validation, under the Plenary Powers, of the generic name *Sicyonia* Milne Edwards (H.), 1830 (Class Crustacea, Order Decapoda) and action consequential thereon. *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**(3): 43–58 (45), gender feminine].
Type species: *Sicyonia sculpta* H. Milne Edwards, 1830 by subsequent designation, see Desmarest, E. (1858). Crustacés, Mollusques, Zoophytes. *In*, Chenu, J.C. *Encyclopédie d'Histoire Naturelle*, 1853–1880, Paris 22 vols [42].

Ruvulus De Natale, G. (1850). *Descrizione zoologica d'una nuova specie di Plojaria e di alcuni crostacei del porto di Messina* con poche considerazioni generali sulla natura delle appendici aculeiformi delle pinati e degli animali. Messina : Giuseppe Fiumara 31 pp., appendix [20] [junior objective synonym of *Sicyonia* H. Milne Edwards, 1830; gender masculine].
Type species: *Sicyonia sculpta* H. Milne Edwards, 1830 by monotypy.

Synhimantites Boeck, A. (1864). Beskrivelse og fremlagde Tegninger af 4 norske Decapoer, undersègte af Overlaege Danielssen og ham. *Forh. VidenskSelsk. Krist* **1863**: 189–190 [189] [gender masculine].
Type species: *Synhimantites typicus* Boeck, 1864 by monotypy.

Eusicyonia Stebbing, T.R.R. (1914). South African Crustacea. Part VII. *Ann. S. Afr. Mus.* **15**: 1–112 [25] [replacement name for *Sicyonia* H. Milne Edwards, 1830; gender feminine].

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [153].

Extralimital distribution: Indo-west Pacific, E Pacific, E and west Atlantic, Mediterranean. See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.

Generic reference: Hanamura, Y. & Wadley, V. (1998). A new species of the rock shrimp genus *Sicyonia* (Decapoda, Sicyoniidae) from South-Eastern Australia, with a key to the Indo-West Pacific species. *Crustaceana* **71**(6): 700–711 (key to species).

Sicyonia australiensis Hanamura & Wadley, 1998

Sicyonia australiensis Hanamura, Y. & Wadley, V. (1998). A new species of the rock shrimp genus *Sicyonia* (Decapoda, Sicyoniidae) from South-Eastern Australia, with a key to the Indo-West Pacific species. *Crustaceana* **71**(6): 700–711 [700 figs 1–3].
Type data: holotype AM ♀, paratypes AM ♂ (as allotype), AM 5♂ 16♀, MNHP Na13437 1♂ 1♀, MVZ 4♂ 5♀, AM ♂ 2♀, NSMT ♀.
Type locality: Bass Strait (*Southern Surveyor* 6/96 Stn 188).

Distribution: TAS (Bass Strait); eastern Bass Strait.
Ecology: benthic, continental shelf, silt bottom; inhabits mud to soft bottoms, depth between 120 and 230 m.

Sicyonia bispinosa De Haan, 1844

Sicyonia bispinosa De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [195 pl. 45 fig. 9] [published from 1833–1850, Atlas dated 1844].
Type data: lectotype RMNH D1105 1 specimen.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc. [212].
Type locality: Japan.

Distribution: QLD (NE coast); Japan, Malay Archipelago.
Ecology: sublittoral.

Sicyonia cristata (De Haan, 1844)

Ridgeback Rock Shrimp (FAO)

Hippolyte cristatus De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [194 pl. 45 fig. 10] [published from 1833–1850, Atlas dated 1844].
Type data: lectotype RMNH D21088 1 dry specimen, paralectotype(s) RMNH D5562 4 dry specimens.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea*. Japan : Shimoda Printing Inc. [212].
Type locality: Japan.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Melville Island, east Indo-west Pacific Oceans.

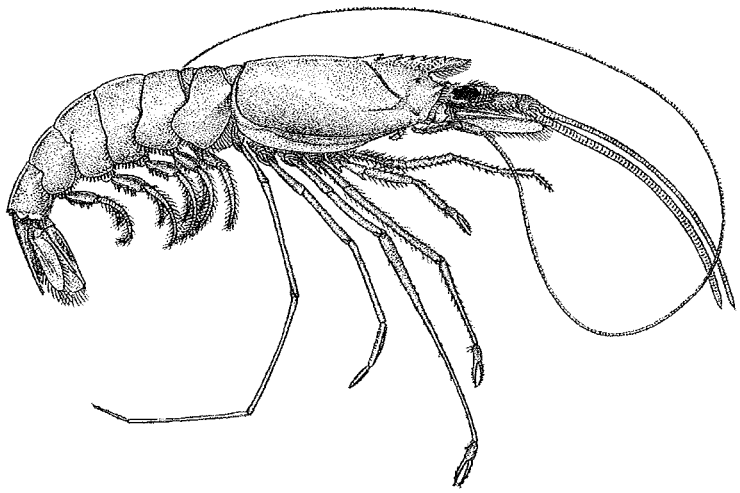
Ecology: sublittoral, continental shelf, continental slope, mud bottom; reported from 350 m, but in Australia recorded from less than 60 m over mud bottom.
Reference: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [60].

Sicyonia ocellata Stimpson, 1860

Sicyonia ocellata Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [43].
Type data: syntypes BMNH 61.44 2 dry specimens.
Type locality: Hong Kong.

Distribution: QLD (NE coast); Torres Strait, Sri Lanka, Singapore, Indonesia, South China Sea.
Ecology: subtidal.

SOLENOCERIDAE



Solenocera australiana [from Pérez Farfante & Grey 1980: fig. 1]

INTRODUCTION

The Solenoceridae mostly inhabit offshore waters ranging from the mid-continental shelf to the oceanic floor (from several hundred to over 1000 metres), but a number of *Solenocera* species and *Pleoticus muelleri* from the West Atlantic may be found in shallower waters. All genera, except *Pleoticus*, are known from Australian waters. Dall (1999) revised Australian solenocerids and provided keys to all genera and to the Indo-west Pacific species. Earlier works dealing specifically with Australian taxa include those of Grey *et al.* (1983), Kensley *et al.* (1987), Pérez Farfante & Grey (1980), and Pérez Farfante & Kensley (1985).

The most important diagnostic features are: the presence of a post-orbital spine; the cervical sulcus reaching to, or almost to, the mid-dorsum; the long antennular flagella; and a spur-like projection on the outer side of the basal segment of the appendix masculina.

Diagnosis

Rostrum laterally compressed, usually shorter than antennular peduncle, mostly with more than three dorsal teeth; ventral teeth usually absent, but if present, restricted to tip. Antennular flagella usually longer than peduncle, often longer than carapace. Prosartema variable, usually prominent, sometimes reduced to a small lobe; ocular scale present, but sometimes poorly developed. Cervical sulcus well defined, reaching or nearly reaching to mid-dorsum of carapace. A postorbital spine (sometimes termed postantennal spine) and a hepatic spine always present; antennal spine usually present, other carapace spines variable. Abdomen wholly or partially carinate. Telson with two fixed subapical spines, occasionally with movable lateral spines as well; very rarely without spines. Exopods present on thoracic somites 1–7, in some genera on 8 as well, those on the pereiopods sometimes reduced. Petasma tubular and simple; appendix masculina with two endites and with a projection on outer side of basal segment; thelycum open, often a simple basin shape. Pleurobranchs on thoracic somites 3–8; usually with a single arthrobranch, but sometimes two, which may be small or rudimentary on somite 1; two well-developed arthrobranchs on somites 2–7; a podobranch on somite 2, except in *Haliporus* where they are on 2 and 3, sometimes with very small or rudimentary podobranchs on 4–6; epipods on 1–7.
(After Dall 1999).

References

Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587

Grey, D.L., Dall, W. & Baker, A. (1983). *A Guide to the Australian Penaeid Prawns.* Darwin : Northern Territory Government Printing Office 140 pp. 51 colour pls

Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331

Pérez Farfante, I. & Grey, D.L. (1980). A new species of *Solenocera* (Crustacea: Decapoda: Solenoceridae) from Northern Australia. *Proc. Biol. Soc. Wash.* **93**(2): 421–434

Pérez Farfante, I. & Kensley, B. (1985). *Cryptopenaeus crosnieri*, a new species of shrimp, and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. *Proc. Biol. Soc. Wash.* **98**(1): 281–287

SOLENOCERIDAE Woodmason, 1891

Solenocerinae Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [275] [as Solenocerina; name in the corrected spelling, Solenocerinae, placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1961). Opinion 611. *Parapenaeus* S.I. Smith, 1885 (Crustacea, Decapoda); validation under the Plenary Powers and interpretation of *Peneus membranaceus* Risso, 1816. *Bull. Zool. Nomencl.* **18**(5): 306–308 (307)].

Cryptopenaeus de Freitas, 1979

Cryptopenaeus de Freitas, A.J. (1979). A new genus and species of the penaeoid family Solenoceridae (Crustacea, Decapoda) from south-east African waters. *Ann. S. Afr. Mus.* **77**: 123–131 [123].
Type species: *Cryptopenaeus catherinae* De Freitas, 1979 by monotypy.

Crassipenaeus Liu, J.Y. & Zhong, Z. (1983). On a new genus and two new species of solenocerid shrimps (Crustacea, Penaeoides) from South China Sea. *Chin. J. Ocean. Limn.* **1**: 171–591 [171].
Type species: *Crassipenaeus sinensis* Liu & Zhenru, 1983 by original designation.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1985). *Cryptopenaeus crosnieri*, a new species of shrimp, and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. *Proc. Biol. Soc. Wash.* **98**(1): 281–287 [281].

Extralimital distribution: Indo-west Pacific Oceans. See: Pérez Farfante, I. & Kensley, B. (1985). *Cryptopenaeus crosnieri*, a new species of shrimp, and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. *Proc. Biol. Soc. Wash.* **98**(1): 281–287.
Species excluded from limital area: SOLENOCERIDAE: *Cryptopenaeus sinensis* Pérez Farfante & Kensley, 1985, see Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [557] (Australian specimens believed to be a synonym of *C. clevai* Crosnier, 1984).

Cryptopenaeus clevai Crosnier, 1984

Red Coral Prawn

Cryptopenaeus clevai Crosnier, A. (1984). Penaeoid shrimps (Benthesicymidae, Aristeidae, Solenoceridae, Sicyonidae) collected in Indonesia during the Corindon II and IV Expeditions. *Mar. Res. Indonesia* **24**: 19–47 [26 figs 1a–b, 2a–e, 3a].
Type data: holotype MNHP ♀.
Type locality: Piru Bay and Amboina [Ambon] Bay, Molluccas.

Distribution: WA (NW oceanic); Indonesia, Japan, Taiwan, New Caledonia, Wallis and Futuna Islands.
Ecology: mesopelagic, oceanic province; depth 300–540 m.
References: Pérez Farfante, I. & Kensley, B. (1985). *Cryptopenaeus crosnieri*, a new species of shrimp, and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. *Proc. Biol. Soc. Wash.* **98**(1): 281–287 [284 fig. 3] (*C. clevai* misidentified as *C. sinensis*); Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [557].

Cryptopenaeus crosnieri Pérez Farfante & Kensley, 1985

Cryptopenaeus crosnieri Pérez Farfante, I. & Kensley, B. (1985). *Cryptopenaeus crosnieri*, a new species of shrimp, and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. *Proc. Biol. Soc. Wash.* **98**(1): 281–287 [281 figs 1, 2].
Type data: holotype AM P32481 ♀, paratypes AM, USNM 189097, QM W15826 1 ♂ (as allotype).
Type locality: NE of North Solitary Island, NSW.

Distribution: NSW (SE oceanic), WA (NW oceanic); Kai [Kei] Island, Indonesia.
Ecology: continental slope, mesopelagic; 230–440 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [558].

Gordonella Tirmizi, 1960

Gordonella Tirmizi, N.M. (1960). Crustacea: Penaeidae Part II. Series Benthesicymae. *John Murray Exped. Scient. Rep.* **10**(7): 319–383 [372].
Type species: *Gordonella polyarthra* Tirmizi, 1960 (= *Haliporus villosus* Alcock & Anderson, 1894) by monotypy.

Extralimital distribution: Indo-west Pacific (Indian Ocean, Indonesia, E Australia, New Caledonia, SE Atlantic Ocean off Cape of Good Hope).

Generic reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [558].

Gordonella kensleyi Crosnier, 1988

Gordonella kensleyi Crosnier, A. (1988). Contribution à l'étude des genres *Haliporus* Bate, 1881 et *Gordonella* Tirmizi, 1960 (Crustacea Decapoda Penaeoidea). Description de deux espèces nouvelles. *Bull. Mus. Natn. Hist. Nat. Paris (A)***10**: 563–601 [597 figs 2e, 12b, 15h–i, 16g].
Type data: holotype MNHP Na 12399 ♀, paratypes SAM A10461 ♀, USNM 205715 ♀.
Type locality: New Caledonia [22°46'S 166°20'E].

Distribution: Lord Howe Island; Lord Howe Rise, New Caledonia, south of Mozambique, SE Atlantic off Cape of Good Hope.
Ecology: bathypelagic, continental slope, oceanic province; 1510–2450 m.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [559].

Gordonella paravillosa Crosnier, 1988

Gordonella paravillosa Crosnier, A. (1988). Contribution à l'étude des genres *Haliporus* Bate, 1881 et *Gordonella* Tirmizi, 1960 (Crustacea Decapoda Penaeoidea). Description de deux espèces nouvelles. *Bull. Mus. Natn. Hist. Nat. Paris (A)***10**: 563–601 [589 figs 2d, 3c, 12a, 13, 14, 15a–e, 16a–f].
Type data: holotype MTQ ♀, paratypes QM W13224 ♀, USNM 205716 ♂.
Type locality: NE Queensland [17°19.58'S 147°47.61'E].

Distribution: QLD (NE oceanic); Indonesia (Celebes region), New Caledonia.
Ecology: bathypelagic, continental slope, oceanic province; from 1147–1200 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [559].

Hadropenaeus Pérez Farfante, 1977

Hadropenaeus Pérez Farfante, I. (1977). American solenocerid shrimps of the genera *Hymenopenaeus*, *Haliporoides*, *Pleoticus*, *Hadropenaeus* new genus, and *Mesopenaeus* new genus. *Fish. Bull. U.S. Natn. Ocean. Atmos.* **75**(2): 261–346 [315] [gender masculine].
Type species: *Hymenopenaeus modestus* Smith, 1885 by original designation.

Extralimital distribution: Western Atlantic, Indo-west Pacific. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [164].

Hadropenaeus lucasii (Bate, 1881)

Striped Coral Prawn

Solenocera lucasii Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [185].
Type data: holotype BMNH* (probable depository institution).
Type locality: Kai [Kei] Is., south of New Guinea.

Distribution: NSW (SE oceanic), QLD (NE oceanic), WA (NW coast, NW oceanic); in Australia to 28°S, Indo-west Pacific Oceans.
Ecology: continental slope, mesopelagic; depths 180–629 m, mainly 300–430 m.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [560].

Haliporoides Stebbing, 1914

Haliporoides Stebbing, T.R.R. (1914). South African Crustacea. Part VII. *Ann. S. Afr. Mus.* **15**: 1–112 [20].
Type species: *Haliporoides triarthrus* Stebbing, 1914 by monotypy.

Parahaliporus Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [207].
Type species: *Haliporus sibogae* de Man, 1907 by original designation.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1985). *Cryptopenaeus crosnieri*, a new species of shrimp, and a new record of *C. sinensis* (Penaeoidea: Solenoceridae) from Australian waters. *Proc. Biol. Soc. Wash.* **98**(1): 281–287 (also for distribution, p. 165)

Extralimital distribution: Indo-Pacific Oceans.

Haliporoides cristatus Kensley, Tranter & Griffin, 1987

Haliporoides cristatus Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [265 figs 1, 2, 5g–l].
Type data: holotype AM P35893 ♂, paratypes AM P35894 11 specimens, AM P21588 1♂, AM P21699 1♂, USNM 211386 1♂ 4♀, USNM 211387 1♂ 4♀.
Type locality: NE of Point Danger, QLD.

Distribution: NSW (SE oceanic), QLD (SE oceanic); known only from limital area.
Ecology: continental slope, mesopelagic; depth 250–629 m.

Haliporoides sibogae de Man, 1907

Jack-knife Shrimp, Pink Prawn, Royal Red Prawn

Haliporus sibogae de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the 'Siboga-Expedition' II. *Notes Leyden Mus.* **29**: 127–145 [138].
Type data: type status unknown ZMA*.
Type locality: from four localities from East Flores Sea to Kai [Kei] Islands.

Haliporoides sibogae australiensis Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [269 figs 3, 4, 5a–f].
Type data: holotype AM P34381 ♂, paratypes AM P35891 1♂ 8♀, AM P33023 1♀, AM P30798 3 specimens, AM P19149–50 2♀, USNM 211389 2♂, USNM 211388 1♂ 5♀.
Type locality: E of Broken Bay, NSW.

Taxonomic decision for synonymy: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [562].

Distribution: NSW (Lower E coast), NT (N coast), QLD (Central E coast), WA (NW coast); Indo-west Pacific Oceans (Madagascar to Indonesia, South China Sea, Japan, New Zealand).
Ecology: abyssopelagic, continental shelf, continental slope, subtidal, trade (fished commercially off eastern Australia); from 100–900 m depth, but all Australian records from deeper than 350 m.

Haliporus Bate, 1881

Haliporus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [185] [gender masculine].
Type species: *Haliporus curvirostris* Bate, 1881 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [542].

Extralimital distribution: Indo-Pacific Oceans.
Generic references: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [168]; Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [564] (key to species).

Haliporus taprobanensis Alcock & Anderson, 1899

Red-backed Coral Prawn

Haliporus taprobanensis Alcock, A.W. & Anderson, A.R.S. (1899). Natural history notes from H.M. royal Indian marine survey ship "Investigator", Commander T.H. Heming, R.N., commanding. Ser. III, No. 2. An account of the deep-sea Crustacea dredged during the surveying-season of 1897–1898. *Ann. Mag. Nat. Hist. (7)***3**: 1–27, 278–292 [280].
Type data: syntypes ZSI* (probable depository institution).
Type locality: Gulf of Manaar and Cape Comorin, southern India.

Hymenopenaeus kannemeyeri Kensley, B. (1977). The South African Museum's *Meiring Naude* Cruise. Part 5. Crustacea, Decapoda, Reptantia and Natantia. *Ann. S. Afr. Mus.* **72**(2): 13–44 figs 1–16 [16, 27 fig. 7].
Type data: holotype SAM*.
Type locality: off South Africa [28°21.9'S 32°34.6'E].

Taxonomic decision for synonymy: Crosnier, A. (1988). Contribution à l'étude des genres *Haliporus* Bate, 1881 et *Gordonella* Tirmizi, 1960 (Crustacea Decapoda Penaeoidea). Description de deux espèces nouvelles. *Bull. Mus. Natn. Hist. Nat. Paris (A)***10**: 563–601 [576].

Distribution: 200 m bathymetric (N coast); South Africa, Madagascar, south of India, Indonesia, Philippines.
Ecology: mesopelagic, abyssopelagic, continental slope; depth 300–1650 m.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [564].

Hymenopenaeus Smith, 1882

Hymenopenaeus Smith, S.I. (1882). Report on the Crustacea. Part 1. Decapoda. Reports on the results of dredging, under the supervision of Alexander Agassiz, on the east coast of the United States, during the summer of 1880, by the U.S. Coast Survey Steamer "Blake", Commander J.R. Bartlett, U.S.N., commanding. *Bull. Mus. Comp. Zool.* **10**(1): 1–108 [91] [gender masculine].
Type species: *Hymenopenaeus debilis* Smith, 1882 by monotypy.

Extralimital distribution: Atlantic-Indo-Pacific Oceans.
See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [172].
Generic reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [565] (key to Indo-west Pacific species).

Hymenopenaeus equalis (Bate, 1888)

Haliporus equalis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [285 pl. 41 fig. 1].
Type data: syntypes BMNH*.
Type locality: Sulu Sea, Philippines (*Challenger* Stn 200).

Distribution: NT (N coast), WA (NW oceanic); Indo-west Pacific (Arabian Sea, Sri Lanka, Indonesia, Japan, Philippines, Wallis and Futuna Islands, Hawai'i).
Ecology: continental slope, mesopelagic, oceanic province; from 300–650 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [565].

Hymenopenaeus halli Bruce, 1966

Hymenopenaeus halli Bruce, A.J. (1966). *Hymenopenaeus halli* sp. nov., a new species of penaeid prawn from the South China Sea (Decapoda, Penaeidae). *Crustaceana* **11**(2): 216–224 [216 figs 1, 2a–e].
Type data: holotype BMNH 1965.1.7.1 ♂.
Type locality: South China Sea.

Distribution: NSW (SE oceanic), QLD (SE oceanic); Indo-west Pacific Oceans (Madagascar to Indonesia, South China Sea, Philippines, Japan, Wallis and Futuna Islands).
Ecology: continental slope, mesopelagic, oceanic province; from 450–1000 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [566].

Hymenopenaeus neptunus (Bate, 1881)

Haliporus neptunus Bate, C.S. (1881). On the Penaeidae. *Ann. Mag. Nat. Hist. (5)***8**: 169–196 pls 11–12 [191 pl. 42 fig. 3].
Type data: syntypes BMNH*.
Type locality: Moluccas, Indonesia (*Challenger* Stn 196).

Distribution: QLD (NE oceanic); Indo-west Pacific Oceans (Bay of Bengal, Indonesia, Philippines).
Ecology: bathypelagic, continental slope, mesopelagic, oceanic province; from 700–3197 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [567].

Hymenopenaeus propinquus (de Man, 1907)

Haliporus propinquus de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the "Siboga-Expedition" II. *Notes Leyden Mus.* **29**: 127–145 [140].
Type data: syntypes ZMA*.
Type locality: Ceram Sea, and off Bali, Indonesia.

Distribution: NSW (SE oceanic), NT (N coast), QLD (SE oceanic), WA (NW oceanic); Indo-west Pacific Oceans.
Ecology: bathypelagic, abyssopelagic, continental slope; 450–1200 m depth.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [275]; Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [568].

Mesopenaeus Pérez Farfante, 1977

Mesopenaeus Pérez Farfante, I. (1977). American solenocerid shrimps of the genera *Hymenopenaeus*, *Haliporoides*, *Pleoticus*, *Hadropenaeus* new genus, and *Mesopenaeus* new genus. *Fish. Bull. U.S. Natn. Ocean. Atmos.* **75**(2): 261–346 [331] [gender masculine].
Type species: *Pararteмesia tropicalis* Bouvier, 1905 by original designation.

Extralimital distribution: Indo-west Pacific, Western Atlantic.

Mesopenaeus brucei Crosnier, 1986

Mesopenaeus brucei Crosnier, A. (1986). Sur deux espèces du genre *Mesopenaeus* (Penaeoidea: Solenoceridae) de l'Océan Indien: *M. brucei* sp. nov. et *M. marine* Perez Farfante & Ivanov, 1982. *Indo-Malayan Zool.* **3**: 19–25 [20 figs 1a–f, 2a–b].
Type data: holotype NTM ♂, paratypes MNHP Na7667 ♀ (as allotype), RMNH D36213 1 specimen, USNM 222506*, NTM Cr.004564 ♀, NTM Cr.003028 2♂.
Type locality: Northwest Shelf, WA (F.R.V. *Soela* Cruise 184 Stn 55).

Distribution: NT (N coast), QLD (SE oceanic), WA (NW oceanic); Arafura Sea, Indonesia.
Ecology: continental slope, mesopelagic; from 260–360 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [569].

Solenocera Lucas, 1849

Solenocera Lucas, H. (1849). *Solenocera philippii. Revue Mag. Zool.* **1**(2): 300 [300] [Name No. 1444 on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1961). Opinion 611. *Parapenaeus* S.I. Smith, 1885 (Crustacea, Decapoda); validation under the Plenary Powers and interpretation of *Peneus membranaceus* Risso, 1816. *Bull. Zool. Nomencl.* **18**(5): 306–308 [306], gender feminine].
Type species: *Solenocera philippii* Lucas, 1849 (= *Peneus siphonoceros* Philippi, 1840 = *Penaeus membranaceous* Risso, 1816 = *Solenocera membranacea* (Risso, 1816)) by monotypy.

Parasolenocera Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [276].
Type species: *Parasolenocera annectens* Wood-Mason, 1891 by monotypy.

Transolenocera Burkenroad, M.D. (1934). The Penaeidea of Louisiana with a discussion of their world relationships. *Bull. Am. Mus. Nat. Hist.* **68**(2): 61–143 [69] [first introduced as a subgenus of *Solenocera* Lucas, 1849].
Type species: *Parasolenocera maldivensis* Borradaile, 1910 by original designation.

Taxonomic decision for synonymy: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233.

Extralimital distribution: Indo-west Pacific, eastern Pacific, Atlantic. See: Pérez Farfante, I. & Kensley, B. (1997). Penaeoid and sergestoid shrimps and prawns of the world. Keys and diagnoses for the families and genera. *Mém. Mus. natn. Hist. nat. Paris* **175**: 1–233 [180].
Generic reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [570] (key to Indo-west Pacific species).

Solenocera alfonso Pérez Farfante, 1981

Yellow Coral Prawn

Solenocera alfonso Pérez Farfante, I. (1981). *Solenocera alfonso*, a new species of shrimp (Penaeoidea: Solenoceridae) from the Philippines. *Proc. Biol. Soc. Wash.* **94**(2): 631–639 [631 figs 1–5].
Type data: holotype USNM 184022 ♀, paratypes USNM 184023 1 ♂ (as allotype), USNM 184024–184034 10 ♀ 10 ♂, RMNH D34578 1 ♂ 1 ♀.
Type locality: off Capitancillo Is., W of Leyte, Philippines.

Distribution: QLD (NE oceanic), WA (NW oceanic); Philippines, Indonesia.
Ecology: continental shelf, continental slope, epipelagic, mesopelagic, soft bottom; from 90–550 m depth.
References: Crosnier, A. (1989). Benthesicymidae, Aristeidae, Solenoceridae (Crustacea Penaeoidea). pp. 37–67 *in* Forest, J. (ed.) Résultats des Campagnes MUSORSTOM, Volume 5. *Mém. Mus. natn. Hist. nat. Paris (A)***144**: 1–385 [58] (recognised two 'forms' of this species, *S. alfonso* form *alfonso*, and *S. alfonso* form *inermis*, and according to Dall (1999) both are present in Australia; however, as these were not given subspecific status, they have no formal nomenclatural standing); Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [571].

Solenocera annectens (Wood-Mason, 1891)

Parasolenocera annectens Wood-Mason, J. (1891). Phylum Appendiculata. Branch Arthropoda. Class Crustacea. *In* Wood-Mason, J. & Alcock, A., Natural history notes from H.M. Indian marine survey steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. No. 21. Note on the results of deep sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***8**: 269–286 [276].
Type data: holotype ZSI* (probable depository institution).
Type locality: Andaman Sea [11°25'5"N 92°47'6"E].

Distribution: WA (N coast); Andaman Sea, Indonesia, Philippines.
Ecology: continental slope, mesopelagic, oceanic province; from 400–900 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [572].

Solenocera australiana Pérez Farfante & Grey, 1980

Solenocera australiana Pérez Farfante, I. & Grey, D.L. (1980). A new species of *Solenocera* (Crustacea: Decapoda: Solenoceridae) from Northern Australia. *Proc. Biol. Soc. Wash.* **93**(2): 421–434 [422 figs 1–7].
Type data: holotype USNM 173115 ♀, paratypes USNM 173117 ♂ (as allotype), USNM 9 specimens, AM P30979.
Type locality: N of Groote Eylandt, Gulf of Carpentaria.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); known only from limital area.
Ecology: epipelagic, subtidal; rock, coral and shell substrates, 15–24 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [572].

Solenocera barunajaya Crosnier, 1994

Solenocera barunajaya Crosnier, A. (1994). Crustacea Decapoda: Penaeoidea récoltés lors de la campagne Karubar en Indonésie. pp. 367–373 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 12. *Mém. Mus. natn. Hist. nat. Paris* **161**: 1–569 [355 figs 1a–c, 2a, 3a–c].
Type data: holotype MNHP*.
Type locality: Kai [Kei] Island, Arafura Sea.

Distribution: NT (N coast), WA (NW oceanic); Kai [Kei] and Tanimbar Islands, Arafura Sea.
Ecology: continental slope, mesopelagic, oceanic province; 240–370 m depth.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [573] (Australian records).

Solenocera bifurcata Dall, 1999

Solenocera bifurcata Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [574 fig. 14A–F].
Type data: holotype QM W2385 ♀, paratypes QM W18029 ♂ (as allotype), QM W4680 ♀.
Type locality: off Cape Moreton, SE Queensland.

Distribution: QLD (Central E coast, NE coast); known only from limital area.
Ecology: continental shelf, epipelagic; 162–170 m depth.

Solenocera choprai Nataraj, 1945

Solenocera choprai Nataraj, S. (1945). On two species of *Solenocera* (Crustacea Decapoda: Penaeidae) with notes on *Solenocera pectinata* (Spence Bate). *J. Asiat. Soc. Bengal* **11**(1): 91–98 [91 figs 1–4].
Type data: syntypes whereabouts unknown*.
Type locality: Arabian Sea.

Distribution: NSW (Central E coast), QLD (Central E coast, NE coast), WA (NW coast); Indo-west Pacific Oceans (Indian Ocean, Malaysia, Philippines, Indonesia, Arafura Sea).
Ecology: continental shelf, epipelagic; 50–200 m depth.
References: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [141] (extensive discussion of relationships and distinguishing characters; well figured); Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [576] (Australian records).

Solenocera comata Stebbing, 1915

Solenocera comatum Stebbing, T.R.R. (1915). South African Crustacea (Part VIII). *Ann. S. Afr. Mus.* **15**: 57–104 pls 8–25 [67 pls 13, 14].
Type data: syntypes SAM 1♂ 1♀*.
Type locality: off East London, E coast of South Africa.

Solenocera brevipes Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [246] [figs 1S, 8X, 20N, 27F–H, 45D, 66I–J, 72Q, W, 80A, 98H–J, 99, 100].
Type data: syntypes whereabouts unknown*.
Type locality: Japan.

Taxonomic decision for synonymy: Crosnier, A. (1989). Benthesicymidae, Aristeidae, Solenoceridae (Crustacea Penaeoidea). pp. 37–67 *in* Forest, J. (ed.) Résultats des Campagnes MUSORSTOM, Volume 5. *Mém. Mus. natn. Hist. nat. Paris (A)***144**: 1–385 [52].

Distribution: WA (N coast); Indo-west Pacific (SW Indian Ocean, Indonesia, Timor Sea, South China Sea, Philippines, Japan).
Ecology: continental shelf, continental slope, epipelagic, mesopelagic; 90–460 m depth.
Reference: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [138] (figures and full synonymy).

Solenocera faxoni de Man, 1907

Solenocera faxoni de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the "Siboga-Expedition" II. *Notes Leyden Mus.* **29**: 127–145 [136].
Type data: holotype ZMA ♀*.
Type locality: Kei Is., Indonesia.

Distribution: NSW (SE oceanic), NT (N coast), QLD (NE oceanic, SE oceanic), WA (NW oceanic, W oceanic); west Pacific Ocean (Indonesia to Japan).
Ecology: continental slope, mesopelagic, oceanic province; 200–400 m depth, uncommon species.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [577] (Australian records).

Solenocera koelbeli de Man, 1911

Solenocera koelbeli de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131 [48, 51].
Type data: syntypes whereabouts unknown*.
Type locality: Japan.

Solenocera depressa Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [237] [figs 8R, 27T-V, 45B, 66E–F, 72O, U, 80G, 96, 98AD, 100].
Type data: syntypes whereabouts unknown*.
Type locality: Japan.

Solenocera vietnamensis Starobogatov, Y.I. (1972). Penaeidae (Crustacea Decapoda) du golfe du Tonkin. *In*, Faouna Tonkinskava zaliva i ouslovia io soutchestvovania. *Akad. Nauk SSSR. Zool. Institout. Isledovaniia Faoune Moreï, X (XVIII). Isdatelstvo "Naouka" Leningrad.* pp. 359–415 pls 1–11 [363, 384 pl. 2 fig. 6a–c].
Type data: holotype* (whereabouts not determined).
Type locality: Gulf of Tonkin, Vietnam.

Taxonomic decision for synonymy: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [144]; Crosnier, A. (1989). Benthesicymidae, Aristeidae, Solenoceridae (Crustacea Penaeoidea). pp. 37–67 *in* Forest, J. (ed.) Résultats des Campagnes MUSORSTOM, Volume 5. *Mém. Mus. natn. Hist. nat. Paris (A)***144**: 1–385 [55].

Distribution: WA (NW coast, NW oceanic); Indo-West Pacific (Madagascar to Indonesia, Philippines, Gulf of Tonkin, Japan).
Ecology: continental shelf, continental slope, epipelagic; 25–240 m depth.

Solenocera melantho de Man, 1907

Solenocera melantho de Man, J.G. (1907). Diagnoses of new species of Macrurous Decapod Crustacea from the "Siboga-Expedition" II. *Notes Leyden Mus.* **29**: 127–145 [137].
Type data: syntypes ZMA De.102.477 ♂.
Type locality: E of Saleh Bay, north coast of Sumbawa, Indonesia.

Solenocera prominentis Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160 [231].
Type data: holotype ♂ (whereabouts not determined).
Type locality: Kumanonada, off Owase, Mie Pref., Japan.

Taxonomic decision for synonymy: Crosnier, A. (1984). Penaeoid shrimps (Benthesicymidae, Aristeidae, Solenoceridae, Sicyonidae) collected in Indonesia during the Corindon II and IV Expeditions. *Mar. Res. Indonesia* **24**: 19–47 [32].

Distribution: NT (N coast), WA (NW oceanic); Scott Reef, off NW Australia, Arafura Sea, southern Indonesia, Taiwan, Japan, Philippines, India.
Ecology: continental shelf, continental slope, epipelagic, mesopelagic; depth 150–400 m.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [578] (Australian records).

Solenocera moosai Crosnier, 1984

Solenocera moosai Crosnier, A. (1984). Penaeoid shrimps (Benthesicymidae, Aristeidae, Solenoceridae, Sicyonidae) collected in Indonesia during the Corindon II and IV Expeditions. *Mar. Res. Indonesia* **24**: 19–47 [37 figs 5a, 6a, 7c, d].
Type data: holotype MNHP ♂, paratype(s) MNHP 1 ♂ 1 ♀.
Type locality: Makassar Strait, Indonesia.

Distribution: QLD (NE oceanic); Indonesia, Timor Sea, Philippines.
Ecology: continental shelf, continental slope, epipelagic, mesopelagic; depth 120–325 m, but in Australia 260–325 m.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [579] (Australian record).

Solenocera pectinata (Bate, 1888)

Comb Shrimp (FAO)

Philonicus pectinatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [279 pl. 38].
Type data: holotype ♂ BNMH.
Type locality: Arafura Sea.

Philonicus cervicalis Zehntner, L. (1894). Crustacés de l'Archipel malais. Voyage de MM.M. Bedot and C. Pictet dans l'Archipel malais. *Revue Suisse Zool.* **2**: 135–214 pls 7–9 [210 pl. 9 fig. 26a, c].
Type data: holotype GMNH.
Type locality: Ambon, Indonesia.

Taxonomic decision for synonymy: de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131 [45].

Distribution: NT (N coast), QLD (Gulf of Carpentaria, NE coast); Indo-west Pacific Oceans (Arabian Sea to Madagascar, Burma, South China Sea, Philippines, Gulf of Tonkin, Indonesia, Wallis and Futuna Islands).
Ecology: continental shelf, epipelagic, subtidal; depth 15–200 m, sandy to coral substrates.
References: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [162] (full synonymy and figures); Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [580] (Australian records).

Solenocera pectinulata Kubo, 1949

Solenocera pectinulata Kubo, I. (1949). Studies on Penaeids of Japan and its adjacent waters. *J. Tokyo Coll. Fish.* **36**(1): 1–467 figs 1–160.
Type data: holotype ♂* (whereabouts not determined).
Type locality: Japan.

Distribution: QLD (NE coast); Indo-west Pacific (Madagascar, W coast of India, Indonesia, Philippines, Japan).
Ecology: continental shelf, epipelagic; depth 75–350 m, in Australia 50–200 m.
References: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [151] (redescribed, figured and relationships discussed); Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [580] (Australian distribution and figured).

Solenocera rathbuni Ramadan, 1938

Solenocera rathbuni Ramadan, M.M. (1938). Crustacea, Penaeidae. *Sci. Rep. John Murray Exped.* **5**: 35–76 [57, text-fig. 6].
Type data: lectotype USNM 30941 ♂.
Subsequent designation: Crosnier, A. (1978). Crustacés Décapodes Pénéides Aristeidae (Benthesicyminae, Aristeinae, Solenocerinae). *Faune Madagascar.* **46**: 1–197 [163] (species also redescribed and figured).
Type locality: Kauai Is., Hawai'i (*Albatross* Stn 3987).

Distribution: NSW (Central E coast), QLD (Central E coast), WA (NW coast); Indo-west central Pacific Oceans (S of Madagascar, Philippines, Wallis and Futuna Islands, Hawai'i).
Ecology: continental shelf, epipelagic; depth 50–200 m.
Reference: Dall, W. (1999). Australian species of Solenoceridae (Penaeoidea: Decapoda). *Mem. Qld Mus.* **43**(2): 553–587 [582] (diagnosis and figure).

SUBORDER: PLEOCYEMATA

This group contains the greatest diversity of forms, and includes seven infraorders: Anomura (hermit-crabs, squat lobsters, mole-crabs, stone-crabs, porcelain-crabs and allies), Astacidea (marine and freshwater clawed lobsters, scampi, etc.), Brachyura (crabs), Caridea (shrimps), Palinura (true lobsters), Stenopodidea (cleaner shrimp), and Thalassinidea (burrowing lobsters). An older systematic approach was to divide pleocyemates into two groups, those that walk on the bottom (Reptantia), and those that swim (Natantia). This is a simplification of the evolutionary history of the Pleocyemata, but it is still commonplace to refer to natant and reptant decapods. Anomura and Brachyura are dealt with in Volume 19.3b of the *Zoological Catalogue of Australia*.

Diagnosis

Carapace variable in shape; fused or not fused to epistome. Eyes stalked, compound; generally well developed, but occasionally reduced or absent. Antennules with peduncle 3-segmented; biramous (occasionally triramous), but flagella may be reduced or vestigial; stylocerite present or absent. Antennal peduncles with one to six segments; exopod present, reduced to acicle, or absent; flagellum variable in length, sometimes absent; with or without scaphocerite. Mandibles with or without palp; molar and incisor processes usually not distinct. Maxillulae usually with endopodal palp. Maxillae biramous; usually with two bilobed endites. Maxillipeds with flagella usually present, but may be reduced or absent; third maxilliped with ischium and merus pediform or operculate. Endopod of first maxillipeds with two or fewer segments; with or without *crista dentata*. Pereiopods with first pair usually chelate, subsequent pairs variously chelate, subchelate or simple; one pair often forming more robust chelipeds. Abdomen with pleopods well developed, reduced, or present only on one side; uni- or biramous; both sexes may have copulatory structures; male first and/or second pairs of pleopods may be developed as gonopods; otherwise male first pleopods often with appendix masculina, with or without appendix interna; telson often forming tailfan with uropods; uropods present, reduced, modified, or absent; telson occasionally reduced or absent. Segmentation: head with 5 + 3 thoracic (maxillipeds); thorax with five; abdomen with six or fewer, excluding telson (some frequently coalesced). Gills phyllobranchiate or trichobranchiate (without secondary rami of branchiae). Sexes separate; female with or without a thelycum; gonopores on coxae or sternite of third pereiopods of female, on fifth of male; eggs attached to pleopods of female, female sometimes with abdominal brood pouch; eggs hatch as zoea; protandry and protogyny may sometimes occur.

INFRAORDER: STENOPODIDEA

INTRODUCTION

This interesting group of small benthic shrimps comprises two families, Stenopodidae Claus, 1872, and Spongicolidae Schram, 1986. Originally considered to be in the Penaeidae, they were later transferred to the Caridae, before being recognised as their own 'tribe' by Bate (1888). Holthuis (1993: 307–308) discussed the history of the group, and provided a key to the families and genera.

Diagnosis

Carapace more or less cylindrical, fused to thorax; eyes stalked, compound; antennules biramous; antennae with 5-segmented peduncle and scaphocerite. Epistome in two parts narrow anterior portion between antennae, posterior portion usually heavily armed with spines on perimeter of circular portion to which labrum attaches. Mandibles with incisor and molar processes fused, but separated by groove; palp incurved, usually 3-segmented. Maxillulae with endopodal palp. Maxillae biramous; with two bilobed endites. First maxillipeds with endopod of two segments; without *crista dentata*. Third maxillipeds long, pediform, with 7 segments. First three pairs of pereiopods chelate; third pair typically enlarged and robust; rarely second longer than third; without exopods. Pleura of anterior abdominal somites usually not expanded, when expanded, enlarged so that first overlaps second; only 3 posterior somites, hinged together by definite locking joints. First pleopods uniramous in both sexes; all pleopods lacking petasma, appendix internae and appendix masculinae. Uropods biramous, lacking diaresis; telson together with broad uropods forming tailfan. Gills trichobranchiate; gill axis bearing numerous simple filaments arranged in irregular row. Gonopores on coxae of third pereiopods of female; on fifth of male; eggs carried on female pleopods, hatch as zoeae (or decapodid) with four pairs of natatory appendages.
(With advice from J.W. Goy, *in litt.*).

References

Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

STENOPODIDEA Bate, 1888

Stenopodidea Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [206] [as Stenopidea].

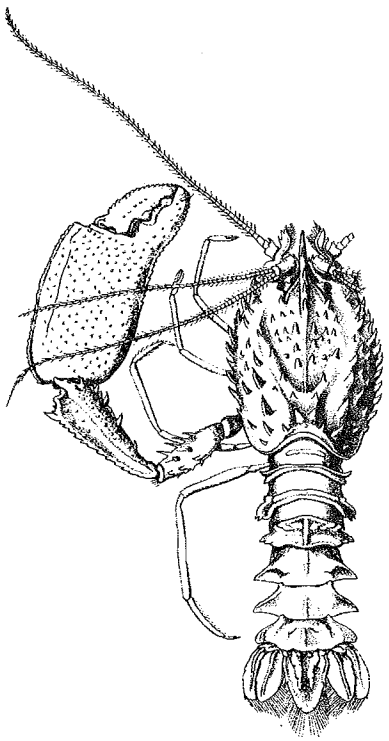
Euzygida Burkenroad, M.D. (1981). The higher taxonomy and evolution of Decapoda (Crustacea). *Trans. San Diego Soc. Nat. Hist.* **19**(17): 251–268 [253].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [307].

SPONGICOLIDAE

INTRODUCTION

This family of small, spiny, shrimp-like decapods comprises five genera worldwide. Only one genus, *Microprosthema*, is represented in Australian waters. Holthuis (1993) provided a key to genera.



Microprosthema validum
[from Borradaile 1910]

Diagnosis

Stenopodidea with body more or less depressed; propodus of second maxilliped with rounded, unarmed, ventral margin; exopod of third maxilliped typically absent or only rudimentary; telson rounded, short or long, but broad, triangular, subtriangular, or subquadrangular, ending in three to five subequal spines; uropodal endopod usually with a single longitudinal dorsal ridge. Chelate appendages with chitinous ridges distally on cutting edges, rarely with few small sharp teeth; propodus of third pereiopod broad, if long, robust not slender. Branchial formula variable, composed of 11–19 branchial exites. (J.W. Goy, *in litt.*)

Reference

Borradaile, L.A. (1910). Penaeidae, Stenopidea and Reptantia from the Western Indian Ocean. *Trans. Linn. Soc. Lond.* **13**(2): 257–264 16 pls

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

SPONGICOLIDAE Schram, 1986

Spongicolidae Schram, F.R. (1986). *Crustacea.* London, New York : Oxford University Press 606 pp. [284].

Microprosthema Stimpson, 1860

Microprosthema Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [44] [gender neuter].
Type species: *Microprosthema valida* Stimpson, 1860 by monotypy.

Stenopusculus Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens*. Berlin pp. 137–178 pls 15–18 [167] [gender masculine].
Type species: *Stenopusculus crassimanus* Richters, 1880 (= *Microprosthema validum* Stimpson, 1860) by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [308].

Extralimital distribution: tropical Indo-west Pacific and east Pacific Oceans. See: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls.

Microprosthema validum Stimpson, 1860

Microprosthema valida Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [45].
Type data: holotype ♀ (presumed lost).
Type locality: Ousima, Ryukyu Islands.

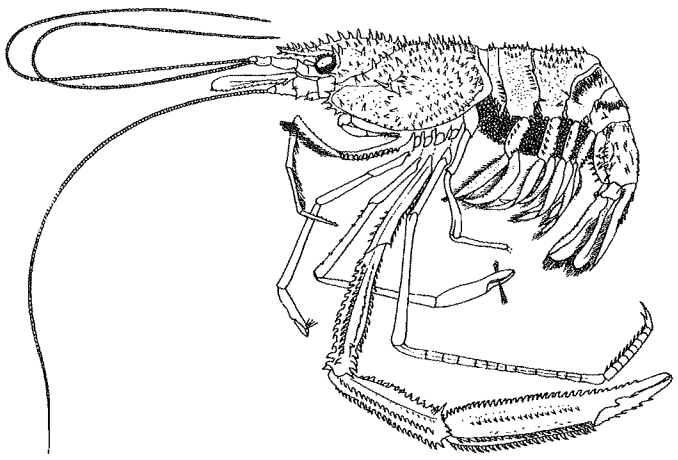
Stenopusculus crassimanus Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens*. Berlin pp. 137–178 pls 15–18 [168 pl. 18 figs 27–29].
Type data: type status unknown 1 specimen.
Type locality: Ile aux Fouquets, Mauritius.

Stenopus robustus Borradaile, L.A. (1910). Penaeidae, Stenopidea and Reptantia from the Western Indian Ocean. *Trans. Linn. Soc. Lond.* **13**(2): 257–264 16 pls [260 pl. 16 fig. 4].
Type data: holotype UMZC 1 specimen.
Type locality: Salomon Atoll, Chagos Archipelago.

Taxonomic decision for synonymy: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [50].

Distribution: NSW (Central E coast, Lower E coast, SE oceanic), NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast, SE oceanic); Indo-Pacific Oceans.
Ecology: low intertidal, reef, subtidal; often in silty intertidal pools, occurs in small numbers, usually in heterosexual pairs, depth to 70 m.

STENOPODIDAE



Stenopus hispidus [from Bate 1888]

INTRODUCTION

Stenopodids are typically small, spiny, benthic shrimps, most commonly found living in pairs on reefs. The beautiful and conspicuous Banded Coral Shrimp, *Stenopus hispidus* (Olivier), is perhaps the best known of the group, and without doubt the most photographed of all tropical marine shrimps. *Stenopus hispidus* is also well documented as a 'fish cleaner', a habit that it shares with at least some other *Stenopus* species although these are generally rarer and less well studied. The most recent paper dealing with Australian species is that of Goy (1992). Holthuis (1993) provided a key to genera.

Diagnosis

Stenopodidea with body compressed; propodus of second maxilliped with cristate ventral margin, often with one or more acute hooked proximal spines; third maxilliped always with a distinct exopod; telson long, narrow, lanceolate, sub-triangular, ending in two strong spines, sometimes with a median spinule in between; endopod of uropod generally with two longitudinal dorsal ridges. One to three chelate appendages, cutting edges of chelae with series of peg-like teeth separated by chitinous lamellae distally; chela of third pereiopod long and slender. Branchial formula always composed of 19 branchial exites. (J.W. Goy, *in. litt.*)

References

Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150

Goy, J.W. (1992). A new species of *Stenopus* from Australia, with a redescription of *Stenopus cyanoscelis* (Crustacea: Decapoda: Stenopodidea). *J. Nat. Hist.* **26**: 79–102

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

STENOPODIDAE Claus, 1872

Stenopinae Claus, C.F.W. (1872). *Grundzüge der Zoologie.* Marburg und Leipzig : Elwert [500].

Odontozona Holthuis, 1946

Odontozona Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [5, 31] [gender feminine].
Type species: *Stenopus ensiferus* Dana, 1852 by original designation.

Extralimital distribution: Indo-west Pacific, Eastern Pacific, and Atlantic Oceans.

Odontozona sculpticaudata Holthuis, 1946

Odontozona sculpticaudata Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [37].
Type data: holotype RMNH ♀.
Type locality: Sape Strait, E of Soembawa, Indonesia (*Siboga* Stn 49a).

Distribution: NT (N coast), WA (NW coast); Indo-west Pacific Oceans (Red Sea to Eniwetok Atoll and New Caledonia) [J.W. Goy, pers. comm.].
Ecology: coral reef, subtidal; coral, shell, and sand substrate, cleaner symbiont, depth to 70 m.

Stenopus Latreille, 1819

Byzenus Rafinesque-Schmaltz, C.S. (1814). *Précis des découvertes et travaux somiologiques de M. r. C.S. Rafinesque-Schmaltz entre 1800 et 1814.* Ou choix raisonné de ses principales découvertes en zoologie et en botanique, pour servir l'introduction à ses ouvrages futurs. Palermo : Royale Typographic Militaire 55 pp. [23] [name of genus, and of its type species, suppressed for the purposes of the Principle of Priority, but not for those of the Principle of Homomymy, under the plenary powers of the ICZN; placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (I) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender masculine].
Type species: *Byzenus scaber* Rafinesque, 1814 (= *Stenopus spinosus* Risso, 1826) by monotypy.

Stenopus Latreille, P.A. (1819). *Nouveau dictionnaire d'histoire naturelle*, appliquée aux arts, à l'agriculture, à l'economie rurale et domestique, à la médecine, etc. edn 2. Vol. 30 pp. 71–72 [71] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (I) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender masculine].
Type species: *Palaemon hispidus* Olivier, 1811 by monotypy.

Embryocaris Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [73, 85] [gender feminine].
Type species: *Embryocaris stylicauda* Ortmann, 1893 (= *Palaemon hispidus* Olivier, 1811) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [315].

Extralimital distribution: Atlantic, Mediterranean, Indo-Pacific.

Stenopus chrysexanthus Goy, 1992

Stenopus chrysexanthus Goy, J.W. (1992). A new species of *Stenopus* from Australia, with a redescription of *Stenopus cyanoscelis* (Crustacea: Decapoda: Stenopodidea). *J. Nat. Hist.* **26**: 79–102 [80 figs 1–4].
Type data: holotype NTM Cr.006548 ♂, paratype(s) AM P26831 ♀.
Type locality: Heron Island, Capricorn group, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); known only from limital area.
Ecology: coral reef, littoral, sublittoral; found under corals, cleaner symbiont, depth to 18 m.

Stenopus cyanoscelis Goy, 1984

Stenopus cyanoscelis Goy, J.W. (1984). Diagnoses of three new *Stenopus* species. pp. 116–117 *in* Debelius, H. (ed.) *Armoured Knights of the Sea.* Essen : Kernen pp. 1–120 [116 pl. 17].
Type data: holotype AM P25263 ♂, paratype(s) AM P41001 ♀ (as allotype).
Type locality: Broadhurst Reef, off Townsville, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans.
Ecology: coral reef, sand bottom, sublittoral; found under plate of branching coral, cleaner symbiont, depth 9 to 12 m.

Reference: Goy, J.W. (1992). A new species of *Stenopus* from Australia, with a redescription of *Stenopus cyanoscelis* (Crustacea: Decapoda: Stenopodidea). *J. Nat. Hist.* **26**: 79–102.

Stenopus hispidus (Olivier, 1811)

Banded Coral Shrimp, Banded Cleaner Shrimp

Squilla groenlandica Seba, A. (1761). *Locupletissimi Rerum Naturalium Thesauri accurata Descriptio et Iconibus artificiosissimis Expressio per Universam Physices Historiam.* Amsterdam : [s.n.] Vol. 3 pp. 1–212 pls 1–116 [54 pl. 21 figs 6, 7] [nomenclaturally unavailable as not proposed as a Linnaean binominal].

Astacus muricatus Olivier, A.G. (1791). Écrevisse, *Astacus*. pp. 327–349 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique d'Histoire naturelle des Insectes.* Paris : Agasse Vol. 6 [346] [name placed on the Official Index of Rejected and Invalid Specific Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 381. Suppression under the plenary powers of two long-neglected specific names for the purpose of rendering the specific name "hispidus" Olivier, 1811, as published in the combination "Palaemon hispidus" (Class Crustacea, Order Decapoda) the oldest available name for the species concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 35–42].
Type data: type status unknown*.
Type locality: not determined.

Cancer (Astacus) longipes Herbst, J.F.W. (1793). *Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten.* 3 volumes. Berlin & Stralsund [90 pl. 31 fig. 2] [junior homonym of *Cancer longipes* Linnaeus, 1758; name placed on the Official Index of Rejected and Invalid Specific Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 381. Suppression under the plenary powers of two long-neglected specific names for the purpose of rendering the specific name "hispidus" Olivier, 1811, as published in the combination "Palaemon hispidus" (Class Crustacea, Order Decapoda) the oldest available name for the species concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 35–42].
Type data: type status unknown*.
Type locality: not determined.

Penaeus borealis Latreille, P.A. (1802). *Histoire naturelle, générale et particulière, des Crustacés et des Insectes.* Paris : F. Dufart Vol. 3 467 pp. [250] [name placed on the Official Index of Rejected and Invalid Specific Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 381. Suppression under the plenary powers of two long-neglected specific names for the purpose of rendering the specific name "hispidus" Olivier, 1811, as published in the combination "Palaemon hispidus" (Class Crustacea, Order Decapoda) the oldest available name for the species concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 35–42].
Type data: type status unknown*.
Type locality: not determined.

Palaemon hispidus Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [666] [Name No. 614 on the Official List of Specific Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 381. Suppression under the plenary powers of two long-neglected specific names for the purpose of rendering the specific name "hispidus" Olivier, 1811, as published in the combination "Palaemon hispidus" (Class Crustacea, Order Decapoda) the oldest available name for the species concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 35–42].
Type data: holotype MNHP.
Type locality: unknown.

Embryocaris stylicauda Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [85 pl. 6 fig. 4].
Type data: syntypes whereabouts unknown*.
Type locality: not determined.

Taxonomic decision for synonymy: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [12].

Distribution: NSW (Central E coast, Lower E coast, SE oceanic), NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast, NE oceanic), WA (Central W coast, Lower W coast, NW coast); Indo-Pacific Oceans, west Atlantic Ocean.
Ecology: coral reef, subtidal; rock crevices, underwater caves, cleaner symbiont, depth to 210 m.

Stenopus tenuirostris de Man, 1888

Stenopus tenuirostris de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [567 pl. 22a fig. 5].
Type data: syntypes ♂ ♀, ZMA 1 specimen, ZMG* (probable depository institution, but should now be in SMF).
Type locality: Amboina [Ambon], Indonesia.

Distribution: NSW (Lower E coast); Indo-west Pacific Oceans.
Ecology: coral reef, subtidal; cleaner symbiont.
Reference: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [21] (full synonymy).

INFRAORDER: CARIDEA

INTRODUCTION

The Caridea comprises around 2000 shrimp species worldwide. Australia has over 600 species representing 156 genera in 25 families, and thus more than a quarter of the world total. Carideans are primarily marine but are found in a variety of biotopes including estuaries and freshwater; they are both planktonic and benthic in habit, sometimes commensal, occasionally intertidal, and, rarely, even semi-terrestrial. Their fossil record dates from the mid-Jurassic. The single most important reference for any modern student of the Caridea is Holthuis' (1993) review and key to genera.

Diagnosis

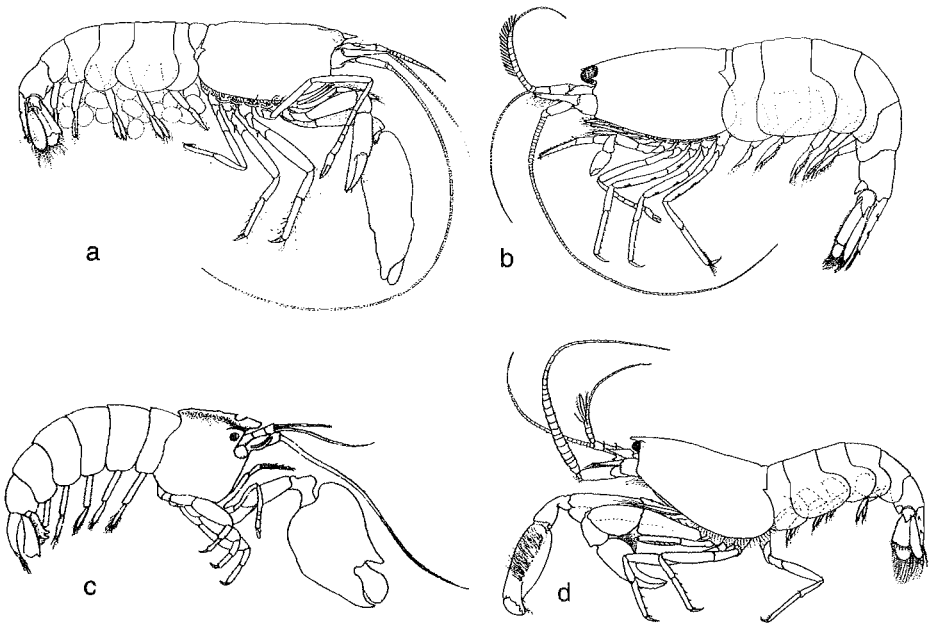
Carapace cylindrical, laterally compressed, or slightly compressed dorsoventrally. Eyes stalked, compound; occasionally reduced or absent. Antennules bi- or triramous; with stylocerite. Antennae with 5-segmented peduncle and scaphocerite. Mandibles with or without palp. Maxillulae with endopodal palp. Maxillae biramous; usually with bilobed distal and entire proximal endites. Endopod of first maxillipeds with two or fewer segments; without *crista dentata*. First two pairs of pereiopods usually chelate; sometimes without exopods. Abdomen with pleopods usually biramous; often with appendix masculina; usually also with appendix interna. Telson, together with broad biramous uropods, forms tailfan. Segmentation: head with 5 + 3 thoracic (maxillipeds); thorax with 5; abdomen with 6, excluding telson. Sexes separate; protandry and protogyny occur; gonopores on coxae of third pereiopods of female, fifth of male; male often with appendix masculina; eggs carried on pleopods of female. (After McLaughlin 1980).

References

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

McLaughlin, P.A. (1980). *Comparative Morphology of Recent Crustacea.* San Francisco : W.H. Freeman & Co. 177 pp.

ALPHEIDAE



a, *Alpheus bannerorum*; b, *Potamalpheops hanleyi*; c, *Racilius compressus*; d, *Pseudathanus darwiniensis* [from a, Bruce 1987: fig. 1; b, Bruce 1991: fig. 1; c, Paulson 1875; d, Bruce 1983: fig. 1]

INTRODUCTION

This distinctive group of shrimps is circumglobal in distribution. Species are commonly found to 45° north and south latitude, with some extending to 60°. They are common in a variety of habitats, from the littoral zone to as deep as 875 metres, and at least one tropical species occurs in freshwater. They are especially numerous on coral reefs (Chace 1988).

The late Albert and Dora Banner provided the most comprehensive treatments of Australian Alpheidae, and their work is central to any study of the members of this family (see Banner & Banner 1973, 1975, 1982a, 1982b, 1986). More recently Bruce (1983, 1987, 1988a, 1988b, 1991, 1993, 1994) has also made a significant contribution. Holthuis (1993) provided the most recent key to genera.

Diagnosis

Rostrum, if present, usually immovably attached to remainder of carapace, without single subterminal dorsal tooth; carapace with cardiac notch present; eyestalks short, often partially or completely concealed by carapace; antennule with dorsolateral flagellum usually more or less bifurcate; second maxilliped with dactylus applied as strip to mesial margin of flexed propodus; third maxilliped bearing well-developed exopod. Pereiopods generally without distinct exopods; two anterior pairs distinctly chelate; first pereiopods (P1) robust, usually longer and more developed than P2, often sexually dimorphic; second pair with carpus subdivided into three to five segments, three posterior pairs not unusually elongate, carpus shorter than propodus. (Modified after Chace 1988).

References

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Banner, D.M. & Banner, A.H. (1986). Two new species of Alpheid shrimp from Australian waters. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 21–27

Bruce, A.J. (1983). *Pseudathanas darwiniensis* new genus, new species, an Alpheid shrimp from the Northern Territory, Australia. *J. Crust. Biol.* **3**(3): 463–471

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Bruce, A.J. (1988a). *Synalpheus dorae*, a new commensal alpheid shrimp from the Australian Northwest Shelf. *Proc. Biol. Soc. Wash.* **101**(4): 843–852

Bruce, A.J. (1988b). *Bannereus anomalus*, new genus, new species, a deep-sea alpheid shrimp from the Coral Sea. *Pac. Sci.* **42**(3–4): 139–149

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Bruce, A.J. (1993). *Potamalpheops darwiniensis* (Crustacea: Decapoda: Alpheidae), the third Indo-west Pacific species. *Proc. Biol. Soc. Wash.* **106**(4): 698–704

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Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

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Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls

ALPHEIDAE Rafinesque, 1815

Alpheidae Rafinesque-Schmaltz, C.S. (1815). *Analyse de la nature ou tableau de l'univers et de corps organisés.* Palermo 224 pp. [98] [as Alphidia; name, in the corrected spelling Alpheidae, placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 334. Validation, under the Plenary Powers, of the generic names *Crangon* Fabricius, 1798, and *Alpheus* Fabricius, 1798 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **10**: 1–44, the incorrect original spelling Alphidia, was also placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, in the same Opinion].

Alpheens Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [339, 345] [name placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 334. Validation, under the Plenary Powers, of the generic names *Crangon* Fabricius, 1798, and *Alpheus* Fabricius, 1798 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **10**: 1–44].

Alpheopsides Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidés, format la sous-famille des alphéopsides. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(8): 380–386.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [187].

Alpheopsis Coutière, 1897

Alpheopsis Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidés, format la sous-famille des alphéopsides. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(8): 380–386 [382] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1959). Opinion 559. Determination of the gender to be attributed to six generic names in the Class Crustacea (Order Decapoda) and addition of the names concerned to the *Official List of Generic Names in Zoology. Opin. Declar. Int. Comm. Zool. Nomencl.* **20**: 283–292; gender feminine].
Type species: *Betaeus trispinosus* Stimpson, 1860 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [32].

Extralimital distribution: pantropical. See: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [4].

Alpheopsis aequalis Coutière, 1896

Alpheopsis aequalis Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidés, format la sous-famille des alphéopsides. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(8): 380–386 [382].
Type data: syntypes MNHP*.
Type locality: Red Sea and Indian Ocean.

Alpheopsis equalis truncatus Coutière, H. (1903). Note sur quelques Alpheidae des Maldives et Laquedives. *Bull. Soc. philomath. Paris* **5**(9): 72–90, 38 figs [89 figs 37, 38].
Type data: holotype MNHP ♂.
Type locality: Goifufahendu Atoll.

Alpheopsis consobrinus de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [305].
Type data: syntypes ZMA*.
Type locality: between Nusa Besi and the NE point of Timor, Indonesia (*Siboga* Stn 282).

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [342].

Distribution: QLD (NE coast); Indo-west central Pacific Oceans (East Africa and Red Sea to Hawai'i).
Ecology: coral reef, littoral; from dead coral.
Reference: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [5] (corrected spelling of species name).

Alpheopsis trispinosa (Stimpson, 1861)

Betaeus trispinosus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [32].
Type data: neotype AM P8230 ♂.

Subsequent designation: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [337].
Type locality: Green Cape, NSW.

Distribution: NSW (Central E coast, Lower E coast), SA (Great Australian Bight), TAS (Tas. coast), WA (Central W coast, Lower W coast); Indo-west Pacific (Madagascar, Réunion Island).
Ecology: sublittoral, benthic, continental shelf; depths of 46–139 m.
Reference: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [337].

Alpheopsis undicola Banner & Banner, 1973

Alpheopsis undicola Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [340 fig. 15].
Type data: holotype AM P18002 ♂, paratype(s) AM P18003 ♀ (as allotype).
Type locality: Opal Reef, Great Barrier Reef, QLD.

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: coral reef, benthic, shallow subtidal; found in dead coral.

Alpheopsis yaldwyni Banner & Banner, 1973

Alpheopsis yaldwyni Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [344 fig. 17].
Type data: holotype AM P18005 ♀, paratypes AM P18006 1♂ 1♀, AM P18007 1♀ 1♂, AM P19167 1♀ 1♂.
Type locality: One Tree Island, Capricorn Group, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); W Pacific (Indonesia, Micronesia, Ryukyu Islands).
Ecology: benthic, coral reef, shallow subtidal; from broken coral heads.

Alpheus Fabricius, 1798

Crangon Weber, F. (1795). *Nomenclator entomologicus secundum entomologian systematicam ill. Fabricii, adjectis speciebus recens detectis et varietatibus.* Chiloni et Hamburgi : C.E. Bohn viii 171 pp. [94] [name placed on the Official Index of Rejected and Invalid Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 334. Validation, under the Plenary Powers, of the generic names *Crangon* Fabricius, 1798, and *Alpheus* Fabricius, 1798 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **10**: 1–44; gender feminine].
Type species: *Astacus malabaricus* Fabricius, 1775 (as *Astacus Malabaricus*) by monotypy.

Alpheus Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [380, 404] [junior homonym of *Alpheus* Weber, 1795, but that name suppressed for the Principle of Priority and that of Homonymy, under the plenary powers of the International Commission on Zoological Nomenclature; name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 334. Validation, under the Plenary Powers, of the generic names *Crangon* Fabricius, 1798, and *Alpheus* Fabricius, 1798 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **10**: 1–44; gender masculine].
Type species: *Alpheus avarus* Fabricius, 1798 by subsequent designation, see Latreille, P.A. (1810). *Considérations générales sur l'ordre naturel des animaux composant les classes de Crustacés, des Arachnides, et des Insectes*, avec un tableau méthodique de leurs genres, disposés en familles. Paris 444 pp. [42].

Cryptophthalmus Rafinesque-Schmaltz, C.S. (1814). *Précis des découvertes et travaux somiologiques de M. r. C. S. Rafinesque-Schmaltz entre 1800 et 1814.* Ou choix raisonné de ses principales découvertes en zoologie et en botanique, pour servir d'introduction à ses ouvrages futurs. Palermo : Royale Typographic Militaire 55 pp. [23] [gender masculine].
Type species: *Cryptophthalmus ruber* Rafinesque, 1814 by monotypy.

Autonomaea Risso, A. (1816). *Histoire naturelle des Crustacés des environs de Nice.* Paris pp. 84–175 pls 1–3 [166] [gender feminine].
Type species: *Autonomaea olivii* Risso, 1816 (as *Autonomaea Olivii*, = *Cancer glaber* Olivier, 1792) by monotypy.

Asphalius Roux, P. (1831). *Mémoire sur la classification des Crustacés de la tribu des Salicoques.* Marseilles 4 tables, 39 pp. [22] [gender masculine].
Type species: *Palaemon brevirostris* Olivier, 1811 by monotypy.

Dienecia Westwood, J.O. (1835). [no title]. *Mag. Nat. Hist.* **8**: 552 [552] [gender feminine].
Type species: *Hippolyte ruber* Hailstone, 1835 (as *Hippolyte ? ruber*, = *Hippolyte macrocheles* Hailstone, 1835) by monotypy.

Nauplius Risso, A. (1844). *Nouveau guide du voyageur dans Nice.* 2. Paris 95 pp. [95] [gender masculine].
Type species: *Nika variegata* Risso, 1816 (= *Alpheus dentipes* Guérin Méneville, 1832) by subsequent designation, see Holthuis, L.B. (1977). The Mediterranean decapod and Stomatopod Crustacea in A. Risso's published works and manuscripts. *Ann. Mus. Hist. Nat. Nice* **5**: 37–88 [76].

Phleusa Nardo, G.D. (1847). *Sinonimia moderna delle specie registrate nell'opera intitolata: Descrizone de Crostacei, de Testacei e de Pesci che abitanao le lagune e golfo veneto rappresentati ... dall' Abate Stefano Chiereghini.* Venezia : Clodiense xi 127 pp. [6] [gender feminine].
Type species: *Phleusa cynea* Nardo, 1847 by monotypy.

Halopsyche Saussure, H. (1857). Note carcinologique sur la famille des Thalassides et sur celle des Astacides. *Revue Mag. Zool.* **9**(2): 99–102.
Type species: *Halopsyche lutaria* de Saussure, 1857 (= *Alpheus heterochaelis* Say, 1818) by monotypy.

Alpheoides Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [105] [reissued and translated by F.D. Por, 1961; gender masculine].

Type species: *Alpheus insignus* Heller, 1861 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157.

Paralpheus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [567] [gender masculine].
Type species: *Palaemon diversimanus* Olivier, 1811 by monotypy.

Thunor Armstrong, J.C. (1949). New Caridea from the Dominican Republic. *Am. Mus. Novit.* **1410**: 1–27 [12] [gender masculine].
Type species: *Crangon rathbunae* Schmitt, 1924 (= *Alpheus simus* Guérin Méneville, 1856) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [190].

Extralimital distribution: Indo-west Pacific, Atlantic Oceans. See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.

Alpheus acutocarinatus de Man, 1909

Alpheus acutocarinatus de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [104].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Madura Strait, Bay of Labuan Tring, west of Kwandang-bay-entrance, east coast of Sumbawa, Indonesia.

Distribution: QLD (Central E coast); Indo-west Pacific Ocean (Madagascar, Gulf of Thailand, Indonesia, Philippines).
Ecology: benthic, soft bottom, subtidal; dredged, 20–72 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [225] (Australian records).

Alpheus acutofemoratus Dana, 1852

Alpheus acutofemoratus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [22] [also Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685 (550)].
Type data: type status unknown* (presumed lost).
Type locality: Balabac Straits, N Borneo.

Alpheus parabrevipes Coutière, H. (1898). Note sur quelques alphéidés nouveaux de la collection du British Museum (Crust). *Bull. Soc. Entomol. Fr.* **1898**(6): 149–152, 2 figs [151].
Type data: syntypes BMNH*.
Type locality: Samoa, Pacific Ocean.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [77].

Distribution: NT (N coast), QLD (Great Barrier Reef); Indo-west Pacific Oceans (Andaman Sea, Gulf of Thailand, Philippines, Indonesia east to Marshall Islands, Fiji, Samoa, and Tonga).
Ecology: coral reef, littoral, sublittoral; from heads of coral, intertidal pools, to 3 m depth.

Alpheus alcyone de Man, 1902

Alpheus alcyone de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [870].
Type data: type status unknown*.
Type locality: Ternate, Indonesia.

Alpheus aculeipes Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [892 pl. 79 fig. 31].
Type data: syntypes 23 specimens ♂ ♀*.
Type locality: Maldive Islands: South Nilandu Atoll, Hulule Male Atoll, North Male Atoll, Miladumadulu Atoll, Naifaro Reef; Djibouti; Mozambique.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [110].

Distribution: NSW (SE oceanic), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast); (Tasman Sea) and Indo-west central Pacific Oceans (East Africa to Indonesia, Japan, Philippines, Caroline and Marshall Islands, Fiji, Samoa, and Tonga).
Ecology: coral reef, sublittoral, benthic, low intertidal; in sponges or dead coral heads, depths to 131 m.

Alpheus amirantei Coutière, 1908

Taxonomic decision for subspecific arrangement: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [76].

Alpheus amirantei sizou Banner & Banner, 1967

Alpheus amirantei sizou Banner, A.H. & Banner, D.M. (1967). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part XI. Collections from the Cook and Society Islands. *Occ. Pap. Bernice P. Bishop Mus.* **23**(12): 253–286 5 figs [265].
Type data: holotype BPBM ♀*, paratype(s) ♀ (specimens lost in laboratory fire).
Type locality: N of Bora Bora, Society Islands.

Distribution: Coral Sea Islands Territory; (Herald Group), Indo-west central Pacific Oceans (Réunion Island, Marshall Islands, Tonga, Line Islands, Tahiti, Raratonga).
Ecology: benthic, intertidal, shallow subtidal; from coral washings.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [74] (Australian record).

Alpheus architectus de Man, 1897

Alpheus architectus de Man, J.G. (1897). Bericht über die von herrn Schiffscapitän Storm zu Atjeh, an den westlichen Küsten von Malakka, Bornio und Celebes sowie in der Java-See gesammelten Decapoden und Stomatopoden (Part 5). *Zool. Jahrb. Syst.* **9**: 725–788 figs 60–73 [726 fig. 60].
Type data: syntypes whereabouts unknown 2 specimens*.
Type locality: Atjeh (Sumatra, Indonesia).

Distribution: NSW (Central E coast), QLD (Great Barrier Reef); Indo-west Pacific Oceans (South Africa, Madagascar, Indonesia).
Ecology: coral reef, littoral, sublittoral; under corals, and from eel grass beds.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus arethusa de Man, 1909

Alpheus arethusa de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [100].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Haingsisi, Samau Island, Timor, Indonesia.

Distribution: QLD (Great Barrier Reef); (Heron Island), and Indonesia.
Ecology: coral reef, low intertidal, reef flat, shallow subtidal; taken from heads of dead coral.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [110] (identified from Australia with some reserve).

Alpheus astrinx Banner & Banner, 1982

Alpheus astrinx Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [35].
Type data: holotype WAM 365 ♀, paratype(s) WAM 2♀ 2♂.
Type locality: Garden Island, near Perth, WA.

Distribution: WA (Central W coast); known only from type locality.
Ecology: benthic, shallow subtidal.

Alpheus australiensis Banner & Banner, 1982

Alpheus australiensis Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [256 fig. 79].
Type data: holotype AM P6352 ♂, paratypes AM P27264 ♀ (as allotype), AM P27201 1 specimen, AM P27202 1 specimen, AM P27203 3 specimens, AM P27204 2 specimens, AM P27205 1 specimen, AM P27220 2 specimens, AM P27221 11 specimens, AM P27222 4 specimens, AM P27254 1 specimen, AM P27255 13 specimens, AM P10980 1 specimen, AM P27248 10 specimens.
Type locality: Caloundra, QLD.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, Great Barrier Reef, NE coast); known only from limital area.
Ecology: estuarine, benthic, intertidal, marine; under rocks, in eel grass beds, often found burrowing in sandy-mud to mud.

Alpheus australosulcatus Banner & Banner, 1982

Alpheus australosulcatus Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [83 fig. 21].
Type data: holotype AM P13551 ♀.
Type locality: North Head, Flinders, VIC.

Distribution: VIC (Bass Strait); known only from type locality.
Ecology: benthic, subtidal; dredged.

Alpheus balaenodigitus Banner & Banner, 1982

Alpheus balaenodigitus Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [223 fig. 70].
Type data: holotype WAM 172-65 ♀.
Type locality: Port Walcott, WA.

Distribution: NT (N coast), WA (NW coast); known only from limital area.
Ecology: benthic, low intertidal, subtidal; intertidally under rocks on sand, to 15 m depth.

Alpheus bannerorum Bruce, 1987

Alpheus bannerorum Bruce, A.J. (1987). A new species of alpheid shrimp, *Alpheus bannerorum* from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **4**(1): 61–72 [61 figs 1–6, pl. 1].
Type data: holotype NTM Cr.004429A ♀, paratypes NTM Cr.004429B ♂ (as allotype), NTM Cr.004429C–E, USNM 23408, BPBM 1987.283 S–10805, RMNH 37181.
Type locality: Dudley Point, Darwin, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: sand bottom, benthic, coral reef, low intertidal; reef flat pool, intertidal pools.

Alpheus barbatus Coutière, 1897

Alpheus barbatus Coutière, H. (1897). Note sur quelques Alphéidés nouveaux ou peu connus rapportés de Djibouti (Afrique orientale). *Bull. Mus. Natn. Hist. Nat. Paris* **3**: 233–236 [235].
Type data: syntypes MNHP 3 specimens*.
Type locality: Djibouti, NE Africa.

Distribution: Christmas Island (Aust. Terr.), QLD (NE coast); Indo-west Pacific Oceans (East Africa, Red Sea, Indonesia, Philippines).
Ecology: coral reef, benthic, subtidal; depths to 10 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [163] (Australian records).

Alpheus bicostatus de Man, 1908

Alpheus bicostatus de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [102].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Indonesia and Philippines area: Kepulauan Balabalagan, Makassar Strait; off North Ubian Is., Sulu Archipelago; Selat Butung, southern Celebes [Sulawesi].

Distribution: QLD (Great Barrier Reef, NE coast), WA (Central W coast); Indo-west Pacific Oceans (Kenya and Madagascar to Indonesia and Philippines).
Ecology: benthic, low intertidal, shallow subtidal; depths to 12 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [124] (Australian records).

Alpheus bidens (Olivier, 1811)

Mottled Snapping Prawn

Palaemon bidens Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [663].
Type data: holotype MNHP.
Type locality: Australia (as 'sur les cotes de la Nouvelle-Hollande').

Alpheus tridentatus Zehntner, L. (1894). Crustacés de l'Archipel malais. Voyage de MM.M. Bedot and C. Pictet dans l'Archipel malais. *Revue Suisse Zool.* **2**: 135–214 pls 7–9 [204 pl. VIII fig. 24].
Type data: holotype GMNH 1 specimen.
Type locality: Amboina, Indonesia.

Alpheus dissodontonotus Stebbing, T.R.R. (1915). South African Crustacea (Part VIII). *Ann. S. Afr. Mus.* **15**: 57–104 pls 8–25 [83 pl. 86].
Type data: holotype SAM 1 ♀.
Type locality: off Port Elizabeth, South Africa.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [136].

Distribution: QLD (Great Barrier Reef, NE coast), SA (Bass Strait), TAS (Tas. coast), WA (Lower W coast); S coast, east Indo-west Pacific Oceans.
Ecology: coral reef, benthic, low intertidal, subtidal; mostly intertidal collections, also found in heads of coral, dredged to depths of 83 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus bisincisus De Haan, 1844

Alpheus bisincisus De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [179 pl. 45 fig. 3] [published from 1833–1850, Atlas dated 1844; De Haan introduced this species on pl. 45; in the text, which appeared in 1849, De Haan synonymised *Alpheus bisincisus* with *Alpheus avarus* Fabricius, 1798; but the name *bisincisus* remains available, and is valid because the two species are now considered to be distinct species].
Type data: holotype RMNH D5545 1 dry specimen.
Type locality: Japan.

Alpheus bisincisus malensis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [910 pl. 86].
Type data: syntypes MNHP 3 ♂ 1 ♀*.
Type locality: Maldive Islands: South Male Atoll, Suvadiva Atoll, South Nilandu Atoll, Mulaku Atoll.

Alpheus bisincisus stylirostris Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [911 pl. 86].
Type data: holotype MNHP ♂.
Type locality: Mulaku Atoll, Maldive Ils.

Alpheus bisincisus variabilis de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [109].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Makassar, Indonesia.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [263].

Distribution: NT (N coast), QLD (Central E coast, Gulf of Carpentaria), WA (NW coast); Indo-west Pacific Oceans.
Ecology: benthic, low intertidal, subtidal; intertidal pools, in sponge, in seagrass beds, dredged from mud and sand to depths of 45 m.

Alpheus brevicristatus De Haan, 1844

Alpheus brevicristatus De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 45 fig. 1] [published from 1833–1850, Atlas dated 1844].
Type data: lectotype RMNH D21105 dry specimen, paralectotypes RMNH D1011 1 specimen, RMNH D5548 1 dry specimen.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea*. Japan : Shimoda Printing Inc. [223].
Type locality: Japan.

Distribution: NT (N coast); Indo-west Pacific.
Ecology: benthic, subtidal.
Reference: Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [321] (Australian record).

Alpheus brevirostris (Olivier, 1811)

Palaemon brevirostris Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [664 pl. 319 fig. 4].
Type data: holotype MNHP.
Type locality: Australia (as New Holland).

Alpheus dispar Randall, J.W. (1840). Catalogue of the Crustacea brought by Thomas Nuttall and J.K. Townsend, from the West Coast of North America and the Sandwich Islands, with descriptions of such species as are apparently new, among which are included several species of different localities, previously existing in the Collection of the Academy. *J. Acad. Nat. Sci. Philad.* **8**(1): 106–147 pls 3–7 [141].
Type data: holotype ANSP CA246.
Type locality: Manila, see Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99.

Alpheus brevirostris angustodigitus de Man, J.G. (1911). The Decapoda of the Siboga Expedition. Part II. Family Alpheidae. *Siboga Exped. (Livr. 60 Mon. 39a1)***22**: 133–465 [253].
Type data: syntypes ZMA 1 ♂ 1 ♀*.
Type locality: Balikpapan, Indonesia.

Taxonomic decision for synonymy: Bruce, A.J. (1994). *Alpheus fenneri* sp. nov. and *A. williamsi* sp. nov., two new Indo-west Pacific Alpheid shrimps of the *Brevirostris* species group. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 15–28 [22].

Distribution: NT (N coast), QLD (NE coast); Indo-west Pacific Oceans.
Ecology: benthic, subtidal.

Alpheus brucei Banner & Banner, 1982

Alpheus brucei Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Supplement I. *Rec. Aust. Mus.* **34**(2): 359–362 fig. 1 [359 fig. 1].
Type data: holotype AM P30803 ♀.
Type locality: Heron Island, QLD.

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: coral reef, benthic, low intertidal, shallow subtidal; from a head of coral (*Porites andrewsi*).

Alpheus bucephalus Coutière, 1905

Alpheus bucephalus Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [890].
Type data: syntypes MNHP 7 specimens ♂ ♀*.
Type locality: Hulule Male Atoll, Minikoi, Maldive Ils.

Alpheus consobrinus de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [101].
Type data: syntypes ZMA numerous specimens*.
Type locality: Indonesia and Philippines area: Borneo Bank, Sulu Archipelago, Kwandang Bay, Siau Is., Roti Is., Paternoster Ils.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [120].

Distribution: QLD (Great Barrier Reef, Gulf of Carpentaria, NE coast), WA (Central W coast); Indo-west Pacific Oceans (East Africa to Japan, Philippines and east to Line and Society Islands).
Ecology: coral reef, benthic, low intertidal, subtidal; found in dead coral heads, in pairs in tubes in algae and sponge, depths to 81 m.

Alpheus bunburius Banner & Banner, 1982

Alpheus bunburius Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [213 fig. 66].
Type data: holotype WAM 271-65 ♀.
Type locality: Bunbury, WA.

Distribution: WA (Lower W coast); known only from type locality.
Ecology: benthic, subtidal.

Alpheus chiragricus H. Milne Edwards, 1837

Alpheus chiragricus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [354].
Type data: type status unknown MNHP*.
Type locality: 'les mers d'Asie'.

Distribution: NT (N coast), QLD (Great Barrier Reef, Gulf of Carpentaria, NE coast), WA (NW coast, NW oceanic); Indo-west Pacific Oceans (East Africa, Madagascar, Mergui Archipelago, Indonesia).
Ecology: benthic, coral reef, intertidal, rocky shore, subtidal; under rocks, in dead coral heads, intertidal pools to 20 m depth.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [267] (Australian records).

Alpheus collumianus Stimpson, 1861

Alpheus collumianus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [30].
Type data: holotype whereabouts unknown (presumably lost).
Type locality: Bonin Ils, NW Pacific.

Alpheus malhaensis Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [205(15)].
Type data: syntypes MNHP ♂ ♀*.
Type locality: Amirante Ils, Seychelles; and Saya de Malha Bank.

Alpheus collumianus probabilis Banner, A.H. (1956). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part I. Collections from the Mariana Archipelago. *Pac. Sci.* **10**(3): 318–378 23 figs [338].
Type data: holotype USNM ♀, paratype(s) USNM.
Type locality: off north-west coast of Saipan, Mariana Ils.

Alpheus collumianus medius Banner, A.H. (1956). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part I. Collections from the Mariana Archipelago. *Pac. Sci.* **10**(3): 318–378 23 figs [340 fig. 11].
Type data: holotype USNM, paratype(s) ♂*.
Type locality: Hawai'i.

Alpheus collumianus inermis Banner, A.H. (1956). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part I. Collections from the Mariana Archipelago. *Pac. Sci.* **10**(3): 318–378 23 figs [342 fig. 12].
Type data: holotype USNM ♂, paratype(s) USNM.
Type locality: off Saipan, Mariana Ils.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [45].

Distribution: QLD (Great Barrier Reef, NE coast), WA (Lower W coast, N coast); Middleton & Elizabeth Reefs, Tasman Sea, Indo-west central Pacific Oceans (Madagascar to Japan and east to Hawai'i and Society Islands).
Ecology: coral reef, low intertidal, reef flat, subtidal; commonly in dead coral heads, dredged to depths of 76 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is probably a complex of several species).

Alpheus cristatus Coutière, 1897

Alpheus cristatus Coutière, H. (1897). Note sur un nouveau genre d'alphéidés. *Bull. Mus. Natn. Hist. Nat. Paris* **3**(7): 301–303 [303].
Type data: holotype MNHP*.
Type locality: Thursday Is., Torres Strait, QLD.

Distribution: NT (N coast), QLD (NE coast), WA (SW coast); Maldives.
Ecology: benthic, low intertidal, shallow subtidal; dredged to depths of about 9 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [122] (new Australian records).

Alpheus deuteropus Hilgendorf, 1879

Alpheus deuteropus Hilgendorf, F. (1879). Die von Herrn W. Peters in Moçambique gesammelten Crustaceen, bearbeitet von Herrn Dr. F. Hilgendorf. *Mber. dt. Akad. Wiss. Berl.* **1878**: 782–851 pls 1–4 [834 pl. 14 figs 8–10].
Type data: holotype MB*.
Type locality: Zanzibar, east Africa.

Distribution: QLD (Great Barrier Reef, NE coast), WA (Lower W coast); Indo-west Pacific Oceans (South Africa to Japan and east to Hawai'i).
Ecology: coral reef, benthic, low intertidal, subtidal; found in fissures in massive heads of living coral, intertidal to depths of 35 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [42] (Australian records and remarks on habitat and biology).

Alpheus diadema Dana, 1852

Alpheus diadema Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [23].
Type data: neotype USNM*.
Subsequent designation: Banner, A.H. (1953). The Crangonidae or snapping shrimp of Hawaii. *Pac. Sci.* **7**(1): 1–147 50 figs.
Type locality: Lahaina, Maui, Hawai'i.

Alpheus insignis Heller, C. (1862). Beiträge zur crustaceenfauna des Rothen Meeres. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **44**(1): 241–295 3 pls [269 pl. 3 figs 17, 18].
Type data: type status unknown*.
Type locality: Red Sea.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [140].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast, NE oceanic); Middleton Reef, Tasman Sea, Indo-west Pacific (East Africa to Japan and east to Hawai'i).
Ecology: coral reef, benthic, low intertidal, subtidal; most commonly taken intertidally, under rocks or in heads of coral.
References: Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685 [555 pl. 35 fig. 7] (fuller description and figures appeared after the original publication); Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [140] (Australian records).

Alpheus digitalis De Haan, 1844

Alpheus digitalis De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [178 pl. 45 fig. 4] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: holotype RMNH D5547 1 dry specimen.
Type locality: Japan.

Alpheus distinguendus de Man, J.G. (1909). Note sur quelques espèces du genre *Alpheus* Fabr. appartenant au Groupe *brevirostris* de M. *Mem. Soc. Zool. Fr.* **22**: 146–164 pls 7, 8 [155 pl. 7 figs 9–14].
Type data: holotype RMNH D5535 1 dry specimen, paratypes RMNH D5534 3 dry specimens, RMNH D5536 1 dry specimen.
Type locality: Japan.

Taxonomic decision for synonymy: Bruce, A.J. (1994). *Alpheus fenneri* sp. nov. and *A. williamsi* sp. nov., two new Indo-west Pacific Alpheid shrimps of the *Brevirostris* species group. *Beagle, Rec. N.T. Mus. Arts Sci.* 11: 15–28 [22].

Distribution: NSW (Central E coast), QLD (Gulf of Carpentaria, NE coast), WA (Lower W coast, NW coast); east Indo-west Pacific Oceans.
Ecology: estuarine, sublittoral; nocturnal, in depths less than 37 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus djeddensis Coutière, 1897

Alpheus djeddensis Coutière, H. (1897). Note sur quelques espèce du genre Alpheus du Musée de Leyde. *Notes Leyden Mus.* **19**(23): 195–207 [202].
Type data: syntypes RMNH D 1781 ♂ ♀.
Type locality: Djeddah, Red Sea, Saudi Arabia.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans (Red Sea eastwards to Society Islands).
Ecology: burrowing, sand bottom, benthic, coral reef, subtidal; shares burrow in a commensal association with a goby fish.
References: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [180] (Australian records and review of biology); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is probably a complex of several species).

Alpheus dolerus Banner, 1956

Alpheus dolerus Banner, A.H. (1956). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part I. Collections from the Mariana Archipelago. *Pac. Sci.* **10**(3): 318–378 23 figs [362 fig. 21].
Type data: holotype USNM ♂, paratypes ♀ (as allotype), 12 specimens*.
Type locality: Saipan, Mariana Ils.

Distribution: Coral Sea Islands Territory, QLD (Great Barrier Reef); Indo-west Pacific Oceans (East Africa to Philippines, and east to Hawai'i).
Ecology: coral reef, benthic, low intertidal, shallow subtidal; from coral heads, to 5 m depth.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [205] (Australian records).

Alpheus edamensis de Man, 1888

Alpheus hippothoe edamensis de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [518].
Type data: syntypes 9 specimens*.
Type locality: Pulo Edam and Amboina [Ambon], Indonesia.

Alpheus acanthomerus Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-

Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [474 pl. 36 fig. 12].
Type data: syntypes 1 specimen*.
Type locality: Tahiti.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [188].

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Madagascar to Ryukyus, Philippines, Fiji, Samoa, Society Islands).
Ecology: benthic, low intertidal, subtidal; depths to 50 m.

Alpheus edwardsii (Audouin, 1827)

Athanas edwardsii Audouin, V. (1827). Description de l'Égypt ou recueil des observations et des recherches qui ont été faites en Égypt pendant l'expéditions de l'armée française. In, *Description de l'Égypte, Histoire Naturelle.* Edn 2. Vol. 22 pp. 249–290 [274].
Type data: neotype MNHP ♂, paratypes MNHP ♀ (as allotype), MNHP 3 ♂ 6 ♀.
Subsequent designation: Banner, A.H. & Banner, D.M. (1973). The establishment of a neotype for *Alpheus edwardsii* (Audouin). *Bull. Mus. Natn. Hist. Nat. Paris* **67**(88): 1141–1146 1 fig. [1141].
Type locality: Suez.

Distribution: 200 m bathymetric (Bass Strait, Central E coast, Central W coast, G. Aust. Bight, Gulf of Carp., Lower E coast, Lower W coast, N coast, NE coast, NW coast, S Gulfs coast, SW coast); circum-Australian, Indo-west Pacific Oceans.
Ecology: benthic, low intertidal; under rocks, dredged to 26 m.

Alpheus ehlersii de Man, 1909

Alpheus ehlersii de Man, J.G. (1909). Description of a new species of the genus *Alpheus* Fabr. from the Bay of Batavia. *Proc. Zool. Soc. Lond.* **1909**: 663–666 pl. 70 [663].
Type data: holotype ZMA* (apparently lost, see Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [132]).
Type locality: Edam Is., Bay of Batavia, Indonesia.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (East Africa to Philippines, and east to Caroline, Marshall, Phoenix, Samoa, and Tonga Islands).
Ecology: coral reef, low intertidal, reef flat; in dead coral heads.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [132] (Australian records).

Alpheus eulimene de Man, 1909

Alpheus eulimene de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [101].
Type data: holotype ZMA ♀*.
Type locality: off north coast of Pulau Waigeo, Indonesia (*Siboga* Stn 154) [0°7.2'N 130°25.5'E].

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); east Indo-west Pacific Oceans (Maldive Islands, Indonesia, Philippines, Japan, Mariana Islands).
Ecology: benthic, coral reef, low intertidal, subtidal; in and under dead coral heads, in sponges, depths to 83 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [105] (Australian records).

Alpheus euphrosyne de Man, 1897

Alpheus euphrosyne de Man, J.G. (1897). Bericht über die von herrn Schiffscapitän Storm zu Atjeh, an den westlichen Küsten von Malakka, Bornio und Celebes sowie in der Java-See gesammelten Decapoden und Stomatopoden (Part 5). *Zool. Jahrb. Syst.* **9**: 725–788 figs 60–73 [745 fig. 64].
Type data: syntypes 2 ♀ 1 juvenile*.
Type locality: Java Sea, Indonesia.

Alpheus eurydactylus de Man, J.G. (1920). Diagnoses of some new species of Penaeidae and Alpheidae with remarks on two known species of the genus *Penaeopsis* A. Milne Edwards from the Indian Archipelago. *Zool. Meded. (Leiden)* **5**(3): 103–109 [109].
Type data: syntypes whereabouts unknown ♂ ♀*.
Type locality: Java, Indonesia.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [232].

Distribution: QLD (NE coast); Indo-west Pacific Oceans (Kenya, Thailand, Indonesia, Philippines).
Ecology: estuarine, mangrove, intertidal, shallow subtidal; muddy shores.

Alpheus facetus de Man, 1908

Alpheus facetus de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [100].
Type data: syntypes ZMA*.
Type locality: off Djedan, Kepulauan Aru, Indonesia.

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (Central W coast, Lower W coast, NW coast); east Indo-west Pacific Oceans (Thailand, Indonesia, Japan, Vietnam, Philippines, Caroline Islands).

Ecology: coral reef, benthic, low intertidal, subtidal; intertidal pools, most in dead coral heads in 6 m or less, to depths of 30 m.
References: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [62] (Australian records); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus frontalis H. Milne Edwards, 1837

Alpheus frontalis Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [356] [several early authors incorrectly attributed the original description of *A. frontalis* to Thomas Say].
Type data: syntypes MNHP*.
Type locality: Australia (as Nouvelle-Hollande).

Alpheus latifrons Milne Edwards, A. (1873). Description de quelques Crustacés nouveaux ou peu connus provenant du Musée de M.C. Godeffroy. *J. Mus. Godeffroy* **1**(4): 253–264 pls 1–2, 13 [263].
Type data: syntypes ZMH 5831 ♀ * (MGH).
Type locality: Upolu, West Samoa, Pacific Ocean.

Bataeus utricola Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens.* Berlin pp. 137–178 pls 15–18 [164 pl. 17 figs 34, 35].
Type data: syntypes MB* (probable depository institution).
Type locality: Mauritius.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [99].

Distribution: QLD (Great Barrier Reef, NE coast), WA (Central W coast, NW coast); Indo-west central Pacific Oceans (East Africa to Japan, Philippines and east to Society Islands).
Ecology: coral reef, benthic, low intertidal, subtidal; lives in tubes in algae, to 130 m depth.

Alpheus georgei Banner & Banner, 1982

Alpheus georgei Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [200 fig. 61].
Type data: holotype WAM 226-65 ♂, paratypes WAM ♀ (as allotype), ZMA.
Type locality: W of Cape Jaubert, WA.

Distribution: WA (NW coast); Indonesia.
Ecology: benthic, continental shelf, subtidal; from sponge, to 126 m depth.

Alpheus gracilipes Stimpson, 1861

Alpheus gracilipes Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [31].
Type data: type status unknown.
Type locality: Tahiti.

Distribution: QLD (Great Barrier Reef, NE coast), WA (N coast, NW coast); Indo-west central Pacific Oceans (East Africa to Ryukyu Islands, east to Hawai'i).
Ecology: coral reef, benthic, low intertidal, shallow subtidal; in heads of dead coral, intertidal pools, depths to 6 m.
References: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [143] (Australian records); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus gracilis Heller, 1861

Alpheus gracilis Heller, C. (1862). Beiträge zur crustaceenfauna des Rothen Meeres. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **44**(1): 241–295 3 pls [271].
Type data: type status unknown NHMW* (probable depository institution).
Type locality: Red Sea.

Alpheus gracilis alluaudi Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [882].
Type data: type status unknown*.
Type locality: Mahé Is., Seychelles.

Crangon gracilis simplex Banner, A.H. (1953). The Crangonidae or snapping shrimp of Hawaii. *Pac. Sci.* **7**(1): 1–147 50 figs [75].
Type data: syntypes USNM*.
Type locality: Waikiki Reef, Oahu, Hawai'i.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [60].

Distribution: QLD (Central E coast, NE coast); Indo-west central Pacific Oceans (East Africa to Japan, east to Hawai'i and Society Islands).
Ecology: benthic, subtidal.

Alpheus hailstonei Coutière, 1905

Alpheus hailstonei Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [879 pl. 74 fig. 18].

Type data: syntypes MNHP 12 specimens ♂ ♀*.
Type locality: Maldive Ils: North Male Atoll, Mahlos Atoll, Hulule Male Atoll.

Alpheus hailstonei assimulans de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [99].
Type data: syntypes ZMA*.
Type locality: Indonesia (8 Siboga stations).

Alpheus hailstonei laetabilis de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [98].
Type data: syntypes ZMA*.
Type locality: Indonesia (3 Siboga stations).

Crangon hailstonei paucispinata Banner, A.H. (1953). The Crangonidae or snapping shrimp of Hawaii. *Pac. Sci.* **7**(1): 1–147 50 figs [51 fig. 16a–j].
Type data: holotype USNM 91602 ♀.
Type locality: off Kauai Is., Hawai'i (*Albatross* Stn 4128).

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [38].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), VIC (Bass Strait), WA (Lower W coast); Indo-west central Pacific Oceans.
Ecology: continental shelf, benthic, continental slope, subtidal; depths from 25–536 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus heronicus Banner & Banner, 1982

Alpheus heronicus Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [220 fig. 69].
Type data: holotype AM P27235 ♀, paratypes AM P27236 4♀, AM P27214 2♀.
Type locality: Heron Island, Capricorn group, QLD.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef); known only from limital area.
Ecology: benthic, coral reef, low intertidal, shallow subtidal; intertidal pools.

Alpheus hutchingsae Banner & Banner, 1982

Alpheus hutchingsae Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [191].
Type data: holotype AM P27252 ♀, paratype(s) AM P27253 ♂ (as allotype).
Type locality: Lizard Island, QLD.

Distribution: NT (N coast), QLD (Great Barrier Reef), WA (NW coast); known only from limital area.
Ecology: benthic, coral reef, subtidal; found most commonly in interstices of dead coral, amongst encrusting sponges and algae, depths to 46 m.

Alpheus labis Banner & Banner, 1982

Alpheus labis Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [127 fig. 35].
Type data: holotype AM P27234 ♂.
Type locality: Albany Passage area, Torres Straits, QLD.

Distribution: QLD (NE coast); known only from type locality.
Ecology: benthic, shallow subtidal.

Alpheus leptochirus Coutière, 1905

Alpheus leptochirus Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [914 pl. 87 fig. 54].
Type data: syntypes MNHP*.
Type locality: Maldive Islands.

Distribution: NT (N coast); Indo-west central Pacific Oceans (Maldive Islands, Seychelles, Réunion, questionably from Philippines and Hawai'i).
Ecology: benthic, sublittoral.

Alpheus leviusculus Dana, 1852

Taxonomic decision for subspecific arrangement: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [246].

Distribution: Coral Sea Islands Territory, QLD (Great Barrier Reef); Indo-west Pacific and Atlantic Oceans.

Alpheus leviusculus leviusculus Dana, 1852

Alpheus edwardsii leviusculus Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685 [543 pl. 34].
Type data: holotype (lost).
Type locality: Wake Island, N Pacific.

Alpheus bouvieri bastardi Coutière, H. (1898). Note sur quelques formes nouvelles d'alphéidés voisines de *A. Bouvieri* A. Milne Edwards (Crustacea). *Bull. Soc. Entomol. Fr.* **1898**(5): 131–134 5 figs [133 fig. 1a].
Type data: syntypes MNHP*.
Type locality: East Africa [Madagascar and Djibouti], and Panama.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [246].

Banner ? Should this be in Oz. fauna?

Distribution: Coral Sea Islands Territory, QLD (Great Barrier Reef); Indo-west central Pacific Oceans (East Africa to Indonesia and Pacific islands at least as far east as Wake Island, but not Hawai'i).
Ecology: coral reef, benthic, low intertidal, shallow subtidal; under rocks and in or under dead coral heads, on sand or gravel substrates.

Alpheus lobidens De Haan, 1844

Alpheus lobidens De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [179] [published from 1833–1850, Atlas dated 1844].
Type data: holotype RMNH D5541 1 dry specimen.
Type locality: Japan.

Alpheus crassimanus Heller, C. (1865). Crustaceen. *In, Reise der Österreichischen Fregatte 'Novara' um die Erdre, in den Jahren 1857, 1858, 1859*, unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zool. Theil. 2 (3) pp. 1–280 pls 1–25 [107 pl. 10 fig. 2].
Type data: type status unknown.
Type locality: Nicobar Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [34]; Davie, P., this work (*Alpheus inopinatus* Holthuis & Gottlieb, and *A. lobidens polynesica* Banner & Banner, are removed from synonymy of this species on the advice of A. Anker).

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (Central W coast, Lower W coast, NW coast); Indo-west Pacific Oceans (Red Sea to Hawai'i), eastern and central Mediterranean.
Ecology: burrowing, benthic, intertidal, shallow subtidal; commonly intertidal inburrows under rocks, on sand to sandy mud, occasionally in bases of dead coral heads, to 26 m depth.
References: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [252] (Australian distribution, remarks on biology); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus lottini Guérin-Méneville, 1829

Coral Snapping Shrimp (FAO)

Alpheus sublucanus Forskål, P. (1775). *Descriptiones animalium avium, amphibiorum, piscium, insectorum, vermium*; quae in itinere orientali observavit Petrus Forskål. Hafniae : Mölleri 19, xxxiv, 164 pp. [94] [name suppressed under the plenary powers, see International Commission on Zoological Nomenclature (1985). Opinion 1367. *Alpheus lottini* Guerin, 1829 (Crustacea, Decapoda): conserved. *Bull. Zool. Nomencl.* **42**(4): 361–364 (361)].
Type data: type status unknown*.
Type locality: Juddah, Saudi Arabia.

Alpheus lottini Guérin-Méneville, F.É. (1829). *Iconographie du règne animal de G. Cuvier*, ou représentation d'après nature de l'une des espèces les plus remarquables, et souvent non figurées, de chaque genre d'animaux, avec un text descriptif mis au courant de la science. Ouvrage pouvant servir d'atlas à tous les traitès de zoologie. Paris : J.B. Baillière 450 plates in 45 livraisons. Crustacea: 36 pls, 48 pp. [38 pl. 3 fig. 3].
Type data: holotype ANSP CA249.
Type locality: New Ireland, Bismark Archipelago, see Spamer, E.E. & Bogan, A.E. (1994). Type specimens of Crustacea surviving in the Guerin-Meneville collection, Academy of Natural Sciences of Philadelphia. *Proc. Acad. Nat. Sci. Phila.* **145**: 35–46.

Alpheus ventrosus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [352].
Type data: syntypes MNHP*.
Type locality: Mauritius.

Alpheus laevis Randall, J.W. (1840). Catalogue of the Crustacea brought by Thomas Nuttall and J.K. Townsend, from the West Coast of North America and the Sandwich Islands, with descriptions of such species as are apparently new, among which are included several species of different localities, previously existing in the Collection of the Academy. *J. Acad. Nat. Sci. Philad.* **8**(1): 106–147 pls 3–7 [141].
Type data: holotype ANSP CA247.
Type locality: Hawai'ian Islands (as Sandwich Islands), see Spamer, E.E. & Bogan, A.E. (1992). General Invertebrates Collection of the Academy of Natural Sciences of Philadelphia. Part 1: Guide to the General Invertebrates Collection. Part 2: Annotated Catalogue of recent type specimens: Protozoa, Proifera, Cnidaria, Platyhelminthes, Rotifera, Nemata, Nematomorpha, Annelida, Arthropoda (Merostomata, Pycnogonida, and Crustacea) Brachiopoda and Echinodermata. *Tryonia* **No. 26**: 1–305.

Alpheus thetis White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [75] [*nom. nud.*].

Crangon latipes Banner, A.H. (1953). The Crangonidae or snapping shrimp of Hawaii. *Pac. Sci.* 7(1): 1–147 50 figs [82 fig. 27].
Type data: syntypes USNM*.
Type locality: off Waikiki Reef, Oahu, Hawai'i.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [35].

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast, SE oceanic), Tasman Sea, WA (Central W coast, Lower W coast, NW coast); Indo-Pacific Oceans (South Africa to Philippines and east to Hawai'i, the Galapagos Islands, and American mainland from the Gulf of California to Colombia).

Ecology: coral reef, benthic, low intertidal, subtidal; only found associated with living pocilloporid corals, depths to 50 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus macrodactylus Ortmann, 1890

Alpheus macrodactylus Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [473 pl. 36 fig. 10].
Type data: holotype MS.
Type locality: Sydney, NSW.

Distribution: NSW (Lower E coast), QLD (NE coast); Indo-west Pacific Oceans (Sri Lanka, Annam, Taiwan, Guam).
Ecology: benthic, subtidal.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [210] (rediscovery and range extension).

Alpheus maindroni Coutière, 1898

Alpheus maindroni Coutière, H. (1898). Note sur quelques formes nouvelles d'alphéidés voisines de *A. Bouvieri* A. Milne Edwards (Crustacea). *Bull. Soc. Entomol. Fr.* **1898**(5): 131–134 5 figs [133 fig. 2].
Type data: syntypes MNHP*.
Type locality: Masqat [Muscat], Gulf of Oman and Djibouti, Gulf of Aden.

Distribution: NSW (Central E coast), NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Madagascar to Philippines and east to Caroline and Marshall Islands).
Ecology: coral reef, benthic, low intertidal, shallow subtidal; from dead coral heads, intertidal pools, reef flat.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [203] (Australian records).

Alpheus malabaricus (Fabricius, 1775)

Astacus malabaricus Fabricius, J.C. (1775). *Systema Entomologiae*, sistens Insectorum Classes, Ordines, Genera, Species, adiectis Synonymis, Locis, Descriptionibus, Observationibus. Korte : Flensburgi & Lipsiae xxvii 832 pp. [415].
Type data: type status unknown.
Type locality: Malabar Coast, southwestern India.

Alpheus dolichodactylus Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [473 pl. 36 fig. 11].
Type data: type status unknown MS*.
Type locality: Tokyo Wan, Japan.

Alpheus dolichodactylus leptopus de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [289].
Type data: syntypes ZMA*.
Type locality: area of Lesser Sunda Islands, Indonesia (four different *Siboga* Stns).

Alpheus malabaricus mackayi Banner, A.H. (1959). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean. Part IV. Various small collections from the central Pacific area, including supplementary notes on alpheids from Hawaii. *Pac. Sci.* **13**(2): 130–155 13 figs [149 fig. 12].
Type data: holotype USNM*.
Type locality: Wailupe fish pond, Oahu, Hawai'i.

Alpheus malabaricus songkla Banner, A.H. & Banner, D.M. (1966). The Alpheidae shrimp of Thailand. *Siam. Soc. Monogr.* **3**: i–v 1–168 pp. 62 figs [147 fig. 56].
Type data: type status unknown*.
Type locality: Lake Songkla, Songkla, Thailand.

Alpheus malabaricus trefzae Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [207 fig. 64].
Type data: holotype AM P30805 ♀.
Type locality: Brammo Bay, Dunk Island, N QLD.

Alpheus mazatlanticus Wicksten, M.K. (1983). Shallow water caridean shrimps of the Gulf of California, Mexico. *Allan Hancock Found. Monogr.* **13**: 1–59, figs 1–8 [46 figs 7, 8].
Type data: holotype AHF*.
Type locality: Laguna del Caimanero, Sinaloa, Mexico.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [39].

Distribution: QLD (NE coast); Indo-Pacific (East Africa to Mexico).
Ecology: benthic, burrowing, continental shelf, low intertidal, muddy-sand, subtidal; under rocks on sandy-mud substrate, to at least 289 m depth.
References: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [207] (Australian record as subspecies *A. malabaricus trefzae*); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus malleodigitus (Bate, 1888)

Bataeus malleodigitus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [565 pl. 101 fig. 5].
Type data: holotype BMNH ♀.
Type locality: Levuka, Fiji Islands.

Alpheus phyrgianus Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text–figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [886 pl. 77 fig. 25].
Type data: syntypes MNHP*.
Type locality: Maldive Islands (two localities), Madagascar (one locality).

Alpheus danae Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text–figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [887 pl. 77 fig. 26].
Type data: type status unknown MNHP*.
Type locality: Maldive Islands.

Alpheus persicus Nobili, G. (1905). Quatre Décopodes nouveaux du golfe Persique (récoltes de MM. J. Bonnier et Ch. Pérez. *Bull. Mus. Natn. Hist. Nat. Paris* **11**: 238–239 [238].
Type data: type status unknown MNHP* (probable depository institution).
Type locality: Persian Gulf.

Alpheus malleodigitus gracilicarpus de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [99].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Indonesia and Philippines region: South of Saleyer; Sulu archipelago; North-Ubian; NE Timor.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [40].

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west Pacific Oceans (East Africa to Japan, and east to Society Islands).
Ecology: coral reef, benthic, shallow subtidal; on and in corals, usually in surf zone.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [92] (Australian records).

Alpheus microstylus (Bate, 1888)

Betaeus microstylus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [566].
Type data: holotype BMNH*.
Type locality: Albany Island, Cape York, QLD.

Distribution: NT (N coast), QLD (NE coast); Indo-west Pacific Oceans (Red Sea to Philippines, and east to Caroline and Mariana Islands, and Samoa).
Ecology: benthic, low intertidal, reef flat, shallow subtidal.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [92] (Australian records).

Alpheus miersi Coutière, 1898

Alpheus rapax miersi Coutière, H. (1898). Note sur quelque formes nouvelles d'alphéidés voisines de *A. Bouvieri* A. M.-Edwards [Crust.]. *Bull. Soc. Entomol. Fr.* **1898**(7): 166–168 3 figs [166 fig. 1].
Type data: syntypes BMNH 3 specimens* (specimens identified as *A. gracilipes* by Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2.* Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [287]).
Type locality: Port Molle, N QLD; Ceylon; Japan.

Alpheus gracilipes serratus Coutière, H. (1898). Note sur quelques alphéidés nouveaux de la collection du British Museum (Crust). *Bull. Soc. Entomol. Fr.* **1898**: 166–168 [167] [Courtière erroneously credited this name to Miers who apparently did not publish it formally (Davie, P., this work)].
Type data: type status unknown BMNH*.
Type locality: Flinders Is., N QLD.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [41].

Distribution: QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans (East Africa to Indonesia, Japan, Philippines).
Ecology: intertidal.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [168] (Australian records).

Alpheus moretensis Banner & Banner, 1982

Alpheus moretensis Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [177 fig. 54].
Type data: holotype AM P30802 ♂.
Type locality: Moreton Bay, QLD.

Distribution: QLD (Central E coast); known only from type locality.
Ecology: sand bottom, benthic, subtidal; from 15 m depth.

Alpheus novaezealandiae Miers, 1876

New Zealand Snapping-prawn

Alpheus novaezealandiae Miers, E.F. (1876). Descriptions of some new species of Crustacea, chiefly from New Zealand. *Ann. Mag. Nat. Hist.* **17**: 218–229 [224] [as *Alpheus novae-zealandiae*].
Type data: syntypes BMNH*.
Type locality: New Zealand.

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast), QLD (Central E coast, Great Barrier Reef, Gulf of Carpentaria, NE oceanic), SA (S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Central W coast, Lower W coast, SW coast); New Zealand.
Ecology: benthic, intertidal, subtidal; under rocks, from cavities in bases of clumps of the tunicate *Pyura stolonifera*, depths to 26 m.
References: Yaldwyn, J. (1956). A redescription of the type material of *Alpheus novae-zealandiae* Miers, 1876 (Crustacea, Decapoda, Natantia). *Ann. Mag. Nat. Hist. (12)***9**: 805–811, figs 1–7; Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [145] (extensive Australian distributional records).

Alpheus obesomanus Dana, 1852

Alpheus obesomanus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [21].
Type data: syntypes ANSP*.
Type locality: Fiji Archipelago.

Alpheus lutini Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [885 pl. 76 fig. 24].
Type data: syntypes MNHP* (probable depository institution).
Type locality: Maldive Ils, Samoan Ils, and 'I'ile Tague'.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [89].

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (East Africa to Japan and east to Society Islands).
Ecology: coral reef, low intertidal, reef flat, shallow subtidal; in pairs in branching galleries under coralline encrusting algae on heads of dead or living coral, usually in areas of wave wash.

Alpheus ovaliceps Coutière, 1905

Alpheus ovaliceps Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [888 pl. 77 fig. 27].
Type data: holotype UMZC ♂* (probable depository institution).
Type locality: Minikoi Atoll, Laccadive Ils.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (Kenya, Laccadive Islands, Philippines, and east to Society Islands).
Ecology: coral reef, benthic, low intertidal, reef flat, subtidal; in dead coral heads, depths to 5 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [98] (Australian record).

Alpheus pachychirus Stimpson, 1861

Alpheus pachychirus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [30].
Type data: type status unknown* (presumed lost).
Type locality: Ryukyu Ils (as Loo Choo).

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (East Africa to Ryukyu Islands, and east to Society Islands).
Ecology: benthic, low intertidal, reef flat, shallow subtidal; lives in algal tubes, to depths of 36 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [102] (Australian distribution).

Alpheus pacificus Dana, 1852

Alpheus pacificus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [21].
Type data: neotype USNM.
Subsequent designation: Banner, A.H. (1953). The Crangonidae or snapping shrimp of Hawaii. *Pac. Sci.* 7(1): 1–147 50 figs [138].
Type locality: Hawai'i.

Alpheus gracilidigitus Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2*. Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [287].
Type data: syntypes BMNH*.
Type locality: Totoya, Fiji, and Hawai'i.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [217].

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast, SE oceanic), Norfolk Island, NT (N coast), QLD (Central E coast, Great Barrier Reef, Gulf of Carpentaria, NE coast), WA (Central W coast, Lower W coast, NW coast); Indo-Pacific Oceans (East Africa to Clipperton Is, in the east Pacific).
Ecology: coral reef, benthic, low intertidal, reef flat, shallow subtidal; intertidal reef pools, from dead coral, and burrowing in sand under rocks and coral heads, depths to 20 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus papillosus Banner & Banner, 1982

Alpheus papillosus Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [260 fig. 80].
Type data: holotype AM P27233 ♂, paratypes AM P27232 ♀ (as allotype), 108 specimens (AM P27212–13, AM P27215–19, AM P27223–25, AM P27227–31, AM P27237–43, AM P40478–81, AM P27262, AM P27875, AM P836, AM P5116, AM P7234, AM P8255, AM P8695, AM P9076, AM P10770, AM P11416, AM P11440, AM P11451, AM P13563, AM P13567, WAM 34–65, WAM 49–65, WAM 205–65, WAM 239–65, WAM 334–79, WAM 335–79, QM W835, QM W838, QM W1052, QM W9853, QM W9854, QM W9855, QM W9856).
Type locality: Gulf of Carpentaria, QLD (published locality Sandgate, Moreton Bay, QLD), see Springthorpe, R.T. & Lowry, J.K. (1993). Catalogue of Crustacean type specimens in the Australian Museum: Malacostraca. *Tech. Rep. Aust. Mus.* **11**: 1–134.

Distribution: NSW (Central E coast), QLD (Gulf of Carpentaria, NE coast), SA (Great Australian Bight), WA (Central W coast); known only from limital area.
Ecology: benthic, low intertidal, subtidal; commonly under rocks intertidally, dredged to depth of 19 m.

Alpheus paracrinitus Miers, 1881

Alpheus paracrinitus Miers, E.J. (1881). On a collection of Crustacea made by Baron Hermann Maltzam (sic, Maltzan) at Goree Island, Senegambia. *Ann. Mag. Nat. Hist.* **8**: 204–220, 259–281, 364–368 pls 13–16 [365 pl. 16 fig. 6].
Type data: syntypes BMNH 2 ♂ *.
Type locality: Goree Island, Senegal.

Alpheus paracrinitus bengalensis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [901 pl. 87 fig. 37].
Type data: syntypes 1 ♂ 1 ♀ *.
Type locality: Minikoi, Laccadive Ils.

Crangon togatus Armstrong, J.C. (1940). New species of Caridea from the Bermudas. *Am. Mus. Novit.* **1096**: 1–10 4 figs [2 fig. 1].
Type data: holotype AMNH 8195 ♀, paratypes AMNH 8187 ♀, AMNH 8188 3 ♀.
Type locality: Piedra Prieta Reef, Barahona, Dominican Republic.
Compiled from secondary source: Feinberg, H.S. (1971). *A Catalogue of Type Specimens in the Department of Living Invertebrates, The American Museum of Natural History, New York, U.S.A. Phylum Arthropoda: Class Crustacea Part One: Order Decapoda.* New York : The American Museum of Natural History.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [129].

Distribution: Coral Sea Islands Territory, QLD (Great Barrier Reef); circumtropical.
Ecology: coral reef, benthic, low intertidal, subtidal; under rocks, in dead coral heads, and in coralline algae, depths to 18 m.
References: Banner, A.H. & Banner, D.M. (1983). An annotated checklist of the alpheid shrimp from the western Indian Ocean. *Trav. Docum. ORSTOM* **158**: 1–164 [55] (previous records from Australia of *Alpheus mitis* Dana, 1852, by Banner & Banner (1982: 134) are reassigned to *A. paracrinitus*); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus paralcyone Coutière, 1905

Alpheus paralcyone Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [895 pl. 80, 81 fig. 34].
Type data: syntypes 11 specimens ♂ ♀ *.
Type locality: Maldive and Laccadive Ils: South Nilandu Atoll, Miladumadulu Atoll, North Male Atoll, Mahlos Atoll.

Crangon laysani Edmondson, C.H. (1925). Crustacea. *In* Marine Zoology of Tropical Central Pacific (Tanager Expedition, Publication I). *Bull. Bernice P. Bishop Mus.* **27**: 3–62 figs 1–8 pls 1–4 [17].
Type data: holotype BPBM 1803 ♀.
Type locality: Laysan Island, Hawai'i.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [113].

Distribution: QLD (Great Barrier Reef, NE coast), WA (Central W coast); Indo-west central Pacific Oceans (Madagascar to Japan and east to Hawai'i).
Ecology: coral reef, benthic, subtidal; found in dead coral heads, depths to 166 m.

Alpheus parasocialis Banner & Banner, 1982

Alpheus parasocialis Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [72 fig. 17].

Type data: holotype WAM 288-65 ♀, paratypes WAM ♂ (as allotype), WAM 90 specimens, NMV J675, AM P27249–51, 5679, 2329, 12427, 13578, 27256-61, 27936 5 specimens; BPBM 4 specimens, TMH G1482, 1509, 1510, 1538 5 specimens, QVM 1971-10-6 1 specimen.
Type locality: Palm Beach, Rockingham, WA.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), WA (Central W coast, Lower W coast, SW coast); known only from limital area.
Ecology: benthic, low intertidal, subtidal; depths to 29 m.

Alpheus pareuchirus Coutière, 1905

Taxonomic decision for subspecific arrangement: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [276].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (NW coast); Indo-west Pacific Oceans.

Alpheus pareuchirus imitatrix de Man, 1909

Alpheus pareuchirus imitatrix de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [106].
Type data: syntypes ZMA*.
Type locality: Indonesia.

Distribution: NT (N coast), QLD (NE coast); Indonesia.
Ecology: continental shelf, benthic, subtidal; from growth on pearl oyster shell, Australian material dredged to 22 m, but found as deep as 141 m in Indonesia.

Alpheus pareuchirus pareuchirus Coutière, 1905

Alpheus pareuchirus Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [906 pl. 84].
Type data: syntypes 4 specimens ♂ ♀*.
Type locality: North Male Atoll, Maldive Ils.

Alpheus pareuchirus leucothea de Man, J.G. (1911). The Decapoda of the Siboga Expedition. Part II. Family Alpheidae. *Siboga Exped. (Livr. 60 Mon. 39a1)***22**: 133–465 [420 fig. 102].
Type data: syntypes ZMA*.
Type locality: Indonesia and Sulu Archipelago (six different *Siboga* Stns).

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [47].

Distribution: NT (N coast), QLD (Central E coast), WA (NW coast); Indo-west Pacific Oceans (Madagascar to Philippines and east to Caroline Islands).
Ecology: benthic, low intertidal, subtidal; intertidal reef pools, dredged to 15 m depth.

Alpheus parvirostris Dana, 1852

Alpheus parvirostris Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [22].
Type data: type status unknown (presumed lost).
Type locality: Straits of Balabac, N of Borneo.

Alpheus lineifer Miers, E.J. (1875). On some new or undescribed species of Crustacea from the Samoa Islands. *Ann. Mag. Nat. Hist.* **16**: 341–344 [343].
Type data: syntypes BMNH*.
Type locality: Samoa Island.

Alpheus euchiroides Nobili, G. (1906). Diagnoses préliminaires de Crustacés Décapodes et Isopodes nouveaux recueillis par M. le Dr. G. Seurat aux îles Touamotou. *Bull. Mus. Natn. Hist. Nat. Paris* **12**(5): 256–270 [257].
Type data: type status unknown*.
Type locality: Marutea, Tuamotu Archipelago.

Alpheus braschi Boone, L. (1935). Crustacea and Echinodermata. Scientific results of the world cruise of the yacht *Alva*, 1931, William K. Vanderbilt, commanding. *Bull. Vanderbilt Mar. Mus.* **6**: 1–263, 96 pls, 13 text-figs [131 pl. 34].
Type data: holotype VMM ♀ adult*.
Type locality: Pago Pago, Samoa.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [47].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (Central W coast, Lower W coast); Indo-west central Pacific Oceans (South Africa to Japan and east to Tuamotu Archipelago).
Ecology: coral reef, benthic, low intertidal, reef flat, subtidal; one of the most common *Alpheus* species in dead coral, also occassionally in live coral, and in sponges, intertidal pools to depths of 32 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [185] (Australian records).

Alpheus polyxo de Man, 1909

Alpheus polyxo de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [108].
Type data: holotype ZMA ♂*.
Type locality: Banda Anchorage, Moluccas, Indonesia.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (Central W coast, Lower W coast); Indo-west Pacific Oceans (Madagascar, Indonesia, Philippines).
Ecology: benthic, coral reef, subtidal; in dead coral in shallow water, dredged to 131 m depth.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [274] (Australian records).

Alpheus pubescens de Man, 1908

Alpheus pubescens de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [109].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Indonesia: Postillon Islands; Samau Is., Timor; Borneo Bank; west-coast of Salawatti; Aru Ils.

Distribution: NT (N coast), QLD (NE coast); Torres Straits, and Indonesia and Vietnam.
Ecology: coral reef, benthic, low intertidal, subtidal; intertidal pools, from dead corals in waters to 30 m depth, dredged from various bottom types.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [167] (Australian records).

Alpheus rapacida de Man, 1908

Alpheus rapacida de Man, J.G. (1908). Diagnoses of new species of Macrurous decapod Crustacea from the "Siboga-Expedition" III. *Notes Leyden Mus.* **30**(14): 98–112 [105].
Type data: syntypes ZMA ♂ ♀*.
Type locality: Indonesia: Ruma Kuda Bay, Roma Island; Saleh Bay.

Distribution: NSW (Central E coast), QLD (Central E coast, Great Barrier Reef, Gulf of Carpentaria, NE coast), WA (Central W coast); Indo-west central Pacific Oceans (South Africa to Indonesia, Vietnam, and east to Hawai'i), Mediterranean coast of Israel.
Ecology: benthic, coral reef, rock reef, subtidal; burrows into sandy to muddy bottoms, forms commensal relationship with gobiid fishes, depths to 56 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [160] (Australian records).

Alpheus rapax Fabricius, 1798

Alpheus rapax Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [405].
Type data: lectotype BMNH* (probably not extant).
Subsequent designation: Zimsen, E. (1964). Crustacea. pp. 643–656 *in, The Type Material of I.C. Fabricius.* Copenhagen : Munksgaard.
Type locality: East Indies.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast); Indo-west central Pacific Oceans (South Africa to Japan and east to Hawai'i).
Ecology: benthic, low intertidal, subtidal; on sandy to stony substrates, intertidal to 46 m depth.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [174] (Australian records).

Alpheus richardsoni Yaldwyn, 1971

Alpheus richardsoni Yaldwyn, J. (1971). Preliminary description of a new genus and twelve new species of natant decapod Crustacea from New Zealand. *Rec. Dom. Mus. N.Z.* 7(10): 85–94 [88].
Type data: holotype NMNZ 1873 ♂, paratypes NMNZ 792–804, RMNH D37530 2 specimens.
Type locality: Marriot Is., Waikare River Inlet, Bay of Islands, North Island, New Zealand.

Distribution: NSW (Lower E coast), QLD (Central E coast), SA (S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Lower W coast, NW coast, SW coast); New Zealand.
Ecology: burrowing, mangrove, estuarine, intertidal, shallow subtidal; muddy shore and mudflats, tolerant of brackish water, depths to 22–24 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [235] (treated as a subspecies of *A. euphrosyne* de Man).

Alpheus serenei Tiwari, 1963

Alpheus serenei Tiwari, K. (1963). Alpheid shrimps (Crustacea: Decapoda: Alpheidae) of Vietnam. *Annls Fac. Sci. Saigon* **1963**: 269–362 1 table 32 figs [310 figs 27, 28].
Type data: type status unknown.
Type locality: Station Cauda, Nhatrang Bay, Vietnam.

Distribution: NT (N coast), QLD (NE coast), WA (Central W coast, NW coast); Indo-west Pacific Oceans (East Africa to Indonesia, Vietnam, Philippines).
Ecology: coral reef, benthic, subtidal; crevice dweller, in dead coral heads, hard substrates, dredged to depths of 60 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [196] (Australian records).

Alpheus socialis Heller, 1865

Smooth Snapping Prawn

Alpheus doto White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [75] [*nom. nud.*].

Alpheus socialis Heller, C. (1865). Crustaceen. *In, Reise der Österreichischen Fregatte 'Novara' um die Erdre, in den Jahren 1857, 1858, 1859*, unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zool. Theil. 2 (3) pp. 1–280 pls 1–25 [106].
Type data: syntypes whereabouts unknown*.
Type locality: Auckland and Sydney.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [68].

Distribution: Lord Howe Island, NSW (Lower E coast), SA (S Gulfs coast), VIC (Bass Strait); New Zealand.
Ecology: benthic, low intertidal, subtidal; to 110 m depth.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs [46] (illustration and notes).

Alpheus soela Banner & Banner, 1986

Alpheus soela Banner, D.M. & Banner, A.H. (1986). Two new species of Alpheid shrimp from Australian waters. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 21–27 [21 fig. 1].
Type data: holotype NTM Cr.001994 ♀.
Type locality: W of La Grange Bay, Western Australia.

Distribution: WA (NW coast); Philippines.
Ecology: benthic, continental slope; depth 293 to 640 m.

Alpheus splendidus Coutière, 1897

Alpheus splendidus Coutière, H. (1897). Note sur quelques Alphéidés nouveaux ou peu connus rapportés de Djibouti (Afrique orientale). *Bull. Mus. Natn. Hist. Nat. Paris* **3**: 233–236 [236].
Type data: syntypes MNHP ♀*.
Type locality: Djibouti, NE Africa.

Alpheus pomatoceros Banner, A.H. & Banner, D.M. (1966). The Alpheidae shrimp of Thailand. *Siam. Soc. Monogr.* **3**: i–v 1–168 pp. 62 figs [93].
Type data: holotype ♂, paratype(s) 9♀ 9♂.
Type locality: Lam Chong Klan, Koh Samui, Thailand.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [56].

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (Red Sea, Seychelles, Indonesia, Malaysia, Thailand, Philippines, Hong Kong).
Ecology: coral reef, benthic, intertidal, shallow subtidal; under coral and rocks, to 2–3 m depth.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus spongiarum Coutière, 1897

Bristle Snapping Shrimp (FAO)

Alpheus spongiarum Coutière, H. (1897). Note sur quelques Alphéidés nouveaux ou peu connus rapportés de Djibouti (Afrique orientale). *Bull. Mus. Natn. Hist. Nat. Paris* **3**: 233–236 [236].
Type data: syntypes AM G2125 1♂ 1♀, RMNH D1008 3 specimens.
Type locality: Djibouti, Gulf of Eden, NE Africa, E Africa, Gulf of Aden, Djibouti.

Alpheus paraculeipes Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [894 pls 79, 80].
Type data: syntypes UMZC 9 specimens ♂ ♀*.
Type locality: Maldive Islands: South Nilandu Atoll, Mahlosmadulu Atoll, North and South Male Atoll.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [116].

Distribution: QLD (Great Barrier Reef, Gulf of Carpentaria, NE coast), WA (Central W coast, Lower W coast); Indo-west Pacific Oceans (Madagascar to Indonesia, Japan and Philippines).
Ecology: benthic, coral reef, low intertidal, subtidal; always found in sponges, depths to 113 m.

Alpheus stantoni Banner & Banner, 1986

Alpheus stantoni Banner, D.M. & Banner, A.H. (1986). Two new species of Alpheid shrimp from Australian waters. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 21–27 [24 fig. 2].
Type data: holotype NTM Cr.003435 ♀.
Type locality: Heron Island, Great Barrier Reef.

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: benthic, coral reef, shallow subtidal; depth 13 m.

Alpheus staphylinus Coutière, 1908

Alpheus staphylinus Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [204(14)].
Type data: holotype MNHP ♂.
Type locality: Solomon Islands.

Distribution: QLD (NE coast); Indo-west Pacific Oceans (East Africa, Chagos Archipelago, Indonesia, Ryukyu Islands, Philippines).
Ecology: benthic, subtidal.

Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [41] (Australian record from Torres Strait; identification with some reserve because of poorly preserved specimen).

Alpheus stephensoni Banner & Smalley, 1969

Queensland Snapping Shrimp (FAO)

Alpheus stephensoni Banner, D.M. & Smalley, C.R. (1969). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean. Part XIII. Two species of Alpheid shrimp, one new, common in the prawn trawls of Moreton Bay, Queensland, Australia. *Proc. R. Soc. Qld* **81**(3): 43–50 3 figs [43 fig. 2].
Type data: holotype AM P18004 ♂.
Type locality: 12.8 km E of Scarborough, QLD.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast); known only from limital area, from Bundaberg south to Port Jackson.
Ecology: benthic, soft bottom, subtidal; trawled from depths of 9–18 m.

Alpheus strenuus Dana, 1852

Taxonomic decision for subspecific arrangement: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [225].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, Lower W coast, N coast, NW coast); Indo-west Pacific Oceans.

Alpheus strenuus cremnus Banner & Banner, 1982

Alpheus strenuus cremnus Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [229 fig. 72].
Type data: holotype AM P27194 ♂, paratypes AM P27195 ♀, AM P4950 3 specimens, AM P6914 1 specimen, AM P27196–200 10 specimens, AM P27206–211 10 specimens, AM P27226 2 specimens, AM P27244–247 6 specimens, NMV J676 2 specimens, WAM 131-65 3 specimens, AM P27265 1 specimen, WAM 89-65 3 specimens, WAM 185-65 9 specimens, WAM 221-65 5 specimens, WAM 278-65 11 specimen, WAM 299-65 2 specimens.
Type locality: Minnie Waters, Grafton, NSW.

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria), WA (Central W coast, Lower W coast, NW coast); known only from limital area.
Ecology: benthic, low intertidal, shallow subtidal; in muddy and estuarine environments, sheltered rocky shores, rocky reefs.

Alpheus strenuus strenuus Dana, 1852

Alpheus strenuus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [21].
Type data: type status unknown* (presumed lost).
Type locality: Island of Tongatabu, Pacific Ocean.

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (NW coast); Indo-west Pacific Oceans (Red Sea to Society Islands).
Ecology: low intertidal; typically under rocks on sandy beaches.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [225] (Australian records).

Alpheus sudara Banner & Banner, 1966

Alpheus sudara Banner, A.H. & Banner, D.M. (1966). The Alpheidae shrimp of Thailand. *Siam. Soc. Monogr.* **3**: i–v 1–168 pp. 62 figs [153 fig. 59].
Type data: holotype ♂, paratype(s) 4 ♀ 1 ♂.
Type locality: Phuket, Thailand.

Distribution: QLD (NE coast); Indo-west Pacific Oceans (Thailand and possibly Vietnam).
Ecology: coral reef, benthic, low intertidal, shallow subtidal; from coral heads.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [243] (Australian record).

Alpheus sulcatus Kingsley, 1878

Alpheus sulcatus Kingsley, J.S. (1878). (Art. VII) A synopsis of the North America species of the genus *Alpheus*. *Bull. U.S. Geol. Geogr. Surv. Territ.* **4**(1): 189–199 [193].
Type data: syntypes USNM 2 imperfect specimens* (probable depository institution).
Type locality: Bay of Panama and Zorritos, Peru.

Alpheus macrochirus Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens*. Berlin pp. 137–178 pls 15–18 [164 pl. 17 figs 31–33].
Type data: syntypes 14 specimens*.
Type locality: Fouquets, Mauritius.

Alpheus luciae Barnard, K.H. (1947). Descriptions of new species of South African decapod Crustacea, with notes on synonymy and new records. *Ann. Mag. Nat. Hist. (11)***13**: 361–392 [389].
Type data: syntypes SAM ♂*.
Type locality: St Lucia Bay, Zululand.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [79].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), VIC, WA (Central W coast, Lower W coast, NW coast); east Atlantic-Indo-Pacific Oceans (south Africa to Japan, east to Society and Galapagos Islands, Pacific American mainland from Gulf of California to Peru, and western Africa from equator to southern Angola).
Ecology: coral reef, benthic, low intertidal, subtidal; under rocks intertidally, from coral, dredged to 24 m.
Reference: Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Alpheus superciliaris Coutière, 1905

Alpheus superciliaris Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes. Vol. 2(4).* Cambridge, England : University Press [896, pl. 81, fig. 35].
Type data: syntype MNHP ♂* (presumed depository institution).
Type locality: Amirante, Seychelles.

Distribution: Territory of Ashmore & Cartier Islands (Hibernia Reef); Indian Ocean (Amirante, Réunion Island, Mauritius).
Ecology: coral reef.
Reference: Banner, A.H. & Banner, D.M. (1983). An annotated checklist of the alpheid shrimp from the western Indian Ocean. *Trav. Docum. ORSTOM* **158**: 1–164 [71]; Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [130].

Alpheus tasmanicus Banner & Banner, 1982

Alpheus tasmanicus Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [215 fig. 67].
Type data: holotype AM P31484 ♂.
Type locality: Tasmania.

Distribution: TAS (Tas. coast); known only from type locality.
Ecology: benthic, subtidal*.

Alpheus villosus (Olivier, 1811)

Palaemon diversimanus Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [663] [despite having page priority over *P. villosus*, Banner & Banner (1982: 52) listed this species as a junior synonym without comment, but presumably because the type specimens are lost, the type locality is vague, and the specific differences from the well known *P. villosus* are unclear; this action can be considered that of first reviser, and thus *Palaemon villosus* named on the next page of the same work is to be considered the senior name (Davie, P., this work)].
Type data: syntypes MNHP* (presumed lost).
Type locality: Australia (as Nouvelle Hollande).

Palaemon villosus Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [664].
Type data: holotype MNHP*.
Type locality: 'la mer des Indes' (holotype apparently has an accompanying label with the locality 'Port du Roi Georges', presumably King George Sound, Albany, WA), see Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [52].

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [49].

Distribution: NSW (Lower E coast), NT (Gulf of Carpentaria, N coast), SA (Great Australian Bight, S Gulfs coast), VIC, WA (Lower W coast, NW coast, SW coast); Indo-west Pacific Oceans (Mascarene Islands, Sulu Archipelago).
Ecology: coral reef, benthic, low intertidal, subtidal; taken from corals, depths to 44 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [53] (recognised a 'northern' and 'southern' form in Australia).

Alpheus williamsi Bruce, 1994

Alpheus williamsi Bruce, A.J. (1994). *Alpheus fenneri* sp. nov. and *A. williamsi* sp. nov., two new Indo-west Pacific Alpheid shrimps of the *Brevirostris* species group. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 15–28 [19 figs 3, 5].
Type data: holotype NTM Cr.009495 ♀.
Type locality: N of Charles Point, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: sublittoral, benthic.

Arete Stimpson, 1860

Arete Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [32] [name placed on the Official List

of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Arete dorsalis* Stimpson, 1860 by monotypy.

Extralimital distribution: Indo-west Pacific.

Generic reference: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [194].

Arete dorsalis Stimpson, 1861

Arete dorsalis Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [32].
Type data: type status unknown* (presumed lost).
Type locality: Hong Kong.

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast, SE oceanic), Norfolk Island, QLD (Central E coast, NE coast, SE oceanic), WA (Central W coast, Lower W coast); Indo-west central Pacific Oceans (South Africa to Japan and east to Tuamotu Archipelago).
Ecology: benthic, coral reef, low intertidal, reef flat, shallow subtidal; typically found living between the spines on the oral surface of sea urchins (*Heterocentrotus mammillatus* or *Anthocidaris crassispina*), and assuming the colour of the host.
References: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [324]; Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Arete indicus Coutière, 1903

Arete dorsalis indicus Coutière, H. (1903). Note sur quelques Alpheidae des Maldives et Laquedives. *Bull. Soc. philomath. Paris* **5**(9): 72–90, 38 figs [84 figs 25–30].
Type data: type status unknown MNHP ♂.
Type locality: Djibouti, Red Sea.

Distribution: Norfolk Island, QLD (Central E coast, Great Barrier Reef, NE coast, NE oceanic), WA (Lower W coast); Indo-west central Pacific Oceans (Madagascar and Red Sea to Japan and east to Tuamotu Archipelago).
Ecology: benthic, coral reef, low intertidal, subtidal; associated with sea urchins (*Echinometra mathaei*).
References: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [327] (as *Athanas indicus*); Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [194].

Aretopsis de Man, 1910

Aretopsis de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [310] [gender feminine].
Type species: *Aretopsis amabilis* de Man, 1910 by monotypy.

Extralimital distribution: Indo-west central Pacific. See: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [59].

Aretopsis amabilis de Man, 1910

Aretopsis amabilis de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [311].
Type data: syntypes ZMA*.
Type locality: Pulu Kaniungan ketjil, Indonesia (*Siboga* Stn 89).

Aretopsis aegyptiaca Ramadan, M.M. (1936). Report on a collection of Stomatopoda and Decapoda from Ghardaga, Red Sea. *Bull. Fac. Sci. Egypt Univ.* **6**: 1–43 pls 1–2 [16 pl. 1 figs 9, 10].
Type data: type status unknown*.
Type locality: Hurghada, Egypt.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [330].

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans (Red Sea to Ryukyu Islands, Philippines, Indonesia, Marshall Islands).
Ecology: benthic, coral reef, reef flat, shallow subtidal; commonly lives in pairs inside the shell of hermit crabs (*Dardanus* and *Aniculus* spp.), also taken in pelecypod (*Pterocera*), may also be free-living.

Athanas Leach, 1814

Athanas Leach, W.E. (1814). Leach, W.E. (1814). Entry: Crustacealogy. pp. 385–437 *in*, *The Edinburgh Encyclopedia conducted by David Brewster LLD.* Vol. VII(2). Edinburgh. [432] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Palaemon nitescens* Leach, 1814 by monotypy.

Extralimital distribution: most tropical and some temperate seas, but not off the American continents. See: Chace, F.A., Jr (1988). The Caridean Shrimps

(Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [59].

Generic reference: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [303] (key to Australian species).

Athanas areteformis Coutière, 1903

Athanas naifaroensis Coutière, H. (1903). Note sur quelques Alpheidae des Maldives et Laquedives. *Bull. Soc. philomath. Paris* **5**(9): 72–90, 38 figs [77(6) figs 14–16].
Type data: syntypes MNHP 7♀* (probable depository institution).
Type locality: Maldive Islands: Naifaro Reef and Hulule Male Atoll.

Athanas areteformis Coutière, H. (1903). Note sur quelques Alpheidae des Maldives et Laquedives. *Bull. Soc. philomath. Paris* **5**(9): 72–90, 38 figs [79 figs 17, 18].
Type data: syntypes MNHP ♂ ♀* (probable depository institution).
Type locality: Maldive Islands: Naifaro Reef and Hulule Male Atoll.

Athanas dubius Banner, A.H. (1956). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part I. Collections from the Mariana Archipelago. *Pac. Sci.* **10**(3): 318–378 23 figs [322 fig. 2].
Type data: holotype USNM ♀, paratypes USNM ♂, USNM 7 specimens*.
Type locality: Saipan.

Athanas erythraeus Ramadan, M.M. (1936). Report on a collection of Stomatopoda and Decapoda from Ghardaga, Red Sea. *Bull. Fac. Sci. Egypt Univ.* **6**: 1–43 pls 1–2 [13 pl. 1 fig. 1].
Type data: type status and whereabouts unknown.
Type locality: Hurghada, Egypt.

Taxonomic decision for synonymy: Banner, A.H. & Banner, D.M. (1960). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean, Part V: The Indo-Pacific members of the genus *Athanas*. *Pac. Sci.* **14**(2): 129–155, figs 1–6 [138] (acted as first reviser in citing *A. naifaroensis* as a junior synonym of *A. areteformis*); Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [61].

Distribution: NSW (SE oceanic), QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans (South Africa to Philippines, Marshall Islands, Fiji, Tonga, Samoa, and Society Islands).
Ecology: benthic, coral reef, low intertidal, reef flat, subtidal; collected in dead coral heads.
Reference: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [304] (Australian records).

Athanas borradailei Coutière, 1903

Athanas borradailei Coutière, H. (1903). Note sur quelques Alpheidae des Maldives et Laquedives. *Bull. Soc. philomath. Paris* **5**(9): 72–90, 38 figs [80 figs 19–24].
Type data: holotype MNHP NA1725 ♂.
Type locality: Maldive Ils.

Athanas ghardaqensis Ramadan, M.M. (1936). Report on a collection of Stomatopoda and Decapoda from Ghardaga, Red Sea. *Bull. Fac. Sci. Egypt Univ.* **6**: 1–43 pls 1–2 [15 pl. 1 fig. 208].
Type data: syntypes 1 ♀ 4♂*.
Type locality: Ghardaga, Red Sea.

Athanas polynesia Banner, A.H. & Banner, D.M. (1966). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part X. Collections from Fiji, Tonga, and Samoa. *Pac. Sci.* **20**(2): 145–188 20 figs [152 fig. 4].
Type data: holotype BPBM ♂ (probable depository), paratype(s) 2♂.
Type locality: Alofau on the island of Tutuila.

Taxonomic decision for synonymy: Banner, A.H. & Banner, D.M. (1983). An annotated checklist of the alpheid shrimp from the western Indian Ocean. *Trav. Docum. ORSTOM* **158**: 1–164 [73].

Distribution: QLD (Great Barrier Reef); Indo-west Pacific (East Africa to Samoa).
Ecology: benthic, coral reef, subtidal; from areas covered with encrusting algae, in depths from 2–7 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [301] (Australian record, as *Athanas polynesia*).

Athanas dimorphus Ortmann, 1894

Athanas dimorphus Ortmann, A.E. (1894). Crustaceen. *In*, Semon, R. Zoologische Forshungreisen in Australien und dem Malayischen Archipel. *Denkschr. Med.-Naturwiss. Ges. Jena* **8**(1): 1–80 pls 1–3 [12 pl. 1 fig. 1].
Type data: syntypes whereabouts unknown*.
Type locality: Upanga Reef, Dar es Salaam, Tanzania.

Athanas leptocheles Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidés, format la sous-famille des alphéopsides. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(8): 380–386 [381].
Type data: type status unknown MNHP*.
Type locality: Red Sea.

Athanas solenomerus Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidés, format la sous-famille des alphéopsides. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(8): 380–386 [381].
Type data: type status unknown MNHP*.
Type locality: Red Sea.

Athanas dispar Coutière, H. (1897). Note sur quelques Alphéidés nouveaux ou peu connus rapportés de Djibouti (Afrique orientale). *Bull. Mus. Natn. Hist. Nat. Paris* **3**: 233–236 [233].
Type data: syntypes MNHP*.
Type locality: Djibouti and El Suweis, Red Sea.

Athanas setoensis Kubo, I. (1951). Some macrurous decapod Crustacea found in Japanese waters, with descriptions of four new species. *J. Tokyo Univ. Fish.* **38**(2): 259–289, 16 figs [265 figs 5, 6].
Type data: holotype SMBL 113 ♀ (can no longer be found, see Harada, E. (1991). Inventory of zoological type specimens in the Museum of the Seto Marine Biological Laboratory. *Publ. Seto Mar. Biol. Lab.* **35**(1–3): 171–233 [204]).
Type locality: near Seto Marine Biological Station of Kyoto University, Seto, Hatake-zima.

Athanas dimorphus seedang Banner, A.H. & Banner, D.M. (1966). The Alpheidae shrimp of Thailand. *Siam. Soc. Monogr.* **3**: i–v 1–168 pp. 62 figs [28 fig. 4].
Type data: holotype ♀, paratype(s) ♂ (as allotype).
Type locality: Koh Kradard, Thailand.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [61].

Distribution: NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, NE coast), WA (Lower W coast); Indo-west Pacific Oceans (Red Sea and eastern Africa, Thailand, Philippines, Hong Kong, Japan, New Caledonia).
Ecology: benthic, coral reef, low intertidal, shallow subtidal; taken from coral heads, intertidal pools, amid detritus on shallow reef flats.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [313] (Australian records).

Athanas djiboutensis Coutière, 1897

Athanas djiboutensis Coutière, H. (1897). Note sur quelques Alphéidés nouveaux ou peu connus rapportés de Djibouti (Afrique orientale). *Bull. Mus. Natn. Hist. Nat. Paris* **3**: 233–236 [234].
Type data: syntypes RMNH D1812 ♂ ♀, MNHP*.
Type locality: E Africa, Gulf of Aden, Djibouti [Jibuti], Africa.

Athanas sulcatipes Borradaile, L.A. (1898). On some Crustaceans from the Pacific. Part III. Macrura. *Proc. Zool. Soc. Lond.* **1898**: 1000–1015 pls 63–65 [1011 pl. 65 fig. 9].
Type data: syntypes UMMZ 5 ♀ 3 ♂*.
Type locality: Funafuti, South Pacific.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [306].

Distribution: Coral Sea Islands Territory, QLD (Great Barrier Reef); Indo-west central Pacific Oceans (South Africa to Japan and east to Marquesas and Society Islands).
Ecology: benthic, coral reef, low intertidal, rocky shore, shallow subtidal; found in live and dead coral, under rocks.

Athanas granti Coutière, 1908

Athanas granti Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [2].
Type data: syntypes MNHP 2 ♂ 3 ♀*.
Type locality: South Adelaide coast, SA.

Distribution: NSW (Lower E coast), SA (Great Australian Bight, S Gulfs coast), VIC, WA (Lower W coast, SW coast); known only from limital area.
Ecology: benthic, intertidal, shallow subtidal; under rocks, also reported from living coral and a sea urchin.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [316].

Athanas hasswelli Coutière, 1908

Athanas hasswelli Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [2] [name originally misspelled as *hasswelli*].
Type data: holotype MNHP ♀*.
Type locality: South Adelaide coast, SA.

Distribution: NT (N coast), SA (Great Australian Bight); known only from limital area.
Ecology: low intertidal, shallow subtidal.

Athanas japonicus Kubo, 1936

Athanas japonicus Kubo, I. (1936). A description of a new alpheoid shrimp from Japan. *J. Imp. Fish. Bur. Tokyo* **31**(2): 43–46 pl. 13 [43 pl. 13].
Type data: syntypes whereabouts unknown*.
Type locality: Japan.

Athanas lamellifer Kubo, I. (1940). Notes on the Japanese shrimps of the genus *Athanas* with a decription of one new species. *Annot. Zool. Jpn.* **19**(2): 99–106 5 figs [102 figs 3–5].
Type data: syntypes ♂ ♀*.
Type locality: Kominato [Matuga-hana], Tiba Prefecture.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [308].

Distribution: NT (N coast); Japan.
Ecology: mangrove, benthic, intertidal, mangrove; muddy foreshore interspersed with rocks and mangrove roots.

Athanas locincertus Banner & Banner, 1973

Athanas locincertus Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [311 fig. 5].
Type data: holotype WAM 61-65 ♂, paratype(s) WAM ♀.
Type locality: Panchoran Bay, Christmas Island.

Distribution: Christmas Island (Aust. Terr.); known only from type locality.
Ecology: benthic, intertidal*.

Athanas ornithorhynchus Banner & Banner, 1973

Athanas ornithorhynchus Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [319 fig. 8].
Type data: holotype AM P17999 ♀, paratypes AM P18000 1 ♀, AM P18001 1 ♀, WAM.
Type locality: Chambers Bay, Van Diemen Gulf, NT.

Distribution: NT (N coast), WA (Central W coast); known only from limital area.
Ecology: benthic, subtidal; from pearl shell growth, dredged at 19 m.

Athanas parvus de Man, 1910

Athanas sibogae de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [314].
Type data: syntypes ZMA*.
Type locality: Indonesia (six separate *Siboga* stations).

Athanas parvus de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [315].
Type data: syntypes ZMA*.
Type locality: Timor, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [63] (Chace pointed out that *A. parvus* must be used as the senior synonym because Banner & Banner (1960: 141) acted as first reviser in citing *A. sibogae* as a junior synonym of *A. parvus*, see Banner, A.H. & Banner, D.M. (1960). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean, Part V: The Indo-Pacific members of the genus *Athanas*. *Pac. Sci.* **14**(2): 129–155, figs 1–6).

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (Central W coast, Lower W coast, NW coast); Indo-west Pacific Oceans (East Africa to Japan, and east to Tonga and Samoa).
Ecology: benthic, intertidal, subtidal; found inter-tidally under rocks, in dead coral, and in sponges, depths to 70 m.
Reference: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [321] (Australian records—as *A. sibogae* de Man).

Athanas polymorphus Kemp, 1915

Athanas polymorphus Kemp, S. (1915). Crustacea, Decapoda. Fauna of the Chilka Lake. *Mem. Indian Museum* **5**: 201–325 figs 1–38 pls 12–13 [295 figs 31, 32].
Type data: type status unknown IM*.
Type locality: Chilka Lake, Orissa, India.

Distribution: NT (N coast); India, Singapore.
Ecology: low intertidal, shallow subtidal.
Reference: Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [325] (Australian record).

Athanopsis Coutière, 1897

Athanopsis Coutière, H. (1897). Note sur un nouveau genre d'alphéidés. *Bull. Mus. Natn. Hist. Nat. Paris* **3**(7): 301–303 [301] [gender feminine].
Type species: *Athanopsis platyrhynchus* Coutière, 1897 by monotypy.

Extralimital distribution: Indo-west Pacific.

Generic reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [9].

Athanopsis australis Banner & Banner, 1982

Athanopsis australis Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [9 fig. 1].
Type data: holotype AM P30808 ♀.
Type locality: Port Phillip Bay, VIC.

Distribution: VIC (Bass Strait); known only from type locality.
Ecology: sublittoral, benthic; from sandy sediment, depth 8 m.

Automate de Man, 1888

Arethusa de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [216] [*nom. nud.*].

Automate de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [529] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Automate dolichognatha* de Man, 1888 by monotypy.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [63].

Extralimital distribution: pan-tropical with temperate extensions.

Generic reference: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [64] (key to species).

Automate dolichognatha de Man, 1888

Automate dolichognatha de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [529 pl. 22 fig. 5].
Type data: holotype ♂*.
Type locality: 'Insel Noordwachter', presumably Djaga Utara, south-western Java Sea near Djakarta, Indonesia.

Automate johnsoni Chace, F.A., Jr (1955). Notes on shrimps from the Marshall Islands. *Proc. U.S. Natn. Mus.* **105**(3349): 1–21, 8 pls [13 fig. 7].
Type data: holotype USNM 94746 ♂, paratype(s) 1 ♀ 1 ♂.
Type locality: Bikini Atoll, Bokonfuaaku Island.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [299]; Davie, P., this work (*Automate gardineri* removed from synonymy on advice of A. Anker).

Distribution: NT (N coast), QLD (NE coast); pantropical excluding eastern Atlantic.
Ecology: benthic, low intertidal, reef, subtidal.

Bannereus Bruce, 1988

Bannereus Bruce, A.J. (1988). *Bannereus anomalus*, new genus, new species, a deep-sea alpheid shrimp from the Coral Sea. *Pac. Sci.* **42**(3–4): 139–149 [139] [gender masculine].
Type species: *Bannereus anomalus* Bruce, 1988 by original designation.

Extralimital distribution: Coral Sea, New Caledonia.

Bannereus anomalus Bruce, 1988

Bannereus anomalus Bruce, A.J. (1988). *Bannereus anomalus*, new genus, new species, a deep-sea alpheid shrimp from the Coral Sea. *Pac. Sci.* **42**(3–4): 139–149 [140 figs 1–6].
Type data: holotype NTM Cr.003495 ♀.
Type locality: Marian Plateau, Coral Sea.

Distribution: QLD (NE oceanic); New Caledonia.
Ecology: bathyal, benthic.

Batella Holthuis, 1955

Cheirothrix Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [532] [junior homonym of *Cheirothrix* Pictet & Humbert, 1866 (Pisces); gender feminine].
Type species: *Cheirothrix parvimanus* Bate, 1888 by monotypy.

Batella Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [92] [*nom. nov.* for *Cheirothrix* Bate, 1888; gender feminine].

Extralimital distribution: west Pacific (northern East China Sea, Philippines).

Batella parvimanus (Bate, 1888)

Cheirothrix parvimanus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [533 pl. 96 fig. 2].
Type data: holotype BMNH.
Type locality: Torres Strait, Cape York, QLD.

Distribution: QLD (Gulf of Carpentaria, NE coast); west Pacific Ocean (northern East China Sea, Philippines).
Ecology: continental shelf, coral reef, sublittoral, benthic; dredged and trawled from 15–216 m depth.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [17].

Betaeus Dana, 1852

Betaeus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [16] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Betaeus truncatus* Dana, 1852 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [558].

Range: Australian endemic.

Generic reference: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [347].

Betaeus australis Stimpson, 1860

Betaeus australis Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [31].
Type data: neotype AM P18008 ♀.

Subsequent designation: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [347].
Type locality: Long Reef, Collaroy, NSW.

Distribution: NSW (Central E coast, Lower E coast), SA (Great Australian Bight, S Gulfs coast), VIC (Bass Strait); known only from limital area.
Ecology: intertidal, rock platforms, rocky shore; under rocks.

Hamalpheus Bruce & Iliffe, 1991

Hamalpheus Bruce, A.J. & Iliffe, T.M. (1991). *Hamalpheus acanthops*, new genus, new species, a stygiophilic alpheid shrimp from a samoan lava tube. *J. Crust. Biol.* **11**(4): 583–593, figs 1–5 [583].
Type species: *Hamalpheus acanthops* Bruce & Iliffe, 1991 by original designation.

Extralimital distribution: Western Samoa.

Hamalpheus acanthops Bruce & Iliffe, 1991

Hamalpheus acanthops Bruce, A.J. & Iliffe, T.M. (1991). *Hamalpheus acanthops*, new genus, new species, a stygiophilic alpheid shrimp from a samoan lava tube. *J. Crust. Biol.* **11**(4): 583–593, figs 1–5 [584 figs 1–5].
Type data: holotype NTM CR.007421 ♀.
Type locality: Tosua-Tolesua lava tube cave located near Lotofaga village, south coast of Upolu Island, Western Samoa.

Distribution: Territory of Ashmore & Cartier Islands (Cartier Reef); Western Samoa.
Ecology: caves, coral reef, intertidal; collected from a shallow intertidal pool in a larva tube cave close to the sea and on sand underneath beach rock boulders.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992*. Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [130].

Metalpheus Coutière, 1908

Metalpheus Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **10**(5–6): 191–216 [213] [gender masculine].
Type species: *Alpheus rostratipes* Pocock, 1890 by subsequent designation, see Shelford, R. (1909). Crustacea. *Zool. Rec. (1908)***45**(10): 37.

Extralimital distribution: pan-tropical. See: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [69].

Metalpheus paragracilis (Coutière, 1897)

Alpheus paragracilis Coutière, H. (1897). Note sur un nouveau genre d'alphéidés. *Bull. Mus. Natn. Hist. Nat. Paris* **3**(7): 301–303 [304].
Type data: holotype MNHP ♀*.
Type locality: 'l'ile Tague' (?).

Distribution: QLD (Central E coast, NE coast, NE oceanic), WA (Central W coast, Lower W coast); Indo-west central Pacific Oceans (Madagascar and Red Sea to Hawai'i and Society Islands), one record from the Atlantic (St Helena Island).
Ecology: coral reef, rock reef, benthic, intertidal, subtidal; dead coral, calcareous algae, and under rocks, depths to 20 m.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [282].

Metalpheus rostratipes (Pocock, 1890)

Alpheus rostratipes Pocock, R.I. (1890). Crustacea. *In*, Ridley, H.N. (ed.) Notes on the zoology of Fernando Noronha. *J. Linn. Soc.* **20**: 473–526 [522].
Type data: type status unknown BMNH* (probable depository institution).
Type locality: Fernando de Noronha, off Brazil, south western Atlantic.

Crangon hawaiiensis clippertoni Schmitt, W.L. (1939). Decapod and other Crustacea collected on the presidential cruise of 1938. *Smithson. Misc. Collect.* **98**(6): 1–29 [11].
Type data: holotype USNM*.
Type locality: Clipperton Is.

Alpheus huikau Banner, A.H. (1959). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean. Part IV. Various small collections from the central Pacific area, including supplementary notes on alpheids from Hawaii. *Pac. Sci.* **13**(2): 130–155 13 figs [139 fig. 5a–e].
Type data: syntypes USNM 194726 13 specimens.
Type locality: Nado Island, Likiep Atoll, Marshall Islands.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–955 [285].

Distribution: QLD (Great Barrier Reef, NE coast); pantropical.
Ecology: rock reef, coral reef, low intertidal, subtidal; under rocks, dead coral, and from calcareous algae, depths to 15 m.

Potamalpheops Powell, 1979

Potamalpheops Powell, C.B. (1979). Three alpheid shrimps of a new genus from West African fresh and brackish waters: taxonomy and ecological zonation (Crustacea Decapoda Natantia). *Revue Zool. Afr.* **93**: 116–150 [116, 117] [gender masculine].
Type species: *Potamalpheops pylorus* Powell, 1979 by original designation.

Extralimital distribution: West Africa.

Potamalpheops darwiniensis Bruce, 1993

Potamalpheops darwiniensis Bruce, A.J. (1993). *Potamalpheops darwiniensis* (Crustacea: Decapoda: Alpheidae), the third Indo-west Pacific species. *Proc. Biol. Soc. Wash.* **106**(4): 698–704 [698 figs 1–3].
Type data: holotype NTM Cr.007922 ♂.
Type locality: Hudson's Creek, Darwin, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: mangrove, intertidal; in 'mud-mound'.

Potamalpheops hanleyi Bruce, 1991

Potamalpheops hanleyi Bruce, A.J. (1991). The "African" shrimp genus *Potamalpheops* in Australia, with the description of *P. hanleyi*, new species (Decapoda: Alpheidae). *J. Crust. Biol.* **11**(4): 629–638 [629].
Type data: holotype NTM Cr.004665 ♀, paratypes NTM Cr.004665 ♂, USNM 244467 1♂ 1♀.
Type locality: Darwin Harbour, NT.

Distribution: NT (N coast), QLD (Central E coast); known only from limital area.
Ecology: mangrove, low intertidal; under surface of rocks.

Prionalpheus Banner & Banner, 1960

Prionalpheus Banner, A.H. & Banner, D.M. (1960). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean. Part VI. *Prionalpheus*, a new genus of the Alpheidae. *Pac. Sci.* **14**(3): 292–298 2 figs [292] [gender masculine].
Type species: *Prionalpheus triarticulatus* Banner & Banner, 1960 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans (Madagascar, Seychelles, southern Philippines, Fiji, Tahiti). See: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [70].
Generic reference: Banner, A.H. & Banner, D.M. (1971). Contributions to the knowledge of the Alpheidae shrimp of the Pacific Ocean. Part XIV. A review of *Prionalpheus* (Decapoda, Alpheidae) with the description of two new species. *Crustaceana* **20**(3): 263–270.

Prionalpheus triarticulatus Banner & Banner, 1960

Prionalpheus triarticulatus Banner, A.H. & Banner, D.M. (1960). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean. Part VI. *Prionalpheus*, a new genus of the Alpheidae. *Pac. Sci.* **14**(3): 292–298 2 figs [293 fig. 1].
Type data: holotype ♀.
Type locality: Korolevu, Vitilevu, Fiji.

Distribution: QLD (Great Barrier Reef); west Pacific Ocean (Fiji, Japan).
Ecology: sublittoral, coral reef; from dead heads of coral, and broken-up reef rock, to about 30 m depth.
Reference: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [14].

Pseudathanas Bruce, 1983

Pseudathanas Bruce, A.J. (1983). *Pseudathanas darwiniensis* new genus, new species, an Alpheid shrimp from the Northern Territory, Australia. *J. Crust. Biol.* **3**(3): 463–471 [463] [gender masculine].
Type species: *Pseudathanas darwiniensis* Bruce, 1983 by original designation.

Range: known only from Australia.

Pseudathanas darwiniensis Bruce, 1983

Pseudathanas darwiniensis Bruce, A.J. (1983). *Pseudathanas darwiniensis* new genus, new species, an Alpheid shrimp from the Northern Territory, Australia. *J. Crust. Biol.* **3**(3): 463–471 [464 figs 1–5].
Type data: holotype NTM Cr.000054 ♂, paratypes NTM Cr.000266 ♀, AM P38220 2♂ 2♀, BMNH.
Type locality: Dudley Point Reef, East Point, Darwin, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: low intertidal; silty intertidal pools, pools with coral and algae.

Racilius Paul'son, 1875

Racilius Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [107] [reissued and translated by F.D. Por, 1961; gender masculine].
Type species: *Racilius compressus* Paul'son, 1875 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans (Suez Canal, Red Sea, eastern Africa, South Africa, Singapore, Thailand, Philippines). See: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [71].

Racilius compressus Paul'son, 1875

Racilius compressus Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [107 pl. 14 fig. 2] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown*.
Type locality: Red Sea.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (Suez Canal, Red Sea, eastern Africa, South Africa, Singapore, Thailand, Philippines).

Ecology: coral reef, subtidal; symbiotic on living coral of genus *Galaxea*.
Reference: Bruce, A.J. (1972). On the association of the shrimp *Racilius compressus* Paulson (Decapoda, Alpheidae) with the coral *Galaxea clavus* (Dana). *Crustaceana* **22**(1): 92–93 (association with coral).

Salmoneus Holthuis, 1955

Jousseaumea Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidés, format la sous-famille des alphéopsides. *Bull. Mus. Natn. Hist. Nat. Paris* **2**(8): 380–386 [381] [name placed on the Official Index of Rejected and Invalid Names in Zoology, see International Commission on Zoological Nomenclature (1963). Opinion 673. *Jousseaumia* Sacco, 1894 (Gastropoda): emendation under the plenary powers to *Jousseaumea*. *Bull. Zool. Nomencl.* **20**(5): 325–328; gender feminine].
Type species: *Jousseaumea serratidigitus* Coutière, 1896 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [88].

Salmoneus Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [88] [*nom. nov.* for *Jousseaumea* Coutière, 1896; name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1963). Opinion 673. *Jousseaumia* Sacco, 1894 (Gastropoda): emendation under the plenary powers to *Jousseaumea*. *Bull. Zool. Nomencl.* **20**(5): 325–328; gender masculine].

Extralimital distribution: Indo-Pacific and Atlantic Oceans.
Generic reference: Banner, D.M. & A.H. (1981). Annotated checklist of the alpheid shrimp of the Red Sea and Gulf of Aden. *Zool. Verh.* **190**: 1–99 [48] (review and key to species).

Salmoneus serratidigitus (Coutière, 1896)

Jousseaumea serratidigitus Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidé, format la sous-famille des alphéopsides. *Bull. Mus. Natl. Hist. Nat. Paris* **2**(8): 380–386 [382].
Type data: syntypes MNHP*.
Type locality: Red Sea.

Jousseaumea latirostris Coutière, H. (1896). Note sur quelques genres nouveaux ou peu connus d'alphéidé, format la sous-famille des alphéopsides. *Bull. Mus. Natl. Hist. Nat. Paris* **2**(8): 380–386 [382].
Type data: syntypes MNHP*.
Type locality: Red Sea.

Jousseaumea sibogae de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [303].
Type data: holotype ZMA ♀*.
Type locality: South point of South Lucipana Islands, Banda Sea, Indonesia (*Siboga* Stn 225).

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99.

Distribution: QLD (Great Barrier Reef), Territory of Ashmore & Cartier Islands (Cartier Reef); Indo-Pacific Oceans (Madagascar and Red Sea to Philippines and Marshall Islands; Baja California, Mexico).
Ecology: benthic, coral reef, intertidal, reef flat.
References: Banner, D.M. & A.H. (1981). Annotated checklist of the alpheid shrimp of the Red Sea and Gulf of Aden. *Zool. Verh.* **190**: 1–99 [64]; Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [305]; Bruce, A.J. (1993). Crustacea - Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [130].

Salmoneus tricristatus Banner, 1959

Salmoneus tricristatus Banner, A.H. (1959). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean. Part IV. Various small collections from the central Pacific area, including supplementary notes on alpheids from Hawaii. *Pac. Sci.* **13**(2): 130–155 13 figs [131 fig. 1].
Type data: holotype BPBM ♀ (probable depository institution).
Type locality: Tomil Harbour, Yap Island, Caroline Archipelago.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (East Africa to Caroline and Marshall Islands).
Ecology: benthic, coral reef, low intertidal; under beach rock.
Reference: Banner, D.M. & Banner, A.H. (1973). The alpheid shrimp of Australia. Part I: The lower genera. *Rec. Aust. Mus.* **28**(15): 291–382 figs 1–19 [334] (Australian records).

Synalpheus Bate, 1888

Homaralpheus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [lxxx, 539] [gender masculine].
Type species: *Alpheus minus* Say, 1818 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [93].

Synalpheus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942,

i–xc figs 1–76 pls 1–150 [572] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Synalpheus falcatus* Bate, 1888 by monotypy.

Alpheinus Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897.* Cambridge : Cambridge University Press [415] [gender masculine].
Type species: *Alpheinus tridens* Borradaile, 1899 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [215].

Extralimital distribution: Indo-Pacific-Atlantic Oceans. See: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix.

Synalpheus ancistrorhynchus de Man, 1909

Synalpheus ancistrorhynchus de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [124].
Type data: syntypes ZMA 2 specimens*.
Type locality: off Pulu Jedan, east coast of Aru-Islands, Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef), WA (Central W coast, NW coast); Indo-west Pacific (Indonesia, Madagascar).
Ecology: benthic, coral reef, low intertidal, subtidal; found in coral heads and dredged, typically shallow to 38 m depth but taken in Madagascar from 100–200 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [347] (Australian records).

Synalpheus bispinosus de Man, 1910

Synalpheus bispinosus de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [302].
Type data: syntypes ZMA*.
Type locality: Bay of Pidjot, Lombok and Banda-anchorage, Indonesia.

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans (Red Sea to southern Philippines).
Ecology: sublittoral; depths of 2–30 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [346] (Australian records).

Synalpheus bituberculatus de Man, 1910

Synalpheus bituberculatus de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [294].
Type data: syntypes ZMA*.
Type locality: Timor, Borneo-bank, Manipa Island, Aru-Islands, Paternoster Islands, Indonesia.

Distribution: Lord Howe Island, NSW (Lower E coast, SE oceanic), NT (N coast), QLD (Great Barrier Reef, NE coast), WA (Lower W coast); Indo-west Pacific Oceans (Indian Ocean to Japan and Philippines).
Ecology: coral reef, sand bottom, benthic, low intertidal, subtidal; commonly found in sponges or dead coral, in pairs, depths to 36 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [307] (Australian records and discussion of relationships).

Synalpheus carinatus (de Man, 1888)

Alpheus carinatus de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [508 pl. 22. fig. 2].
Type data: syntypes ZMA 7♂ 7♀* (probable depository institution).
Type locality: Amboina [Ambon], Indonesia.

Synalpheus carinatus binongcensis de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [111].
Type data: syntypes ZMA* (probable depository institution).
Type locality: Binongko, Banda Sea, Indonesia.

Synalpheus carinatus ubianensis de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [111].
Type data: syntypes ZMA* (probable depository institution).
Type locality: Indonesia.

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [283].

Distribution: QLD (Central E coast, Great Barrier Reef), WA (Central W coast); east Indo-west Pacific Oceans (Indonesia, Malaysia, Caroline, Marshall and Gilbert Islands).
Ecology: sublittoral, benthic, coral reef; associated with crinoids and assuming the colour of the host, dredged to 98 m.

Synalpheus charon (Heller, 1861)

Alpheus charon Heller, C. (1862). Beiträge zur crustaceenfauna des Rothen Meeres. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **44**(1): 241–295 3 pls [272 pl. 3 figs 21, 22].
Type data: type status unknown NHMW* (probable depository institution).
Type locality: Red Sea.

Alpheus prolificus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [556 pl. 99 fig. 4].
Type data: holotype BMNH ♀.
Type locality: off Honolulu, Hawai'ian Islands (as Sandwich Islands).

Synalpheus helleri de Man, J.G. (1911). The Decapoda of the Siboga Expedition. Part II. Family Alpheidae. *Siboga Exped. (Livr. 60 Mon. 39a1)***22**: 133–465 [245 fig. 37].
Type data: syntypes ZMA* (probable depository institution).
Type locality: Nicobar Ils, northeast Indian Ocean.

Synalpheus charon obscurus Banner, A.H. (1956). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part I. Collections from the Mariana Archipelago. *Pac. Sci.* **10**(3): 318–378 23 figs [329 fig. 5].
Type data: holotype USNM ♀ (probable depository institution), paratypes ♂ (as allotype), 14 specimens.
Type locality: SE side of Unai Obyan, Saipan.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [77].

Distribution: NSW (SE oceanic), QLD (Great Barrier Reef, NE coast); (Tasman Sea), and Indo-west Pacific Oceans (South Africa to Japan), east Pacific (Gulf of California to Ecuador).
Ecology: coral reef, benthic, low intertidal, subtidal; apparently always associated with living coral, depth to 33 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [369] (Australian records).

Synalpheus comatularum (Haswell, 1882)

Alpheus comatularum Haswell, W.A. (1882). Description of some new species of Australian Decapoda. *Proc. Linn. Soc. N.S.W.* **6**(4): 750–763 [762].
Type data: syntypes AM G2041:7, AM P1417 7 specimens.
Type locality: Albany Passage near Cape York, QLD.

Synalpheus falcatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [574 pl. CIII].
Type data: syntypes BMNH 4 ♂ 2 ♀ *.
Type locality: between Cape York and Arrou [Aru] Islands (*Challenger* Stn 186).

Taxonomic decision for synonymy: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs I–29, appendix [289].

Distribution: QLD (Great Barrier Reef, NE coast), WA (Central W coast, Lower W coast, NW coast); Indo-west Pacific Oceans (Sri Lanka, Singapore).
Ecology: coral reef, benthic, low intertidal, subtidal; symbiotic with crinoids (*Comanthus timorensis*, *Comatula purpurea*, and probably other species).

Synalpheus coutierei Banner, 1953

Synalpheus coutierei Banner, A.H. (1953). The Crangonidae or snapping shrimp of Hawaii. *Pac. Sci.* **7**(1): 1–147 50 figs [36] [*Synalpheus coutierei* was proposed as a new name for material mis-identified as *S. biunguiculatus* Stimpson, 1860 by Coutière, H. (1898). Note sur *Synalpheus biunguiculatus* Stimpson? de Man [Crust]. *Bull. Soc. Entomol. Fr.* **1898**(11): 232–233, figs 1–4].
Type data: syntypes USNM* (probable depository institution), MNHP numerous specimens* (probable depository institution (material identified as *S. biunguiculatus* by Coutière, 1898)).
Type locality: W side of Hanauma Bay, Oahu; Ambon; Pulau Damar-Besar; Zanzibar; Bahia de Fernao Veloso, Mozambique; D'Arros Is., Amirante Ils; El Suweis, Egypt; Rameswaran, southern India; Holothuria Reefs, Timor Sea; Arafura Sea; and Djibouti.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (NW coast); east Indo-Pacific Oceans (Suez Canal and East Africa to Philippines and many western Pacific Islands), east Pacific (Clipperton Island).
Ecology: coral reef, benthic, low intertidal, subtidal; found living in dead coral heads, or sponges, dredged to 77 m.
References: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [343]; Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [77] (Chace excludes *S. biunguiculatus* var. *exilipes* Coutière, 1905, from the synonymy of Banner & Banner (1975: 344) on the grounds that the identification still requires confirmation. If it is truly conspecific, then *S. exilipes* Coutière will be the senior synonym).

Synalpheus demani Borradaile, 1900

Alpheus triunguiculatus de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [504 pl. 22 fig. 1] [junior homonym of *Alpheus triunguiculatus* Paul'son, 1875 (Crustacea)].
Type data: type status unknown ZMA* (probable depository institution).
Type locality: Ambon, Indonesia.

Synalpheus demani Borradaile, L.A. (1900). On the Stomatopoda and Macrura brought by Dr. Willey from the South seas. pp. 395–428 *in* Willey, A. (ed.) *On the*

Stomatopoda and Macrura brought by Dr Willey from the South Seas. Cambridge : Cambridge University Press Pt 4 [416] [*nom. nov.* for *Alpheus triunguiculatus* de Man, 1888].

Synalpheus brockii Nobili, G. (1901). Decapodi e Stomatopodi Eritrei del Museo Zoologico dell' Università di Napoli. *Annuar. Mus. Zool. Univ. Napoli (new series)* **1**(3): 1–20 [2] [*nom. nov.* for *Alpheus triunguiculatus* de Man, 1888].

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [77].

Distribution: WA (Central W coast); Indo-west Pacific Oceans (Red Sea, Japan, Philippines, Indonesia, Marshall and Loyalty Islands).
Ecology: benthic, coral reef, subtidal; associated with crinoids, to about 50 m depth.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [324] (Australian records).

Synalpheus dorae Bruce, 1988

Synalpheus dorae Bruce, A.J. (1988). *Synalpheus dorae*, a new commensal alpheid shrimp from the Australian Northwest Shelf. *Proc. Biol. Soc. Wash.* **101**(4): 843–852 [843 figs 1–6].
Type data: holotype NTM Cr.005059 ♂, paratypes NTM, USNM 234305, BPBM S10804, RMNH 37179.
Type locality: Northwest Shelf, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: sublittoral; associated with sponges.

Synalpheus echinus Banner & Banner, 1975

Synalpheus echinus Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [374 fig. 27].
Type data: holotype WAM 92-65 ♀, paratypes WAM 1♀ (with type), WAM 51-65 1♀, WAM 409-73, WAM 12822/12823 1♀ 1♂, BAU 3♂ 3♀, AM P19165 5 specimens, AM P19166 4 specimens.
Type locality: Trigg Island, near Perth, WA.

Distribution: WA (Lower W coast); known only from limital area.
Ecology: coral reef, benthic, low intertidal, shallow subtidal; from coral heads, to 3 m depth.

Synalpheus fossor (Paul'son, 1875)

Alpheus fossor Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part 1. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [103 pl. 13 fig. 5] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown*.
Type locality: Saya de Malha Bank, Seychelles-Mauritius Ridge, Indian Ocean.

Synalpheus bakeri Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [199].
Type data: syntypes MNHP ♂ ♀*.
Type locality: south of Adelaide, SA.

Synalpheus fossor propinqua de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [121].
Type data: syntypes ZMA numerous specimens*.
Type locality: Philippines: Pearl Bank, Sulu Archipelago; Indonesia: between Misool and New Guinea; off Timor; and Lesser Sunda Ils.

Synalpheus bakeri stormi de Man, J.G. (1911). Family Penaeidae. The Decapoda of the Siboga Expedition. Part I. *Siboga Exped.* **39**(a): 1–131 [253 fig. 40].
Type data: syntypes ZMA*.
Type locality: Indonesia: Balikpapan, Makassar Strait coast of Borneo, and Atjeh, Sumatra.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [78].

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), SA (S Gulfs coast), WA (Central W coast, Lower W coast); Indo-west Pacific Oceans (Red Sea and Madagascar to Philippines).
Ecology: benthic, coral reef, subtidal; live in dead coral or sponges, to about 50 m depth.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [335].

Synalpheus gracilirostris de Man, 1910

Synalpheus gracilirostris de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [291].
Type data: holotype ZMA ♀*.
Type locality: between Nusa Besi and the NE point of Timor (*Siboga* Stn 282).

Distribution: NT (N coast), QLD (NE coast); Indo-west Pacific Oceans (Red Sea and East Africa to Indonesia and Philippines).
Ecology: benthic, coral reef, littoral, sublittoral; typically in dead coral in shallow water, to 54 m depth.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [372] (Australian records).

Synalpheus haddoni Coutière, 1900

Synalpheus laevimanus haddoni Coutière, H. (1900). Note sur une collection d'Alpheidae provenant détroit de Torrès. *Bull. Mus. Natn. Hist. Nat. Paris* **8**(5): 411–414, 4 figs [411].
Type data: syntypes MNHP 2 specimens*.
Type locality: Sabai Channel, Torres Strait.

Distribution: QLD (NE coast); known only from type locality.
Ecology: benthic, subtidal.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [341] (discussion of record and translation of original description).

Synalpheus harpagatrus Banner & Banner, 1975

Synalpheus harpagatrus Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [311].
Type data: holotype WAM 86-65 ♀, paratypes WAM 11129/30 ♀ (as allotype), WAM 11129 1♀, WAM 10380 1♂ 1♀, WAM 4985 1♀, WAM 583-31 1♂.
Type locality: 8 km W of North Beach, Perth, WA.

Distribution: NT (N coast), SA (Great Australian Bight), WA (Lower W coast); known only from limital area.
Ecology: low intertidal, shallow subtidal; all specimens came from sponges.

Synalpheus hastilicrassus Coutière, 1905

Synalpheus hastilicrassus Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [875 pl. 72 fig. 12].
Type data: syntypes 10 specimens ♂ ♀*.
Type locality: Maldive Ils: South Nilandu Atoll, North Male Atoll, Felidu Atoll, Kendikolu Reef, Miladumadulu Atoll.

Synalpheus acanthitelsonis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [875 pl. 72 fig. 13].
Type data: syntypes 7 specimens ♂ ♀.
Type locality: Maldive Ils: Hulule Male Atoll, Fadifolu Atoll, Addu Atoll, Mulaku Atoll, North Male Atoll.

Synalpheus hastilicrassus acanthitelsoniformis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [875 pl. 72 fig. 13].
Type data: type status unknown*.
Type locality: east side of Pulau Pajunga, Teluk Kuandang, north coast of Celebes [Sulawesi], Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [79].

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast); Indo-west central Pacific Oceans (Red Sea and East Africa to Philippines, Indonesia, Caroline Islands, Marshall Islands, Fiji).
Ecology: benthic, coral reef, low intertidal, subtidal; typically inside coral heads or sponges in shallow water, but dredged as deep as 90 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [353] (Australian records).

Synalpheus heroni Coutière, 1909

Synalpheus heroni Coutière, H. (1909). The American species of snapping shrimps of the genus *Synalpheus*. *Proc. U.S. Natn. Mus.* **36**: 1–93 54 figs [42 fig. 24].
Type data: holotype USNM*.
Type locality: Red Sea.

Distribution: QLD (Great Barrier Reef), WA (Central W coast); Indo-west Pacific Oceans (Red Sea, Indonesia, Phoenix and Line Islands, Society Islands).
Ecology: benthic, coral reef, low intertidal, shallow subtidal; from dead coral heads, depths to 5 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [333] (Australian records and discussion of relationships).

Synalpheus iocasta de Man, 1909

Synalpheus iocasta de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [119].
Type data: syntypes ZMA*.
Type locality: Indonesia (12 separate localities).

Distribution: NT (N coast), QLD (Gulf of Carpentaria), WA (Central W coast, Lower W coast); east Indo-west Pacific Oceans (Indonesia, South China Sea, Philippines).
Ecology: coral reef, rock bottom, sand bottom, benthic, subtidal; associated with sponges and bryozoans (*Tryphyllozoon* sp.), depths to 137 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [368].

Synalpheus lophodactylus Coutière, 1908

Synalpheus lophodactylus Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [197(7)].
Type data: holotype MNHP ♀.
Type locality: Diego Lagoon, Chagos Archipelago, Indian Ocean.

Distribution: QLD (Great Barrier Reef, NE coast), WA (Lower W coast, NW coast); Indo-west central Pacific Oceans (Madagascar, Chagos Archipelago, Marshall Islands).
Ecology: benthic, coral reef, subtidal; from dead coral or sponges, dredged to 90 m depth.

Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [350] (Australian records and discussion of relationships).

Synalpheus neomeris (de Man, 1897)

Alpheus neomeris de Man, J.G. (1897). Bericht über die von herrn Schiffscapitän Storm zu Atjeh, an den westlichen Küsten von Malakka, Bornio und Celebes sowie in der Java-See gesammelten Decapoden und Stomatopoden (Part 5). *Zool. Jahrb. Syst.* **9**: 725–788 figs 60–73 [734].
Type data: lectotype ZMA De. 102.333 ♀, paralectotype(s) ZMA ♀.
Subsequent designation: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [358].
Type locality: Mergui Archipelago.

Synalpheus gravieri Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [870 pl. 70 fig. 2].
Type data: holotype ♂.
Type locality: North Male Atoll, Maldives.

Synalpheus miscellaneus de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [118].
Type data: syntypes ZMA*.
Type locality: off northeastern point of Timor, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [81].

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast, SE oceanic), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, NE coast, NE oceanic, SE oceanic), WA (Central W coast, Lower W coast, NW coast); Indo-west Pacific Oceans (Suez Canal, Red Sea, East Africa, Persian Gulf, Thailand, Indonesia, Japan, Philippines).
Ecology: benthic, coral reef, littoral, sublittoral; associated with alcyonarians, sponges and dead coral, dredged to 250 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [357] (Australian records and discussion of status and relationships).

Synalpheus neptunus Dana, 1852

Taxonomic decision for subspecific arrangement: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [317].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria), QLD (Central E coast, NE coast), WA (Central W coast, Lower W coast); Indo-west Pacific Oceans (Red Sea to Japan, Philippines and Indonesia).

Synalpheus neptunus germanus Banner & Banner, 1975

Synalpheus neptunus germanus Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [321 fig. 12].
Type data: holotype WAM 991 ♂, paratypes WAM 32-65 16 specimens, WAM 32-65 18♂, AM P12426 9♂.
Type locality: Cottesloe, WA.

Distribution: WA (Lower W coast); known only from type locality.
Ecology: benthic, subtidal; found in sponges.

Synalpheus neptunus neptunus Dana, 1852

Alpheus neptunus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [22].
Type data: neotype USNM 135645 ♀.
Subsequent designation: Banner, D.M. & Banner, A.H. (1972). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. XV. The relationship of *Synalpheus neptunus* (Dana, 1852) to *Synalpheus theano* de Man, 1911, and the establishment of a neotype for *Synalpheus neptunus* (Decapoda, Alpheidae). *Crustaceana* **23**: 20–27 [24].
Type locality: Tictabon Island, near Zamboanga, Philippines (presumably refers to Tictauan Islands, on the Moro Gulf side of the Basilian Strait), see Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [82].

Distribution: NSW (Central E coast, Lower E coast), NT (Gulf of Carpentaria), QLD (Central E coast, NE coast), WA (Central W coast, Lower W coast); Indo-west Pacific Oceans (Red Sea to Japan, Philippines and Indonesia).
Ecology: benthic, coral reef, subtidal; found in coral heads, and in sponges, to depths of 70 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [317] (Australian records).

Synalpheus nilandensis Coutière, 1905

Synalpheus nilandensis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [871 pl. 70 fig. 4].
Type data: syntypes 5♂ ♀*.
Type locality: Maldive Ils: North Male Atoll, Suvadiva Atoll, South Male Atoll, South Nilandu Atoll.

Synalpheus nilandensis oxyceros Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text–figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [871 pl. 70 fig. 5].
Type data: syntypes*.
Type locality: South Nilandu Atoll, Maldive Ils.

Synalpheus nilandensis bandaensis de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [121].
Type data: syntypes ZMA*.
Type locality: Selat Sape, Lesser Sunda Islands, and Banda Banda Sea, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [82].

Distribution: WA (Central W coast, Lower W coast); Indo-west Pacific Oceans (Red Sea and East Africa to Indonesia, Hong Kong, Philippines, and possibly Tuamotu Archipelago.).
Ecology: benthic, subtidal; dredged from depths of 18–135 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [327] (Australian records).

Synalpheus paralaticeps Banner & Banner, 1982

Synalpheus paralaticeps Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus "Alpheus", and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [299 fig. 92].
Type data: holotype AM P30810 ♀, paratype(s) AM P30811 1♂.
Type locality: Rudder Reef, off Port Douglas, QLD.

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: coral reef, benthic, reef flat.

Synalpheus paraneomeris Coutière, 1905

Synalpheus paraneomeris Coutière, H. (1899). Les "Alpheidae", morphologie externe et interne, formes larvaires, bionomie. *Ann. Sci. Nat. Zool. (8)***9**: 1–560, figs 1–409, pls 1–6 [456, 466, 486, 501] [*nom. nud.*].

Synalpheus paraneomeris Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text–figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Vol. 2(4). Cambridge, England : University Press [872 pl. 71 fig. 7].
Type data: syntypes 14 specimens ♂ ♀*.
Type locality: Goidu Atoll, Maldive Ils; Minikoi, southernmost island of the Laccadive Archipelago; Djibouti, Gulf of Aden; Masquat [Muscat], Gulf of Oman; Mahe Is., Seychelles.

Synalpheus paraneomeris halmaherensis de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [122].
Type data: syntypes ZMA*.
Type locality: 'Wunoh-bay', north-west coast of Pulau Waigeo, Irian Jaya, Indonesia.

Synalpheus paraneomeris oxyceros Coutière, H. (1909). The American species of snapping shrimps of the genus *Synalpheus*. *Proc. U.S. Natn. Mus.* **36**: 1–93 54 figs [9] [*nom. nud.*].

Synalpheus paraneomeris prolatus Coutière, H. (1909). The American species of snapping shrimps of the genus *Synalpheus*. *Proc. U.S. Natn. Mus.* **36**: 1–93 54 figs [9] [*nom. nud.*].

Synalpheus paraneomeris praedabunda de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [123].
Type data: syntypes ZMA*.
Type locality: Indonesia: four different *Siboga* stations.

Synalpheus paraneomeris prolatus de Man, J.G. (1911). The Decapoda of the Siboga Expedition. Part II. Family Alpheidae. *Siboga Exped. (Livr. 60 Mon. 39a1)***22**: 133–465 [241 pl. 8 fig. 35].
Type data: syntypes ZMA*.
Type locality: 'Wunoh-bay', north-west coast of Pulau Waigeo, Irian Jaya, and Pulau Kabaena, Celebes [Sulawesi], Indonesia.

Synalpheus sluiteri de Man, J.G. (1920). Diagnoses of some new species of Penaeidae and Alpheidae with remarks on two known species of the genus *Penaeopsis* A. Milne Edwards from the Indian Archipelago. *Zool. Meded. (Leiden)* **5**(3): 103–109 [107].
Type data: type status unknown ZMA* (probable depository institution).
Type locality: Teluk Djakarta, Java, Indonesia.

Synalpheus paraneomeris praslini Coutière, H. (1921). Les espèces d'Alpheidae rapportées de l'Océan Indien par M.J. Stanley Gardiner (Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner, M.A., vol. vi. *Trans. Linn. Soc. Lond.* **17**(4): 413–428 pls 60–64 [415 pl. 61].
Type data: syntypes BMNH 2♀* (probable depository institution).
Type locality: Seychelles.

Synalpheus paraneomeris seychellensis Coutière, H. (1921). Les espèces d'Alpheidae rapportées de l'Océan Indien par M.J. Stanley Gardiner (Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner, M.A., vol. vi. *Trans. Linn. Soc. Lond.* **17**(4): 413–428 pls 60–64 [415 pl. 61].
Type data: syntypes BMNH 1♂ 1♀* (probable depository institution).
Type locality: Praslin Reef, Seychelles.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [83].

Distribution: QLD (Central E coast, Great Barrier Reef, NE coast); Indo-west Pacific Ocean (Red Sea, western Indian Ocean to Indonesia, Japan, Philippines, and eastwards at least to Hawai'i).
Ecology: benthic, coral reef, subtidal; from dead coral heads, depths to 126 m.
References: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [383] (Australian records); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Synalpheus pescadorensis Coutière, 1905

Synalpheus pescadorensis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text–figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [877 pl. 73 fig. 15].
Type data: syntypes 5 ♂ ♀*.
Type locality: Maldive Archipelago: Miladumadulu Atoll, South Nilandu Atoll, North Male Atoll; and P'enghu Lichtao (Pescadores), Formosa Strait.

Distribution: QLD (NE coast); Indo-west Pacific Oceans (Somalia to Formosa Strait, Philippines, Indonesia, Caroline and Solomon Islands).
Ecology: sublittoral, benthic; to 51 m depth.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [301] (Australian record).

Synalpheus pococki Coutière, 1898

Synalpheus neomeris pococki Coutière, H. (1898). Note sur quelques formes nouvelles d'alphéidés voisines de *A. Bouvieri* A. M.-Edwards [Crust.]. *Bull. Soc. Entomol. Fr.* **1898**(7): 166–168 3 figs [167 fig. 2].
Type data: syntypes MNHP (probable depository institution).
Type locality: Holothuria Bank, NW WA and Macclesfield Bank, Arafura Sea.

Distribution: NT (N coast), QLD (NE coast); Aru Islands, Indonesia.
Ecology: sublittoral; depth to about 20 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [366].

Synalpheus quadriarticulatus Banner & Banner, 1975

Synalpheus quadriarticulatus Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [297 fig. 5].
Type data: holotype AM P19161 ♀, paratypes AM P19162 1 ♂ (as allotype), AM P19163 6 specimens, AM P19164 2 specimens.
Type locality: between Hammond and Waiwea Islands, Torres Strait, QLD.

Distribution: QLD (NE coast); Philippines.
Ecology: coral reef, benthic, subtidal; collected from sponges lodged in the interstices of dead coral heads, depth 3–18 m.

Synalpheus readi Banner & Banner, 1972

Synalpheus readi Banner, A.H. & Banner, D.M. (1972). Contributions to the knowledge of the alpheid shrimp of the Pacific Ocean Part XVI. A new shrimp of the genus *Synalpheus* (Decapoda, Alpheidae) from Palau. *Micronesica* **8**(1–2): 137–139 fig. 1 [137 fig. 1].
Type data: holotype BPBM S8038 ♀.
Type locality: Malakal Harbor, Urukthapel, Palau.

Distribution: Territory of Ashmore & Cartier Islands (Hibernia Reef); Palau.
Ecology: subtidal; holotype collected from an unidentified sponge in 5 meters of water in canals.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992*. Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [130].

Synalpheus sciro Banner & Banner, 1975

Synalpheus sciro Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [304 fig. 7].
Type data: holotype WAM 64-65 ♀.
Type locality: NW of Bluff Point, WA.

Distribution: WA (NW coast); Philippines.
Ecology: benthic, continental shelf, subtidal; depth 14–123 m.

Synalpheus stimpsonii (de Man, 1888)

Alpheus stimpsonii de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [513 pl. 22 fig. 3].
Type data: holotype SMF ♀* (specimens originally deposited in the Zoological Museum in Göttingen).
Type locality: Amboina [Ambon], Indonesia.

Synalpheus amboinae Zehntner, L. (1894). Crustacés de l'Archipel malais. Voyage de MM.M. Bedot and C. Pictet dans l'Archipel malais. *Revue Suisse Zool.* **2**: 135–214 pls 7–9 [202 pl. 8 fig. 23, 23b].
Type data: holotype GMNH 1 specimen.
Type locality: Archipel Malais, Amboine [Ambon, Indonesia].

Alpheinus tridens Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897*. Cambridge : Cambridge University Press [415 pl. 38 fig. 12].

Type data: syntypes UMZC*.
Type locality: Baie du Sandal, Île Lifou, Admiralty Islands.

Synalpheus stimpsonii maldivensis Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [878 pl. 73 fig. 16].
Type data: holotype*.
Type locality: Hulele, Male Atoll, Maldive Islands.

Synalpheus consobrinus de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [111].
Type data: holotype ZMA ♂*, paratype(s) ZMA 3♂ 2♀*.
Type locality: Saleyer-anchorage, Indonesia (*Siboga* Exped.).

Synalpheus brucei Potts, F.A. (1915). The fauna associated with the crinoids of a tropical coral reef: with especial reference to its colour variations. *Pap. Dep. Mar. Biol. Carnegie Inst.* **8**(3): 71–96 7 figs 1 plate [76 pl. 1 fig. 2].
Type data: syntypes 7♀*.
Type locality: Murray Island, Torres Straits.

Synalpheus striatus Kubo, I. (1938). A new Snapping Shrimp belonging to the genus *Synalpheus*. *Annot. Zool. Jpn.* **17**(1): 89–92 2 figs [89 text-figs 1, 2].
Type data: holotype SMBL 60 ♂, paratype(s) SMBL ♀.
Type locality: Osima Island, Wakayama Prefecture, Japan.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [86].

Distribution: NSW (Lower E coast), NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Great Barrier Reef, Gulf of Carpentaria, NE coast), WA (NW coast); Indo-west Pacific Oceans (East Africa to Japan, Philippines, Marshall, Gilbert, and Loyalty Islands).
Ecology: coral reef, rock bottom, benthic, low intertidal, subtidal; associated with crinoids, occasionally with alcyonarians, and in dead coral heads, and under rocks, dredged to 155 m depth.
References: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [292] (Australian records); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

Synalpheus streptodactylus Coutière, 1905

Synalpheus neomeris streptodactylus Coutière, H. (1905). Les Alpheidae. pp. 852–921 pls 70–87, text-figs 127–139 *in* Gardiner, J.S. (ed.) *The Fauna and Geography of the Maldive and Laccadive Archipelagoes*. Vol. 2(4). Cambridge, England : University Press [870 pl. 70 fig. 1].
Type data: syntypes 5♂ ♀*.
Type locality: Haddumati Atoll, Suvadiva Atoll, South Nilandu Atoll, Maldive Ils.

Synalpheus streptodactyloides de Man, J.G. (1909). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (2)***11**(2): 99–125 [114].
Type data: holotype ZMA ♀*.
Type locality: off northeast point of Timor, Indonesia.

Synalpheus metaneomerus Coutière, H. (1921). Les espèces d'Alpheidae rapportées de l'Océan Indien par M.J. Stanley Gardiner (Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner, M.A., vol. vi. *Trans. Linn. Soc. Lond.* **17**(4): 413–428 pls 60–64 [414 pl. 60 fig. 4] [unnecessary *nom. nov.* for *S. neomeris streptodactylus* Coutière, 1921].

Synalpheus metaneomerus streptodactylus Coutière, H. (1921). Les espèces d'Alpheidae rapportées de l'Océan Indien par M.J. Stanley Gardiner (Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner, M.A., vol. vi. *Trans. Linn. Soc. Lond.* **17**(4): 413–428 pls 60–64 [414] [nomenclaturally invalid name].
Type data: syntypes MNHP*, ZMA*.
Type locality: Indonesia, Indonesia (numerous *Siboga* Stns).

Synalpheus streptodactylus hadrungus Banner, A.H. & Banner, D.M. (1966). Contributions to the knowledge of the Alpheid shrimp of the Pacific Ocean. Part X. Collections from Fiji, Tonga, and Samoa. *Pac. Sci.* **20**(2): 145–188 20 figs [158] [*nom. nov.* for *S. metaneomeris streptodactylus sensu* Coutière, 1921; Coutière created *S. metaneomeris* as a replacement species name for what he had previously described as *S. neomeris streptodactylus* Coutière, 1905, but then reused the name *streptodactylus* to denote a new subspecies of *metaneomeris* differing from the original concept; given he wished to recognise two subspecies, the species name *streptodactylus* should have been retained, and the present taxon given a new subspecies name; this is the reason for the action of Banner & Banner (1966) in proposing the new name *S. streptodactylus hadrungus*].

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [87].

Distribution: 200 m bathymetric (Bass Strait, Central E coast, Central W coast, G. Aust. Bight, Gulf of Carp., Lower E coast, Lower W coast, N coast, NE coast, NW coast, S Gulfs coast, SW coast); circum-Australian, and Indo-west central Pacific Oceans (South Africa to Japan and Hawai'i).
Ecology: benthic, coral reef, low intertidal, subtidal; from heads of dead coral and various sponges, depths to 128 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [362] (Australian records).

Synalpheus theano de Man, 1910

Synalpheus theano de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [296].

Type data: type status unknown ZMA.
Type locality: between Pulau Misool and Pulau Salawati, Indonesia.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Lower W coast); east Indo-west Pacific Oceans (Indonesia and Philippines).
Ecology: sublittoral, benthic, coral reef; found in sponges or dead corals, depths to 62 m.
Reference: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [314] (Australian records).

Synalpheus tijou Banner & Banner, 1982

Synalpheus tijou Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [296 fig. 91].
Type data: holotype AM P30809 ♀.
Type locality: Tijou Reef, Lizard Island, Great Barrier Reef.

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: benthic, coral reef, subtidal; commensal with crinoid.

Synalpheus tropidodactylus Banner & Banner, 1975

Synalpheus tropidodactylus Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [286 fig. 2].
Type data: holotype WAM 90-65 ♂, paratype(s) 1 ♀.
Type locality: Geraldton, WA.

Distribution: WA (Lower W coast); Philippines.
Ecology: sublittoral, benthic; dredged from 90–110 m.

Synalpheus tumidomanus (Paul'son, 1875)

Alpheus tumidomanus Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [101 pl. 13 fig. 2] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown.
Type locality: Red Sea.

Alpheus tumidomanus gracilimanus Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [102 pl. 13 fig. 3] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown*.
Type locality: Red Sea.

Synalpheus hululensis Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **10**(5–6): 191–216 [202].
Type data: type status unknown MNHP* (presumed depository institution).
Type locality: Maldives.

Synalpheus maccullochi Coutière, H. (1908). Sur quelques nouvelles espèces d'Alpheidae. *Bull. Soc. philomath. Paris* **11**(5): 1–26 [203] [as *Synalpheus Mac-Cullochi*].
Type data: type status unknown MNHP* (presumed depository institution).
Type locality: SW coast of Australia.

Synalpheus tumidomanus exilimanus Coutière, H. (1909). The American species of snapping shrimps of the genus *Synalpheus*. *Proc. U.S. Natn. Mus.* **36**: 1–93 54 figs [10] [*nom. nud.*; the combination was proposed by Coutière without explanation, and the name '*exilimanus* Paul'son' was substituted in error for *gracilimanus* Paul'son, 1875].

Synalpheus theophane de Man, J.G. (1910). Diagnoses of new species of macrurous decapod Crustacea from the "Siboga Expedition". *Tijdschr. Ned. Dierk. Vereen. (II)***11**(4): 287–319 [292].
Type data: syntypes ZMA*.
Type locality: three localities in Macassar Strait, Celebes [Sulawesi], and south-east of Timor, Indonesia.

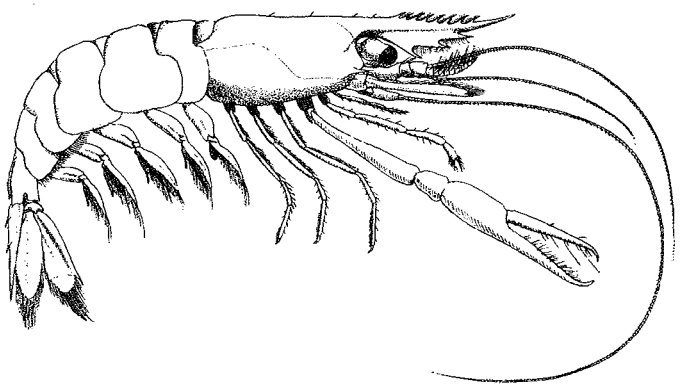
Synalpheus anisocheir Stebbing, T.R.R. (1915). South African Crustacea (Part VIII). *Ann. S. Afr. Mus.* **15**: 57–104 pls 8–25 [86 pl. 23].
Type data: type status unknown SAM*.
Type locality: Gordon's Bay, False Bay, South Africa.

Synalpheus japonicus Yokoya, Y. (1936). Some rare and new species of Decapod Crustaceans found in the vicinity of the Misaki Marine Biological Station. *Jap. J. Zool.* **7**(1): 129–146, text–figs 1–10 [133 fig. 3].
Type data: holotype whereabouts unknown ♀.
Type locality: vicinity of the Misaki Marine Biological Station, Japan.

Taxonomic decision for synonymy: Chace, F.A., Jr (1988). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 5: Family Alpheidae. *Smithson. Contr. Zool.* **No. 466**: 1–99 [90].

Distribution: 200 m bathymetric (Bass Strait, Central E coast, Central W coast, G. Aust. Bight, Gulf of Carp., Lower E coast, Lower W coast, N coast, NE coast, NW coast, S Gulfs coast, SW coast), Lord Howe Island; circum-Australian, Indo-Pacific Oceans (Mediterranean coast of Israel, Red Sea to South Africa, east to Japan, Philippines, Indonesia, and across Pacific to Phoenix Islands).
Ecology: benthic, low intertidal, reef, subtidal; from heads of dead coral and sponges, to 148 m depth.
References: Banner, D.M. & Banner, A.H. (1975). The alpheid shrimp of Australia. Part 2: The genus *Synalpheus*. *Rec. Aust. Mus.* **29**(12): 267–389 figs 1–29, appendix [377] (Australian records); Davie, P., this work (A. Anker (pers. comm.) believes this taxon is a complex of several species).

ANCHISTIOIDIDAE



Anchistioides willeyi [from Balss 1921]

INTRODUCTION

This family comprises a single genus, *Anchistioides*. The family status is supported by larval features described by Gurney (1936). Species are found from the Red Sea and Madagascar to Japan, Philippines, Indonesia, Australia, Tuamotu Archipelago, and the Caribbean (Chace & Bruce 1993).

Diagnosis

Carapace without lateral suture; rostrum immovable; telson typically with one pair of stout posterior spines; antennule with two completely separate flagella, one with accessory branch; mandible with incisor process, without palp; first maxilla without endites; second maxilliped with distal segments articulating serially, not side by side, on penultimate segment, marginal setae on distal segment not unusually stout or dense; third maxilliped composed of no more than six segments, antepenultimate segment neither articulated with, nor much wider than, next proximal segment; fourth thoracic sternite without slender median process; pereiopods without exopods or arthrobranchs, epipods, if present, not large, not extending dorsally into branchial chamber, first and second pair of pereiopods distinctly chelate, dactyl meeting opposing finger when flexed, not crossing; fingers of chelipeds not pectinate; first pereiopod not stouter than second; second pereiopod with undivided carpus, with dactyl not distinctly serrate on extensor margin; all pleopods with appendices internae, at least in male; second pleopod with appendix masculina in male. (After Chace & Bruce 1993).

References

Balss, H. (1921). Stomatopoda, Macrura, Paguridea and Galatheidae. *In*, Results of Dr E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. XXIX. *Svenska Vetensk. Akad. Handl.* **61**(10): 1–24 12 figs

Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152

Gurney, R. (1936). Notes on some decapod Crustacea of Bermuda, III: the larvae of the Palaemonidae. *Proc. Zool. Soc. Lond.* **1936**: 619–623 pls 1–4

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

ANCHISTIOIDIDAE Borradaile, 1915

Anchistioididae Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [205].

Anchistioides Paul'son, 1875

Anchistioides Paul'son, O.M. (1875). Podophthalmata i Edriophthalmata (Cumacea) Part I. *In, Izledovaniya Rakoobraznykh Krasnago Morya s Zamekami Otnositel'no Rakoobraznykh Drugikhv Morie.* Kiev : Kul'zhenko i–xiv 1–144 pp. pls 1–21 [115] [reissued and translated by F.D. Por, 1961: Studies on Crustacea of the Red Sea with notes regarding other seas. Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem: Israel Program for Scientific Translations; published for the National Science Foundation and Smithsonian Institution, Washington, D.C.: pp. 1–134, pls 1–21; name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Anchistioides compressus* Paul'son, 1875 by monotypy.

Palaemonopsis Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897.* Cambridge : Cambridge University Press [410] [junior homonym of *Palaemonopsis* Stimpson, 1871 [Crustacea]; gender feminine].
Type species: *Palaemonopsis willeyi* Borradaile, 1899 by monotypy.

Amphipalaemon Nobili, G. (1901). Decapodi raccolti dal Dr. Filippo Sivestri nell' America meridionale. *Boll. Mus. Zool. Comp. Torino* **16**(402): 1–16, 2 text–figs [5] [*nom. nov.* for *Palaemonopsis* Borradaile, 1899; gender masculine].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [91].

Extralimital distribution: Papua New Guinea; Red Sea and Madagascar to Japan, Philippines, Indonesia, Tuamotu Archipelago, and the Caribbean.

Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [132] (list of currently recognised species).

Anchistioides australiensis (Balss, 1921)

Amphipalaemon australiensis Balss, H. (1921). Stomatopoda, Macrura, Paguridea and Galatheidae. *In,* Results of Dr E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. XXIX. *Svenska Vetensk. Akad. Handl.* **61**(10): 1–24 12 figs [11 figs 3–6].
Type data: syntypes 2 ♀ NHRM*.
Type locality: 45 miles WSW of Cape Jaubert, WA.

Distribution: WA (NW coast); Papua New Guinea.
Ecology: subtidal; from 9–20 m depth.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [132] (suggested that New Guinea specimens may belong to an undescribed species).

Anchistioides compressus Paul'son, 1875

Anchistioides compressus Paul'son, O.M. (1875). Podophthalmata i Edriophthalmata (Cumacea) Part I. *In, Izledovaniya Rakoobraznykh Krasnago Morya s Zamekami Otnositel'no Rakoobraznykh Drugikhv Morie.* Kiev : Kul'zhenko i–xiv 1–144 pp. pls 1–21 [115] [re-issued and translated by F.D. Por, 1961: Studies on Crustacea of the Red Sea with notes regarding other seas. Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem: Israel Program for Scientific Translations; published for the National Science Foundation and Smithsonian Institution, Washington, D.C.: pp. 1–134, pls 1–21].
Type data: type status unknown.
Type locality: Red Sea.

Distribution: QLD (Central E coast, Great Barrier Reef); Indo-west Pacific Oceans.
Ecology: coral reef, sublittoral; sponge associate.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [2] (Australian record).

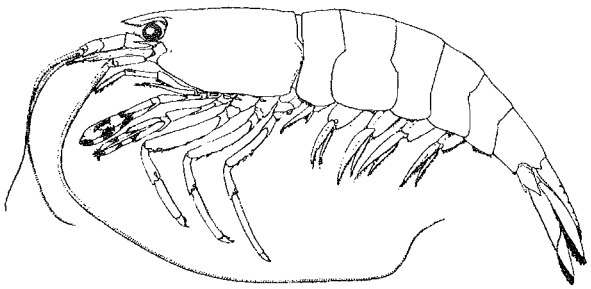
Anchistioides willeyi (Borradaile, 1899)

Palaemonopsis willeyi Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897.* Cambridge : Cambridge University Press [410 pls 36, 37 fig. 7].
Type data: syntypes UMZC.
Type locality: Ralun, New Britain.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: coral reef, subtidal; seagrass flats, commensal with sponges.

References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [214] (full synonymy); Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle–Calédonie.* Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31 [269] (noted occurrence of two forms, one with chelae having long fingers, the other having short fingers; therefore may be more than one species present).

ATYIDAE



Australatya striolata [from Chace 1983]

INTRODUCTION

Australian atyid shrimps are all small in size, being less than 35 mm in total length with the exception of *Australatya striolata* which reaches 60 mm total length. Many are exclusively found in freshwater although a few have larval development requiring marine influence and others are occasionally found in brackish water as adults. Typically they feed by scraping food particles off rocks and plants using the brush-like setae on the tips of the claws of their first and second legs, but at least one species, *Pycnisia raptor*, is believed to be a predator.

Perhaps the most influential work on Australian atyids was published by Riek (1953), although a number of other important papers have followed. Chace (1983) reviewed the *Atya*-like shrimps of the Indo-west Pacific region and was able to recognise the Australian Riffle Shrimp, as a separate endemic genus *Australatya*. New species of *Caridina* were described by Short (1993) and Choy & Marshall (1997). Williams (1964), Holthuis (1960, 1986) and Bruce (1992) described an interesting and relatively diverse fauna of cave-dwelling shrimps (*Parisia*, *Pycneus*, *Pycnisia* and *Stygiocaris*) and it seems likely that more will become known as speleologists explore more remote northern cave systems.

Holthuis (1986) divided the Atyidae into four subfamilies: Atyinae De Haan, 1849 (including *Australatya* and *Caridina*), Caridellinae Holthuis, 1986 (*Caridinides*, *Parisia*, *Pycneus*, *Pycnisia*), Paratyinae Holthuis, 1986 (*Paratya*), and Typhlatyinae Holthuis, 1986 (*Stygiocaris*). Only genera occurring in Australia are included here. Keys to all genera in each subfamily were provided by Holthuis (1993).

Diagnosis

Rostrum, if present, inflexibly attached to rest of carapace. Carapace without longitudinal lateral ridges or suture, and without cardiac notch in posterior margin. Eyes neither unusually long nor concealed beneath carapace. Antennule with two flagella, neither with accessory branch. Mandible with palp, with subtruncate molar process not distinctly separated from incisor process. Second maxilla with endite well developed, scaphognathite with proximal lobe tapering, bearing series of long setae, and extending far into branchial chamber. First maxilliped with exopod terminating in lash, not in broad, partially detached lobe. Caridean lobe not acutely produced, not over-reaching distally produced endite. Second maxilliped with exopod, endopod 4-segmented, not terminating in two segments

attached side-by-side to preceding segment, terminal segment attached to slender, sickle-shaped extension of preceding segment. Third maxilliped 5-segmented, slender, pereiopod-like. Pereiopods usually with strap-like epipods (mastigobranchs) on at least three anterior pairs, epipods without naked appendix extending vertically into branchial chamber; two anterior pairs of pereiopods similar, with fingers of chela usually terminating in tuft of setae; second pereiopod with carpus undivided. (After Chace 1997).

References

Bruce, A.J. (1992). *Pycnisia raptor*, a new genus and species of predatory troglobic shrimp (Crustacea: Decapoda: Atyidae) from Northern Australia. *Invertebr. Taxon.* **6**: 553–566

Chace, F.A., Jr (1983). The *Atya*-like Shrimps of the Indo-Pacific Region (Decapoda: Atyidae). *Smithson. Contr. Zool.* **No. 384**: 1–54

Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106

Choy, S. & Marshall, J. (1997). Two new species of freshwater atyid shrimps (Crustacea: Decapoda: Atyidae) from northern Queensland and the distributional ecology of the *Caridina typus* species-group in Australia. *Mem. Qld Mus.* **42**(1): 25–36

Holthuis, L.B. (1960). Two new species of atyid shrimps from subterranean water of north-western Australia (Decapoda: Natantia). *Crustaceana* **1**(1): 47–57

Holthuis, L.B. (1986). A new genus and species of subterranean shrimp from Western Australia (Crustacea: Decapoda: Atyidae). *Zool. Meded. (Leiden)* **60**(7): 103–111

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121

Short, J.W. (1993). *Caridina zebra*, a new species of freshwater atyid shrimp (Crustacea: Decapoda) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 61–67

Williams, W.D. (1964). Subterranean freshwater prawns (Crustacea: Decapoda: Atyidae) in Australia. *Aust. J. Mar. Freshwat. Res.* **15**(1): 93–106

ATYIDAE De Haan, 1849

Atyidae De Haan, W. (1849). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [168, 184] [as Atyadea; name placed in the corrected spelling, Atyidae, on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202, the incorrect original spelling placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology in the same Opinion].

Stynier Bouvier, E.L. (1908). Arachnides, Myriopodes et Crustacés. *in*, Chevalier, A. *Mission Chari-Lac Tchad 1902–1904*. Apend. S. 701–702 Paris [701].

Paratyinae Holthuis, L.B. (1986). A new genus and species of subterranean shrimp from Western Australia (Crustacea: Decapoda: Atyidae). *Zool. Meded. (Leiden)* **60**(7): 103–111 [103, 104].

Caridellinae Holthuis, L.B. (1986). A new genus and species of subterranean shrimp from Western Australia (Crustacea: Decapoda: Atyidae). *Zool. Meded. (Leiden)* **60**(7): 103–111 [103, 104].

Typhlatyinae Holthuis, L.B. (1986). A new genus and species of subterranean shrimp from Western Australia (Crustacea: Decapoda: Atyidae). *Zool. Meded. (Leiden)* **60**(7): 103–111 [103, 104].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [40].

Australatya Chace, 1983

Australatya Chace, F.A., Jr (1983). The *Atya*-like Shrimps of the Indo-Pacific Region (Decapoda: Atyidae). *Smithson. Contr. Zool.* **No. 384**: 1–54 [43] [gender feminine].
Type species: *Atya striolata* McCulloch & McNeill, 1923 by monotypy.

Range: endemic, confined to coastal flowing rivers and streams of eastern Australia.

Australatya striolata (McCulloch & McNeill, 1923)

Riffle Shrimp

Atya striolata McCulloch, A.R. & McNeill, F.A. (1923). Notes on Australian Decapoda. *Rec. Aust. Mus.* **14**(1): 49–59 2, text–figs 3 pls [55 pl. 9 figs 3–4].
Type data: syntypes AM P4029, AM P4030, AM P4031, AM P4493, AM P4494 3 specimens, AM P31611 ♀.
Type locality: Nepean River, Norton's basin, NSW.

Distribution: NSW (SE coastal), QLD (NE coastal), VIC; known only from limital area, found between 12°45'S 143°12'E and 37°29'S 149°35'E, depending on suitable montane habitat.
Ecology: rock bottom, filter-feeder, freshwater; migratory.
References: Chace, F.A., Jr (1983). The *Atya*-like Shrimps of the Indo-Pacific Region (Decapoda: Atyidae). *Smithson. Contr. Zool.* **No. 384**: 1–54 [43]; Smith, R.E.W. (1994). Distribution and geographical variation of *Australatya striolata* (McCulloch and McNeill 1923) (Decapoda: Atyidae). *Aust. J. Mar. Freshwat. Res.* **45**: 161–168.

Caridina H. Milne Edwards, 1837

Caridina Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [362] [gender feminine].
Type species: *Caridina typus* H. Milne Edwards, 1837 by monotypy.

Neocaridina Kubo, I. (1938). On the Japanese Atyidae Shrimps. *J. Imp. Fish. Bur. Tokyo* **33**: 67–100 figs 1–24 [73] [gender feminine].
Type species: *Hippolyte dentriculatus* De Haan, 1844 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [27].

Extralimital distribution: western equatorial Africa, Egypt, East Africa, Madagascar and neighbouring islands, Syria, Iran, Iraq, India, Sri Lanka, SE Asia north to China, Japan, Ryukyu Ils, Philippines, Indonesia, Papua New Guinea, Bismarck Arch., New Caledonia, Fiji Ils, Hawai'i, and French Polynesia.

Caridina celebensis de Man, 1892

Caridina serratirostris celebensis de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien.* Leiden : E.J. Brill Vol. 2 [385 pl. 23 figs 28f–h].
Type data: syntypes RMNH D2564 4 specimens.
Type locality: river near Palopo, Luwu, Celebes [Sulawesi], Indonesia.

Distribution: QLD (N Gulf).
References: Holthuis, L.B. (1978). A collection of decapod crustacea from Sumba, Lesser Sunda Islands, Indonesia. *Zool. Verh.* **162**: 1–55 [39] (considered *Caridina serratirostris celebensis* de Man, 1892 to be a valid species); Davie, P.J.F. & Short, J.W. (1998). The Decapod Crustaceans of Musselbrook Reserve and the Lawn Hill Gorge area. pp. 93–96 *in, Musselbrook Reserve Scientific Study Report.* Royal Geographic Society of Queensland Inc., Geography Monograph Series No. 4 (Australian record).

Caridina confusa Choy & Marshall, 1997

False Zebra Shrimp

Caridina confusa Choy, S. & Marshall, J. (1997). Two new species of freshwater atyid shrimps (Crustacea: Decapoda: Atyidae) from northern Queensland and the distributional ecology of the *Caridina typus* species-group in Australia. *Mem. Qld Mus.* **42**(1): 25–36 [27 figs 1a, 2i–j, 3b–c, 4a–e].
Type data: holotype QM W21906 ♀, paratypes QM 21907 ♂, QM W21908 21♂ 50♀, QM W21909 about 100 specimens, QM W18841 ♂, QM W18720 ♂ 2♀, QM W18725 13♂ 16♀, QM W21910–12 264 specimens, QM W21917 6♂ 7♀.
Type locality: Thiaki Creek at Seamark Road crossing, upper North Johnstone catchment, north Queensland [17°23.5'S 145°32.5'E].

Distribution: QLD (NE coastal); known only from type locality, upper North Johnstone and upper Baron River catchments.
Ecology: freshwater; streams flowing through open grassland and remnant rainforest.

Caridina gracilirostris de Man, 1892

Needlenose Caridina (FAO), Slender-beaked Caridina

Caridina gracilirostris de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien.* Leiden : E.J. Brill Vol. 2 [399 pl. 25 fig. 31–31d].
Type data: syntypes RMNH D1076 3 specimens, RMNH D2557 2 specimens.
Type locality: near Balangnipa, Celebes [Sulawesi], Indonesia.

Distribution: NT (N coast), QLD (NE coast); east Indo-west Pacific region.
Ecology: estuarine, freshwater; fresh or slightly brackish water, bottom leaf litter.
Reference: Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [61, colour pl.].

Caridina indistincta Calman, 1926

Taxonomic decision for subspecific arrangement: Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: freshwater.

Caridina indistincta indistincta Calman, 1926

Indistinct Caridina

Caridina indistincta Calman, W.T. (1926). On freshwater prawns of the family Atyidae from Queensland. *Ann. Mag. Nat. Hist.* **17**(9): 241–246 [244 fig. 3].
Type data: type status unknown BMNH (?).
Type locality: St George District, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: freshwater.

Reference: Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [60, colour pl.].

Caridina indistincta sobrina Riek, 1953

Caridina indistincta sobrina Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [119 fig. 9].
Type data: syntypes AM P13329 37 specimens (although Riek designated a holotype it cannot be separately identified from the other type specimens).
Type locality: Rocky Creek, Fraser Island, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: freshwater, lake.

Caridina mccullochi J. Roux, 1926

Mcculloch's Caridina

Caridina mccullochi Roux, J. (1926). An account of Australian Atyidae. *Rec. Aust. Mus.* **15**: 237–254 [249, tab. C].
Type data: syntypes AM P7920 4 specimens.
Type locality: Pallal, Horton River, near Bingara, NSW.

Distribution: NSW (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: freshwater.

Caridina nilotica (P. Roux, 1833)

Common Caridina

Pelias niloticus Roux, J.L.F.P. (1833). Lettre relative à divers Coquilles, Crustacés, Insectes, Reptiles et Oiseaux, Observés en Égypte. *Ann. Sci. Nat.* **28**(1): 72–77 [73].
Type data: type status unknown.
Type locality: Cairo, Egypt.

Caridina wyckii gracilipes de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien.* Leiden : E.J. Brill Vol. 2 [387 pl. 24 fig. 29–29e].
Type data: syntypes RMNH D1441 4 specimens, RMNH D2553 3 specimens.
Type locality: Maros River, Celebes [Sulawesi], Indonesia.

Caridina nilotica minahassae de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [895].
Type data: syntypes RMNH D1441 2 specimens.
Type locality: Minahassa, Celebes [Sulawesi], Indonesia.

Caridina nilotica brachydactyla de Man, J.G. (1908). On *Caridina nilotica* (Roux) and its varieties. *Rec. Indian Mus.* **2**(3 no. 28): 255–283, pl. 20 [269 pl. 20 fig. 8] [as *Caridina nilotica* var. *brachydactyla*].
Type data: syntypes RMNH D977 6 specimens, RMNH D2551–52 6 specimens.
Type locality: Indonesia: near Reo and near Mbawa, Flores; river near Palopo, Luwu, Celebes [Sulawesi].

Caridina aruensis Roux, J. (1911). Nouvelles espèces de Décapodes d'eau douce provenant de Papouasie. *Notes Leyden Mus.* **33**: 81–106 5 figs [82].
Type data: syntypes 43 and 52 specimens*.
Type locality: 'Soungi Manoumbai' [Sungai Manoumbai], Aru Islands, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [17].

Distribution: northern Australian, Indo-Pacific region.
Ecology: brackish, freshwater.
Reference: Davie, P., this work (the status of the numerous species and subspecies of this complex is still under debate; a much more extensive, though contentious, synonymy was given by Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [74]).

Caridina serratirostris de Man, 1892

Spiny-beaked Caridina

Caridina serratirostris de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien*. Leiden : E.J. Brill Vol. 2 [382 pl. 23 figs 28–28e].
Type data: syntypes RMNH D1771 7 specimens, RMNH D2563 4 specimens.
Type locality: Bangkalan River, Salayar, Indonesia.

Distribution: QLD (NE coast); Indo-west Pacific region (Madagascar to Fiji).
Ecology: freshwater.
Reference: Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland*. Queensland Museum : South Brisbane 368 pp. [61, colour pl.].

Caridina spelunca Choy, 1996

Caridina spelunca Choy, S.C. (1996). *Caridina spelunca*, a new species of freshwater shrimp (Crustacea: Decapoda: Atyidae) from a Western Australian cave. *Rec. West. Aust. Mus.* **18**: 103–107 [103 fig. 1].
Type data: holotype WAM 422-95 ♂, paratypes WAM 423-95 ♀ (as allotype), WAM 424-95 ♀, WAM 425-95 2♂ 1♀, WAM 426-95 ♀, AM P38512 8 specimens, AM P40859 ♀, AM P40856 ♂.
Type locality: Old Napier Downs Cave, WA [17°14'S 124°39'E].

Distribution: WA (N coastal); known only from type locality.
Ecology: freshwater; in pools in outflow tunnel of cave, in twilight zone, presumed to be a facultative troglobite.

Caridina spinula Choy & Marshall, 1997

McIlwraith Range Caridina

Caridina spinula Choy, S. & Marshall, J. (1997). Two new species of freshwater atyid shrimps (Crustacea: Decapoda: Atyidae) from northern Queensland and the distributional ecology of the *Caridina typus* species-group in Australia. *Mem. Qld Mus.* **42**(1): 25–36 [31 figs 1c, 2g–h, 4f–q].
Type data: holotype QM W21913 ♀, paratypes QM W21914 ♂, QM W21915 5♂ 7♀, QM W21422 7♂ 34♀.
Type locality: east flowing tributary of Leo Creek, near crossing of Leo Creek Mine Road, Nesbit River catchment, McIlwraith Range, Cape York [13°44.6'S 143°21.5'E].

Distribution: QLD (NE coastal); known only from type locality, McIlwraith Range, Cape York.
Ecology: freshwater; in pools in rocky creek, with some sand and gravel on bottom, in tropical mesophyll rainforest with a closed canopy.

Caridina thermophila Riek, 1953

Caridina thermophila Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [120 fig. 10].
Type data: holotype AM P13332 ♀, paratype(s) AM P39625 284 specimens.
Type locality: Muttaburra, QLD.

Distribution: QLD (NE coastal); known only from limital area, endemic.
Ecology: freshwater.

Caridina typus H. Milne Edwards, 1837

Typical Caridina

Caridina typus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux*. Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [363 pl. 25 figs 4, 5].
Type data: syntypes AM P7876 5 specimens, RMNH D2554 2 specimens, RMNH D2555 2 specimens.
Type locality: La Madeleine, Plaine des Lacs, New Caledonia; Indonesia: Salayar and Celebes [Sulawesi].

Distribution: QLD (NE coastal); Indo-west Pacific (southern Africa to Japan and French Polynesia), in Australia from mainland north-eastern QLD, and nearby islands, between 15°–21°S latitude.
Ecology: freshwater.
References: Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [117]; Choy, S. & Marshall, J. (1997). Two new species of freshwater atyid shrimps (Crustacea: Decapoda: Atyidae) from northern Queensland and the distributional ecology of the *Caridina typus* species-group in Australia. *Mem. Qld Mus.* **42**(1): 25–36 [26]; Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland*. Queensland Museum : South Brisbane 368 pp. [61, colour pl.].

Caridina zebra Short, 1993

Zebra Shrimp

Caridina zebra Short, J.W. (1993). *Caridina zebra*, a new species of freshwater atyid shrimp (Crustacea: Decapoda) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 61–67 [62 figs 1–4].
Type data: holotype QM W18718 ♂, paratypes QM W18719 ♀ (as allotype), QM W18120 2♂ 23♀, QM W18131 3♂ 2♀, QM W18719 1♀, QM W18124 1♂ 2♀, QM W18127 5♂ 4♀, QM W19158 24♂ 38♀.
Type locality: O'Leary Creek, NE QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: freshwater; rainforest creeks.
References: Hughes, J.M., Bunn, S.E., Hurwood, D.A., Choy, S. & Pearson, R.G. (1996). Genetic differentiation among populations of *Caridina zebra* (Decapoda: Atyidae) in tropical rainforest streams, northern Australia. *Freshwater Biology* **36**: 289–296; Choy, S. & Marshall, J. (1997). Two new species of freshwater atyid shrimps (Crustacea: Decapoda: Atyidae) from northern Queensland and the distributional ecology of the *Caridina typus* species-group in Australia. *Mem. Qld Mus.* **42**(1): 25–36 [26] (additional figures); Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [62, colour pl.].

Caridinides Calman, 1926

Caridinides Calman, W.T. (1926). On freshwater prawns of the family Atyidae from Queensland. *Ann. Mag. Nat. Hist.* **17**(9): 241–246 [242] [gender masculine].
Type species: *Caridinides wilkinsi* Calman, 1926 by monotypy.

Range: Australian endemic.

Generic reference: Smith, M.J. & Williams, W.D. (1982). Taxonomic revision of the Australian genus *Caridinides* Calman (Crustacea: Decapoda: Atyidae). *Aust. J. Mar. Freshwat. Res.* **33**(3): 575–587.

Caridinides wilkinsi Calman, 1926

Caridinides wilkinsi Calman, W.T. (1926). On freshwater prawns of the family Atyidae from Queensland. *Ann. Mag. Nat. Hist.* **17**(9): 241–246 [242 figs 1, 2].
Type data: lectotype BMNH 1981.425 ♂, paralectotype(s) BMNH 1981.426 ♀.
Subsequent designation: Smith, M.J. & Williams, W.D. (1982). Taxonomic Revision of the Australian Genus *Caridinides* Calman (Crustacea: Decapoda: Atyidae). *Aust. J. Mar. Freshwat. Res.* **33**(3): 575–587.
Type locality: Olive River, Temple Bay, E coast of Cape York Peninsula.

Distribution: NT (N coastal), QLD (NE coastal); known only from limital area.
Ecology: estuarine, freshwater; slightly brackish water close to the sea.

Paratya Miers, 1882

Paratya Miers, E.J. (1882). Note on a freshwater macrurous crustacean from Japan (*Atyaephyra ? compressa*, de Haan?). *Ann. Mag. Nat. Hist.* **9**(5): 193–195 [194] [gender feminine].
Type species: *Ephyra compressa* De Haan, 1844 by monotypy.

Xiphocaridina Bouvier, E.L. (1909). Sur l'origine et l'evolution des crevettes d'eau douce de la famille des Atyidés. *C. R. Séances Acad. Sci.* **148**: 1727–1731 [1729] [junior objective synonym of *Paratya* Miers, 1882; gender feminine].
Type species: *Ephyra compressa* De Haan, 1844 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157.

Xiphatyoida Roux, J. (1915). La famille des Atyidae. *Act. Soc. Helv. Sci. Nat.* **1915**(2): 225–228 [225] [gender feminine].
Type species: *Paratya (Xyphatyoida) typa* J.Roux, 1926 by subsequent designation, see Roux, J. (1926). Crustacés décapodes d'eau douce de la Nouvelle-Calédonie. *Nova Caledonia* **4**(2): 181–240.

Taxonomic decision for synonymy: Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [21].

Extralimital distribution: in an arc extending from eastern Siberia, Korea and Japan, to Vietnam and the Lesser Sunda Islands to Australia, Lord Howe and Norfolk Islands, New Zealand, and Chatham Island.

Generic reference: Williams, W.D. & Smith, M.J. (1979). A taxonomic revision of Australian species of *Paratya* (Crustacea: Atyidae). *Aust. J. Mar. Freshwat. Res.* **30**: 815–832 (distribution).

Paratya australiensis Kemp, 1917

Australian Paratya

Paratya australiensis Kemp, S. (1917). Notes on Crustacea Decapoda in the Indian Museum. X. Hymenosomatidae. *Rec. Indian Mus.* **13**(Pt 5 No. 15): 243–379 [303 fig. 5].
Type data: neotype AM P28693 ♂ (Kemp's types from Clyde, near Sydney, ZSI 7590–2/10, apparently no longer exist).
Subsequent designation: Williams, W.D. & Smith, M.J. (1979). A taxonomic revision of Australian species of *Paratya* (Crustacea: Atyidae). *Aust. J. Mar. Freshwat. Res.* **30**: 815–832.
Type locality: Seven Hills, Sydney, NSW.

Paratya atacta atacta Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [114 fig. 3].
Type data: holotype AM P13279 ♀, paratype(s) AM P39648 34 specimens.
Type locality: Binna Burra, Lamington NP (published type locality: Upper Nerang River, S Queensland).

Paratya australiensis arrostra Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [114 fig. 2].

Type data: holotype AM P13270 ♀, paratype(s) AM P39672 52 specimens (re-registered from P13270).
Type locality: Terrors Creek, Dayboro, QLD.

Paratya atacta adynata Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [115 fig. 4].
Type data: holotype AM P13283 ♀, paratype(s) AM P39660 4 specimens.
Type locality: small creek in upper reaches of Middle Harbour, Port Jackson, NSW.

Paratya tasmaniensis Riek, E.F. (1953). The Australian freshwater prawns of the family Atyidae. *Rec. Aust. Mus.* **23**: 111–121 [115 fig. 5].
Type data: holotype AM P13273 ♀, paratype(s) AM P39647 22 specimens.
Type locality: small stream at Yates Seed Farm, Kingston, TAS.

Taxonomic decision for synonymy: Williams, W.D. & Smith, M.J. (1979). A taxonomic revision of Australian species of *Paratya* (Crustacea: Atyidae). *Aust. J. Mar. Freshwat. Res.* **30**: 815–832 [815].

Distribution: known only from limital area, eastern Australia from Atherton Tableland to Tasmania.
Ecology: freshwater, littoral.
References: Hughes, J.M., Bunn, S.E., Kingston, D.M. & Hurwood, D.A. (1995). Genetic differentiation and dispersal among populations of *Paratya australiensis* (Atyidae) in rainforest streams in southeast Queensland. *J. N. Am. Benthol. Soc.* **14**(1): 158–173; Walsh, C.J. & Mitchell, B.D. (1995). The freshwater shrimp *Paratya australiensis* (Kemp, 1917) (Decapoda: Atyidae) in estuaries of south-western Victoria. *Mar. Freshwater Res.* **46**: 959–965; Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland*. Queensland Museum : South Brisbane 368 pp. [59, colour pl.].

Paratya howensis Roux, 1926

Lord Howe Island Paratya

Paratya howensis Roux, J. (1926). An account of Australian Atyidae. *Rec. Aust. Mus.* **15**: 237–254 [244].
Type data: syntypes AM P7924 12 specimens.
Type locality: Big Creek, Lord Howe Island.

Distribution: Lord Howe Island; known only from limital area.
Ecology: freshwater.

Paratya norfolkensis Kemp, 1917

Norfolk Island Paratya

Paratya australiensis norfolkensis Kemp, S. (1917). Notes on Crustacea Decapoda in the Indian Museum. X. Hymenosomatidae. *Rec. Indian Mus.* **13**(Pt 5 No. 15): 243–379 [305, text-fig. 6].
Type data: syntypes ZSI 8500/10*.
Type locality: W side of Norfolk Island.

Distribution: Norfolk Island; known only from limital area.
Ecology: freshwater.
Reference: Roux, J. (1926). An account of Australian Atyidae. *Rec. Aust. Mus.* **15**: 237–254 [243] (as *Paratya norfolkensis*).

Parisia Holthuis, 1956

Parisia Holthuis, L.B. (1956). An enumeration of the Crustacea Decapods Natantia inhabiting subterranean waters. *Vie Milieu* **7**: 43–76 [54] [gender feminine].
Type species: *Caridina microphthalma* Fage, 1946 by original designation.

Extralimital distribution: Indian Ocean region. See: Williams, W.D. (1964). Subterranean freshwater prawns (Crustacea: Decapoda: Atyidae) in Australia. *Aust. J. Mar. Freshwat. Res.* **15**(1): 93–106.

Parisia gracilis Williams, 1964

Parisia gracilis Williams, W.D. (1964). Subterranean freshwater prawns (Crustacea: Decapoda: Atyidae) in Australia. *Aust. J. Mar. Freshwat. Res.* **15**(1): 93–106 [94 figs 1A–1Q, 2A–2H].
Type data: holotype AM P14059 ♀, paratypes AM P14060 ♂ (as allotype), AM P14061–63 3♀, AM P14064 ♂, AM P14065–66 2♀.
Type locality: 'Brennon's Brook' 425 m from entrance to caves, 25 km S of Katherine, NT.

Distribution: NT (N coastal); known only from limital area.
Ecology: freshwater, underground water, caves; from limestones caves at a depth of 9 m.

Parisia unguis Williams, 1964

Parisia unguis Williams, W.D. (1964). Subterranean freshwater prawns (Crustacea: Decapoda: Atyidae) in Australia. *Aust. J. Mar. Freshwat. Res.* **15**(1): 93–106 [99 figs 2L–S, 3A–O].
Type data: holotype AM P14047 ♀, paratype(s) AM P14048 ♂.
Type locality: 'Brennon's Brook' 425 m from entrance to caves, 25 km S of Katherine, NT.

Distribution: NT (N coastal); known only from limital area.
Ecology: freshwater, underground water, caves; from limestone caves at a depth of 9 m.

Pycneus Holthuis, 1986

Pycneus Holthuis, L.B. (1986). A new genus and species of subterranean shrimp from Western Australia (Crustacea: Decapoda: Atyidae). *Zool. Meded. (Leiden)* **60**(7): 103–111 [103, 104] [gender masculine].
Type species: *Pycneus morsitans* Holthuis, 1986 by original designation and monotypy.

Range: Australian endemic.

Pycneus morsitans Holthuis, 1986

Pycneus morsitans Holthuis, L.B. (1986). A new genus and species of subterranean shrimp from Western Australia (Crustacea: Decapoda: Atyidae). *Zool. Meded. (Leiden)* **60**(7): 103–111 [105].
Type data: holotype WAM 615-85 3 ♀.
Type locality: cave at Munjingerra, Gibson Desert, WA.

Distribution: WA (W plateau); known only from limital area.
Ecology: temporary pools, underground water, caves; in a limestone cave about 12 to 15 m below surface, depth of pool 5 feet (~1.5 m), stagnant water.

Pycnisia Bruce, 1992

Pycnisia Bruce, A.J. (1992). *Pycnisia raptor*, a new genus and species of predatory troglobic shrimp (Crustacea: Decapoda: Atyidae) from Northern Australia. *Invertebr. Taxon.* **6**: 553–566 [553] [gender feminine].
Type species: *Pycnisia raptor* Bruce, 1992 by original designation and monotypy.

Range: Australian endemic.

Pycnisia raptor Bruce, 1992

Pycnisia raptor Bruce, A.J. (1992). *Pycnisia raptor*, a new genus and species of predatory troglobic shrimp (Crustacea: Decapoda: Atyidae) from Northern Australia. *Invertebr. Taxon.* **6**: 553–566 [554].
Type data: holotype NTM Cr.008485 ♀.
Type locality: Cave 8MD26, Katherine Region, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: caves, freshwater; depth 33.5 m below land surface.

Stygiocaris Holthuis, 1960

Stygiocaris Holthuis, L.B. (1960). Two new species of atyid shrimps from subterranean water of north-western Australia (Decapoda: Natantia). *Crustaceana* **1**(1): 47–57 [48] [gender feminine].
Type species: *Stygiocaris lancifera* Holthuis, 1960 by original designation.

Range: Australian endemic.

Stygiocaris lancifera Holthuis, 1960

Stygiocaris lancifera Holthuis, L.B. (1960). Two new species of atyid shrimps from subterranean water of north-western Australia (Decapoda: Natantia). *Crustaceana* **1**(1): 47–57 [48 figs 1, 2].
Type data: holotype RMNH D13180 1 specimen, paratypes RMNH D13181 several specimens, WAM 16-59 3 specimens, WAM 12-59 27 specimens, WAM 13-59 54 specimens, RMNH AM P13259 4 specimens (published number of specimens is 9), RMNH D13182 2 specimens, RMNH D13183 25 specimens, RMNH D15154 28 specimens.
Type locality: Kuddumurra Well, Yardie Creek Station, North-west Cape Peninsula, WA.

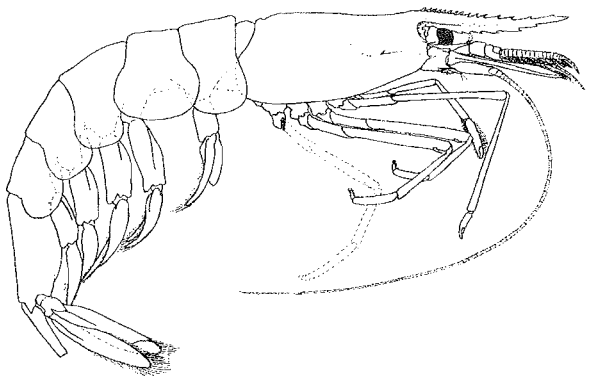
Distribution: WA (NW coastal); known only from limital area.
Ecology: freshwater; from freshwater wells subject to tidal influence and bored into coral limestone, and in waterholes.

Stygiocaris stylifera Holthuis, 1960

Stygiocaris stylifera Holthuis, L.B. (1960). Two new species of atyid shrimps from subterranean water of north-western Australia (Decapoda: Natantia). *Crustaceana* **1**(1): 47–57 [54 fig. 3].
Type data: holotype RMNH D13178 1 specimen, paratypes RMNH 6 specimens, WAM 14-59 2 specimens, WAM 15-59, AM P13258 1 specimen, RMNH D13179 5 specimens.
Type locality: Kuddumurra Well, Yardie Creek Station, North-west Cape Peninsula, WA.

Distribution: WA (NW coastal); known only from limital area.
Ecology: freshwater; subject to tidal influence and bored in coral limestone, and in waterholes.

BATHYPALAEMONELLIDAE



Bathypalaemonella brevirostris [from Bruce 1986: fig. 1]

INTRODUCTION

This family of deep water pelagic shrimps comprises a single genus *Bathypalaemonella*, found in all tropical seas between latitudes 27°N and 13°S, and from 308–1463 metres depth (Chace 1997). A key to the eight described species was provided by Bruce (1986: 263).

Diagnosis

Rostrum discrete, slender, elongate, with varying numbers of teeth and articulated spines dorsally, extending onto anterior carapace. Carapace without longitudinal lateral ridges, postantennal suture, or cardiac notch. Eyestalks normal, neither unusually long nor concealed beneath carapace. Antennule with two completely separate flagella, neither with accessory branch. Mandible with palp, with molar and incisor processes not deeply divided, molar process subtruncate, with transversely ridged grinding surface, not flared. Second maxilla with endite normal, scaphognathite rounded proximally, not deeply produced into branchial cavity. First maxilliped with epipod not abutting endite, not displacing palp out of line, exopod without partially detached lobe, lash well developed, caridean lobe not much produced distally, but distinctly overreaching endite. Second maxilliped with exopod, endopod composed of four segments, not terminating in two segments attached side by side to preceding segment, terminal segment attached obliquely to penultimate segment. Third maxilliped with exopod, 5-segmented, slender, pereiopod-like, antepenultimate segment fused with next proximal segment. Pereiopods without exopods, epipods, if present, not terminating in naked appendix extending vertically into branchial chamber, with arthrobranchs on four anterior pairs. Anterior pair subequal, slender, with one movable and one fixed finger. Second pair very unequal; carried flexed beneath thoracic sternites, with unique locking mechanism; fixed finger not curving subrectangularly around movable finger, carpus entire, undivided. Third pereiopod with dactyl spinose on flexor margin. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted.
(Modified after Chace 1997).

References

Bruce, A.J. (1986). Two new species of *Bathypalaemonella* Balss (Crustacea, Decapoda, Campylonotidae) from the Australian Northwest Shelf. *Zool. Scr.* **15**(3): 251–264

Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106

BATHYPALAEMONELLIDAE de Saint Laurent, 1985

Bathypalaemonellidae de Saint Laurent, M. (1985). Remarques sur la distribution des Crustacés Décapodes. pp. 469–478 *in* Laubier, L & Monniot, C. *Peuplements profonds du Golfe de Gascogne, Campagnes Biogas.* Brest : Institut Française de Recherche pour l'Exploration de la Mer. Ifremer Vol. 40 [473] [name established without a description and without direct mention of the genus *Bathypalaemonella*, but still an available name under ICZN 1985, Art. 11(f), see Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. (87)].

General references: Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80 [71, 78] (removed *Bathypalaemonella* from the Campylonotidae into a separate family with description and discussion).

Bathypalaemonella Balss, 1914

Bathypalaemonella Balss, H. (1914). Diagnosen neuer Macruren der Valdivia Expedition. *Zool. Anz.* **44**: 592–599 [597] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Bathypalaemonella zimmeri* Balss, 1914 by monotypy.

Extralimital distribution: pantropical between latitudes 27°N and 13°S, 308–1463 m depth.
Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [31].

Bathypalaemonella brevirostris Bruce, 1986

Bathypalaemonella brevirostris Bruce, A.J. (1986). Two new species of *Bathypalaemonella* Balss (Crustacea, Decapoda, Campylonotidae) from the Australian Northwest Shelf. *Zool. Scr.* **15**(3): 251–264 [252 figs 1–5].
Type data: holotype NTM Cr.002012 ♂ adult.
Type locality: North-west Shelf, WA.

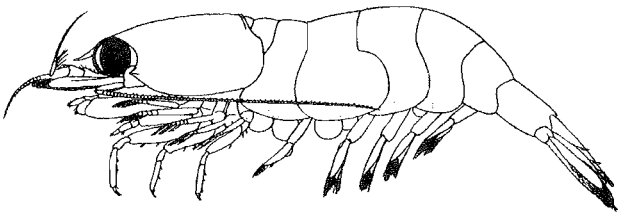
Distribution: WA (NW oceanic); known only from type locality.
Ecology: continental slope, oceanic province; depth 306–308 m.

Bathypalaemonella pilosipes Bruce, 1986

Bathypalaemonella pilosipes Bruce, A.J. (1986). Two new species of *Bathypalaemonella* Balss (Crustacea, Decapoda, Campylonotidae) from the Australian Northwest Shelf. *Zool. Scr.* **15**(3): 251–264 [257 figs 6–10].
Type data: holotype NTM Cr.002018 ♀.
Type locality: North-west Shelf, WA.

Distribution: WA (NW oceanic); Philippines.
Ecology: continental slope, oceanic province; depth 390–394 m.
Reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [31].

BRESILIIDAE



Discias exul [from Kemp 1920]

INTRODUCTION

The Bresiliidae comprises eleven genera of which three are represented in Australian waters. All are rare with the small, commensal, coral reef shrimp, *Discias exul* Kemp, being the most likely to be encountered. Other members of the family are found in a variety of habitats, and members of one genus, *Alvinocaris*, are even found associated with deep sea hydrothermal vents. Holthuis (1993: 69) provided a key to genera. Other useful papers dealing with the Australian fauna can be found under the species accounts.

Diagnosis

Pereiopods with exopods; first pair chelate; stouter, though often shorter, than second. Second pereiopod with undivided carpus. First maxilliped with exopod not terminating distally in broad, semidetached lobe; with endite not unusually large. Second maxilliped with exopod; with segments arranged in usual serial manner. Third maxilliped slender, pereiopod-like, not broad or operculate; with exopod. Mandible with palp and incisor process separated from molar process. First maxilla with distal endite not unusually large. Second maxilla with distal endite mesially bilobate; proximal endite not incised near distal margin; palp not vestigial. (Derived from Chace 1992).

References

Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Kemp, S. (1920). Notes on Crustacea Decapoda in the Indian Museum, XIV: On the occurrence of the Caridean Genus *Discias* in Indian Waters. *Rec. Indian Mus.* **19**: 137–143 figs 1–105 pl. 1–9

BRESILIIDAE Calman, 1896

Bresiliidae Calman, W.T. (1896). On deep sea Crustacea from the South-west of Ireland. *Trans. Roy. Irish. Acad.* **31**(1): 1–20 pls 1–2 [7] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Disciadidae Rathbun, M.J. (1902). Brachyura and Macrura. *In*, Papers from the Hopkins Stanford Galapagos Expedition, 1898–1899. VIII. *Proc. Wash. Acad. Sci.* **4**: 275–292 figs 1–4 pl. 12 [289] [as Discidae; name placed, in the corrected spelling Disciadidae, on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 433. Use of the Plenary Powers to secure that the generic name *Discias* Rathbun, 1902 (Class Crustacea, Order Decapoda) shall be the oldest available name for the genus concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 393–402, the incorrect original spelling was placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology in the same Opinion].

Agostocarididae Hart, C.W., Jr & Manning, R.B. (1986). Two new shrimps (Procarididae and Agostocarididae, new family) from marine caves of the western north Atlantic. *J. Crust. Biol.* **6**(3): 408–416 [411].

Alvinocarididae Christofferson, M.L. (1989). Phylogenetic relationships between Oplophoridae, Atyidae, Pasiphaeidae, Alvinocarididae fam. n., Bresiliidae, Psalidopodidae and Disciadidae (Crustacea Caridea Atyoidea). *Boletim Zool. Univ. Sao Paulo* **10**: 273–281 [273, 277].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [69].

Bresilia Calman, 1896

Bresilia Calman, W.T. (1896). On deep sea Crustacea from the South-west of Ireland. *Trans. Roy. Irish. Acad.* **31**(1): 1–20 pls 1–2 [7] [gender feminine].
Type species: *Bresilia atlantica* Calman, 1896 by monotypy.

Bresilia antipodarum Bruce, 1990

Bresilia antipodarum Bruce, A.J. (1990). Two deep-sea shrimps new to the Australian fauna, *Psathyrocaris hawaiiensis* Rathbun (Pasiphaeidae) and *Bresilia antipodarum*, sp. nov. (Bresiliidae), with remarks on *Encantada spinoculata* Wicksten (Bresiliidae). *Invertebr. Taxon.* **4**(4): 847–866 [855].
Type data: holotype NMV J15885 ♂.
Type locality: Tasman Sea, off Cape Freycinet, TAS.

Distribution: TAS (SE oceanic); known only from type locality.
Ecology: continental slope, oceanic province; shell, depth 800 m.

Bresilia plumifera Bruce, 1990

Bresilia plumifera Bruce, A.J. (1990). A second species of *Bresilia*, *B. plumifera* sp. nov., new to the Australian fauna (Crustacea: Decapoda: Bresilidae). *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 1–8 [1 figs 1–4].
Type data: holotype AM P40086 ♀.
Type locality: Taupo Sea Mount, Western Tasman Sea.

Distribution: NSW (Lower E coast), QLD (Central E coast); known only from limital area.
Ecology: continental shelf; depth 133 m.

Discias Rathbun, 1902

Anisocaris Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [72, 74] [name suppressed for the purpose of the Principle of Priority, but not for the Principle of Homonymy, under the plenary power of the International Commission on Zoological Nomenclature, and placed on the Official Index of Rejected and Invalid Generic Names in Zoology in Opinion 433, see International Commission on Zoological Nomenclature (1956). Opinion 433. Use of the Plenary Powers to secure that the generic name *Discias* Rathbun, 1902 (Class Crustacea, Order Decapoda) shall be the oldest available nbame for the genus concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 393–402; gender feminine].
Type species: *Anisocaris dromedarius* Ortmann, 1893 by monotypy.

Discias Rathbun, M.J. (1902). Brachyura and Macrura. *In*, Papers from the Hopkins Stanford Galapagos Expedition, 1898–1899. VIII. *Proc. Wash. Acad. Sci.* **4**: 275–292 figs 1–4 pl. 12 [290] [gender masculine].
Type species: *Discias serrifer* Rathbun, 1902 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [73].

Extralimital distribution: North Atlantic, Indo-west Pacific Oceans. See: Kensley, B. (1983). New records of Bresiliid shrimp from Australia, South Africa, Caribbean, and Gulf of Mexico (Decapoda: Natantia: Caridea). *Smithson. Contr. Zool.* **No. 394**: 1–31.

Generic reference: Davie, P., this work (probable that all species are sponge commensals).

Discias atlanticus Gurney, 1939

Discias atlanticus Gurney, R. (1939). A new species of the Decapoda Genus *Discias* from Bermuda. *Ann. Mag. Nat. Hist.* **3**(11): 388–393 fig. 1–13 [388 figs 1–13].
Type data: holotype ♀.
Type locality: Bermuda.

Distribution: QLD (Great Barrier Reef, NE coast); Atlantic and Pacific Oceans.
Ecology: coral reef, benthic, low intertidal, shallow subtidal.

Discias brownae Kensley, 1983

Discias brownae Kensley, B. (1983). New records of Bresiliid shrimp from Australia, South Africa, Caribbean, and Gulf of Mexico (Decapoda: Natantia: Caridea). *Smithson. Contr. Zool.* **No. 394**: 1–31 [8 figs 6–9].
Type data: holotype AM P33772 ♂, paratypes AM P33773 ♀ (as allotype), AM P2443 1♂, AM P24444 1♂ 1♀, AM P24447 1♂ 1♀, AM P24448 1♂, AM P24449 2 specimens, AM P24450 1♂, AM P24454 1♀, AM P24455 1♀, AM P24451 2♀, AM P24452 4 specimens, USNM 189096 4♂ 3♀.
Type locality: Port Jackson, NSW.

Distribution: NSW (Lower E coast); known only from limital area.
Ecology: benthic, subtidal.

Discias exul Kemp, 1920

Discias exul Kemp, S. (1920). Notes on Crustacea Decapoda in the Indian Museum, XIV: On the occurrence of the Caridean Genus *Discias* in Indian Waters. *Rec. Indian Mus.* **19**: 137–143 figs 1–105 pl. 1–9 [138 pl. 8 figs 1–3].
Type data: syntypes IM 5 specimens*.
Type locality: Port Blair, Andaman Island.

Discias mvitae Bruce, A.J. (1976). *Discias mvitae* sp. nov., a new sponge associate from Kenya (Decapoda Natantia, Disciadidae). *Crustaceana* **31**: 119–130 fig. 1–5 [119 figs 1–5].
Type data: holotype BMNH ♀.
Type locality: Fort Jesus, Mombasa.

Taxonomic decision for synonymy: Kensley, B. (1983). New records of Bresiliid shrimp from Australia, South Africa, Caribbean, and Gulf of Mexico (Decapoda: Natantia: Caridea). *Smithson. Contr. Zool.* **No. 394**: 1–31 [13].

Distribution: QLD (Great Barrier Reef, NE coast), Tasman Sea, WA (NW oceanic); Cartier Reef, Indo-west Pacific Oceans.
Ecology: coral reef, benthic, low intertidal, shallow subtidal; appear to be sponge associates.

Discias musicus Holthuis, 1981

Discias musicus Holthuis, L.B. (1953). Enumeration of the decapod and stomatopod Crustacea from Pacific coral islands. *Atoll Res. Bull.* **24**: 1–66 2 maps [52] [*nom. nud.*].

Discias musicus Holthuis, L.B. (1981). Description of three new species of shrimps (Crustacea: Decapoda: Caridea) from Pacific Islands. *Proc. Biol. Soc. Wash.* **94**(3): 787–800 [787–792 figs 1, 2].
Type data: holotype USNM ♂*.
Type locality: Lagoon west of Saipan, Marianas Ils.

Distribution: Coral Sea Islands Territory (NE Herald Cay); Mariana Islands, West Pacific.
Ecology: coral reef, reef flat, shallow subtidal; commensal with crinoids.
Reference: Davie, P.J.F. & Short, J.W. (2001). Decapod Crustacea of North East Cay, Herald Cays, Coral Sea. pp. 75–86 *in* Comben, L. (ed.) Herald Cays Scientific Study Report, *Geography Monograph Series* No. 6. Brisbane : The Royal Geographical Society of Queensland Inc. 168 pp. (first Australian record) [76].

Pseudocheles Chace & Brown, 1978

Pseudocheles Chace, F.A., Jr & Brown, D.E. (1978). A new polychelate shrimp from the Great Barrier Reef of Australia and its bearing on the Family Bresiliidae (Crustacea: Decapoda: Caridea). *Proc. Biol. Soc. Wash.* **91**(3): 756–766 [757] [gender feminine].
Type species: *Pseudocheles enigma* Chace & Brown, 1978 by monotypy.

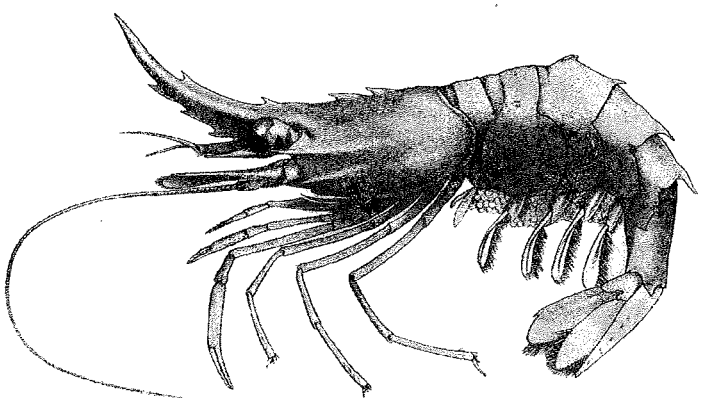
Extralimital distribution: Caribbean Sea. See: Kensley, B. (1983). New records of Bresiliid shrimp from Australia, South Africa, Caribbean, and Gulf of Mexico (Decapoda: Natantia: Caridea). *Smithson. Contr. Zool.* **No. 394**: 1–31.

Pseudocheles enigma Chace & Brown, 1978

Pseudocheles enigma Chace, F.A., Jr & Brown, D.E. (1978). A new polychelate shrimp from the Great Barrier Reef of Australia and its bearing on the Family Bresiliidae (Crustacea: Decapoda: Caridea). *Proc. Biol. Soc. Wash.* **91**(3): 756–766 [757 figs 1–4].
Type data: holotype AM P24190 ♀, paratype(s) AM P26830 2♀.
Type locality: W side of lagoon, Lizard Island, QLD.

Distribution: QLD (Great Barrier Reef); known only from limital area.
Ecology: coral reef, benthic, low intertidal, shallow subtidal; clings to marine plants or animals.

CAMPYLONOTIDAE



Campylonotus rathbunae [from Schmitt 1926: pl. 67]

INTRODUCTION

The family Campylonotidae comprises a single genus, *Campylonotus*, represented in southern Australian waters by a deep water shrimp, *C. rathbunae* Schmitt.

Diagnosis

Dorsal antennular flagellum without accessory branch. Pereiopods with epipods; without exopods; anterior four pairs with arthrobranch. First pair of pereiopods chelate; usually more slender than, rarely subequal to, second. Second pair of pereiopods subequal; with undivided carpus. First maxilliped with exopod not terminating distally in broad, semidetached lobe; caridean lobe of exopod well developed; endite not unusually large, with well-developed exopodal flagellum. Second maxilliped with segments arranged in usual serial manner; terminal segment applied as narrow strip to mesial margin of penultimate segment; with exopod. Third maxilliped slender, pereiopod-like, with exopod. Mandible not bifurcate, incisor and molar processes not separated by distinct sinus; with palp. First maxilla with distal endite not unusually large; proximal endite not reduced or absent. Second maxilla with distal endite mesially bilobate, proximal endite incised near distal margin; scaphognathite narrowly produced proximally into branchial chamber. (Derived from Chace 1992).

References

Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80

Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68

CAMPYLONOTIDAE Sollaud, 1913

Campylonotidae Sollaud, E. (1913). Nouvelles observations sur les crevettes de genre *Campylonotus* Bate (=*Anchistiella* A.M.E) type d'une nouvelle famille de *Caridea*: les *Campylonotidae*. *Bull. Mus. Natn. Hist. Nat. Paris* **19**: 184–190 [184] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Campylonotus Bate, 1888

Campylonotus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [767] [name placed on the Oficial List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Campylonotus semistriatus* Bate, 1888 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [41].

Anchistiella Milne Edwards, A. (1891). Crustacés. Mission scientifique du Cap Horn. *Nouv. Arch. Mus. Hist. Nat. Paris* **VI**: 1–76 [37] [gender feminine].
Type species: *Anchistiella hyadesi* A. Milne Edwards, 1891 (= *Campylonotus vagans* Bate, 1888) by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [41].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda)*. Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [90].

Extralimital distribution: New Zealand. See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.

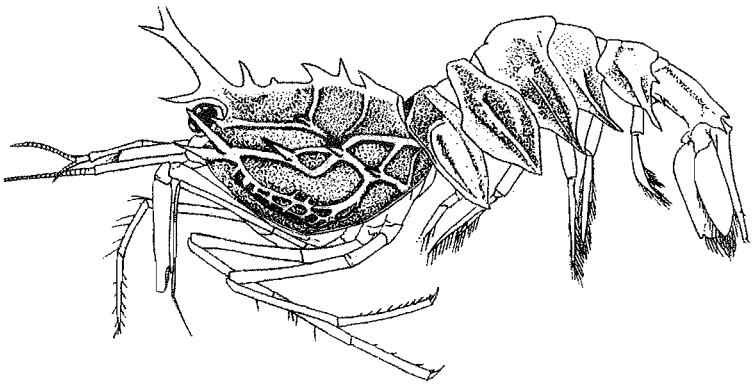
Campylonotus rathbunae Schmitt, 1926

Sabre Prawn (FAO)

Campylonotus rathbunae Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68 [373 pl. 67 fig. 1] [corrigenda et addenda unnumbered].
Type data: holotype AM E3681 ♀, paratypes AM E3681 4♂ 4♀, AM E6634, AM E6631, AM E6632, AM E6633, AM E6635.
Type locality: S of Eucla, Great Australian Bight, SA.

Distribution: SA (Great Australian Bight), TAS (Bass Strait); New Zealand.
Ecology: continental slope, oceanic province, trade (potential fisheries interest); mud bottom, depths of 280–810 m.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca)*. Adelaide : Government Printer 201 pp. 202 figs (illustration and description).

CRANGONIDAE



Paracrangon australis [from Hanamura, Wadley & Taylor 1999: fig. 1]

INTRODUCTION

The Crangonidae is virtually a cosmopolitan family of shrimps, found from the littoral zone down to abyssal depths (Chace 1984). Currently 20 genera are recognised, of which seven are found in Australian waters. There has been little modern work on Australian crangonids although new species were described recently by Hanamura *et al.* (1999) and Bruce (1994). Holthuis (1997: 283) provided a key to genera.

Diagnosis

Rostrum variable, usually short, depressed, immovably attached to remainder of carapace; carapace often sculptured with carinae, spines, or both; antennular flagella simple, without accessory branches; mandible without incisor process or palp; second maxilliped with terminal segment semicircular, attached diagonally to penultimate segment; first pair of pereiopods subchelate, second pair (if present) with undivided carpus. (After Chace 1984).

References

Bruce, A.J. (1994). Shrimps from Flat-Top Bank, Timor Sea (Crustacea: Decapoda: Caridea). *Raffles Bull. Zool.* **42**(4): 743–756

Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63

Hanamura, Y., Wadley, V. & Taylor, J. (1999). Description of a new species of the Pacific shrimp genus *Paracrangon* (Crustacea: Decapoda: Crangonidae) from southern Australia, with a key to the genus. *Mem. Mus. Vic.* **57**(2): 311–317

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

CRANGONIDAE Haworth, 1825

Crangonidae Haworth, A.H. (1825). A new binary arrangement of the macrurus Crustacea. *Phil. Mag. Journ.* **65**: 183–184 [184] [name, as Crangonidae White, 1847, placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 334. Validation, under the Plenary Powers, of the generic names *Crangon* Fabricius, 1798, and *Alpheus* Fabricius, 1798 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **10**: 1–44, but corrected in 1987, in Official Lists: 11].

Pontocaridinae Christofferson, M.L. (1988). Genealogy and phylogenetic classification of the world Crangonidae (Crustacea, Caridea), with a new species and new records of the south western Atlantic. *Rev. Nord. Biol.* **6**(1): 43–59, illustrated [46].

Philocherinae Christofferson, M.L. (1988). Genealogy and phylogenetic classification of the world Crangonidae (Crustacea, Caridea), with a new species and new records of the south western Atlantic. *Rev. Nord. Biol.* **6**(1): 43–59, illustrated [46].

Pontophilinae Christofferson, M.L. (1988). Genealogy and phylogenetic classification of the world Crangonidae (Crustacea, Caridea), with a new species and new records of the south western Atlantic. *Rev. Nord. Biol.* **6**(1): 43–59, illustrated [46].

Paracrangonidae Christofferson, M.L. (1988). Genealogy and phylogenetic classification of the world Crangonidae (Crustacea, Caridea), with a new species and new records of the south western Atlantic. *Rev. Nord. Biol.* **6**(1): 43–59, illustrated [46].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [282].

Aegaeon Agassiz, 1846

Egeon Bosc, L.A.G. (1813). Essai historique sur les crustacés de la mer de Nice par M. RISSO (extrait d'un rapport fait par M. Bosc à l'Institut en 1812). *Nouv. Bull. Soc. Philomath. Paris* **3**(66): 233–234 [233] [junior homonym of *Egeon* du Montfort, 1808 (Protozoa)].
Type species: *Cancer cataphractus* Olivi, 1792 by monotypy.

Aegaeon Agassiz, L. (1846). *Nomenclatoris Zoologici.* Index universalis, continens nomina systematica classium, ordinum, familiarum et generum animalium omnium, tam viventium quam fossilium, secundum ordinem alphabeticum unicum disposita, adjectis homonymiis plantarum, nec non variis adnotationibus et emendationibus. [n.l.] : Soloduri viii 393 pp. [134] [*nom. nov.* for *Egeon* Bosc, 1813; gender masculine].

Extralimital distribution: worldwide in tropical and temperate seas, except eastern Pacific.

Aegaeon lacazei (Gourret, 1887)

Crangon lacazei Gourret, P. (1887). Sur quelques Décapodes macroures nouveaux de Golfe de Marseille. *C. R. Séances Acad. Sci.* **105**: 1033–1035 [1033].
Type data: type status unknown MNHP* (probable depository institution).
Type locality: Gulf of Marseille, France.

Pontocaris habereri Doflein, F. (1902). Ostasiatische Dekapoden. *Abh. Bayer. Akad. Wiss. (II Classe)***21**(3): 611–670 pls 1–6 [620 fig. A, pl. 1 figs 3–4].
Type data: type status unknown ZSMB (probable depository institution).
Type locality: Japan.

Aegeon brendani Kemp, S. (1906). Two new species of Carida from the west coast of Ireland. *Ann. Mag. Nat. Hist. (7)***17**: 297–300 [299].
Type data: type status unknown.
Type locality: south-west of Ireland.

Taxonomic decision for synonymy: Chan, T.-Y. (1996). Crustacea Decapoda Crangonidae: Revision of the three closely related genera *Aegaeon* Agassiz, 1846, *Pontocaris* Bate, 1888 and *Parapontocaris* Alcock, 1901. pp. 269–336 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 15. *Mém. Mus. natn. Hist. nat. Paris* **168**: 1–539 [278].

Distribution: NSW (Central E coast, Lower E coast, SE oceanic); Indo-west central Pacific Oceans, Eastern Atlantic Ocean.
Ecology: bathyal, continental shelf, oceanic province, subtidal; depths of 30–759 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [327] (as *Pontocaris lacazei*).

Aegaeon rathbuni de Man, 1918

Aegeon rathbuni de Man, J.G. (1918). Diagnoses of new species of macrurous decapod Crustacea from the *Siboga*-Expedition. *Tijdschr. Ned. Dierk. Vereen. (2)***16**: 293–306 [304].
Type data:lectotype ♂, paralectotype(s) 3 ♀ USNM.
Subsequent designation: Chan, T.-Y. (1996). Crustacea Decapoda Crangonidae: Revision of the three closely related genera *Aegaeon* Agassiz, 1846, *Pontocaris* Bate, 1888 and *Parapontocaris* Alcock, 1901. pp. 269–336 *in* Crosnier, A.

Résultats des Campagnes MUSORSTOM, Volume 15. *Mém. Mus. natn. Hist. nat. Paris* **168**: 1–539 [281].
Type locality: Borneo, Indonesia.

Distribution: NSW (Central E coast, Lower E coast, SE oceanic); Indo-west central Pacific Oceans (Madagascar to Hawai'i).
Ecology: continental rise, continental shelf, continental slope, subtidal; depths of 11–1464 m (the lectotype was recorded from 11 m but this may be erroneous as all other records are from depths greater than 268 m).
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [327] (as *Pontocaris rathbunae*).

Notocrangon Coutière, 1900

Notocrangon Coutière, H. (1900). Note préliminaire sur quelques Crustacés décapodes recueillis par l'expédition antarctique Belge. *C. R. Séances Acad. Sci.* **130**: 1640–1643 [1640] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Crangon antarcticus* Pfeffer, 1887 by monotypy.

Extralimital distribution: southern circumpolar.

Notocrangon antarcticus (Pfeffer, 1887)

Crangon antarcticus Pfeffer, G. (1887). Die Krebse von Süd-Georgien nach der Ausbeute der Deutschen Station 1882–1883. 1. Tiel. *Mitt. Naturhist. Mus. Hamb.* **4**: 42–150 pls 1–7 [45 pl. i figs 1–21].
Type data: type status unknown*.
Type locality: vicinity of South Georgia, Scotia Sea.

Notocrangon antarcticus gracilis Borradaile, L.A. (1916). Crustacea. Part 1—Decapoda. *Nat. Hist. Rep. Br. Antarct. Terra Nova Exped.* **3**(2): 75–110 figs 1–6 [89].
Type data: type status unknown*.
Type locality: Ross Sea, Antarctica.

Taxonomic decision for synonymy: Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [271].

Distribution: S oceanic, Aust. Antarctic Terr., southern circumpolar.
Ecology: bathypelagic, demersal, mesopelagic, oceanic province, depth 15–1320 m, most commonly 300–600 m, water temperatures from about -2 to 3°C.
Reference: Komai, T., Takeuchi, I. & Takeda, M. (1996). Deep-sea shrimp (Crustacea: Decapoda: Caridea) from the Antarctic Sea collected during the Jare-35 Cruise. *Proc. NIPR Symp. Polar Biol., Tokyo* **9**: 179–206 (redescription, figures and synonymy).

Paracrangon Dana, 1852

Paracrangon Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [16, 20] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Paracrangon echinatus* Dana, 1852 by monotypy.

Extralimital distribution: tropical eastern-Pacific as far south as 17°S, southern Australian and Subantarctic waters.

Generic reference: Hanamura, Y., Wadley, V. & Taylor, J. (1999). Description of a new species of the Pacific shrimp genus *Paracrangon* (Crustacea: Decapoda: Crangonidae) from southern Australia, with a key to the genus. *Mem. Mus. Vic.* **57**(2): 311–317 (key to species).

Paracrangon australis Hanamura, Wadley & Taylor, 1999

Paracrangon australis Hanamura, Y., Wadley, V. & Taylor, J. (1999). Description of a new species of the Pacific shrimp genus *Paracrangon* (Crustacea: Decapoda: Crangonidae) from southern Australia, with a key to the genus. *Mem. Mus. Vic.* **57**(2): 311–317 [311 figs 1–3].
Type data: holotype TMH G3656 ovigerous ♀, paratype(s) NMV J41279 2 ovigerous ♀.
Type locality: 84 km SSE of South East Cape, TAS [44°16'S 147°20'E].

Distribution: TAS (SE oceanic), Macquarie Island.
Ecology: bathypelagic, mesopelagic, oceanic province; from 363–1422 m depth.

Parapontophilus Christofferson, 1988

Parapontophilus Christofferson, M.L. (1988). Genealogy and phylogenetic classification of the world Crangonidae (Crustacea, Caridea), with a new species and new records of the south western Atlantic. *Rev. Nord. Biol.* **6**(1): 43–59, illustrated [46, 48].
Type species: *Pontophilus gracilis* Smith, 1882 by original designation.

Parapontophilus gracilis (Smith, 1882)

Taxonomic decision for subspecific arrangement: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63 [47].

Distribution: 200 mile fishing zone (NW oceanic); Atlantic-Indo-Pacific Oceans.

Parapontophilus gracilis abyssi (Smith, 1884)

Pontophilus abyssi Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [363].
Type data: syntypes USNM* (probable depository institution).
Type locality: E of Chesapeake Bay, USA.

Distribution: QLD (NE oceanic); tropical and temperate seas, except the Eastern Pacific Ocean.
Ecology: abyssal, bathypelagic; depth 1400–5852 m.
Reference: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63 [49].

Parapontophilus gracilis junceus (Bate, 1888)

Pontophilus junceus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [491 pl. 88 figs 2–4].
Type data: holotype BMNH ♀*.
Type locality: Moro Gulf, east of Basilan Strait, Mindanao, Philippines [6°47'N 122°28'E].

Pontophilus occidentalis indica de Man, J.G. (1918). Diagnosis of new species of macrurous decapod Crustacea from *Siboga*-Expedition. *Zool. Meded. Uitgegeven Rijks. Natuur. Hist. Leide* **4**(3): 159–166 [161].
Type data: holotype ZMA*.
Type locality: Bali Sea [7°19'24"S 116°49'30"E].

Taxonomic decision for synonymy: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63 [52].

Distribution: WA (NW oceanic); Philippines, Indonesia.
Ecology: bathypelagic, mesopelagic, oceanic province; from 1258–1305 m off north-western Australia, otherwise recorded from 386–1280 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [15].

Parapontophilus gracilis profundus (Bate, 1888)

Pontophilus profundus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [490 pl. 88 fig. 1].
Type data: holotype 1 ♂.
Type locality: off Sydney, NSW.

Distribution: NSW (SE oceanic); known only from type locality.
Ecology: abyssopelagic, oceanic province; bottom red clay.
Reference: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63 [47].

Philocheras Stebbing, 1900

Mesapus Rafinesque-Schmaltz, C.S. (1814). *Précis des découvertes et travaux somiologiques de M. r. C.S. Rafinesque-Schmaltz entre 1800 et 1814.* Ou choix raisonné de ses principales découvertes en zoologie et en botanique, pour servir d'introduction à ses ouvrages futurs. Palermo : Royale Typographie Militaire 55 pp. + errata [22] [name of genus and its type species suppressed for the purposes of the Principal of Priority, but not for those of the Principal of Homonymy, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (I) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender masculine].
Type species: *Mesapus fasciatus* Rafinesque, 1814 (= *Crangon fasciatus* Risso, 1816) by monotypy.

Philocheras Stebbing, T.R.R. (1900). South African Crustacea. *Mar. Invest. S. Afr.* **I**: 14–66 pls 1–4 [48] [gender masculine].
Type species: *Crangon nanus* Krøyer, 1842 (= *Pontophilus bispinosus* Hailstone, 1835) by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [295].

Extralimital distribution: Atlantic-Indo-west Pacific Oceans and Mediterranean. See: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63.

Philocheras flindersi (Fulton & Grant, 1902)

Sand Shrimp

Pontophilus flindersi Fulton, S.W. & Grant, F.E. (1902). Some little known Victorian decapod Crustacea, with description of new species. No. 2. *Proc. R. Soc. Vic. (2)***15**: 59–68 pls 8–10 [67 pl. 10 fig. 3].
Type data: holotype NMV J215 1 specimen.
Type locality: off Shoreham, Western Port, VIC.

Distribution: VIC (Bass Strait); known only from limital area, temperate coasts of Victoria.
Ecology: sand bottom, sublittoral.

Philocheras intermedius (Bate, 1863)

Crangon intermedius Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [503 pl. 41 fig. 6].
Type data: syntypes BMNH*.
Type locality: Gulf St Vincent, SA.

Distribution: SA (S Gulfs coast); known only from type locality.
Ecology: sublittoral.

Philocheras lowisi (Kemp, 1916)

Pontophilus lowisi Kemp, S. (1916). Notes on Crustacea Decapoda in the Indian Museum. VI. Indian Crangonidae. *Rec. Indian Mus.* **12**(8): 355–384 figs 1–7 pl. 8 [361 pl. 8 fig. 2].
Type data: syntypes IM 9074/10*.
Type locality: Port Blair, Andaman Islands.

Distribution: NT (N coast); Andaman Islands.
Ecology: sublittoral, reef; depth 30 m.
Reference: Bruce, A.J. (1994). Shrimps from Flat-Top Bank, Timor Sea (Crustacea: Decapoda: Caridea). *Raffles Bull. Zool.* **42**(4): 743–756 [752] (Australian record).

Philocheras obliquus (Fulton & Grant, 1902)

Pontophilus obliquus Fulton, S.W. & Grant, F.E. (1902). Some little known Victorian decapod Crustacea, with description of new species. No. 2. *Proc. R. Soc. Vic. (2)***15**: 59–68 pls 8–10 [63 pl. 10 fig. 1].
Type data: holotype NMV J221 1 specimen.
Type locality: off Shoreham, Western Port, VIC.

Distribution: VIC (Bass Strait); known only from limital area, temperate coasts of Victoria.
Ecology: sand bottom, sublittoral.

Philocheras pilosus (Kemp, 1916)

Pontophilus pilosus Kemp, S. (1916). Notes on Crustacea Decapoda in the Indian Museum. VI. Indian Crangonidae. *Rec. Indian Mus.* **12**(8): 355–384 figs 1–7 pl. 8 [367 fig. 4, pl. 8 fig. 4].
Type data: syntypes IM 3 ♂ 4 ♀, 2 juveniles*.
Type locality: northern end of the Gulf of Manaar, Kilakarai, Ramnad District, southern India.

Distribution: NT (N coast); east Indian Ocean.
Ecology: shallow subtidal.
Reference: Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [331] (Australian record).

Philocheras planoculminus Bruce, 1994

Philocheras planoculminus Bruce, A.J. (1994). Shrimps from Flat-Top Bank, Timor Sea (Crustacea: Decapoda: Caridea). *Raffles Bull. Zool.* **42**(4): 743–756 [753 fig. 3].
Type data: holotype NTM Cr.009240 ♂, paratype(s) NTM Cr.009240 ♂ ♀.
Type locality: Flat Top Bank, Timor Sea.

Distribution: NT (N coast); known only from type locality.
Ecology: sublittoral, reef; depth 30 m.

Philocheras victoriensis (Fulton & Grant, 1902)

Pontophilus victoriensis Fulton, S.W. & Grant, F.E. (1902). Some little known Victorian decapod Crustacea, with description of new species. No. 2. *Proc. R. Soc. Vic. (2)***15**: 59–68 pls 8–10 [65 pl. 10 fig. 2].
Type data: holotype NMV J218 1 specimen.
Type locality: Altona Bay and Beaumaris, Port Phillip, VIC.

Distribution: VIC (Bass Strait); known only from limital area, temperate coasts of Victoria.
Ecology: sand bottom, sublittoral.

Pontocaris Bate, 1888

Pontocaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [495] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Pontocaris propensalata* Bate, 1888 by subsequent designation, see Holthuis, L.B. (1947). Nomenclatorical notes on European Macrurous Crustacea Decapoda. *Zool. Meded. (Leiden)* **27**: 312–322 [320].

Pontocheras Bruce, A.J. (1988). A new crangonid shrimp *Pontocheras arafurae* gen. nov. et sp. nov., from the Arafura Sea. *Zool. Scr.* **17**(2): 213–221 figs 1–7 [213] [gender masculine].
Type species: *Pontocheras arafurae* Bruce, 1988 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [296].

Extralimital distribution: Indo-west Pacific Oceans, most species in the Indo-Malay region.
Generic reference: Chan, T.-Y. (1996). Crustacea Decapoda Crangonidae: Revision of the three closely related genera *Aegaeon* Agassiz, 1846, *Pontocaris* Bate, 1888 and *Parapontocaris* Alcock, 1901. pp. 269–336 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 15. *Mém. Mus. natn. Hist. nat. Paris* **168**: 1–539 [290] (generic revision and key to species).

Pontocaris arafurae (Bruce, 1988)

Pontocheras arafurae Bruce, A.J. (1988). A new crangonid shrimp *Pontocheras arafurae* gen. nov. et sp. nov., from the Arafura Sea. *Zool. Scr.* **17**(2): 213–221 figs 1–7 [219].
Type data: holotype NTM Cr.004127 ♀, paratype(s) RMNH D36756 ♀.
Type locality: off Orontes Reef, Port Essington, NT [11°4.5'S 132°40'E].

Distribution: NT (N coast); Thailand, Indonesia, Philippines.
Ecology: continental shelf, subtidal; from 10–199 m depth.
Reference: Chan, T.-Y. (1996). Crustacea Decapoda Crangonidae: Revision of the three closely related genera *Aegaeon* Agassiz, 1846, *Pontocaris* Bate, 1888 and *Parapontocaris* Alcock, 1901. pp. 269–336 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 15. *Mém. Mus. natn. Hist. nat. Paris* **168**: 1–539 [297] (extended range).

Pontocaris propensalata Bate, 1888

Pontocaris propensalata Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [496 pl. 86 fig. 5].
Type data: holotype 1 ♂.
Type locality: E off the Kei Islands, S of Papua.

Pontocaris media Alcock, A.W. & Anderson, A.R.S. (1899). Natural history notes from H.M. royal Indian marine survey ship "Investigator", commander T.H. Heming, R.N., commanding. Ser. III, No. 2. An account of the deep-sea Crustacea dredged during the surveying-season of 1897–1898. *Ann. Mag. Nat. Hist. (7)***3**: 1–27, 278–292 [282].
Type data: type status unknown IM*.
Type locality: Andaman Sea.

Taxonomic decision for synonymy: Chan, T.-Y. (1996). Crustacea Decapoda Crangonidae: Revision of the three closely related genera *Aegaeon* Agassiz, 1846, *Pontocaris* Bate, 1888 and *Parapontocaris* Alcock, 1901. pp. 269–336 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 15. *Mém. Mus. natn. Hist. nat. Paris* **168**: 1–539 [291].

Distribution: NSW (Lower E coast); east Indo-west Pacific Oceans (Andaman Sea, Indonesia, Philippines, Coral Sea, New Caledonia, Loyalty Islands).
Ecology: bathyal, continental shelf, continental slope, oceanic province, subtidal; depth 100–525 m.

Pontophilus Leach, 1817

Pontophilus Leach, W.E. (1817). *Malacostraca Podophthalmata Britanniae*; or description of such British species of Crabs, Lobsters, Prawns, and of other Malacostraca with pedunculated eyes ... Illustrated with coloured figures of all the species by James Sowerby, F.L.S. G.S. W.S. &c. **Nos XIII–XVI.** London : James Sowerby pls XVI, XVIII, XX, XXII, XXV, XXXVII, XXXVIII, XXXIX, XLIV [pl. XXXVIIA] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (I) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender masculine].
Type species: *Crangon spinosus* Leach, 1815 by monotypy.

Cheraphilus Kinahan, J.R. (1862). On the Britannic species of *Crangon* and *Galathea*, with some remarks on the homologies of these groups. *Trans. Roy. Irish. Acad.* **24**(II): 45–113 15 pls [54, 66] [replacement name for *Pontophilus* Leach, 1817; gender masculine].
Type species: *Crangon spinosus* Leach, 1815 by monotypy.

Extralimital distribution: E Atlantic-Indo-west central Pacific Oceans. See: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63.

Pontophilus candidus Kemp, 1916

Pontophilus candidus Kemp, S. (1916). Notes on Crustacea Decapoda in the Indian Museum. VI. Indian Crangonidae. *Rec. Indian Mus.* **12**(8): 355–384 figs 1–7 pl. 8 [365 pl. 8 fig. 3].
Type data: syntypes IM 9082/10 2 ♂ 4 ♀.
Type locality: Port Blair, Andamans.

Distribution: WA (NW coast); Andaman Islands.
Ecology: sublittoral.

Vercoia Baker, 1904

Vercoia Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [157] [gender feminine].
Type species: *Vercoia gibbosa* Baker, 1904 by monotypy.

Extralimital distribution: Gulf of Aden, north-west Indian Ocean, Marshall Is., Pacific Ocean. See: Duris, Z. (1992). Revision of *Vercoia* Baker (Crustacea: Decapoda: Crangonidae). *Invertebr. Taxon.* **6**: 1437–1457.

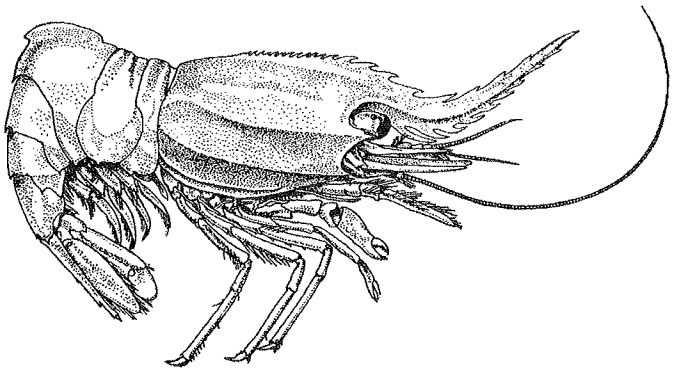
Vercoia gibbosa Baker, 1904

Humped Shrimp

Vercoia gibbosa Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [158].
Type data: holotype SAM C630 ♀.
Type locality: South Australia, see Duris, Z. (1992). Revision of *Vercoia* Baker (Crustacea: Decapoda: Crangonidae). *Invertebr. Taxon.* **6**: 1437–1457.

Distribution: QLD (Great Barrier Reef), SA (Great Australian Bight); Marshall Island, Eniwetok Atoll.
Ecology: coral reef, sand bottom, rock reef; sand with lots of broken shells, depths 3–54 m.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs.

EUGONATONOTIDAE



Eugonatonotus crassus, above, while not an Australian species, is very similar in appearance to the Australian species, *E. chacei* [from Boone 1927].

INTRODUCTION

This family of deep water shrimps comprises only a single genus and two very similar species. *Eugonatonous chacei* Chan & Yu, 1991 occurs in the Indo-West Pacific from Japan to northern Australia and eastwards to the Tonga Islands. Only recently, it was recognised as a distinct species, separate from *E. crassus* (A. Milne Edwards, 1881), which occurs in the Western Atlantic from off Georgia to Gulf of Mexico and Caribbean as far as Nicaragua and Grenada.

Diagnosis

Rostrum a discrete, grossly dentate extension of, and attached inflexibly to, remainder of carapace. Carapace with longitudinal lateral ridges, without longitudinal suture or cardiac notch in posterior margin. Eyes normal, neither unusually long nor concealed beneath carapace. Antennule with two flagella, neither with accessory branch. Mandible with 3-jointed palp, usually without incisor process, molar process subtruncate, not flared distally. Second maxilla with normal endite, scaphognathite only moderately produced proximally into branchial chamber. First maxilliped with exopod not abutting endite, not displacing palp out of plane, exopod without partially detached lobe, lash well developed, caridean lobe blunt, slightly produced, distinctly overreaching endite. Second maxilliped with exopod, endopod 4-segmented, not terminating in two segments attached side by side to preceding segment, terminal segment applied as a narrow strip to mesial margin of penultimate segment. Third maxilliped with exopod, composed of five segments, slender, pereiopod-like, antepenultimate segment fused with next proximal segment. Pereiopods with exopods on all five pairs, with strap-like epipods (mastigobranchs) on four anterior pairs without naked appendix extending vertically into branchial chamber, with arthrobranchs on three anterior pairs, two anterior pairs rather robust, fingers without terminal tuft of setae but bearing long lateral and terminal spines forming basket-like cage when closed, first pair subequal, stouter and shorter than second pair, with one fixed and one movable finger. Second pair of pereiopods subequal, fixed finger not curving subrectangularly around short, broad movable finger, carpus entire, undivided. Third pereiopod with flexor margin of dactyl spinose. First pleopod of male with endopod laminar, not large or elaborately convoluted.
(After Chace 1997).

References

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Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106

Chan, T.-Y. & Yu, H.-P. (1991). *Eugonatonotus chacei* sp. nov., second species of the genus (Crustacea, Decapoda, Eugonatonotidae). *Bull. Mus. Natn. Hist. Nat. Paris* **13**(1–2): 143–152

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16

EUGONATONOTIDAE Chace, 1937

Gomphonotidae Chace, F.A., Jr (1936). A revision of the bathypelagic prawns of the family Acanthephyridae, with notes on a new family Gomphonotidae. *J. Wash. Acad. Sci.* **26**: 24–31 [25] [name suppressed for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy, under the plenary powers of the International Commission on Zoological Nomenclature, and placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Eugonatonotidae Chace, F.A., Jr (1937). A correction in crustacean nomenclature. *Proc. N. Engl. Zool. Club* **16**: 15–16 [15] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Gonatonotidae Gurney, R. *in* Gurney, R. & Lebour, M.V. (1941). On the larvae of certain Crustacea Macrura mainly from Bermuda. *J. Linn. Soc. Lond. Zool.* **41**: 89–181, 26 text–figs [122] [name placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [77].

Eugonatonotus Schmitt, 1926

Gonatonotus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [10] [junior homonym of *Gonatonotus* Adams & White, 1847, name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Gonatonotus crassus* A. Milne Edwards, 1881 by monotypy.

Eugonatonotus Schmitt, W.L. (1926). Report on the Crustacea Macrura (Families Penaeidae, Campylonotidae and Pandalidae) obtained by the F.I.S. "Endeavour" in Australian seas. With notes on the species of "Penaeus" described by Haswell and contained, in part, in the collections of the Macleay Museum, at the University of Sydney. *Zool. Result Fish. Exper. Endeavour* **5**(6): 2 page Corrigenda et Addenda, 311–381 pls 57–68 [p. 2 of 'Corrigenda et Adenda' facing p. 311] [corrigenda et addenda unnumbered; *nom. nov.* for *Gonatonotus* A. Milne Edwards, 1881; name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].

Gomphonotus Chace, F.A., Jr (1936). A revision of the bathypelagic prawns of the family Acanthephyridae, with notes on a new family Gomphonotidae. *J. Wash. Acad. Sci.* **26**: 24–31 [25] [*nom. nov.* for *Gonatonotus* A. Milne Edwards, 1881, name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Gonatonotus crassus* A. Milne Edwards, 1881 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [77].

Extralimital distribution: Indo-west Pacific (Japan and NW Australia to Tonga), west Atlantic. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

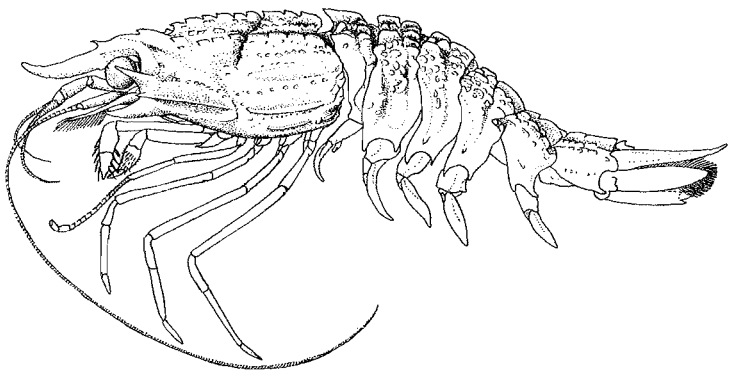
Eugonatonotus chacei Chan & Yu, 1991

Leopard Shrimp

Eugonatonotus chacei Chan, T.-Y. & Yu, H.-P. (1991). *Eugonatonotus chacei* sp. nov., second species of the genus (Crustacea, Decapoda, Eugonatonotidae). *Bull. Mus. Natn. Hist. Nat. Paris* **13**(1–2): 143–152 [144 figs 1a–h, pl. 1A].
Type data: holotype NTOU ♂, paratypes NTOU 3♂ 2♀, MNHP.
Type locality: Ta-Shi, I-Lan County, NE Taiwan.

Distribution: NT (N coast), QLD (NE coast, NE oceanic), WA (NW coast, NW oceanic); east Indo-west Pacific Oceans.
Ecology: mesopelagic, sand bottom, continental shelf, continental slope, oceanic province; depth 100–610 m, but mainly 305–413 m.
Reference: Davie, P., this work (previously recorded from Australia as *E. crassus* A. Milne Edwards, 1881 (see Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331), but that species is now considered to be restricted to the Western Atlantic).

GLYPHOCRANGONIDAE



Glyphocrangon holthuisi [A.J. Francis]

INTRODUCTION

This family comprises a single genus of distinctively sculptured shrimps. They are typically deep water pelagic shrimps, found in depths from 258–6364 metres. *Glyphocrangon* A. Milne Edwards, 1881 was poorly known in Australia until Kensley *et al.* (1987) described three new species.

Diagnosis

Integument unusually firm, rigid; rostrum immovably attached to remainder of carapace, dorsally and ventrally flattened or concave, armed laterally with 2–7 pairs of teeth; carapace strongly sculptured with ridges, grooves, spines and tubercles; antennular flagella simple, without accessory branch; mandible without incisor process or palp; second maxilliped with terminal segment applied as broad strip to penultimate segment; third maxilliped with exopod; pereiopods without exopods, first pair imperfectly subchelate, second pair with multi-articulate carpus. (After Chace 1984).

References

Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63

Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331

GLYPHOCRANGONIDAE Smith, 1884

Glyphocrangonidae Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [364].

Glyphocrangon A. Milne Edwards, 1881

Thalascaris Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [282] [name suppressed for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy under the plenary powers of the International Commission on Zoological Nomanclature, and placed on the Official List of Rejected and Invalid Generic Names in Zoology (see International Commission on Zoological Nomenclature (1974). Opinion 1012. *Thalascaris* Bate, 1878 (Crustacea, Decapoda): suppressed under the Plenary Powers. *Bull. Zool. Nomencl.* **30**(3/4): 169–170); gender feminine].
Type species: *Glyphocrangon rimapes* Bate, 1888 by subsequent designation, see Holthuis, L.B. (1971). The Atlantic shrimps of the deep-sea genus *Glyphocrangon* A. Milne Edwards, 1881. *Bull. Mar. Sci. Univ.* **21**(1): 267–373 12 figs.

Glyphocrangon Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [3] [gender feminine].
Type species: *Glyphocrangon spinicauda* A. Milne Edwards, 1881 by original designation.

Rhachocaris Smith, S.I. (1882). Report on the Crustacea. Part 1. Decapoda. Reports on the results of dredging, under the supervision of Alexander Agassiz, on the east coast of the United States, during the summer of 1880, by the U.S. Coast Survey Steamer "Blake", Commander J.R. Bartlett, U.S.N., commanding. *Bull. Mus. Comp. Zool.* **10**(1): 1–108 [41] [gender feminine].
Type species: *Rhachocaris agassizii* S.I. Smith, 1882 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650.

Plastocrangon Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum*. Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [125, 133] [gender feminine].
Type species: *Glyphocrangon caecescens* Wood-Mason & Alcock, 1891 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [303].

Extralimital distribution: Indo-west Pacific Oceans, eastern Pacific Ocean from southern California to Chile, Galapagos and Juan Fernandez, Atlantic Ocean. See: Chace, F.A., Jr (1984). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 2: Families Glyphocrangonidae and Crangonidae. *Smithson. Contr. Zool.* **No. 397**: 1–63 [3].

Glyphocrangon assimilis de Man, 1918

Glyphocrangon assimilis de Man, J.G. (1918). Diagnoses of new species of macrurous decapod Crustacea from the *Siboga*-Expedition. *Tijdschr. Ned. Dierk. Vereen. (2)***16**: 293–306 [294].
Type data: holotype (probable) ZMA*.
Type locality: Bali Sea [7°19'24"S 116°49'30"E].

Distribution: NSW (SE oceanic), QLD (SE oceanic); Indo-west Pacific Oceans.
Ecology: mesopelagic, oceanic province; depths of 538–810 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [320] (Australian records).

Glyphocrangon holthuisi Kensley, Tranter & Griffin, 1987

Glyphocrangon holthuisi Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [321 figs 22, 25c].
Type data: holotype AM P35906 ♀, paratypes AM P33157 16 ♀, USNM 211397 5 ♀ 5 ♂.
Type locality: SE of Cape Byron, NSW.

Distribution: NSW (SE oceanic), QLD (SE oceanic); known only from limital area.
Ecology: mesopelagic, oceanic province; depths to 540 m.

Glyphocrangon lowryi Kensley, Tranter & Griffin, 1987

Glyphocrangon lowryi Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [322 figs 23, 25d].
Type data: holotype AM P33158 ♀.
Type locality: NE of Danger Point, QLD.

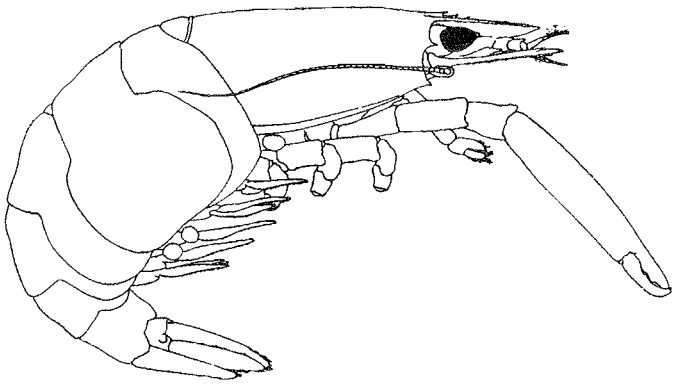
Distribution: QLD (SE oceanic); known only from limital area.
Ecology: mesopelagic, oceanic province; depths to 720 m.

Glyphocrangon novacastellum Kensley, Tranter & Griffin, 1987

Glyphocrangon novacastellum Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [324 figs 24, 25e].
Type data: holotype AM P26766 ♀, paratypes AM P20995, AM P20996 11 specimens, AM P33160 1 ♀, AM P19096 1 ♀, USNM 211399 1 ♂ 4 ♀, USNM 211398 1 ♀.
Type locality: SE of Newcastle, NSW.

Distribution: NSW (SE oceanic); known only from limital area.
Ecology: mesopelagic, oceanic province; depths to 823 m.

GNATHOPHYLLIDAE



Gnathophylloides robustus [from Bruce 1973: fig. 1]

INTRODUCTION

This small family of distinctive shrimps has a pantropical and subtropical distribution. Only three species in two genera occur in Australian waters. The *Gnathophylloides* species are found associated with sea urchins, while *Gnathophyllum americanum* is more typically free-living, and a predator of asteroids. The most comprehensive modern treatment is that of Chace & Bruce (1993).

Diagnosis

Carapace without longitudinal suture; rostrum immovable; telson with two or three pairs of spines on posterior margin, antennule with two completely separate flagella, one with accessory branch; mandible without palp, with incisor process vestigial or absent; first maxilla with mesial coxal lobe unusually large, mesial basal lobe reduced; second maxilla without endites; first maxilliped with exopodal lash; second maxilliped with distal segments articulating serially, not side by side, on penultimate segment, distal segment bearing dense marginal row of stout setae; third maxilliped composed of no more than six segments, antepenultimate segment broad, at least proximally; pereiopods without exopods or arthrobranchs, epipods, if present, not large, not extending dorsally into branchial chamber, first and second pair of pereiopods distinctly chelate, dactyl meeting opposing finger when flexed, not crossing; fingers of chelipeds not pectinate; first pereiopod not stouter than second; second pereiopod with undivided carpus, with dactyl not distinctly serrate on extensor margin; first pleopod without appendix interna on endopod; second pleopod with appendix masculina in male. (After Chace & Bruce 1993).

References

Bruce, A.J. (1973). *Gnathophylloides robustus* sp. nov., a new commensal Gnathophyllid shrimp from Western Australia, with the designation of a new genus *Levicaris* (Decapoda, Caridea). *Crustaceana* **24**(1): 17–23

Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152

GNATHOPHYLLIDAE Dana, 1852

Gnathophyllinae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [16].

Drimoidae Ortmann, A.E. (1896). Das System der Decapoden Krebse. *Zool. Jahrb. Syst.* **9**: 409–453 [425].

Gnathophylloides Schmitt, 1933

Gnathophylloides Schmitt, W.L. (1933). Four new species of decapod Crustaceans from Porto Rico. *Am. Mus. Novit.* **662**: 1–9, 4 pls [5] [gender masculine].
Type species: *Gnathophylloides mineri* Schmitt, 1933 by monotypy.

Extralimital distribution: Indo-Pacific Oceans. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* 7(2): 9–20 fig. 1 tables 1–2.

Gnathophylloides mineri Schmitt, 1933

Gnathophylloides mineri Schmitt, W.L. (1933). Four new species of decapod Crustaceans from Porto Rico. *Am. Mus. Novit.* **662**: 1–9, 4 pls [7 fig. 3].
Type data: holotype AMNH 6700, paratype(s) AMNH 3654 2 specimens.
Type locality: Ballena Point, Ensenada, Puerto Rico.
Compiled from secondary source: Feinberg, H.S. (1971). *A Catalogue of Type Specimens in the Department of Living Invertebrates, The American Museum of Natural History, New York, U.S.A. Phylum Arthropoda: Class Crustacea Part One: Order Decapoda.* New York : The American Museum of Natural History.

Distribution: NSW (Lower E coast), QLD (NE coast); circumtropical.
Ecology: coral reef, subtidal; associated with *Tripneustes* echinoids.
Reference: Bruce, A.J. (1974). The occurrence of *Gnathophylloides mineri* Schmitt (Decapoda, Natantia, Gnathophyllidae) in the Indian Ocean. *Crustaceana* **26**(3): 313–315 fig. 1 [313].

Gnathophylloides robustus Bruce, 1973

Gnathophylloides robustus Bruce, A.J. (1973). *Gnathophylloides robustus* sp. nov., a new commensal Gnathophyllid shrimp from Western Australia, with the designation of a new genus *Levicaris* (Decapoda, Caridea). *Crustaceana* **24**(1): 17–23 [17 figs 1–7].
Type data: holotype RMNH D27146 1 ovigerous ♀, paratypes RMNH D27147 ♂ (as allotype), USNM 138271 ♀.
Type locality: Point Moore, Geraldton, WA.

Distribution: WA (Lower W coast); known only from type locality.
Ecology: subtidal; occurs on host *Centrostephanus tenuispinus* (Diadematidae), depth 3 m.

Gnathophyllum Latreille, 1819

Gnathophyllum Latreille, P.A. (1819). *Nouveau dictionnaire d'histoire naturelle*, appliquée aux arts, à l'agriculture, à l'economie rurale et domestique, à la médecine, etc. edn 2. Vol. 30 pp. 71–72 [72] [as *Gnatophyllum*; name emended under the plenary powers of the International Commission on Zoological Nomenclature to *Gnathophyllum*, and emended spelling placed on Official List of Generic Names, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202, the spelling *Gnatophyllum* at the same time was placed on the Official Index of Rejected and Invalid Generic Names in Zoology; gender neuter].
Type species: *Alpheus elegans* Risso, 1816 by subsequent designation, see Milne Edwards, H. (1844). Les Crustacés. 1–278 pp., Atlas, pls 1–80 *in* Cuvier, G. *Le Règne Animal*, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux, et d'introduction à l'anatomie comparée. Paris : Déterville [pl. 52 fig. 2].

Drimo Risso, A. (1826). *Histoire naturelle des principales productions de l'Europe Méridionale. Decapoden.* Strassbourg & Paris : Paris Vol. 5 pp. 2–81 pls 1–4 [70] [junior objective synonym of *Gnathophyllum* Latreille, 1819; gender masculine].
Type species: *Alpheus elegans* Risso, 1816 by monotypy.

Gnathophyllum Schulze, F.E., Kukenthal, W., Heider, K. & Hesse, R. (1929). pp. 1299–1458 *in, Nomenclator animalium generum et subgenerum.* Berlin : Preuss. Akad. Wiss. Vol. 3 Pt 11 [1388] [emendation of *Gnatophyllum* Latreille, 1819, and thus with the same type species; these authors were the first to make it explicit that their spelling, *Gnathophyllum*, was an intentional spelling change; their name is available, but is an objective homonym of the original name in its corrected spelling; gender neuter].
Type species: *Alpheus elegans* Risso, 1816 by subsequent designation, see Milne Edwards, H. (1844). Les Crustacés. 1–278 pp., Atlas, pls 1–80 *in* Cuvier, G. *Le Règne Animal*, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux, et d'introduction à l'anatomie comparée. Paris : Déterville [pl. 52 fig. 2].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [94].

Extralimital distribution: circumtropical. See: Manning, R.B. (1963). The East American species of *Gnathophyllum* (Decapoda, Caridea), with the description of a new species. *Crustaceana* **5**(1): 47–63.

Gnathophyllum americanum Guérin-Méneville, 1856

Bumble-bee Shrimp

Gnathophyllum americanum Guérin-Méneville, F.É. (1856). Crustaceos. *Historia fisica politica y natural de la isla de Cuba, Historia Natural*. pp. v–xxxii 8 pls 1–3 [xx].
Type data: holotype MFP, paratype(s) ANSP CA3148 2 specimens*.
Type locality: Cuba, see Spamer, E.E. & Bogan, A.E. (1994). Type specimens of Crustacea surviving in the Guerin-Meneville collection, Academy of Natural Sciences of Philadelphia. *Proc. Acad. Nat. Sci. Phila.* **145**: 35–46.

Gnathophyllum fasciolatum Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [28].
Type data: type status unknown* (presumed lost).
Type locality: Port Jackson, NSW.

Gnathophyllum zebra Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens*. Berlin pp. 137–178 pls 15–18 [161].
Type data: type status unknown*.
Type locality: Fouquet Ils, Mauritius.

Gnathophyllum pallidium Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [537].
Type data: syntypes ZMH 1 ♂ 1 ♀*.
Type locality: Tahiti.

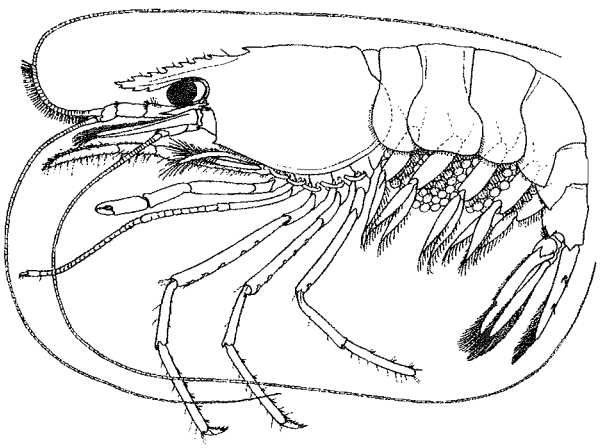
Gnathophyllum tridens Nobili, G. (1906). Diagnoses préliminaires de Crustacés Décapodes et Isopodes nouveaux recueillis par M. le Dr. G. Seurat aux îles Touamotou. *Bull. Mus. Natn. Hist. Nat. Paris* **12**(5): 256–270 [259].
Type data: holotype MNHP 1 ♀.
Type locality: Rikitea, Tuamotu Islands, see Holthuis, L.B. (1949). Note sur le type du *Gnathophyllum tridens* Nobili, 1906 (Crustacés, Décapodes). *Bull. Mus. Natn. Hist. Nat. Paris (2)***21**: 210–214.

Gnathophyllum minuscularium Armstrong, J.C. (1940). New species of Caridea from the Bermudas. *Am. Mus. Novit.* **1096**: 1–10 4 figs [9 fig. 4C–K].
Type data: holotype AMNH 8192 ♀, paratype(s) AMNH 8193 2 ♀.
Type locality: The Reach, St George Island, Bermuda.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [136].

Distribution: NSW (Lower E coast), QLD (Central E coast, Great Barrier Reef, NE coast); Elizabeth Reef, Tasman Sea, circumtropical.
Ecology: coral reef; found free-living, but also often associated with echinoids and ophiuroids, and has been observed browsing on papulae of several asteroids, to 50 m depth.
Reference: Davie, P., this work (it is likely that a complex of sibling species is involved, and that some synonyms may need to be resurrected; numerous colour forms are evident from the popular photographic record (A.J. Bruce, pers. comm.)).

HIPPOLYTIDAE



Lysmata vittata [from Bruce 1990]

INTRODUCTION

Hippolytid shrimps are cosmopolitan in distribution and highly diverse in morphology and ecology. They are common on coral reefs and seagrass flats, but also occur in offshore coastal waters down to almost abyssal depths (3803 metres). Members of one remarkable Asian genus, *Merguia*, are the only known arboreal shrimps. Chace (1997: 40) provided a key to hippolytid genera, as well as an extensive checklist of hippolytid genera and species, including all valid and available names. Of the 36 genera, and over 270 species worldwide, 16 genera and 32 species are found in Australian waters.

Although originally placed in the Hippolytidae, the affinities of the monotypic genus *Leontocaris* are in some doubt. After a careful morphological analysis Chace (1997: 40) found the Hippolytidae to be a reasonably homogeneous group 'with the possible exception of *Leontocaris*'. A. Anker (pers. comm.) believes that this genus is more closely related to Bathypalaemonidae, but it is here provisionally retained in the Hippolytidae pending a more thorough analysis of the problem.

Diagnosis

Rostrum usually a discrete, uninflated extension of remainder of carapace. Carapace without cardiac notch (except in *Saron*). Eyes fully exposed, not unusually elongate. Mandible usually composed of incisor and molar processes and palp. Second maxilla with proximal endite reduced, scaphognathite proximally rounded or bluntly angular. First maxilliped with exopod distally flagellate, not abutting endite. Second maxilliped with exopod, endopod composed of four serially arranged segments, terminal segment attached diagonally or transversely to preceding segment, not abutted by slender, sickle-shaped extension from latter. Third maxilliped composed of fewer than seven segments. Neither first nor second pair of pereiopods bearing terminal tufts of setae on fingers. First pair more robust than second pair, usually subequal, not swollen, distinctly chelate, chela with one movable and one fixed finger. Second pereiopod with carpus subdivided into two or more articles. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted.
(After Chace 1997).

References

Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2

Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

HIPPOLYTIDAE Bate, 1888

Lysmatinae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [16, 20] [name placed on the Official List of Family-Group names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202, with the proviso that the name Hippolytidae should be given precedence over it by those who consider the two names to be synonymous].

Thorinae Kingsley, J.S. (1878). List of the North American Crustacea belonging to the suborder Caridea. *Bull. Essex Institute* **10**(4, 5, 6): 53–71 [64] [name placed on the Official List of Family-Group names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202, with the proviso that the name Hippolytidae should be given precedence over it by those who consider the two names to be synonymous].

Hippolytidae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [xii, xli, 480, 503, 574, 576] [placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202, with the proviso that it is given precedence over the older names Lysmatinae Dana, 1852, and Thorinae Kingsley, 1878, in cases where it is considered synonymous with either].

Latreutidae Ortmann, A.E. (1896). Das System der Decapoden Krebse. *Zool. Jahrb. Syst.* **9**: 409–453 [415, 424].

Barbouridae Christofferson, M.L. (1987). Phylogenetic relationships of hippolytid genera, with an assignment of new families for the Crangonoidea and Alpheoidea (Crustacea, Decapoda, Caridea). *Cladistics* **3**(4): 348–362 [350, 353].

Nauticarididae Christofferson, M.L. (1987). Phylogenetic relationships of hippolytid genera, with an assignment of new families for the Crangonoidea and Alpheoidea (Crustacea, Decapoda, Caridea). *Cladistics* **3**(4): 348–362 [350].

Alopidae Christofferson, M.L. (1987). Phylogenetic relationships of hippolytid genera, with an assignment of new families for the Crangonoidea and Alpheoidea (Crustacea, Decapoda, Caridea). *Cladistics* **3**(4): 348–362 [350].

Bythocarididae Christofferson, M.L. (1987). Phylogenetic relationships of hippolytid genera, with an assignment of new families for the Crangonoidea and Alpheoidea (Crustacea, Decapoda, Caridea). *Cladistics* **3**(4): 348–362 [350].

Merguiidae Christofferson, M.L. (1990). A new superfamily classification of the Caridea (Crustacea: Pleocyemata) based on phylogenetic pattern. *Z. Zool. Syst. Evolutionsforsch.* **28**: 94–106 [96, 97].

Merhippolytidae Christofferson, M.L. (1990). A new superfamily classification of the Caridea (Crustacea: Pleocyemata) based on phylogenetic pattern. *Z. Zool. Syst. Evolutionsforsch.* **28**: 94–106 [96, 97].

Thorellinae Christofferson, M.L. (1990). A new superfamily classification of the Caridea (Crustacea: Pleocyemata) based on phylogenetic pattern. *Z. Zool. Syst. Evolutionsforsch.* **28**: 94–106 [97].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [217].

Alope White, 1847

Alope White, A. (1847). Descriptions of new or little-known Crustacea in the Collections at the British Museum. *Proc. Zool. Soc. Lond.* **15**: 118–127 [123] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Alope palpalis* White, 1847 (= *Hippolyte spinifrons* H. Milne Edwards, 1837) by monotypy.

Hetairocaris de Man, J.G. (1890). Carcinological studies in the Leyden Museum. No 4. *Notes Leyden Mus.* **12**(13): 49–126 pls 3–6 [120] [gender feminine].
Type species: *Hetairocaris orientalis* de Man, 1890 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [220].

Extralimital distribution: Indo-west Pacific Oceans. See: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100.

Alope orientalis (de Man, 1890)

Bald Prawn

Hetairocaris orientalis de Man, J.G. (1890). Carcinological studies in the Leyden Museum. No 4. *Notes Leyden Mus.* **12**(13): 49–126 pls 3–6 [122].
Type data: type status unknown RMNH*.
Type locality: Ponape, Caroline Islands.

Hippolyte ponapensis Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [502 pl. 36 fig. 20, 20d].
Type data: type status unknown ZMH ♂ ♀*.
Type locality: Ponape, Caroline Islands.

Alope australis Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [154 pl. 30 figs 1–7].
Type data: syntypes SAMA 2 specimens*.
Type locality: Smith's Bay, Kangaroo Island.

Taxonomic decision for synonymy: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [33].

Distribution: NSW (Lower E coast), QLD (NE coast), SA (Great Australian Bight, S Gulfs coast); Indo-west Pacific Oceans.
Ecology: littoral, rock bottom, subtidal.

Chorismus Bate, 1888

Chorismus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [577, 616] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Chorismus tuberculatus* Bate, 1888 by monotypy.

Extralimital distribution: Antarctic Region.

Chorismus antarcticus (Pfeffer, 1887)

Hippolyte antarcticus Pfeffer, G. (1887). Die Krebse von Süd-Georgien nach der Ausbeute der Deutschen Station 1882–1883. 1. Tiel. *Mitt. Naturhist. Mus. Hamb.* **4**: 42–150 pls 1–7 [51 pl. i figs 22–27].
Type data: type status unknown ZMH* (presumed museum of deposition).
Type locality: South Georgia, Antarctica.

Distribution: S oceanic, Aust. Antarctic Terr., southern circumpolar.
Ecology: sublittoral; types from 13–17 m depth.
References: Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [267]; Komai, T., Takeuchi, I. & Takeda, M. (1996). Deep-sea shrimp (Crustacea: Decapoda: Caridea) from the Antarctic Sea collected during the Jare-35 Cruise. *Proc. NIPR Symp. Polar Biol., Tokyo* **9**: 179–206 (full description, figures, synonymy).

Gelastocaris Kemp, 1914

Gelastocaris Kemp, S. (1914). Hippolytidae. Notes on Crustacea Decapoda in the Indian Museum. V. *Rec. Indian Mus.* **10**: 81–129 pls 1–7 [106] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Latreutes paronae* Nobili, 1905 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans. See: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100.

Gelastocaris paronae (Nobili, 1905)

Latreutes paronae Nobili, G. (1905). Crostacei di Zanzibar. *Boll. Mus. Zool. Comp. Torino* **20**(506): 1–12 fig. 1 [2] [as *Latreutes Paronae*].
Type data: type status unknown MSNT* (probable depository institution).
Type locality: Zanzibar.

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: sublittoral; often associated with sponge hosts, Philippines material taken from bottoms of coral sand, usually with shells, depth 26–44 m.
References: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [63]; Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [66].

Hippolyte Leach, 1814

Hippolyte Leach, W.E. (1814). Entry: Crustacealogy. pp. 385–437 *in*, *The Edinburgh Encyclopedia conducted by David Brewster LLD.* Vol. VII(2). Edinburgh [431] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Hippolyte varians* Leach, 1814 by monotypy.

Nectoceras Rafinesque-Schmaltz, C.S. (1817). Synopsis of four new genera and two new species of Crustacea found in the United States. *Amer. Month. Mag.* **2**: 40–41 [41] [name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender neuter].
Type species: *Nectoceras pelagica* Rafinesque, 1817 (= *Astacus coerulescens* Fabricius, 1775) by monotypy.

Virbius Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [35] [gender masculine].
Type species: *Hippolyte acuminatus* Dana, 1852 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [421].

Bellidia Gosse, P.H. (1877). On *Bellidia huntii*, a new genus and species of Crustacea, supposed to be new. *Ann. Mag. Nat. Hist.* **20**: 313–316 [313] [gender feminine].
Type species: *Bellidia huntii* Gosse, 1877 (= *Hippolyte prideauxiana* Leach, 1817) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [233].

Extralimital distribution: worldwide temperate and tropical seas. See: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [66].
Generic reference: Udekem d'Acoz, C. d' (1996). The genus *Hippolyte* Leach, 1814 (Crustacea: Decapoda: Caridea: Hippolytidae) in the east Atlantic Ocean and the Mediterranean Sea, with a checklist of all species in the genus. *Zool. Verh.* **303**: 1–133, figs 1–50, tab. 1 (summary of data on all *Hippolyte* species).

Hippolyte australiensis Stimpson, 1860

Southern Weed Shrimp

Virbius australiensis Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [35].
Type data: type status unknown* (probably lost).
Type locality: Port Jackson, NSW.

Caradina cincinnuli Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [500 pl. 40 fig. 3].
Type data: type status unknown BMNH*.
Type locality: Gulf St Vincent, SA.

Taxonomic decision for synonymy: Udekem d'Acoz, C. d' (1996). The genus *Hippolyte* Leach, 1814 (Crustacea: Decapoda: Caridea: Hippolytidae) in the east Atlantic Ocean and the Mediterranean Sea, with a checklist of all species in the genus. *Zool. Verh.* **303**: 1–133, figs 1–50, tab. 1 [112].

Distribution: NSW (Lower E coast), SA (S Gulfs coast); known only from limital area, with certainty only from southern and SE Australia.
Ecology: seagrass, subtidal; in algae in pools, low intertidal to 100 m depth.
References: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs [50] (figured); Davie, P., this work (this species has been long considered a junior synonym of *H. ventricosa* H. Milne Edwards, and Australian records have been confused under this latter name. D'Udekem d'Acoz (pers. comm.) believes that 'many different species (including undescribed ones) have been lumped together with *H. australiensis*. So far, there is no evidence that the 'true' *H. ventricosa* has been found elsewhere than in India').

Hippolyte bifidirostris (Miers, 1876)

Virbius bifidirostris Miers, E.J. (1876). Notes upon oxystomatous Crustacea. *Trans. Linn. Soc. Lond.* **1**: 235–249 pls 38–40 [224].
Type data: holotype BMNH.
Type locality: New Zealand.

Taxonomic decision for new combination: Miers, E.F. (1876). Descriptions of some new species of Crustacea, chiefly from New Zealand. *Ann. Mag. Nat. Hist.* **17**: 218–229 [224].

Distribution: QLD (Great Barrier Reef, NE coast); New Zealand.
Ecology: coral reef, seagrass, subtidal; among leaves of seagrass beds, depths 18 to 36 m.
Reference: Davie, P., this work (d'Udekem d'Acoz (pers. comm.) believes the identity of the Australian records needs to be confirmed).

Hippolyte caradina Holthuis, 1947

Caradina tenuirostris Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [501 pl. 40 fig. 4] [junior homonym of *Hippolyte tenuirostris* H. Milne Edwards, 1837].
Type data: syntypes BMNH*.
Type locality: Gulf St Vincent, SA.

Hippolyte caradina Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [54] [*nom. nov.* for *Caradina tenuirostris* Bate, 1863].

Distribution: NSW (Lower E coast), SA (Great Australian Bight, S Gulfs coast); New Caledonia.
Ecology: low intertidal, seagrass, subtidal; among leaves of seagrass beds, depth to 80 m.
Reference: Ledoyer, M. (1984). Les Caridea (Crustacea: Decapoda) des herbiers de phanérogames marines de Nouvelle-Calédonie (région de Nouméa). *Zool. Verh.* **211**: 1–58 (figures and range extension).

Hippolyte ignobilis Kinahan, 1856

Hippolyte ignobilis Kinahan, J.R. (1856). Remarks on the habits and distribution of marine Crustacea on the eastern shores of Port Philip, Victoria, Australia, with descriptions of undescribed species and genera. *J. R. Dublin Soc.* **1**(3): 111–134 [131] [*species inquirenda*; see Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathy-palaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 (47)].
Type data: type status unknown*.
Type locality: Port Phillip, VIC.

Distribution: VIC (Bass Strait); known only from type locality.
Ecology: subtidal.

Hippolyte ventricosa H. Milne Edwards, 1837

Hippolyte ventricosus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [371].
Type data: syntypes MNHP Na 1672 7 ♀.
Type locality: India.

Distribution: NT (N coast), QLD (NE coast); India.
Ecology: coral reef, low intertidal, seagrass, subtidal; common amongst algal growth in intertidal pools, among leaves of seagrass beds.
References: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49 [46] (records from NT); Udekem d'Acoz, C. d' (1999). Redescription of *Hippolyte ventricosa* H. Milne Edwards, 1837 based on syntypes, with remarks on *Hippolyte orientalis* Heller, 1862 (Crustacea, Decapoda, Caridea). *Zoosystema* **21**(1): 65–76 [66] (redescribed and

figured); Davie, P., this work (this species has previously been confused with *H. australiensis* Stimpson. D'Udekem d'Acoz (pers. comm.) believes that 'many different species (including undescribed ones) have been lumped together with *H. australiensis*. So far, there is no evidence that the 'true' *H. ventricosa* has been found elsewhere than in India. It is possible that all Australian records of that species are based on misidentifications').

Latreutes Stimpson, 1860

Cyclorhynchus De Haan, W. (1849). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [173, 174, 175] [junior homonym of *Cyclorhynchus* Kaup, 1829 (Aves), *Cyclorhynchus* Sundevall, 1836 (Aves), *Cyclorhynchus* Macquart, 1841 (Diptera); gender neuter].
Type species: *Hippolyte planirostris* De Haan, 1844 by monotypy.

Latreutes Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [27] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Hippolyte ensiferus* H. Milne Edwards, 1837 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [413].

Rhynchocyclus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [27] [*nom. nov.* for *Cyclorhynchus* De Haan, 1849, junior homonym of *Rhynchocyclus* Cabanis & Heine, 1860 (Aves); gender masculine].

Concordia Kingsley, J.S. (1880). Carcinological Notes. No. 1. *Proc. Acad. Nat. Sci. Phila.* **1879**: 34–37 [413] [gender feminine].
Type species: *Concordia gibberosus* Kingsley, 1880 (= *Rhynchocyclus parvulus* Stimpson, 1866) by monotypy.

Platybema Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [576, 578] [*nom. nov.* for *Cyclorhynchus* De Haan, 1849 and *Rhynchocyclus* Stimpson, 1860; gender neuter].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [235].

Extralimital distribution: Indo-west Pacific. See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.
Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [67] (key to species).

Latreutes anoplonyx Kemp, 1914

Latreutes anoplonyx Kemp, S. (1914). Hippolytidae. Notes on Crustacea Decapoda in the Indian Museum. V. *Rec. Indian Mus.* **10**: 81–129 pls 1–7 [104 pl. 4 figs 3–5].
Type data: type status unknown IM*.
Type locality: Bombay, India.

Distribution: NT (N coast), QLD (Central E coast); Indo-west Pacific (eastern India to Indonesia and north to China and Japan).
Ecology: continental shelf, ectocommensal, pelagic; appear to be jellyfish (Coelenterata: Scyphozoa) associates: found on *Phyllorhiza punctata* von Lendenfelt (Mastigiidae), and *Versuriga anadynomene* (Versurigidae).
Reference: Bruce, A.J. (1995). *Latreutes anoplonyx* Kemp, 1914 (Crustacea: Decapoda: Hippolytidae), a jelly-fish associate new to Australian fauna. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 61–64 (first record for Australia, and notes on biology).

Latreutes compressus (Stimpson, 1860)

Green Prawn

Rhynchocyclus compressus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [28].
Type data: type status unknown 2 specimens (probably lost).
Type locality: Port Jackson, NSW.

Caradina truncifrons Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [499 pl. XL fig. 2].
Type data: type status unknown BMNH* (probable depository Institution).
Type locality: Gulf St Vincent, SA.

Taxonomic decision for synonymy: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [59].

Distribution: NSW (Lower E coast), QLD (NE coast), SA (Great Australian Bight, S Gulfs coast); east Indo-west Pacific Oceans.
Ecology: low intertidal, subtidal; among leaves of seagrass beds.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs (illustration and description).

Latreutes mucronatus (Stimpson, 1860)

Rhynchocyclus mucronatus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [28].
Type data: type status unknown ANSP* (probably not extant).
Type locality: 'Ly-i-moon', Hong Kong.

Latreutes gravieri Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [230] [as *Latreutes Gravieri*].
Type data: type status unknown*.
Type locality: Djibouti, Red Sea.

Latreutes mucronatus multidens Nobili, G. (1905). Diagnoses préliminaires de 34 espèces et variétés nouvelles, et de 2 genres nouveaux de Décapodes de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **11**(6): 393–411 [395].
Type data: type status unknown*.
Type locality: Japan and China.

Taxonomic decision for synonymy: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [17].

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: sublittoral, low intertidal; among leaves of seagrass beds or algae in silty intertidal pools, also reported as often associated with medusae.

Latreutes planirostris (De Haan, 1844)

Flatnose Shrimp (FAO)

Hippolyte planirostris De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 45 fig. 7] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: type status unknown.
Type locality: Japan.

Latreutes dorsalis Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [27].
Type data: type status unknown (probably lost).
Type locality: Hakodadi, Japan.

Taxonomic decision for synonymy: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [128].

Distribution: WA (NW coast); east Indo-west Pacific Oceans.
Ecology: sublittoral; among leaves of seagrass beds, depths of 5–110 m.

Latreutes porcinus Kemp, 1916

Big-nosed Seagrass Shrimp

Latreutes porcinus Kemp, S. (1916). Notes on Crustacea Decapoda in the Indian Museum. VII. Further notes on Hippolytidae. *Rec. Indian Mus.* **12**(8): 385–405, 5 pls [397 fig. 3, pl. 36 fig. 3].
Type data: type status unknown IM*.
Type locality: off Ross Island jetty, Port Blair, Andaman Islands.

Distribution: NT (N coast), QLD (Central E coast); central Indo-west Pacific Oceans (Andaman Islands, Singapore, Ryukyu Islands).
Ecology: low intertidal, seagrass, shallow subtidal; clings to seagrass blades.

Latreutes pymoeus Nobili, 1904

Latreutes pymoeus Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [230] [often misspelled as *L. pygmaeus*].
Type data: type status unknown*.
Type locality: Djibouti, Red Sea.

Distribution: QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: littoral, subtidal; among blades in seagrass beds, depth to 26 m.

Lebbeus White, 1847

Lebbeus White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [76, 135] [name conserved under the plenary powers of the ICZN and placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1963). Opinion 671. *Lebbeus* White, 1847, and *Eulalus* Thallwitz, 1892 (Crustacea, Decapoda): validated under the Plenary Powers. *Bull. Zool. Nomencl.* **20**: 279–280; gender masculine].
Type species: *Lebbeus orthorhynchus* (Leach MSS) White, 1847 (= *Alpheus polaris* Sabine, 1824) by monotypy.

Hetairus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [577, 610] [name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature

(1963). Opinion 671. *Lebbeus* White, 1847, and *Eulalus* Thallwitz, 1892 (Crustacea, Decapoda): validated under the Plenary Powers. *Bull. Zool. Nomencl.* **20**: 279–280; gender masculine].
Type species: *Alpheus polaris* Sabine, 1824 by designation under Plenary Powers, see International Commission on Zoological Nomenclature (1963). Opinion 671. *Lebbeus* White, 1847, and *Eulalus* Thallwitz, 1892 (Crustacea, Decapoda): validated under the Plenary Powers. *Bull. Zool. Nomencl.* **20**: 279–280.

Birulaecaris Dons, C. (1915). Nord-Norges Decapoder. *Tromso Mus. Arsh.* **34**: 15–153 37 figs pls 1–2 [26] [gender feminine].
Type species: *Hippolyte mysis* Birula, 1898 (= *Alpheus polaris* Sabine, 1824) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [237].

Lebbeus antarcticus (Hale, 1941)

Spirontocaris antarcticus Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [267 figs 5–6].
Type data: holotype SAMA C4096*.
Type locality: off Adelie Land, Wilkes Land, Antarctica [66°21'S 138°28'E].

Distribution: Australian Antarctic Territory; S oceanic, Aust. Antarctic Terr., southern circumpolar.
Ecology: continental slope, oceanic province; type from 640 m depth.
Reference: Komai, T., Takeuchi, I. & Takeda, M. (1996). Deep-sea shrimp (Crustacea: Decapoda: Caridea) from the Antarctic Sea collected during the Jare-35 Cruise. *Proc. NIPR Symp. Polar Biol., Tokyo* **9**: 179–206 (redescription, figures and synonymy).

Lebbeus yaldwyni Kensley, Tranter & Griffin, 1987

Lebbeus yaldwyni Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [304 figs 15–17, pl. B].
Type data: holotype AM P26561 ♀, paratypes AM P33109 1♀, AM P24769 1♂, AM P21825 1♀, AM P26840 7 specimens, USNM 221396 2♀.
Type locality: E of Port Jackson, NSW.

Distribution: NSW (SE oceanic, Lower E coast); known only from limital area.
Ecology: continental shelf, continental slope, oceanic province; depth 190–470 m.

Leontocaris Stebbing, 1905

Leontocaris Stebbing, T.R.R. (1905). South African Crustacea, Pt III. *Mar. Invest. S. Afr.* **IV**: 21–123 pls xvii–xxvi [21, 98] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Leontocaris paulsoni* Stebbing, 1905 by monotypy.

Problemacaris Stebbing, T.R.R. (1921). Preliminary account of supposed new genus and species. *Ann. Mag. Nat. Hist.* **8**: 626 [626] [gender feminine].
Type species: *Problemacaris spinetum* Stebbing, 1921 (probably = *Leontocaris paulsoni* Stebbing, 1905) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [100].

Extralimital distribution: South Africa, east Pacific off South America, north west Atlantic, deep water, depths of 246–1650 m.

Leontocaris amplectipes Bruce, 1990

Leontocaris amplectipes Bruce, A.J. (1990). *Leontocaris amplectipes* sp. nov. (Hippolytidae), a new deep-water shrimp from southern Australia. *Mem. Mus. Vic.* **51**: 121–130 [121].
Type data: holotype NMV J19881 ♂.
Type locality: S of Point Hicks, VIC.

Distribution: TAS (SE oceanic), VIC (SE oceanic); known only from limital area.
Ecology: continental slope, continental rise, oceanic province; associated with coelenterates on seamounts, from 750–1450 m depth.

Leontocaris bulga Taylor & Poore, 1998

Leontocaris bulga Taylor, J. & Poore, G.C.B. (1998). A review of the genus *Leontocaris* (Crustacea: Caridea: Hippolytidae) with descriptions of three species from southeastern Australia seamounts and slope. *Mem. Mus. Vic.* **57**(1): 57–69 [59].
Type data: holotype NMV J39938 gender not specified.
Type locality: 94.5 km SSE of Southeast Cape, 'V' seamount, off TAS.

Distribution: TAS (SE oceanic); known only from type locality.
Ecology: continental slope, continental rise, oceanic province; on seamount, 1400–1650 m depth.

Leontocaris yarramundi Taylor & Poore, 1998

Leontocaris yarramundi Taylor, J. & Poore, G.C.B. (1998). A review of the genus *Leontocaris* (Crustacea: Caridea: Hippolytidae) with descriptions of three species from southeastern Australia seamounts and slope. *Mem. Mus. Vic.* **57**(1): 57–69 [64 figs 5–7].
Type data: holotype NMV J41272 ? ♂, paratypes NMV J41273 ovigerous ♀, NMV J41274 1 specimen, TMH G3951 2 specimens.
Type locality: 'U' seamount, 82.8 km SSE of Southeast Cape, TAS.

Distribution: TAS (SE oceanic); known only from limital area.
Ecology: continental slope, continental rise, oceanic province; from 900–1450 m depth.

Lysmata Risso, 1816

Aglaope Rafinesque-Schmaltz, C.S. (1814). *Précis des découvertes et travaux somiologiques de M. r. C.S. Rafinesque-Schmaltz entre 1800 et 1814.* Ou choix raisonné de ses principales découvertes en zoologie et en botanique, pour servir d'introduction à ses ouvrages futurs. Palermo : Royale Typographic Militaire 55 pp. [24] [junior homonym of *Aglaope* Latreille, 1809 (Lepidoptera); name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (I) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender feminine].
Type species: *Aglaope striata* Rafinesque, 1814 (= *Melicerta Seti Caudata* Risso, 1816) by monotypy.

Niphea Rafinesque-Schmaltz, C.S. (1815). *Analyse de la nature ou tableau de l'univers et de corps organisés.* Palermo 224 pp. [98] [*nom. nov.* for *Aglaope* Rafinesque, 1814; name suppressed for the purposes of the Principle of Priority, but not for those of the Principle of Homomymy under the plenary powers of the ICZN, and placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (i) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender feminine].

Melicerta Risso, A. (1816). *Histoire naturelle des Crustacés des environs de Nice.* Paris pp. 84–175 pls 1–3 [109] [junior homonym of *Melicerta* Schrank, 1803 (Vermes) and *Melicerta* Péron & Lesueur, 1810 (Coelenterata); name placed on the Official Index of Rejected and Invalid Generic Names, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (I) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender feminine].
Type species: *Melicerta seticaudata* Risso, 1816 by subsequent designation, see Milne Edwards, H. (1837). Les Crustacés. 278 pp., Atlas, pls 1–80 *in* Cuvier, G. *Le Règne Animal*, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux, et d'introduction à l'anatomie comparée. Paris : Déterville [pl. 54 fig. 3] (see Manning, R.B. & Holthuis, L.B. (1981). West African Brachyuran Crabs (Crustacea: Decapoda). *Smithson. Contr. Zool.* **No. 306**: i–xii, 1–379 figs 1–88, 2 appendices [369] for the dates of the 23 issues of this work).

Lysmata Risso, A. (1816). *Histoire naturelle des Crustacés des environs de Nice.* Paris pp. 84–175 pls 1–3 [175] [*nom. nov.* for *Melicerta* Risso, 1816; name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (i) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender feminine].

Opithiocheirus Leach, W.E. (1830). On two new genera of Crustaceous animals discovered by Mr. John Cranch in the Expedition to Congo. *Trans. Plymouth Inst.* **1**: 172–173 [172] [gender masculine].
Type species: *Opithiocheirus chrysophthalmus* Leach, 1830 by monotypy.

Usterocheirus Leach, W.E. (1830). On two new genera of Crustaceous animals discovered by Mr. John Cranch in the Expedition to Congo. *Trans. Plymouth Inst.* **1**: 172–173 [173] [gender masculine].
Type species: *Usterocheirus macropocoilium* Leach, 1830 by subsequent designation, see Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [241].

Arno Roux, P. (1831). *Mémoire sur la classification des Crustacés de la tribu des Salicoques.* Marseilles 4 tables, 39 pp. [18, 19] [*nom. nov.* for *Aglaope* Rafinesque, 1814; gender feminine].

Eretmocaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [894] [gender feminine].
Type species: *Eretmocaris stylorostris* Bate, 1888 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [114].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [240].

Extralimital distribution: Indo-west Pacific Oceans. See: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49.
Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families

Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [71] (key to species).

Lysmata amboinensis (de Man, 1888)

Hippolysmata vittata amboinensis de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [495].
Type data: syntypes ZMG 5 specimens* (now probably in SMF).
Type locality: Ambon, Indonesia.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, Great Barrier Reef, NE coast); eastern Australia south to at least Seal Rocks, NSW; Indo-west Pacific Oceans (east Africa, Red Sea, Indonesia, Gulf of Tonkin, north to Japan, east to Hawai'i and Society Ils).
Ecology: coral reef, rock reef, subtidal; acts as a 'cleaner' for reef fishes.
References: Gosliner, T.M., Behrens, D.W. & Williams, G.C. (1996). *Coral Reef Animals of the Indo-Pacific. Animal life from Africa to Hawai'i exclusive of the vertebrates.* Monterey, California : Sea Challengers 314 pp. [213] (colour photograph); Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [74] (remarks on taxonomic status).

Lysmata ternatensis de Man, 1902

Palaemon dentatus De Haan, W. (1844). Crustacea. pp. 1–243, pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 45, fig. 13] [published from 1833–1850, Atlas dated 1844, text dated 1849; junior homonym of *Palaemon dentatus* Roemer, 1841].
Type data: syntypes RMNH (lost).
Type locality: Japan.

Lysmata seticaudata ternatensis de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* 25: 467–929 pls 19–27 [486].
Type data: syntypes SMF* (probable depository institution).
Type locality: Ternate, Indonesia.

Hippolysmata acicula Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [912 pl. 24, fig. 6].
Type data: holotype USNM 30544 ♀.
Type locality: vicinity of Kauai Island, Hawai'ian Islands.

Lysmata affinis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [209].
Type data: syntypes UMZC*.
Type locality: Minikoi, Laccadive Islands; Peros Banhos and Salomon, Chagos Archipelago; the Seychelles.

Taxonomic decision for synonymy: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [64]; Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [77].

Distribution: Christmas Island (Aust. Terr.), Territory of Ashmore & Cartier Islands (Hibernia Reef); Indo-west Pacific Oceans (Seychelles, Laccadives, Chagos Archipelago, Japan, Philippines, Indonesia).
Ecology: coral reef, intertidal, sand bottom-marine, subtidal.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [130] (as *Lysmata dentata*).

Lysmata vittata (Stimpson, 1860)

Red-striped Shrimp

Hippolysmata vittata Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [26].
Type data: type status unknown* (presumed lost).
Type locality: Hong Kong.

Nauticaris unirecedens Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [608 pl. 110 fig. 1].
Type data: type status unknown BMNH*.
Type locality: Hong Kong.

Hippolysmata durbanensis Stebbing, T.R.R. (1921). Some Crustacea of Natal. *Ann. Durban Mus.* **2**(3): 119–125 pls 1–5 [120 pl. 5].
Type data: type status unknown DMB*.
Type locality: Durban Bay, South Africa.

Taxonomic decision for synonymy: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [78].

Distribution: NT (N coast), QLD (NE coast); Indo-west Pacific Oceans.
Ecology: sand bottom, low intertidal, subtidal; found under stones, in intertidal pools, and subtidally to 54 m depth.
Reference: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49 [46].

Merhippolyte Bate, 1888

Merhippolyte Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [577, 618] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Merhippolyte agulhasensis* Bate, 1888 by original designation.

Extralimital distribution: Indo-Pacific and Atlantic Oceans.

Merhippolyte chacei Kensley, Tranter & Griffin, 1987

Merhippolyte chacei Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [309 figs 18–19].
Type data: holotype AM P19092 ♀.
Type locality: E of Long Reef, NSW.

Distribution: NSW (Central E coast, Lower E coast); known only from limital area.
Ecology: continental slope, oceanic province; from 549–686 m depth.

Nauticaris Bate, 1888

Nauticaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [577, 602] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Nauticaris marionis* Bate, 1888 by subsequent designation, see Calman, W.T. (1906). Notes on some genera of the Crustacean family Hippolytidae. *Ann. Mag. Nat. Hist.* **17**: 29–34 [31].

Extralimital distribution: Indo-west Pacific and Atlantic Oceans.

Nauticaris marionis Bate, 1888

Nauticaris marionis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [603 pl. 108].
Type data: syntypes BMNH 67♂ ♀*.
Type locality: off Marion Island.

Hippolyte stewarti Thomson, G.M. (1888). Notes on, and recent additions to, the New Zealand Crustacean Fauna. *Trans. Proc. N.Z. Inst.* **21**: 259–268 pls 13–14 [259 pl. 13 fig. 1].
Type data: type status unknown*.
Type locality: Paterson Inlet, Stewart Is., New Zealand.

Merhippolyte australis Hodgson, T.V. (1902). Crustacea. *In, Report on the Collections of Natural History made in the Antarctic Regions during the Voyage of the "Southern Cross"*. London : British Museum pp. 228–261 [233 pl. 29].
Type data: syntypes 4 specimens BMNH*.
Type locality: Auckland Island, New Zealand.

Taxonomic decision for synonymy: Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [266].

Distribution: Australian Antarctic Territory, TAS (S oceanic, Tas. coast); southern circumpolar, Atlantic, Indo-west Pacific and Southern Oceans.
Ecology: continental shelf, oceanic province, subtidal; from 20–256 m depth.

Paralebbeus Bruce & Chace, 1986

Paralebbeus Bruce, A.J. & Chace, F.A., Jr (1986). *Paralebbeus zotheculatus* n.gen., n.sp., a new Hippolytid shrimp from the Australian Northwest Shelf. *Proc. Biol. Soc. Wash.* **99**(2): 237–247 [237] [gender masculine].
Type species: *Paralebbeus zotheculatus* Bruce & Chace, 1986 by original designation.

Extralimital distribution: Philippines.

Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhyncho-cinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [82] (key to species).

Paralebbeus zotheculatus Bruce & Chace, 1986

Paralebbeus zotheculatus Bruce, A.J. & Chace, F.A., Jr (1986). *Paralebbeus zotheculatus* n.gen., n.sp., a new Hippolytid shrimp from the Australian Northwest Shelf. *Proc. Biol. Soc. Wash.* **99**(2): 237–247 [238 figs 1–6].
Type data: holotype NTM Cr.00574A ♀, paratypes NTM Cr.00574B, NTM Cr.00577, NTM Cr.00575.
Type locality: off Imperieuse Reef, west of Dampier Land, North-west Shelf, WA [17°30.1'S 118°28.9'E].

Distribution: WA (NW coast); Philippines.
Ecology: continental slope, oceanic province; types in hexactinellid sponge (probably *Euplectella* sp.), depth 452–720 m.

Phycocaris Kemp, 1916

Phycocaris Kemp, S. (1916). Notes on Crustacea Decapoda in the Indian Museum. VII. Further notes on Hippolytidae. *Rec. Indian Mus.* **12**(8): 385–405, 5 pls [391] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Phycocaris simulans* Kemp, 1916 by original designation.

Extralimital distribution: east Indo-west Pacific Oceans. See: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49.

Phycocaris simulans Kemp, 1916

Phycocaris simulans Kemp, S. (1916). Notes on Crustacea Decapoda in the Indian Museum. VII. Further notes on Hippolytidae. *Rec. Indian Mus.* **12**(8): 385–405, 5 pls [392 pl. 36 fig. 2].
Type data: holotype IM 9255–6/10*.
Type locality: Port Blair, Andaman Islands.

Distribution: NT (N coast), QLD (NE coast); east Indo-west Pacific Oceans.
Ecology: coral reef, low intertidal, shallow subtidal; among weeds.

Saron Thallwitz, 1891

Saron Thallwitz, J. (1891). Notiz über einen annamitischen *Palaemon*. *Zool. Anz.* **14**: 418–421 [99] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Hippolyte gibberosus* Milne Edwards, 1837 (= *Palaemon marmoratus* Olivier, 1811) by original designation.

Extralimital distribution: Indo-Pacific Oceans. See: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49.

Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [89] (key to species).

Saron marmoratus (Olivier, 1811)

Marble Shrimp

Palaemon marmoratus Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [665].
Type data: holotype MNHP.
Type locality: Port Jackson, NSW, or Western Australia.

Hippolyte gibberosus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [378].
Type data: type status unknown MNHP*.
Type locality: Australia.

Hippolyte leachii Guérin-Méneville, F.É. (1838). Première division. Crustacés, Arachnides et Insectes. *In* Duperrey, L.J. (1830) [1838]. *Voyage autour du monde, exécuté par Ordre du Roi sur la corvette de La Majesté, La Coquille*, pendant les années 1822, 1823, 1824 et 1825 ... Zoologie, par M. Lesson. Tome 2, 2e Partie. Arthus Bertrand, Paris (separately paginated article). [accompanied by: *Voyage autour du monde ... Histoire naturelle, Zoologie. Atlas.* Arthus Bertrand, Paris. Plates numbered consecutively by taxonomic group; Crustacés, 1–5 [1826]] [37] [1830 on title page].
Type data: type status unknown*.
Type locality: Kusaie, Caroline Islands.

Hippolyte hemprichii Heller, C. (1861). Synopsis der im rothen Meere vorkommenden Crustaceen. *Verh. Zool.-Bot. Ges. Wien* **11**: 3–32 [29].
Type data: type status unknown*.
Type locality: Red Sea.

Hippolite kraussii Bianconi, J.J. (1869). Specimina Zoologica Mosambicana, Fasciculus XVII. *Mem. Accad. Sci. Bologna (2)***9**: 199–222 pls 1–2 [200].
Type data: type status unknown*.
Type locality: Mozambique.

Nauticaris grandirostris Pearson, J. (1905). Report on the Macrura collected by Professor Herdman, at Ceylon, in 1902. *In, Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar.* Part 4, suppl. Rep. 24: 65–92 2 pls [79 pl. 1 fig. 6].
Type data: type status unknown BMNH*.
Type locality: Galle, Sri Lanka.

Taxonomic decision for synonymy: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [89].

Distribution: NSW (SE oceanic), NT (N coast), QLD (NE coast); (Tasman Sea) Indo-west central Pacific Oceans.
Ecology: coral reef, low intertidal, subtidal; various habitats from coral reef to seagrass beds, often in pairs under rocks or in coarse coral rubble.
Reference: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49 [46].

Saron neglectus de Man, 1902

Saron neglectus de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [854 pl. 26 fig. 58].
Type data: syntypes SMF (probable depository institution).
Type locality: Ternate, Indonesia.

Distribution: Coral Sea Islands Territory (NE Herald Cay); East Africa and Red Sea to Johnston Is, Central Pacific.
Ecology: coral reef, low intertidal, shallow subtidal; associated with coral.
Reference: Davie, P.J.F. & Short, J.W. (2001). Decapod Crustacea of North East Cay, Herald Cays, Coral Sea. pp. 75-86 *in* Comben, L. (ed.) Herald Cays Scientific Study Report, *Geography Monograph Series* No. 6. Brisbane : The Royal Geographical Society of Queensland Inc. 168 pp. (first Australian record) [76].

Thinora Bruce, 1998

Thorina Bruce, A.J. (1997). A new genus of hippolytid shrimp (Crustacea: Decapoda: Hippolytidae) for *Thor maldivensis* Borradaile. *Mem. Qld Mus.* **42**(1): 13–23 figs 1–6 [13] [junior homonym of *Thorina* Stephenson, 1944 (Crustacea: Caprellidea) and *Thorina* Meyl, 1954 (Nematoda)].
Type species: *Thor maldivensis* Borradaile, 1915 by original designation.

Thinora Bruce, A.J. (1998). A new name, *Thinora*, proposed for the preoccupied name *Thorina* Bruce (Crustacea: Decapoda: Hippolytidae). *Mem. Qld Mus.* **42**(2): 398 [398] [*nom. nov.* for *Thorina* Bruce, 1997].

Extralimital distribution: Indo-west Pacific Oceans (eastern Africa to Ryukyu, Hawai'ian and Cook Islands).

Thinora maldivensis (Borradaile, 1917)

Thor maldivensis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [208].
Type data: syntypes UMZC AR 3.1920 1specimen, UMZC AR 3.1920 2 specimens.
Type locality: Minikoi, Laccadive Islands, Holulé Island, Malé Island, Maldive Islands.

Taxonomic decision for new combination: Bruce, A.J. (1998). A new name, *Thinora*, proposed for the preoccupied name *Thorina* Bruce (Crustacea: Decapoda: Hippolytidae). *Mem. Qld Mus.* **42**(2): 398 [398].

Distribution: QLD (Great Barrier Reef), Territory of Ashmore & Cartier Islands (Cartier Reef); Indo-west Pacific Oceans (eastern Africa to Ryukyu, Cook and Hawai'ian Islands).
Ecology: coral reef, intertidal.
Reference: Bruce, A.J. (1997). A new genus of hippolytid shrimp (Crustacea: Decapoda: Hippolytidae) for *Thor maldivensis* Borradaile. *Mem. Qld Mus.* **42**(1): 13–23, figs 1–6 [14].

Thor Kingsley, 1878

Thor Kingsley, J.S. (1878). Notes on the North American Caridea in the Museum of the Peabody Academy of Science in Salem, Mass. *Proc. Acad. Nat. Sci. Phila.* **1878**: 89–98 [94] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Thor floridanus* Kingsley, 1878 by monotypy.

Paschocaris Nobili, G. (1905). Diagnoses préliminaires de 34 espèces et variétés nouvelles, et de 2 genres nouveaux de Décapodes de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **11**(6): 393–411 [395] [gender feminine].
Type species: *Hippolyte paschalis* Heller, 1862 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [109].

Extralimital distribution: circum-tropical.

Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [91] (key to species).

Thor amboinensis de Man, 1888

Bold-spotted Anemone Shrimp

Thor amboinensis de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [535].
Type data: type status unknown*.
Type locality: Ambon, Indonesia.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (N coast, NW coast); west and east Atlantic and Indo-west Pacific Oceans.
Ecology: benthic, coral reef, ectocommensal, rock reef, seagrass, subtidal; found on a variety of hosts, but most commonly on anemones.

Thor marguitae Bruce, 1978

Thor marguitae Bruce, A.J. (1978). *Thor marguitae* sp. nov., a new hippolytid shrimp from Heron Island. Australia. *Crustaceana* **35**(2): 159–169 [159 figs 1–6].
Type data: holotype QM W7352 ♀, paratypes QM W7353 ♂ (as allotype), AM P28108, NMNH, BMNH, RMNH D31958 1 specimen.
Type locality: Heron Island, Capricorn Islands, QLD.

Distribution: QLD (NE coast, Great Barrier Reef); known only from limital area.
Ecology: coral reef, littoral, sublittoral; in coral heads and amongst seagrass beds.

Thor paschalis Heller, 1862

Thor paschalis Heller, C. (1862). Beiträge zur crustaceenfauna des Rothen Meeres. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **44**(1): 241–295 3 pls [276 pl. 3 fig. 24].
Type data: type status unknown*.
Type locality: Red Sea.

Distribution: Lord Howe Island, NSW (Lower E coast), NT (N coast); Indo-west Pacific Oceans.
Ecology: coral reef, low intertidal, reef flat, shallow subtidal; in intertidal pools and areas with abundant algal growth.

Thor spinipes Bruce, 1983

Thor spinipes Bruce, A.J. (1983). *Thor spinipes* sp. nov., a new Hippolytid shrimp from the Coburg Peninsula, Northern Australia. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(1): 1–10 [2].
Type data: holotype NTM Cr.00083/a ♀, paratypes NTM Cr.00083/b ♂, AM, RMNH.
Type locality: Burford Island, Cobourg Peninsula, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: low intertidal, seagrass, shallow subtidal.

Thor spinosus Boone, 1935

Thor spinosus Boone, L. (1935). Crustacea and Echinodermata. Scientific results of the world cruise of the yacht *Alva*, 1931, William K. Vanderbilt, commanding. *Bull. Vanderbilt Mar. Mus.* **6**: 1–263, 96 pls, 13 text–figs [192 pl. 52].
Type data: holotype VMM 1 specimen*.
Type locality: Temukus Roads, Bali, Indonesia.

Distribution: Territory of Ashmore & Cartier Islands (Cartier Reef); Indo-west Pacific Oceans (Kenya, Seychelle Islands, Ryukyu Islands, Indonesia).
Ecology: coral reef.
References: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [131]; Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [93].

Thorella Bruce, 1982

Thorella Bruce, A.J. (1982). *Thorella cobourgi*, new genus, new species, a Hippolytid shrimp from the Northern Territory, Australia. *J. Crust. Biol.* **2**(3): 451–458 [451] [gender feminine].
Type species: *Thorella cobourgi* Bruce, 1982 by monotypy.

Extralimital distribution: east Indo-west Pacific Oceans.

Thorella cobourgi Bruce, 1982

Thorella cobourgi Bruce, A.J. (1982). *Thorella cobourgi*, new genus, new species, a Hippolytid shrimp from the Northern Territory, Australia. *J. Crust. Biol.* **2**(3): 451–458 [452].
Type data: holotype NTM Cr.00141 ♀, paratypes NTM Cr.00052, NTM Cr.00142, NTM Cr.00143.
Type locality: Black Point, Port Essington, Cobourg Peninsula, NT [11°09.0'S 132°08.2'E].

Distribution: NT (N coast); known only from limital area.
Ecology: coral reef, silt bottom, low intertidal, shallow subtidal; free living algal-feeder associated with abundant algal growth.

Tozeuma Stimpson, 1860

Tozeuma Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [26] [gender neuter].
Type species: *Tozeuma lanceolatum* Stimpson, 1860 by monotypy.

Angasia Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [498] [gender feminine].
Type species: *Angasia pavonina* Bate, 1863 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [253].

Extralimital distribution: Indo-west Pacific, East Atlantic Oceans.

Generic reference: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [93] (key to species).

Tozeuma elongatum (Baker, 1904)

Angasia elongata Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [147 pl. 27 figs 1–4].
Type data:syntypes SAMA*.
Type locality: SA coast and Port Victor [Victor Harbour], South Australia.

Distribution: SA (S Gulfs coast); known only from limital area.
Ecology: subtidal; amongst seagrass beds, depth 27 m.

Tozeuma kimberi (Baker, 1904)

Angasia kimberi Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [149 pl. 27 fig. 5].
Type data: holotype SAMA ♀*.
Type locality: off Port Willunga, SA.

Distribution: SA (S Gulfs coast); known only from limital area.
Ecology: subtidal; holotype dredged from about 7 m depth.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs [53] (figure and colour description).

Tozeuma pavoninum (Bate, 1863)

Angasia pavonina Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [498 pl. XL fig. 1].
Type data: holotype BMNH* probable depository institution.
Type locality: Gulf St Vincent, SA.

Angasia robusta Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [150 pl. 28 figs 1–8].
Type data: holotype SAMA C550*.
Type locality: Gulf St Vincent, SA.

Taxonomic decision for synonymy: Holthuis, L.B. (1947). The Decapoda of the Siboga Expedition. Part IX. The Hippolytidae and Rhynchocinetidae. *Siboga Exped. (39a)***25**: 1–100 [18].

Distribution: QLD (NE coast), SA (S Gulfs coast); known only from limital area.
Ecology: seagrass, subtidal; amongst seagrass beds, depth 18–22 m.

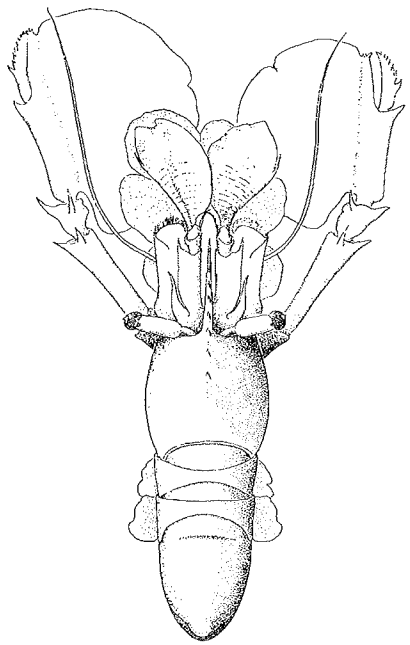
Tozeuma tomentosum (Baker, 1904)

Angasia tomentosa Baker, W.H. (1904). Notes on the South Australian Decapod Crustacea. Part 1. *Trans. R. Soc. S. Aust.* **28**: 146–161 pls 27–31 [152 pl. 29 figs 1–4].
Type data: type status unknown SAMA*.
Type locality: South Australian coast.

Distribution: SA (S Gulfs coast); Japan.
Ecology: seagrass, subtidal; amongst seagrass beds, depth 36–50 m.

HYMENOCERIDAE

INTRODUCTION



Hymenocera picta [from Barnard 1950]

This small family of remarkable looking and beautifully coloured shrimps comprises only two genera and three species, all of which are found in Australian waters. The species are distributed from the Red Sea to South Africa and eastward through Indonesia and across the entire Pacific to Panama (Chace & Bruce 1993).

Diagnosis

Carapace without longitudinal suture; rostrum immovable; telson with two pairs of spines on posterior margin; antennule with two completely separate flagella, one with accessory branch, sometimes foliaceous; mandible without palp or incisor process; first maxilliped with mesial coxal lobe not unusually large, mesial basal lobe not reduced; second maxilla with vestigial endite; first maxilliped with exopodal lash; second maxilliped with distal segments articulating serially, not side by side, on penultimate segment, marginal setae on distal segment not especially stout or dense; third maxilliped composed of no more than six segments, antepenultimate segment articulated with and distinctly wider than next proximal segment; pereiopods without exopods or arthrobranchs, epipods, if present, not large, not extending dorsally into branchial chamber, first and second pair of pereiopods distinctly chelate, dactyl meeting opposing finger when flexed, not crossing; first pereiopod not stouter than second; second pereiopod with undivided carpus, with chela compressed toward flexor margin, sometimes foliaceously, dactyl sometimes serrate on extensor margin; first pleopod without appendix interna on endopod; second pleopod with appendix masculina in male. (After Chace & Bruce 1993).

References

Barnard, K.H. (1950). Descriptive Catalogue of South African Decapod Crustacea (Crabs and Shrimps). *Ann. S. Afr. Mus.* **38**: 1–837 figs 1–154

Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152

HYMENOCERIDAE Ortmann, 1890

Hymenoceridae Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [511].

Hymenocera Latreille, 1819

Hymenocera Latreille, P.A. (1819). *Nouveau dictionnaire d'histoire naturelle*, appliquée aux arts, à l'agriculture, à l'economie rurale et domestique, à la médecine, etc. edn 2. Vol. 30 pp. 71–72 [71] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 383. Designation under the Plenary Powers of a type species in harmony with accustomed usage for the genus *Hymenocera* Latreille, 1819 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 59–70; gender feminine].
Type species: *Hymenocera picta* Dana, 1852 by designation under Plenary Powers, see International Commission on Zoological Nomenclature (1956). Opinion 383. Designation under the Plenary Powers of a type species in harmony with accustomed usage for the genus *Hymenocera* Latreille, 1819 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 59–70.

Nematophyllum Bleeker, P. (1856). *Reis door de Minahassa en den Molukschen Archipel gedaan un die maanden September en October 1855 in het gervvolg van den Gouveneur-Generaal A.J. Duymaer van Twist.* Batavia [Jakarta] : Laange & Co. Vol. 2 [37] [junior homonym of *Nematophyllum* H. Milne Edwards & Haime, 1850 (Coelenterata); junior objective synonym of *Hymenocera* Latreille, 1819; name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 383. Designation under the Plenary Powers of a type species in harmony with accustomed usage for the genus *Hymenocera* Latreille, 1819 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **12**: 59–70; gender neuter].
Type species: *Hymenocera picta* Dana, 1852 by subsequent designation, see Holthuis, L.B. (1952). Proposed use of the plenary powers to designate a type species for the genus *Hymenocera* Latreille, 1819 (Class Crustacea Order Decapoda) in harmony with current usage. *Bull. Zool. Nomencl.* **6**: 343–345 [345].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [98].

Extralimital distribution: Indo-Pacific (from east Africa to Panama).

Hymenocera picta Dana, 1852

Hymenocera picta Dana, J.D. (1852). *Crustacea. U.S. Exploring Expedition. During the years 1838, 1839, 1840, 1841, 1842.* Under the command of Charles Wilkes, U.S.N. Philadelphia : C. Sherman Vol. 13 1618 pp. [593] [Pt 1: 1–685; Pt 2: 686–1618].
Type data: type status unknown (presumed lost).
Type locality: Raraka, Tuamotu Archipelago.

Hymenocera elegans Heller, C. (1861). Synopsis der im rothen Meere vorkommenden Crustaceen. *Verh. Zool.-Bot. Ges. Wien* **11**: 3–32 [25].
Type data: type status unknown NHMW*.
Type locality: Tor [Gulf of Suez], Red Sea.

Hymenocera latreillii Sharp, B. (1893). Catalogue of the crustaceans in the Museum of the Academy of Natural Sciences of Philadelphia. *Proc. Acad. Nat. Sci. Phila.* **1893**: 104–127 [119] [*nom. nud.*, unpublished name proposed by Guérin-Méneville].

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [137].

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans.
Ecology: coral reef, subtidal; preys on starfish.
Reference: Davie, P., this work (differences in colour pattern possibly indicate two sibling species (A.J. Bruce, pers comm.)).

Phyllognathia Borradaile, 1915

Phyllognathia Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [205] [gender feminine].
Type species: *Hymenocera ceratophthalma* Balss, 1913 by monotypy.

Extralimital distribution: Australian Region—New Caledonia, Palaearctic Region—Japan; west Pacific Ocean.

Phyllognathia ceratophthalma (Balss, 1913)

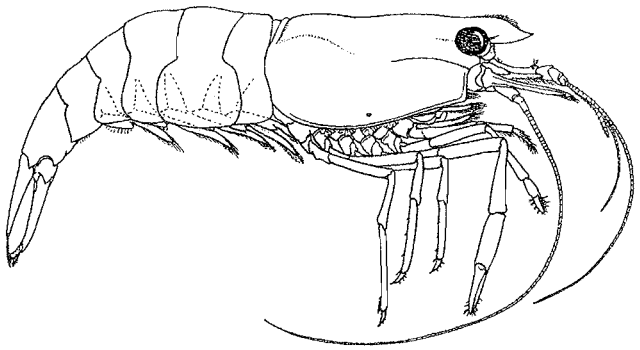
Hymenocera ceratophthalma Balss, H. (1913). Diagnosen neuer ostasiatischer Macruren. *Zool. Anz.* **42**: 234–239 [236].
Type data: holotype 1 ♂*.
Type locality: Satsumu, Japan.

Distribution: QLD (Central E coast, Great Barrier Reef); in Australia only known from Lizard Island and Moreton Bay, also from Maldive Island, Japan, and New Caledonia.
Ecology: coral reef, subtidal.
References: Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle-Calédonie.* Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31 (full synonymy); Davie, P.J.F. (1992). The rare shrimp, *Phyllognathia ceratophthalma* (Balss), discovered in Moreton Bay. *Mem. Qld Mus.* **32**(1): 98 1 col. fig [98].

Phyllognathia simplex Fujino, 1973

Phyllognathia simplex Fujino, T. (1973). A new shrimp *Phyllognathia simplex* sp. nov. (Crustacea, Decapoda, Gnathophyllidae) from Sagami Bay, Japan. *Annot. Zool. Jpn.* **46**: 90–99 [90].
Type data: holotype BLIH No.1928 ♀, paratype(s) BLIH No.1973 ♀.
Type locality: near Shuragane, Sagami Bay, Hokkaido, Japan.
Distribution: QLD (NE coast); west Pacific Ocean.
Ecology: coral reef, subtidal.
Reference: Bruce, A.J. (1988). Further records of the Hymenocerine shrimp *Phyllognathia simplex* Fujino (Crustacea: Decapoda). *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 101–104.

KAKADUCARIDIDAE



Kakaducaris glabra [from Bruce 1993]

INTRODUCTION

This small family is closely allied to the Palaemonidae. It was erected to accommodate the indigenous Australian freshwater genera, *Kakaducaris* Bruce, 1993 and *Leptopalaemon* Bruce & Short, 1993, both known only from the top of the escarpment in the Kakadu region, of Arnhem Land, Northern Territory. Also tentatively included was the Mexican freshwater cave genus *Calathaemon* Bruce & Short, 1993.

Diagnosis

Palaemonid-like shrimps with distinct compressed rostra; carapace without longitudinal dorsolateral suture, branchiostegal suture present or absent, lacking supra-orbital and hepatic spines; mandible with palp; first maxilliped with endites forming hemispherical filtratory basket; third maxilliped with ischio-merus fused, ischium distinct from basis, with 1–2 arthrobranchs; five pairs of pleurobranchs, first pereiopods slender, with simple fingers; second pereiopods with well-developed chelae; ambulatory pereiopods with simple dactyls, appendices internae on second to fifth pleopods; appendix masculina elongate, tapering, subcylindrical, rigid, with numerous short spines; exopod of uropod with disto-lateral tooth, without articulated spine medially; telson with two pairs of posterior spines. (After Bruce 1993).

References

Bruce, A.J. (1993). *Kakaducaris glabra* gen. nov., sp. nov., a new freshwater shrimp from the Kakadu National Park, Northern Territory, Australia, Crustacea: Decapoda: Palaemonidae with the designation of a new subfamily Kakaducaridinae. *Hydrobiologia* **268**: 27–44

Bruce, A.J. & Short, J.W. (1993). *Leptopalaemon gagadjui* gen. nov., sp. nov., a new freshwater Palaemonid shrimp from Arnhem Land, and a re-evaluation of *Palaemonetes holthuisi* Strenth, with the designation of a new genus, *Calathaemon*. *Hydrobiologia* **257**(2): 73–95

KAKADUCARIDIDAE Bruce, 1993

Kakaducaridinae Bruce, A.J. (1993). *Kakaducaris glabra* gen. nov., sp. nov., a new freshwater shrimp from the Kakadu National Park, Northern Territory, Australia, Crustacea: Decapoda: Palaemonidae with the designation of a new subfamily Kakaducaridinae. *Hydrobiologia* **268**: 27–44 [41] [described as a subfamily of the Palaemonidae, but raised to family rank in an addendum (p. 44) to the same paper].
Type genus: *Kakaducaris* Bruce, 1993.

Kakaducaris Bruce, 1993

Kakaducaris Bruce, A.J. (1993). *Kakaducaris glabra* gen. nov., sp. nov., a new freshwater shrimp from the Kakadu National Park, Northern Territory, Australia, Crustacea: Decapoda: Palaemonidae with the designation of a new subfamily Kakaducaridinae. *Hydrobiologia* **268**: 27–44 [27] [gender feminine].
Type species: *Kakaducaris glabra* Bruce, 1993 by monotypy.

Kakaducaris glabra Bruce, 1993

Kakaducaris glabra Bruce, A.J. (1993). *Kakaducaris glabra* gen. nov., sp. nov., a new freshwater shrimp from the Kakadu National Park, Northern Territory, Australia, Crustacea: Decapoda: Palaemonidae with the designation of a new subfamily Kakaducaridinae. *Hydrobiologia* **268**: 27–44 [28 figs 1–12].
Type data: holotype NTM Cr.001992a ♀, paratypes NTM Cr.001992b ♂ (as allotype), NTM Cr.001992c 26 specimens, RMNH D36150, RMNH D36151, USNM 234303, AM P41845, BMNH 1993:76.1, QM W16558.
Type locality: Lightning Dreaming Creek, Nourlangie, Kakadu National Park, NT.

Distribution: NT (N coastal); known only from type locality.
Ecology: freshwater, permanent pond, rock bottom, filter-feeder; rock pool in the downfall of a waterfall, occurring in areas subject to torrential flow.

Leptopalaemon Bruce & Short, 1993

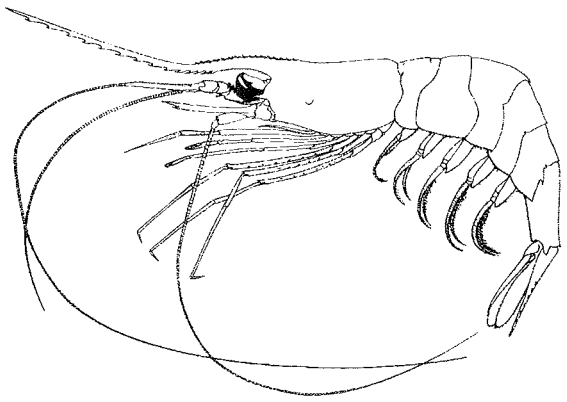
Leptopalaemon Bruce, A.J. & Short, J.W. (1993). *Leptopalaemon gagadjui* gen. nov., sp. nov., a new freshwater Palaemonid shrimp from Arnhem Land, and a re-evaluation of *Palaemonetes holthuisi* Strenth, with the designation of a new genus, *Calathaemon*. *Hydrobiologia* **257**(2): 73–95 [73] [gender masculine].
Type species: *Leptopalaemon gagadjui* Bruce & Short, 1993 by monotypy.

Leptopalaemon gagadjui Bruce & Short, 1993

Leptopalaemon gagadjui Bruce, A.J. & Short, J.W. (1993). *Leptopalaemon gagadjui* gen. nov., sp. nov., a new freshwater Palaemonid shrimp from Arnhem Land, and a re-evaluation of *Palaemonetes holthuisi* Strenth, with the designation of a new genus, *Calathaemon*. *Hydrobiologia* **257**(2): 73–95 [75 figs 1–6].
Type data: holotype NTM Cr.002103A ♂, paratypes NTM Cr.002103B–C 2♂, RMNH D41285 ♂, QM W16550 2♂ 7 , QM W16542 5 , QM W16655 3 , QM W17109 1♂.
Type locality: Arnhem Land plateau, Northern Territory.

Distribution: NT (N coastal); known only from limital area.
Ecology: freshwater, gregarious, noctidiurnal, rock bottom, sand bottom.

NEMATOCARCINIDAE



Lipkius holthuisi [from Webber, Frenaughty & M.R. Clark 1990: 36]

INTRODUCTION

This family of shrimps seems to occur in all tropical and temperate seas, and as far south as 71°S in the Weddell Sea off Antarctica. Nematocarcinids are typically demersal, in depths ranging from 51 to 3931 metres (Chace 1986). Holthuis (1993: 79) gave a key to the three genera recognised in the family. Only two, *Nematocarcinus* and *Lipkius*, are recorded from Australia. Burukovsky (2000a–g) recently revised extensively many of the *Nematocarcinus* species.

Diagnosis

Rostrum immovable, attached to remainder of carapace, laterally compressed, narrow in lateral aspect; carapace relatively smooth, not strongly sculptured; antennular flagella simple, without accessory branches; mandible with palp, molar and incisor processes deeply separated; first maxilliped with flagellum on exopod; second maxilliped with terminal segment applied as narrow strip to penultimate segment; third maxilliped elongate, not unusually expanded, 5-segmented, bearing well-developed exopod and strap-like epipod; four anterior pairs of pereiopods with exopods and strap-like epipods lacking endpiece extending vertically into branchial chamber, two anterior pairs with well-developed chela and undivided carpus, three posterior pairs unusually long, with carpus several times as long as propodus; pleopods with appendix interna. (After Chace 1986).

References

Burukovsky, R.N. (2000a). Taxonomy of *Nematocarcinus* (Decapoda, Nematocarcinidae). 1. Description of disto-ventral organ and revision of *N. productus, N. tenuipes, N. intermedius, N. parvidentatus, N. longirostris,* and *N. proximatus*. *Zool. Zh.* **79**(2): 161–170 figs 1–4 [in Russian]

Burukovsky, R.N. (2000b). Taxonomy of shrimps from the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 2. Revision of *N. longirostris* and *N. altus*, correction of species diagnosis in *N. sigmoides* and *N. lanceops*, and description of new species, *N. batei* and *N. romenskyi*. *Zool. Zh.* **79**(3): 282–290 figs 1–5 [in Russian]

Burukovsky, R.N. (2000c). Taxonomy of shrimps from the genus *Nematocarcinus* (Decapoda, Nematocarcinidae). 3. Description of new species. *Zool. Zh.* **79**(6): 662–668 figs 1–3 [in Russian]

Burukovsky, R.N. (2000d). Taxonomy of shrimps from the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 4. Description of species from *tenuirostris* group. *Zool. Zh.* **79**(8): 898–906 figs 1–4 [in Russian]

Burukovsky, R.N. (2000e). Taxonomy of shrimps of the genus *Nematocarcinus* (Decapoda, Nematocarcinidae). 5. Redescription of *Nematocarcinus nudirostris* and description of *N. combensis*, *N. kaiensis*, and *N. subtilis*. *Zool. Zh.* **79**(9): 1036–1044 figs 1–4 [in Russian]

Burukovsky, R.N. (2000f). Taxonomy of shrimps from the genus *Nematocarcinus* (Decapoda, Nematocarcinidae). 6. Redescription of species from the groups *undulatipes* and *gracilis* with descriptions of two new species. *Zool. Zh.* **79**(10): 1155–1167 figs 1–8 [in Russian]

Burukovsky, R.N. (2000g). Taxonomy of shrimps of the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 7. Description of new species, *N. hanamuri* and *N. evansi*, from southwestern Australian waters. *Zool. Zh.* **79**(11): 1290–1293 figs 1–2 [in Russian]

Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Webber, W.R., Fenaughty, C.M. & Clark, M.R. (1990). A guide to some common offshore shrimp and prawn species of New Zealand. *N.Z. Fish. Occas. Publ.* 6: 1–42, 18 figs

NEMATOCARCINIDAE Smith, 1884

Nematocarcininae Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [368] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Lipkius Yaldwyn, 1960

Lipkius Yaldwyn, J.C. (1960). Biological results of the Chatham Islands 1954 Expedition. Part 1. Crustacea Decapoda Natantia from the Chatham Rise: a deep water bottom fauna from New Zealand. *Bull. N.Z. Dept Sci. Ind. Res.* **139**(1): 13–53 [16] [gender masculine].
Type species: *Lipkius holthuisi* Yaldwyn, 1960 by original designation.

Extralimital distribution: south-west Pacific.

Lipkius holthuisi Yaldwyn, 1960

Lipkius holthuisi Yaldwyn, J.C. (1960). Biological results of the Chatham Islands 1954 Expedition. Part 1. Crustacea Decapoda Natantia from the Chatham Rise: a deep water bottom fauna from New Zealand. *Bull. N.Z. Dept Sci. Ind. Res.* **139**(1): 13–53 [16 figs 1–16].
Type data: holotype NMNZ 781 ♀, paratype(s) VUZ 54*.
Type locality: Cook Strait, New Zealand.

Distribution: NSW (SE oceanic); south-west Pacific Ocean.
Ecology: mesopelagic, oceanic province; depth 400–810 m.

Nematocarcinus A. Milne Edwards, 1881

Nematocarcinus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [14] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Nematocarcinus cursor* A. Milne Edwards, 1881 by monotypy.

Eumiersia Smith, S.I. (1882). Report on the Crustacea. Part 1. Decapoda. Reports on the results of dredging, under the supervision of Alexander Agassiz, on the east coast of the United States, during the summer of 1880, by the U.S. Coast Survey Steamer "Blake", Commander J.R. Bartlett, U.S.N., commanding. *Bull. Mus. Comp. Zool.* **10**(1): 1–108 [77] [gender feminine].
Type species: *Eumiersia ensifera* Smith, 1882 by monotypy.

Stochasmus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [822] [gender masculine].
Type species: *Stochasmus exilis* Bate, 1888 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [80].

Extralimital distribution: Antarctic Region; Indo-Pacific Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Nematocarcinus evansi Burukovsky, 2000

Nematocarcinus evansi Burukovsky, R.N. (2000). Taxonomy of shrimps of the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 7. Description of new species, *N. hanamuri* and *N. evansi*, from southwestern Australian waters. *Zool. Zh.* **79**(11): 1290–1293 figs 1–2 [1291 fig. 2] [in Russian].
Type data: holotype TMH G3997 ♀, paratype(s) TMH G3998 4 ♀.
Type locality: west of Dampier, WA [20°16.3'S 113°13.5'E].

Distribution: WA (W oceanic); known only from limital area.
Ecology: continental shelf, continental slope, mesopelagic, oceanic province; depth 913–916 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater Caridean Shrimps of the Families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [3] (as *N. undulatipes*: Burukovsky reidentified their records as two new species, *N. hanamurai* and *N. evansi*).

Nematocarcinus gracilis Bate, 1888

Nematocarcinus gracilis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [815 pl. 132 fig. 8].
Type data: syntypes BMNH 2 ♂*.
Type locality: off Kandavu, Fiji Islands, near Kermadec Islands.

Distribution: NSW (SE oceanic), WA (W oceanic); Indo-west Pacific Oceans.
Ecology: bathypelagic, continental shelf, continental slope, oceanic province; depth 165–1170 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [291]; Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [2].

Nematocarcinus hanamuri Burukovsky, 2000

Nematocarcinus hanamuri Burukovsky, R.N. (2000). Taxonomy of shrimps of the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 7. Description of new species, *N. hanamuri* and *N. evansi*, from southwestern Australian waters. *Zool. Zh.* **79**(11): 1290–1293 figs 1–2 [1290 fig. 1] [in Russian].
Type data: holotype TMH G3995 ♂, paratype(s) TMH G3996 3 ♂ 1 ♀.
Type locality: west of Dampier, WA [20°16.3'S 113°13.5'E].
Distribution: WA (W oceanic); known only from limital area.

Ecology: continental shelf, continental slope, mesopelagic, oceanic province; depth 913–916 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater Caridean Shrimps of the Families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [3] (as *N. undulatipes*: Burukovsky reidentified their records as two new species, *N. hanamurai* and *N. evansi*).

Nematocarcinus lanceopes Bate, 1888

Nematocarcinus lanceopes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [804 pl. 131].
Type data: syntypes BMNH ♂ ♀*.
Type locality: Antarctic Sea.

Acanthephyra antarctica Bage, F. (1938). Crustacea Decapoda (in part). *Scientific Reports of the Australasian Antarctic E* **2**(6): 1–13 [6 pl. 4 fig. 1].
Type data: syntypes AM P11306–7, AM P11310–312.
Type locality: Commonwealth Bay, Antarctica.

Taxonomic decision for synonymy: Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [264].

Distribution: Australian Antarctic Territory; southern circumpolar.
Ecology: bathypelagic, mesopelagic, oceanic province, 243–2268 m depth.
References: Komai, T., Takeuchi, I. & Takeda, M. (1996). Deep-sea shrimp (Crustacea: Decapoda: Caridea) from the Antarctic Sea collected during the Jare-35 Cruise. *Proc. NIPR Symp. Polar Biol., Tokyo* **9**: 179–206 [181 figs 1–5]; Burukovsky, R.N. (2000b). Taxonomy of shrimps from the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 2. Revision of *N. longirostris* and *N. altus*, correction of species diagnosis in *N. sigmoides* and *N. lanceops*, and description of new species, *N. batei* and *N. romenskyi*. *Zool. Zh.* **79**(3): 282–290 figs 1–5 [in Russian] [286].

Nematocarcinus productus Bate, 1888

Nematocarcinus productus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [810 pl. 132 fig. 5].
Type data: syntypes BMNH*.
Type locality: China Sea off Lingayen Gulf; Luzon, Philippines; Banda Sea, south of Ceram, Indonesia; south-east of Sagami Nada, Honshu, Japan; North Fiji Basin.

Nematocarcinus tenuipes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [812 pl. 132 fig. 6].
Type data: syntypes BMNH*.
Type locality: south of Honshu, Japan; north of New Guinea; Sagami Nada, Honshu, Japan.

Nematocarcinus intermedius Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [821 pl. 132 fig. 13].
Type data: syntypes BMNH*.
Type locality: north of New Guinea.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [72]; Burukovsky, R.N. (2000a). Taxonomy of *Nematocarcinus* (Decapoda, Nematocarcinidae). 1. Description of disto-ventral organ and revision of *N. productus, N. tenuipes, N. intermedius, N. parvidentatus, N. longirostris,* and *N. proximatus*. *Zool. Zh.* **79**(2): 161–170 figs 1–4 [in Russian] [162] (re-examined types).

Distribution: WA (NW oceanic); Philippine-Indonesian region, mid-Pacific sea-mounts.
Ecology: bathypelagic, oceanic province; from 630–3429 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [2].

Nematocarcinus proximatus Bate, 1888

Nematocarcinus proximatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [808 pl. 132 fig. 3].
Type data: syntypes BMNH*.
Type locality: Arafura Sea, south of New Guinea; south-east of Sagami Bay, Honshu, Japan; eastern Pacific off Islas Juan Fernandez, Chile; eastern Pacific west of southern Chile.

Distribution: NT (N coast); Indo-Pacific, Australian record is based on *Challenger* Arafura Sea specimens that were captured slightly to the north of Australian Territorial waters.
Ecology: bathypelagic, pelagic; depth 51 m (Arafura Sea), all others >2500 m.
Reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [73].

Nematocarcinus sigmoideus Macpherson, 1984

Nematocarcinus sigmoideus Macpherson, E. (1984). Crustáceos Decápodos del Banco Valdivia (Atlántico sudoriental). *Res. Exp. Cient.* **12**: 39–105 figs 1–42 [63 figs 10–12].
Type data: holotype ICM ♀, paratypes BMNH 13 specimens, ICM 29 specimens, RMNH D35835 3 specimens, RMNH D36291 1 specimen, RMNH D36335 2 specimens, SAM 10 specimens.
Type locality: Valdivia Bank, SE Atlantic.

Distribution: TAS (Bass Strait, SE oceanic), VIC (Bass Strait, SE oceanic); SE Atlantic and off S Africa.
Ecology: bathypelagic, mesopelagic, oceanic province; depth 900–1440 m.
Reference: Burukovsky, R.N. (2000). Taxonomy of shrimps from the genus *Nematocarcinus* (Crustacea, Decapoda, Nematocarcinidae). 2. Revision of *N. longirostris* and *N. altus*, correction of species diagnosis in *N. sigmoides* and *N. lanceops*, and description of new species, *N. batei* and *N. romenskyi*. *Zool. Zh.* **79**(3): 282–290 figs 1–5 [in Russian] [285].

Nematocarcinus tenuirostris Bate, 1888

Nematocarcinus tenuirostris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [817 pl. 132 fig. 10].
Type data: syntypes BMNH*.
Type locality: Fiji Islands.

Nematocarcinus tenuirostris sibogae de Man, J.G. (1917). Diagnoses of new species of macrurous decapod Crustacea from the Siboga-Expedition. *Zool. Meded. (Leiden)* **3**(4): 279–284 [279] [described as var. *sibogae*].
Type data: type status unknown ZMA*.
Type locality: off the south coast of Roti, Lesser Sunda Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [74].

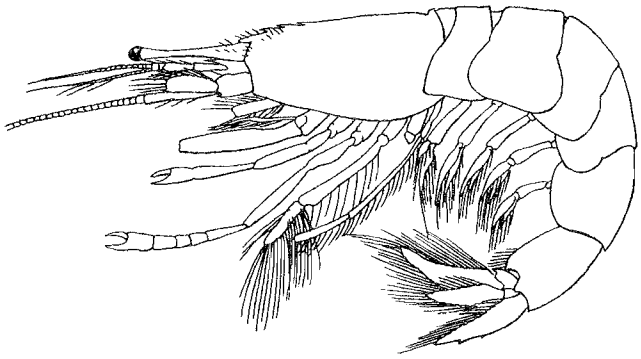
Distribution: WA (NW oceanic, W oceanic); Indo-west Pacific.
Ecology: bathypelagic, mesopelagic, oceanic province; from 301–1611 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [3] (first Australian record).

Nematocarcinus undulatipes Bate, 1888

Nematocarcinus undulatipes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [801 pl. 130].
Type data: syntypes BMNH 12 ♀ 10 ♂*.
Type locality: four *Challenger* stations: western Moro Gulf, Mindanao, Philippines; southern Philippine Sea off Talaud Island; Banda Sea off Banda Island; off Kermadec Islands.

Distribution: NSW (SE oceanic); Indo-west Pacific Oceans, off east coast Australia.
Ecology: bathypelagic, mesopelagic, oceanic province; depths of 366–1269 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [291]; Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [3]; Davie, P., this work (Western Australian records of *N. undulipes* by Hanamura & Evans were re-identified by Burukovsky as two new species, *N. hanamurai* and *N. evansi*).

OGYRIDIDAE



Ogyrides mjobergi [from Balss 1921]

INTRODUCTION

Members of this family of shrimps are remarkable for their very elongate eyestalks. A single genus is recognised, *Ogyrides* Stebbing, and two species are known from Australian waters.

Diagnosis

Rostrum greatly reduced. Eyes unusually elongate, reaching nearly to distal end of antennular peduncle. First pair of pereiopods about as robust as second pair; distinctly chelate. Second pair of pereiopods with carpus subdivided into four articles. First maxilliped with exopod far removed from endite. Second maxilliped with segments arranged in usual serial manner; bearing exopod; endopod 4-segmented. Mandible usually with incisor and molar processes and palp. Second maxilla with palp; endite well developed.
(Derived from Chace 1992).

References

Balss, H. (1921). Stomatopoda, Macrura, Paguridea and Galatheidae. *In,* results of Dr E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. XXIX. *Svenska Vetensk. Akad. Handl.* **61**(10): 1–24 12 figs

Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80

OGYRIDIDAE Holthuis, 1955

Ogyridae Hay, W.P. & Shore, C.A. (1918). The decapod crustaceans of Beaufort, N. C. and the surrounding region. *Bull. U.S. Bur. Fish.* **35**: 369–475 figs 1–20 pls 25–39 [388] [invalid family name as based on *Ogyris* Stimpson, 1860, a junior homonym].

Ogyrididae Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [93] [replacement family name based on *Ogyrides* Stebbing, 1914, a *nom. nov.* for *Ogyris* Stimpson, 1860] .

Ogyrides Stebbing, 1914

Ogyris Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [36] [junior homonym of *Ogyris* Westwood, 1851 (Lepidoptera); name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Ogyris orientalis* Stimpson, 1860 by monotypy.

Ogyrides Stebbing, T.R.R. (1914). South African Crustacea. Part VII. *Ann. S. Afr. Mus.* **15**: 1–112 [31] [*nom. nov.* for *Ogyris* Stimpson, 1860; gender masculine].

Extralimital distribution: Indo-Pacific. See: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95.
Generic reference: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [256].

Ogyrides delli Yaldwyn, 1971

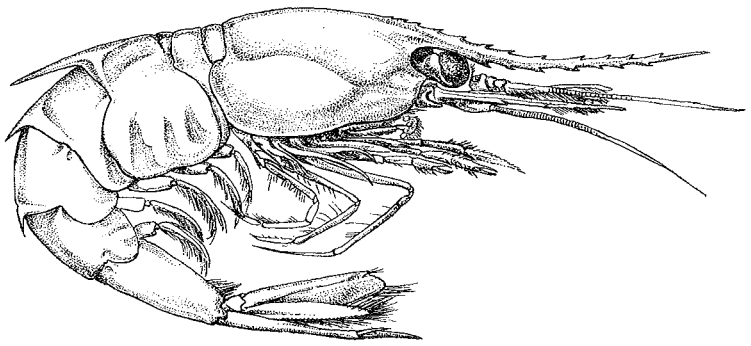
Ogyrides delli Yaldwyn, J. (1971). Preliminary description of a new genus and twelve new species of natant decapod Crustacea from New Zealand. *Rec. Dom. Mus. N.Z.* **7**(10): 85–94 [89].
Type data: holotype NMNZ ♂*, paratype(s) NMNZ 7415–7423*.
Type locality: Lowry Bay, Wellington Harbour.
Distribution: NSW (Lower E coast), QLD (Central E coast); west Pacific Ocean.
Ecology: burrowing, sand bottom, continental shelf, subtidal; depths to 55 m.

Ogyrides mjobergi (Balss, 1921)

Ogyris mjobergi Balss, H. (1921). Stomatopoda, Macrura, Paguridea and Galatheidae. *In*, Results of Dr E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. XXIX. *Svenska Vetensk. Akad. Handl.* **61**(10): 1–24 12 figs [7 figs 1, 2].
Type data: syntypes 2 specimens NHRM*.
Type locality: Cape Jaubert, WA.

Distribution: NT (N coast), WA (NW coast); Indian Ocean.
Ecology: sand bottom, continental shelf, subtidal; depths from 6–37 m.
References: Banner, D.M. & Banner, A.H. (1982). The alpheid shrimp of Australia. Part III: The remaining alpheids, principally the genus *Alpheus*, and the family Ogyrididae. *Rec. Aust. Mus.* **34**(1): 1–357 figs 1–95 [294]; Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [328] (range extension and taxonomic status).

OPLOPHORIDAE



Janicella spinicauda [from Boone 1927: fig. 21]

INTRODUCTION

The family Oplophoridae has a cosmopolitan distribution. It includes about ten genera, of which eight have been recorded from Australia. Chace (1986: 5) and Holthuis (1993: 30) provided keys to all genera. Oplophorids are typically mesopelagic with nocturnal migration towards the surface (except for a small group of species that are apparently benthic as adults), in 315–5300 metres (Chace 1986). All species are probably capable of some form of bioluminescence (Herring 1976: 1041)

Diagnosis

Rostrum immovable, attached to remainder of carapace, otherwise variable; antennular flagella simple, without accessory branches; mandible with palp, molar and incisor processes not deeply separated; third maxilliped elongate, not unusually expanded, 5-segmented, bearing well-developed exopod; well-developed exopod, three anterior pairs, at least, bearing strap-like epipod with endpeice extending perpendicularly into branchial chamber, two anterior pairs with well-developed chela and undivided carpus, three posterior pairs not unusually long, carpus shorter than propodus; pleopods bearing appendices interna.
(After Chace 1986).

References

Boone, L. (1927). Crustacea from tropical East American Seas. *In*, Scientific Results of the First Oceanographic Expedition of the "Pawnee" 1925. *Bull. Bingham Oceanogr. Coll.* **1**(2): 1–147 figs 1–33 1 map

Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82

Herring, P.J. (1976). Bioluminescence in decapod Crustacea. *J. Mar. Biol. Assoc. U.K.* **56**(4): 1029–1047, 4 figs

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

OPLOPHORIDAE Dana, 1852

Ephyrinae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [16].

Oplophorinae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [18, 27] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Miersiidae Smith, S.I. (1886). Report on the Decapod Crustacea of the Albatross Dredgings off the East-coast of the United States during the Summer and Autumn of 1884. *Report of the United States Fish Commission* **13**: 605–705 pls 1–20 [608, 619, 667] [dated 1887, but preprint (101 pp.) was available in 1886].

Acanthephyridae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [24].

Caricyphidae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [24].

Tropiocaridae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [24].

Notostominae Ortmann, A.E. (1898). Gliederfüssler: Arthropoda. *in Dr. H. G. Bronn's Klassen und Ordnungen des Tierreichs* Vol. 5(2), Crustacea, Malacostraca, (47–52) [Systematik] pp. 1057–1168 [1126].

Oplophaidae Guiler, E.R. (1952). A list of the Crustacea of Tasmania. *Rec. Queen Vic. Mus.* **3**: 15–44 [35] [name placed on the Official Index of Rejected and Invalid Family-Group Names, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Hoplophoridae Faxon, W. (1895). Stalk-eyed Crustacea of the "Albatross". *Mem. Mus. Comp. Zool. Harvard* **18**: 1–292, 56 pls [159] [name placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [30].

Acanthephyra A. Milne Edwards, 1881

Ephyra Roux, P. (1831). *Mémoire sur la classification des Crustacés de la tribu des Salicoques*. Marseilles 4 tables, 39 pp. [24] [junior homonym of *Ephyra* Péron & Lesueur, 1810 [Coelenterata], and also junior homonym of *Ephyra* Duponchel, 1829 [Lepidoptera]; name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 359. Suppression, under the Plenary Powers, of the generic name *Miersia* Kingsley, 1879, for the purpose of rendering the generic name *Acanthephyra* Milne Edwards (A.), 1881 (Class Crustacea, Order Decapoda), the oldest available name for the genus concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **11**: 139–150; gender feminine].
Type species: *Alpheus pelagicus* Risso, 1816 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [416].

Miersia Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [416] [replacement name for *Ephyra* Roux, 1831; name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 359. Suppression, under the Plenary Powers, of the generic name *Miersia* Kingsley, 11879, for the purpose of rendering the generic name *Acanthephyra* Milne Edwards (A.), 1881 (Class Crustacea, Order Decapoda), the oldest available name for the genus concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **11**: 139–150; gender feminine].
Type species: *Alpheus pelagicus* Risso, 1816 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [416] (as for *Epiiyra* Roux).

Acanthephyra Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [12] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1955). Opinion 359. Suppression, under the Plenary Powers, of the generic name *Miersia* Kingsley, 11879, for the purpose of rendering the generic name *Acanthephyra* Milne Edwards (A.), 1881 (Class Crustacea, Order Decapoda), the oldest available name for the genus concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **11**: 139–150; gender feminine].
Type species: *Acanthephyra armata* A. Milne Edwards, 1881 by original designation.

Bentheocaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [723] [gender feminine].
Type species: *Bentheocaris stylorostratis* Bate, 1888 hy subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [14].

Acanthephyropsis Riggio, G. (1895). Sul rinvenimento di nuovi Crostacei macruri nei mari della Sicilia. *Naturalista Siciliano* **14**: 244–249 [246] [gender feminine].
Type species: *Acanthephyra pulchra* A. Milne Edwards, 1890 (= *Acanthephyra eximia* Smith, 1884) by monotypy.

Hoplocaricyphus Coutière, H. (1907). Sur quelques formes larvaires enigmatiques d'Eucyphotes provenant des collections de S.A.s. le Prince de Monaco. *Bull. Inst. Oceanogr. Monaco* **104**: 1–70 [7] [gender masculine].
Type species: *Hoplocaricyphus similis* Coutière, 1907 (probably = *Alpheus pelagicus* Risso, 1816, see Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [33]) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [32].

Extralimital distribution: Atlantic, Indo-Pacific and Southern Oceans.

Generic reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [7] (key to species).

Acanthephyra acutifrons Bate, 1888

Acanthephyra acutifrons Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [749 pl. 126 fig. 3].
Type data: holotype BMNH ♂*.
Type locality: off Kepulauan Arrou [Aru] Is., Indonesia (*Challenger* Expedition Stn 191) [5°41'S 134°04'30"E], see Kemp, S.W. (1906). On the occurrence of the genus Acanthephyra in deep water off the west coast of Ireland. *Fish. Ireland Sci. Invest. 1905* **1**: 1–28 figs 1, 2 pls 1, 2 [20].

Distribution: NSW (SE oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 650–2400 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [283] (first Australian record).

Acanthephyra armata A. Milne Edwards, 1881

Brilliant Red Carid, Scarlet Carid

Acanthephyra armata Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [12].
Type data: type status unknown MNHP (?).
Type locality: off Saint Lucia, Lesser Antilles.

Distribution: WA (NW oceanic); Gulf of Mexico, Indo-west Pacific Oceans.
Ecology: sand bottom, bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 365–1570 m, mainly 500–650 m.

Acanthephyra curtirostris Wood-Mason, 1891

Acanthephyra curtirostris Wood-Mason, J. & Alcock, A. (1891). Natural History notes from H. M. Indian Marine Survey Steamer 'Investigator', Commander R. F. Hoskyn, R.N., commanding. No 21. Note on the results of the last season's deep-sea dredging. *Ann. Mag. Nat. Hist. (6)*7: 1–19, 186–202, 258–272 [195].
Type data: syntypes IM 2 ♂ 1 ♀ * (?).
Type locality: Indian Ocean: Laccadive Sea, off Elicalpeni Shoal and Bay of Bengal, off Andhra Pradesh.

Distribution: NSW (SE oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: abyssopelagic, bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 630–4970 m.

Acanthephyra eximia Smith, 1884

Acanthephyra eximia Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [376].
Type data: type status unknown USNM (?).
Type locality: off Cape Hatteras, North Carolina.

Acanthephyra angusta Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [737 pl. 124 fig. 6].
Type data: syntypes BMNH 2 specimens .
Type locality: off Kepulauan Banda [Banda Is.], Indonesia.

Acanthephyra brachytelsonis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [753 pl. 126 fig. 7].
Type data: syntypes BMNH 18 specimens*.
Type locality: taken from eight *Challenger* stations in the following localities: Kepulauan Talaud & Kepulauan Banda, Indonesia; Sagami Nada, Japan; off the Kermadec Islands, South Pacific; east of Peninsula Valdis, Argentina.

Acanthephyra edwardsii Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [747 pl. 126 fig. 1].
Type data: syntypes BMNH 1 ♂ 1 ♀.
Type locality: S of Pernambuco, off Aracaju, Brazil [10°46'S 36°08'W].

Acanthephyra pulchra Milne Edwards, A. (1890). Diagnose d'un crustacés macroures nouveau de la Méditerranée. *Bull. Soc. Zool. Fr.* **15**: 163 [163].
Type data: type status unknown MNHP.
Type locality: off Monaco.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [18].

Distribution: WA (NW oceanic, W oceanic); tropical and sub-tropical waters.
Ecology: bathypelagic, benthic, continental rise, continental slope, mesopelagic, oceanic province; essentially benthic, from 200–3700 m depth.

Acanthephyra quadrispinosa Kemp, 1939

Acanthephyra batei Stebbing, T.R.R. (1905). South African Crustacea, Pt III. *Mar. Invest. S. Afr.* **IV**: 21–123 pls xvii–xxvi [107 pl. 24B] [junior homonym of *A. batei* Faxon, 1895].
Type data: syntypes SAM (?).
Type locality: Cape Point Lighthouse, South Africa.

Acanthephyra quadrispinosa Kemp, S. (1939). On *Acanthephyra purpurea* and its allies (Crustacea, Decapoda, Hoplophoridae). *Ann. Mag. Nat. Hist.* **4**(11): 568–579 [571, 576, 578].
Type data: syntypes BMNH*.
Type locality: E South Atlantic from 32°S to 40°S.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [26].

Distribution: Australian Antarctic Territory, NSW (SE oceanic), TAS (S oceanic), WA (NW oceanic, W oceanic); south Atlantic, Indo-Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 250–1700 m.
References: Griffiths, F.B. & Brandt, S.B. (1983). Mesopelagic Crustacea in and around a warm-core eddy in the Tasman Sea off eastern Australia. *Aust. J. Mar. Freshwat. Res.* **34**(4): 609–623; Griffiths, F.B. & Brandt, B. (1983). Distribution of mesopelagic decapod Crustacea in and around a warm-core eddy in the Tasman Sea. *Mar. Ecol. Progr. Ser.* **12**: 175–184; Griffiths, F.B. & Wadley, V.A. (1986). A synoptic comparison of fishes and crustaceans from a warm-core eddy, the East-Australian Current, the Coral Sea and the Tasman Sea. *Deep Sea Res.* **33**(11/12): 1907–1922; Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91.

Acanthephyra rostrata (Bate, 1888)

Hymenodora rostrata Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [846 pl. 136 fig. 4].
Type data: syntypes BMNH 3 specimens*.

Type locality: from three separate localities: northern Coral Sea SE of Torres Strait; South China Sea off Lingayen Gulf, Luzon, Philippines; and N Pacific Ocean NW of Midway Islands.

Distribution: QLD (NE oceanic); known only from type locality.
Ecology: bathypelagic, pelagic, continental rise, continental slope, oceanic province; depth to 3110 m.
Reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [28].

Acanthephyra sanguinea Wood-Mason & Alcock, 1892

Acanthephyra sanguinea Wood-Mason, J. & Alcock, A. (1892). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. Series II., No. 1. On the results of deep-sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***9**: 265–275, 358–370 figs 1–6 pls 14, 15 [358 fig. 1].
Type data: syntypes IM 4♀* (probable depository institution).
Type locality: three separate localities: Laccadive Sea, off Kerala State, India; Bay of Bengal west of the Andaman Islands; and the Andaman Sea off North Cinque Island.

Acanthephyra kempii Balss, H. (1914). Diagnosen neuer Macruren der Valdivia Expedition. *Zool. Anz.* **44**: 592–599 [595].
Type data: type status unknown.
Type locality: extreme southern part of Bay of Bengal [70°01'N 85°56'E].

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [29].

Distribution: WA (NW oceanic); Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; from 567–3197 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [48] (first Australian record).

Acanthephyra sica Bate, 1888

Acanthephyra sica Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [739 pl. 125 fig. 1].
Type data: syntypes BMNH 1♂ 3♀*.
Type locality: off New Zealand.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), TAS (S oceanic); S oceanic, southern circumpolar.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; Australian specimens collected to a depth of 675 m.
References: Burukovsky, R.N. & Romensky, L.L. (1982). New findings of several species of shrimps and description of *Pasiphaea natalensis* sp. n. *Zool. Zh.* **61**(12): 1797–1801 [1799] (in Russian with English summary; restored use of this name by showing the southern Oceans form to be distinct from *A. pelagica* (Risso, 1816) which thus appears to be confined to the Northern Hemisphere); Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [284] (under the name of *A. pelagica*).

Acanthephyra smithi Kemp, 1939

Acanthephyra smithi Kemp, S. (1939). On *Acanthephyra purpurea* and its allies (Crustacea, Decapoda, Hoplophoridae). *Ann. Mag. Nat. Hist.* **4**(11): 568–579 [577].
Type data: type status unknown.
Type locality: Indo-Pacific from eastern Africa to 131°W and 14°S in the west, and to 20°N to 24°S in the east, see Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [31].

Distribution: NSW (SE oceanic), WA (NW oceanic); Indo-west central Pacific Oceans.
Ecology: continental slope, mesopelagic, oceanic province; depth 216–800 m.

Acanthephyra tenuipes (Bate, 1888)

Tropiocaris tenuipes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [836 pl. 136 fig. 2].
Type data: holotype BMNH ♂.
Type locality: Coral Sea.

Distribution: QLD (NE oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental slope, oceanic province; from 1000–3840 m depth.
Reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [8].

Ephyrina Smith, 1885

Ephyrina Smith, S.I. (1885). On some new or little known Decapod Crustacea, from recent Fish Commission Dredgings off the East coast of the United States. *Proc. U.S. Natn. Mus.* **7**: 493–511 [506] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to

the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Ephyrina benedicti* Smith, 1885 by monotypy.

Calymarina Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [834].
Type species: *Tropiocaris planipes* Bate, 1888 (= *Ephyrina benedicti* Smith, 1885) by original designation.

Tropiocaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [731] [*nom. nud.*].

Tropirinus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [750] [*nom. nud.*].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [34].

Extralimital distribution: Atlantic Indo-west Pacific Ocean. See: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 (also for key to species).

Ephyrina ombango Crosnier & Forest, 1973

Ephyrina ombango Crosnier, A. & Forest, J. (1973). Les crevettes profondes de l'Atlantique oriental tropical. *Faune Trop.* **19**: 1–409 [68 figs 20a, 21a, 22a].
Type data: holotype MNHP*.
Type locality: off São Tom, Gulf of Guinea.

Distribution: Cocos (Keeling) Islands; Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, mesopelagic, pelagic, continental slope, neritic, oceanic province; surface to 1000 m depth.

Hymenodora Sars, 1877

Hymenodora Sars, G.O. (1876). Prodromus descriptionis Crustaceorum et Pycnogonidarum quae in expeditione Norvegica anno 1876 observavit. *Arch. Math. Naturvidensk* **2**: 337–371 [340] [gender feminine].
Type species: *Pasiphae glacialis* Burchholz, 1874 by monotypy.

Extralimital distribution: Atlantic, Indo-Pacific and Southern Oceans, southern circumpolar.
Generic reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [42] (key to species).

Hymenodora glacialis (Buchholz, 1874)

Pasiphae glacialis Buchholz, R. (1874). Crustaceen. *In, Die zweite deutsche Nordpolar-fahrt in den Jahren 1869 and 1870, unter Führung des Kapitän Karl Koldewey.* Leipzig, Germany : F.A. Brockhaus [279 pl. 1 fig. 2].
Type data: type status unknown*.
Type locality: Arctic region.

Hymenodora glauca Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [847].
Type data: syntypes BMNH*.
Type locality: between the Subtropical Convergence and the Antarctic Polar Front [47°25'S 130°22'E].

Hymenodora mollicutis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [848 pl. 137 fig. 2].
Type data: syntypes BMNH ♂ ♀*.
Type locality: N Atlantic.

Taxonomic decision for synonymy: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [67].

Distribution: Australian Antarctic Territory, SA (Great Australian Bight, S oceanic), WA (S oceanic); Atlantic, Indo-west Pacific.
Ecology: pelagic, abyssopelagic, bathypelagic, mesopelagic, oceanic province; from surface to 5686 m.
Reference: Udekem d'Acoz, C. d' (1999). Inventaire et distribution des crustacés décapodes de l'Atlantique nord-oriental, de la Méditerranée et des eaux continentales adjacentes au nord de 25°N. *Patrimoines naturels (M.N.H.N./S.P.N.)* **40**: 1–383 [84] (summary of literature).

Hymenodora gracilis Smith, 1886

Hymenodora gracilis Smith, S.I. (1886). Report on the Decapod Crustacea of the Albatross Dredgings off the East-coast of the United States during the Summer and Autumn of 1884. *Report of the United States Fish Commission* **13**: 605–705 pls 1–20 [680 pl. 12 fig. 6] [dated 1887, but preprint (101 pp.) was available in 1886].
Type data: type status unknown USNM*.
Type locality: off E United States, NW Atlantic.

Distribution: S oceanic, Aust. Antarctic Terr., southern circumpolar, North Atlantic and Gulf of Panama, off Japan and off S Africa.
Ecology: abyssopelagic, bathypelagic, mesopelagic, oceanic province; from 500–5300 m depth.
References: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91; Udekem d'Acoz, C. d' (1999). Inventaire et distribution des crustacés décapodes de l'Atlantique nord-oriental, de la Méditerranée et des eaux

continentales adjacentes au nord de 25°N. *Patrimoines naturels (M.N.H.N./S.P.N.)* **40**: 1–383 [84] (summary of literature).

Janicella Chace, 1986

Janicella Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [43] [gender feminine].
Type species: *Oplophorus spinicauda* A. Milne Edwards, 1883 by original designation.

Extralimital distribution: pantropical except for extreme Pacific Ocean off American continents.

Janicella spinicauda (A. Milne Edwards, 1883)

Oplophorus spinicauda Milne Edwards, A. (1883). *Recueil de figures de crustacés nouveaux ou peu connus.* Paris : [s.n.] 3 pp., 44 plates [pl. 30].
Type data: type status unknown MNHP*.
Type locality: off Casablanca, Morocco.

Oplophorus foliaceus Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [922 pl. 20 fig. 8].
Type data: holotype USNM 30555 1 ♀.
Type locality: western end of Kaiwi Channel, Hawai'i.

Acanthephyra anomala Boone, L. (1927). Crustacea from tropical East American Seas. *In*, Scientific Results of the First Oceanographic Expedition of the "Pawnee" 1925. *Bull. Bingham Oceanogr. Coll.* **1**(2): 1–147 figs 1–33 1 map [104 fig. 21].
Type data: holotype BOC 1 specimen*, paratype BOC 1 specimen*.
Type locality: north of Glover Reef, Gulf of Honduras.

Taxonomic decision for synonymy: Hanamura, Y. (1987). Caridean shrimps obtained by R.V. "Soela" from North-West Australia, with description of a new species of *Leptochela* (Crustacea: Decapoda: Pasiphaeidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **4**(1): 15–33 [26].

Distribution: NSW (SE oceanic), WA (NW coast); Indo-Pacific Oceans, N and S Atlantic.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 366–1464 m.

Meningodora Smith, 1882

Meningodora Smith, S.I. (1882). Report on the Crustacea. Part 1. Decapoda. Reports on the results of dredging, under the supervision of Alexander Agassiz, on the east coast of the United States, during the summer of 1880, by the U.S. Coast Survey Steamer "Blake", Commander J.R. Bartlett, U.S.N., commanding. *Bull. Mus. Comp. Zool.* **10**(1): 1–108 [73] [gender feminine].
Type species: *Meningodora mollis* Smith, 1882 by monotypy.

Extralimital distribution: Atlantic-Indo-Pacific Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Generic reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [49] (key to species).

Meningodora mollis Smith, 1882

Meningodora mollis Smith, S.I. (1882). Report on the Crustacea. Part 1. Decapoda. Reports on the results of dredging, under the supervision of Alexander Agassiz, on the east coast of the United States, during the summer of 1880, by the U.S. Coast Survey Steamer "Blake", Commander J.R. Bartlett, U.S.N., commanding. *Bull. Mus. Comp. Zool.* **10**(1): 1–108 [74 pl. 11 figs 8–9, pl.].
Type data: holotype USNM ♀ (probable depository institution).
Type locality: East of Cape Lookout, North Carolina, United States.

Distribution: NSW (SE oceanic); Indo-Pacific Oceans, Atlantic Ocean.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 840–2160 m.

Meningodora vesca (Smith, 1886)

Acanthephyra brevirostris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [751 pl. 126 figs 5, 6] [junior homonym of *A. brevirostris* Smith, 1885].
Type data: syntypes BMNH 2 specimens.
Type locality: equatorial Atlantic ENE of St Peter and St Paul Rocks.

Notostomus vescus Smith, S.I. (1886). Report on the Decapod Crustacea of the Albatross Dredgings off the East-coast of the United States during the Summer and Autumn of 1884. *Report of the United States Fish Commission* **13**: 605–705 pls 1–20 [676 [72]] [dated 1887, but preprint (101 pp.) was available in 1886].
Type data: type status unknown USNM (?).
Type locality: Gulf Stream east of Chesapeake Bay.

Notostomus viscus Smith, S.I. (1886). The abyssal decapod Crustacea of the 'Albatross' dredgings in the North Atlantic. *Ann. Mag. Nat. Hist.* **17**(5): 187–198 [189, 192] [*nom. nud.*].

Acanthephyra batei Faxon, W. (1895). Stalk-eyed Crustacea of the "Albatross". *Mem. Mus. Comp. Zool. Harvard* **18**: 1–292, 56 pls [167] [*nom. nov.* for *A. brevirostris* Bate, 1888].

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [50].

Distribution: NSW (SE oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: abyssopelagic, bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 615–5400 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [286].

Notostomus A. Milne Edwards, 1881

Notostomus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [7] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Notostomus gibbosus* A. Milne Edwards, 1881 by original designation.

Extralimital distribution: Pacific Ocean, west and S coasts of Africa. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Generic reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [52] (key to species).

Notostomus auriculatus Barnard, 1950

Notostomus auriculatus Barnard, K.H. (1950). Descriptive Catalogue of South African Decapod Crustacea (Crabs and Shrimps). *Ann. S. Afr. Mus.* **38**: 1–837 figs 1–154 [670].
Type data: holotype SAM. A1189 ♀.
Type locality: off Cape of Good Hope, South Africa.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), QLD (NE oceanic, SE oceanic); S oceanic, SE Atlantic, off S Africa, SE Indian and western Pacific.
Ecology: mesopelagic, oceanic province.
Reference: Davie, P. this work (the identity of this species in Australian waters needs to be confirmed; Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 referred to it under the name of *Notostomus* cf. *crosnieri* Macpherson, 1984, but noted differences; they also, however, stated that it agrees with the figure of the type of *N. auriculatus*, and for some reason include *N. auriculatus* in the synonymy of their *N. cf. crosnieri*).

Notostomus elegans A. Milne Edwards, 1881

Notostomus elegans Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [8].
Type data:syntypes MNHP.
Type locality: southeastern Gulf of Mexico.

Notostomus patentissimus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [826 pl. 133, 134].
Type data: holotype BMNH ♀.
Type locality: eastern Celebes Sea, west of Kepulauan Sangi [Sangi Is.], Indonesia.

Notostomus longirostris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [833 pl. 135 fig. 4].
Type data: holotype BMNH ♂*.
Type locality: off Banda Island, Banda Sea, south of Ceram, Indonesia.

Notostomus westergreni Faxon, W. (1893). Reports on the Dredging Operations off the West Coast of Central America to the Galapagos, to the West Coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, Carried on by the U.S.Fish Commission Steamer "Albatross" during 1891, Lieut. Commander Z.L. Tanner, U.S.N., Commanding, VI: Preliminary Description of New Species of Crustacea. *Bull. Mus. Comp. Zool.* **24**(7): 149–220 [208].
Type data: holotype MCZ ♂*.
Type locality: off northern Ecuador.

Notostomus atlanticus Lenz, H. & Strunck, K. (1914). Die Decapoden der Deutschen Sudpolar-Expedition 1901–1903. I. Brachyuren und Macruren mit Ausschluss der Sergestiden. *Dt. Südpol. Exped.* **15**(Zool. 7): 257–345 5 pls figs 12–22 [330].
Type data: type status unknown.
Type locality: North Atlantic, north-west of Cape Verde Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [56].

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 630–2780 m.

Notostomus gibbosus A. Milne Edwards, 1881

Notostomus gibbosus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [7].
Type data: syntypes MNHP*.
Type locality: off Grenada, Lesser Antilles.

Notostomus brevirostris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [832–833 pl. 134 fig. 3].

Type data: holotype BMNH*.
Type locality: off Recife, Brazil.

Notostomus perlatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [831 pl 135 fig. 2].
Type data: holotype BMNH ♀*.
Type locality: eastern Celebes Sea, west of Kepulauan Sangi, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [57].

Distribution: NSW (SE oceanic), WA (NW oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, mesopelagic, oceanic province; depth 569–3932 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [288].

Oplophorus H. Milne Edwards, 1837

Oplophorus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [423] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Oplophorus typus* H. Milne Edwards, 1837 by monotypy.

Hoplophorus Agassiz, L. (1846). *Nomenclatoris Zoologici.* Index universalis, continens nomina systematica classium, ordinum, familiarum et generum animalium omnium, tam viventium quam fossilium, secundum ordinem alphabeticum unicum disposita, adjectis homonymiis plantarum, nec non variis adnotationibus et emendationibus. [n.l.] : Soloduri viii 393 pp. [185, 262] [invalid emendation of *Oplophorus* H. Milne Edwards, 1837; junior homonym of *Hoplophorus* Lund, 1838; name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [38].

Extralimital distribution: Atlantic-Indo-west Pacific. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Generic reference: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [57] (key to species).

Oplophorus gracilirostris A. Milne Edwards, 1881

Oplophorus gracilirostris Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [6].
Type data: syntypes MNHP* .
Type locality: off Dominica, Lesser Antilles.

Oplophorus longirostris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [765 pl. 127 fig. 2].
Type data: holotype BMNH 1 ♀*.
Type locality: off Kandavu, Fiji Islands.

Hoplophorus smithii Wood-Mason, J. *in* Woodmason, J. & Alcock, A. (1891). Natural History notes from H. M. Indian Marine Survey Steamer 'Investigator', Commander R.F. Hoskyn, R.N., commanding. No 21. Note on the results of the last season's deep-sea dredging. *Ann. Mag. Nat. Hist. (6)***7**: 1–19, 186–202, 258–272 [194].
Type data: holotype IM 1 specimen*.
Type locality: Bay of Bengal.

Taxonomic decision for synonymy: Hanamura, Y. (1987). Caridean shrimps obtained by R.V. "Soela" from North-West Australia, with description of a new species of *Leptochela* (Crustacea: Decapoda: Pasiphaeidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **4**(1): 15–33 [28].

Distribution: WA (NW oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; from 274–2305 m depth.

Oplophorus novaezeelandiae (de Man, 1931)

Hoplophorus novaezeelandiae de Man, J.G. (1931). On a new species of the genus *Hoplophorus (Oplophorus)* H.M. Edw., *Hoplophorus novae-zealandiae*, sp. n. *J. Linn. Soc.* **37**: 369–378 [369].
Type data: syntypes CMNZ 4 specimens*.
Type locality: Kaikoura, east coast of South Is., New Zealand.

Distribution: Australian Antarctic Territory, NSW (SE oceanic), SA (Great Australian Bight, S oceanic), WA (W oceanic, S oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: pelagic, continental shelf, continental slope, mesopelagic, oceanic province; depths of 90–725 m.

Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [289].

Oplophorus spinosus (Brullé, 1839)

Palaemon spinosus Brullé, G.A. (1837). Crustacés. pp. 13–18 *in* Barker-Webb, P. & Berthelot, S. *Histoire Naturelle des Iles Canaries*, Zoologie, 2 (2, Entomologie). Atlas: plate unique [1837]; text [1839]. Paris : Publisher unknown [18].
Type data: type status unknown MNHP* (?).
Type locality: Canary Islands, eastern Atlantic.

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic), WA (NW oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental shelf, continental slope, mesopelagic, oceanic province; depths 10–3923 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [289].

Oplophorus typus H. Milne Edwards, 1837

Oplophorus typus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [424 pl. 25 fig. 6].
Type data: type status unknown MNHP.
Type locality: New Guinea.

Oplophorus brevirostris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [766 pl. 127 fig. 3].
Type data: holotype BMNH.
Type locality: Sibuyan Sea off Tablas Island, Philippines.

Taxonomic decision for synonymy: Chace, F.A., Jr (1986). The Caridean shrimps (Crustacea: Decapoda) of the Albatross Philippine Expedition, 1907–1910. Part 4: Families Oplophoridae and Nematocarcinidae. *Smithson. Contr. Zool.* **No. 432**: i–iv, 1–82 [60].

Distribution: WA (NW oceanic); Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; 382–2361 m depth.

Systellaspis Bate, 1888

Systellaspis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [757] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Systellaspis lanceocaudata* Bate, 1888 by original designation.

Extralimital distribution: Atlantic-Indo-west Pacific.
See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Systellaspis debilis (A. Milne Edwards, 1881)

Acanthephyra debilis Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [13].
Type data: type status unknown MNHP (?).
Type locality: Bahama Canal.

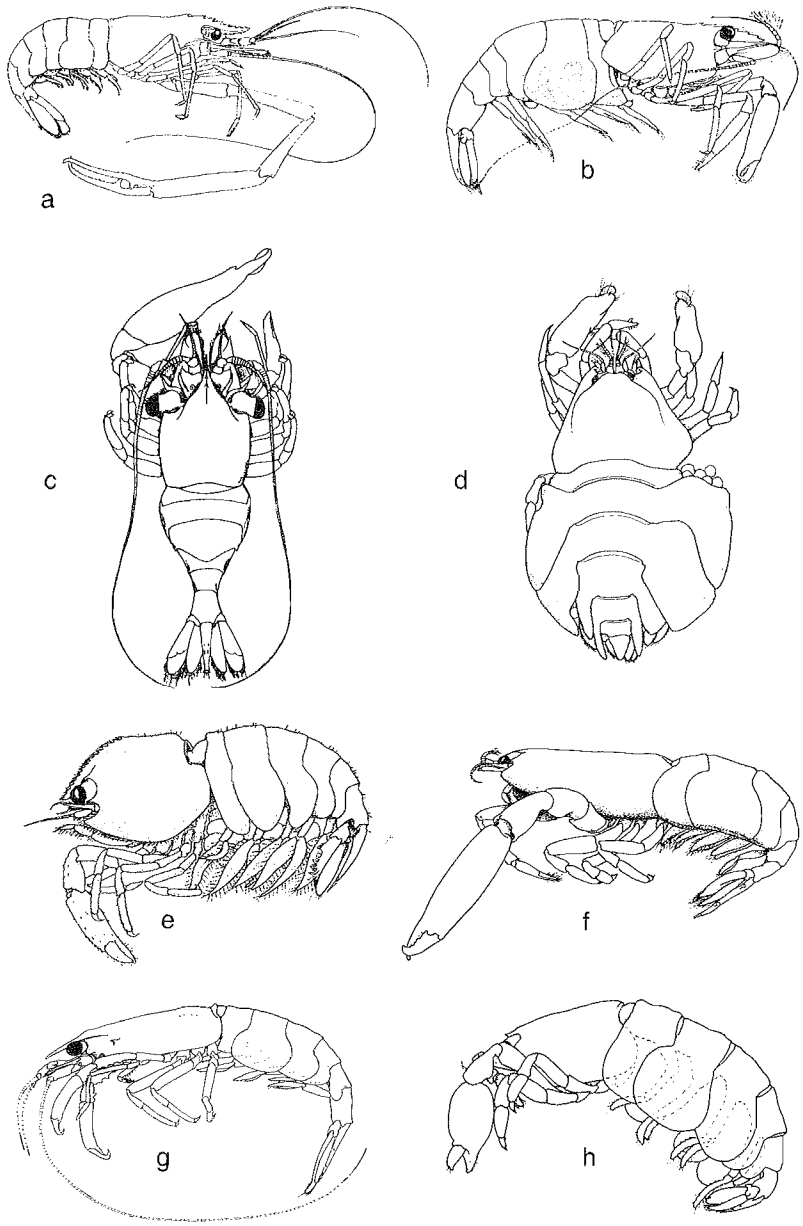
Distribution: Australian Antarctic Territory, NSW (SE oceanic), SA (S oceanic), WA (NW oceanic, S oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental shelf, continental slope, epipelagic, mesopelagic, oceanic province; depth 25–3000 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [290].

Systellaspis pellucida (Filhol, 1884)

Acanthephyra pellucida Filhol, H. (1884). *Exploration sous-marine Voyage du "Talisman"*. La nature, Paris. 12 (part 1), 119–122, 134–138, 147–151, 161–164, 182–186, 198–202, 230–234, 278–282, 326–330, 391–394 [199].
Type data: lectotype MNHP ovigerous ♀*, paralectotypes MNHP 3♂ 4♀, MNHP 3♀, MNHP 7♂ 3♀.
Subsequent designation: Crosnier, A. & Forest, J. (1973). Les crevettes profondes de l'Atlantique oriental tropical. *Faune Trop.* **19**: 1–409 [93].
Type locality: off Cabo Bojador, Spanish Sahara (*Talisman* Stn 65).

Distribution: WA (NW oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: benthic, continental slope, mesopelagic, oceanic province; Australian specimens from 443–540 m depth, in the Atlantic known from 90–3292 m, although most commonly between 300–600 m.
Reference: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [52].

PALAEMONIDAE



a, Palaemoninae: *Macrobrachium lar*. b–h, Pontoniinae: b, *Hamopontonia corallicola*; c, *Jocaste lucina*; d, *Paratypton siebenrocki*; e, *Anapontonia denticauda*; f, *Chernocaris placunae*; g, *Miopontonia yongei*; h, *Typton australis* [from: a, Bate 1888; b, Bruce 1970; c, Borradaile 1917; d, Balss 1915; e, Bruce 1967; f, Bruce 1994; g, Bruce 1985; h, Bruce 1973]

INTRODUCTION

This is the most speciose and morphologically diverse of all the shrimp families, with around 100 genera currently recognised. Palaemonids are cosmopolitan in distribution. Most species are marine, occurring from shallow interidal pools down to 1285 metres, but the Palaemonidae is one of the few shrimp families that has radiated successfully into freshwater. Many species, especially in the subfamily Pontoniinae, live commensally with other invertebrates and have developed exceptionally beautiful colour patterns.

Four subfamilies are recognised. Only two occur in the Indo-Pacific region: Palaemoninae and Pontoniinae, and both are widespread. Holthuis (1993) provided the most recent review at the generic level and included keys to genera known to that time.

The superfamily Palaemonoidea comprises seven closely allied families, five of which, Palaemonidae, Anchistioididae, Hymenoceridae, Gnathophyllidae, and Kakaducarididae, occur in the Australian region. The Kakaducarididae Bruce, 1993, was originally included as a subfamily in the Palaemonidae. A key to these families, with the exception of Kakaducarididae, was provided by Chace & Bruce (1993: 3).

Diagnosis

Carapace without complete longitudinal suture; rostrum immovable; telson usually with two or three pairs of spines on posterior margin; antennule with two completely separate flagella, one with accessory branch; mandible usually with incisor process; first maxilla with mesial coxal lobe not unusually large, mesial basal lobe not reduced; second maxilla with 0, 1, or 2 endites; first maxilliped with exopodal lash; second maxilliped with distal segments articulating serially, not side by side, on penultimate segment, marginal setae on distal segment not especially stout or dense; third maxilliped composed of no more than six segments, antepenultimate segment neither articulated with, nor much wider than, next proximal segment; pereiopods without exopods or arthrobranchs, epipods, if present, not large, not extending dorsally into branchial chamber, first and second pair of pereiopods distinctly chelate, dactyl meeting opposing finger (pollex) when flexed, usually not crossing; first pereiopod not stouter than second; second pereiopod with undivided carpus (except in *Thaumastocaris*), with dactyl usually not distinctly serrate on extensor margin; second pleopod with appendix masculina in male. (After Chace & Bruce 1993).

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Borradaile, L.A. (1917). On the Pontoniinae. The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr J. Stanley Gardiner. *Trans. Linn. Soc. Lond.* **17**: 323–396 pls 52–57

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Bruce, A.J. (1973). *Typton australis* sp. nov., a new pontoniinid shrimp from the Great Barrier Reef, Australia. *Rec. Aust. Mus.* **28**: 253–263

Bruce, A.J. (1976). Shrimps and prawns of coral reefs, with special reference to commensalism. pp. 37–94 figs 1–21 *in* Jones, O. & Endean, R. (eds) *Biology and Geology of Coral Reefs.* New York : Academic Press Vol. 3(2) xxi 345 pp.

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Bruce, A.J. (1993). *Kakaducaris glabra* gen. nov., sp. nov., a new freshwater shrimp from the Kakadu National Park, Northern Territory, Australia, Crustacea: Decapoda: Palaemonidae with the designation of a new subfamily Kakaducaridinae. *Hydrobiologia* **268**: 27–44

Bruce, A.J. (1994). Shrimps from Flat-Top Bank, Timor Sea (Crustacea: Decapoda: Caridea). *Raffles Bull. Zool.* **42**(4): 743–756

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Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

PALAEMONIDAE Rafinesque, 1815

Palaemonidae Rafinesque-Schmaltz, C.S. (1815). *Analyse de la nature ou tableau de l'univers et de corps organisés.* Palermo 224 pp. [98] [as Palemonia; name with spelling corrected to Palaemonidae, placed on the Official List of Family-Group Names, see International Commission on Zoological Nomenclature (1959). Opinion 564. Suppression under the Plenary Powers of the scientific name *squilla* Linnaeus, 1758, as published in the combination *Cancer squilla*, and designation under the same Plenary Powers of *Palaemon adspersus* Rathke, 1837, to be the type species of the genus *Palaemon* Weber, 1795, and matters incidental thereto (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **20**: 337–358].

Palaemoninae

INTRODUCTION

This subfamily is represented in Australian waters by six of the 17 described genera. Keys to genera were provided by Chace & Bruce (1993: 4) and Holthuis (1993: 100). Palaemonines are cosmopolitan in distribution, and occupy a diverse range of environments, including fresh, estuarine, marine, and subterranean waters. They can be found from the intertidal zone to 170 metres depth, and may be benthic or pelagic (Chace & Bruce 1993).

Australian freshwater palaemonids were first revised by Riek (1951) who recognised 10 species (nine *Macrobrachium* and *Palaemonetes australis*) and seven subspecies (of *M. australiense* and *M. atactum*). The biggest genus in Australian waters is *Macrobrachium* with 13 freshwater or estuarine species. The tropical *Macrobrachium rosenbergii*, the largest of these, reaches a total length of 320 mm (Holthuis 1980); it is a popular food item, especially in Asia where it is grown in aquaculture farms. In an extensive revision of Australian *Macrobrachium* species completed recently by John Short of the Queensland Museum, 13 species will be recognised, including two new species, one new record and eight new synonyms (J. Short, in prep.).

Diagnosis

Palaemonids with telson having two or more submedian plumose setae, and usually armed with only two pairs of posterior spines (except the non-Australian genus *Coutierella* which has three pairs); third maxilliped usually with two well-developed arthrobranchs (*Calathaemon* appears to have single small arthrobranch), second maxilliped usually with well developed podobranch (feebly developed in *Calathaemon*). As noted by Bruce & Short (1993), the distinction between the subfamilies Palaemoninae and Pontoniinae requires further investigation.

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Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda)*. Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367

Palaemoninae Rafinesque, 1815

Palemoninae Rafinesque-Schmaltz, C.S. (1815). *Analyse de la nature ou tableau de l'univers et de corps organisés*. Palermo 224 pp. [98] [as Palemonia].

Leander Desmarest, 1849

Leander Desmarest, E. (1849). Description d'un nouveau genre de Crustacés de la section des Décapodes Macroures, famille des Salicoques, tribu des Palémoniens. *Ann. Soc. Entomol. Fr.* 7(2): 87–94 2 pls [92] [gender masculine].
Type species: *Leander erraticus* E. Desmarest, 1849 by monotypy.

Cryptoleander Gurney, R. & Lebour, M.V. (1941). On the larvae of certain Crustacea Macrura mainly from Bermuda. *J. Linn. Soc. Lond. Zool.* **41**: 89–181, 26 text-figs [145, 159] [Gurney, R. (1938). The larvae of the Decapod Crustacea, Palaemonidae and Alpheidae. *Scient. Rep. Gt Barrier Reef Exped. (1928–29)***6**(1): 1–60 figs 1–265 (35) proposed this name as a uninominal collective group name; but it was Gurney & Lebour (*op. cit.*) who referred *Leander tenuicornis* to the name, thereby according it generic status; gender masculine].
Type species: *Palaemon tenuicornis* Say, 1818 by monotypy.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [5].

Extralimital distribution: Red Sea to Japan, Philippines, Indonesia, Australia, New Zealand, West and E Atlantic, and Mediterranean.
Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [6] (key to *Leander* species).

Leander tenuicornis (Say, 1818)

Astacus locusta Fabricius, J.C. (1781). *Species Insectorum* exhibentes eorum Differentias, specificas, Synonyma auctorum, Loca natalia, Metamorphosia adiectis Observationibus, Descriptionibus. Hamburg & Kilonii : C.E. Bohnii Vol. 2, viii 552 pp. [513] [junior homonym of *Astacus locusta* Pennant, 1777].
Type data: type status and whereabouts unknown (probably lost, museum not determined).
Type locality: 'in Oceano. Mus. Dom. Banks'.

Palaemon tenuicornis Say, T. (1818). An account of the Crustacea of the United States. *J. Acad. Nat. Sci. Philad.* **1**: 235–253, 313–316, 317–319, 374–380, 381–401, 423–441 [249].
Type data: syntypes ANSP (lost), BMNH 2 specimens.
Type locality: Newfoundland, N Atlantic Ocean, Canada.

Penaeus adspersus Tilesius, W.G. (1819). Ueber das nächtliche Leuchten des Meerwassers. *Neue Annal. Wetteranisch Gese* **1**(1): 1–10 pl. 21 [4 pl. 21a fig. 1].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: High Seas.

Palaemon natator Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [393].
Type data: type status unknown MNHP.
Type locality: Indian Ocean.

Palaemon latirostris De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [170 pl. 45 fig. 12] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH D1024 1 specimen, paralectotype(s) RMNH D1024 4 specimens*.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc. [217].
Type locality: Japan.

Leander erraticus Desmarest, E. (1849). Description d'un nouveau genre de Crustacés de la section des Décapodes Macroures, famille des Salicoques, tribu des Palémoniens. *Ann. Soc. Entomol. Fr.* 7(2): 87–94 2 pls [92].
Type data: syntypes MNHP ♂ ♀*.
Type locality: Guadeloupe, Atlantic Ocean.

Palaemon torensis Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [116 pl. 17 fig. 3] [reissued and translated by F.D. Por, 1961].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Red Sea.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [6].

Distribution: 200 m bathymetric (Bass Strait, Central E coast, Central W coast, G. Aust. Bight, Gulf of Carp., Lower E coast, Lower W coast, N coast, NE coast, NW coast, S Gulfs coast, SW coast, Tas. coast); Atlantic-Indo-west Pacific Oceans.
Ecology: low intertidal, shallow subtidal; in pools, oceanic in floating *Sargassum*.

Leandrites Holthuis, 1950

Leandrites Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [4, 6, 34] [gender masculine].
Type species: *Leander celebensis* de Man, 1881 by original designation.

Extralimital distribution: India, Singapore and Indonesia. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Leandrites celebensis (de Man, 1881)

Leander celebensis de Man, J.G. (1881). Carcinological studies in the Leyden Musesum. No. 1. *Notes Leyden Mus.* **3**(27): 121–144 [141].
Type data: syntypes RMNH D1035 *ca* 20 specimens.
Type locality: off Makassar [Ujung Pandang], Celebes [Sulawesi], Indonesia.

Palaemonetes hornelli Kemp, S. (1925). Notes on Crustacea Decapoda in the Indian Museum. XVII—On various Caridea. *Rec. Indian Mus.* **27**(4): 249–343 figs 1–24 [318 figs 14–15].
Type data: syntypes RMNH D7692 ♀, ZSI* (probable depository institution).
Type locality: Silavathurai Lagoon, Tuticorin, S. India.

Taxonomic decision for synonymy: Bruce, A.J. (1987). Records of three Palaemonid shrimps new to the Australian fauna. *Beagle, Rec. N.T. Mus. Arts Sci.* **4**(1): 57–60 [58].

Distribution: NT (N coast); Indo-west Pacific Oceans (southern India, Singapore, and Indonesia).
Ecology: low intertidal, marine, shallow subtidal.

Leandrites stenopus Holthuis, 1950

Leandrites stenopus Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [40 fig. 6].
Type data: holotype ZMA.
Type locality: off Java, Indonesia.

Distribution: QLD (NE coast); central Indo-Malaysian region (Indonesia, South China Sea).
Ecology: continental shelf, subtidal; sandy mud substrate, depth 15–56 m.
Reference: Bruce, A.J. (2000). The rediscovery of *Leandrites stenopus* Holthuis, 1950 (Crustacea: Palaemoninae), from Lucinda, Queensland. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **16**: 83–88 (first Australian record).

Macrobrachium Bate, 1868

Macrobrachium Bate, C.S. (1868). On a new genus with 4 new species of freshwater prawns. *Proc. Zool. Soc. Lond.* **1868**: 363–368 pl. 30–31 [363] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1959). Opinion 564. Suppression under the Plenary Powers of the scientific name *squilla* Linnaeus, 1758, as published in the combination *Cancer squilla*, and designation under the same Plenary Powers of *Palaemon adspersus* Rathke, 1837, to be the type species of the genus *Palaemon* Weber, 1795, and matters incidental thereto (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **20**: 337–358; gender neuter].
Type species: *Macrobrachium americanum* Bate, 1868 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [558].

Parapalaemon Ortmann, A.E. (1891). Die Decapoden-Krebse des Strassburger museums, mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z. Z. im Strassburger Museum aufbewahrten Formen, II: Versuch einer Revision der Gattungen *Palaemon* sens. strict. und *Bithynis*. *Zool. Jahrb. Syst.* **5**: 693–750 pl. 47 [696, 731] [gender masculine].
Type species: *Palaemon dolichodactylus* Hilgendorf, 1879 (= *Palaemon scabriculus* Heller, 1862) by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [53].

Macroterocheir Stebbing, T.R.R. (1908). South African Crustacea, Pt IV. *Ann. S. Afr. Mus.* **6**(1): 1–96 pls 1–15 [39] [gender masculine].
Type species: *Palaemon lepidactylus* Hilgendorf, 1878 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [109].

Extralimital distribution: pantropical and subtropical, occasionally temperate, adults mostly in fresh, less commonly in brackish water, rarely marine, many species with larval development requiring marine influence, juveniles and larvae of some species tolerate seawater.

Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [8] (world checklist).

Macrobrachium australe (Guérin-Méneville, 1838)

Palaemon australe Guérin-Méneville, F.É. (1838). Première division. Crustacés, Arachnides et Insectes. *In* Duperrey, L.J. (1830) [1838]. *Voyage autour du monde, exécuté par Ordre du Roi sur la corvette de La Majesté, La Coquille*, pendant les années 1822, 1823, 1824 et 1825 ... Zoologie, par M. Lesson. Tome 2, 2e Partie. Arthus Bertrand, Paris (separately paginated article). [accompanied by: *Voyage autour du monde ... Histoire naturelle, Zoologie. Atlas.* Arthus Bertrand, Paris. Plates numbered consecutively by taxonomic group; Crustacés, 1–5 [1826]] [37] [1830 on title page].
Type data: type status and whereabouts unknown.
Type locality: Tahiti.

Palaemon sundaicus Heller, C. (1862). Beiträge zur näheren kenntnis der Macrouren. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **45**(1): 389–426, 2 pls [415 pl. 2 figs 38, 39].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Java.

Palaemon danae Heller, C. (1865). Crustaceen. *In, Reise der Österreichischen Fregatte 'Novara' um die Erdre, in den Jahren 1857, 1858, 1859*, unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zool. Theil. 2 (3) pp. 1–280 pls 1–25 [120 pl. 11 fig. 3].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Sydney, NSW.

Palaemon dispar Martens, E. von (1868). Über einige ostasiatische Susswasserthiere. *Arch. Naturgesch.* **34**(1): 1–64 pl. 1 [41].

Type data: type status and whereabouts unknown (museum not determined).
Type locality: Pulau Adonara, east of Flores, Indonesia.

Palaemon alphonsianus Hoffmann, C.K. (1874). Crustacés et Echinodermes de Madagascar et de l'île de la Réunion. pp. i–xvii, i–xxxi, ix–xvi, 1–58 pls 1–10 *in* Pollen, F.P.L. & Van Dam, D.C. (eds) *Recherches sur la Fauna de Madagascar et de ses dépendances,* part 5. Leiden : E.J. Brill [33 pl. 9 figs 63–65].
Type data: type status unknown.
Type locality: Le Réunion.

Palaemon parvus Hoffmann, C.K. (1874). Crustacés et Echinodermes de Madagascar et de l'île de la Réunion. pp. i–xvii, i–xxxi, ix–xvi, 1–58 pls 1–10 *in* Pollen, F.P.L. & Van Dam, D.C. (eds) *Recherches sur la Fauna de Madagascar et de ses dépendances,* part 5. Leiden : E.J. Brill [35 pl. 7 fig. 59].
Type data: type status unknown.
Type locality: 'Nosy Faly', Madagascar.

Palaemon malliardi Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens*. Berlin pp. 137–178 pls 15–18 [166 pl. 18 figs 1–3].
Type data: type status unknown MB* (presumed depository institution).
Type locality: Mauritius.

Palaemon (Eupalaemon) ustulatus Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282 [241].
Type data: type status unknown MCG*.
Type locality: Rigo, SE Papua.

Leander lepidus de Man, J.G. (1915). Zur Fauna von Nord-Neuguinea. Nach den Sammlungen von Dr. P.N. van Kampen und K. Gjellerup in den Jahren 1910–1911. Macrura. *Zool. Jb.* **38**: 385–458 pls 27–29 [410 pl. 28 fig. 6].
Type data: syntypes RMNH D2953 3 specimens.
Type locality: Netherlands, New Guinea [Indonesia, Irian Jaya], mouth of small river near Oinake.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [23].

Distribution: NSW (SE coastal); Indo-west Pacific Oceans.
Ecology: euryhaline, adults in lowland and mid-catchment freshwaters.
Reference: Davie, P., this work (records of this species from Australia are based on the type locality, Sydney, of the junior subjective synonym, *Palaemon danae* (Heller, 1865). This locality appears to be erroneous. There have been no further records from the type locality or from Australia. Riek (1951) considered *Palaemon danae* (Heller, 1865) a valid species different from *M. australe*, but his description of the morphology of the fingers of the chelipeds does not match Heller's type material as redescribed by Holthuis (1950). Unfortunately no material can be located that was identified by Riek as *M. danae*, and its status remains uncertain (J.W. Short pers. comm.)).

Macrobrachium australiense Holthuis, 1950

Palaemon australis Ortmann, A.E. (1891). Die Decapoden-Krebse des Strassburger museums, mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z. Z. im Strassburger Museum aufbewahrten Formen, II: Versuch einer Revision der Gattungen *Palaemon* sens. strict. und *Bithynis*. *Zool. Jahrb. Syst.* **5**: 693–750 pl. 47 [709] [junior homonym of *Palaemon australis* Guérin-Méneville, 1838 (= *M. australe*)].
Type data: syntypes MS*.
Type locality: Rockhampton, Peak Downs and Gayndah, QLD.

Macrobrachium australiense Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [13, 174] [*nom. nov.* for *Palaemon australis* Ortmann, 1891].

Macrobrachium adscitum adscitum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 363 fig. 3].
Type data: holotype AM P3095 ♂, paratypes AM P39623 ♀ (as allotype), AM P39624 41 specimen.
Type locality: Accommodation Creek, near Ballandean (SE QLD).

Macrobrachium atactum atactum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 364 fig. 5].
Type data: holotype AM P12007 ♂, paratypes AM P12008 ♀ (as allotype), AM P12009 10 specimens.
Type locality: Mary River at Conondale, QLD.

Macrobrachium atactum ischnomorphum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 364 fig. 6].
Type data: holotype AM P11995 ♂, paratypes AM P11996 ♀ (as allotype), AM P11997 9 specimens.
Type locality: Elimbah Creek, Elimbah, QLD.

Macrobrachium atactum sobrinum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 364 fig. 7].
Type data: holotype AM P11998 ♂, paratypes AM P11999 ♀ (as allotype), AM P12000 67 specimens.
Type locality: Muttaburra, QLD.

Macrobrachium australiense eupharum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 365 fig. 8].
Type data: holotype AM P12001 ♂, paratypes AM P12002 ♀ (as allotype), AM P12003.
Type locality: Burdekin River, Macrossan, QLD.

Macrobrachium australiense cristatum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 366 fig. 9].
Type data: holotype AM P12004 ♂, paratypes AM P12005 ♀ (as allotype), AM P12006.
Type locality: Pallal, Horton River, near Bingara, NSW.

Macrobrachium australiense crassum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [366 fig. 11].
Type data: holotype AM P12010 ♂, paratypes AM P12011 ♀ (as allotype), AM P12012 2 specimens.
Type locality: Cairns, QLD.

Taxonomic decision for synonymy: J.W. Short, this work.

Distribution: NSW (Bulloo River basin, Lake Eyre basin, Murray-Darling basin, SE coastal), NT (Lake Eyre basin, N Gulf), QLD (Bulloo River basin, Lake Eyre basin, Murray-Darling basin, N Gulf, NE coastal), WA; known only from limital area.
Ecology: freshwater.
Reference: Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [63] (colour picture).

Macrobrachium bullatum Fincham, 1987

Macrobrachium bullatum Fincham, A.A. (1987). A new species of *Macrobrachium* (Decapoda, Caridea, Palaemonidae) from Northern Territory, Australia and a key to Australian species of the genus. *Zool. Scr.* **16**(4): 351–354 [351 fig. 1].
Type data: holotype NTM Cr.003097 ♂, paratypes NTM AS.Cr.003085 ♀, BMNH 1986.384 ♂.
Type locality: Magela Creek, Alligator Rivers region, NT.

Distribution: NT (N coastal), WA (N coastal); known only from limital area.
Ecology: freshwater.

Macrobrachium equidens (Dana, 1852)

Palaemon equidens Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [26].
Type data: holotype MZUT Cr.957, paratype(s) MZUT Cr.964*.
Type locality: Singapore.

Palaemon sundaicus bataviana de Man, J.G. (1897). Bericht über die von herrn Schiffscapitän Storm zu Atjeh, an den westlichen Küsten von Malakka, Bornio und Celebes sowie in der Java-See gesammelten Decapoden und Stomatopoden (Part 5). *Zool. Jahrb. Syst.* **9**: 725–788 figs 60–73 [784].
Type data: syntypes RMNH D2433 3 ovigerous ♀.
Type locality: Indonesia, Java, river near Batavia [Jakarta].

Palaemon (Eupalaemon) sundaicus brachydactyla Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282 [238].
Type data: holotype MCG ♂ (presumed museum of deposition).
Type locality: Amboina [Ambon], Indonesia.

Palaemon (Eupalaemon) acanthosoma Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282 [242].
Type data: holotype MCG ♂ (presumed museum of deposition).
Type locality: 'Katau' [?Binaturi River, near Fly River], Papua New Guinea.

Palaemon sundaicus demani Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282.

Palaemon (Eupalaemon) nasutus Nobili, G. (1903). Crostacei di Singapore. *Boll. Mus. Zool. Comp. Torino* **18**(455): 1–39 1 pl. [9].
Type data: type status unknown MSNT*.
Type locality: Singapore.

Palaemon sulcatus Henderson, J.R. & Matthai, G. (1910). On certain species of *Palaemon* from South India. *Rec. Indian Mus.* **5**: 277–305 pls 15–18 [289 pl. 41 figs 4a–g].
Type data: syntypes IM 1 ♂ 5 ♀ *.
Type locality: Cochin.

Palaemon delagoae Stebbing, T.R.R. (1915). South African Crustacea (Part VIII). *Ann. S. Afr. Mus.* **15**: 57–104 pls 8–25 [74 pl. 80].
Type data: holotype SAM A2196 1 specimen.
Type locality: Delagoa Bay.

Urocaridella borradailei Stebbing, T.R.R. (1923). Crustacea of Natal. *Rep. Fish. Mar. Biol. Surv. S. Afr.* **3**(3): 1–16 pls 10–16 [8].
Type data: type status unknown SAM*.
Type locality: Mhlatuze River, Natal, South Africa.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [25].

Distribution: NT (N coast); Indo-Pacific Oceans (South Africa, southern India to Fukien Province, China, Philippines, Indonesia, and Palau islands eastward to New Britain, and the Solomon Islands).
Ecology: estuarine; high salinity brackish and salt water, rarely into freshwater.
References: Johnson, D.S. (1973) Notes on some species of the genus *Macrobrachium* (Crustacea: Decapoda: Caridea: Palaemonidae). *J. Sing. Acad. Sci.* **3**(3): 273–291 [283] (considered that all records of *M. equidens* from East Africa and Madagascar belong to *M. rude* (Heller, 1862); Powell, G.B. (1987). Occurrence of the Indo-Pacific prawn *Macrobrachium equidens* in west Africa (Crustacea: Decapoda: Palaemonidae). *Rev. Hydrobiol. Tropicale* **19**(2): 75–79 [75] (*M. rude* appears to have been ointroduced to West Africa).

Macrobrachium handschini (J. Roux, 1933)

Palaemon (Macrobrachium) handschini Roux, J. (1933). Note sur quelques Crustacés décapodes d'eau douce provenant de l'Australie Septentrionale. *Revue Suisse Zool.* **40**: 343–348 [345].
Type data: lectotype NHMB ♂, paralectotype(s) NHMB 1 juvenile 4 ♂, NTM 1 ♂.
Subsequent designation: Bruce, A.J. (1992). A re-description of *Macrobrachium handschini* (Roux, 1933) (Crustacea: Decapoda: Palaemonidae). *Hydrobiol.* **231**: 131–139 [137].
Type locality: Katherine River, N Australia.

Macrobrachium glypticum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [363 fig. 4].
Type data: holotype AM P11992 ♂, paratypes AM P11993 ♀ (as allotype), AM P11994 3 specimens.
Type locality: Coen, N QLD.

Taxonomic decision for synonymy: J.W. Short, this work.

Distribution: NT (N coastal, N Gulf), QLD (N Gulf, NE coastal), WA (N coastal); Papua New Guinea.
Ecology: freshwater.

Macrobrachium idae (Heller, 1862)

Ida's River Prawn, Orana River Prawn (FAO)

Palaemon idae Heller, C. (1862). Beiträge zur näheren kenntnis der Macrouren. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **45**(1): 389–426, 2 pls [416 pl. 2 figs 40, 41].
Type data: syntypes NHMW* (probable depository institution).
Type locality: Borneo.

Palaemon (Eupalaemon) ritsemae de Man, J.G. (1897). Bericht über die von herrn Schiffscapitän Storm zu Atjeh, an den westlichen Küsten von Malakka, Bornio und Celebes sowie in der Java-See gesammelten Decapoden und Stomatopoden (Part 5). *Zool. Jahrb. Syst.* **9**: 725–788 figs 60–73 [774].
Type data: syntypes ZMA*.
Type locality: Atjeh, NW Sumatra, Indonesia.

Palaemon (Eupalaemon) idae subinermis Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282 [237].
Type data: syntypes MCG*.
Type locality: San Guiseppe R., near Innawi, Meheo District, Papua New Guinea.

Palaemon (Eupalaemon) mariae Coutière, H. (1900). Sur quelques Macroures des eaux douces de Madagascar. *C. R. Hebd. Séances Acad. Sci.* **130**: 1266–1268 [1266].
Type data: syntypes MNHP*.
Type locality: Madagascar.

Palaemon idae inermis Coutière, H. (1901). Les Palaemonidae des eaux douces de Madagascar. *Ann. Sci. Nat. Zool.* **12**: 249–342 [304, 306].
Type data: syntypes MNHP*.
Type locality: Madagascar.

Palaemon eupalaemon robustus de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [771 pl. 24 fig. 48].
Type data: syntypes whereabouts unknown*.
Type locality: Halmahera, Indonesia.

Taxonomic decision for synonymy: Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [142].

Distribution: QLD (NE coastal); Jeannie River basin to Herbert River basin; Indo-West Pacific region (east Africa to the Philippines, New Guinea and the Admiralty Islands).
Ecology: estuarine, freshwater; euryhaline, salinity 0–33 ppt, adults predominantly in lowland waterholes and billabongs, tidal rivers and creeks.
Reference: Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [64] (colour photograph).

Macrobrachium intermedium (Stimpson, 1860)

Striped Prawn (Aust), Striped River Prawn (FAO)

Leander intermedius Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [41].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Port Jackson, NSW.

Distribution: NSW (Central E coast, Lower E coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Central W coast, Lower W coast, SW coast); Indo-west Pacific Oceans.
Ecology: estuarine, gregarious, littoral, sublittoral; usually among seagrass and algae, depth to 17 m.
References: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs (illustration and description); Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261 [93]; Boulton, A.J. & Knott, B. (1984). Morphological and Electrophoretic Studies of the Palaemonidae (Crustacea) of the Perth Region, Western Australia. *Aust. J. Mar. Freshwat. Res.* **35**(6): 769–784 (considered it unlikely that this species belongs in *Macrobrachium*).

Macrobrachium lar (Fabricius, 1798)

Giant Jungle Prawn (Aust), Monkey River Shrimp (FAO)

Palaemon lar Weber, F. (1795). *Nomenclator entomologicus secundum entomologian systematicam ill. Fabricii, adjectis speciebus recens detectis et varietatibus.* Chiloni et Hamburgi : C.E. Bohn viii 171 pp. [94] [*nom. nud.*].

Palaemon lar Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [402].
Type data: syntypes (probable) BMNH* (if still extant, see Zimsen, E. (1964). Crustacea. pp. 643–656 *in, The Type Material of I.C. Fabricius*. Copenhagen : Munksgaard).
Type locality: 'in India Dom. Daldorff' [probably from Tranquebar, SE India].

Palaemon ornatus Olivier, A.G. (1811). Palémon. pp. 652–667 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique. Histoire Naturelle. Insectes.* Paris : H. Agasse Vol. 8 722 pp. [660].
Type data: syntypes MNHP*.
Type locality: Australia (as New-Holland).

Palaemon tridens White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [78] [*nom. nud.*].

Palaemon spectabilis Heller, C. (1862). Neue Crustaceen, gesammelt während der Weltumseglung der k.k. Fregatte Novarra: Zweiter vorläufiger Bericht. *Verh. Zool.-Bot. Ges. Wien* **12**: 519–528 [527].
Type data: type status unknown MB (presumed museum of deposition).
Type locality: Tahiti.

Palaemon vagus Heller, C. (1862). Beiträge zur näheren kenntnis der Macrouren. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **45**(1): 389–426, 2 pls [417 pl. 2 figs 42, 43].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Amboina [Ambon], Indonesia.

Palaemon ruber Hess, W. (1865). Beiträge zur Kenntniss der Decapoden-Krebse Ost-Australiens. *Arch. Naturgesch.* **31**: 127–173 pls 6–7 [165 pl. 7 fig. 20].
Type data: type status unknown ZMG (presumed lost, not present in the Hess collection transferred to SMF).
Type locality: Fiji Islands.

Palaemon mayottensis Hoffmann, C.K. (1874). Crustacés et Echinodermes de Madagascar et de l'île de la Réunion. pp. i–xvii, i–xxxi, ix–xvi, 1–58 pls 1–10 *in* Pollen, F.P.L. & Van Dam, D.C. (eds) *Recherches sur la Fauna de Madagascar et de ses dépendances,* part 5. Leiden : E.J. Brill [32 pl. 9 figs 61, 62].
Type data: syntypes RMNH D1081 9 specimens.
Type locality: Comoros, Mayotte Island, NW of Madagascar.

Palaemon reunionnensis Hoffmann, C.K. (1874). Crustacés et Echinodermes de Madagascar et de l'île de la Réunion. pp. i–xvii, i–xxxi, ix–xvi, 1–58 pls 1–10 *in* Pollen, F.P.L. & Van Dam, D.C. (eds) *Recherches sur la Fauna de Madagascar et de ses dépendances,* part 5. Leiden : E.J. Brill [33 pl. 9 figs 66, 67].
Type data: syntypes RMNH D1503 11 specimens* (in the old catalogue a lot 'RMNH D1096' is present, and has the same data as RMNH D1503, possibly RMNH D1096 was incorporated into lot RMNH D1503).
Type locality: Indian Ocean, Réunion.

Palaemon madagascariensis Hoffmann, C.K. (1874). Crustacés et Echinodermes de Madagascar et de l'île de la Réunion. pp. i–xvii, i–xxxi, ix–xvi, 1–58 pls 1–10 *in* Pollen, F.P.L. & Van Dam, D.C. (eds) *Recherches sur la Fauna de Madagascar et de ses dépendances,* part 5. Leiden: E.J. Brill [35 pl. 7 fig. 58].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Nosy Fali, NW Madagascar.

Leander dionyx Nobili, G. (1905). Decapodi e Isopodi della Nuova Guinea Tedesca, racolti dal Sign. L. Biro. *Ann. Hist.-Nat. Mus. Natn. Hung.* **3**: 480–507 figs 1, 2 pls 12, 13 [482 pl. 12 fig. 2].
Type data: holotype HNHM (lost, see Forró, L. & Müller, P. (1985). An annotated list of Decapoda material collected by L. BIRÓ in New Guinea. *Misc. Zool. Hung.* **3**: 77–80 [78].
Type locality: Bogadjim [Stephansort], Papua New Guinea.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [30].

Distribution: NT (N Gulf), QLD (NE coast); Indo-west Pacific Oceans.
Ecology: freshwater; adults in seasonally torrential, rainforest streams.
References: Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [176]; Short, J.W. & Meek, P. (2000). New records of *Macrobrachium* (Crustacea: Decapoda: Palaemonidae) from Christmas Island, Indian Ocean. *Rec. West. Aust. Mus.* **20**: 81–86 [82] (diagnosis and new record); Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [64] (colour photograph).

Macrobrachium latidactylus (Thallwitz, 1891)

Broad-fingered River Prawn (Aust), Scissor River Prawn (FAO)

Palaemon latidactylus Thallwitz, J. (1891). Decapoden-Studien insbesondere basirt auf A.B.Meyer's Sammlungen im Ostindischen Archipel, nebst einer aufzahlung der Decapoden und Stomatopoden des Dresdener Museums. *Abh. Ber. K. Zool. Anthropol.-Ethnogr. Mus. Dres.* **1890–91**(3): 1–56 1 pl. [17].
Type data: type status unknown MTKD* (probably destroyed in WWII).
Type locality: N Sulawesi (as Celebes).

Palaemon (Eupalaemon) endehensis de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien.* Leiden : E.J. Brill Vol. 2 [465 pl. 27 fig. 42].
Type data: syntypes RMNH D2583 1 specimen.
Type locality: Nanga Ba near Endeh, Flores, Indonesia.

Palaemon (Macrobrachium) lampropus de Man, J.G. (1892). Decapoden des Indischen Archipels. pp. 265–527 pls 15–29 *in* Weber, M. (ed.) *Zoologische Ergebnisse einer Reise nach Niederländisch Ost-Indien.* Leiden : E.J. Brill Vol. 2 [493 pl. 29 fig. 49].
Type data: syntypes RMNH D2570 3 specimens.
Type locality: waterfall near Bantimurong near Maros, Celebes [Sulawesi], Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [31].

Distribution: QLD (NE coast); Malaya, Indonesia, Taiwan, and Philippines.
Ecology: estuarine, inshore marine, lowland freshwater; adults common in tidal freshwater, larval development in sea or brackish water.

Macrobrachium microps Holthuis, 1978

Macrobrachium microps Holthuis, L.B. (1978). Zoological results of the British Speleological Expedition to Papua New Guinea 1975. 7. Cavernicolous shrimps (Crustacea Decapoda, Natantia) from New Ireland and the Philippines. *Zool. Meded. (Leiden)* **53**: 209–224 [210 figs 1, 2].
Type data: holotype MSB ♂*.
Type locality: Danim Cave, near Konogusgus, New Ireland.

Distribution: Christmas Island (Indian Ocean); NE Indian and SW Pacific regions—New Ireland, Samoa, New Caledonia.
Ecology: anchialine, caves, freshwater; obligate hypogeal species.
References: Bruce, A.J. & Iliffe, T.M. (1993). The second occurrence of the troglobitic shrimp *Macrobrachium microps* Holthuis (Crustacea, Decapoda, Palaemonidae), in Samoa. *Internat. J. Speleol.* **22**(1–4): 83–96 (redescription and full illustration); Short, J.W. & Meek, P. (2000). New records of *Macrobrachium* (Crustacea: Decapoda: Palaemonidae) from Christmas Island, Indian Ocean. *Rec. West. Aust. Mus.* **20**: 81–86 [82] (diagnosis, figures, and Australian territorial record).

Macrobrachium novaehollandiae (de Man, 1908)

Palaemon (Eupalaemon) novaehollandiae de Man, J.G. (1908). Description of a species of *Palaemon* from near Sydney, probably either a new species or the adult form of *Palaemon (Eupalaemon) danae* Heller. *Ann. Mag. Nat. Hist.* **1**: 363–370 pl. 16 [363].
Type data: holotype ZMA*.
Type locality: Sydney, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), WA (NW coast); known only from limital area.
Ecology: estuarine, inshore marine.
Reference: Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [17].

Macrobrachium rosenbergii (de Man, 1879)

Giant River Prawn (FAO)

Palaemon rosenbergii de Man, J.G. (1879). On some species of the genus *Palaemon* Fabr. with descriptions of two new forms. *Notes Leyden Mus.* **1**: 165–184 [167].
Type data: holotype RMNH D1097 1 specimen.
Type locality: Andai, Netherlands New Guinea [Irian Jaya, Indonesia].

Palaemon whitei Sharp, B. (1893). Catalogue of the crustaceans in the Museum of the Academy of Natural Sciences of Philadelphia. *Proc. Acad. Nat. Sci. Phila.* **1893**: 104–127 [122] [Guérin-Méneville manuscript name].
Type data: type status unknown ANSP*.
Type locality: Bombay, India.

Palaemon spinipes Schenkel, E. (1902). Beitrag zur Kenntnis der Dekapodenfauna von Celebes. *Verh. Naturf. Ges. Basel* **13**: 485–585 pls 7–13 [501 pl. 9 fig. 7].
Type data: syntypes whereabouts unknown ♂ (museum not determined).
Type locality: Kema, Minahassa, NE Sulawesi (as Celebes).

Palaemon dacqueti Sunier, A.L.J. (1925). Twee Mededeelingen over Palaemoniden. *Tijdschr. Ned. Dierk. Vereen. (2)***19**: cxv–cxvii [cxvii] [as *Palaemon d'Aqueti*].
Type data: lectotype RMNH D1065 1 specimen, paralectotypes RMNH D1064 2 specimens, RMNH D1066 ♂ 3♀, RMNH D1068 2 specimens, RMNH D1069 1 specimen, RMNH D2435 3♂, RMNH D2437 2♂ 9♀, RMNH D2439 ♂, RMNH D2440 ♂, RMNH D2446 ♀, RMNH D2453 2♀, RMNH D2475 ♂, RMNH D5482 ♂ dry.
Subsequent designation: Holthuis, L.B. (1995). Notes on Indo-West Pacific Crustacea Decapoda III to IX. *Zool. Meded. (Leiden)* **69**(13): 139–151 figs 1–2 [148].
Type locality: Batavia [Jakarta], Java, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [36].

Distribution: Christmas Island (Aust. Terr.), NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (NW coast); India to southern China, Philippines, Indonesia, introduced to Hawai'i.
Ecology: catadromous, estuarine; fresh and brackish water, sometimes marine (coastal), in non-torrential streams.
Reference: Holthuis, L.B. (1995). Notes on Indo-West Pacific Crustacea Decapoda III to IX. *Zool. Meded. (Leiden)* **69**(13): 139–151 figs 1–2 [148] (discussion of names available for potential subspecies).

Macrobrachium tolmerum Riek, 1951

Macrobrachium tolmerum Riek, E.F. (1951). The Australian freshwater prawns of the family Palaemonidae. *Rec. Aust. Mus.* **22**(4): 358–367 [360, 362 fig. 1].
Type data: holotype AM P11988 ♀, paratypes AM P11989 ♂ (as allotype), AM P11990 12 specimens.
Type locality: Black River, Macrossan, QLD, Davie, P., this work (stated locality appears to be erroneous, true locality probably north of Townsville, N QLD).

Distribution: NSW (Central E coast), QLD (NE coast); known only from limital area.
Ecology: euryhaline, freshwater.
Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland*. Queensland Museum : South Brisbane 368 pp. [63] (colour photograph).

Palaemon Weber, 1795

Palaemon Weber, F. (1795). *Nomenclator entomologicus secundum entomologian systematicam ill. Fabricii, adjectis speciebus recens detectis et varietatibus.* Chiloni et Hamburgi : C.E. Bohn viii 171 pp. [94] [gender masculine].
Type species: *Palaemon adspersus* Rathke, 1837 by subsequent designation, see Latreille, P.A. (1810). *Considérations générales sur l'ordre naturel des animaux composant les classes de Crustacés, des Arachnides, et des Insectes*, avec un tableau méthodique de leurs genres, disposés en familles. Paris 444 pp.

Palaemon Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [378, 402] [name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1959). Opinion 564. Suppression under the Plenary Powers of the scientific name *squilla* Linnaeus, 1758, as published in the combination *Cancer squilla*, and designation under the same Plenary Powers of *Palaemon adspersus* Rathke, 1837, to be the type species of the genus *Palaemon* Weber, 1795, and matters incidental thereto (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **20**: 337–358; gender masculine].
Type species: *Cancer squilla* Linnaeus, 1758 by subsequent designation, see Latreille, P.A. (1810). *Considérations générales sur l'ordre naturel des animaux composant les classes de Crustacés, des Arachnides, et des Insectes*, avec un tableau méthodique de leurs genres, disposés en familles. Paris 444 pp. [422].

Palaeander Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [5, 8, 55] [gender masculine].
Type species: *Palaemon elegans* Rathke, 1837 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [112].

Extralimital distribution: worldwide in tropical and temperate salt, brackish and fresh water.
Generic references: Bruce, A.J. (1987). Records of three Palaemonid shrimps new to the Australian fauna. *Beagle, Rec. N.T. Mus. Arts Sci.* **4**(1): 57–60 [59–60] (key to Australian species); Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [40] (key to Philippines-Indonesian species of *Palaemon*).

Palaemon concinnus Dana, 1852

Mangrove Prawn (FAO)

Palaemon concinnus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [26].
Type data: type status unknown (presumed lost).
Type locality: Viti Archipelago [Fiji].

Palaemon exilimanus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [26].
Type data: type status unknown (presumed lost).
Type locality: Viti Archipelago [Fiji].

Leander longicarpus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [40].
Type data: type status unknown (probably lost).
Type locality: Hong Kong.

Palaemon lagdaoensis Blanco, G.J. (1939). Two new Decapods from the Philippines. *Philipp. J. Sci.* **69**: 167–172 2 pls [167 pl. 1].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Cagayan River, Philippines.

Taxonomic decision for synonymy: Short, J.W. (1995). First record of *Palaemon concinnus* Dana, 1852 (Crustacea: Decapoda: Palaemonidae) from Australia. *Mem. Qld Mus.* **38**(2): 622 [622].

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: estuarine, freshwater, littoral, marine.

Palaemon debilis Dana, 1852

Palaemon debilis Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [26].
Type data: syntypes BMNH 61.44 2 specimens.
Type locality: Hawai'i (Sandwich Islands).

Palaemon debilis attenuatus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [26].
Type data: type status unknown (presumed lost).
Type locality: Hawai'i.

Leander gardineri Borradaile, L.A. (1901). Land crustaceans. pp. 64–100 *in* Gardiner, J.S (ed.) *Fauna and Geography of the Maldive and Laccadive Archipelagoes.* Cambridge : Cambridge University Press [98].
Type data: syntypes ZMUC 20.vi.00.
Type locality: Ekasdu, Miladummadulu Atoll, Maldive Islands.

Leander beauforti Roux, J. (1923). Crustacés d'eau douce de l'Archipel Indo-Australian. *Capita Zool.* **2**(2): 1–22 2 figs [18 figs 1, 2].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Kairatu, Ceram, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [40].

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans.
Ecology: estuarine, freshwater, littoral, marine.

Palaemon litoreus (McCulloch, 1909)

Shore Prawn

Leander litoreus McCulloch, A.R. (1909). Studies in Australian Crustacea, No. 2. *Rec. Aust. Mus.* **7**(4): 305–314 figs 16–17 pls 88–89 [308 fig. 16].
Type data: syntypes AM P2155, AM P2194 2 specimens.
Type locality: coast near Sydney, NSW.

Distribution: NSW (Lower E coast), SA (S Gulfs coast); known only from limital area.
Ecology: littoral, rock bottom, rock pools.
Reference: Holthuis, L.B. (1952). On some Indo-west Palaemoninae (Crustacea Decapoda Caridea). *Zool. Meded. (Leiden)* **31**: 201–211 pl. 15 [205].

Palaemon macrodactylus Rathbun, 1902

Migrant Prawn (FAO)

Palaemon macrodactylus Rathbun, M.J. (1902). Japanese stalk-eyed Crustaceans. *Proc. U.S. Natn. Mus.* **26**(1307): 23–55 figs 1–24 [52].
Type data: syntypes USNM 26162 ♀.
Type locality: Aomori, Rikuoku [Ryukyu Islands].

Distribution: Introduced (from China, Korea, Japan, USA), NSW (Lower E coast), NT (N coast); confirmed records from Mannering Lake, NSW, and Darwin Harbour, unconfirmed reports from vicinity of Adelaide, SA; Indo-Pacific Oceans.
Ecology: estuarine.
References: Furlani, D.M. (1996). *A guide to the introduced marine species in Australian waters.* Hobart : Technical Report Centre for Research on Introduced Marine Pests, C.S.I.R.O. Vol. 5; Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [302] (range extension).

Palaemon semmelinkii (de Man, 1881)

Leander semmelinkii de Man, J.G. (1881). Carcinological studies in the Leyden Musesum. No. 1. *Notes Leyden Mus.* **3**(27): 121–144 [137].
Type data: syntypes RMNH D1029 many specimens.
Type locality: Indonesia, Celebes [Sulawesi], off Makassar [Ujung Pandang].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria); Indo-west Pacific Oceans (India through Indonesia to Philippines).
Ecology: marine, low intertidal, shallow subtidal; sometimes brackish water.
Reference: Bruce, A.J. (1987). Records of three Palaemonid shrimps new to the Australian fauna. *Beagle, Rec. N.T. Mus. Arts Sci.* **4**(1): 57–60 [58].

Palaemon serenus (Heller, 1862)

Rock-pool Prawn

Palaemon serenus Heller, C. (1862). Neue Crustaceen, gesammelt während der Weltumseglung der k.k. Fregatte Novarra: Zweiter vorläufiger Bericht. *Verh. Zool.-Bot. Ges. Wien* **12**: 519–528 [527].
Type data: type status unknown NHMW* (probable depository institution).
Type locality: Sydney, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: littoral, rock pools, sublittoral.
References: Holthuis, L.B. (1952). On some Indo-west Palaemoninae (Crustacea Decapoda Caridea). *Zool. Meded. (Leiden)* **31**: 201–211 pl. 15 [204]; Davie, P. (1998). *Wild Guide to Moreton Bay.* Wildlife and habitats of a beautiful Australian coast — Noosa to the Tweed. Brisbane : Queensland Museum xxiv 408 pp. [146] (colour picture).

Palaemon serrifer (Stimpson, 1860)

Barred Estuarine Shrimp

Leander serrifer Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [41].
Type data: type status unknown (probably lost).
Type locality: Hong Kong and O Shima [Ryukyu Islands, Japan].

Leander fagei Yu, S.C. (1930). Note sur les crevettes chinoises appartenant au genre *Leander* Desm. avec description de nouvelles espèces. *Bull. Soc. Zool. Fr.* **55**: 553–573 figs 1–4 [555, 561].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Shandong Peninsula, China.

Leander serrifer longidactylus Yu, S.C. (1930). Note sur les crevettes chinoises appartenant au genre *Leander* Desm. avec description de nouvelles espèces. *Bull. Soc. Zool. Fr.* **55**: 553–573 figs 1–4 [555, 570 fig. 4B'C'].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: 'Yangmotoa' Peitaiho, 'Tangkou' and Yent'ai (Chefoo), China, see Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the

Albatross Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [41].

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [41].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: inshore, estuarine, low intertidal, shallow subtidal; among rocks and fouling in lower estuarine and seagrass areas, and sheltered rocky shores.
Reference: Davie, P. (1998). *Wild Guide to Moreton Bay.* Wildlife and habitats of a beautiful Australian coast — Noosa to the Tweed. Brisbane : Queensland Museum xxiv 408 pp. [96] (colour picture).

Palaemonetes Heller, 1869

Palaemonetes Heller, C. (1869). Zur näheren Kenntnis der in den süäen Gewässern des südlichen Europas vorkommenden Meereskrustazeen. *Z. Wiss. Zool.* **19**: 156–162 [157, 161] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Palaemon varians* Leach, 1814 by monotypy.

Palaemonopsis Stimpson, W. (1871). Notes on North American Crustacea in the Museum of the Smithsonian Institution, No. III. *Ann. Lyc. Nat. Hist. N.Y.* **10**(4–5): 92–136 [128] [gender feminine].
Type species: *Palaemonopsis carolinus* Stimpson, 1871 (= *Palaemon vulgaris* Say, 1818) by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [129].

Allocaris Sollaud, E. (1911). *Allocaris sinensis* n.g., n.sp., crevette des eaux ouces des environs de Pékin. Infusoire commensal de ce Crustacé. *Bull. Mus. Natn. Hist. Nat. Paris* **17**: 50–56 figs 1–3 [50] [gender feminine].
Type species: *Allocaris sinensis* Sollaud, 1911 by monotypy.

Alaocaris Holthuis, L.B. (1949). Note on the species of *Palaemonetes* (Crustacea Decapoda) found in the United States of America. *Proc. Konin. Neder. Akad. Weten.* **52**: 87–95 [88, 89] [gender feminine].
Type species: *Palaemonetes antrorum* Benedict, 1896 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [114].

Extralimital distribution: worldwide.

Palaemonetes atrinubes Bray, 1976

Palaemonetes atrinubes Bray, D.M. (1976). A review of two Western Australian shrimps of the genus *Palaemonetes*, *P. australis* Dakin, 1915 and *P. atrinubes* sp. nov. (Decapoda, Palaemonidae). *Rec. West. Aust. Mus.* **4**: 65–84 [76].
Type data: holotype WAM 106-75 ♀ adult, paratypes WAM 456-73, WAM 515-73, WAM 519-73, WAM 94-75, WAM 95-75, WAM 105-75, WAM 98-75, 104-75 57♂ 60♀ 6 juveniles.
Type locality: Lower Swan River.

Distribution: QLD (NE coast), WA (Central W coast, Lower W coast, NW coast); New Caledonia.
Ecology: detritus-feeder, estuarine, gregarious, littoral, noctidiurnal, silt bottom, sublittoral.

Palaemonetes australis Dakin, 1915

Palaemonetes australis Dakin, W.J. (1915). Fauna of West Australia, IV *Palaemonetes australis* sp. nov. being the first record of the genus in Australia. *Proc. Zool. Soc. Lond.* **1915**: 571–574 [571 pl. 1].
Type data: neotype WAM 108-75 ♀ adult, paratypes WAM 36-74, WAM 96-75 2♂ 2♀, WAM 102-75 2♂ 2♀, WAM 101-75 2♂ 2♀, WAM 92-75 1♂, WAM 93-75 1♀, WAM 97-75 2♂ 2♀, WAM 110-75 2♂ 2♀, WAM 103-75 2♂ 2♀, WAM 109-75 2♂ 2♀, WAM 100-75 2♂ 2♀, WAM 107-75 2♂ 2♀.
Subsequent designation: Bray, D.M. (1976). A review of two Western Australian shrimps of the genus *Palaemonetes*, *P. australis* Dakin, 1915 and *P. atrinubes* sp. nov. (Decapoda, Palaemonidae). *Rec. West. Aust. Mus.* **4**: 65–84.
Type locality: Upper Swan Bridge.

Distribution: NT (N coast), WA (Lower W coast, SW coast); known only from limital area, record from NT possibly a misidentification.
Ecology: estuarine, freshwater, littoral, mangrove, omnivore.

Urocaridella Borradaile, 1915

Urocaridella Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207] [gender feminine].
Type species: *Urocaridella gracilis* Borradaile, 1915 by monotypy.

Extralimital distribution: Maldive Islands, India, Andaman Is., Mergui Archipelago, Indonesia, Japan, Palau Islands. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Urocaridella antonbruunii (Bruce, 1967)

Periclimenes antonbruunii Bruce, A.J. (1967). Notes on some Indo-Pacific Pontoniinae III–IX. Descriptions of some new genera and species from the Western Indian Ocean and the South China Sea. *Zool. Verh.* **87**: 1–73 [45 figs 19–22].
Type data: holotype USNM I specimen*.
Type locality: Pamanzi Island reef, Dzaoudzi, Ile Mayotte, Archipel des Comores.

Leandrites cyrtorhynchus Fujino, T. & Miyake, S. (1969). On two new species of palaemonid shrimps from Tanabe Bay, Kii Peninsula, Japan (Crustacea, Decapoda, Palaemonidae). *Publ. Seto Mar. Biol. Lab.* **17**(3): 143–154 figs 1–5 [143 figs 1–3].
Type data: holotype SMBL 230 ♀.
Type locality: To-shima Island, Tanabe Bay, Wakayama, Japan.

Taxonomic decision for synonymy: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans.
Ecology: coral reef, shallow subtidal; depth to 12 m.
References: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49 (Australian record, as *Leandrites cyrtorhynchus* Fujino & Miyake); Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [42].

Urocaridella urocaridella (Holthuis, 1950)

Urocaridella gracilis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [210] [junior secondary homonym of *Leander gracilis* Smith, 1869].
Type data: syntypes UMZC AR2.1921.
Type locality: Kohlumadulu, Haddumalti, and Suvadiva Atolls, Maldive Ils.

Leander urocaridella Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [28] [*nom. nov.* for *Leander gracilis* (Borradaile, 1915), which is a junior secondary homonym].

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [42].

Distribution: NT (N coast); east Indo-west Pacific Oceans (India, Andaman and Mergui Islands, Indonesia, Malaysia, New Caledonia).
Ecology: continental shelf, reef; depths to 30 m.
Reference: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49 [744] (Australian record).

Pontoniinae

INTRODUCTION

Pontoniine shrimps are especially remarkable because of the large number of species that enter into commensal relationships with other marine invertebrate animals. Hosts include Porifera (excluding the hexactinellids), Cnidaria (Actinaria, Scleractinia, Alcyonacea, Gorgonacea, Hydroida and Scyphozoa), opisthobranch Gastropoda, and filibranch and eulamellibranch Bivalvia, Echinodermata (Crinoidea, Asteroidea, Ophiuroidea, Echinoidea, and Holothuroidea), and Tunicata (Ascidiacea). Some have even been reported to enter the gastric cavity of some cnidarians [coelenterates]. The group is almost exclusively marine, but very little is known of the biology of most species. Well over 100 Indo-west Pacific species are known from their type specimens alone. This apparent rarity may be due largely to their cryptic habits, and lack of knowledge about their host species (Bruce 1995). Pontoniines reach their greatest diversity on tropical reefs where, along with Alpheidae (many of which also have a commensal lifestyle), they are the dominant caridean shrimps. Besides shallow water coral reefs they also occur (generally) from the intertidal zone down to 1820 metres depth. They are found in all tropical and subtropical seas, with a few species reaching temperate latitudes (Chace & Bruce 1993).

The largest genus, *Periclimenes*, contains over 130 species, but in contrast, about half of the 66 Indo-west Pacific genera are monospecific. Pontoniines are well represented in Australian waters, with 50 genera and 172 species recorded. This may be due, in part, to the long Australian career of Dr A.J. 'Sandy' Bruce who made the Pontoniinae his own, and has described more genera and species of this group than any other taxonomist. The best available general introduction to the Pontoniinae is that of Bruce (1995).

Diagnosis

Palaemonids having telson typically armed with three pairs of posterior spines; third maxilliped without arthrobranch or with small rudimentary arthrobranch, second maxilliped usually without podobranch, sometimes with small rudimentary podobranch.

References

Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp.

Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152

Pontoniinae Kingsley, 1878

Pontoniinae Kingsley, J.S. (1878). List of the North American Crustacea belonging to the suborder Caridea. *Bull. Essex Institute* **10**(4, 5, 6): 53–71 [64] [as Pontoninae; name with spelling corrected to Pontoniinae, placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1956). Direction 41. Addition to the *Official List of Family-Group Names in Zoology*, or as the case may be, to the *Official Index of Rejected and Invalid Family-Group Names in Zoology* of the family-group names involved in the cases dealt with in Volume 11 of the *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature*, other than family-group names already dealt with in those *Opinions*. *Opin. Declar. Int. Comm. Zool. Nomencl.* **11**: 431–434; in the same Direction the incorrect original spelling, Pontoninae was placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology].

Allopontonia Bruce, 1972

Allopontonia Bruce, A.J. (1972). Notes on some Indo-Pacific Pontoniinae. XIX. *Allopontonia iaini* gen. nov., sp. nov., a new echinoid associate from Zanzibar (Decapoda, Caridea). *Crustaceana* **22**(1): 1–12 [1] [gender feminine].
Type species: *Allopontonia iaini* Bruce, 1972 by monotypy.

Generic reference: Bruce, A.J. (1983). The Pontoniine shrimp fauna of Australia. *Mem. Aust. Mus.* **18**: 195–218 (Heron Is.).

Allopontonia iaini Bruce, 1972

Allopontonia iaini Bruce, A.J. (1972). Notes on some Indo-Pacific Pontoniinae. XIX. *Allopontonia iaini* gen. nov., sp. nov., a new echinoid associate from Zanzibar (Decapoda, Caridea). *Crustaceana* **22**(1): 1–12 [7 figs 1–4].
Type data: holotype BMNH 1971:155 ♀, paratype(s) RMNH D27134 ♂ (as allotype).
Type locality: Heron Island.

Distribution: QLD (Great Barrier Reef, NE coast); NSW (Tasman Sea—Middleton & Elizabeth Reefs), and Indo-west Pacific Oceans.
Ecology: sublittoral, ectocommensal; on echinoids (*Salmacis sphaeroides*).

Anapontonia Bruce, 1966

Anapontonia Bruce, A.J. (1966). Notes on some Indo-Pacific Pontoniinae, XI. A re-examination of *Philarius lophos* Barnard, with the designation of a new genus *Ischnopontonia*. *Bull. Mar. Sci.* **16**(3): 584–598 [595] [gender feminine].
Type species: *Anapontonia denticauda* Bruce, 1966 by monotypy.

Extralimital distribution: Indo-west Pacific.
Generic reference: Bruce, A.J. (1967). Notes on some Indo-Pacific Pontoniinae III–IX. Descriptions of some new genera and species from the Western Indian Ocean and the South China Sea. *Zool. Verh.* **87**: 1–73 (detailed description).

Anapontonia denticauda Bruce, 1966

Anapontonia denticauda Bruce, A.J. (1966). Notes on some Indo-Pacific Pontoniinae, XI. A re-examination of *Philarius lophos* Barnard, with the designation of a new genus *Ischnopontonia*. *Bull. Mar. Sci.* **16**(3): 584–598 [595].
Type data: holotype BMNH 1965.V.26.1 ♀, paratype(s) RMNH D21238 1 specimen.
Type locality: Pange Reef, Zanzibar.

Distribution: QLD (Great Barrier Reef, Gulf of Carpentaria); Indo-west Pacific Oceans (Zanzibar, Camoro Ils, Singapore, Malaysia), east Pacific (Gulf of California).
Ecology: ectocommensal, low intertidal, shallow subtidal; recorded in associated with the oculinid coral *Galaxea fascicularis*.
Reference: Bruce, A.J. (1967). Notes on some Indo-Pacific Pontoniinae III–IX. Descriptions of some new genera and species from the Western Indian Ocean and the South China Sea. *Zool. Verh.* **87**: 1–73 (detailed description and figure).

Anchistus Borradaile, 1898

Anchistus Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [387] [gender masculine].
Type species: *Harpilius miersi* de Man, 1888 by original designation.

Tridacnocaris Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282 [235] [unnecessary *nom. nov. Anchistus* Borradaile, 1898; gender feminine].

Marygrande Pesta, O. (1911). Beitrag zur Kenntnis der Pontoniiden. *Marygrande mirabilis* nov. gen. spec. *Zool. Anz.* **38**: 571–575 5 figs [571] [gender feminine].
Type species: *Marygrande mirabilis* Pesta, 1911 by monotypy.

Ensiger Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207] [gender masculine].
Type species: *Anchistia aurantiaca* Dana, 1852 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157.

Taxonomic decision for synonymy: Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [62].

Extralimital distribution: Indo-west Pacific Oceans (eastern Africa and Red Sea to Indonesia, Japan and Philippines and SE as far as Tuamotu Archipelago).

Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [71] (key to *Anchistus*).

Anchistus australis Bruce, 1977

Anchistus australis Bruce, A.J. (1977). Pontoniine shrimps in the collections of the Australian Museum. *Rec. Aust. Mus.* **31**(2): 39–81 figs 1–16 [56 figs 7–9].
Type data: holotype AM P17520 ♂, paratype(s) AM 7♂ 5♀.
Type locality: Capre Cay, Swain Reefs, Coral Sea.

Distribution: NT (N coast), QLD (Great Barrier Reef), WA (NW coast); east Indo-west Pacific Oceans (Japan, Vietnam, Indonesia, Papua New Guinea, Marshall Islands, Coral Sea, New Caledonia, Fiji).
References: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [71], Davie, P., this work (Bruce, as part of his original description, described a 'forma' *typica* and a 'forma' *dendricauda*. Under I.C.Z.N. Article 45.6.3 (ICZN 1999) names published after 1960 as 'forma' are to be considered infrasubspecific, and thus are unavailable).

Anchistus custoides Bruce, 1977

Anchistus custoides Bruce, A.J. (1977). Pontoniine shrimps in the collections of the Australian Museum. *Rec. Aust. Mus.* **31**(2): 39–81 figs 1–16 [50 figs 4–6].
Type data: holotype AM P17531 ♀, paratype(s) AM P39911 ♂ (as allotype).
Type locality: NW end, Gillett Cay, Great Barrier Reef, QLD.

Distribution: QLD (Great Barrier Reef); west Pacific Ocean (Indonesia, Palau).
Ecology: coral reef, sublittoral, low intertidal; associated with bivalves (*Atrina* and *Pteria* species).
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [72].

Anchistus custos (Forskål, 1775)

Pinna Prawn

Cancer custos Forskål, P. (1775). *Descriptiones animalium avium, amphibiorum, piscium, insectorum, vermium*; quae in itinere orientali observavit Petrus Forskål. Hafniae : Mölleri 19, xxxiv, 164 pp. [xxi, 94].
Type data: type status unknown*.
Type locality: Al Luhayyah, Yemen, see Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Pontonia inflata Milne Edwards, H. (1840). *Histoire naturelle des Crustacés*, comprenant l'anatomie, la physiologie et la classification de ces animaux. Paris : [n.s.] Vol. 3 638 pp. [633].
Type data: type status unknown MNHP*.
Type locality: Sri Lanka and Vanikoro (as 'Vanicoso'), Santa Cruz Islands, see Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Anchistia aurantiaca Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [25].
Type data: type status unknown (presumed lost).
Type locality: Fiji Islands.

Harpilius inermis Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2*. Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [291 pl. 32 fig. B].
Type data: syntypes BMNH ♂ 1 ♀*.
Type locality: Port Molle, NE QLD.

Pontonia pinnae Ortmann, A.E. (1894). Crustaceen. *In*, Semon, R. Zoologische Forshungreisen in Australien und dem Malayischen Archipel. *Denkschr. Med.-Naturwiss. Ges. Jena* **8**(1): 1–80 pls 1–3 [16 pl. 1 fig. 3].
Type data: syntypes whereabouts unknown 1 ♂ 1 ♀*.
Type locality: Dar es Salaam, Tanzania.

Taxonomic decision for synonymy: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [13, 105].

Distribution: 200 m bathymetric (Bass Strait, Central E coast, Central W coast, G. Aust. Bight, Great Barrier Reef, Gulf of Carp., Lower E coast, Lower W coast, N coast, NE coast, NW coast, S Gulfs coast, SW coast); circum-Australian, and Indo-west central Pacific Oceans (East Africa to Philippines, Caroline and Fiji Islands).
Ecology: intertidal flats, low intertidal, shallow subtidal; associated with bivalves of the genus *Pinna*, true commensal, shrimp holds onto host while the surface of the gill is scraped with the chelae of the first pereiopods, which convey food to mouthparts.

Anchistus demani Kemp, 1922

Anchistus demani Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [256 figs 86–88].
Type data: syntypes IM C419\1 2 specimens*.
Type locality: Aberdeen, Port Blair, Andaman Islands.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, littoral, commensal; associated with the giant clam *Tridacna maxima*.

Anchistus gravieri Kemp, 1922

Anchistus gravieri Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [252 figs 82–84].
Type data: holotype MNHP 1 specimen*.
Type locality: Vanikoro, Santa Cruz Islands, Polynesia.

Distribution: QLD (Great Barrier Reef); west central Pacific Oceans (New Caledonia and Santa Cruz Ils).
Ecology: coral reef, littoral; commensal in giant clam *Hippopus hippopus*.

Anchistus miersi (de Man, 1888)

Harpilius de Man, J.G. (1888). Report on the Podophthalmous Crustacea of the Mergui Archipelago, collected for the Trustees of the Indian Museum, Calcutta, by Dr John Anderson, F.R.S., Superintendent of the Museum. Part V. *J. Linn. Soc.* **22**(140): 241–305 pls 16–19 [274 pl. 17 figs 6–10].
Type data: syntypes ZSI 82386 ♂ ♀.
Type locality: Mergui Archipelago.

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans (eastern Africa to French Polynesia).
Ecology: coral reef, littoral, commensal; lives in the giant clam *Tridacna gigas*.
References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [13]; Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea:

Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [72].

Anchistus pectinis Kemp, 1925

Anchistus pectinis Kemp, S. (1925). Notes on Crustacea Decapoda in the Indian Museum. XVII—On various Caridea. *Rec. Indian Mus.* **27**(4): 249–343 figs 1–24 [327 figs 19, 20].
Type data: holotype IM C899/1 1♂ 1♀.
Type locality: Octavia Bay, Nancowry Harbour, Nicobars.

Distribution: QLD (NE coast); Indo-west Pacific Oceans (Zanzibar to Japan and New Caledonia).
Ecology: coral reef, littoral, commensal; in the scallops *Amusium balloti* and *Pecten* species.

Apopontonia Bruce, 1976

Apopontonia Bruce, A.J. (1976). Notes on some Indo-Pacific Pontoniinae. XXVII. *Apopontonia falcirostris* gen. nov., sp. nov., from Madagascar. *Crustaceana* **31**(3): 301–311 [301] [gender feminine].
Type species: *Apopontonia falcirostris* Bruce, 1976 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Apopontonia dubia Bruce, 1981

Apopontonia dubia Bruce, A.J. (1981). Notes on some Indo-Pacific Pontoniinae, XXXVIII. *Apopontonia dubia* sp. nov., from a southern Queensland sponge host. *Crustaceana* **41**(3): 225–232 [225 figs 1–3].
Type data: holotype AM P30718 ♀.
Type locality: Shag Rock, E of North Stradbroke Island, QLD.

Distribution: QLD (Central E coast, Great Barrier Reef, NE coast); New Caledonia.
Ecology: sublittoral; host is a sponge, *Ircinia echinata*.
Reference: Bruce, A.J. (1983). Further information on *Apopontonia dubia* Bruce (Decapoda, Pontoniinae). *Crustaceana* **45**(2): 210–213.

Apopontonia falcirostris Bruce, 1976

Apopontonia falcirostris Bruce, A.J. (1976). Notes on some Indo-Pacific Pontoniinae. XXVII. *Apopontonia falcirostris* gen. nov., sp. nov., from Madagascar. *Crustaceana* **31**(3): 301–311 [303 figs 1–5].
Type data: holotype MNHP Na1879 ♀.
Type locality: north-western Madagascar.

Distribution: QLD (NE coast); Indo-west Pacific Oceans (Madagascar, Maldive Islands).
Ecology: sublittoral; associated with sponges, to 73 m depth.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [3] (Australian record).

Apopontonia orbitospinatus (Bruce, 1969)

Periclimenaeus orbitospinatus Bruce, A.J. (1969). Preliminary descriptions of ten new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda, Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(12): 159–176 [160].
Type data: holotype RMNH D25616 1 specimen.
Type locality: Gulf of Carpentaria, N Australia, 18 miles NW of Mornington Island.

Apopontonia tridentata Bruce, A.J. (1988). Two new palaemonid shrimps (Crustacea: Decapoda) from the Australian Northwest shelf. *J. Nat. Hist.* **22**: 1263–1276 [1270].
Type data: holotype NTM Cr005459 ♀.
Type locality: Northwest Shelf, WA.

Taxonomic decision for synonymy: Bruce, A.J., this work (paper in press).

Distribution: NT (Gulf of Carpentaria), QLD (Gulf of Carpentaria), WA (NW coast); Ambon, Indonesia.
Ecology: sublittoral, continental shelf; commensal with sponges, depth to 54 m.

Araiopontonia Fujino & Miyake, 1970

Araiopontonia Fujino, T. & Miyake, S. (1970). *Araiopontonia odontorhyncha* gen. et sp. nov., a new shrimp from the Ryukyu Islands, Japan (Decapoda, Palaemonidae, Pontoniinae). *Ohmu* **3**(1): 2–10 figs 1–4 [1] [gender feminine].
Type species: *Araiopontonia odontorhyncha* Fujino & Miyake, 1970 by original designation.

Extralimital distribution: central Indo-west Pacific (Japan, Indonesia, Marshall Ils).

Araiopontonia odontorhyncha Fujino & Miyake, 1970

Araiopontonia odontorhyncha Fujino, T. & Miyake, S. (1970). *Araiopontonia odontorhyncha* gen. et sp. nov., a new shrimp from the Ryukyu Islands, Japan (Decapoda, Palaemonidae, Pontoniinae). *Ohmu* **3**(1): 2–10 figs 1–4.
Type data: holotype ZLKU ♀.
Type locality: Koniya, Amami-Oshima Is., Ryukyu Ils.

Distribution: QLD (Great Barrier Reef), Territory of Ashmore & Cartier Islands; central Indo-west Pacific (Japan, Indonesia, Marshall Ils).
Ecology: coral reef, subtidal; commensal with crinoids.

Carinopontonia Bruce, 1988

Carinopontonia Bruce, A.J. (1988). Two new palaemonid shrimps (Crustacea: Decapoda) from the Australian Northwest shelf. *J. Nat. Hist.* **22**: 1263–1276 [1263] [gender feminine].
Type species: *Carinopontonia paucipes* Bruce, 1988 by original designation.

Extralimital distribution: Timor Sea.

Carinopontonia paucipes Bruce, 1988

Carinopontonia paucipes Bruce, A.J. (1988). Two new palaemonid shrimps (Crustacea: Decapoda) from the Australian Northwest shelf. *J. Nat. Hist.* **22**: 1263–1276 [1265 figs 1–3].

Type data: holotype NTM Cr.005460 ♀.
Type locality: Northwest Shelf, Australia.

Distribution: WA (NW coast); known only from limital area.
Ecology: continental shelf; host unknown (coelenterate associated seems likely), depth 83 m.

Chernocaris Johnson, 1967

Chernocaris Johnson, D.S. (1967). On some commensal decapod crustaceans from Singapore (Palaemonidae and Porcellanidae). *J. Zool., London* **153**: 499–526 [500] [gender feminine].
Type species: *Chernocaris placunae* Johnson, 1967 by monotypy.

Extralimital distribution: Singapore, Arafura Sea. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Chernocaris placunae Johnson, 1967

Chernocaris placunae Johnson, D.S. (1967). On some commensal decapod crustaceans from Singapore (Palaemonidae and Porcellanidae). *J. Zool., London* **153**: 499–526 [500].
Type data: holotype BMNH 1967.1.4.1 ♀, paratype(s) RM ♂ (as allotype).
Type locality: Telok Paku, Singapore.

Distribution: NT (N coast); Singapore.
Ecology: sublittoral, low intertidal; living in mantle cavity of bivalve mollusc (*Placuna* sp.), to 27 m depth.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [107].

Conchodytes Peters, 1852

Conchodytes Peters, W. (1852). *Conchodytes*, eine neue in Muschheln lebende Gattung von Garneelen. *Ber. Akad. Wiss. Berlin* **1852**: 588–595 [588, 591] [gender masculine].
Type species: *Conchodytes tridacnae* Peters, 1852 by subsequent designation, see Hilgendorf, F. (1879). Die von Herrn W. Peters in Moçambique gesammelten Crustaceen, bearbeitet von Herrn Dr. F. Hilgendorf. *Mber. dt. Akad. Wiss. Berl.* **1878**: 782–851 pls 1–4 [835].

Extralimital distribution: Indo-west Pacific (Red Sea and Madagascar to Japan, Philippines, Indonesia, and eastward to Hawai'i and Tuamotu Archipelago). See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.
Generic reference: Bruce, A.J. (1989). Notes on some Indo-Pacific Pontoniinae, XLV. *Conchodytes maculatus* sp. nov., a new bivalve associate from the Australian Northwest Shelf. *Crustaceana* **56**: 182–192 (key to species).

Conchodytes biunguiculatus (Paul'son, 1875)

Pontonia biunguiculata Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [111] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown MK*.
Type locality: Red Sea.

Conchodytes kempi Bruce, A.J. (1989). A report on some coral reef shrimps from the Philippine Islands. *Asian Mar. Biol.* **6**: 173–192 [183 fig. 3b–e].
Type data: holotype*.
Type locality: Andaman Islands.

Taxonomic decision for synonymy: Fransen, C.H.J.M. (1994). Marine palaemonoid shrimps of the Netherlands Seychelles Expedition 1992–1993. *Zool. Verh.* **297**: 85–152 figs 1–112, pls 1–4 [89].

Distribution: QLD (NE coast), WA (NW coast); WA (Hibernia Reef), Indo-west Pacific Oceans (east Africa, Red Sea, Seychelles, Andamans, Indonesia, Taiwan, Philippines, Marshall Ils).
Ecology: sublittoral, commensal; lives inside bivalve molluscs (*Pinna* species).
References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [17, 199] (distribution and full synonymy); Fransen, C.H.J.M. (1994). Marine palaemonoid shrimps of the Netherlands Seychelles Expedition 1992–1993. *Zool. Verh.* **297**: 85–152 figs 1–112, pls 1–4 [89] (redescribed, figured, and variation discussed; identity of many older records still considered uncertain).

Conchodytes maculatus Bruce, 1989

Conchodytes maculatus Bruce, A.J. (1989). Notes on some Indo-Pacific Pontoniinae, XLV. *Conchodytes maculatus* sp. nov., a new bivalve associate from the Australian Northwest Shelf. *Crustaceana* **56**: 182–192 [182 figs 1–6].
Type data: holotype NTM Cr.002978A ♀, paratypes NTM Cr.002978B ♂ (as allotype), NTM Cr.002979 ♂.
Type locality: W of Cape Leveque, Australian North-west Shelf, WA.

Distribution: WA (NW coast); Philippines.
Ecology: sublittoral, commensal; commensal with *Pinctada maxima* (Mollusca), depths to 40 m.

Conchodytes meleagrinae Peters, 1852

Conchodytes meleagrinae Peters, W. (1852). *Conchodytes*, eine neue in Muschheln lebende Gattung von Garneelen. *Ber. Akad. Wiss. Berlin* **1852**: 588–595 [594].
Type data: syntypes ZMB ♂ ♀*.
Type locality: Ibo, Cabo Delgado, Mozambique, SE coast of Africa.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans.

Ecology: coral reef, littoral, sublittoral, commensal; associated with pearl oysters in the genus *Pinctada*.
Reference: Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle–Calédonie*. Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31.

Conchodytes monodactylus Holthuis, 1952

Conchodytes monodactylus Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [200 figs 96–98].
Type data: syntypes RMNH D6525 1 specimen, RMNH D4491 ♂ 2 ovigerous ♀, ZMA 1 ♂ 1 ♀.
Type locality: Indonesia, Lesser Sunda Islands, S Taiwan, Takao, Lesser Sunda Islands, Indonesia and Kaohsiung, Taiwan (as Takao, S Formosa).

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); east Indo-west Pacific Oceans.
Ecology: sublittoral; associated with bivalves of genus *Atrina*, and the fan-shell, *Pinna bicolor*.

Conchodytes nipponensis (De Haan, 1844)

Hymenocera nipponensis De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 46 fig. 8] [published from 1833–1850, Atlas dated 1844; corrected to *H. nipponensis* by plenary powers of the International Commission on Zoological Nomenclature, 1956].
Type data: type status unknown* (presumed lost).
Type locality: Japan.

Distribution: QLD (Great Barrier Reef); west Pacific Ocean (Japan, Philippines).
Ecology: sublittoral, commensal, coral reef; in Australia found associated with a scallop *Amusium balloti*, in Japan from pectinid and pinnid bivalves.
Reference: Bruce, A.J. (1977). The occurrence of *Conchodytes nipponensis* (de Haan) (Decapoda Natantia, Pontoniinae) in Queensland, Australia. *Crustaceana* **33**(1): 97–100 [97] (Australian record).

Conchodytes tridacnae Peters, 1852

Conchodytes tridacnae Peters, W. (1852). *Conchodytes*, eine neue in Muschheln lebende Gattung von Garneelen. *Ber. Akad. Wiss. Berlin* **1852**: 588–595 [594].
Type data: holotype ZMB 1009 ♀.
Type locality: Ibo, Mozambique, Cabo Delgado, SE coast of Africa.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Red Sea to Hawai'i).
Ecology: coral reef, commensal, low intertidal, shallow subtidal; found in the mantle cavity of giant clam (*Tridacna* sp.).
Reference: Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle–Calédonie*. Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31.

Coralliocaris Stimpson, 1860

Oedipus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [17] [junior homonym of *Oedipus* Berthold, 1827 (Orthoptera); *Oedipus* Tschudi, 1838 (Amphibia); and *Oedipus* Lesson, 1840 (Mammalia); gender masculine].
Type species: *Oedipus superbus* Dana, 1852 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [423].

Coralliocaris Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [38] [*nom. nov.* for *Oedipus* Dana, 1852; gender feminine].

Taxonomic decision for synonymy: Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [66].

Extralimital distribution: Red Sea and Indian Ocean to Indonesia and eastward to the Line Islands.
Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [76] (key to species).

Coralliocaris brevirostris Borradaile, 1898

Coralliocaris brevirostris Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [386].
Type data: syntypes UMZC Jan11.1987.
Type locality: Funafuti, Ellice Islands.

Distribution: QLD (NE coast); Willis Islets, Coral Sea, west central Pacific Ocean (Marshall and Ellice Islands).
Ecology: sublittoral, coral reef, low intertidal; associated with scleractinian corals of genus *Acropora*.

Coralliocaris graminea (Dana, 1852)

Oedipus graminea Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [25].
Type data: syntypes ANSP*.
Type locality: Viti Levu, Fiji.

Distribution: Lord Howe Island, NSW (Lower E coast), NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans.

Ecology: coral reef, littoral, sublittoral; associated with species of scleractinian corals of the genus *Acropora*.
References: Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle-Calédonie*. Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31 [264]; Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [107].

Coralliocaris superba (Dana, 1852)

Oedipus superbus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [25].
Type data: type status unknown (lost).
Type locality: Tongatabu Island, Tonga.

Distribution: NSW (SE oceanic), QLD (Great Barrier Reef, NE coast), Tasman Sea, WA.
Ecology: coral reef, littoral, sublittoral; associated with the corals of the genus *Acropora*.
Reference: Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle-Calédonie*. Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31 [264].

Coralliocaris venusta Kemp, 1922

Coralliocaris venusta Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [274 figs 100–101].
Type data: syntypes IM C429/1 2 specimens*.
Type locality: NE Tholayiram Paar, Gulf of Manaar, India.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; associated with corals of the genus *Acropora*, depth to 19 m.

Coralliocaris viridis Bruce, 1974

Coralliocaris viridis Bruce, A.J. (1974). *Coralliocaris viridis* sp. nov., a preliminary note (Decapoda Natantia, Pontoniinae). *Crustaceana* **26**(2): 222–224 [222 fig. 1a–b].
Type data: holotype BMNH 1973.657 ♂, paratypes BMNH ♀ (as allotype), USNM, RMNH D29448 ♂ ♀, MNHP, NM.
Type locality: seaward reefs of Mombasa Islands, Kenya.

Distribution: NT (N coast), QLD (Great Barrier Reef); Indo-west Pacific Oceans.
Ecology: coral reef, sublittoral; associated with scleractinian corals (*Acropora* species).
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [107].

Dasella Lebour, 1945

Dasia Lebour, M.V. (1938). Decapod Crustacea associated with the Ascidian *Herdmania*. *Proc. Zool. Soc. Lond.* **108**(B): 649–653 pl. I, II [650] [junior homonym of *Dasia* Gray, 1839 (Reptilia), and *Dasia* Van der Goot, 1918 (Hemiptera); gender feminine].
Type species: *Dasia herdmaniae* Lebour, 1938 by monotypy.

Dasella Lebour, M.V. (1945). Alteration in the name *Dasia* as a Decapod Genus. *Proc. Zool. Soc. Lond.* **115**: 279 [279] [*nom. nov.* for *Dasia* Lebour, 1938].

Extralimital distribution: Mozambique, S India, Sulu Archipelago, Arafura Sea).
Generic reference: See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 (key to species).

Dasella ansoni Bruce, 1983

Dasella ansoni Bruce, A.J. (1983). A second species of the genus *Dasella* Lebour, *D. ansoni* sp. nov., from the Arafura Sea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(3): 21–29 [22].
Type data: holotype NTM Cr.00104/a ♀, paratypes NTM Cr.00104/b ♂, NTM Cr.00104/c.
Type locality: Arafura Sea [10°58'S 132°10'E].

Distribution: NT (N coast), WA (NW coast); known only from limital area, Arafura Sea.
Ecology: coral reef, littoral, sublittoral, commensal; host is *Phallusia depressiuscula* (Ascidiacea).

Dasella brucei Berggren, 1990

Dasella brucei Berggren, M. (1990). *Dasella herdmaniae* (Lebour) (Decapoda: Natantia: Pontoniinae) from Mocambique and establishment of a new species, *D. brucei*. *J. Crust. Biol.* **10**(3): 554–559 [554].
Type data: holotype AM 2940 ♂ (lost (P. Berents, pers. comm.)).
Type locality: Heron Island, QLD.

Distribution: QLD (Great Barrier Reef); known only from limital area.
Ecology: coral reef, littoral, sublittoral, commensal; associated with the Ascidian *Herdmania momus*.
Reference: Bruce, A.J. (1981). Notes on some Indo-Pacific Pontoniinae, XXXVII additional information on *Dasella herdmaniae* (Lebour) (Decapoda, Natantia). *Crustaceana* **40**(1): 50–56 figs 1–2 (description and figures of holotype specimen, originally misidentified as *D. herdmaniae*).

Dasycaris Kemp, 1922

Dasycaris Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [240] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the

Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Dasycaris symbiotes* Kemp, 1922 by monotypy.

Extralimital distribution: Oriental Region—Indonesia; Indo-west Pacific (Zanzibar, India, Mergui Archipelago, Japan, Indonesia and New Caledonia).

Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [79] (key to species).

Dasycaris ceratops Holthuis, 1952

Dasycaris ceratops Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [176 figs 87, 88].
Type data: holotype ZMA 1 ♀.
Type locality: Borneo Bank, Makassar Strait, Indonesia.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Zanzibar, Indonesia).
Ecology: coral reef, sublittoral; on sea pens (*Pteroeides*, *Scleroblemnon* and *Virgularia* species), depths to 50 m.

Dasycaris zanzibarica Bruce, 1973

Dasycaris zanzibarica Bruce, A.J. (1973). Notes on some Indo-Pacific Pontoniinae, XXIV. *Dasycaris zanzibarica* sp. nov. from the Western Indian Ocean, with remarks on other species of *Dasycaris* Kemp, 1922 (Decapoda Natantia). *Crustaceana* **24**(3): 247–260 [247].
Type data: holotype BMNH 1971:196 ♀, paratype(s) RMNH D27309 ♂ (as allotype).
Type locality: Changu Island, Zanzibar.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (Zanzibar, Japan, Philippines, Papua New Guinea, New Caledonia).
Ecology: coral reef, littoral; associated with antipatharian coral of the genus *Cirripathes*.

Epipontonia Bruce, 1977

Epipontonia Bruce, A.J. (1977). Notes on some Indo-Pacific Pontoniinae, XXIX. *Epipontonia spongicola* gen. nov., sp. nov., from Wasin Island, Kenya. *Crustaceana* **32**(3): 304–315 [304] [gender feminine].
Type species: *Epipontonia spongicola* Bruce, 1977 by monotypy.

Extralimital distribution: Indo-west Pacific.

Epipontonia anceps Bruce, 1983

Epipontonia anceps Bruce, A.J. (1983). *Epipontonia anceps* n.sp., a Sponge-associated Pontoniine Shrimp from Heron Island, Queensland. (Crustacea: Decapoda: Palaemonidae). *Rec. Aust. Mus.* **35**: 19–28 [19 figs 1–10].
Type data: holotype AM P31485 ♀, paratype(s) RMNH D33340 ♀.
Type locality: Heron Island, QLD.

Distribution: WA (NW coast); known only from limital area.
Ecology: sublittoral; host is a sponge *Dysidea* sp., depth of 18 m.

Exoclimenella Duris & Bruce, 1995

Exoclimenella Duris, Z. & Bruce, A.J. (1995). A revision of the "petitthouarsii" species-group of the genus *Periclimenes* Costa, 1844 (Crustacea: Decapoda: Palaemonidae). *J. Nat. Hist.* **29**: 619–671 [620] [gender feminine].
Type species: *Periclimenes petitthouarsii denticulata* Nobili, 1906 by original designation.

Extralimital distribution: Indo-west Pacific Oceans (Red Sea, Indonesia, Marshall Is., Tuamotu, South China Sea).

Exoclimenella denticulata (Nobili, 1906)

Periclimenes petitthouarsii denticulata Nobili, G. (1906). Diagnoses préliminaires de Crustacés Décapodes et Isopodes nouveaux recueillis par M. le Dr. G. Seurat aux îles Touamotou. *Bull. Mus. Natn. Hist. Nat. Paris* **12**(5): 256–270 [257].
Type data: holotype MNHP Na1944 ♂.
Type locality: Gatavake, Gambier Islands.

Distribution: QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans.
Ecology: sublittoral, coral reef, low intertidal; lagoon bottom, sand over rock pavement, coral, rubble and algae, free-living browser, depth 13–32 m.
Reference: Duris, Z. & Bruce, A.J. (1995). A revision of the "petitthouarsii" species-group of the genus *Periclimenes* Costa, 1844 (Crustacea: Decapoda: Palaemonidae). *J. Nat. Hist.* **29**: 619–671 [637].

Exoclimenella maldivensis Duris & Bruce, 1995

Exoclimenella maldivensis Duris, Z. & Bruce, A.J. (1995). A revision of the "petitthouarsii" species-group of the genus *Periclimenes* Costa, 1844 (Crustacea: Decapoda: Palaemonidae). *J. Nat. Hist.* **29**: 619–671 [622 figs 1–5].
Type data: holotype ZMM No. 4401 ♂, paratypes ZMM No. 4402 ♀ (as allotype), ZMM No. 4403 1♂ 2♀, NTM Cr.009566 1♂ 1♀, QM W17692 1 juvenile, RMNH D42626 1♂ 1 ovigerous ♀, NMNH 265045 1♂ 1 juvenile.
Type locality: Maldive Islands.

Distribution: WA (NW coast), Territory of Ashmore & Cartier Islands; Cartier Reef, North Nilandu Atoll.
Ecology: coral reef, sublittoral; depth 20 m.

Exopontonia Bruce, 1988

Exopontonia Bruce, A.J. (1988). *Exopontonia malleatrix*, new genus, new species, a palaemonid shrimp from Ashmore Reef, Timor Sea. *J. Crust. Biol.* **8**(1): 122–130 [122] [gender feminine].
Type species: *Exopontonia malleatrix* Bruce, 1988 by original designation.

Extralimital distribution: east Indian Ocean. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Exopontonia malleatrix Bruce, 1988

Exopontonia malleatrix Bruce, A.J. (1988). *Exopontonia malleatrix*, new genus, new species, a palaemonid shrimp from Ashmore Reef, Timor Sea. *J. Crust. Biol.* **8**(1): 122–130 [123].
Type data: holotype NTM Cr.005220 ♀.
Type locality: Ashmore Reef, Timor Sea.

Distribution: Territory of Ashmore & Cartier Islands; Ashmore Reef, Réunion Is.
Ecology: sublittoral.

Fennera Holthuis, 1951

Fennera Holthuis, L.B. (1951). A general revision of the Palaemonidae (Crustacea Decapoda Natantia) of the Americas. I. The subfamilies Euryrhynchinae and Pontoniinae. *Occ. Pap. Allan Hancock Found.* **11**: 1–332 [10, 171] [gender feminine].
Type species: *Fennera chacei* Holthuis, 1951 by original designation.

Extralimital distribution: Indo-Pacific Oceans. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Fennera chacei Holthuis, 1951

Fennera chacei Holthuis, L.B. (1951). A general revision of the Palaemonidae (Crustacea Decapoda Natantia) of the Americas. I. The subfamilies Euryrhynchinae and Pontoniinae. *Occ. Pap. Allan Hancock Found.* **11**: 1–332 [171 pl. 54 fig. a].
Type data: holotype USNM 88888 ♀, paratypes RMNH D9232 5 specimens, RMNH D9233 4 specimens.
Type locality: Secas Islands.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; associated with pocilloporid coral, depths of 14–15 m.

Hamodactyloides Fujino, 1973

Hamodactyloides Fujino, T. (1973). A new genus of Pontoniinid shrimp, *Hamodactyloides*, with a description of *H. ishigakiensis* sp. nov. (Decapoda Natantia, Pontoniinae), from the Ryukyu Islands. *Crustaceana* **25**(2): 171–180 [171] [gender masculine].
Type species: *Hamodactylus incompletus* Holthuis, 1958 by original designation.

Extralimital distribution: Indo-west central Pacific Oceans. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Hamodactyloides incompletus (Holthuis, 1958)

Hamodactylus incompletus Holthuis, L.B. (1958). Contributions to the knowledge of the Red Sea. No 8. Crustacea Decapoda from the northern Red Sea (Gulf of Aqaba and Sinai Peninsula). I. Macrura. *Bull. Sea Fish. Res. Sta.* **17**: 1–40 15 figs [11].
Type data: holotype RMNH D15158 ♀.
Type locality: Sharam a Sheikh, Sinai Peninsula, Red Sea.

Distribution: QLD (NE coast); Indo-west central Pacific Oceans.
Ecology: reef, subtidal; associated with *Millepora* corals.

Hamodactylus Holthuis, 1952

Hamodactylus Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [6, 18, 208] [gender masculine].
Type species: *Hamodactylus boschmai* Holthuis, 1952 by original designation.

Extralimital distribution: Indo-west Pacific Oceans (Red Sea, Kenya, Tanzania, Madagascar, Hong Kong, Singapore, Indonesia, New Caledonia).

Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [80] (key).

Hamodactylus aqabai Bruce & Svoboda, 1983

Hamodactylus aqabai Bruce, A.J. & Svoboda, A. (1983). Observations upon some pontoniine shrimps from Aqaba, Jordan. *Zool. Verh.* **205**: 3–44 figs 1–15 [26 figs 10–14].
Type data: holotype RMNH D33233 1 specimen, paratype(s)*.
Type locality: Aqaba, Jordan, Red Sea.

Distribution: QLD (NE coast); Indo-west Pacific Oceans, Gulf of Sinai.
Ecology: littoral, sublittoral; associated with alcyonarians *Nephthea* spp., *Litophyton arboreum* (Coelenterata), depths 4–11 m.
Reference: Bruce, A.J. (1983). The Pontoniine shrimp fauna of Australia. *Mem. Aust. Mus.* **18**: 195–218.

Hamodactylus boschmai Holthuis, 1952

Hamodactylus boschmai Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [209 figs 102–104].
Type data: syntypes RMNH D8999 1 ovigerous ♀ 2 juveniles, RMNH 2 ♀ 2 juveniles.
Type locality: Djedan Island, Ternate, Indonesia; E coast of Aru Islands, Ternate, Indonesia.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; associated with the gorgonians *Subergorgia reticulata* and *Melithea ocracea*, depths of 4–25 m.

Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [5] (Australian record).

Hamodactylus noumeae Bruce, 1970

Hamodactylus noumeae Bruce, A.J. (1970). Report on some commensal pontoniinid shrimps (Crustacea: Palaemonidae) associated with an Indo-Pacific gorgonian host (Coelenterata: Gorgonacea). *J. Zool., London* **160**: 537–544 [539 fig. 2].
Type data: holotype AM P16864 ♀.
Type locality: between Isle aux Canards and Islot Maitre, Noumea, New Caledonia.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; associated with a variety of gorgonian hosts, including species of *Euplexaura*, *Rumphella*, *Pseudopterogorgia* and *Subergorgia*, depths of 4–27 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [6] (Australian record).

Hamopontonia Bruce, 1970

Hamopontonia Bruce, A.J. (1970). Notes on some Indo-Pacific Pontoniinae. XV. *Hamopontonia corallicola* gen. nov., sp. nov., a new pontoniid shrimp from Hong Kong. *Crustaceana* **18**: 37–48 [37] [gender feminine].
Type species: *Hamopontonia corallicola* Bruce, 1970 by original designation.

Extralimital distribution: east Indo-west Pacific Oceans. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Hamopontonia corallicola Bruce, 1970

Hamopontonia corallicola Bruce, A.J. (1970). Notes on some Indo-Pacific Pontoniinae. XV. *Hamopontonia corallicola* gen. nov., sp. nov., a new pontoniid shrimp from Hong Kong. *Crustaceana* **18**: 37–48 [41 figs 1–4].
Type data: holotype RMNH D25533 ovigerous ♀, paratypes RMNH D25534, BMNH 1969:40:1, USNM 125669*.
Type locality: Kat O Chau, Mirs Bay, New Territories, Hong Kong.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); east Indo-west Pacific Oceans (Hong Kong, Japan).
Ecology: coral reef, littoral, sublittoral; associated with scleractinian corals of the genus *Goniopora*, and in deeper water with *Heliofungia*.

Hamopontonia essingtoni Bruce, 1986

Hamopontonia essingtoni Bruce, A.J. (1986). Three new species of commensal shrimps from Port Essington, Arnhem land, Northern Australia (Crustacea: Decapoda: Palaemonidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 143–166 [158].
Type data: holotype NTM Cr.004072A ♀, paratypes NTM Cr.004072B ♂ (as allotype), RMNH D36584 1 ovigerous ♀, NTM Cr.004073 11 specimens.
Type locality: Coral Bay, Port Essington, NT.

Distribution: NT (N coast), WA (NW coast); known only from limital area.
Ecology: sublittoral; host is *Stylophora pistillata* (Coelenterata).

Harpiliopsis Borradaile, 1917

Harpiliopsis Borradaile, L.A. (1917). On the Pontoniinae. The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr J. Stanley Gardiner. *Trans. Linn. Soc. Lond.* **17**: 323–396 pls 52–57 [324, 329] [gender masculine].
Type species: *Palaemon beaupresii* Audouin, 1826 by original designation.

Extralimital distribution: Red Sea to Pacific coasts of America. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 (also p. 82 for key to species).

Harpiliopsis beaupresii (Audouin, 1826)

Palaemon beaupresii Audouin, C. (1826). Explication sommaire des planches de Crustacés de l'Égypte et la Syrie, publiées par Jules-César Savigny, membre de l'Institute: offrant un exposé des caractères naturelles des genres avec les distinctions des espèces. Description de l'Égypt ou receuil des observations et des recherches qui on été faites en Égypte pendent l'expédition de l'armeé française. *Hist. Nat.* **1**(4): 77–98 [91].
Type data: type status unknown*.
Type locality: Egypt, see Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254.

Pontonia dentata Richters, F. (1880). Decapoda. *In*, Möbius, K.A. *Beiträge zur Meeresfauna der Insel Mauritius und der Seychellen, bearbeitet von K. Möbius, F. Richters und E. von Martens.* Berlin pp. 137–178 pls 15–18 [165 pl. 17 figs 36–38].
Type data: syntypes 2 specimens*.
Type locality: Ile aux Fouquets, Mauritius.

Taxonomic decision for synonymy: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [181].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (Lower W coast); Indo-Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; abundant on corals of the genera *Pocillopora* and *Stylophora*.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [82].

Harpiliopsis depressa (Stimpson, 1860)

Harpilius depressus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [38].
Type data: syntypes BMNH 61.44 1 specimen*.
Type locality: Hawai'i, Hawai'ian Islands (as Sandwich Islands).
Compiled from secondary source: Evans, A.C. (1967). Syntypes of Decapoda described by William Stimpson and James Dana in the collections of the British Museum (Natural History). *J. Nat. Hist.* **1**: 399–411.

Periclimenes pusillus Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [921 fig. 71 pl. 24].
Type data: syntypes BPBM 30554 4 specimens.
Type locality: S coast of Oahu, off Honolulu, Hawai'i.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [82].

Distribution: Lord Howe Island, NSW (Lower E coast, SE oceanic), QLD (Great Barrier Reef, NE coast); Indo-Pacific Oceans.
Ecology: coral reef, sublittoral; host corals of the genera *Pocillopora* and *Stylophora*.

Harpiliopsis spinigera (Ortmann, 1890)

Anchistia spinigera Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [511 pl. 36 fig. 23, 23a].
Type data: holotype RMNH D312 1 specimen (listed as 'Topotype'—part of the type series before the other part was described as new; it is not clear if other syntypes exist).
Type locality: Pacific Ocean, Samoa.

Harpilius depressus gracilis Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [234 fig. 71].
Type data: holotype IM 3252/10.
Type locality: Andaman Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [82].

Distribution: QLD (Great Barrier Reef, NE coast); Indo-Pacific Oceans.
Ecology: sublittoral, coral reef; associated with several scleractinian corals, mainly of family Pocilloporidae.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [7] (Australian record).

Ischnopontonia Bruce, 1966

Ischnopontonia Bruce, A.J. (1966). Notes on some Indo-Pacific Pontoniinae, XI. A re-examination of *Philarius lophos* Barnard, with the designation of a new genus *Ischnopontonia*. *Bull. Mar. Sci.* **16**(3): 584–598 [584] [gender feminine].
Type species: *Philarius lophos* Barnard, 1962 by original designation.

Extralimital distribution: west Indian Ocean to Ryukyu and Fijian Islands. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Ischnopontonia lophos (Barnard, 1962)

Philarius lophos Barnard, K.H. (1962). New records of marine Crustacea from the East African Region. *Crustaceana* **3**(3): 239–245 figs 1–3 [242 fig. 2].
Type data: lectotype SAM A10652 ♂, paralectotype(s) ♀.
Type locality: Inhaca Island, Delagoa Bay, Baia de Lourenco, Marques, Mozambique.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans.
Ecology: coral reef, sublittoral, low intertidal; intertidal pools associated with oculinid coral *Galaxea fascicularis*, depths to 15 m.
Reference: Bruce, A.J. (1966). Notes on some Indo-Pacific Pontoniinae, XI. A re-examination of *Philarius lophos* Barnard, with the designation of a new genus *Ischnopontonia*. *Bull. Mar. Sci.* **16**(3): 584–598.

Jocaste Holthuis, 1952

Jocaste Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [6, 17, 192] [gender feminine].
Type species: *Coralliocaris lucina* Nobili, 1901 by monotypy.

Extralimital distribution: Red Sea to Society Islands. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 (also p. 84 for key to species).

Jocaste japonica (Ortmann, 1890)

Coralliocaris superba japonica Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum

aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [509 pl. 36 fig. 22].
Type data: holotype RMNH D8992, paratype(s) RMNH 3 specimens.
Type locality: Ternate, Indonesia.

Distribution: QLD (NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, sublittoral; found in corals of the genus *Acropora* to a depth of 15 m.
Reference: Bruce, A.J. (1973). The Pontoniinid shrimps collected by the Yale Seychelles Expedition, 1957–1958 (Decapoda, Palaemonidae). *Crustaceana* **24**(1): 132–142 [140]

Jocaste lucina (Nobili, 1901)

Coralliocaris lucina Nobili, G. (1901). Decapodi e Stomatopodi Eritrei del Museo Zoologico dell' Università di Napoli. *Annuar. Mus. Zool. Univ. Napoli (new series)* **1**(3): 1–20 [5].
Type data: syntypes MZUT Cr.613 6 specimens.
Type locality: Eritrea.

Distribution: NSW (Tasman Sea), QLD (NE coast); Indo-west central Pacific Oceans.
Ecology: sublittoral, coral reef; associated with corals of the genus *Acropora*.
Reference: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [17].

Mesopontonia Bruce, 1967

Mesopontonia Bruce, A.J. (1967). Notes on some Indo-Pacific Pontoniinae III–IX. Descriptions of some new genera and species from the Western Indian Ocean and the South China Sea. *Zool. Verh.* **87**: 1–73 [13] [gender feminine].
Type species: *Mesopontonia gorgoniophila* Bruce, 1967 by original designation.

Extralimital distribution: east Indo-west Pacific Oceans. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Mesopontonia gorgoniophila Bruce, 1967

Mesopontonia gorgoniophila Bruce, A.J. (1967). Notes on some Indo-Pacific Pontoniinae III–IX. Descriptions of some new genera and species from the Western Indian Ocean and the South China Sea. *Zool. Verh.* **87**: 1–73 [13].
Type data: holotype BMNH 1965.V.21.3, paratypes BMNH 1965.V.21.4–6, RMNH D21217 3 specimens.
Type locality: ESE of Hong Kong, South China Sea.

Distribution: QLD (NE coast); northern South China Sea.
Ecology: continental shelf, continental slope; associated with gorgonians, depth 117–270 m.

Miopontonia Bruce, 1985

Miopontonia Bruce, A.J. (1985). Notes on some Indo-Pacific Pontoniinae, XLII. *Miopontonia yongei* gen. nov., sp. nov., from the Australian Northwest Shelf. *Crustaceana* **48**(2): 167–178 [167] [gender feminine].
Type species: *Miopontonia yongei* Bruce, 1985 by original designation.

Extralimital distribution: east Indian Ocean. See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Miopontonia yongei Bruce, 1985

Miopontonia yongei Bruce, A.J. (1985). Notes on some Indo-Pacific Pontoniinae, XLII. *Miopontonia yongei* gen. nov., sp. nov., from the Australian Northwest Shelf. *Crustaceana* **48**(2): 167–178 [168].
Type data: holotype NTM Cr.000449 ♀, paratypes NTM Cr.000450 ♂, RMNH D35796a ♀.
Type locality: North-west Shelf, WA.

Distribution: WA (NW coast); Japan.
Ecology: continental shelf; recorded as commensal on gorgonians (*Juncella* sp., *Ellisella plexsuroides*, and antipatharians (*Cirripathes anguina*), depth to 30 m.

Notopontonia Bruce, 1991

Notopontonia Bruce, A.J. (1991). *Notopontonia platycheles*, a new genus, new species (Decapoda: Pontoniinae) from South Australia, with remarks on *Pontonia pinnophylax* (Otto), the type species of *Pontonia* Latreille. *J. Crust. Biol.* **11**(4): 607–628 figs 1–14 [607] [gender feminine].
Type species: *Notopontonia platycheles* Bruce, 1991 by original designation.

Notopontonia platycheles Bruce, 1991

Notopontonia platycheles Bruce, A.J. (1991). *Notopontonia platycheles*, a new genus, new species (Decapoda: Pontoniinae) from South Australia, with remarks on *Pontonia pinnophylax* (Otto), the type species of *Pontonia* Latreille. *J. Crust. Biol.* **11**(4): 607–628 figs 1–14 [608].
Type data: holotype SAMA C4240 ♂.
Type locality: NW of Robe, SA.

Distribution: SA (Great Australian Bight), WA (Central W coast, Lower W coast); known only from limital area.
Ecology: continental shelf, subtidal; found commensally associated with ascidian *Herdmannia momus*, depth to 64 m.

Onycocaridella Bruce, 1981

Onycocaridella Bruce, A.J. (1981). *Onycocaridella prima*, new genus, new species, a new Pontoniine sponge–associate from the Capricorn Islands, Australia (Decapoda, Caridea, Pontoniinae). *J. Crust. Biol.* **1**(2): 241–250 [241] [gender feminine].
Type species: *Onycocaridella prima* Bruce, 1981 by original designation.

Extralimital distribution: west Indian Ocean, Ryukyu Islands, Sulu Archipelago, Philippines, Marshall and Fiji Islands. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Onycocaridella monodoa (Fujino & Miyake, 1969)

Onycocaris monodoa Fujino, T. & Miyake, S. (1969). Studies on the genus *Onycocaris* with descriptions of five new species (Crustacea, Decapoda, Palaemonidae). *J. Fac. Agric. Kyushu Univ.* **15**: 403–448 [405].
Type data: holotype ZLKU 12039 ♂, paratype(s) ZLKU 12040 ♀.
Type locality: Kasari-zaki, Amami-oshima Is., Ryukyu Is., Japan.

Distribution: NSW (Tasman Sea), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans.
Ecology: coral reef, sublittoral, low intertidal, reef flat; associated with sponges of the genus *Paraesperella*.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [26] (Australian record).

Onycocaridella prima Bruce, 1981

Onycocaridella prima Bruce, A.J. (1981). *Onycocaridella prima*, new genus, new species, a new Pontoniine sponge-associate from the Capricorn Islands, Australia (Decapoda, Caridea, Pontoniinae). *J. Crust. Biol.* **1**(2): 241–250 [243 figs 1–6].
Type data: holotype AM P30812 ♀, paratype(s) AM P30813 (as allotype).
Type locality: Wistari Reef, Heron Island, QLD.

Distribution: NT (N coast), QLD (Great Barrier Reef); known only from limital area.
Ecology: sublittoral, coral reef; in a sponge, *Mycale sulcata*, depth 3–12 m.
Reference: Bruce, A.J. (2000). *Onycocaridella prima* Bruce, 1981, a rare pontoniine shrimp from Darwin Harbour (Crustacea: Decapoda: Pontoniinae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **16**: 89–90.

Onycocaridites Bruce, 1987

Onycocaridites Bruce, A.J. (1987). *Onycocaridites anomodactylus*, new genus, new species (Decapoda: Palaemonidae), a commensal shrimp from the Arafura Sea. *J. Crust. Biol.* **7**(4): 771–779 [771] [gender masculine].
Type species: *Onycocaridites anomodactylus* Bruce, 1987 by original designation.

Extralimital distribution: known only from the Arafura Sea.

Onycocaridites anomodactylus Bruce, 1987

Onycocaridites anomodactylus Bruce, A.J. (1987). *Onycocaridites anomodactylus*, new genus, new species (Decapoda: Palaemonidae), a commensal shrimp from the Arafura Sea. *J. Crust. Biol.* **7**(4): 771–779 [772].
Type data: holotype NTM Cr.004561 ♀, paratype(s) NTM ♂ (as allotype).
Type locality: Arafura Sea.

Distribution: NT (N coast); known only from type locality.
Ecology: sublittoral; in an unidentified sponge (Porifera), 60 m depth.

Onycocaris Nobili, 1904

Onycocaris Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [228] [gender feminine].
Type species: *Coralliocaris (Onycocaris) aualitica* Nobili, 1904 by subsequent designation, see Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [14].

Extralimital distribution: Indo-west Pacific Oceans (Djibouti, eastern Africa, Madagascar to Hong Kong, Japan, Philippines, New Caledonia, Wake Island, Marshall and Fiji Islands to Hawai'i).
Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [86] (key to species).

Onycocaris amakusensis Fujino & Miyake, 1969

Onycocaris amakusensis Fujino, T. & Miyake, S. (1969). Studies on the genus *Onycocaris* with descriptions of five new species (Crustacea, Decapoda, Palaemonidae). *J. Fac. Agric. Kyushu Univ.* **15**: 403–448 [413 figs 6, 8a–c, 9a–c].
Type data: holotype ZLKU 14224 ♀, paratype(s) ZLKU 3438, 3439 1♂ 1♀.
Type locality: Takamatsu, Amakusa Is.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (Zanzibar to Japan and Hawai'i).
Ecology: coral reef, low intertidal, shallow subtidal; associated with sponge hosts, including *Callyspongia* sp.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [8] (Australian record).

Onycocaris oligodentata Fujino & Miyake, 1969

Onycocaris oligodentata Fujino, T. & Miyake, S. (1969). Studies on the genus *Onycocaris* with descriptions of five new species (Crustacea, Decapoda, Palaemonidae). *J. Fac. Agric. Kyushu Univ.* **15**: 403–448 [414 figs 7, 8d–f, 9d–f].
Type data: holotype ZLKU 14222 ♀, paratype(s) ZLKU 14221 ♂.
Type locality: Tomioka, Amakusa Is.

Distribution: QLD (Great Barrier Reef); east Indo-west Pacific Oceans (Hong Kong, Japan).
Ecology: sublittoral, coral reef; associated with a sponge, *Spongionella* sp., depth 17 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [8] (Australian record).

Onycocaris quadratophthalma (Balss, 1921)

Pontonia quadratophthalma Balss, H. (1921). Stomatopoda, Macrura, Paguridea and Galatheidae. *In,* results of Dr E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. XXIX. *Svenska Vetensk. Akad. Handl.* **61**(10): 1–24 12 figs [15].
Type data: type status unknown.
Type locality: Cape Jaubert, WA.

Distribution: NT (N coast), WA (NW coast); Hong Kong.
Ecology: sublittoral, coral reef, subtidal; in sponge.

Onycocaris spinosa Fujino & Miyake, 1969

Onycocaris spinosa Fujino, T. & Miyake, S. (1969). Studies on the genus *Onycocaris* with descriptions of five new species (Crustacea, Decapoda, Palaemonidae). *J. Fac. Agric. Kyushu Univ.* **15**: 403–448 [429 figs 13–15].
Type data: holotype ZLKU 12056 ♂, paratype(s) ZLKU 12057 ♀.
Type locality: Yoron-jima, Ryukyu Island and Okinawa.

Distribution: QLD (Great Barrier Reef); west Pacific Ocean.
Ecology: sublittoral, coral reef; in sponge on reef slope, depth 10 m.

Onycocaris stradbrokei Bruce, 1998

Onycocaris stradbrokei Bruce, A.J. (1998). Pontoniine shrimps from Moreton Bay, Queensland (Crustacea: Decapoda: Pontoniinae). *Mem. Qld Mus.* **42**(2): 387–398 figs 1–5 [390 figs 2, 3].
Type data: holotype QM W21691 ♀, paratype(s) QM W22276 ♂ (as allotype).
Type locality: Myora Reef, North Stradbroke Island, Moreton Bay.

Distribution: QLD (Central E coast); known only from type locality.
Ecology: coral reef, shallow subtidal; probably from a sponge.

Orthopontonia Bruce, 1982

Orthopontonia Bruce, A.J. (1982). Notes on some Indo-Pacific Pontoniinae, XLI *Orthopontonia*, a new genus proposed for *Periclimenaeus ornatus* Bruce. *Crustaceana* **43**(2): 163–176 [163] [gender feminine].
Type species: *Periclimenaeus ornatus* Bruce, 1970 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Orthopontonia ornata (Bruce, 1970)

Periclimenaeus ornatus Bruce, A.J. (1970). Further preliminary descriptions of new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(21): 305–315 [313].
Type data: holotype RMNH D37689 ovigerous ♀, paratypes BMNH, USNM.
Type locality: Heron Island, Capricorn Group, QLD.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); WA (Hibernia Reef), Indo-west Pacific Oceans.
Ecology: coral reef, low intertidal, subtidal; host is the sponge, *Jaspis stellifera*.
Reference: Bruce, A.J. (1982). Notes on some Indo-Pacific Pontoniinae, XLI *Orthopontonia*, a new genus proposed for *Periclimenaeus ornatus* Bruce. *Crustaceana* **43**(2): 163–176 [165].

Palaemonella Dana, 1852

Palaemonella Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [17] [gender feminine].
Type species: *Palaemonella tenuipes* Dana, 1852 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [425].

Extralimital distribution: Red Sea and S Africa to Pacific coast of America, E Atlantic and E Mediterranean.
Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [87] (key to species).

Palaemonella crosnieri Bruce, 1978

Palaemonella crosnieri Bruce, A.J. (1978). A report on a collection of pontoniine shrimps from Madagascar and adjacent seas. *J. Linn. Soc.* **62**: 205–290 [210 figs 2–4].
Type data: holotype MNHP Na2584 ♂.
Type locality: Iles Glorieuses [11°28.1'S 27°21.1'E].

Distribution: Territory of Ashmore & Cartier Islands (Cartier Reef); Iles Glorieuses, western Indian Ocean.
Ecology: coral reef, shallow subtidal.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [128].

Palaemonella pottsi (Borradaile, 1915)

Periclimenes (Falciger) pottsi Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [212].
Type data: syntypes UMZC AR3.1920 4♂ 3♀, 2 juveniles.
Type locality: Mabuaig and Murray Island, Torres Strait.

Distribution: NT (N coast), QLD (NE coast), WA (N coast); Torres Strait and Timor Sea, Indo-west central Pacific Oceans (Zanzibar to Marshall Islands, north to Japan, and south to New Caledonia).

Ecology: coral reef, subtidal; associated with the crinoids *Comanthus parvicirrus* and *Comanthina schlegli*, depth of 29 m.
Reference: Bruce, A.J. (1994). Shrimps from Flat-Top Bank, Timor Sea (Crustacea: Decapoda: Caridea). *Raffles Bull. Zool.* **42**(4): 743–756.

Palaemonella rotumana (Borradaile, 1898)

Periclimenes rotumanus Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [383].
Type data: syntypes UMZC Sept15.1897.
Type locality: Rotuma, Fiji Islands.

Palaemonella vestigialis Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [123 figs 1, 2, pl. 3, f].
Type data: syntypes IM C394–5/1*.
Type locality: Port Blair, Andaman Islands.

Taxonomic decision for synonymy: Bruce, A.J. (1970). Observations on the Indo-West-Pacific species of the genus *Palaemonella* Dana, 1852 (Decapoda, Pontoniinae). *Crustaceana* **19**(3): 273–287.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (Lower W coast, NW coast); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; found around bases of live and dead corals, intertidal pools, depths to 128 m.

Palaemonella spinulata Yokoya, 1936

Palaemonella spinulata Yokoya, Y. (1936). Some rare and new species of Decapod Crustaceans found in the vicinity of the Misaki Marine Biological Station. *Jap. J. Zool.* **7**(1): 129–146, text–figs 1–10 [135].
Type data: holotype whereabouts unknown ♀ (probably lost).
Type locality: vicinity of the Misaki Marine Biological Station, Japan.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; found under coral, depths to 25 m.

Paraclimenes Bruce, 1995

Paraclimenes Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [99] [gender masculine].
Type species: *Periclimenes franklini* Bruce, 1990 by original designation.

Extralimital distribution: Indo-west Pacific (South China Sea, Coral Sea, New Caledonia, Chesterfield Ils).

Paraclimenes franklini (Bruce, 1990)

Periclimenes franklini Bruce, A.J. (1990). *Periclimenes franklini* sp. nov., a new deep sea shrimp from the Coral Sea (Crustacea: Decapoda: Palaemonidae). *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(1): 55–64 figs 1–5 [55 figs 1–5].
Type data: holotype QM W13234 ♀, paratypes QM W13235 ♂ (as allotype), NTM Cr.006789 ♀.
Type locality: Coral Sea, off NE QLD.

Taxonomic decision for new combination: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [99].

Distribution: QLD (NE oceanic); known only from limital area.
Ecology: continental slope, oceanic province; depths of 296–520 m.

Paranchistus Holthuis, 1952

Paranchistus Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [5, 13, 91] [gender masculine].
Type species: *Anchistus biunguiculatus* Borradaile, 1898 (= *Paranchistus armatus* (H. Milne Edwards, 1837)) by original designation.

Extralimital distribution: Indo-west Pacific (Mozambique, Madagascar, Comoro Is. and Persian Gulf to Japan, Palau Is., Indonesia, New Guinea, New Ireland and Australia to Gilbert and Marshall Islands).
Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [90] (key to species).

Paranchistus armatus (H. Milne Edwards, 1837)

Pontonia armata Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [359].
Type data: syntypes MNHP 1 ♀ 1 ♂.
Type locality: New Ireland, Papua New Guinea.

Anchistus biunguiculatus Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [387].
Type data: syntype UMZC*.
Type locality: Tubetube, Engineer Group, Papua New Guinea.

Taxonomic decision for synonymy: Bruce, A.J. (1967). The results of the re-examination of the type specimens of some pontoniid shrimps in the collection of the Muséum National d'Histoire Naturelle, Paris. Bull. Mus. nat. Hist. Nat. (2) 39(3):. *Bull. Mus. Natn. Hist. Nat. Paris (2)***39**(3): 564–572 [564]; Bruce, A.J. (1975). *Pontonia armata* H. Milne-Edwards (Decapoda Natantia, Pontoniinae), — a correction. *Crustaceana* **29**(1): 49–54 figs 1–3.

Distribution: QLD (Great Barrier Reef); east Indo-west Central Pacific (Indonesia to Gilbert and Marshall Islands).
Ecology: coral reef, sublittoral, low intertidal; in heterosexual pairs, exclusively in mantle cavity of the giant clam, *Tridacna gigas*.

Reference: Bruce, A.J. (2000). Biological observations on the commensal shrimp *Paranchistus armatus* (H. Milne Edwards) (Crustacea: Decapoda: Pontoniinae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **16**: 91–96.

Paranchistus pycnodontae Bruce, 1978

Paranchistus pycnodontae Bruce, A.J. (1978). *Paranchistus pycnodontae* sp. nov., a new pontoniine shrimp associated with an Ostreid Bivalve host. *Mem. Qld Mus.* **18**(2): 233–243 pl. 39 [233 pl. 39].
Type data: holotype QM W7337 ♀.
Type locality: Heron Island, QLD.

Paranchistus serenei Bruce, A.J. (1983). Expedition Rumphius 2 (1975). Crustaces parasites, commensaux, etc. (Th. Monod ed.) 9. Crustaces decapodes (1ère partie: Natantia Pontoniinae). *Bull. Mus. Natn. Hist. Nat. Paris (Sect. A)***5**(3): 871–902 [890 figs 7H–I, 9].
Type data: holotype MNHP ♂, paratypes MNHP Na5281 ♀ (as allotype), MNHP Na5282 ♂.
Type locality: Seleman Bay, Seram Is., Indonesia.

Taxonomic decision for synonymy: De Grave, S. (1999). Pontoniinae (Crustacea: Decapoda: Palaemonidae) associated with bivalve molluscs from Hansa Bay, Papua New Guinea. *Bull. Inst. R. Sci. Nat. Belg.* **69**: 125–141 [138]; Davie, P., this work (A.J. Bruce, pers. comm., believes that this synonymy can only be confirmed by the examination of a greater range of specimens of both species).

Distribution: QLD (Great Barrier Reef); Papua New Guinea.
Ecology: coral reef, low intertidal, subtidal; found in mantle cavity of the bivalve molluscs, *Ostrea cristagalli*, *Hyotissa hyotis* and *Magnavicula penguin*, depth 3–10 m.

Parapontonia Bruce, 1968

Parapontonia Bruce, A.J. (1968). A report on some Pontoniid shrimps from New Caledonia (Crustacea Decapoda Natantia). *Bull. Mus. Natn. Hist. Nat. Paris* **39**(2): 1148–1171 [1148] [gender feminine].
Type species: *Parapontonia nudirostris* Bruce, 1968 by original designation.

Extralimital distribution: Australian Region—New Caledonia; west Pacific Ocean (New Caledonia, Indonesia).
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [103].

Parapontonia nudirostris Bruce, 1968

Parapontonia nudirostris Bruce, A.J. (1968). A report on some Pontoniid shrimps from New Caledonia (Crustacea Decapoda Natantia). *Bull. Mus. Natn. Hist. Nat. Paris* **39**(2): 1148–1171 [1149].
Type data: holotype MNHP 6811 ♂.
Type locality: Tiaré Bay, Noumea, New Caledonia.

Distribution: QLD (Central E coast, Great Barrier Reef, NE coast); west Pacific Ocean (New Caledonia, Indonesia).
Ecology: coral reef, subtidal; associated with crinoids of the genera *Tropiometra*, *Himerometra* and *Pontiometra*, to 18 m depth.

Paratypton Balss, 1914

Paratypton Balss, H. (1914). Ueber einige Pontoniiden. *Zool. Anz.* **45**: 83–88 [83] [gender masculine].
Type species: *Paratypton siebenrocki* Balss, 1914 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans (Red Sea to Marshall Islands and Samoa).

Paratypton siebenrocki Balss, 1914

Paratypton siebenrocki Balss, H. (1914). Ueber einige Pontoniiden. *Zool. Anz.* **45**: 83–88 [83 fig. 1].
Type data: syntypes NHMW 6714-6 ♀.
Type locality: Koseir, Senafir and Mersa Sheikh, Egypt.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Red Sea to Japan, Marshall Islands and Samoa).
Ecology: coral reef, shallow subtidal; lives as heterosexual pairs in cysts in a variety of *Acropora* coral species.

Periclimenaeus Borradaile, 1915

Periclimenaeus Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Periclimenaeus robustus* Borradaile, 1915 by subsequent designation, see Borradaile, L.A. (1917). On the Pontoniinae. The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr J. Stanley Gardiner. *Trans. Linn. Soc. Lond.* **17**: 323–396 pls 52–57 [378].

Extralimital distribution: Indo-Pacific and west Atlantic Oceans (Red Sea and South Africa to Japan, Indonesia and Australia and eastward to Hawai'i and Pacific coast of America from Costa Rica to Colombia and west Atlantic from north Carolina and Bermuda to Panama and Trinidad). See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Periclimenaeus arabicus (Calman, 1939)

Periclimenes (Periclimenaeus) arabicus Calman, W.T. (1939). Crustacea: Caridea. *Sci. Rep. John Murray Exped.* **6**(4): 183–224 [210, text-fig. 4].
Type data: holotype BMNH ♀.
Type locality: S Arabian Coast.

Periclimenaeus ohshimai Miyake, S. & Fujino, T. (1967). On four species of Pontoniinae (Crustacea, Decapoda, Palaemonidae) found in Porifera inhabiting the coastal regions of Kyushu, Japan. *J. Fac. Agric. Kyushu Univ.* **14**: 275–291 figs 1–7 pl. 3 [275 fig. 1].
Type data: holotype ZLKU 3431 ♂, paratype(s) ZLKU 3432 1 ♀.
Type locality: Takamatsu, Amakusa Islands, Kyushu, Japan.

Taxonomic decision for synonymy: Bruce, A.J. (1980). On some pontoniinae shrimps from Noumea, New Caledonia. *Cah. Pacif.* **2**(1): 1–39.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: low intertidal, reef, shallow subtidal; associated with sponges (including *Toxochalina*, *Callyspongia* and *Acarnus* species), depths of 1–30 m.

Periclimenaeus ardeae Bruce, 1970

Periclimenaeus ardeae Bruce, A.J. (1970). Further preliminary descriptions of new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(21): 305–315 [310].
Type data: holotype RMNH D45526 ovigerous ♀, paratype(s) ♂ (as allotype).
Type locality: Heron Island, Capricorn Group, QLD.

Distribution: QLD (Great Barrier Reef); known only from Heron Is., and Kenya, E. Africa.
Ecology: low intertidal, reef, shallow subtidal; hosts are sponges (*Jaspis stellifera*).

Periclimenaeus bidentatus Bruce, 1970

Periclimenaeus bidentatus Bruce, A.J. (1970). Further preliminary descriptions of new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(21): 305–315 [305].
Type data: holotype RMNH D45527 ovigerous ♀.
Type locality: Heron Island, Capricorn Group, QLD.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA; WA (Hibernia Reef), Zanzibar.
Ecology: coral reef, littoral; associated with sponges of the genera *Dysidea*, *Arenochalina*, *Jaspis*, *Sponginella* and *Liosina*.

Periclimenaeus crassipes (Calman, 1939)

Periclimenes (Ancylocaris) crassipes Calman, W.T. (1939). Crustacea: Caridea. *Sci. Rep. John Murray Exped.* **6**(4): 183–224 [211 fig. 5].
Type data: type status unknown BMNH.
Type locality: off Oman, Arabian Sea [18°03.5'N 57°02.5'E].

Distribution: NT (N coast); Indian Ocean (Arabian Sea).
Ecology: commensal, reef, subtidal; in an ascidian, *Didemnum psammatoides*, from 8–10 m depth.
Reference: Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [304] (Australian record).

Periclimenaeus diplosomatis Bruce, 1980

Periclimenaeus diplosomatis Bruce, A.J. (1980). Notes on some Indo-Pacific Pontoniinae, XXXIII. *Periclimenaeus diplosomatis* sp. nov., an ascidian associate from Heron Island, Australia. *Crustaceana* **39**(1): 39–51 [39 figs 1–6].
Type data: holotype AM P28417 ♀, paratype(s) AM P28418 ♂ (as allotype).
Type locality: Heron Island, QLD.

Distribution: QLD (NE coast); known only from limital area.
Ecology: coral reef, low intertidal, shallow subtidal; in *Diplosoma ? rayneri* (Ascidian).

Periclimenaeus djiboutensis Bruce, 1970

Periclimenaeus djiboutensis Bruce, A.J. (1970). Further preliminary descriptions of new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(21): 305–315 [307].
Type data: syntypes MNHP 1 ♂ 1 ♀.
Type locality: Jibuti, French Somaliland.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans.
Ecology: coral reef, low intertidal, shallow subtidal; collected from sponges.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [11] (Australian record).

Periclimenaeus gorgonidarum (Balss, 1913)

Periclimenes gorgonidarum Balss, H. (1913). Diagnosen neuer ostasiatischer Macruren. *Zool. Anz.* **42**: 234–239 [236].
Type data: syntypes whereabouts unknown.
Type locality: Japan.

Distribution: QLD (Great Barrier Reef); Seychelle Ils, Japan.
Ecology: coral reef, littoral, sublittoral; associated with a sponge of the genus *Siphonochalina*, depths to 24 m.
References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [129]; Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [11] (Australian record).

Periclimenaeus hecate (Nobili, 1904)

Coralliocaris hecate Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [232].
Type data: syntypes MNHP 1 ♂ 1 ♀.
Type locality: Djibouti, Africa.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: sublittoral; associated with encrusting colonial ascidians, such as *Diplosoma* spp.

Periclimenaeus myora Bruce, 1998

Periclimenaeus myora Bruce, A.J. (1998). Pontoniine shrimps from Moreton Bay, Queensland (Crustacea: Decapoda: Pontoniinae). *Mem. Qld Mus.* **42**(2): 387–398 figs 1–5 [394 figs 4, 5].
Type data: holotype QM W21706 ♀.
Type locality: Myora Reef, North Stradbroke Island, Moreton Bay.

Distribution: QLD (Central E coast); known only from type locality.
Ecology: coral reef, shallow subtidal; host not recorded, but presumed to be a tunicate, 3 m depth.

Periclimenaeus orontes Bruce, 1986

Periclimenaeus orontes Bruce, A.J. (1986). Three new species of commensal shrimps from Port Essington, Arnhem land, Northern Australia (Crustacea: Decapoda: Palaemonidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 143–166 [151].
Type data: holotype NTM Cr.000272 ♀.
Type locality: Orontes Reef, Port Essington, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: coral reef, littoral, sublittoral; sponge host *Jaspis stellifera*, depth of 3 m.

Periclimenaeus pachydentatus Bruce, 1969

Periclimenaeus pachydentatus Bruce, A.J. (1969). Preliminary descriptions of ten new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda, Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(12): 159–176 [162].
Type data: holotype ♀, paratype(s) BMNH ♂.
Type locality: Great Barrier Reef, QLD.

Distribution: NT (Gulf of Carpentaria), QLD (Great Barrier Reef), Territory of Ashmore & Cartier Islands; Hibernia Reef, known only from limital area.
Ecology: coral reef, littoral, sublittoral; hosts are compound Ascidians, depths to 15 m.

Periclimenaeus quadridentatus (Rathbun, 1906)

Coralliocaris quadridentatus Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text-figs 1–79 pls 1–24 [920 fig. 69, pl. 24 fig. 1].
Type data: holotype USNM 30552*.
Type locality: Auau Channel, between Maui and Lanai Islands, Hawai'ian Islands.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific (Kenya, Réunion, Queensland, Marianas Islands, and Hawai'ian Islands).
Ecology: 51–79 m (type depth).
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [27] (Australian record).

Periclimenaeus rastrifer Bruce, 1980

Periclimenaeus rastrifer Bruce, A.J. (1980). On some pontoniinae shrimps from Noumea, New Caledonia. *Cah. Pacif.* **2**(1): 1–39 [27 figs 12, 13a,b].
Type data: holotype MNHP Na3696 ♂.
Type locality: Noumea, New Caledonia.

Distribution: QLD (Great Barrier Reef, NE coast); east Indo-west Central Pacific.
Ecology: sublittoral; hosts include sponges of the genus *Ulosa*, depths of 12–15 m.

Periclimenaeus rhodope (Nobili, 1904)

Coralliocaris (Onycocaris) rhodope Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [233].
Type data: syntypes MZUT Cr.614*.
Type locality: Djibouti, Africa.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; found in encrusting sponges.
References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [125]; Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [12] (Australian record).

Periclimenaeus serrula Bruce & Coombes, 1995

Periclimenaeus serrula Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [111 figs 3–5].
Type data: holotype NTM Cr.004174A ♀, paratype(s) NTM Cr.004174B ♂ (as allotype).
Type locality: Orontes Reef, Port Essington, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: commensal, subtidal; in a tunicate, *Leptoclinides incertus* Sluiter, 11–12 m depth.

Periclimenaeus solitus Bruce & Coombes, 1995

Periclimenaeus solitus Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [115 figs 6, 7].
Type data: holotype NTM Cr.000277 ♂.
Type locality: Orontes Reef, Port Essington, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: commensal, subtidal; in a sponge, *Jaspis stellifera*, 3 m depth.

Periclimenaeus stylirostris Bruce, 1969

Periclimenaeus stylirostris Bruce, A.J. (1969). Preliminary descriptions of ten new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda, Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(12): 159–176 [167].
Type data: holotype RMNH D25612 ♀*.
Type locality: South China Sea [20°34.0'N 113°30.5'E].

Distribution: NT (N coast); Elizabeth Reef, Coral Sea, South China Sea, Fiji.
Ecology: subtidal; to about 90 m depth, in sponges.

Periclimenaeus tridentatus (Miers, 1884)

Coralliocaris tridentatus Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2.* Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [294 pl. 32 fig. c].
Type data: holotype BMNH 81.31 ♀.
Type locality: Thursday Island, QLD.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); east Indo-west Pacific Oceans.
Ecology: sublittoral; from species of the encrusting colonial ascidians in the genus *Diplosoma*, depths to 12 m.
Reference: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [140].

Periclimenaeus tuamotae Bruce, 1969

Periclimenaeus tuamotae Bruce, A.J. (1969). Preliminary descriptions of ten new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda, Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(12): 159–176 [170].
Type data: holotype MNHP ♀, paratype(s) MNHP 3 specimens*.
Type locality: Mururoa Island, Tuamoto Archipelago, Polynesia.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans (Mururoa Atoll, Kenya, Tanganyika).
Ecology: sublittoral; hosts are sponges, depth of 12 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [12] (Australian record).

Periclimenella Duris & Bruce, 1995

Periclimenella Duris, Z. & Bruce, A.J. (1995). A revision of the "petitthouarsii" species-group of the genus *Periclimenes* Costa, 1844 (Crustacea: Decapoda: Palaemonidae). *J. Nat. Hist.* **29**: 619–671 [620] [gender feminine].
Type species: *Palaemon petitthouarsii* Audouin, 1826 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [109].

Periclimenella spinifera (de Man, 1902)

Periclimenes petitthouarsii spinifera de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [824].
Type data: syntypes whereabouts unknown (museum not determined).
Type locality: Pulo Edam, Bay of Batavia [Jakarta], Amboina [Ambon], and Ternate, Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; intertidal pools, free-living browser though often found in branching corals.
Reference: Duris, Z. & Bruce, A.J. (1995). A revision of the "petitthouarsii" species-group of the genus *Periclimenes* Costa, 1844 (Crustacea: Decapoda: Palaemonidae). *J. Nat. Hist.* **29**: 619–671 [656].

Periclimenes Costa, 1844

Pelias Roux, P. (1831). *Mémoire sur la classification des Crustacés de la tribu des Salicoques.* Marseilles 4 tables, 39 pp. [25] [junior homonym of *Pelias* Merrem, 1820 (Reptilia); gender masculine].
Type species: *Alpheus amethystea* Risso, 1826 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [57].

Periclimenes Costa, O.G. (1844). Su due nuovi generi di Crostacei decapodi Macrouri Nota. *Ann. Accad. Aspir. Nat.* **2**: 285–290 [290] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Periclimenes insignis* Costa, 1844 (= *Alpheus amethystea* Risso, 1826) by monotypy.

Anchistia Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [17] [gender feminine].

Type species: *Anchistia gracilis* Dana, 1852 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [424].

Harpilius Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [17] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1964). Opinion 712. Forty-seven genera of Decapod Crustacea: placed on the Official List. *Bull. Zool. Nomencl.* **21**: 336–351; gender masculine].
Type species: *Harpilius lutescens* Dana, 1852 by monotypy.

Urocaris Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [39] [gender feminine].
Type species: *Urocaris longicaudata* Stimpson, 1860 by original designation.

Dennisia Norman, A.M. (1861). Contributions to British Carcinology. I. Characters of undescribed Podophthalmia and Entomostraca. *Ann. Mag. Nat. Hist.* **8**(3): 273–279 pls 13–14 [278] [gender feminine].
Type species: *Dennisia sagittifera* Norman, 1861 by monotypy.

Ancylocaris Schenkel, E. (1902). Beitrag zur Kenntnis der Dekapodenfauna von Celebes. *Verh. Naturf. Ges. Basel* **13**: 485–585 pls 7–13 [563] [gender feminine].
Type species: *Ancylocaris brevicarpalis* Schenkel, 1902 by monotypy.

Corniger Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207] [junior homonym of *Corniger* Agassiz, 1831 (Pisces), and *Corniger* Boehm, 1879 (Pycnogonida); gender masculine].
Type species: *Periclimenes (Corniger) ceratophthalmus* Borradaile, 1915 by subsequent designation, see Borradaile, L.A. (1917). On the Pontoniinae. The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr J. Stanley Gardiner. *Trans. Linn. Soc. Lond.* **17**: 323–396 pls 52–57 [365].

Cristiger Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207].
Type species: *Periclimenes (Cristiger) commensalis* Borradaile, 1915 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [61].

Falciger Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207] [junior homonym of *Falciger* Dejean, 1821 (Coleoptera); gender masculine].
Type species: *Periclimenes (Falciger) nilandensis* Borradaile, 1915 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [61].

Cuapetes Clark, A.H. (1919). Some necessary changes in Crustacean Nomenclature. *Proc. Biol. Soc. Wash.* **32**: 199 [199] [*nom. nov.* for *Falciger* Borradaile, 1915; gender masculine].

Laomenes Clark, A.H. (1919). Some necessary changes in Crustacean Nomenclature. *Proc. Biol. Soc. Wash.* **32**: 199 [199] [*nom. nov.* for *Corniger* Borradaile, 1915; gender masculine].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [163].

Extralimital distribution: all tropical and most subtropical seas.

Generic reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [95] (key to species).

Periclimenes abolineatus Bruce & Coombes, 1997

Periclimenes abolineatus Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [305 figs 1, 2].
Type data: holotype NTM Cr.000134 ♀, paratype(s) NTM Cr.000134 ♀ (juvenile).
Type locality: Lee Point, Darwin Harbour, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: commensal, reef, subtidal; on unidentified actinarian.

Periclimenes aesopius (Bate, 1863)

Aesop Prawn

Anchistia aesopia Bate, C.S. (1863). On some new Australian species of Crustacea. *Proc. Zool. Soc. Lond.* **1863**: 498–505 [502 pl. XLI fig. 5].
Type data: syntypes BMNH 68-81 2 ♀ *.
Type locality: Gulf St Vincent, SA.

Distribution: SA (Great Australian Bight, S Gulfs coast); known only from limital area.
Ecology: sublittoral.
Reference: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [8, 34].

Periclimenes affinis (Zehntner, 1894)

Palaemonella affinis Zehntner, L. (1894). Crustacés de l'Archipel malais. Voyage de MM.M. Bedot and C. Pictet dans l'Archipel malais. *Revue Suisse Zool.* **2**: 135–214 pls 7–9 [208].
Type data: holotype GMNH ♀.
Type locality: Amboina [Ambon], Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans, South China Sea, New Caledonia.
Ecology: sublittoral, coral reef; in association with the crinoids *Comatula cratera* and *Comanthina schlegeli*, depths 25 to 30 m.
References: Holthuis, L.B. (1958). Contributions to the knowledge of the Red Sea. No 8. Crustacea Decapoda from the northern Red Sea (Gulf of Aqaba and Sinai Peninsula). I. Macrura. *Bull. Sea Fish. Res. Sta.* **17**: 1–40 15 figs [6]; Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [12] (Australian record).

Periclimenes agag Kemp, 1922

Periclimenes agag Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [197 pl. 7 fig. 9].
Type data: holotype IM C374–6/1 35 specimens*.
Type locality: Ross Channel, Port Blair, Andamans.

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans.
Ecology: coral reef, sublittoral.

Periclimenes alcocki Kemp, 1922

Periclimenes alcocki Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [154 figs 21–24].
Type data: holotype ZSI 4787/7 ♀.
Type locality: Laccadive Sea.

Distribution: NSW (Central E coast, Lower E coast); Indo-west Pacific Oceans.
Ecology: continental shelf, continental slope; depths to 750 m.

Periclimenes alegrias Bruce, 1986

Periclimenes alegrias Bruce, A.J. (1986). Three new species of commensal shrimps from Port Essington, Arnhem land, Northern Australia (Crustacea: Decapoda: Palaemonidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 143–166 [143 figs 1A, 2–5, 15A–C].
Type data: holotype NTM Cr.004071 ♀, paratypes NTM Cr.003223 1 ♀, NTM Cr.000286 1 ♂ 1 ♀.
Type locality: Coral Bay, Port Essington, Arnhem Land.

Distribution: NT (N coast), WA (NW coast); known only from limital area.
Ecology: sublittoral, coral reef; associated with the crinoids *Stephanometra spicata*, *Lamprometra palmata* and *Comanthina variabilis*.

Periclimenes amboinensis (de Man, 1888)

Anchistia amboinensis de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a.
Type data: type status unknown*.
Type locality: Ambon, Indonesia.

Distribution: QLD (Great Barrier Reef); east Indo-west Central Pacific (Indonesia, Marshall Islands).
Ecology: coral reef, sublittoral; associated with the crinoids *Comanthina briareus* and *Comaster bennetti*, depths of 15–23 m.
References: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [13] (Australian record); Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle–Calédonie*. Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31 [235].

Periclimenes amymone de Man, 1902

Periclimenes amymone de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [829 pl. 25 fig. 53].
Type data: type status unknown.
Type locality: Ternate, Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); east Indo-west Central Pacific, Nicobar Islands, Samoan Islands.
Ecology: coral reef, littoral, sublittoral; common on branching corals of the genera *Pocillopora*, *Stylophora* and *Acropora*.

Periclimenes anacanthus Bruce, 1988

Periclimenes anacanthus Bruce, A.J. (1988). A new Palaemonid shrimp from the *Zostera*-beds of Moreton Bay, Queensland, Australia (Decapoda: Palaemonidae). *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 105–114 [105 figs 1–5].
Type data: holotype NTM Cr.006317 ♀, paratypes NTM Cr.006317 ♂ (as allotype), NTM Cr.006317 3 ♂ 6 ♀, RMNH D37303 ♀.
Type locality: Polka Point, Dunwich North Stradbroke Island, Moreton Bay, QLD.

Distribution: NT (N coast), QLD (Central E coast); known only from limital area.
Ecology: marine, sublittoral; collected by epibenthic sledge pulled through *Zostera*.

Periclimenes andamanensis Kemp, 1922

Periclimenes andamanensis Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [204 figs 54–57].
Type data: syntypes IM C380/I*.
Type locality: Ross Channel, Port Blair, Andamans.

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: sublittoral; depths of 7–15 m.

Periclimenes attenuatus Bruce, 1971

Periclimenes attenuatus Bruce, A.J. (1971). *Periclimenes attenuatus* sp. nov., (Crustacea, Decapoda Natantia, Pontoniinae), a new commensal shrimp from the Duke of York Islands. *Pac. Sci.* **25**(4): 533–544 [533 figs 1–5].
Type data: holotype BMNH 1970:443 ♀, paratypes RMNH D27149 ♂ (as allotype), RMNH 1 ♂ 1 ♀ 1 juvenile.
Type locality: Waterhouse Cove, Burukuk, St George's Channel, Duke of York Island, Bismarck Archipelago.

Distribution: QLD (Great Barrier Reef); east Indo-west Pacific Oceans (Bismarck Archipelago, Indonesia).
Ecology: sublittoral, coral reef; found on comatulid crinoids, depth of 15 m.

Periclimenes bayeri Holthuis, 1981

Periclimenes (Harpilius) bayeri Holthuis, L.B. (1953). Enumeration of the decapod and stomatopod Crustacea from Pacific coral islands. *Atoll. Res. Bull.* **No. 24**: 1–66 [56] [*nom. nud.*].

Periclimenes bayeri Holthuis, L.B. (1981). Description of three new species of shrimps (Crustacea: Decapoda: Caridea) from Pacific Islands. *Proc. Biol. Soc. Wash.* **94**(3): 787–800 [792 fig. 3a–h].
Type data: holotype USNM*, paratype(s) RMNH D16856 14 specimens.
Type locality: Ine village, Arno Atoll, Marshall Islands.

Distribution: Territory of Ashmore & Cartier Islands (Cartier Reef); Caroline and Marshall Islands, West Pacific.
Ecology: coral reef, intertidal, shallow subtidal.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992*. Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [128].

Periclimenes brevicarpalis Schenkel, 1902

Palaemonella amboinensis Zehntner, L. (1894). Crustacés de l'Archipel malais. Voyage de MM.M. Bedot and C. Pictet dans l'Archipel malais. *Revue Suisse Zool.* **2**: 135–214 pls 7–9 [206 pl. 9 fig. 27] [junior homonym of *Periclimenes amboinensis* de Man, 1888].
Type data: holotype GMNH.
Type locality: Amboina [Ambon], Indonesia.

Periclimenes brevicarpalis Schenkel, E. (1902). Beitrag zur Kenntnis der Dekapodenfauna von Celebes. *Verh. Naturf. Ges. Basel* **13**: 485–585 pls 7–13 [563 pl. 13 fig. 21a–m].
Type data: syntypes ♀*.
Type locality: Makassar, Sulawesi (as Celebes).

Palaemonella aberrans Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [234].
Type data: type status unknown.
Type locality: Djibouti.

Harpilius latirostris Lenz, H. (1905). Ostafrikanische Dekapoden und Stomatopoden. Gesammelt von Herrn Prof. Dr A. Voeltzkow. Wissenschaftliche Ergebnisse der Reisen in Madagaskar und Ostafrika in den Jahren 1889–95. Vol. III. *Abh. Senckenb. Naturforsch. Ges.* 27: 341–392 pls 47, 48 [380 pl. 47 fig. 14–14b].
Type data: syntypes ♀.
Type locality: Mkokotoni and Bawi, Zanzibar.

Periclimenes potina Nobili, G. (1905). Décapodes nouveaux des côtes d'Arabie et du Golfe Persique (Diagnoses préliininaires). *Bull. Mus. Natn. Hist. Nat. Paris* **11**(3): 158–164 1 text-fig [159].
Type data: type status unknown.
Type locality: SE coast of Arabia.

Periclimenes hermitensis Rathbun, M.J. (1914). Stalk-eyed Crustaceans collected at the Monte Bello Islands. *Proc. Zool. Soc. Lond.* **1914**: 653–664 pls 1, 2 [655 pl. 1 figs 1–3].
Type data: holotype USNM 159 ♀.
Type locality: Monte Bello Island.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [104].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; found on giant anemones of the genus *Stoichactis*, and with other anemones.
Reference: McNeill, F.A. (1968). Crustacea, Decapoda & Stomatopoda. *Scient. Rep. Gt Barrier Reef Exped.* **7**(1): 1–98 pls 1–2 [22].

Periclimenes brocketti Borradaile, 1915

Periclimenes brocketti Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [212].
Type data: holotype UMZC AR3.1920.
Type locality: Male Atoll, Maldive Islands.

Distribution: QLD (Great Barrier Reef, NE coast); Maldive Islands.
Ecology: coral reef, littoral, sublittoral; associated with the crinoid *Comanthina schlegeli*.
Reference: Bruce, A.J. (1978). The re-examination of some pontiniine shrimp types first described by L.A. Borradaile (Decapoda, Palaemonidae). *Crustaceana* **34**(3): 251–268 figs 1–9 [253] (redescribed and figured).

Periclimenes canalinsulae Bruce & Coombes, 1997

Periclimenes canalinsulae Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine*

flora and fauna of Darwin Harbour, Northern Territory, Australia. Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [309].
Type data: holotype NTM Cr.003265 ♂.
Type locality: Channel Island, Darwin Harbour, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: low intertidal, reef flat; in pool, extreme low water neap.

Periclimenes carinidactylus Bruce, 1969

Periclimenes carinidactylus Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [254].
Type data: holotype AM P28109 ♀.
Type locality: Bottle and Glass Rocks, Port Jackson, NSW.

Distribution: NSW (Central E coast, Lower E coast), SA (S Gulfs coast); known only from limital area.
Ecology: sublittoral, reef; associated with the crinoid *Comanthus trichoptera*, depth to 9 m.

Periclimenes ceratophthalmus Borradaile, 1915

Periclimenes ceratophthalmus Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [211].
Type data: holotype UMZC ♂.
Type locality: Hulule, Male Atoll, Maldive Islands.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, sublittoral; associated with the crinoid *Himerometra robustipinna*, depths to 43 m.
Reference: Bruce, A.J. (1978). The re-examination of some pontiniine shrimp types first described by L.A. Borradaile (Decapoda, Palaemonidae). *Crustaceana* **34**(3): 251–268 figs 1–9 [251] (redescribed and figured).

Periclimenes cobourgi Bruce & Coombes, 1995

Periclimenes cobourgi Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [125 figs 10, 11].
Type data: holotype NTM Cr.000307 ♀.
Type locality: Table Head, Cobourg Peninsula, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: ectocommensal, subtidal; on the gorgonian *Rumphella aggregata*, 3 m depth.

Periclimenes colemani Bruce, 1975

Periclimenes colemani Bruce, A.J. (1975). *Periclimenes colemani* sp. nov., a new shrimp associate of a rare sea urchin from Heron Island, Queensland (Decapoda, Natantia, Pontoniinae). *Rec. Aust. Mus.* **29**: 485–495 figs 2–8 [487 figs 1–7].
Type data: holotype AM P20209 ♂, paratype(s) AM P20210 ♀ (as allotype).
Type locality: Wistari Reef, Heron Island, Great Barrier Reef, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); west Pacific (Indonesia, Japan, Philippines).
Ecology: coral reef, littoral, sublittoral; associated with the sea urchin *Asthenosoma intermedium*, depths to 12 m.
Reference: Bruce, A.J. (1986). Shrimps that live on Tropical Echinoderms. *Underwater* **17**: 92–94 (illustration and associations).

Periclimenes commensalis Borradaile, 1915

Periclimenes (Cristiger) commensalis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [211].
Type data: syntypes UMZC*.
Type locality: Murray Island, Torres Straits.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast); Elizabeth and Middleton Reefs, Tasman Sea, Indo-west Pacific Oceans.
Ecology: sublittoral; hosts include *Comanthus parvicirrus*, *Comanthina schlegeli*, *Comaster multifidus* and *Lamprometra palmata*, depths to 30 m.
Reference: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [53] (full synonymy).

Periclimenes consobrinus (de Man, 1902)

Harpilius consobrinus de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [836 pl. 26 fig. 54].
Type data: type status unknown.
Type locality: Ternate, Indonesia.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (east Africa to Thailand, Indonesia and Vietnam).
Ecology: coral reef, littoral, sublittoral; associated with the coral *Pocillipora damicornis*.
References: Bruce, A.J. (1972). A review of information upon the coral hosts of commensal shrimps of the sub-family Pontoninae, Kingsley, 1878 (Crustacea, Decapoda, Palaemonidae). pp. 399–418 *in, Proc. Symp. Corals and Coral Reefs, 1969.* Mar.biol. Ass. India pp. 399–418 [403, 409 fig. 1b] (resurrected from synonymy and redescribed); Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [14] (Australian record).

Periclimenes cornutus Borradaile, 1915

Periclimenes cornutus Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [211].
Type data: holotype UMZC.
Type locality: Male Atoll, Maldive Island.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans, Maldive Islands.
Ecology: coral reef, sublittoral; associated with the crinoid *Himerometra robustipinna*, depths of 12–14 m.

Periclimenes cristimanus Bruce, 1965

Periclimenes cristimanus Bruce, A.J. (1965). Notes on Indo-Pacific Pontoniinae, X, *Periclimenes cristimanus* sp. nov., a new pontoniinid shrimp from Singapore. *Ann. Mag. Nat. Hist.* **8**(13): 487–493 [487 figs 1, 2].
Type data: holotype BMNH 1965.12.29.2.
Type locality: Pulau Sudong, near Pulau Salu, Singapore.

Distribution: QLD (Great Barrier Reef); east Indo-west Pacific Oceans (Singapore, Malaysia, Hong Kong, and Marshall Ils).
Ecology: coral reef, littoral, sublittoral; associated with the echinoid *Echinothrix calamaris*, depths of 3–17 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [15] (Australian record).

Periclimenes darwiniensis Bruce, 1987

Periclimenes darwiniensis Bruce, A.J. (1987). Notes on some Indo-Pacific Pontoniinae, XLIV. *Periclimenes darwiniensis* sp. nov., from the Northern Territory, Australia (Decapoda, Caridea). *Crustaceana* **52**(1): 29–39 [29].
Type data: holotype NTM Cr.002547a ♂, paratypes, RMNH D36332 1 specimen.
Type locality: Weed Reef, Darwin, NT.

Distribution: NT (N coast); known only from limital area.
Ecology: coral reef, littoral, rock reef; associated with other shrimps of the genus.

Periclimenes diversipes Kemp, 1922

Periclimenes diversipes Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [179 figs 36–39].
Type data: syntypes IM C364–5/I 44 specimens*.
Type locality: Kilakarai, Gulf of Manaar, S India.

Distribution: QLD (Great Barrier Reef), WA (NW coast); Indo-west Pacific Oceans (Red Sea and Madagascar to Gulf of Thailand and Coral Sea).
Ecology: sublittoral, coral reef, low intertidal; associated with a wide variety of scleractinian coral hosts.
Reference: Bruce, A.J. (1978). A report on a collection of pontoniine shrimps from Madagascar and adjacent seas. *J. Linn. Soc.* **62**: 205–290.

Periclimenes elegans Paul'son, 1875

Periclimenes elegans Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [113 pl. 17 fig. 1] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown.
Type locality: Red Sea.

Periclimenes (Falciger) dubius Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [211].
Type data: syntypes UMZC AR3.1920.
Type locality: Minicoy, Laccadive Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [110].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans (Red Sea and western Indian Ocean to Hong Kong, Philippines and Marshall Islands).
Ecology: coral reef, sublittoral, low intertidal; predatory, found under dead coral bases, and on coral sand and shell substrates, intertidal pools to 53 m depth.

Periclimenes galene Holthuis, 1952

Periclimenes galene Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [11, 62 fig. 24].
Type data: syntypes RMNH D9038 1 specimen, RMNH D9037 2 juveniles.
Type locality: Ambon, Indonesia, small island near Menado, Sulawesi, Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (eastern Africa, Indonesia, Philippines and Japan).
Ecology: sublittoral, reef; on hydroids, *Lytocarpus philippinus* and *Aglaophenia* species, depths of 18–26 m.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [112].

Periclimenes gonioporae Bruce, 1989

Periclimenes gonioporae Bruce, A.J. (1989). *Periclimenes gonioporae* sp. nov. (Crustacea: Decapoda: Palaemonidae), a new coelenterate-associated shrimp. *Beagle, Rec. N.T. Mus. Arts Sci.* **6**(1): 173–192 [149 figs 1–3, 4a].
Type data: holotype NTM Cr.006745 ♀, paratypes RMNH D37691 ovigerous ♀, USNM 243226.
Type locality: Ras Iwatine, Mombasa, Kenya.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (Kenya, La Réunion).

Ecology: coral reef, littoral; associated with a variety of coral genera including *Montipora*, *Goniopora*, *Galaxea* and *Porites*, depths to 6 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [16] (Australian record).

Periclimenes grandis (Stimpson, 1860)

Anchistia grandis Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [39].
Type data: holotype BMNH 61.44 1 specimen.
Type locality: 'Ousima' Amami O Shima, Ryukyu Islands.

Periclimenes vitiensis Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [383].
Type data: syntypes UMZC Sept.15.1897 ♀.
Type locality: Viti Levu, Fiji Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [112].

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans.
Ecology: coral reef, low intertidal; intertidal pools.
Reference: Bruce, A.J. (1978). The re-examination of some pontiniine shrimp types first described by L.A. Borradaile (Decapoda, Palaemonidae). *Crustaceana* **34**(3): 251–268 figs 1–9 [266] (redescribed and figured).

Periclimenes granulimanus Bruce, 1978

Periclimenes granulimanus Bruce, A.J. (1978). A report on a collection of pontoniine shrimps from Madagascar and adjacent seas. *J. Linn. Soc.* **62**: 205–290 [237 figs 16–19].
Type data: holotype MNHP 2580 ♀.
Type locality: Tany-Kely, NW coast near Nosy Bay, Madagascar.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans, Madagascar.
Ecology: coral reef, sublittoral; associated with the hydroid *Lytocarpus philippinus*, depth 24 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [16] (Australian record).

Periclimenes hertwigi Balss, 1913

Periclimenes hertwigi Balss, H. (1913). Diagnosen neuer ostasiatischer Macruren. *Zool. Anz.* **42**: 234–239 [235].
Type data: syntypes whereabouts unknown ♂ ♀.
Type locality: Sagami Bay, Japan.

Periclimenes (Ancylocaris) gracilirostris Kubo, J. (1940). Studies on Japanese Palaemonoid Shrimps. II. Pontoniinae. *J. Imp. Fish. Bur. Tokyo* **34**: 31–75 [41 figs 8–10].
Type data: holotype whereabouts unknown ♀.
Type locality: Kumano-nada off Mie Prefecture, Japan.

Taxonomic decision for synonymy: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [8, 43].

Distribution: QLD (Central E coast, NE coast); east Indo-west Central Pacific (Japan, East China Sea, Kei Islands, Philippines).
Ecology: continental shelf, continental slope; associated with the echinoids, 120–600 m depth.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [113].

Periclimenes holthuisi Bruce, 1969

Periclimenes holthuisi Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [258].
Type data: holotype RMNH D33226 ♂.
Type locality: Lung Ha Wan, New Territories, Hong Kong.

Distribution: Lord Howe Island, NSW (Central E coast, Lower E coast, SE oceanic), NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (NW coast); Indo-west Pacific Oceans (eastern Africa to Japan, New Caledonia and Marshall Islands).
Ecology: coral reef, sublittoral; associated with the coral genera *Goniopora* and *Catalaphyllia*, the anemone *Dofleinia armata*, and the scyphozoan *Cassiopea*, to 25 m depth.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [113].

Periclimenes imperator Bruce, 1967

Periclimenes imperator Bruce, A.J. (1967). Notes on some Indo-Pacific Pontoniinae III–IX. Descriptions of some new genera and species from the Western Indian Ocean and the South China Sea. *Zool. Verh.* **87**: 1–73 [53 figs 23–25].
Type data: holotype BMNH 1965.12.29.1 ♂, paratypes RMNH ♀ (as allotype), RMNH D23065 ♂.
Type locality: Zanzibar.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans.
Ecology: coral reef, sublittoral; found on the nudibranch *Hexabranchus sanguineus* and several holothurians.

Periclimenes incertus Borradaile, 1915

Periclimenes incertus Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [210].
Type data: syntypes UMZC June20.1920.
Type locality: South Nilandu Atoll, Maldive Islands.

Periclimenes impar Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [140, 147 pl. 3 fig. 1].
Type data: holotype IM C348/1 1 specimen*.
Type locality: Port Blair, Andamans.

Taxonomic decision for synonymy: Holthuis, L.B. (1959). Results of the reexamination of the type specimens of some species belonging to the subfamilies Pontoniinae and Palaemoniinae (Crustacea Decapoda, Macrura). *Zool. Meded. (Leiden)* **36**(11): 193–200 fig. 1 [193].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans (Madagascar to Philippines and New Caledonia).
Ecology: sublittoral, coral reef; associated with sponges, to 53 m depth.
References: Balss, H. (1921). Stomatopoda, Macrura, Paguridea and Galatheidae. *In,* Results of Dr E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. XXIX. *Svenska Vetensk. Akad. Handl.* **61**(10): 1–24 12 figs (first Australian record from NW Cape, WA but misidentified under name of *Palaemonella biunguiculatus*); Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [114]; Bruce, A.J. (1994). Shrimps from Flat-Top Bank, Timor Sea (Crustacea: Decapoda: Caridea). *Raffles Bull. Zool.* **42**(4): 743–756 [746].

Periclimenes indicus (Kemp, 1915)

Urocaris indica Kemp, S. (1915). Crustacea, Decapoda. Fauna of the Chilka Lake. *Mem. Indian Museum* **5**: 201–325 figs 1–38 pls 12–13 [275, text-fig. 26, pl. 13].
Type data: holotype IM 8997–8/10*.
Type locality: Chilka Lake, Orissa, India.

Distribution: NT (N coast), QLD (Central E coast, NE coast); east Indo-west Pacific Oceans (India to Singapore, Malaysia and Sulawesi, Indonesia, Philippines).
Ecology: sublittoral, low intertidal; fresh and brackish water, from seaweed (*Sargassum*) washings, also reportedly associated with intertidal anemone, depth to 55 m.
Reference: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [9, 39].

Periclimenes inornatus Kemp, 1922

Periclimenes inornatus Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [191 figs 43–46].
Type data: syntypes IM C363/1 18 specimens*.
Type locality: Port Blair, Andamans.

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans (East Africa to Fiji and Caroline Islands).
Ecology: coral reef, sublittoral; from giant anemones of the genus *Radianthus*, depths of 9–18 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [17] (Australian record).

Periclimenes investigatoris Kemp, 1922

Periclimenes investigatoris Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [160 pl. 5 fig. 6].
Type data: holotype IM C350/1*.
Type locality: Persian Gulf.

Distribution: NT (N coast), QLD (NE coast); Indo-west Pacific Oceans (Persian Gulf, Malaysia, Singapore).
Ecology: sublittoral; reported from telestacean host in the genus *Solenocaulon*, and on an alcyonacean, to 24 m depth.
Reference: Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [314].

Periclimenes kempi Bruce, 1969

Periclimenes kempi Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [260].
Type data: holotype whereabouts unknown ♀ (probably lost), paratype(s) whereabouts unknown 3 specimens (probably lost).
Type locality: Hurghada, Red Sea, Egypt.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west Pacific (East Africa to Philippines, Fiji and Caroline Islands).
Ecology: coral reef, littoral; associated with a variety of alcyonarians, including species in the genera *Dendronephthya, Limnalia, Macrospicularia, Nephthya, Sarcophyton, Sinularia* and *Stereonephthya*.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [131].

Periclimenes kororensis Bruce, 1977

Periclimenes kororensis Bruce, A.J. (1977). *Periclimenes kororensis* n.sp., an unusual shrimp associate of the Fungiid Coral, *Heliofungia actiniformis*. *Micronesica* **13**(1): 33–43 [33 figs 1–4].
Type data: holotype USNM 168474 ♀.
Type locality: Koror, Palau Islands.

Distribution: QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans (Indonesia, Malaysia, Japan, Philippines, Palau Ils, Papua New Guinea, Carline and Marshall Ils).
Ecology: coral reef, sublittoral; associated with the fungiid coral, *Heliofungia actiniformis*, to 17 m depth.

Periclimenes laccadivensis (Alcock & Anderson, 1894)

Palaemonella laccadivensis Alcock, A. & Anderson, A.R.S. (1894). Natural History Notes from H.M. Indian Marine Survey Steamer "Investigator", Commander C.F. Oldham, R.N., commanding. Series II, No. 14. An Account of a Recent Collection of Deep Sea Crustacea from the Bay of Bengal and Laccadive Sea. *J. Asiat. Soc. Bengal* **63**(Pt 2 No. 3): 141–185 pl. 9 [157].
Type data: holotype IM ♀*.
Type locality: Laccadive Sea.

Distribution: TAS (SE oceanic); Indo-west Pacific Oceans (Laccadive Sea, South China Sea, New Caledonia).
Ecology: bathyal, continental shelf, continental slope; depth 274–1285 m.
Reference: Bruce, A.J. (1992). Two new species of *Periclimenes* (Crustacea: Decapoda: Palaemonidae) from Lizard Island, Queensland, with notes on some related taxa. *Rec. Aust. Mus.* **44**: 45–84 [69] (Australian record, redescription and figures).

Periclimenes lacertae Bruce, 1992

Periclimenes lacertae Bruce, A.J. (1992). Two new species of *Periclimenes* (Crustacea: Decapoda: Palaemonidae) from Lizard Island, Queensland, with notes on some related taxa. *Rec. Aust. Mus.* **44**: 45–84 [46 figs 1–6].
Type data: holotype AM P39299 ♂.
Type locality: off North Point, Lizard Island, QLD (published data: off Chinaman's ridge, Mrs Watson's Bay).

Distribution: QLD (Great Barrier Reef, NE coast); known only from limital area.
Ecology: sublittoral; depths of 22–23 m.

Periclimenes lanipes Kemp, 1922

Periclimenes lanipes Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [156 pl. 4 fig. 4].
Type data: holotype IM C405/I 1 specimen*.
Type locality: Mergui Archipelago.

Distribution: QLD (Central E coast, NE coast); Indo-west central Pacific Oceans (East Africa to South China Sea, Philippines, New Caledonia).
Ecology: coral reef, sublittoral; associated with basket stars, *Euryale aspera*.
Reference: Bruce, A.J. (1986). Shrimps that live on Tropical Echinoderms. *Underwater* **17**: 92–94 (illustration and associations).

Periclimenes longirostris (Borradaile, 1915)

Palaemonella longirostris Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [210].
Type data: syntypes UMZC June20.1900.
Type locality: Fardiffolu Atoll, Maldive Islands.

Periclimenes (Falciger) affinis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [211].
Type data: syntypes UMZC*.
Type locality: Salomon Island, Chagos Archipelago.

Periclimenes (Ancylocaris) proximus Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [201 figs 51–53].
Type data: syntypes IM*.
Type locality: Port Blair, Andaman Islands.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [117].

Distribution: QLD (NE coast); Indo-Pacific Oceans (Red Sea and western Red Sea to Philippines, Papua and Marshall Islands).
Ecology: sublittoral; depth to at least 17 m.

Periclimenes lutescens (Dana, 1852)

Harpilius lutescens Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, Iexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [25].
Type data: syntypes ANSP*.
Type locality: Tongatabu, Tonga Islands.

Periclimenes (Ancylocaris) amamiensis Kubo, J. (1940). Studies on Japanese Palaemonoid Shrimps. II. Pontoniinae. *J. Imp. Fish. Bur. Tokyo* **34**: 31–75 [44 figs 11, 12].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Amami O Shima, Ryukyu islands.

Taxonomic decision for synonymy: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [88].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (East Africa to Japan east to Samoa and the Marquesas).
Ecology: coral reef, low intertidal, shallow subtidal; associated with *Acropora* coral species, to 11 m depth.
Reference: Bruce, A.J. (1983). The Pontoniine shrimp fauna of Australia. *Mem. Aust. Mus.* **18**: 195–218.

Periclimenes madreporae Bruce, 1969

Periclimenes madreporae Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [262].
Type data: holotype whereabouts unknown ♂.
Type locality: Erskine Island, Capricorn Group, QLD.

Distribution: Lord Howe Island, NSW (Lower E coast), QLD (Great Barrier Reef, NE coast); Elizabeth and Middleton Reefs, Tasman Sea, Indo-west Pacific Oceans (La Réunion, Solomon Islands, Caroline Islands, Society and Tuamoto Ils).
Ecology: coral reef, sublittoral; hosts are madrepore corals, including species in the genus *Goniopora*.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [132].

Periclimenes magnificus Bruce, 1979

Periclimenes magnificus Bruce, A.J. (1979). Notes on some Indo-Pacific Pontoniinae, XXXI *Periclimenes magnificus* sp. nov., a coelenterate associate from the Capricorn Islands (Decapoda, Palaemonidae). *Crustaceana (Suppl.)***5**: 195–208 [195 figs 1–5, pl. 1a–c].
Type data: holotype AM P27106 ♀, paratype(s) RMNH D31957 1 specimen.
Type locality: Wistari Reef, Heron Island, Capricorn Islands, QLD.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans (Ryukyu Islands, Philippines, Lesser Sunda Islands, Indonesia, Thailand and New Caledonia).
Ecology: coral reef, sublittoral; associated with scleractinian corals and sea anemones (genus *Cerianthus*), depths to 29 m.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [132].

Periclimenes mahei Bruce, 1969

Periclimenes mahei Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [263].
Type data: holotype whereabouts unknown ♀ (probably lost), paratype(s) whereabouts unknown 9 specimens (probably lost).
Type locality: North West Bay, Mahé, Seychelles Islands.

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans (Zanzibar, Seychelle, Comoro and Amirante Islands to Tuamoto Ils).
Ecology: shallow subtidal; on *Acropora* species and madrepore corals.

Periclimenes nilandensis Borradaile, 1915

Periclimenes nilandensis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [211].
Type data: syntypes UMZC*.
Type locality: S Nilandu Atoll, Maldive Island.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (East Africa to South China Sea and New Caledonia).
Ecology: coral reef, sublittoral; collected from the hydroid *Lytocarpus philippines*, usually found with gorgonian hosts, depth 24 m.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [132].

Periclimenes novaecaledoniae Bruce, 1968

Periclimenes novaecaledoniae Bruce, A.J. (1968). A report on some Pontoniid shrimps from New Caledonia (Crustacea Decapoda Natantia). *Bull. Mus. Natn. Hist. Nat. Paris* **39**(2): 1148–1171 [1157 figs 6–9].
Type data: holotype MNHP Na.6182.
Type locality: Ilôt Maitre, Nouméa, New Caledonia.

Distribution: NT (N coast); New Caledonia, and, with reservation, from Madagascar.
Ecology: commensal, coral reef, subtidal; associated with the crinoids, *Lamprometra klunzingeri* and *Tropiometra afra*.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [132].

Periclimenes novaffinis Bruce & Coombes, 1997

Periclimenes novaffinis Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [315 fig. 6].
Type data: holotype NTM Cr.004484 ♀, paratypes NTM Cr.004216 ♂, NTM Cr.004473 ♂ ♀.
Type locality: off East Point, Darwin Harbour, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: ectocommensal, reef, subtidal; associated with crinoids, *Zygometra* spp., 6–10 m depth.

Periclimenes obscurus Kemp, 1922

Periclimenes obscurus Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [144, text-fig. 14, 15].
Type data: syntypes IM C345–6/1*.
Type locality: Springhaven Madras Harbour.

Distribution: NT (N coast), QLD (Central E coast); Indo-west Pacific Oceans.
Ecology: sublittoral, reef; collected from sponges, depth of 10 m.

Periclimenes ornatellus Bruce, 1979

Periclimenes ornatellus Bruce, A.J. (1979). A report on a small collection of Pontoniine shrimps from Eniwetok Atoll. *Crustaceana (Suppl.)***5**: 209–230 [219 figs 4–7, pl. 1C–E].
Type data: holotype USNM 172167 ♀, paratypes RMNH D31989 ♂, USNM 172168 ♂ (as allotype).
Type locality: Eniwetok Atoll, Marshall Islands.

Distribution: QLD (Great Barrier Reef); west Pacific Ocean (Eniwetok Atoll).
Ecology: coral reef, shallow subtidal; from an anemone, *Radianthus* sp.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [19] (Australian record).

Periclimenes ornatus Bruce, 1969

Periclimenes ornatus Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [266].
Type data: holotype RMNH D33229 ♀.
Type locality: Lung Ha Wan, New Territories, Hong Kong.

Distribution: Lord Howe Island, Norfolk Island, QLD (Great Barrier Reef, NE coast); Indo-west Pacific (East Africa and Red Sea to Marshall Islands).
Ecology: coral reef, littoral, sublittoral; associated with anemones of the genus *Radianthus*, depth of 6 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [19] (Australian record).

Periclimenes pectiniferus Holthuis, 1952

Periclimenes pectiniferus Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [48 figs 15, 16].
Type data: syntypes ZMA 2 ♀.
Type locality: Kabala Dua Island, Indonesia.

Distribution: QLD (NE coast); east Indo-west Pacific Oceans, Indonesia.
Ecology: sublittoral; host unidentified, depth 30 to 35 m.

Periclimenes platycheles Holthuis, 1952

Periclimenes platycheles Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [85 fig. 33].
Type data: syntypes ZMA 1 specimen.
Type locality: off Atiationim, W New Guinea.

Distribution: QLD (Great Barrier Reef); east Indo-west Pacific Oceans (Indonesia, Palau, Japan and Caroline Ils).
Ecology: coral reef, sublittoral; collected from a colony of an *Acropora* species, depth 14 m.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [120].

Periclimenes priodactylus Bruce, 1992

Periclimenes priodactylus Bruce, A.J. (1992). Two new species of *Periclimenes* (Crustacea: Decapoda: Palaemonidae) from Lizard Island, Queensland, with notes on some related taxa. *Rec. Aust. Mus.* **44**: 45–84 [53 figs 1, 7–11].
Type data: holotype AM P39435 ♂.
Type locality: Blue Lagoon, Lizard Island, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); known only from limital area.
Ecology: sublittoral, coral reef; depth 3 m.

Periclimenes psamathe (de Man, 1902)

Urocaris psamathe de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [816 pl. 25 fig. 51].
Type data: type status and whereabouts unknown.
Type locality: Ternate, Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef); Indo-west Pacific Oceans (Eastern Africa to Japan, Philippines, New Caledonia and Marshall Islands).
Ecology: sublittoral, coral reef; associated with the hydroid *Lytocarpus philippinus*, depths 24 to 53 m.
References: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [19] (Australian record); Bruce, A.J. (1991). Shallow-water Palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *Le benthos des fonds meubles des lagons de Nouvelle-Calédonie.* Études et Théses, ORSTOM, Paris pp. 221–279 figs 1–31 [238].

Periclimenes ruber Bruce, 1982

Periclimenes ruber Bruce, A.J. (1982). The shrimps associated with Indo-west Pacific Echinoderms, with the description of a new species in the genus *Periclimenes* Costa, 1844 (Crustacea: Pontoniinae). *Mem. Aust. Mus.* **16**: 191–216 [197 figs 3–5, 8f].
Type data: holotype AM P28106 ♀, paratypes AM P28107 ♂, RMNH D31955 ♀.
Type locality: Bribie Passage, Pumicestone Channel, QLD.

Distribution: QLD (Central E coast); known only from limital area.
Ecology: sublittoral; from a crinoid host, *Zygometra microdiscus*, depth 8 m.

Periclimenes seychellensis Borradaile, 1915

Periclimenes seychellensis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [212].
Type data: syntypes UMZC AR3.1920.
Type locality: Praslin, Seychelles.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (East Africa and Red Sea to Indonesia, Papua, New Caledonia, and Marshall Islands).
Ecology: coral reef, sublittoral; found associated with algae.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [133].

Periclimenes sinensis Bruce, 1969

Periclimenes sinensis Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [270].
Type data: holotype RMNH D33230.
Type locality: Hong Kong.

Distribution: NT (N coast); West Pacific (Hong Kong, Japan, Philippines).
Ecology: coral reef, subtidal; associated with alcyonarians, *Morchellana planoregularis* (Burchardt) and *Dendronephthya* sp.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [133].

Periclimenes soror Nobili, 1904

Periclimenes soror Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [232].
Type data: syntypes MZUT Cr.1239.
Type locality: Djibouti, Africa.

Periclimenes frater Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [210].
Type data: syntypes UMZC AR3.1920.
Type locality: Seychelles.

Periclimenes bicolor Edmondson, C.H. (1935). New and rare Polynesian Crustacea. *Occ. Pap. Bernice P. Bishop Mus.* **10**(24): 3–40 figs 1–11 pls 1–2 [10 fig. 3].
Type data: holotype BPBM 3756 ♀.
Type locality: Kaneohne Bay, Oahu.

Taxonomic decision for synonymy: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [51].

Distribution: NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast), WA (Central W coast, NW coast); widespread Indo-Pacific Oceans, east Pacific from Gulf of California, Panama, and Columbia.
Ecology: coral reef, sublittoral; associated with a wide variety of asteroid hosts.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [133].

Periclimenes suvadivensis Borradaile, 1915

Periclimenes suvadivensis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [212].
Type data: holotype UMZC AR3.1920.
Type locality: Suvadiva Atoll, Maldive Islands.

Distribution: NT (N coast); Indian Ocean (Maldives).
Ecology: low intertidal; in muddy pools.
References: Bruce, A.J. (1978). The re-examination of some pontiniine shrimp types first described by L.A. Borradaile (Decapoda, Palaemonidae). *Crustaceana* **34**(3): 251–268 figs 1–9 [264] (redescription and figure of type); Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [318] (Australian record).

Periclimenes tenuipes Borradaile, 1898

Periclimenes tenuipes Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [384].
Type data: syntypes UMZC March1.1898 (redescribed and figured in Bruce, A.J. (1978). The re-examination of some pontiniine shrimp types first described by L.A. Borradaile (Decapoda, Palaemonidae). *Crustaceana* **34**(3): 251–268 figs 1–9 [261–264, figs 6C, 7]).
Type locality: Ralun, New Britain.

Periclimenes borradailei Rathbun, M.J. (1904). Decapod crustaceans of the northwest coast of North America. *Harriman Alaska Exped., N.Y.* **10**: 1–190, text–figs 1–95 pls 1–10 [34] [unnecessary *nom. nov.* for *Periclimenes tenuipes* Borradaile, 1898].

Periclimenes kolumadulensis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [213].
Type data: syntypes UMZC AR3.1920 (redescribed and figured in Bruce, A.J. (1978). The re-examination of some

pontiniine shrimp types first described by L.A. Borradaile (Decapoda, Palaemonidae). *Crustaceana* **34**(3): 251–268 figs 1–9 [261–4, figs 6A, B]).
Type locality: Kolumadulu Atoll, Maldive Islands.

Taxonomic decision for synonymy: Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [220].

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west Pacific Oceans (East Africa and Red Sea to Indonesia, Philippines, Palau and Marshall Islands).
Ecology: coral reef, sublittoral; intertidal pools at extreme low spring tides, generally free-living, but also reported associated with anemones, nocturnal, depths 14 to 24 m.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [135].

Periclimenes tenuis Bruce, 1969

Periclimenes tenuis Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [272].
Type data: holotype RMNH ♀, paratype(s).
Type locality: Chukwani, Zanzibar Island, E Africa.

Distribution: QLD (Great Barrier Reef, NE coast); east Indo-west Pacific Oceans (East Africa and Red Sea to Ryukyu and Marshall Islands).
Ecology: coral reef, subtidal; associated with crinoids, including *Himerometra magnipinna.*
References: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [20] (Australian record); Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [123].

Periclimenes terangeri Bruce, 1998

Periclimenes terangeri Bruce, A.J. (1998). Pontoniine shrimps from Moreton Bay, Queensland (Crustacea: Decapoda: Pontoniinae). *Mem. Qld Mus.* **42**(2): 387–398 figs 1–5 [387 fig. 1].
Type data: holotype QM W21735 ♀, paratype(s) QM W22275 ♀.
Type locality: Polka Point, North Stradbroke Island, Moreton Bay.

Distribution: QLD (Central E coast); known only from type locality.
Ecology: intertidal flats, low intertidal, seagrass.

Periclimenes toloensis Bruce, 1969

Periclimenes toloensis Bruce, A.J. (1969). Preliminary descriptions of sixteen new species of the genus *Periclimenes* Costa, 1844 (Crustacea, Decapoda, Nantantia, Pontoniinae). *Zool. Meded. (Leiden)* **43**(20): 253–278 [273].
Type data: holotype RMNH D33231 ♂.
Type locality: Ap Chau, Tolo Channel, Hong Kong.

Distribution: NT (N coast), QLD (Great Barrier Reef); Indo-west Pacific Oceans, Hong Kong, Zanzibar.
Ecology: coral reef, sublittoral; found on the hydroid *Lytocarpus philippinus*, depth 24 m.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [20] (Australian record).

Periclimenes venustus Bruce, 1990

Periclimenes venustus Bruce, A.J. (1990). A new cnidarian-associated palaemonid shrimp from Port Essington, Coburg Peninsula, Australia. *Indo-Malayan Zool.* **6**(1989): 229–243 [230 figs 1–6].
Type data: holotype MOM ♀, paratypes BMNH 38041, RMNH D1990:37, USNM 239286.
Type locality: Port Essington, Cobourg Peninsula, N Australia.

Distribution: NT (N coast), WA (NW coast); Papua New Guinea, Indonesia, Philippines and Japan.
Ecology: sublittoral, coral reef; associated with anemones, and coral of the genus *Heliofungia.*
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [136].

Periclimenes yaldwyni Holthuis, 1959

Brachycarpus audouini Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [798 pl. 129 fig. 5] [junior secondary homonym of *Palaemon audouini* Heller, 1862].
Type data: holotype BMNH ♀.
Type locality: New Zealand.

Periclimenes batei Holthuis, L.B. (1950). The Decapoda of the Siboga Expedition. Part X. The Palaemonidae collected by the *Siboga* and *Snellius* expeditions, with remarks on other species, Part I: Subfamily Palaemoninae. *Siboga Exped.* **39**(a9): 1–268 figs 1–52 [22] [*nom. nov.* for *Brachycarpus audouini* Bate, 1888; junior secondary homonym of *Palaemonella batei* Borradaile, 1917].

Periclimenes yaldwyni Holthuis, L.B. (1959). Results of the reexamination of the type specimens of some species belonging to the subfamilies Pontoniinae and Palaemoniinae (Crustacea Decapoda, Macrura). *Zool. Meded. (Leiden)* **36**(11): 193–200 fig. 1 [197] [*nom. nov.* for *Periclimenes batei* Holthuis, 1950].

Taxonomic decision for synonymy: Holthuis, L.B. (1959). Results of the reexamination of the type specimens of some species belonging to the subfamilies Pontoniinae and Palaemoniinae (Crustacea Decapoda, Macrura). *Zool. Meded. (Leiden)* **36**(11): 193–200 fig. 1 [197].

Distribution: TAS (Tas. coast); New Zealand.
Ecology: sublittoral; depth 16–28 m.
Reference: Bruce, A.J. & Cropp, D.A. (1984). A redescription of *Periclimenes yaldwyni* Holthuis (*Brachycarpus audouini* Bate, 1888, Crustacea, Decapoda, Palaemonidae) and its occurrence in Australian waters. *Pac. Sci.* **38**(3): 189–198 [189].

Periclimenes zanzibaricus Bruce, 1969

Periclimenes zanzibaricus Bruce, A.J. (1969). Preliminary descriptions of ten new species of the genus *Periclimenaeus* Borradaile, 1915 (Crustacea, Decapoda, Natantia, Pontoniinae). *Zool. Meded. (Leiden)* **44**(12): 159–176 [174].
Type data: holotype RMNH D25615 ♀, paratype(s) BMNH ♂.
Type locality: Uroa, E coast of Zanzibar Island, East Africa.

Distribution: NT (N coast), WA (NW coast); Indian Ocean (Zanzibar, Kenya, and Seychelles).
Ecology: coral reef, shallow subtidal; associated with the echinoids *Centrostephanus tenuispinus* and *Diadema setosum*, and in sponges.
Reference: Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [136].

Periclimenoides Bruce, 1990

Periclimenoides Bruce, A.J. (1990). Additions to the marine shrimp fauna of Hong Kong. *In*, Morton, B. (ed.) *Proc. Second Internat. Mar. Biol. Wksp : The Marine Fauna of Hong Kong and Southern China, Hong Kong, 1986.* Hong Kong : Hong Kong U.P. pp. 611–648, figs 1–18 [616] [gender masculine].
Type species: *Periclimenaeus odontodactylus* Fujino & Miyake, 1968 by original designation.

Extralimital distribution: Japan, Hong Kong, Philippines.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [113].

Periclimenoides odontodactylus (Fujino & Miyake, 1968)

Periclimenaeus odontodactylus Fujino, T. & Miyake, S. (1968). Descriptions of two new species of Pontoniid shrimps (Crustacea, Decapoda, Palaemonidae) commensal with sponges. *Ohmu* **1**(3): 85–96 [85 figs 1, 2].
Type data: holotype ZLKU 10931 ♀.
Type locality: Ushibuka, Amakusa Is., W of Kyushu, Japan.

Distribution: QLD (Great Barrier Reef), WA (NW coast); east Indo-west Pacific Oceans (Japan, Hong Kong, Philippines).
Ecology: coral reef, subtidal; in heterosexual pairs in sponge hosts, including *Ircinia fasciculata*, 11–20 m depth.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [11] (Australian record).

Philarius Holthuis, 1952

Philarius Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [5, 15, 151] [gender masculine].
Type species: *Harpilius gerlachei* Nobili, 1905 by original designation.

Extralimital distribution: Red Sea and E Africa to Indonesia, Marshall, Gilbert and Samoan Islands.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [115].

Philarius gerlachei (Nobili, 1905)

Harpilius gerlachei Nobili, G. (1905). Décapodes nouveaux des côtes d'Arabie et du Golfe Persique (Diagnoses préliminaires). *Bull. Mus. Natn. Hist. Nat. Paris* **11**(3): 158–164 1, text–fig [160] [as *Harpilius Gerlachei*].
Type data: syntypes MZUT Cr.782, MNHP Na1899 numerous specimens.
Type locality: off Arzana Island, Southern Persian Gulf.

Distribution: NT (N coast), QLD (Great Barrier Reef); Indo-Pacific Oceans.
Ecology: coral reef, low intertidal, shallow subtidal; associated with corals of the genus *Acropora*.
References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [15, 152] (distribution and full synonymy); Bruce, A.J. (1978). A report on a collection of pontoniine shrimps from Madagascar and adjacent seas. *J. Linn. Soc.* **62**: 205–290 [114].

Philarius imperialis (Kubo, 1940)

Harpilius imperialis Kubo, J. (1940). A new shrimp, *Harpilius imperialis*. *J. Imp. Fish. Bur. Tokyo* **34**: 1–4 [1 figs 1–3].
Type data: holotype whereabouts unknown ♂.
Type locality: Nankin-Hama, Haha-zima, Bonin [Ogasawara] Islands.

Distribution: NT (N coast), QLD (Great Barrier Reef), WA (NW coast); Indo-west Pacific Oceans.
Ecology: coral reef, low intertidal, shallow subtidal; associated with colony of *Acropora* sp., depth to 20 m.
Reference: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [15].

Philarius lifuensis (Borradaile, 1898)

Periclimenes lifuensis Borradaile, L.A. (1898). A revision of the Pontoniidae. *Ann. Mag. Nat. Hist.* **2**(7): 376–391 [384].
Type data: holotype UMZC March1.1898 ♂.
Type locality: Lifu reef, Loyalty Islands.

Distribution: QLD (Great Barrier Reef); south-west Pacific Ocean.

Ecology: coral reef, low intertidal, shallow subtidal; from *Acropora* corals, 6–18 m depth.
Reference: Bruce, A.J. (1982). Notes on some Indo-Pacific Pontoniinae. XL The rediscovery of *Periclimenes lifuensis* Borradaile, 1898 (Decapoda, Pontoniinae) and the establishment of its systematic position. *Crustaceana* **42**(2): 158–173 [158].

Platycaris Holthuis, 1952

Platycaris Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [5, 16, 172] [gender feminine].
Type species: *Platycaris latirostris* Holthuis, 1952 by original designation.

Extralimital distribution: E Africa to Okinawa, Indonesia, and Fiji Islands.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [117].

Platycaris latirostris Holthuis, 1952

Platycaris latirostris Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [173 figs 85, 86].
Type data: holotype RMNH D8993 1 specimen.
Type locality: Ende, Flores, Indonesia.

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans (E Africa to Okinawa, Indonesia, and Fiji Islands).
Ecology: coral reef, low intertidal, shallow subtidal; always in association with oculinid corals of the genus *Galaxea*, to 15 m depth.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [21] (Australian record).

Platypontonia Bruce, 1968

Platypontonia Bruce, A.J. (1968). Notes on some Indo-Pacific Pontoniinae, XII. The re-examination of *Pontonia ? brevirostris* Miers, 1844, with the designation of a new genus *Platypontonia* (Decapoda Natantia, Pontoniinae). *Crustaceana* **15**: 289–297 [289] [gender feminine].
Type species: *Pontonia brevirostris* Miers, 1884 by original designation.

Extralimital distribution: Indo-west Pacific (Madagascar, Seychelles, Japan, Indonesia).
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [119].

Platypontonia brevirostris (Miers, 1884)

Pontonia brevirostris Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2.* Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [562 pl. 51 fig. B].
Type data: syntypes BMNH 82-54 ♂.
Type locality: Seychelles, Indian Ocean.

Distribution: QLD (NE coast); Indo-west Pacific Oceans, only known from QLD and Seychelles.
Ecology: commensal, subtidal; in bivalve molluscs, including *Pycnodonta* and *Pterostrea* species, to 22 m depth.
Reference: Bruce, A.J. (1973). The Pontoniinid shrimps collected by the Yale Seychelles Expedition, 1957–1958 (Decapoda, Palaemonidae). *Crustaceana* **24**(1): 132–142 [136].

Platypontonia hyotis Hipeau-Jacquotte, 1971

Platypontonia hyotis Hipeau-Jacquotte, R. (1971). Notes de fafunistique et de biologie marines de Madagascar, V: *Platypontonia hyotis* nov. sp. (Decapoda Natantia, Pontoniinae). *Crustaceana* **20**(2): 125–140 figs 1–7 [126 figs 1–7].
Type data: holotype RMNH D25624 ♂, paratype(s) RMNH D25624 ♀ (as allotype).
Type locality: outer slope of Banc de Belosa, S of Tuléar, Madagascar.

Platypontonia pterostreae Suzuki, H. (1971). On some Commensal Shrimps found in the Western Region of Sagami Bay. *Res. Crust.* **4 & 5**: 1–31 figs 1–12 pls 1–3 [5 figs 3, 4, pl. 3].
Type data: holotype whereabouts unknown ♂, paratype(s) MMBL ♀.
Type locality: Hatsu-shima, Sagami Bay, Honshu, Japan.

Taxonomic decision for synonymy: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [127].

Distribution: Indo-west Pacific Oceans, reported from 'East Australia' by Chace & Bruce (1993) *op. cit.*, but may be in error as no specific localities appear to have been reported elsewhere.
Ecology: commensal, subtidal; in bivalve molluscs including *Pycnodonta* and *Pterostrea* species, to 22 m depth.

Pliopontonia Bruce, 1973

Pliopontonia Bruce, A.J. (1973). Notes on some Indo-Pacific Pontoniinae. XXII. *Pliopontonia furtiva* gen. nov., sp. nov., a new shrimp associated with a corallimorph Zoantharian. *Crustaceana* **24**: 97–109 [97] [gender feminine].
Type species: *Pliopontonia furtiva* Bruce, 1973 by original designation and monotypy.

Extralimital distribution: Kenya, Philippines, Indonesia. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.

Pliopontonia furtiva Bruce, 1973

Pliopontonia furtiva Bruce, A.J. (1973). Notes on some Indo-Pacific Pontoniinae. XXII. *Pliopontonia furtiva* gen. nov., sp. nov., a new shrimp associated with a corallimorph Zoantharian. *Crustaceana* **24**: 97–109 [99 figs 1–5, pl. 1].
Type data: holotype BMNH 1971:197 ♀.
Type locality: Ras Iwatine, Mombasa, Kenya.

Distribution: NSW (Central E coast), QLD (Great Barrier Reef); Kenya, Philippines, Japan, Indonesia, Marshall Ils, Solomon Ils, and New Caledonia.
Ecology: coral reef, low intertidal, shallow subtidal; in association with the corallimorph zooantharian, *Rhodactis rhodostoma* (Actinodiscidae).

Pontonia Latreille, 1829

Alciope Rafinesque-Schmaltz, C.S. (1814). *Précis des découvertes et travaux somiologiques de M. r. C.S. Rafinesque-Schmaltz entre 1800 et 1814.* Ou choix raisonné de ses principales découvertes en zoologie et en botanique, pour servir d'introduction à ses ouvrages futurs. Palermo : Royale Typographic Militaire 55 pp. [24] [name suppressed for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy, under the plenary powers of the International Commission on Zoological Nomenclature; name placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 522. Suppression under the Plenary Powers (i) of certain names published by C.S. Rafinesque for genera and species of the Orders Decapoda and Stomatopoda (Class Crustacea) in the period 1814–1818 and (ii) of certain specific names currently regarded as senior subjective synonyms of the names of the type species of *Homola* Leach, 1815, and *Lissa* Leach, 1815 respectively both being genera assigned to the list of the foregoing Orders. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 209–248; gender feminine].
Type species: *Alciope heterochelus* Rafinesque, 1814 (= *Pontonia flavomaculata* Heller, 1864) by monotypy.

Pontonia Latreille, P.A. (1829). Les Crustacés, les Arachnides et les Insectes, distribués en familles naturelles. *Le Règne Animal,* distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. 2nd edn. Vol. 4 584 pp. [96] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 378. Designation, under the Plenary Powers, of a type species in harmony with accustomed usage for the genus *Pontonia* Latreille, 1829 (Class Crustacea, Order Decapoda), a genus based on a misidentified type species. *Opin. Declar. Int. Comm. Zool. Nomencl.* **11**: 411–420; gender feminine].
Type species: *Palaemon pinnophylax* Otto, 1821 by designation under Plenary Powers, see International Commission on Zoological Nomenclature (1956). Opinion 378. Designation, under the Plenary Powers, of a type species in harmony with accustomed usage for the genus *Pontonia* Latreille, 1829 (Class Crustacea, Order Decapoda), a genus based on a misidentified type species. *Opin. Declar. Int. Comm. Zool. Nomencl.* **11**: 411–420.
Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [168].

Extralimital distribution: pantropical and warm temperate waters. See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.
Generic reference: Bruce, A.J. (1972). Notes on some Indo-Pacific Pontoniinae, XX. *Pontonia sibogae* sp. nov., a new species of *Pontonia* from Eastern Australia and Indonesia (Decapoda Natantia, Palaemonidae). *Crustaceana* **23**(2): 182–186 [185] (key to species).

Pontonia ardeae Bruce, 1981

Pontonia ardeae Bruce, A.J. (1981). Notes on some Indo-Pacific Pontoniinae, XXXVI. *Pontonia ardeae* sp. nov., a new bivalve associate from the Capricorn Islands (Decapoda, Natantia). *Crustaceana* **40**(2): 113–126 [113].
Type data: holotype AM P29542 ♀, paratypes AM P29543 ♂ (as allotype), USNM, RMNH D32303 2 specimens.
Type locality: Heron Island, Wistari reef, QLD.

Distribution: QLD (Great Barrier Reef); known only from limital area.
Ecology: coral reef, sublittoral; in association with bivalve *Chama reflexa*, to 18 m depth.

Pontonia katoi Kubo, 1940

Pontonia katoi Kubo, J. (1940). Studies on Japanese Palaemonoid Shrimps. II. Pontoniinae. *J. Imp. Fish. Bur. Tokyo* **34**: 31–75 [55 figs 21–23].
Type data: holotype whereabouts unknown ♂, paratype(s) whereabouts unknown 2 ♂.
Type locality: off Simoda, Siduoka Prefecture, Japan.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); Indo-west central Pacific Oceans (Tanzania, Indonesia, Japan, New Caledonia).
Ecology: commensal, subtidal; associated with species of solitary ascidians in the genera *Herdmania*, *Cnemidocarpa*, *Polycarpa* and *Styela*.

Pontonia okai Kemp, 1922

Pontonia okai Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [261 figs 89–92].
Type data: syntypes IM C421/1 2 specimens.
Type locality: off Cape Negrais, Burma.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific (Kenya, Burma, Indonesia, South China Sea, Philippines).
Ecology: commensal, subtidal; associated with ascidians, including a species of *Ascidia*, to 27 m depth.
References: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [22] (Australian record); Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the

Albatross Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [129].

Pontonia sibogae Bruce, 1972

Pontonia sibogae Bruce, A.J. (1972). Notes on some Indo-Pacific Pontoniinae, XX. *Pontonia sibogae* sp. nov., a new species of *Pontonia* from Eastern Australia and Indonesia (Decapoda Natantia, Palaemonidae). *Crustaceana* **23**(2): 182–186 [182 fig. 1].
Type data: holotype AM P15362 ♀, paratype(s) AM P39943 ♂ (as allotype).
Type locality: Curtis Channel, Port Curtis, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Oman, Madagascar, Indonesia).
Ecology: commensal, subtidal; associated with the ascidian, *Styela whiteleggii*, depth from 3–45 m.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [129].

Pontonia stylirostris Holthuis, 1952

Pontonia stylirostris Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [169 figs 82–84].
Type data: holotype ZMA.
Type locality: between Pulau Misool and New Guinea.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Oman, Tanzania, Indonesia).
Ecology: subtidal; 32–45 m depth.

Pontoniopsis Borradaile, 1915

Pontoniopsis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [207] [gender feminine].
Type species: *Pontoniopsis comanthi* Borradaile, 1915 by monotypy.

Extralimital distribution: Indo-Pacific from the Red Sea to the Gilbert, Marianna and Fiji Islands, Kiribati and Japan.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [129].

Pontoniopsis comanthi Borradaile, 1915

Pontoniopsis comanthi Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [213].
Type data: syntypes UMZC I.9596.
Type locality: Mabuaig, Torres Strait.

Distribution: QLD (NE coast), Tasman Sea; Indo-west central Pacific Oceans (Red Sea to Kiribati and Japan).
Ecology: coral reef, commensal, low intertidal, subtidal; obligatory associate of crinoids including species of *Comatula* and *Capillaster*, to 21 m depth.
Reference: Bruce, A.J. (1986). Shrimps that live on Tropical Echinoderms. *Underwater* **17**: 92–94 (illustration and associations).

Propontonia Bruce, 1969

Propontonia Bruce, A.J. (1969). Notes on some Indo-Pacific Pontoniinae. XIII. *Propontonia pellucida* gen. nov., a new Pontoniid shrimp from the Amirante Islands. *Crustaceana* **17**(2): 141–150 [141] [gender feminine].
Type species: *Propontonia pellucida* Bruce, 1969 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.
Generic references: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2; Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [131].

Propontonia pellucida Bruce, 1969

Propontonia pellucida Bruce, A.J. (1969). Notes on some Indo-Pacific Pontoniinae. XIII. *Propontonia pellucida* gen. nov., a new Pontoniid shrimp from the Amirante Islands. *Crustaceana* **17**(2): 141–150 [142].
Type data: holotype RMNH D25365 ovigerous ♀, paratype(s) BMNH 1968:599 ♂ (as allotype).
Type locality: Remire Island, Amirante Islands, Seychelles, W Indian Ocean.

Distribution: QLD (Great Barrier Reef); western Indian Ocean and QLD.
Ecology: coral reef, shallow subtidal; associated with alcyonarians, species of *Lobophyton* and *Sarcophyton*.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [23] (Australian record).

Pseudopontonia Bruce, 1992

Pseudopontonia Bruce, A.J. (1992). Designation of two new Pontoniine shrimp genera (Decapoda: Palaemonidae). *J. Nat. Hist.* **26**: 1273–1282 [1273] [gender feminine].
Type species: *Pontonia minuta* Baker, 1907 by original designation.

Pseudopontonia minuta (Baker, 1907)

Smooth Prawn

Pontonia minuta Baker, W.H. (1907). Notes on South Australian Decapod Crustacea. Part V. *Trans. R. Soc. S. Aust.* **31**(5): 173–191 pls 23–25 [189 pl. 24 figs 9–12] [gender feminine].
Type data: holotype SAMA C625 ♀, paratype(s) SAMA C625 ♂.
Type locality: South Australia (precise locality not recorded).

Taxonomic decision for new combination: Bruce, A.J. (1992). Designation of two new Pontoniine shrimp genera (Decapoda: Palaemonidae). *J. Nat. Hist.* **26**: 1273–1282 [1274].

Distribution: NSW (Lower E coast), SA (Great Australian Bight, S Gulfs coast); known only from limital area.
Ecology: subtidal; possibly commensal with the polychaete *Eunice aphroditois*; if so, the only pontoniine shrimp known to have an association with an annelid, and the only one known to have abbreviated larval development.
Reference: Bruce, A.J. (1972). Notes on some Indo-Pacific Pontoniinae, XVIII. A redescription of *Pontonia minuta* Baker, 1907, and the occurrence of abbreviated development in the Pontoniinae (Decapoda, Natantia, Palaemonidae). *Crustaceana* **23**(1): 65–75 figs 1–5.

Stegopontonia Nobili, 1906

Stegopontonia Nobili, G. (1906). Diagnoses préliminaires de Crustacés Décapodes et Isopodes nouveaux recueillis par M. le Dr. G. Seurat aux îles Touamotou. *Bull. Mus. Natn. Hist. Nat. Paris* **12**(5): 256–270 [258] [gender feminine].
Type species: *Stegopontonia commensalis* Nobili, 1906 by monotypy.

Extralimital distribution: Indo-west central Pacific Oceans (East Africa to Hawai'i).

Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [135].

Stegopontonia commensalis Nobili, 1906

Stegopontonia commensalis Nobili, G. (1906). Diagnoses préliminaires de Crustacés Décapodes et Isopodes nouveaux recueillis par M. le Dr. G. Seurat aux îles Touamotou. *Bull. Mus. Natn. Hist. Nat. Paris* **12**(5): 256–270 [258].
Type data: holotype MNHP Na1975 ♀.
Type locality: Lagoon at Hao, Tuamotu Archipelago.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans (East Africa to Hawai'i).
Ecology: commensal, low intertidal, shallow subtidal; obligatory associate of diadematid echinoids, *Diadema* and *Echinothrix* species.
Reference: Bruce, A.J. (1986). Shrimps that live on Tropical Echinoderms. *Underwater* **17**: 92–94 (illustration and associations).

Thaumastocaris Kemp, 1922

Thaumastocaris Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [244] [gender feminine].
Type species: *Thaumastocaris streptopus* Kemp, 1922 by monotypy.

Extralimital distribution: Indo-west central Pacific Oceans (East Africa to Red Sea, and Marshall Ils).

Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [139].

Thaumastocaris streptopus Kemp, 1922

Thaumastocaris streptopus Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [244 figs 78–80].
Type data: holotype MNHP Na1978 ♂.
Type locality: Noumea, New Caledonia.

Distribution: QLD (Great Barrier Reef); Indo-west central Pacific Oceans (East Africa and Marshall Islands).
Ecology: coral reef, sublittoral; obligatory associate of sponges, and reported from species of *Acarnus*, *Arenochalina*, *Callyspongia*, *Haliclona*, *Leucetta* and *Petrosia*, to 141 m depth.
References: Bruce, A.J. (1976). Shrimps and prawns of coral reefs, with special reference to commensalism. pp. 37–94 figs 1–21 *in* Jones, O. & Endean, R. (eds) *Biology and Geology of Coral Reefs.* New York : Academic Press Vol. 3(2) pp. i–xxi, 1–345; Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [23] (Australian record).

Tulеariocaris Hipeau-Jacquotte, 1965

Tulеariocaris Hipeau-Jacquotte, R. (1965). Notes de faunistique et de biologie marines de Madagascar. III Un nouveau decapode nageur (Pontoniinae) associe aux oursins dans la region de Tulear *Tulеariocaris holthuisi* nov. gen. et nov. sp. *Recl Trav. Sta. Mar. Endoume* **53**: 247–259 5 pls [247] [gender feminine].
Type species: *Tulеariocaris holthuisi* Hipeau-Jacquotte, 1965 by monotypy.

Extralimital distribution: Indo-west Pacific, Caribbean.

Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [141].

Tulеariocaris holthuisi Hipeau-Jacquotte, 1965

Tulеariocaris holthuisi Hipeau-Jacquotte, R. (1965). Notes de faunistique et de biologie marines de Madagascar. III Un nouveau decapode nageur (Pontoniinae) associe aux oursins dans la region de Tulear *Tulеariocaris holthuisi* nov. gen. et nov. sp. *Recl Trav. Sta. Mar. Endoume* **53**: 247–259 5 pls [248, 251–252].
Type data: syntypes RMNH D21470 1 juvenile.
Type locality: coral reef at Tuléar, Madgascar.

Distribution: QLD (Central E coast, Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Madagascar to Hawai'i).
Ecology: low intertidal, shallow subtidal; obligatory associates of echinoids of the genera *Diadema* and *Astropyge*, cling to spines in head-down attitude.
Reference: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Typton Costa, 1844

Typton Costa, O. (1844). Catalogo di Crostacei raccolti nel golfo di Tarento nella primavera del 1830. *Mem. Acad. Sci. Napoli* **5**: 67–74, 3 pls [288] [gender masculine].
Type species: *Typton spongicola* Costa, 1844 by monotypy.

Pontonella Heller, C. (1856). Beitrag zur Fauna der Adria. *Verh. Zool.-Bot. Ver. Wien* **6**: 629–634 pls 1–10 [629] [gender feminine].
Type species: *Pontonella glabra* Heller, 1856 (= *Typton spongicola* Costa, 1844) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [178].

Extralimital distribution: Indo-Pacific Oceans, Atlantic Ocean and Mediterranean.
Generic references: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [143]; Bruce, A.J. (2000). *Typton manningi* and *T. capricorniae*, new species, new pontoniine shrimps from northern Queensland, with a review of the Indo-West Pacific species of *Typton* Costa (Decapoda: Palaemonidae). *J. Crust. Biol.* **Spec. No. 2**: 87–100 [99] (key to species).

Typton australis Bruce, 1973

Typton australis Bruce, A.J. (1973). *Typton australis* sp. nov., a new pontoniinid shrimp from the Great Barrier Reef, Australia. *Rec. Aust. Mus.* **28**: 253–263 [254 figs 1–4].
Type data: holotype AM P17936 ♀.
Type locality: Chinaman's Reef, Great Barrier Reef, QLD.

Distribution: QLD (Great Barrier Reef); known only from limital area.
Ecology: coral reef, subtidal; from dead coral.

Typton bawii Bruce, 1972

Typton bawii Bruce, A.J. (1972). Notes on some Indo-Pacific Pontoniinae, XXI. *Typton bawii* sp. nov., the first occurence of the genus *Typton* Costa in the Indian Ocean (Decapoda Natantia, Palaemonidae). *Crustaceana* **23**(3): 243–254 [243].
Type data: holotype BMNH 1971:154 ♀.
Type locality: S of Bawi Island [W coast of Zanzibar].

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans, western Indian Ocean and Japan.
Ecology: coral reef, reef flat, subtidal; in sponges.
Reference: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [24] (Australian record).

Typton capricorniae Bruce, 2000

Typton capricorniae Bruce, A.J. (2000). *Typton manningi* and *T. capricorniae*, new species, new pontoniine shrimps from northern Queensland, with a review of the Indo-West Pacific species of *Typton* Costa (Decapoda: Palaemonidae). *J. Crust. Biol.* **Spec. No. 2**: 87–100 [94 figs 6–8].
Type data: holotype QM W24744 ♀.
Type locality: Heron Is., Capricorn Group, QLD.
Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: benthic, coral reef, subtidal; in unidentified sponge.

Typton manningi Bruce, 2000

Typton manningi Bruce, A.J. (2000). *Typton manningi* and *T. capricorniae*, new species, new pontoniine shrimps from northern Queensland, with a review of the Indo-West Pacific species of *Typton* Costa (Decapoda: Palaemonidae). *J. Crust. Biol.* **Spec. No. 2**: 87–100 [87 figs 1–5].
Type data: holotype QM W24741 ♀, paratype(s) QM W24742 ♂.
Type locality: Abbot Point, QLD [19°53'S 148°05'E].

Distribution: QLD (NE coast); known only from type locality.
Ecology: benthic, subtidal; in sponge *(Ircinia* sp.) on harbour pile.

Typton nanus Bruce, 1987

Typton nanus Bruce, A.J. (1987). *Typton nanus* sp. nov., a new commensal shrimp (Crustacea: Decapoda: Palaemonidae) from the Australian North-west shelf. *Beagle, Rec. N.T. Mus. Arts Sci.* **4**(1): 49–56 [49].
Type data: holotype NTM Cr.005204 ♀.
Type locality: North-west Shelf, WA.

Distribution: WA (NW coast); known only from limital area.
Ecology: continental shelf; commensally associated with sponges.
Reference: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **7**(2): 9–20 fig. 1 tables 1–2.

Typton wasini Bruce, 1977

Typton wasini Bruce, A.J. (1977). Notes on some Indo-Pacific Pontoniinae, XXVIII. *Typton wasini* sp. nov., from Wasin Island, Kenya. *Crustaceana* **32**(3): 272–285 [272 figs 1–6].
Type data: holotype BMNH 1974.740 ♀, paratypes BMNH 1974.741 ♂ (as allotype), RMNH D29886 2 specimens.
Type locality: Wasin Island Channel, Kenya.

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: sublittoral; host is *Reniera* sp. (Demospongiae).

Typtonychus Bruce, 1996

Typtonychus Bruce, A.J. (1996). Crustacea Decapoda: Palaemonoid shrimps from the Indo-West Pacific region mainly from New Caledonia. pp. 197–267 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 15. *Mém. Mus. natn. Hist. nat. Paris* **168**: 1–539 [251].
Type species: *Typtonychus crassimanus* Bruce, 1996 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Typtonychus anomalus (Bruce, 1979)

Onycocaris anomala Bruce, A.J. (1979). *Onycocaris anomala* sp. nov., a new Pontoniine shrimp from the Northern Territory, Australia. *Rec. Aust. Mus.* **32**(3): 69–79 [69 figs 1–4].
Type data: holotype AM P24994 ♀, paratypes AM P24993 ♀, AM P28112 ♀.
Type locality: between North and South Shell Islands, Port Darwin, NT.

Distribution: NT (N coast), WA (NW coast); known only from limital area.
Ecology: sublittoral; from sponge hosts, depth 5 to 13 m.

Typtonychus dentatus (Fujino & Miyake, 1969)

Typton dentatus Fujino, T. & Miyake, S. (1969). *Typton dentatus* sp. nov. from the Ryukyu Islands, Japan, with discussion on the generic characters (Decapoda, Palaemonidae). *Ohmu* **2**(5): 79–86 figs 1, 2 [80 figs 1, 2].
Type data: holotype ZLKU 12054 ♀, paratype(s) ZLKU 12055 1 specimen.
Type locality: Ukachi, Yoron-jima Is., Ryukyu Islands, Japan.

Distribution: NT (N coast), QLD (Central E coast, Great Barrier Reef, NE coast); Ryukyu Islands.
Ecology: coral reef, shallow subtidal; in sponges (type specimens from *Reniera* sp.).
References: Bruce, A.J. (1981). Pontoniine shrimps of Heron Island. *Atoll Res. Bull.* **245**: 1–33 [24] (Australian record); Bruce, A.J. & Coombes, K.E. (1995). The palaemonoid shrimp fauna (Crustacea: Decapoda: Caridea) of the Cobourg Peninsula, Northern Territory. *Beagle, Rec. N.T. Mus. Arts Sci.* **12**: 101–144 [137].

Typtonychus dimorphus (Bruce, 1986)

Typton dimorphus Bruce, A.J. (1986). Notes on some Indo-Pacific Pontoniinae, XLIII. A new species of Typton from Ashmore Reef, Timor Sea (Decpoda, Palaemonidae). *Crustaceana* **50**(3): 278–286 [278].
Type data: holotype NTM Cr.001557 ♂, paratype(s) NTM Cr.0001544 ♀.
Type locality: Ashmore Reef, Timor Sea.

Distribution: Territory of Ashmore & Cartier Islands; known only from limital area.
Ecology: coral reef, sublittoral; commensally associated with sponges.

Vir Holthuis, 1952

Vir Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [4, 8, 29] [gender masculine].
Type species: *Palaemonella orientalis* Dana, 1852 by original designation.

Extralimital distribution: Indo-west-central Pacific Oceans (E Africa, Andaman Islands, South China Sea, Ryukyu Islands, Philippines, Marianna and Fiji Islands and Hawai'i). See: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [147].

Vir orientalis (Dana, 1852)

Palaemonella orientalis Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [26].
Type data: holotype ♀ (lost).
Type locality: Mari suluensi [Sulu Sea].

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: commensal, coral reef, shallow subtidal; associated with scleractinian corals of genus *Pocillopora*.
References: Holthuis, L.B. (1952). The Palaemonidae collected by the Siboga and Snellius expeditions with remarks on other species II. Subfamily Pontoniinae. *Siboga Exped.* **39a**(XI): 1–254 [8, 30]; Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [131].

Vir philippinensis Bruce & Svoboda, 1984

Vir philippinensis Bruce, A.J. & Svoboda, A. (1984). A report on a small collection of Coelenterate-associated Pontoniine shrimps from Cebu, Philippine Islands. *Asian Mar. Biol.* **1**: 87–99 figs 1–7 [87 figs 1–4].
Type data: holotype NTM ♀, paratypes NTM Cr.000415 ♂ (as allotype), RMNH D35559 ovigerous ♀, USNM 204413 ♀.
Type locality: Cebu, Philippines.

Distribution: QLD (Central E coast, Great Barrier Reef, NE coast); east Indo-west Pacific Oceans (Ryukyu Islands and Philippines).
Ecology: coral reef, sublittoral, commensal; associated with scleractinian corals of the genera *Pleurogyra*, *Pterogyra*, *Euphylia* and *Fungia*.
Reference: Chace, F.A., Jr & Bruce, A.J. (1993). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 6: Superfamily Palaemonoidea. *Smithson. Contr. Zool.* **No. 543**: 1–152 [132].

Zenopontonia Bruce, 1975

Zenopontonia Bruce, A.J. (1975). Notes on some Indo-Pacific Pontoniinae, XXV. Further observations upon *Periclimenes noverca* Kemp, 1922, with the designation of a new genus *Zenopontonia* and some remarks upon *Periclimenes parasiticus* Borradaile (Decapoda Natantia, Palaemonidae). *Crustaceana* **28**(3): 275–285 [275] [gender feminine].

Type species: *Periclimenes (Periclimenes) noverca* Kemp, 1922 by monotypy.

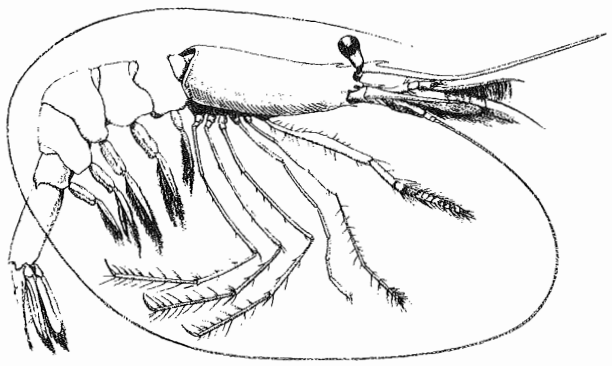
Extralimital distribution: Indo-west Pacific Oceans (Zanzibar, Madagascar, New Caledonia). See: Bruce, A.J. (1990). Recent additions to the Pontoniine shrimp fauna of Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* 7(2): 9–20 fig. 1 tables 1–2.
Generic reference: Bruce, A.J. (1995). *A Synopsis of the Indo-West Pacific Genera of the Pontoniinae (Crustacea: Decapoda: Palaemonidae).* Königstein : Koeltz Scientific Books 172 pp. [149].

Zenopontonia noverca (Kemp, 1922)

Periclimenes (Periclimenes) noverca Kemp, S. (1922). Notes on Crustacea Decapoda in the Indian Museum. Part XV. Pontoniinae. *Rec. Indian Mus.* **XXIV**: 113–288 pls 3–9 [162].
Type data: holotype MNHP Na1931 ♀.
Type locality: New Caledonia.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Zanzibar, Madagascar, New Caledonia).
Ecology: coral reef, sublittoral; an obligatory associate of asteroids including species of *Culcita*, *Halityle*, *Pentaceraster*, *Protoreaster* and *Poraster*.

PANDALIDAE



Chlorotocella gracilis [from Balss 1914]

INTRODUCTION

Pandalid shrimps are cosmopolitan in distribution. They occupy of a variety of habitats and niches, from an oceanic pelagic existence to commensal benthic associations, and from the littoral zone to more than 3000 metres depth. About 20 genera are currently recognised, of which six are known from Australia.

Some important recent papers covering Australian pandalids include those of Kensley *et al.* (1987), Hanamura & Takeda (1987) and Hanamura & Evans (1996). Holthuis (1993: 261) provided a key to genera.

Diagnosis

Rostrum well developed, laterally compressed, variable; antennular flagella simple, without accessory branches; mandible with palp and with incisor and molar processes deeply separated; first maxilliped with flagellum on exopod; second maxilliped normal, two distal segments not arising side by side from penultimate segment; first pereiopod simple or microscopically chelate; second pereiopod chelate, carpus subdivided into two or more articles; first male pleopod with endopod normal, not unusually enlarged or elaborately convoluted. (After Chace 1985).

References

Balss, H. (1914). Ostasiatische Decapoden, II. Die Natantia und Reptantia. pp. 1–101 figs 1–50 pl. 1 in, Doflein, F. *Beiträge zur Naturgeschichte Ostasiens.* Abh. Bayer. Akad. Wiss. (Suppl.) 2(10)

Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143

Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18

Hanamura, Y. & Takeda, M. (1987). Family Pandalidae (Crustacea, Decapoda, Caridea) collected by the R.V. "Soela" from the north-west Australian Shelf. *Bull. Natn. Sci. Mus., Tokyo (Zool.) (A)***13**(3): 103–121

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331

PANDALIDAE Haworth, 1825

Pandalidae Haworth, A.H. (1825). A new binary arrangement of the macrurus Crustacea. *Phil. Mag. Journ.* **65**: 183–184 [184].

Heterocarpodidae Thompson, J.R. (1965). Comments on phylogeny of section Caridea (Decapoda Natantia) and the phylogenetic importance of the Oplophoroidea. *Abstract Pap. Symp. Crust. Ernakulam, India*: 5 [full text in Thompson, J.R. (1966). Comments on phylogeny of section Caridea (Decapoda Natantia) and the phylogenetic importance of the Oplophoroidea. *Symp. Ser. Mar. Biol. Assoc. India.* No. 2. *Proceedings of the Symposium on Crustacea held at Ernakulam, 12-15 Jan 1965.* Part I. pp. 314–326 Marine Biological Association of India. Bangalore : Bangalore Press pp. 314–326].

Pantominae Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Austropandalini Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Pandalini Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Plesionikidae Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Heterocarpidae Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Heterocarpoididae Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Dorodoteidae Christofferson, M.L. (1989). Phylogeny and classification of the Pandaloidea (Crustacea, Caridea). *Cladistics* **5**(3): 259–274 [265].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [261].

Chlorotocella Balss, 1914

Chlorotocella Balss, H. (1914). Ostasiatische Decapoden, II. Die Natantia und Reptantia. pp. 1–101 figs 1–50 pl. 1 in, Doflein, F. *Beiträge zur Naturgeschichte Ostasiens.* Abh. Bayer. Akad. Wiss. (Suppl.) 2(10) [33] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].

Type species: *Chlorotocella gracilis* Balss, 1914 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans.

Chlorotocella gracilis Balss, 1914

Chlorotocella gracilis Balss, H. (1914). Ostasiatische Decapoden, II. Die Natantia und Reptantia. pp. 1–101 figs 1–50 pl. 1 in, Doflein, F. *Beiträge zur Naturgeschichte Ostasiens.* Abh. Bayer. Akad. Wiss. (Suppl.) 2(10) [33].
Type data: type status unknown*.
Type locality: Sagami Bay, Japan.

Distribution: NT (N coast), QLD (Central E coast), WA (NW coast); Indo-west Pacific (from Andaman and Nicobar Islands to Philippines, Japan and New Caledonia).
Ecology: sublittoral, low intertidal; collected from a gorgonian, *Junceella fragilis*, depth 13 m, other records from low intertidal pools to about 80 m depth.
References: Bruce, A.J. (1988). The shrimp fauna of a small tropical reef, the East Point Fish Reserve, Darwin. pp. 226–245 *in* Larson, H.K., Michie, M.G. & Hanley, J.R. (eds) *Darwin Harbour, Proceedings of the Workshop on Research and Management held in Darwin, 2–3 September, 1987.* Darwin : A.N.U. North Australia Research Unit, Mangrove Monograph Vol. 4 (first Australian record); Bruce, A.J. & Coombes, K.E. (1997). An annotated check-list of the Caridean Shrimps (Crustacea: Decapoda) of Darwin Harbour, with descriptions of three new species of *Periclimenes* [Palaemonidae: Pontoniinae]. pp. 301–337 *in* Hanley, J.R., Caswell, G., Megirian, D. & Larson, H.K. (eds) *Proceedings of the Sixth International Marine Biological Workshop. The marine flora and fauna of Darwin Harbour, Northern Territory, Australia.* Darwin : Museums and Art Galleries of the Northern Territory and the Australian Marine Sciences Association [331] (further distributional records).

Chlorotocella spinicaudus (H. Milne Edwards, 1837)

Slender-beaked Prawn

Hippolyte spinicaudus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [378].
Type data: type status unknown MNHP.
Type locality: 'Nouvelle Hollande'.

Pandalus leptorhynchus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [38].
Type data: type status unknown*.
Type locality: Port Jackson, NSW.

Taxonomic decision for synonymy: Holthuis, L.B. (1995). Notes on Indo-West Pacific Crustacea Decapoda III to IX. *Zool. Meded. (Leiden)* **69**(13): 139–151 figs 1–2 [144].

Distribution: NSW (Lower E coast), SA (Great Australian Bight, S Gulfs coast); known only from limital area.
Ecology: benthic, low intertidal, muddy-sand, seagrass, shallow subtidal.
Reference: Worthington, D.G., McNeill, S.E., Ferrell, D.J. & Bell, J.D. (1995). Large scale variation in abundance of five common species of decapod sampled from seagrass in New South Wales. *Aust. J. Ecol.* **20**(4): 515–525.

Chlorotocus A. Milne Edwards, 1882

Chlorotocus Milne Edwards (1882). Rapport sur les travaux de la Commission chargée d'étudier la faune sous-marine dans les grandes profondeurs de la Mediterranée et de l'océan Atlantique. *Archives des Missions scientifique et Litteraires* **9**(3): 1–59 [18] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Chlorotocus gracilipes* A. Milne Edwards, 1882 (= *Pandalus crassicornis* Costa, 1871) by monotypy.

Extralimital distribution: west Pacific Ocean. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Chlorotocus crassicornis (Costa, 1871)

Pandalus crassicornis Costa, A. (1871). Specie del genere *Pandalus* rinvenute nel Golfo di Napoli. *Annuar. Mus. Zool. Univ. Napoli* **6**: 89–92 pl. 2 [90 pl. 2 fig. 2].
Type data: type status unknown MZUN (presumed museum of deposition).
Type locality: Golfo di Napoli, Mediterranean.

Chlorotocus gracilipes Milne Edwards (1882). Rapport sur les travaux de la Commission chargée d'étudier la faune sous-marine dans les grandes profondeurs de la Mediterranée et de l'océan Atlantique. *Archives des Missions scientifique et Litteraires* **9**(3): 1–59 [14].
Type data: type status unknown MNHP (presumed museum of deposition).
Type locality: Alboran Sea off Mediterranean coast of Morocca.

Chlorotocus gracilipes andamanensis Alcock, A.W. & Anderson, A.R.S. (1899). Natural history notes from H.M. royal Indian marine survey ship "Investigator", commander T.H. Heming, R.N., commanding. Ser. III, No. 2. An account of the deep-sea Crustacea dredged during the surveying-season of 1897–1898. *Ann. Mag. Nat. Hist. (7)***3**: 1–27, 278–292 [284].
Type data: type status unknown IM* (presumed depository institution).
Type locality: Andaman Sea east of North Andaman Island, Indian Ocean.

Taxonomic decision for synonymy: Hanamura, Y. & Takeda, M. (1987). Family Pandalidae (Crustacea, Decapoda, Caridea) collected by the R.V. "Soela" from the north-west Australian Shelf. *Bull. Natn. Sci. Mus., Tokyo (Zool.) (A)***13**(3): 103–121 [106].

Distribution: WA (NW coast); eastern Atlantic (Mediterranean, southern Spain to Congo River, west Africa), Indo-west Pacific Oceans (southern Africa to South and East China Seas, and Korea Strait).
Ecology: epipelagic, mesopelagic; from 3–600 m depth.

Chlorotocus novaezealandiae (Borradaile, 1916)

Thalassocaris novaezealandiae Borradaile, L.A. (1916). Crustacea. Part 1—Decapoda. *Nat. Hist. Rep. Br. Antarct. Terra Nova Exped.* **3**(2): 75–110 figs 1–6 [84 fig. 2] [as *Thalassocaris novae-zealandiae*].
Type data: syntypes NMNZ 7369*.
Type locality: New Zealand.

Distribution: NSW (Central E coast, Lower E coast); south-west Pacific Ocean (New Zealand).
Ecology: continental shelf, epipelagic; depth 140 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [312].

Heterocarpus A. Milne Edwards, 1881

Heterocarpus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [8] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Heterocarpus ensifer* A. Milne Edwards, 1881 by original designation.

Atlantocaris Ortmann, A.E. (1893). Decapoden und Schizopoden der Plankton-Expedition. *Ergebnisse der Plankton-Expedition der Humboldt-St* **2**(Gb): 1–120 pls 1–10 [73, 79] [gender feminine].
Type species: *Atlantocaris gigas* Ortmann, 1893 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [125].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [268].

Extralimital distribution: Indo-Pacific Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Generic reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [5] (key to Western Australian species).

Heterocarpus calmani Crosnier, 1988

Heterocarpus calmani Crosnier, A. (1988). Sur les *Heterocarpus* (Crustacea, Decapoda, Pandalidae) du sud-ouest de l'océan Indien. Remarques sur d'autres espèces ouest-pacifiques du genre et description de quatre taxa nouveaux. *Bull. Mus. Natn. Hist. Nat. Paris* **10**(sect. A, No. 1): 57–103 [59 fig. 1a–h].
Type data: holotype MNHP Na7722 ♀, paratype(s) MNHP Na7722–7730 24 specimens.
Type locality: Madagascar [12°52'S 48°10.3'E].

Distribution: QLD (NE oceanic); West Indian Ocean (east Africa, Madagascar).
Ecology: continental slope, mesopelagic, oceanic province; depth 250–650 m.
Reference: Crosnier, A. (1999). Un *Heterocarpus* nouveau (Crustacea, Decapoda, Pandalidae) du Pacifique Sud-Ouest. *Zoosystema* **21**(2): 345–351 [348] (Australian records).

Heterocarpus dorsalis Bate, 1888

Madagascar Nylon Shrimp (FAO), Pink Carid

Heterocarpus dorsalis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [630 pl. 111].
Type data: lectotype BMNH 1 ♀.
Type locality: off Kepulauan Banda [Banda Is.], Indonesia.

Heterocarpus alphonsi Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [632 pl. 112 fig. 1].
Type data: syntypes BMNH ♂ ♀.
Type locality: off Kepulauan Talaud [Talaud Is.], Indonesia and Sagami Bay, Japan.

Heterocarpus affinis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [208].
Type data: holotype.
Type locality: off Saya de Malha Bank, Seychelles-Mauritius Ridge, Indian Ocean.

Taxonomic decision for synonymy: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocaridae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [22].

Distribution: WA (NW oceanic, W oceanic); Indo-west Pacific (South Africa to Indonesia, Philippines, Japan, New Caledonia, and Western Samoa).
Ecology: mesopelagic, sand bottom, oceanic province; coral sand, depth 185–1400 m, mainly 500–650 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families

Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [5].

Heterocarpus gibbosus Bate, 1888

Humpback Nylon Shrimp (FAO), Red-crested Carid, Redhead Carid

Heterocarpus gibbosus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [634 pl. 112 fig. 2].
Type data: holotype BMNH.
Type locality: Sibuyan Sea between Tablas and Sibuyan Islands, Philippines.

Distribution: WA (NW oceanic); Indo-west Pacific (eastern Africa to Indonesia, Philippines, and east to Tonga).
Ecology: mesopelagic, sand bottom, sublittoral; depth ranging from 200–1280 m, but mainly 350–450 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [6].

Heterocarpus hayashii Crosnier, 1988

Hayashi Carid, White Carid

Heterocarpus hayashii Crosnier, A. (1988). Sur les *Heterocarpus* (Crustacea, Decapoda, Pandalidae) du sud-ouest de l'océan Indien. Remarques sur d'autres espèces ouest-pacifiques du genre et description de quatre taxa nouveaux. *Bull. Mus. Natn. Hist. Nat. Paris* **10**(sect. A, No. 1): 57–103 [79 fig. 5b].
Type data: holotype MNHP Na12395 1♂, paratype(s) MNHP Na12396 6♂ 5♀.
Type locality: Chesterfield Is., Coral Sea.

Distribution: QLD (NE oceanic), WA (NW oceanic, W oceanic); east Indo-west Pacific Oceans.
Ecology: pelagic, sand bottom; depth 180–625 m, mainly 285–420 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [6].

Heterocarpus intermedius Crosnier, 1999

Heterocarpus intermedius Crosnier, A. (1999). Un *Heterocarpus* nouveau (Crustacea, Decapoda, Pandalidae) du Pacifique Sud-Ouest. *Zoosystema* **21**(2): 345–351 [346 fig. 1].
Type data: holotype MNHP Na13442 ♀, paratypes MNHP 142 specimens (various localities including: New Caledonia, Loyalty Ils, Chesterfield Ils, Vanuatu, Banc Combe & Banc Tuscarora), BMNH 3 specimens, USNM 3 specimens.
Type locality: Chesterfield Ils, Coral Sea (MUSORSTOM 5 Stn CP363).

Distribution: QLD (NE oceanic); SW Pacific Ocean (New Caledonia, Loyalty Ils, Chesterfield Ils, Vanuatu, Banc Combe & Banc Tuscarora).
Ecology: continental slope, mesopelagic, oceanic province; 500–750 m depth.

Heterocarpus laevigatus Bate, 1888

Heterocarpus laevigatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [636 pl. 112 fig. 3].
Type data: holotype BMNH ♂*.
Type locality: off Banda Island, Indonesia.

Distribution: WA (NW oceanic); Eastern Atlantic, South Africa to Indonesia.
Ecology: mesopelagic; mud substrates.

Heterocarpus longirostris MacGilchrist, 1905

Heterocarpus longirostris MacGilchrist, A.C. (1905). Natural History Notes from the R.I.M.S.S. "Investigator", Capt T.H. Heming, R.N. (retired), commanding. — Series III., No. 6. An account of the new and some of the rarer Decapod Crustacea obtained during the surveying seasons 1901–1904. *Ann. Mag. Nat. Hist.* **15**(87): 233–268 [237].
Type data: type status unknown BMNH* (?).
Type locality: Andaman Sea [13°29'30"S 95°29'E].

Distribution: WA (NW oceanic); Indo-west Pacific (Maldive Islands, Andaman Sea, west of Sumatra, Mariana Islands).
Ecology: bathypelagic, oceanic province; from 1097–1756 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [7].

Heterocarpus parvispina de Man, 1917

Heterocarpus ensifer parvispina de Man, J.G. (1917). Diagnoses of new species of macrurous decapod Crustacea from the Siboga-Expedition. *Zool. Meded. (Leiden)* **3**(4): 279–284 [282].
Type data: syntypes ZMA*.
Type locality: Indonesia: three separate localities, between Bali and Flores Seas, off Jolo Island, Sulu Archipelago and Kepulauan Ewab [Ewab Is.].

Distribution: QLD (NE oceanic); Indo-west Pacific Oceans (Madagascar to Japan, Tahiti, New Caledonia).
Ecology: mesopelagic, sand bottom, sublittoral; depth 183–885 m.
References: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocaridiidae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [25]; Crosnier, A. (1988). Sur les *Heterocarpus* (Crustacea, Decapoda, Pandalidae) du sud-ouest de l'océan Indien. Remarques sur

d'autres espèces ouest-pacifiques du genre et description de quatre taxa nouveaux. *Bull. Mus. Natn. Hist. Nat. Paris* **10**(sect. A, No. 1): 57–103 [69].

Heterocarpus sibogae de Man, 1917

Mino Nylon Shrimp, White Carid

Heterocarpus sibogae de Man, J.G. (1917). Diagnoses of new species of macrurous decapod Crustacea from the Siboga-Expedition. *Zool. Meded. (Leiden)* **3**(4): 279–284 [283].
Type data: type status unknown ZMA*.
Type locality: Indonesia (eight *Siboga* stations between 115°E and 133°E, and between the equator and 8°S).

Distribution: NSW (SE oceanic), VIC (Bass Strait), WA (NW oceanic, W oceanic); Indo-west Pacific (Andaman Sea to Western Samoa).
Ecology: pelagic, sand bottom; depths of 247–850 m, mainly 320–520 m.
Reference: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [36].

Heterocarpus tricarinatus Alcock & Anderson, 1894

Heterocarpus tricarinatus Alcock, A. & Anderson, A.R.S. (1894). Natural History Notes from H.M. Indian Marine Survey Steamer "Investigator", Commander C.F. Oldham, R.N., commanding. Series II, No. 14. An Account of a Recent Collection of Deep Sea Crustacea from the Bay of Bengal and Laccadive Sea. *J. Asiat. Soc. Bengal* **63**(Pt 2 No. 3): 141–185 pl. 9 [154].
Type data: type status unknown IM* (?).
Type locality: Arabian Sea off Byramgore Reef, and Laccadive Islands.

Distribution: WA (NW oceanic, W oceanic); Indo-west Pacific (South Africa to Indonesia and S Philippines).
Ecology: bathypelagic, oceanic province; from 1046–2000 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [9] (first Australian record).

Heterocarpus woodmasoni Alcock, 1901

Indian Nylon Shrimp (FAO), Red Carid, Red Pandalus

Heterocarpus woodmasoni Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [108].
Type data: syntypes IM 2 specimens*.
Type locality: Andaman Sea.

Distribution: QLD (NE oceanic) WA (NW oceanic); Indo-west Pacific (South Africa to Indonesia, South China Sea, Philippines).
Ecology: pelagic, sand bottom; depths of 291–655 m, mainly 300–500 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [313]; Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [10].

Plesionika Bate, 1888

Plesionika Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [626, 640] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Plesionika uniproducta* Bate, 1888 (= *Acanthephyra ensis* A. Milne Edwards, 1881) by subsequent designation, see Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [93].

Nothocaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [626, 650] [gender feminine].
Type species: *Nothocaris rostricrescentis* Bate, 1888 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [551].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [277].

Extralimital distribution: circumtropical, Atlantic, Indian, Pacific Oceans, Mediterranean. See: Holthuis, L.B. (1980). FAO species catalogue. Vol. 1. Shrimps and prawns of the world. An annotated catalogue of species of interest to fisheries. *FAO Fisheries Synopsis* **1**(125): 1–261.

Plesionika alcocki (Anderson, 1896)

Pandalus alcocki Anderson, A.R.S. (1896). Natural History Notes from the R.I.M. Survey Steamer "Investigator", Commander C.F. Oldham, R.N., commanding. Series II,

No. 21. An account of the Deep Sea Crustacea collected during the season 1894–95. *J. Asiat. Soc. Bengal* **65**(2): 88–106 [92].
Type data: type status unknown IM (presumed depository institution).
Type locality: Laccadive Sea off Malabar coast of India [9°34'57"N 75°36'30"E].

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic), WA (NW coast); Indian Ocean from East Africa to Andaman Sea, New Caledonia, west Pacific Ocean.
Ecology: bathypelagic, mesopelagic, oceanic province; depths of 500–1412 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [313]; Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [11].

Plesionika bifurca Alcock & Anderson, 1894

Plesionika bifurca Alcock, A. & Anderson, A.R.S. (1894). Natural History Notes from H.M. Indian Marine Survey Steamer "Investigator", Commander C.F. Oldham, R.N., commanding. Series II, No. 14. An Account of a Recent Collection of Deep Sea Crustacea from the Bay of Bengal and Laccadive Sea. *J. Asiat. Soc. Bengal* **63**(Pt 2 No. 3): 141–185 pl. 9 [155].
Type data: type status unknown IM (presumed museum of deposition).
Type locality: east of Bassas de Pedro, Laccadive Islands [13°47'49"N 73°07"E].

Distribution: NSW (SE oceanic), WA (NW oceanic); eastern Africa to Indonesia, South China Sea, south of Japan and Australia.
Ecology: bathypelagic, mesopelagic, oceanic province; depths of 245–1412 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [314].

Plesionika binoculus (Bate, 1888)

Nothocaris binoculus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [656 pl. 114 fig. 2].
Type data: syntypes BMNH 1 ♂ 4 ♀.
Type locality: Arafura Sea.

Distribution: NT (N coast); known only from type locality, Arafura Sea between Australia and New Guinea.
Ecology: epipelagic; depth 90 m.
Reference: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [59].

Plesionika edwardsii (Brandt, 1851)

Pandalus edwardsii Brandt, J.F. (1851). Krebse. pp. 79–148 *in* Middendorff, A.T. *Reise in den äussersten Norden und Osten Sibiriens während ... 1843 und 1844*: auf Veranstaltung der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg ausgeführt und ... herausgegeben von ... A.T. v. Middendorff. 516 pp. 32 pls. [122].
Type data: type status unknown (presumed lost; name based on a figure of *Pandalus narval* (not *Astacus narval* Fabricius, 1787) by H. Milne Edwards, see Milne Edwards, H. (1841). Les Crustacés. pp. 113–120 pls 5, 18, 54 *in* Cuvier, G. *Le Règne Animal*, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux, et d'introduction à l'anatomie comparée. Paris : Déterville 1–278 pp., Atlas, pls 1–80 [pl. 54, fig. 2]).
Type locality: Mediterranean Sea, see Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [62].

Pandalus longirostris Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897.* Cambridge : Cambridge University Press [413 pl. 37 fig. 10].
Type data: syntypes UMZC.
Type locality: New Britain.

Taxonomic decision for synonymy: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [62].

Distribution: NSW (Central E coast, Lower E coast, SE oceanic); east and west Atlantic, Indo-Pacific Oceans.
Ecology: epipelagic, mesopelagic; depths of 50–689 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [314]; Chan, T.-Y. & Yu, H.P. (1991). Two similar species: *Plesionika edwardsii* (Brandt, 1851) and *Plesionika crosnieri*, new species (Crustacea: Decapoda: Pandalidae). *Proc. Biol. Soc. Wash.* **104**(3): 545–555 (Australian material may prove to belong partly to the closely related *P. crosnieri*).

Plesionika grahami Kensley, Tranter & Griffin, 1987

Plesionika grahami Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [315 figs 20–21, pl. C].

Type data: holotype AM P35897 ♂, paratypes AM P35896 4 specimens, AM P21583 2 specimens, AM P26576 2 specimens, AM P21030 1 specimen, USNM 211400 7 specimens.
Type locality: NE of Port Jackson, NSW.

Distribution: NSW (Central E coast, SE oceanic); known only from limital area.
Ecology: epipelagic, mesopelagic; depth 149– 675 m.

Plesionika grandis Doflein, 1902

Mother Shrimp

Plesionika spinipes grandis Doflein, F. (1902). Ostasiatische Dekapoden. *Abh. Bayer. Akad. Wiss. (II Classe)***21**(3): 611–670 pls 1–6 [618 pl. 3 figs 3–5] [as *P. spinipes* var. *grandis*].
Type data: syntypes ZSMB (lost, see Chan, T.-Y. & Crosnier, A. (1991). Crustacea Decapoda: Studies of the *Plesionika narval* (Fabricius, 1787) group (Pandalidae) with descriptions of six new species. pp. 413–461 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [425]).
Type locality: Sagami Bay, Japan.

Distribution: WA (NW coast); Indo-west Pacific (Madagascar to southern Japan, Taiwan, Philippines).
Ecology: mesopelagic, epipelagic; depth 110–375 m.
Reference: Hanamura, Y. & Takeda, M. (1987). Family Pandalidae (Crustacea, Decapoda, Caridea) collected by the R.V. "Soela" from the north-west Australian Shelf. *Bull. Natn. Sci. Mus., Tokyo (Zool.) (A)***13**(3): 103–121 [110] .

Plesionika indica de Man, 1917

GT Carid, Striped Carid

Plesionika longipes indica de Man, J.G. (1917). Diagnoses of new species of macrurous decapod Crustacea from the Siboga-Expedition. *Zool. Meded. (Leiden)* **3**(4): 279–284 [279].
Type data: type status unknown ZMA*.
Type locality: Kepulauan Kai [Kei], Indonesia [5°40'S 132°26'E].

Distribution: NT (N coast), WA (NW oceanic); Indo-west Pacific (Zanzibar to South China Sea and Philippines).
Ecology: mesopelagic, sand bottom; depth 250–360 m.
References: Hanamura, Y. & Takeda, M. (1987). Family Pandalidae (Crustacea, Decapoda, Caridea) collected by the R.V. "Soela" from the north-west Australian Shelf. *Bull. Natn. Sci. Mus., Tokyo (Zool.) (A)***13**(3): 103–121 [111]; Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [12].

Plesionika laurentae Chan & Crosnier, 1991

Plesionika laurentae Chan, T.-Y. & Crosnier, A. (1991). Crustacea Decapoda: Studies of the *Plesionika narval* (Fabricius, 1787) group (Pandalidae) with descriptions of six new species. pp. 413–461 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 9. *Mém. Mus. natn. Hist. nat. Paris* **152**(A): 1–520 [431 figs 6 a–e, 24].
Type data: holotype MNHP Na12609 ♀, paratypes MNHP Na12751 2♂, MNHP Na12611 4♂, MNHP Na12752 1♀, MNHP Na12753 1♀.
Type locality: Chesterfield Islands.

Distribution: NSW (Lower E coast); south-west Pacific Ocean.
Ecology: epipelagic, mesopelagic; depth 150–210 m.

Plesionika lophotes Chace, 1985

Plesionika lophotes Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocaridídae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [81 fig. 37].
Type data: holotype USNM 205212 ♂, paratype(s) ♂ ♀.
Type locality: Salamar Sea between Southeastern Masbate and Almagro Island, Philippines.

Distribution: WA (NW coast); Philippines to Japan.
Ecology: sand bottom, epipelagic, mesopelagic; from 183–329 m depth.

Plesionika martia (A. Milne Edwards, 1883)

Pandalus martius Milne Edwards, A. (1883). *Recueil de figures de crustacés nouveaux ou peu connus.* Paris : [s.n.] 3 pp., 44 plates [pl. 21].
Type data: type status unknown MNHP*.
Type locality: eastern Atlantic.

Distribution: NSW (SE oceanic), WA (W oceanic); Atlantic-south Indo-West Pacific (southern Australian population seems confined to waters south of about 25°S).
Ecology: bathypelagic, mesopelagic, oceanic province; from 190–1215 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [13].

Plesionika ocellus (Bate, 1888)

Nothocaris ocellus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [657 pl. 114 fig. 3].
Type data: syntypes BMNH 1♂ 1♀.
Type locality: eastern Sulu Sea north-west of Basilan Strait.

Plesionika chacei Hayashi, K.I. (1986). Penoidea and Caridea. *In,* Baba, K., Hayashi, K.I., & Toriyama, M. (eds) *Decapod Crustaceans from Continental Shelf and Slope around Japan.* Tokyo : Japan Fisheries Resource Conservation Association 336 pp. 23 figs, 1776 photos [128].
Type data: holotype SUFS ♂ (12.1 mm carapace length), paratypes SUFS 1 ovigerous ♀, SUFS 2 ovigerous ♀, SUFS ♂.
Type locality: Tosa Bay, off Kagoshima Prefecture, Japan.

Taxonomic decision for synonymy: Chan, T.-Y. & Crosnier, A. (1997). Crustacea Decapoda: Deep-sea shrimps of the genus *Plesionika* Bate, 1888 (Pandalidae) from French Polynesia, with descriptions of five new species. pp. 187–234 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 18. *Mém. Mus. natn. Hist. nat. Paris* **176**: 1–570 [218].

Distribution: WA (NW oceanic); Indonesia, South China Sea, Philippines, Hawai'ian Islands.
Ecology: continental shelf, continental slope, epipelagic, mesopelagic; from 150–600 m depth.
Reference: Hanamura, Y. & Takeda, M. (1987). Family Pandalidae (Crustacea, Decapoda, Caridea) collected by the R.V. "Soela" from the north-west Australian Shelf. *Bull. Natn. Sci. Mus., Tokyo (Zool.) (A)***13**(3): 103–121 [113].

Plesionika orientalis Chace, 1985

Golden Shrimp (FAO)

Plesionika martia orientalis Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [84 figs 38, 39].
Type data: holotype USNM ♂*.
Type locality: Sulu Archipelago, between Jolo and Tawitawi Islands [5°48'00"N 129°33'45"E].

For alternative taxonomic arrangement, see Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [14].

Distribution: WA (NW oceanic); Philippine-Indonesian region.
Ecology: mesopelagic, oceanic province; coarse sand or sand and mud substrates, from 247–686 m depth.

Plesionika parvimartia Chace, 1985

Plesionika parvimartia Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [93 figs 42, 43].
Type data: holotype USNM 205213 ♂, paratype(s) ♂ ♀.
Type locality: Samar Sea S of Tagapula Island.

Distribution: WA (NW oceanic); Indonesia, Philippines.
Ecology: mesopelagic, epipelagic; depth 176–366 m.

Plesionika pumila Chace, 1985

Plesionika pumila Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [100 figs 45, 46].
Type data: holotype USNM 205215 ♂, paratype USNM 205215 ♂.
Type locality: W end of Basilan Strait, Sulu Archipelago, Philippines.

Distribution: NT (N oceanic), WA (NW coast); Philippines.
Ecology: epipelagic; depth 46 and 80 m.

Plesionika quasigrandis Chace, 1985

Plesionika quasigrandis Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [104 figs 47, 48].
Type data: holotype USNM 205216 ♂, paratype(s) ♂ ♀.
Type locality: Davao Gulf about 3.2 km off Davao, Mindanao, Philippines.

Distribution: WA (NW oceanic); Indo-West Pacific (Philippines).
Ecology: mesopelagic, sand bottom, oceanic province; depth 245 to 320 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [14].

Plesionika reflexa Chace, 1985

Plesionika reflexa Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [108 fig. 49].
Type data: holotype USNM 205217 ♂.
Type locality: E of S Luzon, NE of San Bernardino Strait, Philippines.

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic), WA (NW oceanic); Indonesia, Philippines, South China Sea, Japan.
Ecology: mesopelagic; depths of 191–629 m.

Plesionika semilaevis Bate, 1888

Plesionika semilaevis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [644 pl. CXIII].
Type data: lectotype BMNH ♂, paralectotype(s) BMNH 4 specimens.
Subsequent designation: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [121].
Type locality: Moro Gulf E of Basilan Strait, Philippines.

Distribution: NSW (SE oceanic), NT (N coast), WA (NW oceanic); Philippines, Indonesia.
Ecology: mesopelagic, oceanic province; over fine sand and mud substrates, 176–700 m depth.
References: de Man, J.G. (1920). The Decapoda of the Sibogae Expedition. Part IV. Families Pasiphaeidae, Stylodactylidae, Hoplophoridae, Nematocarcinidae, Thalassocaridae, Pandalidae, Psalidopodidae, Gnatho-

phyllidae, Processidae, Glyphocrangonidae and Crangonidae. *Siboga Exped.* **39a**: 11–263 (stated that Bate's record from Sydney, Australia was doubtful; it may prove to belong to *P. orientalis* Chace, 1985, but this remains to be established); Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [15].

Plesionika spinidorsalis (Rathbun, 1906)

Pandalus spinidorsalis Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [917 pl. 21 fig. 5].
Type data: holotype USNM 30550.
Type locality: vicinity of Kauai Island, Hawai'i.

Distribution: WA (NW coast); Indonesia, Philippines, South China Sea, Hawai'i.
Ecology: bathypelagic, epipelagic, mesopelagic, oceanic province; from 100–1250 m depth.
Reference: Hanamura, Y. & Takeda, M. (1987). Family Pandalidae (Crustacea, Decapoda, Caridea) collected by the R.V. "Soela" from the north-west Australian Shelf. *Bull. Natn. Sci. Mus., Tokyo (Zool.) (A)***13**(3): 103–121 [117].

Plesionika spinipes Bate, 1888

Plesionika spinipes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [646 pl. 113 fig. 2].
Type data: syntypes BMNH 9 damaged young specimens*.
Type locality: N of New Guinea (*Challenger* Stn 219).

Distribution: NSW (Central E coast, Lower E coast, SE oceanic); Indo-west Pacific Oceans.
Ecology: epipelagic, mesopelagic; depth 91–183 to 500–600 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [319].

Plesionika unidens Bate, 1888

Plesionika unidens Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [648 pl. 113 fig. 4].
Type data: syntypes BMNH 2♂ 2♀.
Type locality: Admiralty Islands, N of New Guinea.

Distribution: WA (NW oceanic); Indo-west Pacific (Admiralty Islands, Andaman Sea, Bay of Bengal, Indonesia, Philippines, Japan).
Ecology: mesopelagic, oceanic province; from 214–400 m depth.

Procletes Bate, 1888

Procletes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [883] [gender masculine].
Type species: *Procletes biangulatus* Bate, 1888 (= *Dorodotes levicarina* Bate, 1888) by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157.

Heterocarpoides de Man, J.G. (1917). Diagnoses of new species of macrurous decapod Crustacea from the Siboga-Expedition. *Zool. Meded. (Leiden)* **3**(4): 279–284 [284] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Dorodotes levicarina* Bate, 1888 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [277].

Extralimital distribution: Indo-west Pacific Oceans. See: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143.

Procletes levicarina (Bate, 1888)

Dorodotes levicarina Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [680 pl. 112 fig. 5].
Type data: syntypes BMNH 2♂*.
Type locality: Arafura Sea W of Torres Strait.

Procletes biangulatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [884].
Type data: type status unknown BMNH*.
Type locality: unknown.

Heterocarpus (Heterocapoides) glabrus Zarenkov, N.A. (1971). Contribution to the study of the species and of the Geographic Distribution of the Marine Shrimps Belonging to the families Hippolytidae and Pandalidae (Crustacea Decapoda). *Complexnie Issledovaniia Prirodi Okeana, Moskovsko* **2**: 176–195 [193 fig. 4: 16–27] [in Russian].
Type data: holotype whereabouts unknown*.
Type locality: South China Sea.

Taxonomic decision for synonymy: Gopala Menon, P. (1972). Decapod Crustacea from the International Indian Ocean Expedition: the larval development of *Heterocarpus* (Caridea). J. Zool., Lond. 167: 371–397 [374] (also includes description of larval development, pp. 382–393 figs 4–10); Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [16] (*Heterocarpus (Heterocapoides) glabrus* a probable synonym); taxonomic decision for new combination: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [278].

Distribution: NT (N coast), QLD (NE oceanic); Indo-west Pacific Oceans.
Ecology: mesopelagic, pelagic; depth 31–393 m.

Stylopandalus Coutière, 1905

Stylopandalus Coutière, H. (1905). Sur quelques Crustacés provenant des campagnes de la *Princesse-Alice* (Filet à grande ouverture). *C. R. Séances Acad. Sci.* **140**: 1113–1115 [1115] [gender masculine].
Type species: *Pandalus (Stylopandalus) richardi* Coutière, 1905 by monotypy.

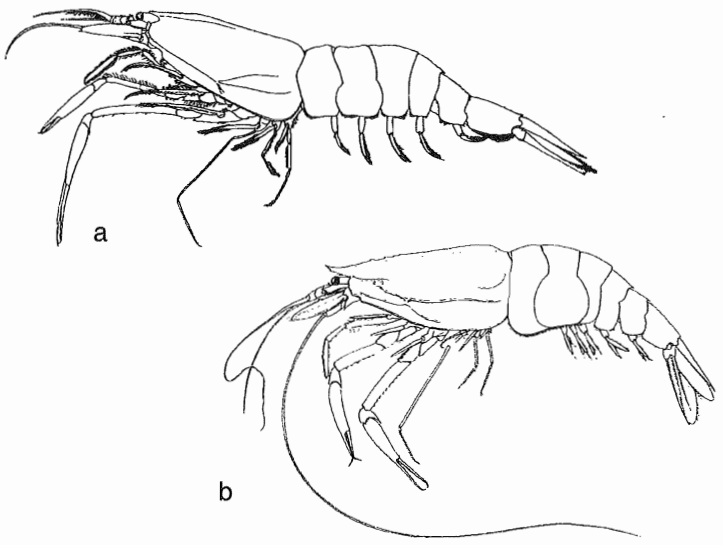
Extralimital distribution: Indo-west Pacific, N and S Atlantic Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Stylopandalus richardi (Coutière, 1905)

Pandalus (Stylopandalus) richardi Coutière, H. (1905). Note préliminaire sur les *Eucyphotes* recuillis par S.A.S. le Prince de Monaco a laide du filet a grande ouverture (Campagnes de la "Princesse-Alice" 1903–1904). *Bull. Mus. Océanogr. Monaco* **48**: 1–35, 11 text-figs [18 fig. 6] [as *Pandalus (Stylopandalus) Richardi*, description also continued in Coutière, H. (1905). Sur quelques Crustacés provenant des campagnes de la *Princesse-Alice* (Filet à grande ouverture). *C. R. Séances Acad. Sci.* **140**: 1113–1115].
Type data: holotype ♂.
Type locality: E Atlantic Ocean.

Distribution: NSW (SE oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic; surface to 3600 m.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [319].

PASIPHAEIDAE



a, *Parapasiphae sulcatifrons*; b, *Glyphus marsupialis*
[from a, Kemp 1910: pl. 5 fig. 1; b, Crosnier & Forest 1973: 145 fig. 42]

INTRODUCTION

This family of mostly pelagic shrimps can be found from surface waters to abyssal depths in excess of 5000 metres. Holthuis (1993: 23) provided a key to six genera and two subgenera recognised at that time, but a new genus *Alainopasiphaea* has since been rcognised (Hayashi 1999). All except *Alainopasiphaea* are found in Australian waters.

Diagnosis

All pereiopods bearing exopods. First and second pairs of pereiopods chelate, with long, slender, pectinate fingers. Second pereiopod with carpus entire, not articulate. First maxilliped with broad lobe partially detached from distal end of exopod; endite much reduced. Second maxilliped without exopod; with terminal segment attached to distal transverse margin of preceding segment. Third maxilliped slender, pereiopod-like, not broad or operculate, with exopod bearing lash. Mandible without true molar process, with or without palp. First maxilla with distal endite not unusually large, proximal endite slightly reduced. Second maxilla with endite much suppressed, palp well developed, scaphognathite rounded proximally, not narrowly produced. Both arthrobranchaie and pleurobranchiae present on some posterior pereiopods. (Derived from Chace 1992).

References

Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80

Crosnier, A. & Forest, J. (1973). Les crevettes profondes de l'Atlantique oriental tropical. *Faune Trop.* **19**: 1–40

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Hayashi, K.-I. (1999). Crustacea Decapoda: Revision of *Pasiphaea sivado* (Risso, 1816) and related species, with descriptions of one new genus and five new species (Pasiphaeidae). pp. 267–302 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 20. *Mém. Mus. natn. Hist. nat. Paris* **180**: 1–588

Kemp, S. (1910). The Decapod Natantia of the coasts of Ireland. *Sci. Invest. Fisher. Branch Ireland* **1908**(1): 3–190 pls 1–23

PASIPHAEIDAE Dana, 1852

Pasiphaeidae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [13, 18] [name placed on the Official List of Family-Group Names, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Leptochelidae Paul'son, O.M. (1875). Podophthalmata i Edriophthalmata (Cumacea) Part I. *In, Izledovaniya Rakoobraznykh Krasnago Morya s Zamekami Otnositel'no Rakoobraznykh Drugikhv Morie.* Kiev : Kul'zhenko i–xiv 1–144 pp. pls 1–21 [99] [reissued and translated by F.D. Por, 1961: Studies on Crustacea of the Red Sea with notes regarding other seas. Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem: Israel Program for Scientific Translations; published for the National Science Foundation and Smithsonian Institution, Washington, D.C.: pp. 1–134, pls 1–21].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [23].

Eupasiphae Wood-Mason & Alcock, 1893

Eupasiphae Wood-Mason, J. & Alcock, A. (1893). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator" Commander R.F. Hoskyu, R.N. commanding. Series II. No. 1. On the results of the Deep Sea Dredging during the Season 1890–1891. *Ann. Mag. Nat. Hist.* **11**(February 1893): 161–172 pls 10–11 [165] [gender feminine].
Type species: *Parasiphae gilesii* Wood-Mason, 1892 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [36].

Extralimital distribution: Atlantic-Indo-Pacific Oceans.
Generic references: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331; Crosnier, A. (1988). Les *Eupasiphae* (Crustacea Decapoda Pasiphaeidae) du sud-ouest de l'ocean Indien. Description d'*E. paucidentata* sp. nov. *Bull. Mus. Natn. Hist. Nat. Paris (4)***10**(ser. A): 785–797

Eupasiphae gilesii (Wood-Mason & Alcock, 1893)

Parapasiphae gilesii Wood-Mason, J. & Alcock, A. (1893). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator" Commander R.F. Hoskyu, R.N. commanding. Series II. No. 1. On the results of the Deep Sea Dredging during the Season 1890–1891. *Ann. Mag. Nat. Hist.* **11**(February 1893): 161–172 pls 10–11 [166].
Type data: holotype IM ♀*.
Type locality: Cinque Island, Andaman Sea.

Eupasiphae rhinocerata Burukovsky, R.N. (1977). A new species of the family Pasiphaeidae (Crustacea: Decapoda). *Zool. Zh.* **56**: 473–475 [473] [in Russian].
Type data: holotype ZIL* (presumed depository institution).
Type locality: off Morocco, eastern Atlantic Ocean.

Taxonomic decision for synonymy: Crosnier, A. (1988). Les *Eupasiphae* (Crustacea Decapoda Pasiphaeidae) du sud-ouest de l'ocean Indien. Description d'*E. paucidentata* sp. nov. *Bull. Mus. Natn. Hist. Nat. Paris (4)***10**(ser. A): 785–797.

Distribution: NSW (SE oceanic), WA (NW oceanic); Atlantic-Indo-west Pacific Oceans.

Ecology: continental slope, mesopelagic; depth 340–770 m.
References: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [293]; Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [52].

Eupasiphae latirostris (Wood-Mason, 1891)

Parapasiphae latirostris Wood-Mason, J. *in* Woodmason, J. & Alcock, A. (1891). Natural History notes from H. M. Indian Marine Survey Steamer 'Investigator', Commander R. F. Hoskyn, R.N., commanding. No 21. Note on the results of the last season's deep-sea dredging. *Ann. Mag. Nat. Hist. (6)***7**: 1–19, 186–202, 258–272 [196].
Type data: type status unknown IM ♀*.
Type locality: Laccadive Sea, off Goa coast.

Distribution: WA (NW oceanic); Indian Ocean.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic; Australian material from 900–1023 m depth.
Reference: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [53] (first Australian record).

Glyphus Filhol, 1884

Glyphus Filhol, H. (1884). *Exploration sous-marine Voyage du "Talisman"*. La nature, Paris. 12 (part 1), 119–122, 134–138, 147–151, 161–164, 182–186, 198–202, 230–234, 278–282, 326–330, 391–394 [231] [gender masculine].
Type species: *Glyphus marsupialis* Filhol, 1884 by monotypy.

Sympasiphaea Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum*. Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [58, 62, 63] [gender feminine].
Type species: *Sympasiphaea annectens* Alcock, 1901 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda)*. Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [25].

Extralimital distribution: E Atlantic and Indo-Pacific Oceans. See: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60.

Glyphus marsupialis Filhol, 1884

Glyphus marsupialis Filhol, H. (1884). *Exploration sous-marine Voyage du "Talisman"*. La nature, Paris. 12 (part 1), 119–122, 134–138, 147–151, 161–164, 182–186, 198–202, 230–234, 278–282, 326–330, 391–394 [231].
Type data: holotype MNHP ♀, paratype(s) MNHP 4♂ 10♀.
Type locality: off Western Sahara, West Africa (*Taliman* Stn 75) [25°39'N 16°02'W].

Sympasiphae annectens Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum*. Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [63].
Type data: holotype IM 3817/10.
Type locality: Arabian Sea, SW of Cape Comorin.

Sympasiphae imperialis Terao, A. (1922). A new decapod crustacean, *Sympasiphaea imperialis*, n. sp. *Annot. Zool. Jpn.* **10**: 109–113 [110, 1 fig.].
Type data: holotype (destroyed), paratype(s) BLIH.
Type locality: Suruga Bay, Japan.

Taxonomic decision for synonymy: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [54].

Distribution: WA (NW oceanic); east Atlantic-Indo-west central Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic; Australian specimens from 1061–1071 m depth.

Leptochela Stimpson, 1860

Taxonomic decision for subgeneric arrangement: Chace, F.A., Jr (1976). Shrimps of the pasiphaeid genus *Leptochela* with descriptions of three new species (Crustacea: Decapoda: Caridea). *Smithson. Contr. Zool.* **No. 222**: 1–51 [3, 44].

Extralimital distribution: Indo-Pacific Oceans, tropical western Atlantic.

Leptochela (Leptochela) Stimpson, 1860

Leptochela Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [42] [gender feminine].
Type species: *Leptochela gracilis* Stimpson, 1860 by subsequent designation, see Kemp, S. (1915). Crustacea, Decapoda. Fauna of the Chilka Lake. *Mem. Indian Museum* **5**: 201–325 figs 1–38 pls 12–13 [310].

Extralimital distribution: Indo-Pacific Oceans, tropical western Atlantic.
Generic references: Chace, F.A., Jr (1976). Shrimps of the pasiphaeid genus *Leptochela* with descriptions of three new species (Crustacea: Decapoda: Caridea).

Smithson. Contr. Zool. **No. 222**: 1–51 [3] (general key to species); Hanamura, Y. (1987). Caridean shrimps obtained by R.V. "Soela" from North-West Australia, with description of a new species of *Leptochela* (Crustacea: Decapoda: Pasiphaeidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **4**(1): 15–33 [17] (key to NW Australian species); Hayashi, K.-L. (1995). Brief revision of the genus *Leptochela* with description of two new species (Crustacea, Decapoda, Pasiphaeidae). pp. 83–99 *in* Richer de Forges, B. (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie,* Études et Théses. Paris : ORSTOM Vol. 2 pp. 1–205.

Leptochela (Leptochela) aculeocaudata Paul'son, 1875

Leptochela (Leptochela) aculeocaudata Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [100 pl. 16 fig. 1–1s] [reissued and translated by F.D. Por, 1961; translation 1961 p. 106, pl. 15, figs 1–1s].
Type data: type status unknown*.
Type locality: Red Sea.

Distribution: QLD (NE coast), WA (NW coast); Red Sea.
Ecology: benthic, continental shelf, epipelagic; 51–88 m depth.

Leptochela (Leptochela) irrobusta Chace, 1976

Leptochela (Leptochela) irrobusta Chace, F.A., Jr (1976). Shrimps of the pasiphaeid genus *Leptochela* with descriptions of three new species (Crustacea: Decapoda: Caridea). *Smithson. Contr. Zool.* **No. 222**: 1–51 [19 figs 14–18].
Type data: holotype USNM 94729 ♀, paratype(s) USNM.
Type locality: Lagoon of Bikini Atoll, Marshall Islands.

Distribution: NT (N coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: benthic, sand bottom, continental shelf, epipelagic; 35–70 m depth.

Leptochela (Leptochela) japonica Hayashi & Miyake, 1969

Leptochela (Leptochela) japonica Hayashi, K.-I. & Miyake, S. (1969). A new species of the genus *Leptochela* from northern Kyushu, Japan (Decapoda, Caridea, Pasiphaeidae). *Publs Amakusa Mar. Biol. Lab* **2**(1): 1–8 3 figs [1 figs 1, 2].
Type data: holotype ZLKU 11182 ♀, paratype(s) ZLKU 11183, 11184, 11677.
Type locality: Tachibana-wan [Chijiwa Bay], north-western Kyushu, Japan.

Distribution: QLD (Great Barrier Reef, NE oceanic), WA (NW coast); Gulf of Thailand, southern Japan.
Ecology: benthic, continental shelf, continental slope, epipelagic, mesopelagic; 45–525 m depth.

Leptochela (Leptochela) pugnax de Man, 1916

Leptochela (Leptochela) pugnax de Man, J.G. (1916). Diagnoses of new species of macrurous decapod Crustacea from the Siboga Expedition. *Zool. Meded. (Leiden)* **2**: 147–151 [148].
Type data: type status unknown ZMA*.
Type locality: Indonesia: five localities between Java and the Moluccas.

Distribution: NT (N coast); Indo-west Pacific Oceans.
Ecology: benthic, coral reef, sand bottom, continental shelf, epipelagic, subtidal; 8–140 m depth.

Leptochela (Leptochela) robusta Stimpson, 1860

Leptochela (Leptochela) robusta Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [43].
Type data: types destroyed in the Chicago fire of 1871.
Type locality: 'Mari Sinensi' [South China Sea].

Distribution: WA (NW coast); South China Sea, Philippine Islands, Indonesia.
Ecology: benthic, sand bottom, continental shelf, epipelagic, subtidal; coral sand and shells.

Leptochela (Leptochela) sydniensis Dakin & Colefax, 1940

Sydney Comb Shrimp

Leptochela (Leptochela) sydniensis Dakin, W.J. & Colefax, A.N. (1940). The plankton of the Australian coastal waters of New South Wales, Part No. 1: With special reference to the Seasonal Distribution, the Phytoplankton, and the Planktonic Crustacea, and in Particular, the Copepoda and Crustacean Larvae, together with an account of the more frequent members of the groups *Mysidacea*, *Euphausiacea*, *Amphipoda*, *Mollusca*, *Tunicata*, *Chaetognatha*, and some reference to the fish eggs and fish larvae. *Univ. Sydney, Depart. Zool., Monogr* **1**: 1–215 303 figs 4 pls [153 figs 245, 246].
Type data: type status unknown AM (presumed lost).
Type locality: off Sydney, NSW.

Distribution: NSW (Lower E coast), NT (N coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait); Indo-west Pacific (Arabian Sea, Bay of Bengal, South China Sea, Japan, Philippines, New Caledonia).
Ecology: benthic, continental shelf, continental slope, epipelagic; occasionally found in sediment samples, pelagic at night and buried in substrate by day, 2–300 m depth.
Reference: Chace, F.A., Jr (1976). Shrimps of the pasiphaeid genus *Leptochela* with descriptions of three new species (Crustacea: Decapoda: Caridea). *Smithson. Contr. Zool.* **No. 222**: 1–51 [44] (redescription).

Leptochela (Proboloura) Chace, 1976

Proboloura Chace, F.A., Jr (1976). Shrimps of the pasiphaeid genus *Leptochela* with descriptions of three new species (Crustacea: Decapoda: Caridea). *Smithson. Contr. Zool.* **No. 222**: 1–51 [44] [gender feminine].
Type species: *Leptochela carinata* Ortmann, 1893 by original designation.

Extralimital distribution: tropical west Atlantic, north-western Australia.

Leptochela (Proboloura) soelae Hanamura, 1987

Leptochela (Proboloura) soelae Hanamura, Y. (1987). Caridean shrimps obtained by R.V. "Soela" from North-West Australia, with description of a new species of *Leptochela* (Crustacea: Decapoda: Pasiphaeidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **4**(1): 15–33 [21 figs 6–8].
Type data: holotype NTM Cr.003605 ♀, paratypes NTM Cr.003606 1 ♂, NTM Cr.003607 1 juvenile, NSMT Cr.9205 1 ♀, NSMT Cr.9206 1 ♂, USNM 233802 1 ♀.
Type locality: North West Shelf, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: benthic, continental shelf, epipelagic; 80–82 m depth.

Parapasiphae Smith, 1884

Parapasiphae Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [383] [gender feminine].
Type species: *Parapasiphae sulcatifrons* Smith, 1884 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [547].

Orphania Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [872] [junior homonym of *Orphania* Fischer, 1853 (Insecta: Orthoptera); gender feminine].
Type species: *Orphania tenuimana* Bate, 1888 (= *Parapasiphae sulcatifrons* S.I. Smith, 1884) by monotypy.

Dantecia Caullery, M. (1896). Crustacés Schizopodes et Décapodes. *In* Koehler, R., Résultats scientifiques de la campagne du "Caudan" dans le Golfe de Gascogne. *Ann. Univ. Lyon* **26**: 365–419 pls 13–17 [372] [gender feminine].
Type species: *Dantecia caudani* Caullery, 1896 (= *Parapasiphae sulcatifrons* S.I. Smith, 1884) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [27].

Extralimital distribution: N and S Atlantic, Indian, Pacific Oceans. See: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331.

Parapasiphae sulcatifrons Smith, 1884

Parapasiphae sulcatifrons Smith, S.I. (1884). Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [384 pl. 5 figs 4, 6].
Type data: type status unknown*.
Type locality: N and S Atlantic Ocean.

Orphania tenuimana Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [872 pl. 141 fig. 4].
Type data: holotype BMNH* (dredged *Challenger* Expedition Stn 45).
Type locality: SE of New York [38°34'N 72°10'W].

Dantecia caudani Caullery, M. (1896). Crustacés Schizopodes et Décapodes. *In* Koehler, R., Résultats scientifiques de la campagne du "Caudan" dans le Golfe de Gascogne. *Ann. Univ. Lyon* **26**: 365–419 pls 13–17 [372].
Type data: syntypes whereabouts unknown*.
Type locality: Bay of Gascony.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [27].

Distribution: NSW (SE oceanic), TAS (S oceanic, Tas. coast); Aust. Antarctic Terr., Atlantic-Indo-Pacific Oceans.
Ecology: abyssopelagic, bathypelagic, continental rise, continental slope, mesopelagic, oceanic province; depth 500–5340 m.
Reference: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91.

Pasiphaea Savigny, 1816

Pasiphaea Savigny, J.C. de (1816). *Mémoires sur les animaux sans vertèbres.* Bd.1. Description et classification des animaux invertébrés et articulés. Paris : G. Dufour 118 pp. [50] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Alpheus sivado* Risso, 1816 by monotypy.

Phye Wood-Mason, J. (1892). *Illustrations of the Zoology of the Royal Indian Marine Surveying Steamer "Investigator".* Crustacea, Pt 1, pls 1–5 [pl. 3 fig. 5] [gender feminine].
Type species: *Parapasiphae alcocki* Wood-Mason & Alcock, 1891 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [27].

Extralimital distribution: Atlantic, Indo-Pacific and Southern Oceans.

Pasiphaea acutifrons Bate, 1888

Pasiphaea acutifrons Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [871 pl. 141 fig. 3].
Type data: lectotype BMNH.
Subsequent designation: Iwasaki, N. & Nemoto, T. (1987). Pelagic shrimps (Crustacea: Decapoda) from the Southern Ocean between 150°E and 115°E. *Mem. Nat. Inst. Polar Res.* **38**(E): 1–40 [23].
Type locality: *Challenger* Stn 311 off Magallanes [Magellan's Strait], southern Chile.

Pasiphaea forceps Milne Edwards, A. (1891). Crustacés. Mission scientifique du Cap Horn. *Nouv. Arch. Mus. Hist. Nat. Paris* **VI**: 1–76 [51 pl. 6 fig. 2].
Type data: syntypes MNHP*.
Type locality: Cape Horn.

Taxonomic decision for synonymy: Iwasaki, N. & Nemoto, T. (1987). Pelagic shrimps (Crustacea: Decapoda) from the Southern Ocean between 150°E and 115°E. *Mem. Nat. Inst. Polar Res.* **38**(E): 1–40 [22].

Distribution: Australian Antarctic Territory; S oceanic, S South America, east Pacific Ocean.
Ecology: pelagic.

Pasiphaea australis Hanamura, 1989

Pasiphaea australis Hanamura, Y. (1989). Deep-sea shrimps (Crustacea: Decapoda) collected by the R.V. "Soela" from southern Australia. *Bull. Biogeog. Soc. Japan* 44: 51–69 [59 figs 5–7].
Type data: holotype NTM, paratypes*, USNM*, NSMT*.
Type locality: off E Tasmania (RV *Soela* Stn SO3-84-62).

Distribution: TAS (SE oceanic); known only from type locality.
Ecology: continental slope, mesopelagic, oceanic province; depth 345–350 m.

Pasiphaea balssi Burukovsky & Romensky, 1987

Pasiphaea balssi Burukovsky, R.N. & Romensky, L.L. (1987). Description of *Pasiphaea balssi* sp.n., a new species of shrimps from South Atlantic (Crustacea, Decapoda, Pasiphaeidae), and polytomous key for identification of the shrimps in the genus. *Byull. Mosk. O-VA Inpyt. Prir. Otd Biol.* **92**(6): 51–60 [52, 58 figs 1(1–7), 2(9)].
Type data: holotype ZIL* (presumed depository institution).
Type locality: Subantarctic waters of the S Atlantic Ocean, see Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91.

Distribution: Australian Antarctic Territory; S oceanic, southern circumpolar.
Ecology: pelagic.

Pasiphaea barnardi Yaldwyn, 1971

Pasiphaea barnardi Yaldwyn, J. (1971). Preliminary description of a new genus and twelve new species of natant decapod Crustacea from New Zealand. *Rec. Dom. Mus. N.Z.* **7**(10): 85–94 [86].

Type data: holotype NMNZ Cr.1870 ♂, paratype(s).
Type locality: Cook Strait, New Zealand.

Pasiphaea berentsae Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [294 figs 7–9].
Type data: holotype AM P26768, paratypes AM P26797, P26798, P26779, USNM 211394.
Type locality: NE of Norah Head, NSW.

Taxonomic decision for synonymy: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [55].

Distribution: NSW (SE oceanic), VIC (Bass Strait), WA (NW coast); Atlantic-Indo-west Pacific Oceans.
Ecology: bathypelagic, continental rise, continental slope, mesopelagic, oceanic province.

Pasiphaea kapala Kensley, Tranter & Griffin, 1987

Pasiphaea kapala Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [297 figs 10–12].
Type data: holotype AM P33133 ♂, paratypes AM P26789 27♂ 23♀, USNM 211393 20♂ 20♀.
Type locality: NE of Norah Head, NSW.

Distribution: NSW (SE oceanic).
Ecology: continental slope, mesopelagic, oceanic province; depth 446–900 m.

Pasiphaea levicarinata Hanamura, 1994

Pasiphaea levicarinata Hanamura, Y. (1994). A new species of *Pasiphaea* Savigny (Crustacea: Caridea: Pasiphaeidae) from North-western Australian waters. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 167–173 [167 figs 1, 2].
Type data: holotype NTM Cr.010906 ♀, paratypes NTM Cr.010907 6♀, NTM Cr.007210 3♂, NTM Cr.007211 1♂, NSMT Cr.11336*.
Type locality: NW Australia.

Distribution: WA (NW oceanic); known only from type locality.
Ecology: continental slope, mesopelagic, oceanic province; depth 500–1000 m.

Pasiphaea longitaenia Kensley, Tranter & Griffin, 1987

Pasiphaea longitaenia Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [301].
Type data: holotype AM P35916 ♂ (or possibly P35196),

paratypes AM P24772 1♂ 2♀, AM P24771 1♀, USNM 211395 1♂.
Type locality: E of Long Reef Point, NSW.

Distribution: NSW (SE oceanic), WA (NW oceanic); known only from limital area.
Ecology: continental slope, mesopelagic, oceanic province; depth 457–637 m.

Pasiphaea orientalis Schmitt, 1931

Pasiphaea orientalis Schmitt, W.L. (1931). Two new species of shrimp from the Straits of Formosa. *Lingnan Sci. J.* **10**: 265–268 [267 pl. 32 figs 1, 5].
Type data: type status unknown*.
Type locality: Straits of Formosa [Taiwan].

Distribution: WA (NW oceanic); Taiwan.
Ecology: continental slope, mesopelagic, oceanic province; depth 500 m.

Pasiphaea rathbunae (Stebbing, 1914)

Phye rathbunae Stebbing, T.R.R. (1914). Stalk-eyed Crustacea Malacostraca of the Scottish National Antarctic. *Trans. Roy. Soc. Edinburgh* **50**(2): 253–307 pls 23–32 [295 pl. 31].
Type data: holotype BMNH* (fragmented).
Type locality: SW of South Africa (Scottish National Antarctic Expedition Stn 450).

Distribution: TAS (S oceanic); Indo-west Pacific Oceans.
Ecology: oceanic province, pelagic.
Reference: Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [263].

Pasiphaea scotiae (Stebbing, 1914)

Phye scotiae Stebbing, T.R.R. (1914). Stalk-eyed Crustacea Malacostraca of the Scottish National Antarctic. *Trans. Roy. Soc. Edinburgh* **50**(2): 253–307 pls 23–32 [294 pl. 30].
Type data:syntype BMNH (fragmented).
Type locality: Scottish National Antarctic Expedition Stn 417 [71°22'S 16°34'W].

Pasiphaea longispina Lenz, H. & Strunck, K. (1914). Die Decapoden der Deutschen Sudpolar-Expedition 1901–1903. I. Brachyuren und Macruren mit Ausschluss der Sergestiden. *Dt. Südpol. Exped.* **15**(Zool. 7): 257–345 5 pls figs 12–22 [315 pl. 19 figs 1–11].
Type data: syntype ZMB ♂*.
Type locality: Antarctic.

Taxonomic decision for synonymy: Wasmer, R.A. (1993). Pelagic shrimps (Crustacea: Decapoda) from six USNS *Eltanin* cruises in the Southeastern Indian Ocean, Tasman Sea, and the southwestern Pacific Ocean to the Ross Sea. *Biology of the Antarctic Seas. XXII* **58**: 49–91 [82].

Distribution: Australian Antarctic Territory; S oceanic, southern circumpolar.
Ecology: pelagic, oceanic province.
Reference: Iwasaki, N. & Nemoto, T. (1987). Pelagic shrimps (Crustacea: Decapoda) from the Southern Ocean between 150°E and 115°E. *Mem. Nat. Inst. Polar Res.* **38**(E): 1–40 [26].

Pasiphaea sinensis Hayashi & Miyake, 1971

Pasiphaea sinensis Hayashi, K. & Miyake, S. (1971). A new species of the genus *Pasiphaea* from the East China Sea (Crustacea, Decapoda, Pasiphaeidae). *Proc. Jpn. Soc. Syst. Zool.* **7**: 39–44 [39 fig. 1].
Type data: holotype KNHM* (presumed depsitory institution).
Type locality: East China Sea.

Distribution: WA (NW oceanic); East China Sea, Japan.
Ecology: continental slope, mesopelagic, oceanic province; depth 450 m.

Pasiphaea tarda Krøyer, 1845

Pasiphaea tarda Krøyer, H. (1845). Karcinologiske Bidrag (Fortsaettelse). *Naturhistorisk Tidsskrift* **1**: 453–638 pls 6, 7 [453].
Type data: type status and whereabouts unknown.
Type locality: unknown.

Pasiphaea principialis Sund, O. (1913). The glass shrimps (*Pasiphaea*) in northern waters. *Bergens Museums Aarbok* **1912**(6): 1–18 pls 1–3 [6 figs 5–7, 9a–f].
Type data: type status unknown*.
Type locality: Scandinavian waters.

Taxonomic decision for synonymy: Hanamura, Y. & Evans, D.R. (1994). Deepwater caridean shrimps of the families Oplophoridae and Pasiphaeidae (Crustacea: Decapoda) from Western Australia, with an appendix on a lophogastridan mysid (Mysidacea). *Crust. Res.* **23**: 46–60 [56].

Distribution: WA (NW oceanic); Atlantic-Indo-west Pacific Oceans.
Ecology: continental slope, mesopelagic, oceanic province; from 880–960 m in Australian waters.

Psathyrocaris Wood-Mason & Alcock, 1893

Psathyrocaris Wood-Mason, J. & Alcock, A. (1893). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator" Commander R.F. Hoskyu, R.N. commanding. Series II. No. 1. On the results of the Deep Sea Dredging during the Season 1890–1891. *Ann. Mag. Nat. Hist.* **11**(February 1893): 161–172 pls 10–11 [168] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Psathyrocaris fragilis* Wood-Mason & Alcock, 1893 by monotypy.

Extralimital distribution: West-central Pacific Oceans. See: Bruce, A.J. (1990). Two deep-sea shrimps new to the Australian fauna, *Psathyrocaris hawaiiensis* Rathbun (Pasiphaeidae) and *Bresilia antipodarum*, sp. nov. (Bresiliidae), with remarks on *Encantada spinoculata* Wicksten (Bresiliidae). *Invertebr. Taxon.* **4**(4): 847–866.

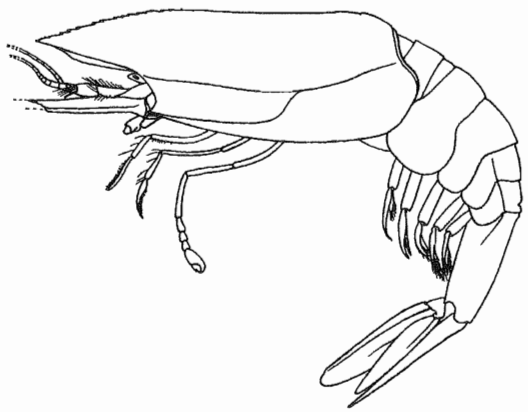
Psathyrocaris hawaiiensis Rathbun, 1906

Psathyrocaris hawaiiensis Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [928 fig. 79].

Type data: holotype USNM*.
Type locality: off Hawai'i.

Distribution: QLD (NE oceanic); west Pacific Ocean.
Ecology: bathypelagic, continental rise, oceanic province; depth 1612 m.

PHYSETOCARIDIDAE



Physetocaris microphthalma [from Chace 1940: 197 fig. 62]

INTRODUCTION

This peculiar monotypic family of pelagic shrimps is immediately recognisable by the broad triangular rostrum that is not clearly distinct from the rest of the carapace. The single species is found in all oceans.

Diagnosis

Carapace merging anteriorly into inflated, indiscrete rostrum. Pereiopods without exopods. First pereiopod simple, without chela. Second pair of pereiopods with carpus subdivided into four articles; fixed finger of chela curving subrectangularly around short, broad movable finger. First maxilliped with exopod not terminating distally in broad, semidetached lobe; caridean lobe of exopod not prominent. Second maxilliped with exopod; segments arranged in usual serial manner; terminal segment not attached to slender, sickle-shaped extension from preceding segment; endopod composed of only three distinct, serial segments. Third maxilliped without exopod. Mandible with molar process only, without incisor process or palp. Second maxilla with vestigial palp; endite simple, not bilobate.
(Derived from Chace 1992).

References

Chace, F.A., Jr (1940). The bathypelagic Caridean Crustacea. Plankton of the Bermuda Oceanographic Expeditions. 9. *Zoologica (N.Y.)* **25**: 117–209

Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80

PHYSETOCARIDIDAE Chace, 1940

Physetocarididae Chace, F.A., Jr (1940). The bathypelagic Caridean Crustacea. Plankton of the Bermuda Oceanographic Expeditions. 9. *Zoologica (N.Y.)* **25**: 117–209 [196] [as Physetocaridae; emended to Physetocarididae by Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 (128)].

Physetocaris Chace, 1940

Physetocaris Chace, F.A., Jr (1940). The bathypelagic Caridean Crustacea. Plankton of the Bermuda Oceanographic Expeditions.9. *Zoologica (N.Y.)* **25**: 117–209 [196] [gender feminine].
Type species: *Physetocaris microphthalma* Chace, 1940 by monotypy.

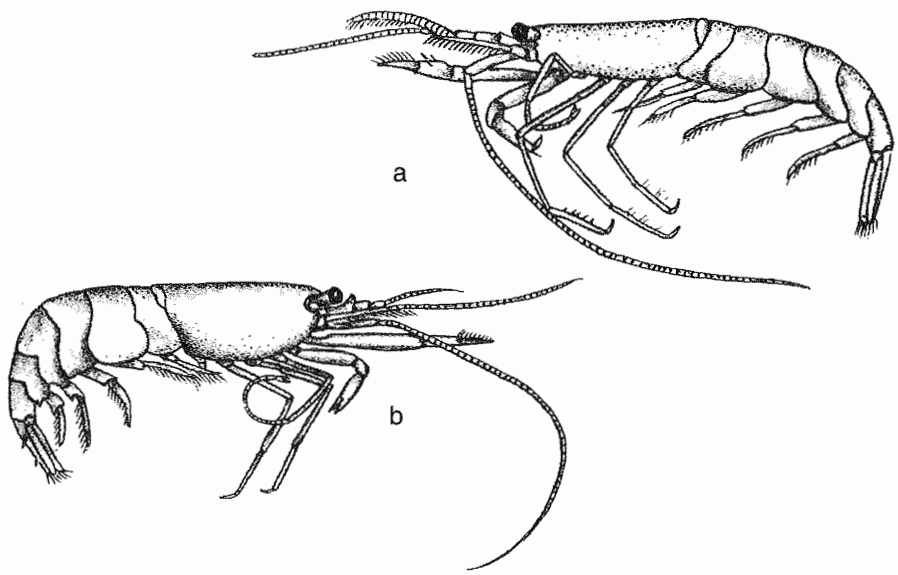
Extralimital distribution: Atlantic, Indo-Pacific Oceans. See: Udekem d'Acoz, C. d' (1999). Inventaire et distribution des crustacés décapodes de l'Atlantique nord-oriental, de la Méditerranée et des eaux continentales adjacentes au nord de 25°N. *Patrimoines naturels (M.N.H.N./S.P.N.)* **40**: 1–383 [127].

Physetocaris microphthalma Chace, 1940

Physetocaris microphthalma Chace, F.A., Jr (1940). The bathypelagic Caridean Crustacea. Plankton of the Bermuda Oceanographic Expeditions.9. *Zoologica (N.Y.)* **25**: 117–209 [196 figs 62, 63].
Type data: holotype AMNH 12379 ♀.
Type locality: S to SE of Nonsuch Island, Bermuda.

Distribution: NSW (SE oceanic); Indo-Pacific Oceans, Atlantic Ocean.
Ecology: bathypelagic, continental rise, continental shelf, continental slope, epipelagic, mesopelagic, oceanic province; from 125–1300 m depth.
Reference: Kensley, B., Tranter, H.A. & Griffin, D.J.G. (1987). Deepwater Decapod Crustacea from Eastern Australia (Penaeidae and Caridea). *Rec. Aust. Mus.* **39**: 263–331 [320] (first Australian records).

PROCESSIDAE



a, *Processa gracilis*; b, *Processa australiensis*

[from Hale 1927: a, fig. 58 p. 61; b, fig. 57 p. 61]

INTRODUCTION

Processid shrimps are often found on shallow seagrass flats and tide pools, although some occur as deep as 566 metres. Five genera and about 60 species are recognised worldwide. They are distributed in all tropical and subtropical seas, but are apparently absent from the west coast of South America; one genus, *Ambidexter*, occurs only in the shallow tropical American Atlantic and eastern Pacific. Three genera and eight species occur in Australia, most having wide Indo-west Pacific distributions and only one, the temperate *Processa gracilis* Baker, 1907, being restricted to Australian waters. Chace (1997) included a key to the five processid genera. Earlier important revisionary studies with keys to species are those of Hayashi (1975) and Noël (1986).

Diagnosis

Rostrum a discrete structure inflexibly attached to remainder of carapace, unarmed except (usually) for pair of teeth delimiting terminal seta-filled notch. Carapace without longitudinal lateral ridges, complete postantennal suture, or cardiac notch. Telson bearing two pairs of posterior marginal spines and one or more pairs of mesial setae. Eyestalks normal, neither abnormally long nor concealed beneath carapace. Antennule with two completely separate flagella, neither with accessory branch. Mandible without palp or incisor process, latter obliquely truncate, sometimes slightly flared. Second maxilla with endite reduced, scaphognathite with proximal lobe produced only moderately into branchial cavity. First maxilliped with exopod abutting endite and displacing palp out of plane, exopod without partially detached lobe, lash well developed, caridean lobe not much produced distally, not distinctly overreaching endite. Second maxilliped with exopod, endopod 4-segmented, not terminating in two segments attached side by side to preceding segment, terminal segment narrow strip attached obliquely to wide penultimate segment. Third maxilliped with exopod, 5-segmented, slender, pereiopod-like, antepenultimate segment fused with next

proximal segment. Pereiopods without epipods, anterior pair more robust than second pair, often asymmetrical, second pair equal, with undivided carpus, fixed finger not curving subrectangularly around short, broad movable finger, fingers not concealed in dense setae. Third pereiopod with dactyl simple, unarmed on flexor margin. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted. (After Chace 1997).

References

Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106

Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs

Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145

Noël, P. (1986). Crustacés Décapodes: Processidae de l'Indo-Ouest-Pacifique. pp. 261–301, figs 1–19 *in* Forest, J. Résultats des Campagnes MUSORSTOM I & II, Philippines, Volume 2. *Mém. Mus. natn. Hist. nat. Paris* **133**: 1–525

PROCESSIDAE Ortmann, 1896

Nikadea De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. N] [published from 1833–1850, Atlas dated 1844].

Nikidae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [xii, xli, 480, 503] [name suppressed under the plenary powers of the ICZN for the purposes of the Principle of Priority but not for those of the Principle of Homonymy, and placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424].

Hectarthropidae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [481, 883] [name suppressed under the plenary powers of the ICZN for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy, and placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424].

Processidae Ortmann, A.E. (1896). Das System der Decapoden Krebse. *Zool. Jahrb. Syst.* **9**: 409–453 [415, 424] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [257].

Hayashidonus Chace, 1997

Hayashidonus Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [34] [gender masculine].
Type species: *Nika japonica* De Haan, 1844 by original designation.

Extralimital distribution: Indo-west Pacific (east Africa to Japan, Philippines, and Indonesia).

Hayashidonus japonica (De Haan, 1844)

Nika japonica De Haan, W. (1844). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugduni-Batavorum [pl. 46 fig. 6] [published from 1833–1850, Atlas dated 1844, text dated 1849].
Type data: lectotype RMNH D5579 dry specimen, paralectotype(s) RMNH D21110 dry specimen.
Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc. [230].
Type locality: Japan.

Distribution: QLD (Central E coast); Indo-west Pacific (East Africa to Japan, Philippines, and Indonesia).
Ecology: epibenthic, shallow subtidal; associated with seagrass beds (*Zostera*), active nocturnally.
References: Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145 [110]; Wadley, V.A. (1978). A checklist and illustrated key to the epibenthic shrimps (Decapoda: Natantia) of Moreton Bay, Queensland. *C.S.I.R.O. (Aust.) Div. Fish. Oceanogr. Rep.* **99**: 1–24, figs 1–10 [21] (Australian record).

Nikoides Paul'son, 1875

Nikoides Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [98] [reissued and translated by F.D. Por, 1961; gender masculine].
Type species: *Nikoides danae* Paul'son, 1875 by monotypy.

Nikoides danae Paul'son, 1875

Nikoides danae Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [98 pl. 14 fig. 5–5d] [reissued and translated by F.D. Por, 1961].
Type data: type status unknown.
Type locality: Red Sea.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, low intertidal, subtidal; depths to 36 m.

Nikoides gurneyi Hayashi, 1975

Nikoides gurneyi Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145 [58 figs 3, 4].
Type data: holotype EAMFRO ♀, paratypes RMNH D21286 ♀, RMNH D3734 ♀, EAMFRO 5♂ 2♀ 2 juv.
Type locality: Kikambala, Kenya.

Distribution: Territory of Ashmore & Cartier Islands (Hibernia Reef); Indo-west Pacific Oceans (east Africa and Red Sea to Sulu Islands and N Sumatra).
Ecology: intertidal, subtidal.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [131].

Nikoides maldivensis Borradaile, 1915

Nikoides maldivensis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [209].
Type data: holotype CUMZ AR3, 1920.
Type locality: Amirante Islands (for clarification of type locality, see Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [36]).

Processa jacobsoni de Man, J.G. (1921). On three macrurous decapod Crustacea, one of which is new to science. *Zool. Meded. (Leiden)* **6**: 92–96 figs 1, 2 [95].
Type data: holotype RMNH D2487 ♂.
Type locality: Sinabang, Simalur Island, off west coast of Sumatra, Indonesia.

Taxonomic decision for synonymy: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [36].

Distribution: Coral Sea Islands Territory (NE Herald Cay); East Africa to Indonesia, and central Pacific.
Ecology: coral reef, reef flat, shallow subtidal; on dead coral.
Reference: Davie, P.J.F. & Short, J.W. (2001). Decapod Crustacea of North East Cay, Herald Cays, Coral Sea. pp. 75-86 *in* Comben, L. (ed.) Herald Cays Scientific Study Report, *Geography Monograph Series* No. 6. Brisbane : The Royal Geographical Society of Queensland Inc. 168 pp. (first Australian record) [76].

Nikoides steinii (Edmondson, 1935)

Processa steinii Edmondson, C.H. (1935). New and rare Polynesian Crustacea. *Occ. Pap. Bernice P. Bishop Mus.* **10**(24): 3–40 figs 1–11 pls 1–2 [3 fig. 1a–i].

Type data: holotype BPBM No. S3918 ♀ (originally incorrectly reported as male).
Type locality: Maui, Hawai'ian Archipelago.

Nikoides nanus Holthuis, L.B. (1953). Enumeration of the decapod and stomatopod Crustacea from Pacific coral islands. *Atoll. Res. Bull.* **No. 24**: 1–66 [52] [*nom. nud.*].

Nikoides nanus Chace, F.A., Jr (1955). Notes on shrimps from the Marshall Islands. *Proc. U.S. Natl Mus.* **105**(3349): 1–21, 8 pls [8, fig. 4 a-u].
Type data: holotype USNM 94741 ♂; paratype ♀ (whereabouts unknown).
Type locality: Reunit Island, Eniwetok Atoll, Marshall Ils.

Taxonomic decision for synonymy: Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145 [69].

Distribution: Territory of Ashmore & Cartier Islands (Cartier Reef); Indo-west Pacific Oceans (east Africa to Hawai'i).
Ecology: coral reef, low intertidal, shallow subtidal.
Reference: Bruce, A.J. (1993). Crustacea — Caridea. pp. 69–70, 128–131 *in* Russell, B.C. & Hanley, J.R. (eds) *The Marine Biological Resources and Heritage Values of Cartier and Hibernia Reefs, Timor Sea. Report of the Northern Territory Museum Cartier and Hibernia Reefs Expedition, May 1992.* Darwin : Northern Territory Museum of Arts and Sciences pp. 1–180 pls 1–26 [131].

Processa Leach, 1815

Thalassalpes Bosc, L.A.G. (1813). Essai historique sur les crustacés de la mer de Nice par M. RISSO (extrait d'un rapport fait par M. Bosc à l'Institut en 1812). *Nouv. Bull. Soc. Philomath. Paris* **3**(66): 233–234 [233] [name suppressed under the plenary powers of the ICZN for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy, and placed on the Official Index of Rejected and Invalid Generic Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424; gender masculine].
Type species: *Nika edulis* Risso, 1816 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [85].

Processa Leach, W.E. (1815). *Malacostraca Podophthalmata Britanniae*; or descriptions of such British species of the Linnaean genus Cancer as have their eyes elevated on footstalks; continued and completed, with a new generic and Specific Index to the whole. No. I–VI. London : James Sowerby pls I, II, IV, VIII, XIV, XV, XVII, XIX, XXII, XXIII, XXVI, XXVIII, XXIX, XXX, XL, XLI [explanation of pl. XLI] [name placed on the Official Index of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424; gender feminine].
Type species: *Processa canaliculata* Leach, 1815 by monotypy.

Nika Risso, A. (1816). *Histoire naturelle des Crustacés des environs de Nice*. Paris pp. 84–175 pls 1–3 [84] [gender feminine].
Type species: *Nika edulis* Risso, 1816 by subsequent designation, see Milne Edwards, H. (1837). Les Crustacés. 278 pp., Atlas, pls 1–80 *in* Cuvier, G. *Le Règne Animal*, distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux, et d'introduction à l'anatomie comparée. Paris : Déterville [pl. 52 fig. 1] (see Manning, R.B. & Holthuis, L.B. (1981). West African Brachyuran Crabs (Crustacea: Decapoda). *Smithson. Contr. Zool.* **No. 306**: i–xii, 1–379 figs 1–88, 2 appendices [369] for the dates of the 23 issues of this work).

Velocina Gistel, J. (1848). *Naturgeschichte des Thierreiches für höhere Schulen bearbeitet.* Stuttgart : [n.s.] pp. i–xvi, 1–220 pls 1–32 [x] [*nom. nov.* for *Processa* Leach, 1815; gender feminine].

Chiereghina Nardo, G.D. (1869). Annotazioni illustranti cinquantaquattro specie di Crostacei podottalmi, endottalmi e succhiatori del Mare Adriatico, alcune delle quali nuove o male conosciute, accompagnate da trentatre figure litografate, e precedute dalla storis della carcinologia Adriatica antica e recente. *Mem. Ist. Veneto Sci.* **14**: 217–343 pls 12–15 [320] [pp. 1–127, pls 1–4 on reprint of 1869; gender feminine].
Type species: *Cancer pellucidus* Nardo, 1847 (probably = *Nika edulis* Risso, 1816) by monotypy.

Hectarthropus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [889] [gender masculine].
Type species: *Hectarthropus expansus* Bate, 1888 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [117].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [259].

Extralimital distribution: Indo-west Pacific Oceans.
See: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49.

Processa aequimana (Paul'son, 1875)

Nika aequimana Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [97 pl. 14 fig, 6, 6a] [reissued and translated by F.D. Por, 1961].
Type data: type statusand whereabouts unknown.
Type locality: Red Sea.

Distribution: NT (N coast); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, sublittoral; depth 2–10 m.
Reference: Bruce, A.J. (1983). Additions to the marine fauna of the Northern Territory. 1. Decapoda crustacea: Caridea and Stenopodidea. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(5): 41–49 [46].

Processa australiensis Baker, 1907

Odd-footed Shrimp

Processa australiensis Baker, W.H. (1907). Notes on South Australian Decapod Crustacea. Part V. *Trans. R. Soc. S. Aust.* **31**(5): 173–191 pls 23–25 [185 pl. 25 fig. 2–2e].
Type data: syntypes SAMA.
Type locality: South Australian coast.

Distribution: NSW (Lower E coast), SA (S Gulfs coast); Indo-west Pacific Oceans (Seychelle Ils, Philippines, Singapore, Indonesia).
Ecology: pelagic, sublittoral; depth 13–32 m.

Processa barnardi Hayashi, 1975

Processa barnardi Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145 [92 figs 15a–m, 16a–d].
Type data: holotype SAMA 1114 ♀, paratype(s) RMNH D7244 1 ♂.
Type locality: South Africa.

Distribution: SA (S Gulfs coast); South Africa, West Pakistan.
Ecology: pelagic, sublittoral.

Processa dimorpha Hayashi, 1975

Processa dimorpha Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145 [102 fig. 21].
Type data: holotype ZLKU 13771 ♀, paratypes ZLKU ♂, ZLKU 13699–13700 2 ♂, ZLKU 9426 ♂, ZLKU 13772 6 ♂ 13 ♀, ZLKU ♀, RMNH D17054 ♂ ♀.
Type locality: Ainoshima Is., off Shingu, Fukuoka Province, Japan.

Distribution: QLD (Central E coast); west Pacific (Japan, Vietnam).
Ecology: epibenthic, low intertidal, shallow subtidal; associated with seagrass and algal beds, depth to 14 m.
Reference: Wadley, V.A. (1978). A checklist and illustrated key to the epibenthic shrimps (Decapoda: Natantia) of Moreton Bay, Queensland. *C. S. I. R. O. (Aust.) Div. Fish. Oceanogr. Rep.* **99**: 1–24, figs 1–10 [21] (Australian record).

Processa gracilis Baker, 1907

Long-wristed Shrimp

Processa gracilis Baker, W.H. (1907). Notes on South Australian Decapod Crustacea. Part V. *Trans. R. Soc. S. Aust.* **31**(5): 173–191 pls 23–25 [187 pl. 25 fig. 3–3c].
Type data: holotype SAMA ♂.
Type locality: South Australian coast.

Distribution: SA (S Gulfs coast); known only from type locality.
Ecology: pelagic.

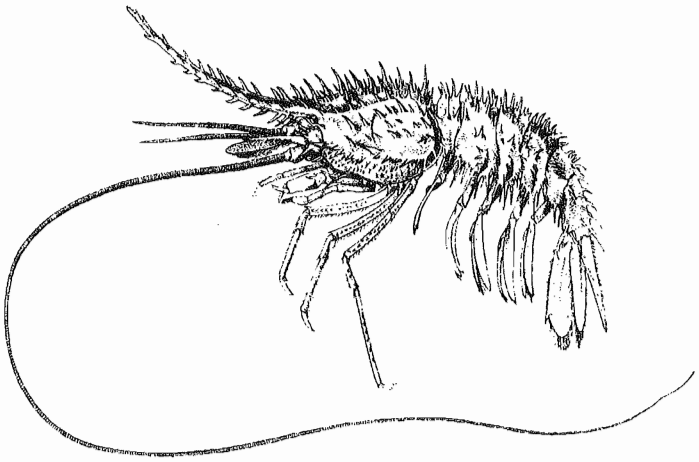
Processa sulcata Hayashi, 1975

Processa sulcata Hayashi, K.I. (1975). The Indo-West Pacific Processidae (Crustacea, Decapoda, Caridea). *J. Shimonoseki Univ. Fish.* **24**(1): 47–145 [134 fig. 34].
Type data: holotype ZLKU 13900 ♀, paratypes ZLKU 13890 2 ♂ 2 ♀, ZLKU ♂ 3 ♀, ZLKU 13901 2 ♂ ♀, ZLKU 13899 ♀, ZLKU 13860 16 ♂ 14 ♀, ZLKU 13843 7 ♂ 10 ♀, ZLKU 13896 ♂ 2 ♀, ZLKU 13894 ♂ ♀, RMNH D991 1 specimen (also paralectotype of *Nika japonica* De Haan, 1844), RMNH D29897 ♀, ZMA ♂ ♀.
Type locality: Ainoshima, Fukuoka Prefecture, Kyushu, Japan.

Distribution: QLD (Central E coast); Indo-west Pacific (South Africa, Madagascar, southern Arabia, Indonesia, Vietnam, Japan).
Ecology: epibenthic, low intertidal, subtidal; typically in seagrass beds, algal beds, and associated with sessile invertebrate fouling, depth 0–123 m.

Reference: Wadley, V.A. (1978). A checklist and illustrated key to the epibenthic shrimps (Decapoda: Natantia) of Moreton Bay, Queensland. *C.S.I.R.O. (Aust.) Div. Fish. Oceanogr. Rep.* **99**: 1–24, figs 1–10 [21] (Australian record).

PSALIDOPODIDAE



Psalidopus huxleyi [from Alcock & McArdle 1901: pl. 51 fig. 5]

INTRODUCTION

The family Psalidopodidae comprises a single genus and species of pelagic, deep water shrimp. It is unusually spiny, but is most remarkable in having both fingers of the chela of the first two pairs of pereiopods movable and scissor-like.

Diagnosis

Carapace and abdomen spinous; rostrum very long. Pereiopods without exopods. First and second pairs of pereiopods with both fingers of chela movable and scissor-like. Second pair of pereiopods with carpus entire, not articulate; terminating in imperfect chela hidden in dense tuft of setae. First maxilliped with exopod not terminating distally in broad, semi-detached lobe; with endite not overreaching exopod; exopod without lash or prominent caridean lobe. Second maxilliped with segments arranged in usual serial manner; bearing exopod. Third maxilliped slender, pereiopod-like, not broad or operculate, with exopod. Mandible with sharply conical incisor process, deeply separated from molar process; with palp. First maxilla with distal endite not unusually large, proximal endite not reduced. Second maxilla with distal endite mesially bilobate; proximal endite not incised near distal margin; palp distinct; scaphognathite subtriangularly produced proximally.
(Derived from Chace 1992).

References

Alcock, A. & McArdle, A.F. (1901). Crustacea, Part IX. *In, Illustrations of the Zoology of the Royal Indian Marine Survey Ship Investigator, under the command of Commander T.H. Heming, R.N.* Calcutta : Office of the Superintendent of Government Printing, India pls 49–55

Chace, F.A., Jr (1992). On the classification of the Caridea. *Crustaceana* **63**(1): 70–80

PSALIDOPODIDAE Wood-Mason & Alcock, 1892

Psalidopodidae Wood-Mason, J. & Alcock, A. (1892). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. Series II., No. 1. On the results of deep-sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***9**: 265–275, 358–370 figs 1–6 pls 14, 15 [265] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Psalidopus Wood Mason & Alcock, 1892

Psalidopus Wood-Mason, J. & Alcock, A. (1892). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. Series II., No. 1. On the results of deep-sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***9**: 265–275, 358–370 figs 1–6 pls 14, 15 [266] [gender masculine].
Type species: *Psalidopus huxleyi* Wood-Mason & Alcock, 1892 by subsequent designation, see Holthuis, L.B. (1955). The recent genera of the caridean and stenopodidean shrimps (Class Crustacea, Order Decapoda, Supersection Natantia) with keys for their determination. *Zool. Verh.* **26**: 1–157 [81].

Extralimital distribution: Indo-west Pacific Oceans.

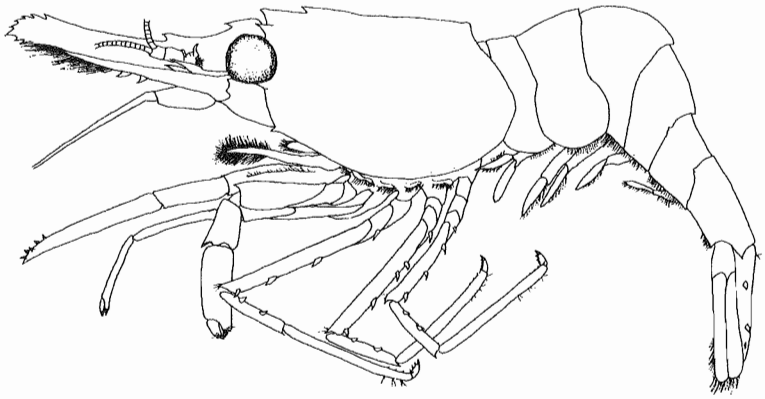
Psalidopus huxleyi Wood Mason & Alcock, 1892

Spiny Carid

Psalidopus huxleyi Wood-Mason, J. & Alcock, A. (1892). Natural history notes from H.M. Indian Marine Survey Steamer "Investigator", Commander R.F. Hoskyn, R.N., commanding. Series II., No. 1. On the results of deep-sea dredging during the season 1890–91. *Ann. Mag. Nat. Hist. (6)***9**: 265–275, 358–370 figs 1–6 pls 14, 15 [273].
Type data: type status unknown IM (probable depository institution).
Type locality: unknown.

Distribution: WA (NW oceanic); Indo-west Pacific Oceans.
Ecology: mesopelagic, sand bottom, bathypelagic, continental slope, oceanic province; depth 500–1100 m.
Reference: Wadley, V. & Evans, D. (1991). *Crustaceans from the Deepwater Trawl Fisheries of Western Australia.* Hobart, Australia : CSIRO Division of Fisheries 44 pp. [15].

RHYNCHOCINETIDAE



Rhynchocinetes brucei [from Okuno 1994: fig. 1]

INTRODUCTION

This family includes two genera, *Rhynchocinetes* H. Milne Edwards, and *Cinetorhynchus* Holthuis, with over 20 described species, of which 12 are found in Australian waters. Chace (1997: 27) provided a key to species known to that time. Rhynchocinetid shrimps have a characteristic hinged rostrum, are typically bottom-dwelling, and most species are brightly and distinctively patterned. They occur circumtropically, often extending into temperate seas as in Australia; and can be found from intertidal pools to a depth of 220 metres.

Diagnosis

Rostrum a discrete grossly dentate extension of remainder of carapace, but typically incompletely fused therewith. Carapace without longitudinal lateral ridges or suture or cardiac notch. Telson with three pairs of posterior marginal spines. Eyes normal, neither unusually long nor concealed beneath carapace. Antennule with two completely separate flagella, neither with accessory branch. Mandible with 3-jointed palp, rather broad incisor process, and molar process with transversely ridged grinding surface but not flared. Second maxilla with normal endite, scaphognathite produced proximally far into branchial chamber. First maxilliped with exopod not abutting endite, not displacing palp out of plane, exopod without partially detached lobe, lash well developed, caridean lobe not produced distally, distinctly overreaching endite. Second maxilliped with exopod, endopod 4-segmented, not terminating in two segments attached side by side to preceding segment, terminal segment applied as narrow strip to much wider penultimate segment. Third maxilliped with exopod, 5-segmented, slender, pereiopod-like, antepenultimate segment fused with next proximal segment. Pereiopods without exopods, with strap-like epipods (mastigobranchs) on four anterior pairs without naked appendix extending vertically into branchial chamber, with arthrobranchs on at least anterior pair, anterior pair subequal, stouter than second, with one movable and one fixed finger, second pair subequal, fixed finger not curving subrectangularly around movable finger, carpus entire, undivided. Third pereiopod with flexor margin of dactyl armed with few spines. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted. (After Chace 1997).

References

Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106

Okuno, J. (1994). A new species of hinge-beak shrimp from the western Pacific (Crustacea, Decapoda, Rhynchocinetidae). *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 29–37

RHYNCHOCINETIDAE Ortmann, 1890

Rhynchocinetidae Ortmann, A.E. (1890). Die Unterordnung Natantia Boas: Die Decapoden-Krebse des Strassburger Museums mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und z.Z. im Strassburger Museum aufbewahrten Formen, I. *Zool. Jahrb. Syst.* **5**: 437–542 pls 36, 37 [459] [name placed on the Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Cinetorhynchus Holthuis, 1995

Cinetorhynchus Holthuis, L.B. (1995). Notes on Indo-West Pacific Crustacea Decapoda III to IX. *Zool. Meded. (Leiden)* **69**(13): 139–151 figs 1–2 [146].
Type species: *Rhynchocinetes rigens* Gordon, 1936 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.
Generic reference: Okuno, J. & Tachikawa, H. (1997). *Cinetorhynchus fasciatus*, a new shrimp from the western and central Pacific (Decapoda: Caridea: Rhynchocinetidae). *Crust. Res.* **26**: 16–25 [23] (key to species).

Cinetorhynchus concolor (Okuno, 1994)

Rhynchocinetes concolor Okuno, J. (1994). *Rhynchocinetes concolor*, a new shrimp (Caridea: Rhynchocinetidae) from the Indo-West Pacific. *Proc. Jpn. Soc. Syst. Zool.* **52**: 65–74 [66 figs 1–2, 3a, 4a–d].
Type data: holotype NSMT Cr.2166 ♀, paratypes YCM CM975 1♂, YCM CM976 1♂, NSMT Cr.2222 1♀, SUF 530–2–1679 1♂, NTM Cr.009511 2♀, NTM Cr.010307 1♂ 3♀, QM W17528 1♂.
Type locality: Hizushi-hama, Aka-jima Islet, Kerama Group, Ryukyu Ils, southern Japan.

Distribution: QLD (Great Barrier Reef, NE coast), WA (NW coast); east Indo-west Pacific Oceans.
Ecology: benthic, coral reef, subtidal.
Reference: Okuno, J. (1997). Crustacea Decapoda: Review on the genus *Cinetorhynchus* Holthuis, 1995 from the Indo-West Pacific (Caridea: Rhynchocinetidae). pp. 31–58 *in* Richer de Forbes, B. (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie (Sédimentologie, Benthos).* Études & Thèses. Paris : ORSTOM Vol. 3 [43].

Cinetorhynchus hendersoni (Kemp, 1925)

Rhynchocinetes hendersoni Kemp, S. (1925). Notes on Crustacea Decapoda in the Indian Museum. XVII—On various Caridea. *Rec. Indian Mus.* **27**(4): 249–343 figs 1–24 [265 figs 3–7].
Type data: syntypes IM C850–1/1 1♂ 1♀*.
Type locality: Pamban and Kilakarai, Gulf of Manaar.

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west Pacific Oceans.
Ecology: coral reef, benthic, subtidal.
Reference: Okuno, J. (1997). Crustacea Decapoda: Review on the genus *Cinetorhynchus* Holthuis, 1995 from the Indo-West Pacific (Caridea: Rhynchocinetidae). pp. 31–58 *in* Richer de Forbes, B. (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie (Sédimentologie, Benthos).* Études & Thèses. Paris : ORSTOM Vol. 3 [46].

Cinetorhynchus reticulatus Okuno, 1997

Cinetorhynchus reticulatus Okuno, J. (1997). Crustacea Decapoda: Review on the genus *Cinetorhynchus* Holthuis, 1995 from the Indo-West Pacific (Caridea: Rhynchocinetidae). pp. 31–58 *in* Richer de Forbes, B. (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie (Sédimentologie, Benthos).* Études & Thèses. Paris : ORSTOM Vol. 3 [49 figs 10, 11, 12A–C, pl. 1 G,H].
Type data: holotype MNHP Na 12957 ♂, paratypes NSMT Cr.2626 2♂, NSMT Cr.2625 ♀, NSMT Cr.3317 ♂ ♀, YCM CM 979 ♀, YCM CM 978 ♂, CBM ZC 1467, 1469 2♀, CBM ZC 1468 ♂, CBM ZC 1466 ♂, NTM Cr.009895 ♂, NTM Cr.010236 ♂, NTM Cr.011320 8♂ 11♀, BPBM S11281 ♀, BPBM S11282 ♀, NTM Cr.010300 ♀, AMNH 9312 ♂ ♀, MNHP Na 12945 ♂ ♀, MNHP

Na 12956 ♀, QM W17809 2♂, NTM Cr.006368 ♀, NTM Cr.010749 4♂ 2♀.
Type locality: Uvea Island, Banya Islet, Loyalty Islands [20°35.8'S 166°16.7'E].

Distribution: Territory of Ashmore & Cartier Islands), QLD (Great Barrier Reef); Ashmore and Hibernia Reefs, widespread Indo-west Pacific (E Africa to Japan and French Polynesia).
Ecology: benthic, coral reef, rock reef, shallow subtidal; from low intertidal pools to 30 m depth.

Cinetorhynchus striatus (Nomura & Hayashi, 1992)

Rhynchocinetes striatus Nomura, K. & Hayashi, K.-I. (1992). *Rhynchocinetes striatus*, a new species (Decapoda, Caridea, Rhynchocinetidae) from Southern Japan. *Zool. Sci. (Tokyo)* **9**: 199–206 figs 1–4 [199].
Type data: holotype.
Type locality: Kadena Port, Okinawa Is., Ryukyu Islands, southern Japan.

Distribution: QLD (Great Barrier Reef); Ryukyu Islands, southern Japan.
Ecology: benthic, coral reef, subtidal.

Rhynchocinetes H. Milne Edwards, 1837

Rhynchocinetes Milne Edwards, H. (1837). Note sur le Rhynchocinète, nouveau genre des Crustacés Décapodes. *Ann. Sci. Nat. (Zool.)*7(2): 165–168 pl. 4c [168] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Rhynchocinetes typus* H. Milne Edwards, 1837 by monotypy.

Extralimital distribution: tropical and many temperate seas worldwide. See: Chace, F.A., Jr (1997). The Caridean Shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 7: Families Atyidae, Eugonatonotidae, Rhynchocinetidae, Bathypalaemonellidae, Processidae, and Hippolytidae. *Smithson. Contr. Zool.* **No. 587**: i–v, 1–106 [26].

Rhynchocinetes australis Hale, 1941

Rhynchocinetes australis Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [270 fig. 8].
Type data: holotype SAMA C557 ♂, paratypes SAMA C127, SAMA C558, SAMA C1886, SAMA C63, SAMA C559, SAMA C560, AM P11350, AM P9447, AM P4048, SAMA C4097.
Type locality: Edithburgh, SA.

Distribution: NSW (Lower E coast), TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: benthic, rock reef, subtidal; in rock crevices and algae, depth to 166 m.

Rhynchocinetes balssi Gordon, 1936

Rhynchocinetes balssi Gordon, I. (1936). On the macruran genus *Rhynchocinetes*, with the description of a new species. *Proc. Zool. Soc. Lond.* **1936**: 75–88 figs 1–7 [85, text-figs 7a,b].
Type data: holotype BMNH ♀*, paratype(s) BMNH ♂*.
Type locality: Juan Fernandez, Easter Island, Masatieria.

Distribution: Lord Howe Island; Norfolk Island, Pacific Ocean, New Zealand, Juan Fernandez Island.
Ecology: benthic, rock reef, subtidal; around bases of live coral or under slabs of dead coral.

Rhynchocinetes brucei Okuno, 1994

Rhynchocinetes brucei Okuno, J. (1994). A new species of hinge-beak shrimp from the western Pacific (Crustacea, Decapoda, Rhynchocinetidae). *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 29–37 [29 figs 1–3, 4a–b, pl.].
Type data: holotype NTM Cr.003618 ♂, paratypes NTM Cr.000678 1♂, NTM Cr.003617 1♂ 1♀, NTM Cr.003618 2♂, NTM Cr.003806 1♂, NTM Cr.003951 1♀, NTM Cr.004002 1♂.
Type locality: Long Ke Wan, Hong Kong.

Distribution: QLD (Central E coast, Great Barrier Reef); Hong Kong, Philippines.
Ecology: benthic, coral reef, rock reef, subtidal; depth 8–20 m.

Rhynchocinetes durbanensis Gordon, 1936

Rhynchocinetes durbanensis Gordon, I. (1936). On the macruran genus *Rhynchocinetes*, with the description of a new species. *Proc. Zool. Soc. Lond.* **1936**: 75–88 figs 1–7 [83 figs 5b, c, 7c, d].
Type data: holotype BMNH ♂*.
Type locality: Durban, South Africa.

Distribution: QLD (Great Barrier Reef); Indo-west Pacific Oceans (South Africa, Ryukyus, Philippines, Indonesia).
Ecology: coral reef, subtidal.
References: Davie, P., this work (this species is included in the Australian fauna on the advice of Dr J. Okuno, on the basis of underwater photographs in the two books cited below); Steene, R. (1990). *Coral Reefs: Nature's Richest Realm.* Bathurst : Crawford House Press 336 pp. [77, 314] (colour photograph; misidentified as *R. uritai*); Halstead, B. (2000). *Coral Sea Reef Guide.* Monterey, California : Sea Challengers 320 pp. [280] (colour photograph).

Rhynchocinetes enigma Okuno, 1997

Rhynchocinetes enigma Okuno, J. (1997). A new shrimp of the Genus *Rhynchocinetes* from the Great Australian Bight (Crustacea: Decapoda: Rhynchocinetidae). *Rec. S. Aust. Mus.* **30**(1): 13–18 [13 figs 1–3].
Type data: holotype SAM C5599 ♂, paratypes SAM C5598 ovigerous ♀, SAM C5600 ♂.
Type locality: off Pearson Islands, Great Australian Bight.

Distribution: SA (Great Australian Bight); known only from type locality.
Ecology: continental shelf; deep waters in excess of 100 m.

Rhynchocinetes kuiteri Tiefenbacher, 1982

Rhynchocinetes kuiteri Tiefenbacher, L. (1982). A new species of *Rhynchocinetes* from South-Australia (Crustacea, Decapoda, Rhynchocinetidae). *Rev. fr. Aquariol.* **9**(4): 121–124 [121 fig. 1].
Type data: holotype ZSMB E.Kat.No.780 ♂, paratype(s) ZSMB E.Kat.No.780 1 ♂ 2 ♀.
Type locality: before Portsea at the mouth of Port Phillip Bay, VIC.

Distribution: TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: rock reef, benthic, subtidal; depth 10–30 m.

Rhynchocinetes serratus (H. Milne Edwards, 1837)

Hinged-beaked Prawn

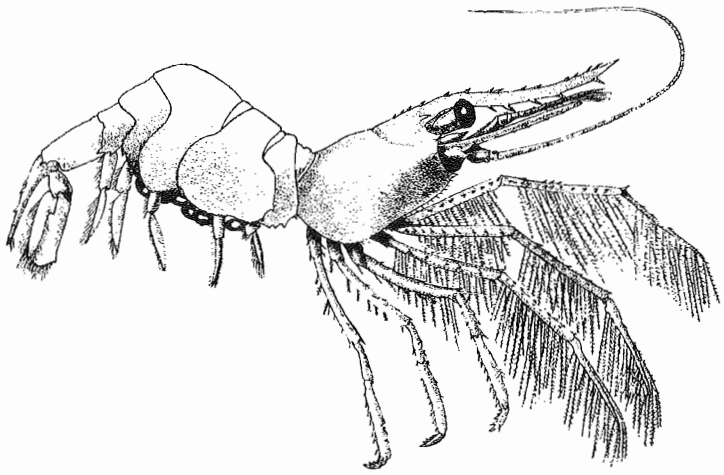
Hippolyte serratus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [377].
Type data: type status unknown MNHP (type material lost).
Type locality: 'la baie de Jarvis' [Jervis Bay, S of Sydney, NSW].

Rhynchocinetes rugulosus Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [36].
Type data: type status and whereabouts unknown*.
Type locality: Port Jackson, NSW.

Taxonomic decision for synonymy: Holthuis, L.B. (1995). Notes on Indo-West Pacific Crustacea Decapoda III to IX. *Zool. Meded. (Leiden)* **69**(13): 139–151 figs 1–2 [144].

Distribution: NSW (Lower E coast), SA (S Gulfs coast); Elizabeth & Middleton Reefs, Tasman Sea, known only from limital area.
Ecology: benthic, rock reef, subtidal; around bases of live coral or under slabs of dead coral.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs (illustration and description).

STYLODACTYLIDAE



Neostylodactylus amarynthis [from de Man 1920: pl. 5 fig. 9]

INTRODUCTION

Stylodactylid shrimps are found in depths from 3 to 3515 metres. They are most speciose in the tropical and subtropical Indo-west Pacific Ocean from eastern Africa to Hawai'i, but extend northward to the Korea Strait, and southward to South Africa and around the Kermadec Islands. They also occur in the western Atlantic (Florida Straits, Bahamas, Yucatan Channel, Haiti, Lesser Antilles), and in the eastern Atlantic off Spanish Sahara and Canary Islands) (Chace 1983; Cléva 1990b). There are five genera, all of which are found in Australian waters (Cléva 1990a, 1994). Holthuis (1993: 85) and Hanamura & Takeda (1996: 930) provided keys to genera.

Diagnosis

Rostrum nearly as long as or longer than remainder of carapace and immovably attached to it; eyes well developed, freely movable; antennular flagella simple, undivided; mandible with molar and incisor processes not deeply separated; second maxilliped with two distal segments arising, side by side, from preceding segment; third maxilliped and two anterior pairs of pereiopods longer than three posterior pairs of pereiopods, without exopods, fringed with remarkably long setae; two anterior pairs of pereiopods subequal in length, similarly slender, with elongate and virtually unarmed fingers, movable finger nearly as long as fixed finger, palm much reduced, carpus entire, not subdivided; three posterior pairs of pereiopods with carpus distinctly shorter than propodus. (After Chace 1983).

References

Chace, F.A., Jr (1983). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 1: Family Stylodactylidae. *Smithson. Contr. Zool.* **No. 381**: i–iii, 1–21

Cleva, R. (1990a). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388

Cleva, R. (1990b). Sur les Stylodactylidae (Crustacea, Decapoda, Caridea) de l'Atlantique. *Bull. Mus. Natn. Hist. Nat. Paris (4)***A, 12**: 165–176

Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64

de Man, J.G. (1920). The Decapoda of the Sibogae Expedition. Part IV. Families Pasiphaeidae, Stylodactylidae, Hoplophoridae, Nematocarcinidae, Thalassocaridae, Pandalidae, Psalidopodidae, Gnatho-phyllidae, Processidae, Glyphocrangonidae and Crangonidae. *Siboga Exped.* **39a**: 11–263

Hanamura, Y. & Takeda M. (1996). Establishment of a new genus *Bathystylodactylus* (Crustacea: Decapoda: Stylodactylidae), with description of a new species from Northwestern Pacific. *Zoological Science (Tokyo)* **13**(6): 929–934

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

STYLODACTYLIDAE Bate, 1888

Stylodactylidae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [481, 850] [name placed on Official List of Family-Group Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202].

Bathystylodactylus Hanamura & Takeda, 1996

Bathystylodactylus Hanamura, Y. & Takeda M. (1996). Establishment of a new genus *Bathystylodactylus* (Crustacea: Decapoda: Stylodactylidae), with description of a new species from Northwestern Pacific. *Zoological Science (Tokyo)* **13**(6): 929–934 [929].
Type species: *Stylodactylus bathyalis* Cleva, 1994 by original designation.

Extralimital distribution: Taiwan, Coral Sea.

Bathystylodactylus bathyalis (Cleva, 1994)

Stylodactylus bathyalis Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [56 fig. 2A–E].
Type data: holotype QM W13594 ♂.
Type locality: Bligh Canyon, Coral Sea.

Distribution: QLD (NE oceanic); known only from type locality, endemic.
Ecology: bathypelagic, oceanic province; depth 3502–3515 m.

Neostylodactylus Hayashi & Miyake, 1968

Neostylodactylus Hayashi, K.I. & Miyake, S. (1968). Notes on the family Stylodactylidae with the description of a new genus *Neostylodactylus*. *J. Fac. Agric. Kyushu Univ.* **14**(4): 583–611 [602] [gender masculine].
Type species: *Stylodactylus amarynthis* de Man, 1902 by original designation.

Extralimital distribution: Indo-west Pacific Oceans. See: Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388.

Neostylodactylus amarynthis (de Man, 1902)

Stylodactylus amarynthis de Man, J.G. (1902). Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. *In*, Kükenthal, W. Ergebnisse einer Zoologischen Forschungsreise in den Molukken und Borneo. *Abh. Senckenb. Naturforsch. Ges.* **25**: 467–929 pls 19–27 [897 pl. 27 fig. 64a,b].
Type data: holotype SMF 5883 ♂.
Type locality: Ternate, eastern Indonesia.

Taxonomic decision for new combination: Hayashi, K.I. & Miyake, S. (1968). Notes on the family Stylodactylidae with the description of a new genus *Neostylodactylus*. *J. Fac. Agric. Kyushu Univ.* **14**(4): 583–611 [603].

Distribution: WA (NW coast); Indo-west Pacific Oceans (Réunion, Andaman Islands, Indonesia, Philippines, Japan, New Caledonia).
Ecology: epipelagic, neritic; depth 9–120 m.

Reference: Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [60].

Neostylodactylus investigatoris (Kemp, 1925)

Stylodactylus investigatoris Kemp, S. (1925). Notes on Crustacea Decapoda in the Indian Museum. XVII—On various Caridea. *Rec. Indian Mus.* **27**(4): 249–343 figs 1–24 [260 figs 1, 2].
Type data: holotype IM C847/1 ♀.
Type locality: 2 miles off Great Torres Is., Mergui Archipelago.

Taxonomic decision for new combination: Hayashi, K.I. & Miyake, S. (1968). Notes on the family Stylodactylidae with the description of a new genus *Neostylodactylus*. *J. Fac. Agric. Kyushu Univ.* **14**(4): 583–611 [609].

Distribution: WA (NW coast); Mergui Archipelago, Straits of Korea.
Ecology: epipelagic, neritic; depth 73–110 m.
Reference: Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [61].

Parastylodactylus Figueira, 1971

Parastylodactylus Figueira, A.J.G. (1971). Materials for a revision of the family Stylodactylidae (Crustacea Decapoda: Caridea). I. Description of a new genus and of a new species. *Arq. Mus. Bocage* **3**(1): 1–8 [3] [gender masculine].
Type species: *Stylodactylus bimaxillaris* Bate, 1888 by original designation.

Extralimital distribution: Indo-west Pacific Oceans. See: Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388.

Parastylodactylus bimaxillaris (Bate, 1888)

Stylodactylus bimaxillaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [855 pl. 138 fig. 3].
Type data: holotype BMNH 1 ♀*.
Type locality: off Admiralty Island, New Guinea.

Distribution: WA (NW coast); Indo-west Pacific Oceans.
Ecology: epipelagic, mesopelagic, neritic, oceanic province; depth 106–608 m.
References: Chace, F.A., Jr (1983). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 1: Family Stylodactylidae. *Smithson. Contr. Zool.* **No. 381**: i–iii, 1–21 [8]; Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [62].

Parastylodactylus semblatae Cleva, 1990

Parastylodactylus semblatae Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388 [122 figs 12c, 14, 18c].
Type data: holotype MNHP Na10814 ♂, paratypes MNHP Na10869–10870 2♂, MNHP Na10863 1♂, MNHP Na10800 1♀.
Type locality: New Caledonia.

Distribution: QLD (NE oceanic); SW Pacific (New Caledonia and Chesterfield Islands, Vanuatu, Wallis and Futuna).
Ecology: mesopelagic, oceanic province; depth 260–702 m.

Parastylodactylus tranterae Cleva, 1990

Parastylodactylus tranterae Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388 [119 figs 11b, 12b, 13].
Type data: holotype MNHP Na10769 ♀, paratypes MNHP Na10887 ♀, MNHP Na11875 ♀.
Type locality: New Caledonia.

Distribution: NSW (SE oceanic); SW Pacific Ocean (New Caledonia, Chesterfield Islands).
Ecology: mesopelagic, oceanic province; depth 475–700 m.

Stylodactyloides Cleva, 1990

Stylodactyloides Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388 [129] [gender masculine].
Type species: *Stylodactyloides crosnieri* Cleva, 1990 by monotypy.

Extralimital distribution: west Pacific Ocean.

Stylodactyloides crosnieri Cleva, 1990

Stylodactyloides crosnieri Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388 [129 figs 17, 18d,e].
Type data: holotype MNHP Na10874 ♀, paratype(s) MNHP Na10922 ♀.
Type locality: Chesterfield Islands.

Distribution: QLD (NE oceanic); south-west Pacific (Chesterfield Island, New Caledonia, New Zealand).
Ecology: mesopelagic, oceanic province; depth 200–540 m.

Stylodactylus A. Milne Edwards, 1881

Stylodactylus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [11] [gender masculine].
Type species: *Stylodactylus serratus* A. Milne Edwards, 1881 by monotypy.

Extralimital distribution: Indo-west central Pacific Oceans, Atlantic Ocean (Florida Straits, Bahamas, Yucatan Channel, Haiti, Lesser Antilles, Spanish Sahara, Canary Ils).

References: Chace, F.A., Jr (1983). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 1: Family Stylodactylidae. *Smithson. Contr. Zool.* **No. 381**: i–iii, 1–21; Cleva, R. (1990). Crustacea Decapoda: Les genres et les espèces indo-ouest pacifiques de Stylodactylidae. pp. 71–136 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**(A): 1–388; Cleva, R. (1990). Sur les Stylodactylidae (Crustacea, Decapoda, Caridea) de l'Atlantique. *Bull. Mus. Natn. Hist. Nat. Paris (4)***A, 12**: 165–176.

Stylodactylus brucei Cleva, 1994

Stylodactylus brucei Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [54 fig. 1A, C–F].
Type data: holotype MNHP Na12121 ♂, paratypes NTM Cr.007060 3♂ 1♀, NTM Cr.007195 1♂.
Type locality: Wallis Island, South-west Pacific.

Distribution: WA (NW oceanic); south-west Pacific Ocean.
Ecology: mesopelagic, oceanic province; depth 820–1000 m.

Stylodactylus libratus Chace, 1983

Stylodactylus libratus Chace, F.A., Jr (1983). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 1: Family Stylodactylidae. *Smithson. Contr. Zool.* **No. 381**: i–iii, 1–21 [12 fig. 5].
Type data: holotype USNM 196081 ♂.
Type locality: Selat Butung, Sulawesi (as Celebes), Indonesia.

Distribution: NSW (SE oceanic); Indonesia, Chesterfield Island, New Caledonia.
Ecology: mesopelagic, oceanic province; depths of 270–610 m.

Stylodactylus licinus Chace, 1983

Stylodactylus licinus Chace, F.A., Jr (1983). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 1: Family Stylodactylidae. *Smithson. Contr. Zool.* **No. 381**: i–iii, 1–21 [14 fig. 6].
Type data: holotype USNM 196076 ♀, paratype(s) USNM 196082 ♀.
Type locality: Palawan Passage, Philippines.

Distribution: WA (NW oceanic); Philippines, Japan, New Caledonia, Chesterfield Islands, Fiji.
Ecology: mesopelagic, oceanic province; depth 222–1000 m.
Reference: Hanamura, Y. & Evans, D.R. (1996). Deepwater caridean shrimps of the families Nematocarcinidae, Stylodactylidae, Pandalidae and Crangonidae (Crustacea: Decapoda) from Western Australia. *Bull. Nansei Nat. Fish. Res. Inst.* **29**: 1–18 [4] (Australian record).

Stylodactylus multidentatus Kubo, 1942

Taxonomic decision for subspecific arrangement: Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [59].

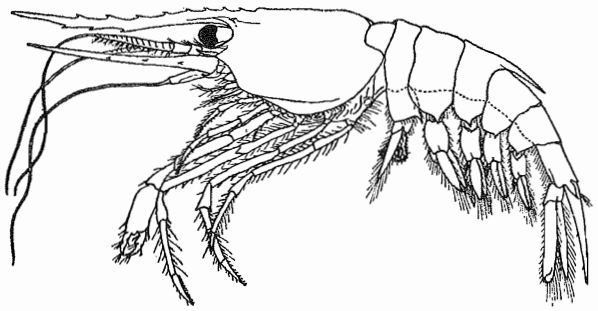
Distribution: Indo-west Pacific Oceans.

Stylodactylus multidentatus multidentatus Kubo, 1942

Stylodactylus multidentatus Kubo, I. (1942). On two new species of Decapoda Macrura. *Annot. Zool. Jpn.* **21**(1): 30–38 [34 figs 4, 5].
Type data: holotype ZLKU ♀, paratype(s) ZLKU 2♀ 3♂.
Type locality: Kumanonada off Mie Prefecture, southern Honshu, Japan.

Distribution: NSW (SE oceanic), WA (NW oceanic); Indo-west Pacific Oceans.
Ecology: epipelagic, mesopelagic, neritic, oceanic province; depth 150–580 m.
Reference: Cleva, R. (1994). Some Australian Stylodactylidae (Crustacea: Decapoda), with descriptions of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 53–64 [59].

THALASSOCARIDIDAE



Thalassocaris lucida [from Menon & Williamson 1971]

INTRODUCTION

The Thalassocarididae has been variously considered either a subfamily or a junior synonym of the Pandalidae. Menon & Williamson (1971) argued for full family status based on unique larval characters. This view was followed by Chace (1985) and Holthuis (1993). The family is restricted to the Indo-west Pacific Oceans from southern and eastern Africa and Red Sea to Indonesia, the Philippines, Japan, and eastward to the Marshall and Fiji islands.

Thalassocaridids are typically pelagic over depths of 13 to more than 4000 metres (Chace 1985). Two genera are recognised, *Thalassocaris* Stimpson, 1860, and the monotypic *Chlorotocoides* Kemp, 1925, but only the former has been recorded from Australian waters.

Diagnosis

Rostrum prominent, dentate both dorsally and ventrally, immovably attached to remainder of carapace; latter without lateral carinae; abdomen with sharp dorsomedian and pleural spines on one or more somites; antennular flagella simple, without accessory branches; mandible with palp and with incisor and molar processes deeply separate; second maxilliped with terminal segment subsemicircular; first pair of pereiopods simple, not chelate; second pair chelate, more robust than first pair, carpus entire or with one articulation; endopod of first pleopod of male enlarged, uniquely convoluted and spinulose, petasma-like.
(After Chace 1985).

References

Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143

Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp.

Kemp, S. (1925). Notes on Crustacea Decapoda in the Indian Museum. XVII—On various Caridea. *Rec. Indian Mus.* **27**(4): 249–343 figs 1–24

Menon, P.G. & Williamson, D.I. (1971). Decapod Crustacea from the International Indian Ocean Expedition: the species of *Thalossocaris* (Caridea) and their larvae. *J. Zool. (Lond.)* **165**: 27–51

Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47

THALASSOCARIDIDAE Bate, 1888

Thalassocarididae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [481, 682] [as Thalassocaridae; name, in emended spelling of Thalassocarididae, placed on the Official list of Family-Group names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202, in the same Opinion the incorrect original spelling Thalassocaridae is placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology].

Thalassocaris Stimpson, 1860

Regulus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [18, 27] [junior homonym of *Regulus* Cuvier, 1800 (Aves); name placed on the Official Index of Rejected and Invalid Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender masculine].
Type species: *Regulus lucidus* Dana, 1852 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [426].

Thalassocaris Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [42] [replacement name for *Regulus* Dana, 1852, placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1957). Opinion 470. Additions to the *Official List of Family-Group Names in Zoology* of the names of one hundred and two genera of Caridea (Class Crustacea, Order Decapoda) and use of the Plenary Powers for various purposes in connection therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **16**: 129–202; gender feminine].
Type species: *Regulus lucidus* Dana, 1852 by subsequent designation, see Kingsley, J.S. (1880). On a collection of Crustacea from Virginia, North Carolina and Florida, with a revision of the genera of Crangonidae and Palaemonidae. *Proc. Acad. Nat. Sci. Phila.* **1879**: 382–427 pl. 14 [426].

Taxonomic decision for synonymy: Holthuis, L.B. (1993). *The Recent Genera of the Caridean and Stenopodidean Shrimps (Crustacea, Decapoda).* Alblasserdam : Ridderprint Offsetdrukkerij B.V. 2nd Edn 328 pp. [280].

Extralimital distribution: Indo-west Pacific.

Thalassocaris crinita (Dana, 1852)

Regulus crinitus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [27].
Type data: type status unknown (presumed lost).
Type locality: Sulu Sea (as Sooloo Sea).

Thalassocaris affinis Borradaile, L.A. (1915). Notes on Carides. *Ann. Mag. Nat. Hist.* **15**: 205–213 [208] [in part].
Type data: lectotype UMZC June20.1904*.
Subsequent designation: Menon, P.G. & Williamson, D.I. (1971). Decapod Crustacea from the International Indian Ocean Expedition: the species of *Thalossocaris* (Caridea) and their larvae. *J. Zool. (Lond.)* **165**: 27–51 [33].
Type locality: Mahlos, Maldives.

Taxonomic decision for synonymy: Hanamura, Y. (1987). Caridean shrimps obtained by R.V. "Soela" from North-West Australia, with description of a new species of *Leptochela* (Crustacea: Decapoda: Pasiphaeidae). *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **4**(1): 15–33 [30].

Distribution: WA (NW coast); Indo-west Pacific Oceans.
Ecology: continental shelf, epipelagic.

Thalassocaris lucida (Dana, 1852)

Regulus lucidus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [27].
Type data: type status unknown (presumed lost).
Type locality: near Ladrones [Mariana] Islands.

Distribution: Christmas Island (Indian Ocean); Indo-west Pacific.
Ecology: pelagic, oceanic province; beyond continental shelf.
Reference: Chace, F.A., Jr (1985). The Caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine Expedition, 1907–1910, Part 3: Families Thalassocarididae and Pandalidae. *Smithson. Contr. Zool.* **No. 411**: 1–143 [9].

INFRAORDER: ASTACIDEA

INTRODUCTION

The Astacidea includes the crayfish and clawed lobsters. Of most significance in Australia are the Parastacidae, the freshwater crayfish of the Southern Hemisphere. While they have a Gondwanan distribution they reach their greatest diversity in Australia with nine of the 14 recognised genera present here. Of especial interest is the recent discovery of a specimen of *Neoglyphea inopinata* Forest & de Saint Laurent, 1975, in the Arafura Sea to the north of Australia (Bruce 1988). The Glyphaeidae are lobster-like crustaceans, until recently believed to have been extinct for at least 38 million years.

Diagnosis

Carapace usually subcylindrical or subovoid; eyes stalked, compound; occasionally reduced or absent. Antennules biramous; peduncle 3-segmented. Antennal peduncle with five segments; with or without scaphocerite. Mandibles usually with palp. Maxillulae with endopodal palp. Maxillae biramous; with two bilobed endites. Endopod of first maxillipeds with two or fewer segments; usually with *crista dentata*. Pereiopods uniramous; first three pairs chelate, fifth often chelate. Abdomen with pleopods uni- or biramous; often with appendix masculina or other copulatory structures in males; telson, together with broad biramous uropods, forms tailfan. Segmentation: head with 5 + 3 thoracic (maxillipeds); thorax with 5; abdomen with 6, excluding telson. Sexes separate; gonopores on coxae of third pereiopods of female, on fifth of male; male often with appendix masculina or other copulatory structures; female often with annubus ventralis.
(After McLaughlin 1980).

References

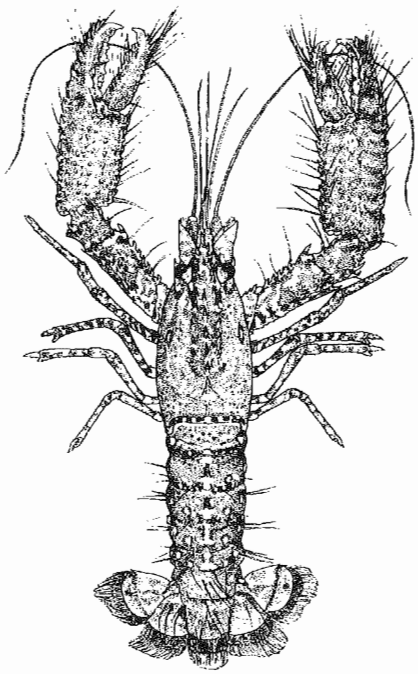
Bruce, A.J. (1988). Capture of a female living-fossil lobster *Neoglyphea inopinata* in the Arafura Sea. *Search* **19**(4): 217–218

Forest, M.J. & de Saint Laurent, M. (1975). Présence dans la faune actuelle d'un représentant du groupe mésozoïque des Glyphéides: *Neoglyphea inopinata* gen. nov., sp. nov. (Crustacea Decapoda Glypheidae). *C. R. Séances Acad. Sci.* **281**: 155–158

McLaughlin, P.A. (1980). *Comparative Morphology of Recent Crustacea.* San Francisco : W.H. Freeman & Co. 177 pp.

ENOPLOMETOPIDAE

INTRODUCTION



Enoplometopus (Enoplometopus) occidentalis [from Chan 1998: 1000]

Enoplometopids are commonly known as 'Reef Lobsters'. Typically, they live on coral or rocky reefs from the shallow subtidal to depths of about 300 metres. They are nocturnal and secretive, and thus are difficult to find and collect. Many are very beautifully coloured and patterned, and are thus popular in the marine aquarium trade, particularly in Asia, Europe and the United States.

Enoplometopus was previously included within the Axiidae, but de Saint Laurent (1988) erected both a new family, Enoplometopidae and a new superfamily, Enoplometopoidea, for the genus. The latter taxon does not seem to have found acceptance, with the Nephropoidea used instead by recent authors (see Chan & Yu 1999). Holthuis (1983) split *Enoplometopus* into two subgenera, with the erection of *Hoplometopus*. The family is represented in Australia by two species only. Chan (1998), Chan & Yu (1999) and Holthuis (1983) provided illustrations and keys for this and the other species of the broader region.

Diagnosis

Moderate- to small-sized lobsters. Body cylindrical, bearing tufts of long, stiff setae. Carapace with well-developed rostrum; eyes well developed and black pigmented; antennae long and thread-like, antennal scale with inner margin unarmed and curved. First pair of pereiopods chelate, greatly enlarged to form robust claws; pereiopods 2–5 slender, subchelate (less distinct in last pair). Abdomen well developed and powerful; pleura more or less rounded, sometimes bearing strong spines; tailfan entirely calcified, telson bearing movable spines, its posterior margin broadly convex. (After Chan 1998).

References

Chan, T.-Y. (1998). Lobsters. pp. 973–1043 *in* Carpenter, K.E. & Niem, V.H. (eds) *FAO Species Identification Guide for Fisheries Purposes.* The living marine resources of the Western Central Pacific. Volume 2, Cephalopods, crustaceans, holothurians and sharks. Rome : FAO pp. 687–1396

Chan, T.-Y. & Yu, H.-P. (1999). A new reef lobster of the genus *Enoplometopus* A. Milne Edwards, 1862 (Decapoda, Nephropoidea) from the western and southern Pacific. *Zoosystema* **20**(2): 183–192

de Saint Laurent, M. (1988). Enoplometopoidea, nouvelle superfamille de crustacés decapodes Astacidea. *C. R. Hebd. Séances Acad. Sci. (Ser. III. Sci. Vie)***307**(2): 59–62

Holthuis, L.B. (1983). Notes on the genus *Enoplometopus*, with descriptions of a new subgenus and two new species (Crustacea Decapoda, Axiidae). *Zool. Meded. (Leiden)* **56**(22): 281–298

ENOPLOMETOPIDAE de Saint Laurent, 1988

Enoplometopidae de Saint Laurent, M. (1988). Enoplometopoidea, nouvelle superfamille de crustacés decapodes Astacidea. *C. R. Hebd. Séances Acad. Sci. (Ser. III. Sci. Vie)***307**(2): 59–62 [59].
Type genus: *Enoplometopus* A. Milne Edwards, 1862.

Enoplometopus A. Milne Edwards, 1862

Taxonomic decision for subgeneric arrangement: Holthuis, L.B. (1983). Notes on the genus *Enoplometopus*, with descriptions of a new subgenus and two new species (Crustacea Decapoda, Axiidae). *Zool. Meded. (Leiden)* **56**(22): 281–298.

Extralimital distribution: Indo-west Pacific, Atlantic Oceans. See: Holthuis, L.B. (1983). Notes on the genus *Enoplometopus*, with descriptions of a new subgenus and two new species (Crustacea Decapoda, Axiidae). *Zool. Meded. (Leiden)* **56**(22): 281–298.
Generic reference: Chan, T.-Y. & Yu, H.-P. (1998). A new reef lobster of the genus *Enoplometopus* A. Milne Edwards, 1862 (Decapoda, Nephropoidea) from the western and southern Pacific. *Zoosystema* **20**(2): 183–192 [189] (key to species).

Enoplometopus (Enoplometopus) A. Milne Edwards, 1862

Enoplometopus Milne Edwards, A. (1862). Faune carcinologique de l'île de la Réunion. *In,* Maillard, L., *Notes sur l'île de la Réunion*. Annexe F, Paris 16 pp. pls 17–19 [14] [gender masculine].
Type species: *Enoplometopus pictus* A. Milne Edwards, 1862 by monotypy.

Extralimital distribution: Indo-west Pacific, Atlantic Oceans. See: Holthuis, L.B. (1983). Notes on the genus *Enoplometopus*, with descriptions of a new subgenus and two new species (Crustacea Decapoda, Axiidae). *Zool. Meded. (Leiden)* **56**(22): 281–298.
Generic reference: Davie, P., this work (*Enoplometopus (Enoplometopus) daumi* Holthuis, 1983, was recorded as occurring in Australia by Debelius, H. (1999). *Crustacea Guide of the World.*. Frankfurt : Ikan Publications 321 pp., but as no specific locality is cited, this record still needs formal verification).

Enoplometopus (Enoplometopus) crosnieri Chan & Yu, 1998

Enoplometopus (Enoplometopus) crosnieri Chan, T.-Y. & Yu, H.-P. (1998). A new reef lobster of the genus *Enoplometopus* A. Milne Edwards, 1862 (Decapoda, Nephropoidea) from the western and southern Pacific. *Zoosystema* **20**(2): 183–192 [184 figs 1–3].
Type data: holotype NTOU 1997-1-H ♀.
Type locality: Ho-Ping Is., Keelung, Taiwan.

Distribution: NT (N coast); (vicinity of Darwin), Taiwan, French Polynesia.
Ecology: benthic, continental shelf, reef; about 100 m depth.

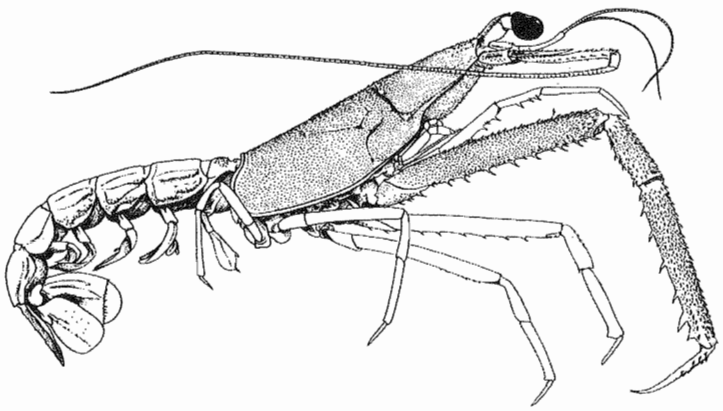
Enoplometopus (Enoplometopus) occidentalis (Randall, 1840)

Reef Lobster, Western Lobster

Nephrops (Enoplometopus) occidentalis Randall, J.W. (1840). Catalogue of the Crustacea brought by Thomas Nuttall and J.K. Townsend, from the West Coast of North America and the Sandwich Islands, with descriptions of such species as are apparently new, among which are included several species of different localities, previously existing in the Collection of the Academy. *J. Acad. Nat. Sci. Philad.* **8**(1): 106–147 pls 3–7 [139].
Type data: holotype ANSP CA288.
Type locality: Hawai'ian Islands (E Pacific thought to be incorrect), see Holthuis, L.B. (1983). Notes on the genus *Enoplometopus*, with descriptions of a new subgenus and two new species (Crustacea Decapoda, Axiidae). *Zool. Meded. (Leiden)* **56**(22): 281–298 [297].

Distribution: QLD (Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.
Ecology: coral reef, sublittoral; on the outer reefs, nocturnal, hides in cavities in rocks through the day, piscivore, predator, depths from shallow subtidal to about 100 m.
Reference: Holthuis, L.B. (1983). Notes on the genus *Enoplometopus*, with descriptions of a new subgenus and two new species (Crustacea Decapoda, Axiidae). *Zool. Meded. (Leiden)* **56**(22): 281–298 [294] (extensive colour description and remarks on ecology and distribution).

GLYPHEIDAE



Neoglyphea inopinata [from Forest & de Saint Laurent 1981: fig. 1]

INTRODUCTION

The Glyphaeidae are lobster-like crustaceans, until recently believed to have been extinct for at least 38 million years. Glyphaeids first appeared in the Lower Triassic, flourished during the Jurassic, became less abundant in the Cretaceous, and then seemed to disappear during the Eocene (Forest *et al.* 1976); four fossil genera are recognised. In the mid-1970s a living species was discovered, from the South China Sea off the Philippines. It was described as a new species and genus, *Neoglyphea inopinata* Forest & de Saint Laurent, 1975. In 1988 a specimen of this very rare lobster was found in the Arafura Sea to the north of Australia (Bruce 1988).

Diagnosis

Carapace subcylindrical, with a median, longitudinal, suture line; cervical groove deep, arising laterally in front of the insertion of the mandible; branchio-cardiac grooves obvious; rostrum well developed; epistome prominent, exposed in lateral view, not separated from the precervical part of the carapace by a branchiostegal flap; male and female sternal structures identical, female without a thelycum differentiated; last thoracic sternite free; first article of the antennular peduncle free. Pereiopods 1–5 more or less subchelate; pereiopods 2–5 with basis and ischium not fused. Male first pleopods modified as gonopods, second pleopods with appendix masculina. Pleopods 2–5 with appendix interna equipped with retinacula. Telson with posterior border rounded. Exopodite of uropods separated into proximal and distal parts by transverse diaeresis. (After Forest & de Saint Laurent 1989: 88–89).

References

Bruce, A.J. (1988). Capture of a female living-fossil lobster *Neoglyphea inopinata* in the Arafura Sea. *Search* **19**(4): 217–218

Forest, J. & de Saint Laurent, M. (1975). Présence dans la faune actuelle d'un représentant du groupe mésozoïque des Glyphéides: *Neoglyphea inopinata* gen. nov., sp. nov. (Crustacea Decapoda Glypheidae). *C. R. Séances Acad. Sci.* **281**: 155–158

Forest, J. & de Saint Laurent, M. (1981). La morphologie externe de *Neoglyphea inopinata*, espèce actuelle de Crustacé Décapode Glyphéide. *Mem. ORSTOM* **91**: 51–84

Forest, J. & de Saint Laurent, M. (1989). Nouvelle contribution à la connaissance de *Neoglyphea inopinata* Forest & de Saint Laurent, à propos de la femelle adulte. pp. 75–92 *in* Forest, J. Résultats des Campagnes MUSORSTOM, Volume 5. *Mém. Mus. natn. Hist. nat. Paris* **144**: 1–385

Forest, J., de Saint Laurent, M. & Chace, F.A., Jr (1976). *Neoglyphea inopinata*: a crustacean "Living Fossil" from the Philippines. *Science* **192**: 884

GLYPHEIDAE Zittel, 1885

Glyphaeidae Zittel, K.A., von (1885). *Handbuch der Palaeontologie*. 1 Abt. Palaeozoologie. Vol. 2, Mollusca and Arthropoda. München & Liepzig pp. 1–893, 719 figs [689] [Zittel cited Winkler (1881) as the author of the name Glyphaeidae; Winkler recognised a relationship between several genera around the genus *Glyphea*, which he referred to as 'les glyphées', but this fails to constitute a formal family definition; Zittel used the incorrect spellings *Glyphaea* and Glyphaeidae, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 (88)].

Neoglyphea Forest & de Saint Laurent, 1975

Neoglyphea Forest, M.J. & de Saint Laurent, M. (1975). Présence dans la faune actuelle d'un représentant du groupe mésozoïque des Glyphéides: *Neoglyphea inopinata* gen. nov., sp. nov. (Crustacea Decapoda Glypheidae). *C. R. Séances Acad. Sci.* **281**: 155–158 [155] [gender feminine].
Type species: *Neoglyphea inopinata* Forest & de Saint Laurent, 1975 by original designation.

Extralimital distribution: east Indo-west Pacific Oceans. See: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Neoglyphea inopinata Forest & de Saint Laurent, 1975

Fenix Lobster (FAO)

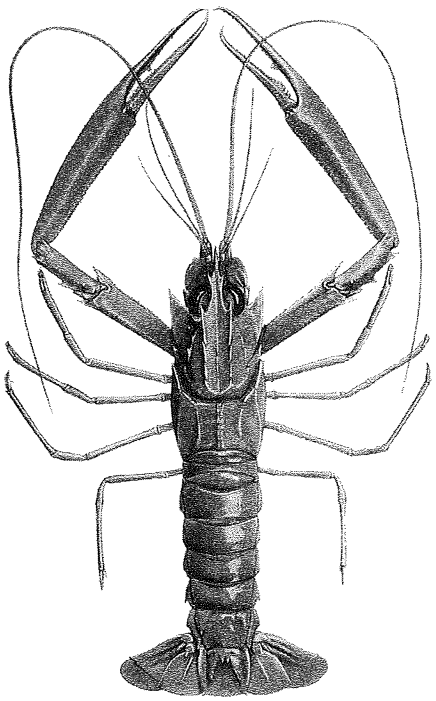
Neoglyphea inopinata Forest, M.J. & de Saint Laurent, M. (1975). Présence dans la faune actuelle d'un représentant du groupe mésozoïque des Glyphéides: *Neoglyphea inopinata* gen. nov., sp. nov. (Crustacea Decapoda Glypheidae). *C. R. Séances Acad. Sci.* **281**: 155–158 [155 pls 1, 2].

Type data: holotype USNM 152650 ♂.
Type locality: SW entrance of Manila Bay, Philippines.

Distribution: NT (N coast); east Indo-west Pacific Oceans.
Ecology: benthic, continental shelf, continental slope, mud bottom, oceanic province; firm substrate with mud, depth 186 to 300 m.
References: Forest, J. & de Saint Laurent, M. (1981). La morphologie externe de *Neoglyphea inopinata*, espèce actuelle de Crustacé Décapode Glyphéide. *Mem. ORSTOM* **91**: 51–84 (extensive description of male); Forest, J. (1989). Sur la découverte de *Neoglyphea inopinata* Forest et de Saint Laurent en mer de Timor (Crustacea Decapoda, Glypheidae). *Bull. Mus. Natn. Hist. Nat. Paris* **4**(11): 469–471; Forest, J. & de Saint Laurent, M. (1989). Nouvelle contribution à la connaissance de *Neoglyphea inopinata* Forest & de Saint Laurent, à propos de la femelle adulte. pp. 75–92 *in* Forest, J. Résultats des Campagnes MUSORSTOM, Volume 5. *Mém. Mus. natn. Hist. nat. Paris* **144**: 1–385 (female description).

NEPHROPIDAE

INTRODUCTION



Metanephrops sibogae
[from de Man 1916: pl. 4 fig. 18]

Nephropids are deep water lobsters found in depths from 150–1893 metres. Three genera are represented in Australian waters: *Acanthacaris* Bate (Neophoberinae), *Metanephrops* Jenkins (Nephropinae), and *Nephropsis* Wood-Mason (Thymopinae). The species of *Metanephrops* are collectively known as 'Scampi' and are of some commercial interest, although generally not taken in the quantities that make the Northern Hemisphere Scampi (*Nephrops* species) so important to fisheries. Jenkins (1972) was the first to recognise that the Southern Hemisphere '*Nephrops*' were generically distinct. Other important references dealing with the Australian fauna include: Bruce (1966), Chan & Yu (1991), Chan (1998) Griffin & Stoddart (1987) and Holthuis (1991).

Diagnosis

Moderate to large lobsters. Body tubular, surface almost naked or covered with thick fur. Carapace with well-developed rostrum, ornamented with spines or nodules, occasionally smooth. Eyes usually well developed and black, or small and lacking pigmentation, or even absent. Antennae very long and thread-like; antennal scale, if present, with inner margin unarmed and curved. Pereiopods 1–3 chelate, first pair forming long, robust claws. Sternal plate between fifth pereiopods fused with that between fourth pair; podobranchiae of first three pereiopods with discrete branchial and epipoditic parts; first pleopod of male without individual sperm conduit. Abdomen and tailfan well developed and robust; abdomen smooth or variously sculptured, pleura ending in acute ventral tooth; tailfan entirely calcified; telson with fixed spines, posterior margin broadly convex. (Modified after Chan 1998).

References

Bruce, A.J. (1966). *Nephrops australiensis* sp. nov., a new species of lobster from northern Australia (Decapoda Reptantia). *Crustaceana* **10**: 245–258 pls 25–27

Chan, T.-Y. (1998). Lobsters. pp. 973–1043 *in* Carpenter, K.E. & Niem, V.H. (eds) *FAO Species Identification Guide for Fisheries Purposes.* The living marine resources of the Western Central Pacific. Volume 2, Cephalopods, crustaceans, holothurians and sharks. Rome : FAO pp. 687–1396

Chan, T.-Y. & Yu, H.P. (1991). Studies on the *Metanephrops japonicus* group (Decapoda, Nephropidae), with descriptions of two new species. *Crustaceana* **60**(1): 18–51, text-figs 1–3 pls 1–9

de Man, J.G. (1916). Families Eryonidae, Palinuridae, Scyllaridae and Nephropsidae. The Decapoda of the Siboga Expedition. Part III. *Siboga Exped.* **39**(A2): 1–122 pls 1–4

Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

Jenkins, R.J.F. (1972). *Metanephrops*, a new genus of late Pliocene to recent lobsters (Decapoda, Nephropidae). *Crustaceana* **22**(2): 161–177 2 pls

NEPHROPIDAE Dana, 1852

Nephropinae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [15].

Homaridae Huxley, T.H. (1879). On the classification and the distribution of the crayfishes. *Proc. Zool. Soc. Lond.* **1878**: 752–788.

Neophoberinae Glaessner, M.F. (1969). Decapoda. pp. R399–R533, R626–R628 *in* Moore, R.C. (ed.) *Treatise on Invertebrate Paleontology.* Part R. Arthropoda 4(2) Crustacea (except Ostracoda) Myriapoda — Hexapoda. Laurence, Kansas : The University of Kansas and The Geological Society of America, Inc. Vol. 2 pp. R399–R651 [R459].

Thymopinae Holthuis, L.B. (1974). The lobsters of the superfamily Nephropidea of the Atlantic Ocean (Crustacea: Decapoda). *Bull. Mar. Sci., Miami* **24**(4): 723–884 [753].

Phoberinae Mertin, H. (1941). Decapode Krebse aus dem subhercynen und Braunschweiger Emscher und Untersenon sowie Bemarkungen über einige verwandte Formen inder Oberkreide. *Nova Acta Leopoldina (n. ser.)***10**(68): 1–215.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [26].

Acanthacaris Bate, 1888

Phoberus Milne Edwards, A. (1881). Description de quelques Crustacés macroures provenant des grandes profondeurs de la mer des Antilles. *Ann. Sci. Nat. (Zool. (6))***11**(4): 1–16 [1] [junior homonym of *Phoberus* MacLeay, 1818; gender masculine].
Type species: *Phoberus caecus* A. Milne Edwards, 1881 by monotypy.

Acanthacaris Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [171, 929] [gender feminine].
Type species: *Acanthacaris tenuimana* Bate, 1888 by monotypy.

Neophoberas Glaessner, M.F. (1969). Decapoda. pp. R399–R533, R626–R628 *in* Moore, R.C. (ed.) *Treatise on Invertebrate Paleontology.* Part R. Arthropoda 4(2) Crustacea (except Ostracoda) Myriapoda — Hexapoda. Laurence, Kansas : The University of Kansas and The Geological Society of America, Inc. Vol. 2 pp. R399–R651 [R460] [*nom. nov.* for *Phoberas* A. Milne Edwards, 1881; gender masculine].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Extralimital distribution: Indo-west Pacific Oceans, West Atlantic Ocean (Gulf of Mexico, Caribbean Sea, Straits of Florida).

Acanthacaris tenuimana Bate, 1888

Acanthacaris tenuimana Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [171, 929 pl. 21].
Type data: holotype BMNH 88.22.
Type locality: south of New Guinea (*Challenger* Stn 191) [5°41'S 134°4'30"E].

Phoberas caecus sublevis Wood-Mason, J. & Alcock, A. (1891). Natural History notes from H. M. Indian Marine Survey Steamer 'Investigator', Commander R.F. Hoskyn, R.N., commanding. No 21. Note on the results of the last season's deep-sea dredging. *Ann. Mag. Nat. Hist. (6)***7**: 1–19, 186–202, 258–272.
Type data: holotype ZSI*.
Type locality: Laccadive Sea, off Goa coast, India (*Investigator* Stn 105) [15°02'N 72°34'E].

Acanthacaris opipara Burukovsky, R.N. & Musij, Y.I. (1976). [*Acanthacaris opipara* Burukovsky & Musij, sp. n., a new abyssal lobster (Crustacea, Decapoda, Neophoberinae)]. *Zool. Zh.* **55**(12): 1811–1815 [1811 figs 1, 2] [in Russian].
Type data: holotype whereabouts unknown*.
Type locality: South-west part of Indian Ocean near Durban [29°57'6"–29°52'5"S 31°46'2"–31°52'5"E].

Phoberus brevirostris Tung,Y.-m., Wang, B.-y & Li, Z.-c (1985). A new species of Nephropsidea from the deep water of East China Sea (Crustacea, Decapoda). *Acta Zootax. Sinica* **10**(4): 379–380 [379, 380] [in Chinese, English summary].
Type data: holotype DFRIS 81015 ♂*, paratypes BDHU 81016 ♂*, BDHU 81006 ♂*.
Type locality: East China Sea [29°00'30"S 127°30'E].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [28].

Distribution: QLD (SE oceanic); Indo-west Pacific (East Africa to Japan, Philippines and New Caledonia).
Ecology: benthic, continental rise, continental slope, mud bottom, oceanic province; from 600–2161 m depth.
Reference: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [232].

Metanephrops Jenkins, 1972

Metanephrops Jenkins, R.J.F. (1972). *Metanephrops*, a new genus of late Pliocene to recent lobsters (Decapoda, Nephropidae). *Crustaceana* **22**(2): 161–177 2 pls [162] [gender masculine].
Type species: *Nephrops japonicus* Tapparone-Canefri, 1873 by original designation.

Extralimital distribution: tropical western Atlantic and Indo-Pacific Oceans. See: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Generic reference: Chan, T.-Y. (1997). Crustacea Decapoda: Palinuridae, Scyllaridae and Nephropidae collected in Indonesia by the KARUBAR Cruise, with an identification key for the species of *Metanephrops*. pp. 409–431 *in* Crosnier, A. & Bouchet, P. Résultats des Campagnes MUSORSTOM, Volume 16. *Mém. Mus. natn. Hist. nat. Paris* **172**: 1–667 [422] (key to species, discussion of species relationships; and depth and geographical distributions compared).

Metanephrops australiensis (Bruce, 1966)

Australian Scampi, Northwest Lobster (FAO), Northwest Scampi (Aust)

Nephrops australiensis Bruce, A.J. (1966). *Nephrops australiensis* sp. nov., a new species of lobster from northern Australia (Decapoda Reptantia). *Crustaceana* **10**: 245–258 pls 25–27 [245 pls 25–27].
Type data: holotype WAM 11-64 ♂, paratypes WAM 12-64 ♀ (as allotype), WAM 16-64 ♀ (now RMNH D21151), WAM 17-64 ♀ (now BMNH 1964.9.28.14), RMNH D21152 1 ♀.
Type locality: NE of Port Hedland, N WA.

Distribution: WA (NW oceanic); Indonesia, Philippines.
Ecology: benthic, continental slope, oceanic province, trade (food); firm sediment, on a bottom of *Globigerina* ooze probably in burrows, depth 390 to 500 m, mainly 440–460 m.
References: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [65, 68]; Wadley, V. & Evans, D. (1991). *Crustaceans from the Deepwater Trawl Fisheries of Western Australia.* Hobart, Australia : CSIRO Division of Fisheries 44 pp. [33]; Chan, T.-Y. (1997). Crustacea Decapoda: Palinuridae, Scyllaridae and Nephropidae collected in Indonesia by the KARUBAR Cruise, with an identification key for the species of *Metanephrops*. pp. 409–431 *in* Crosnier, A. & Bouchet, P. Résultats des Campagnes MUSORSTOM, Volume 16. *Mém. Mus. natn. Hist. nat. Paris* **172**: 1–667 [414] (range extension; and discussion on variation); Wassenberg, T.J. & Hill, B.J. (1989). Diets of four decapod crustaceans (*Linuparus trigonus*, *Metanephrops andamanicus*, *M. australiensis* and *M. boschmai*) from the continental shelf around Australia. *Mar. Biol.* **103**: 161–167.

Metanephrops boschmai (Holthuis, 1964)

Bight Lobster (FAO), Bight Scampi, Boschma's Scampi

Nephrops boschmai Holthuis, L.B. (1964). On some species of the genus *Nephrops* (Crustacea Decapoda). *Zool. Meded. (Leiden)* **39**: 71–78 fig. 1 [72 fig. 1].

Type data: holotype AM E3673 ♂, paratypes AM E39941 ♀ (as allotype, re-registered), AM E3657 3♂, AM E3671 1 specimen, AM E3682 1 specimen, AM E6254 1 specimen, AM E6257 1 specimen, RMNH D15461 5 specimens, RMNH D15462 1 specimen, USNM*.
Type locality: Great Australian Bight, SW of Eucla, WA.

Distribution: SA (Great Australian Bight, S oceanic), WA (NW oceanic, S oceanic, W oceanic); known only from limital area.
Ecology: benthic, sand bottom, continental slope, trade (food); or mud and rubble, probably in burrows, depth from 260 to 460 m, mainly 300–320 m.
References: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [65, 71]; Wadley, V. & Evans, D. (1991). *Crustaceans from the Deepwater Trawl Fisheries of Western Australia.* Hobart, Australia : CSIRO Division of Fisheries 44 pp. [34]; Wassenberg, T.J. & Hill, B.J. (1989). Diets of four decapod crustaceans (*Linuparus trigonus*, *Metanephrops andamanicus*, *M. australiensis* and *M. boschmai*) from the continental shelf around Australia. *Mar. Biol.* **103**: 161–167.

Metanephrops neptunus (Bruce, 1965)

Neppie Scampi, Neptune's Lobster (FAO), Neptune's Scampi (Aust)

Nephrops neptunus Bruce, A.J. (1965). A new species of *Nephrops* (Decapoda, Reptantia) from the South China Sea. *Crustaceana* **9**: 274–284 pls 13–15 [274 pls 13–15].
Type data: holotype BMNH 1964.9.28.1 ♀, paratype(s) RMNH D21152 ♂ (as allotype).
Type locality: 'Cape St Mary', South China Sea, S of Hong Kong.

Distribution: WA (NW oceanic); Indonesia, South China Sea, Philippines.
Ecology: burrowing, benthic, continental slope, oceanic province, trade (food); soft muddy substrate, depth 238–940 m.
References: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [65, 76]; Wadley, V. & Evans, D. (1991). *Crustaceans from the Deepwater Trawl Fisheries of Western Australia.* Hobart, Australia : CSIRO Division of Fisheries 44 pp. [35].

Metanephrops sibogae (de Man, 1916)

Melville Island Scampi, Siboga Lobster (FAO), Siboga's Scampi (Aust)

Nephrops sibogae de Man, J.G. (1916). Families Eryonidae, Palinuridae, Scyllaridae and Nephropsidae. The Decapoda of the Siboga Expedition. Part III. *Siboga Exped.* **39**(A2): 1–122 pls 1–4 [102 pl. 4 fig. 18].
Type data: syntypes ZMA De 104.197 5♂ 4♀.
Type locality: near the Kai [Kei] Islands, Indonesia.

Distribution: NT (N coast), QLD (NE oceanic), WA (NW oceanic); Indonesia.
Ecology: benthic, continental slope, oceanic province, trade (food); bottom of soft sediments, probably in burrows, depth 260–480 m.
References: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [65, 79]; Wadley, V. & Evans, D. (1991). *Crustaceans from the Deepwater Trawl Fisheries of Western Australia.* Hobart, Australia : CSIRO Division of Fisheries 44 pp. [36]; Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [232].

Metanephrops velutinus Chan & Yu, 1991

Andaman Scampi (Aust.), Velvet Lobster (FAO), Velvet Scampi

Metanephrops velutinus Chan, T.-Y. & Yu, H.P. (1991). Studies on the *Metanephrops japonicus* group (Decapoda, Nephropidae), with descriptions of two new species. *Crustaceana* **60**(1): 18–51, text–figs 1–3 pls 1–9 [35 pls 2b, 4b, 6c, 8a].
Type data: holotype NTOU PM1 ♂, paratypes MNHP, RMNH D15458 5 specimens, USNM, WAM, RMNH D25689 ♂.
Type locality: Philippines.

Distribution: QLD (NE oceanic), SA (Great Australian Bight), WA (NW oceanic, S oceanic, W oceanic); Philippines, Indonesia.
Ecology: benthic, continental slope, oceanic province, trade (food); substrate hard mud, probably in burrows, depth 238 to 702 m, most common 350 to 450 m.
References: Wassenberg, T.J. & Hill, B.J. (1989). Diets of four decapod crustaceans (*Linuparus trigonus*, *Metanephrops andamanicus*, *M. australiensis* and *M. boschmai*) from the continental shelf around Australia. *Mar. Biol.* **103**: 161–167 (as *M. andamanicus)*; Wadley, V. & Evans, D. (1991). *Crustaceans from the Deepwater Trawl Fisheries of Western Australia.* Hobart, Australia : CSIRO Division of Fisheries 44 pp. [37]; Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [233]; Davie, P., this work (previously identified incorrectly from Australia as *M. andamanicus*).

Nephropsis Wood-Mason, 1873

Nephropsis Wood-Mason, J. (1873). On *Nephropsis stewarti* a new genus and species of Macrurous Crustaceans dredged in deep water off the eastern coast of the Andaman Islands. *Ann. Mag. Nat. Hist.* **12**(4): 59–64 [60] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1959). Opinion 559. Determination of the gender to be attributed to six generic names in the Class Crustacea (Order Decapoda) and addition of the names concerned to the *Official List of Generic Names in Zoology*. *Opin. Declar. Int. Comm. Zool. Nomencl.* **20**: 283–292; gender feminine].
Type species: *Nephropsis stewarti* Wood-Mason, 1873 by monotypy.

Extralimital distribution: Indo-Pacific and Atlantic Oceans. See: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Generic reference: Macpherson, E. (1993). New records for the genus *Nephropsis* Wood-Mason (Crustacea, Decapoda, Nephropidae) from Northern Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 55–66 [64] (key to Australian species).

Nephropsis acanthura Macpherson, 1990

Spinetail Lobsterette (FAO)

Nephropsis acanthura Macpherson, E. (1990). Crustacea Decapoda: On a collection of Nephropidae from the Indian Ocean and Western Pacific. pp. 289–329 figs 1–17 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**: 1–388 [311 figs 5d, 9d–f, 11a].
Type data: holotype MNHP AS546 ♂, paratypes MnHP AS514 ♀ (as allotype), MNHP AS510–513, MNHP AS515–517.
Type locality: Philippines.

Distribution: NSW (SE oceanic), QLD (NE oceanic), WA (NW oceanic); Indo-west Pacific Oceans (Madagascar, Indonesia, Philippines, Coral Sea).
Ecology: benthic, continental rise, continental slope, oceanic province; depths 750–1305 m.
Reference: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [234].

Nephropsis holthuisi Macpherson, 1993

Nephropsis holthuisi Macpherson, E. (1993). New records for the genus *Nephropsis* Wood-Mason (Crustacea, Decapoda, Nephropidae) from Northern Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 55–66 [55 figs 1–3].
Type data: holotype NTM Cr.007044 ♂, paratype(s) NTM Cr.007043.
Type locality: Indian Ocean, W of Ashmore Reef, WA.
Distribution: NSW (SE oceanic), WA (NW oceanic); known only from limital area, off Ashmore Reef (WA), Indonesia.
Ecology: benthic, continental rise, continental slope, oceanic province; depth 900–1105 m.
References: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [234]; Chan, T.-Y. (1997). Crustacea Decapoda: Palinuridae, Scyllaridae and Nephropidae collected in Indonesia by the KARUBAR Cruise, with an identification key for the species of *Metanephrops*. pp. 409–431 *in* Crosnier, A. & Bouchet, P. Résultats des Campagnes MUSORSTOM, Volume 16. *Mém. Mus. natn. Hist. nat. Paris* **172**: 1–667.

Nephropsis serrata Macpherson, 1993

Nephropsis serrata Macpherson, E. (1993). New records for the genus *Nephropsis* Wood-Mason (Crustacea, Decapoda, Nephropidae) from Northern Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 55–66 [59 figs 4–6].
Type data: holotype NTM Cr.008762 ♂, paratypes NTM Cr.000561 1♂, NTM Cr.000616 1♂ 1♀, NTM Cr.000712 5♂, NTM Cr.000716 2♂, NTM Cr.006899 1♀, NTM Cr.007009 2♀, NTM Cr.007010 1♂ 1♀, NTM Cr.007011 2♂ 1♀, NTM Cr.0063141 1♀, NTM Cr.006900 1♂, NTM Cr.006901 1♂, NTM Cr.007008 3♀, NTM Cr.007015 1♂, NTM Cr.007017 4♀, NTM Cr.007046 1♀, NTM Cr.007349 1♀ 1♂, NTM Cr.007508 3♂, NTM Cr.007512 2♀ 2♂.
Type locality: North-west Shelf, WA.

Distribution: WA (NW coast); Indonesia.
Ecology: benthic, continental rise, continental slope, oceanic province; depth 390–1430 m.
Reference: Chan, T.-Y. (1997). Crustacea Decapoda: Palinuridae, Scyllaridae and Nephropidae collected in Indonesia by the KARUBAR Cruise, with an identification key for the species of *Metanephrops*. pp. 409–431 *in* Crosnier, A. & Bouchet, P. Résultats des Campagnes MUSORSTOM, Volume 16. *Mém. Mus. natn. Hist. nat. Paris* **172**: 1–667 [414] (range extension; suggests that *N. hamadai* Watabe & Ikeda, 1994, may be a synonym).

Nephropsis stewarti Wood-Mason, 1872

Indian Ocean Lobsterette (FAO), Smooth Blind Scampi, Stewart's Scampi

Nephropsis stewarti Wood-Mason, J. (1872). [Abstract]. *Proc. Asiat. Soc. Bengal* **1872**: 151 [151] [original description published in an abstract, full description published the following year in Wood-Mason, J. (1873). On *Nephropsis stewarti* a new genus and species of Macrurous Crustaceans dredged in deep water off the eastern coast of the Andaman Islands. *J. Asiat. Soc. Bengal* **42**(II): 39–44 4 pls; name placed on the Official List of Specific names in Zoology, see International Commission on Zoological Nomenclature (1959). Opinion 559. Determination of the gender to be attributed to six generic names in the

Class Crustacea (Order Decapoda) and addition of the names concerned to the *Official List of Generic Names in Zoology*. *Opin. Declar. Int. Comm. Zool. Nomencl.* **20**: 283–292].
Type data: holotype ZSI 1404.
Type locality: 25 miles off Ross Island on the E coast of the Andamans.

Distribution: QLD (Great Barrier Reef, NE oceanic), WA (NW oceanic, W oceanic); Indo-west Pacific Oceans (East Africa to Japan).
Ecology: benthic, continental rise, continental shelf, continental slope, oceanic province; on soft muddy substrates, from 170–1060 m, usually between 500 and 750 m.
Reference: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [45].

Nephropsis suhmi Bate, 1888

Red and White Lobsterette (FAO)

Nephropsis orientalis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [171, 175] [a name Bate originally intended for the species *suhmi* and forgot to alter on pp. 171, 175; considered a junior objective synonym].

Nephropsis suhmi Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [181 pl. 23 fig. 3].
Type data: holotype BMNH 88.22.
Type locality: E off Dobba, Arrou Island [Dobo, Aru Islands], Indonesia.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [35, 46].

Distribution: NSW (SE oceanic), QLD (NE oceanic), WA (NW oceanic); Lord Howe Rise, W Tasman Sea, and Indo-west Pacific Oceans.
Ecology: benthic, continental rise, continental slope, oceanic province; depth 786 and 2029 m, usually between 1600 and 1900 m.
Reference: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [234].

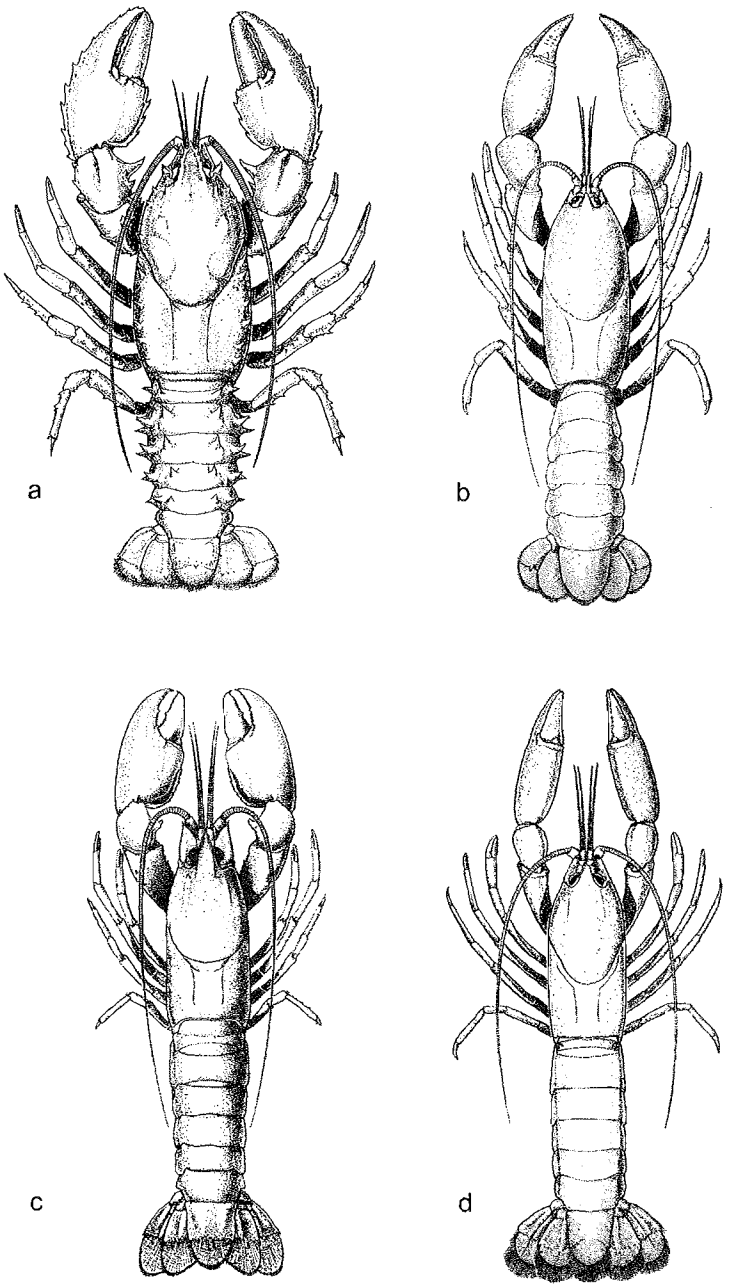
Nephropsis sulcata Macpherson, 1990

Grooved Lobsterette (FAO)

Nephropsis sulcata Macpherson, E. (1990). Crustacea Decapoda: On a collection of Nephropidae from the Indian Ocean and Western Pacific. pp. 289–329 figs 1–17 *in* Crosnier, A. Résultats des Campagnes MUSORSTOM, Volume 6. *Mém. Mus. natn. Hist. nat. Paris* **145**: 1–388 [319 figs 13e–g, 14, 15].
Type data: holotype MNHP AS523 ♂, paratypes MNHP AS518 ♀ (as allotype), MNHP AS490, MNHP AS493, MNHP AS524–25, MNHP AS519–22, MNHP AS545, MNHP AS530*, USNM*, JCU*.
Type locality: Philippines.

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic), WA (NW oceanic); Indo-west Pacific Oceans.
Ecology: benthic, continental rise, continental slope; depth 415–1115 m.
Reference: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [235].

PARASTACIDAE



a, *Euastacus armatus*; b, *Engaewa subcoerulea*; c, *Cherax preissii*; d, *Tenuibranchiurus glypticus*
[from Riek 1972: a, fig. 11; b, fig. 5; c, fig. 9; d, fig. 6]

INTRODUCTION

Parastacids are the freshwater crayfish of the Southern Hemisphere. They have a Gondwanan distribution being found in New Zealand, Madagascar, southern New Guinea and South America, but it is in Australia that they reach their greatest diversity. Of the 14 recognised genera, nine are known from Australia. All Australian genera are indigenous except for *Cherax* which extends north into New Guinea. Of the more than 135 species described, 124 are known only from Australia. *Tenuibranchiurus glypticus*, fully grown at about 4 cm in length, is one of the smallest crayfish known, while at the other end of the scale, *Astacopsis gouldi* from Tasmania, is the world's largest measuring up to 76 cm long and weighing 4.5 kg.

The main foundation work on Australian Parastacidae was undertaken by Dr Edgar Riek who published five papers between 1951 and 1972. Subsequently, several important works have revised, or contributed to, particular genera: *Astacopsis* (Hamr 1992); *Cherax* (Sokol 1988; Short 1991, 1993; Campbell *et al.* 1994; Short & Davie 1993); *Gramastacus* (Zeidler & Adams 1990); *Engaeus* (Horwitz 1990a, 1994); *Engaewa* (Horwitz & Adams 2000) *Euastacus* (Morgan 1986, 1988, 1989, 1997; Short & Davie 1993); and *Parastacoides* (Sumner 1978).

There has been recent interest in the phylogenetic relationships of Australian parastacids using molecular genetics techniques, with important papers being published by Crandall *et al.* (1995), Crandall & Fitzpatrick (1996), Lawler & Crandall (1998) and Ponniah & Hughes (1998). The ecology and conservation of parastacids is also receiving some attention with interesting publications from Horwitz & Richardson (1986) and Horwitz (1990b), amongst others.

Diagnosis

Small to moderately large crayfish. Carapace lacking dorsomedian, longitudinal suture or ridge in cardiac and posterior gastric regions. Sternal plate between fifth pereiopods not fused with sternal complex anteriorly. Telson never completely divided by transverse suture; exopod of uropods with transverse suture. Podobranchiae of first three pereiopods not differentiated into branchial and epipoditic portions and lacking bilobed plaited laminae; epipodite of first maxilliped usually with branchial filaments. Articles of lateral ramus of antennule never with more than one cluster of asthetascs. First pleopod absent in both male and female; second pleopod similar to third. Eggs large, larvae hatching as miniatures of adult. Restricted to freshwater. (After Hobbs 1974).

References

Campbell, N.J.H., Geddes, M.C. & Adams, M. (1994). Genetic variation in yabbies, *Cherax destructor* and *C. albidus* (Crustacea: Decapoda: Parastacidae), indicates the presence of a single, highly sub-structured species. *Aust. J. Zool.* **42**(6): 745–760

Crandall, K.A. & Fitzpatrick, J.F. Jr (1996). Crayfish molecular systematics: using a combination of procedures to estimate phylogeny. *Syst. Biol.* **45**(1): 1–26

Crandall, K.A., Lawler, S.H. & Austin, C.M. (1995). A preliminary examination of the molecular phylogenetic relationships of some crayfish genera from Australia (Decapoda: Parastacidae). *Freshwater Crayfish* **10**: 18–30

Hamr, P. (1992). A revision of the Tasmanian freshwater crayfish genus *Astacopsis* Huxley (Decapoda: Parastacidae). *Pap. Proc. Roy. Soc. Tasmania* **126**: 91–94

Hobbs, H.H., Jr (1974). Synopsis of the families and genera of crayfish. *Smithson. Contr. Zool.* **No. 164**: i–iii, 1–32

Horwitz, P. (1990a). The conservation status of Australian freshwater Crustacea with a provisional list of threatened species, habitats and potentially threatened processes. *Aust. Natn. Parks Wildlife Serv. Rept Ser.* **14**: 1–121

Horwitz, P. (1990b). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614

Horwitz, P. (1994). A new species of the freshwater crayfish *Engaeus* Erichson (Decapoda: Parastacidae) from north-western Tasmania. *Mem. Mus. Vic.* **54**(2): 439–445

Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680

Horwitz, P.H.J. & Richardson, A.M.M. (1986). An ecological classification of the burrows of Australian freshwater crayfish. *Aust. J. Mar. Freshwat. Res.* **37**: 237–342

Lawler, S.H. & Crandall, K.A. (1998). The relationship of the Australian freshwater crayfish genera *Euastacus* and *Astacopsis*. *Proc. Linn. Soc. N.S.W.* **119**: 1–8

Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria. *Mem. Mus. Vic.* **47**(1): 1–57

Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49

Morgan, G.J. (1989). Two new species of the freshwater crayfish *Euastacus* Clark (Decapoda: Parastacidae) from isolated high country of Queensland. *Mem. Qld Mus.* **27**(2): 555–562

Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110

Ponniah, M. & Hughes, J.M. (1998). Evolution of Queensland spiny mountain crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae): preliminary 16s mtDNA phylogeny. *Proc. Linn. Soc. N.S.W.* **119**: 9–19

Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388

Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6

Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121

Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918

Riek, E.F. (1972). The phylogeny of the Parastacidae (Crustacea: Astacoidea), and description of a new genus of Australian freshwater crayfishes. *Aust. J. Zool.* **20**: 369–389

Short, J.W. (1991). *Cherax nucifraga*, a new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from the Northern Territory, Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **8**(1): 115–120

Short, J.W. (1993). *Caridina zebra*, a new species of freshwater atyid shrimp (Crustacea: Decapoda) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 61–67

Short, J.W. & Davie, P.J.F. (1993). Two new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 69–80

Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79

Sumner, C.E. (1978). A revision of the genus *Parastacoides* Clark (Crustacea: Decapoda: Parastacidae). *Aust. J. Zool.* **26**: 809–821

Zeidler, W. & Adams, M. (1990). Revision of the Australian Crustacean genus of freshwater crayfish *Gramastacus* Riek (Decapoda: Parastacidae). *Invertebr. Taxon.* **3**: 913–924

PARASTACIDAE Huxley, 1879

Parastacidae Huxley, T.H. (1879). On the classification and the distribution of the crayfishes. *Proc. Zool. Soc. Lond.* **1878**: 752–788 [771, 775].

Astacopsis Huxley, 1879

Astacopsis Huxley, T.H. (1879). On the classification and the distribution of the crayfishes. *Proc. Zool. Soc. Lond.* **1878**: 752–788 [764] [gender feminine].
Type species: *Astacus franklinii* Gray, 1845 by monotypy (Huxley's specimens, upon which he based the genus, were later found to be distinct from *A. franklinii* Gray, and were subsequently described as *A. gouldi* Clark, 1836).

Range: indigenous to Tasmania.
Generic reference: Hamr, P. (1992). A revision of the Tasmanian freshwater crayfish genus *Astacopsis* Huxley (Decapoda: Parastacidae). *Pap. Proc. Roy. Soc. Tasmania* **126**: 91–94.

Astacopsis franklinii (Gray, 1845)

Astacus franklinii Gray, J.E. (1845). Description of some new Australian animals. pp. 405–411 *in* Eyre, E.J. (ed.) *Journal of Expedition of Discovery into Central Australia.* London : T. & W. Boone [409 pl. 3 fig. 1].
Type data: lectotype BMNH 1968:215 2♂, paralectotype(s) BMNH 1968:216.
Subsequent designation: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [896].
Type locality: Tasmania (as Van Diemen's Land).

Astacopsis fluviatilis Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [912 fig. 16A].
Type data: holotype AM P11912 ♂, paratypes AM P19591 ♀ (as allotype), AM P11913 10 specimens, AM P19592 9 specimens.
Type locality: Hobart Creek, Hobart, TAS.

Taxonomic decision for synonymy: Hamr, P. (1992). A revision of the Tasmanian freshwater crayfish genus *Astacopsis* Huxley (Decapoda: Parastacidae). *Pap. Proc. Roy. Soc. Tasmania* **126**: 91–94 [93].

Distribution: TAS; known only from limital area, SE coastal TAS.
Ecology: freshwater, swamp.

Astacopsis gouldi Clark, 1936

Astacopsis gouldi Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [35 pl. 7 fig. 28].
Type data: lectotype NMV J870.
Subsequent designation: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.
Type locality: Circular Head, TAS.

Distribution: TAS; known only from limital area, SE coastal.
Ecology: freshwater.
References: Horwitz, P. (1994). Distribution and conservation status of the Tasmanian giant freshwater lobster *Astacopsis gouldi* (Decapoda: Parastacidae). *Biological Conservation* **69**: 199–206; Hamr, P. (1997). A giant's tale: the life history of *Astacopsis gouldi* (Decapoda: Parastacidae) a freshwater crayfish from Tasmania. *Freshwater Crayfish* **11**: 13–33.

Astacopsis tricornis Clark, 1936

Astacopsis tricornis Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [36 pl. 1 fig. 7, pl. 7].
Type data: lectotype NMV J896 ♂.
Subsequent designation: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.
Type locality: Lake St Clair, TAS.

Distribution: TAS; known only from limital area, SE coastal.
Ecology: lake, freshwater; lentic waters.

Reference: Hamr, P. (1992). A revision of the Tasmanian freshwater crayfish genus *Astacopsis* Huxley (Decapoda: Parastacidae). *Pap. Proc. Roy. Soc. Tasmania* **126**: 91–94 [93].

Cherax Erichson, 1846

Cherax Erichson, W.F. (1846). Uebersicht der Arten der Gattung *Astacus*. *Arch. Naturgesch.* **xii**: 86–103, 375–377 [88] [first introduced as a subgenus of *Astacus* with two different spellings; elevated to generic rank with third form of spelling by Huxley, T.H. (1879). On the classification and the distribution of the crayfishes. *Proc. Zool. Soc. Lond.* **1878**: 752–788 (769); placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 519. Addition to the *Official List of Generic Names in Zoology* of the names of twenty-three genera of Macrura Reptantia (Class Crustacea) and use of the Plenary Powers in regard to three matters concerned therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 133–168; gender masculine].
Type species: *Astacus (Cheraps) preissii* Erichson, 1846 by monotypy.

Astaconephrops Nobili, G. (1899). Contribuzioni alla conoscenza della fauna carcinologica della Papuasia, della Molucche e dell' Australia. *Ann. Mus. Civ. Stor. Nat. 'Giacomo Doria'* **20**(40): 230–282 [244] [gender masculine].
Type species: *Astaconephrops albertisii* Nobili, 1899 by monotypy.

Parachaeraps Smith, G.W. (1912). The freshwater crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1912**: 144–170 [145, 148, 150, 161] [gender masculine].
Type species: *Astacus bicarinatus* Gray, 1845 by monotypy.

Taxonomic decision for synonymy: Hobbs, H.H., Jr (1974). Synopsis of the families and genera of crayfish. *Smithson. Contr. Zool.* **No. 164**: i–iii, 1–32 [20].

Extralimital distribution: New Guinea, Aru Islands, and Misool. See: Hobbs, H.H., Jr (1974). Synopsis of the families and genera of crayfish. *Smithson. Contr. Zool.* **No. 164**: i–iii, 1–32 [20].

Generic references: Austin, C.M. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in northern and eastern Australia: electrophoretic and morphological variation. *Aust. J. Zool.* **44**: 259–296; Austin, C.M. & Knott, B. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in south-western Australia: electrophoretic, morphological and habitat variation. *Aust. J. Zool.* **44**: 223–258.

Cherax barretti Clark, 1941

Cherax barretti Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [31 pl. 10. fig. 1].
Type data: holotype NMV ♂ (presumed lost).
Type locality: Japanese Creek, Wessell Is., NT.

Distribution: NT (N coastal); known only from type locality.
Ecology: freshwater; otherwise undocumented.

Cherax bicarinatus (Gray, 1845)

Astacus bicarinatus Gray, J.E. (1845). New species of the genus *Astacus*. pp. 405-411 *in* Eyre, E.J. (ed.) *Journal of Expedition of Discovery into Central Australia*. London [410].
Type data: lectotype BMNH 1968: 217, paralectotype(s) BMNH 1968: 218 4 specimens.
Subsequent designation: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.
Type locality: Port Essington, NT.

Distribution: NT (N coastal); known only from type locality.
Ecology: burrowing, coastal streams, freshwater; freshwater pools and streams.
References: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 (description); Davie, P., this work (there has been much speculation about the identity of this taxon. Preserved material lent to Ellen Clark by the Natural History Museum and said to belong to the type series appears to have been the south-western Australian species, *C. preissii* (Erichson, 1846) rather than *C. bicarinatus*. Subsequently, she treated the two as synonyms. The dry specimen nominated by Riek (1969) *op. cit.* as 'lectoholotype' appears to match the specimen figured by Gray in his original description (based on examination of the types in the BMNH by J.W. Short). Riek's assertion that *C. bicarinatus* is a valid species allied to *C. quadricarinatus* and *C. rhynchotus* rather than *C. preissii* appears correct (J.W. Short, pers. comm.)).

Cherax cairnsensis Riek, 1969

Cherax cairnsensis Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [914].
Type data: holotype AM P12837 ♂, paratypes AM P39910 ♀ (as allotype), AM P12838, AM P39909 1 ♀.
Type locality: near Anderson Street, Cairns, N QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, swamp, freshwater; tea tree swamps, lentic waters.

Cherax cartalacoolah Short, 1993

Cherax cartalacoolah Short, J.W. (1993). *Cherax cartalacoolah*, a new species of freshwater crayfish (Decapoda: Parastacidae) from Northeast Australia. *Mem. Qld Mus.* **33**(1): 55–59 [55 figs 1–3, 4A,B].
Type data: holotype QM W18224 ♂, paratypes QM W18225 ♀ (as allotype), QM W17231 ♀, QM W17234 ♂, QM W18223 ♀, QM W18226 ♂, QM W18228 4 ♂.
Type locality: Cape Flattery, second creek S of headland.

Distribution: QLD (NE coastal); known only from type locality.
Ecology: burrowing, freshwater; lentic waters, in burrows near water line of lagoons, creeks and drainage channels, peaty sand, acidic water.

Cherax crassimanus Riek, 1967

Cherax crassimanus Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [119 fig. 5d, pl. 3B].
Type data: holotype WAM 38-66 ♂, paratypes WAM 39-66 ♀ (as allotype), WAM 62-66 to 76-66 3 specimens, AM P15319 4 specimens.
Type locality: Beedelup Falls, Pemberton area, WA.

Distribution: WA (SW coastal); known only from limital area, Augusta–Walpole region.
Ecology: burrowing, freshwater, permanent pond.
Reference: Austin, C.M. & Knott, B. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in south-western Australia: electrophoretic, morphological and habitat variation. *Aust. J. Zool.* **44**: 223–258 (suggested that *C. crassimanus* is a possible synonym of *C. quinquecarinatus*).

Cherax cuspidatus Riek, 1969

Cherax cuspidatus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [913 fig. 15F].
Type data: holotype AM P15734 ♂, paratypes AM P15735 ♀ (as allotype), AM P15736 ♀.
Type locality: 32 km S of Port Macquarie, NSW.

Distribution: NSW (SE coastal); known only from limital area.
Ecology: burrowing, freshwater.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat and photograph); ~~Davies, P., this work~~ (Davie, P., this work (*Cherax cuspidatus* Reik, 1969 may prove to be synonymous with *C. dispar*).

Cherax davisi Clark, 1941

Cherax davisi Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [33 pl. 10 fig. 3].
Type data: syntypes NMV J877 5 specimens.
Type locality: Dumaresq Creek, Armidale, NSW.

Distribution: NSW (SE coastal), QLD (NE coastal); known only from limital area, Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 listed the distribution as 'inland areas extending north from Armidale to the Dawson River, Qld' and also noted a record from Wallabadah, NSW.
Ecology: burrowing, freshwater.
Reference: Davie, P., this work (*Cherax davisi* Clark, 1941 is a member of the *C. destructor* species complex, and arguably a junior subjective synonym of that species, see Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79 and Austin, C.M. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in northern and eastern Australia: electrophoretic and morpho-logical variation. *Aust. J. Zool.* **44**: 259–296: [279]).

Cherax depressus Riek, 1951

Cherax depressus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [375 figs 7–9].
Type data: holotype AM P11964 ♂, paratypes AM P11965 ♀ (as allotype), AM P11966 100 specimens.
Type locality: Mt Coot-tha, Brisbane, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, freshwater; ephemeral waters including acidic swamps, burrows connected to open water or the water table.
References: Davie, P., this work (the '*depressus*' species complex, also includes *C. cairnsensis*, *C. gladstonensis*, *C. wasselli*, and *C. urospinosus*, all of Riek, 1969; there is strong evidence that at least some of these taxa should be synonymised but this requires further study); Short, J.W. (1995). Freshwater and terrestrial Crustaceans. pp. 45–54 *in*, *Wildlife of Greater Brisbane.* Brisbane : Queensland Museum 340 pp. [50] (colour photo and diagnostic characters).

Cherax destructor Clark, 1936

Common Yabbie, Inland Yabbie, Western Yabbie

Taxonomic decision for subspecific arrangement: Campbell, N.J.H., Geddes, M.C. & Adams, M. (1994). Genetic variation in yabbies, *Cherax destructor* and *C. albidus* (Crustacea: Decapoda: Parastacidae), indicates the presence of a single, highly sub-structured species. *Aust. J. Zool.* **42**(6): 745–760.

Distribution: NSW (Murray-Darling basin), QLD (Lake Eyre basin, Murray-Darling basin), SA (Lake Eyre basin, Murray-Darling basin, S Gulfs), VIC, WA (SW coastal); known only from limital area.
References: Sokol, A. (1987). Yabbies at Dalhousie, Northern South Australia: Morphological evidence for long term isolation. *Trans. R. Soc. S. Aust.* **111**: 207–209 (evidence for long term isolation); Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79.

Cherax destructor albidus Clark, 1936

White Yabbie

Cherax albidus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [28 pl. I(4), VI(24)].

Type data: lectotype NMV J13414 1 specimen, paralectotypes NMV J872 2 specimens, NMV J11877–78 21 specimens.
Type locality: Nurrabiel, 25 miles SW of Horsham, VIC.

Distribution: SA (SE coastal), VIC (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: burrowing, freshwater.
References: Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79 (considered this a valid species distinct from *C. destructor* using morphological criteria); Campbell, N.J.H., Geddes, M.C. & Adams, M. (1994). Genetic variation in yabbies, *Cherax destructor* and *C. albidus* (Crustacea: Decapoda: Parastacidae), indicates the presence of a single, highly sub-structured species. *Aust. J. Zool.* **42**(6): 745–760 (found a subspecific level of genetic difference from *C. destructor* and suggested that *C. albidus* should be treated as a subspecies); Austin, C.M. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in northern and eastern Australia: electrophoretic and morphological variation. *Aust. J. Zool.* **44**: 259–296 [291] (noted that F1 hybrids produce a viable F2 generation and therefore full species status cannot be recognised).

Cherax destructor destructor Clark, 1936

Cherax destructor Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [26 pl. I(3, 5), pl. V(23)].
Type data: lectotype NMV J871, paralectotypes NMV J1558, NMV J13415 1 specimen, NMV J10881 24 specimens, NMV J10887 28 specimens, NMV J1559, NMV J11881–903 54 specimens.
Type locality: Melbourne University pond, VIC.

Distribution: NSW (Murray-Darling basin), QLD (Lake Eyre basin, Murray-Darling basin), SA (Lake Eyre basin, Murray-Darling basin, S Gulfs), VIC, WA (SW coastal); known only from limital area, wide-ranging inland and southern Australia, in endorheic catchments, is now widely translocated for aquaculture, introduced to WA.
Ecology: burrowing, detritus-feeder, freshwater, nocturnal, trade (aquaculture, food); lotic and lentic freshwater, in permanent and ephemeral water bodies, abundant in billabongs, swamps and bore drains, burrows in, or connected to, open water.
References: Sokol, A. (1987). Yabbies at Dalhousie, Northern South Australia: Morphological evidence for long term isolation. *Trans. R. Soc. S. Aust.* **111**: 207–209; Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79.

Cherax dispar Riek, 1951

Taxonomic decision for subspecific arrangement: Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 (there is debate over the validity of the subspecies and, although listed here, they are presently not generally recognised).

Distribution: QLD (NE coastal); known only from limital area, between Agnes Water (based on QM record) and Brisbane River, SE QLD, including large offshore sand islands.
Ecology: burrowing, freshwater; in permanent freshwater, including perched lakes and large coastal streams, short burrows in or connected to open water.
References: Davie, P., this work (*Cherax dispar* Reik, 1951 may prove to be synonymous with *C. cuspidatus*); Short, J.W. (1995). Freshwater and terrestrial Crustaceans. pp. 45–54 *in*, *Wildlife of Greater Brisbane*. Brisbane : Queensland Museum 340 pp. [51] (colour photo and diagnostic characters).

Cherax dispar crassus Riek, 1951

Cherax dispar crassus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [372].
Type data: holotype AM P11962 ♂, paratype(s) AM P11963 4 specimens.
Type locality: Caboolture, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, freshwater; lotic.

Cherax dispar dispar Riek, 1951

Cherax dispar Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [371 fig. 2–3].
Type data: holotype AM P11956 ♂, paratypes AM P11957 ♀ (as allotype), AM P11958 100 specimens.
Type locality: Sandy Creek, Moorooka, Brisbane, QLD.

Distribution: QLD (NE coastal); known only from limital area, SE QLD, Brisbane River to Elliot River and offshore islands.
Ecology: burrowing, freshwater; lentic and lotic waters.

Cherax dispar elongatus Riek, 1951

Cherax dispar elongatus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [372 fig. 4].
Type data: holotype AM P11959 ♂, paratypes AM P11960 ♀ (as allotype), AM P11961 30 specimens.
Type locality: Lake McKenzie, Fraser Island, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, lentic.

Cherax esculus Riek, 1956

Cherax esculus Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [6].
Type data: holotype AM P12797 ♂, paratypes AM P12798 ♀ (as allotype), AM P12799 5 specimens.
Type locality: Peel River at Nundle, NSW.

Distribution: NSW (Murray-Darling basin); known only from limital area.
Ecology: burrowing, freshwater.
References: Davie, P., this work (this species is arguably a junior subjective synonym of *C. destructor*); Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79 (found little support for the distinction of this species from *C. destructor*).

Cherax glaber Riek, 1967

Cherax glaber Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [120 fig. 5f, pl. 4B].
Type data: holotype WAM 40-66 ♂, paratypes WAM 41-66 ♀ (as allotype), WAM 75-66 to 79-66 5 specimens, AM P15326 3 specimens.
Type locality: 12 miles N of Augusta, WA.

Distribution: WA (SW coastal); known only from limital area, Augusta region.
Ecology: burrowing, freshwater; swampy areas with sedges, as the swamp dries out the burrows are sealed with a mud chimney.

Cherax glabrimanus Riek, 1967

Cherax glabrimanus Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [117 fig. 5c, pl. 3A].
Type data: holotype WAM 34-66 ♂, paratypes WAM 35-66 ♀ (as allotype), WAM 42-66 to 49-66 8 specimens, AM P15317.
Type locality: 16 km S of Yallingup, WA.

Distribution: WA (SW coastal); known only from limital area.
Ecology: burrowing, freshwater.
Reference: Austin, C.M. & Knott, B. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in south-western Australia: electrophoretic, morphological and habitat variation. *Aust. J. Zool.* **44**: 223–258 (suggested that *C. glabrimanus* is a possible synonym of *C. quinquecarinatus*).

Cherax gladstonensis Riek, 1969

Cherax gladstonensis Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [915].
Type data: holotype AM P12833 ♂, paratypes AM P12834 ♂, AM P17809 ♀.
Type locality: Railway pumping station, Gladstone, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, freshwater; ephemeral waters including acidic swamps, burrows connected to open water or the water table.
Reference: Davie, P., this work (a member of the *C. depressus* complex, *sensu* Short & Davie (1993)).

Cherax neocarinatus Riek, 1967

Cherax neocarinatus Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [118].
Type data: holotype WAM 36-66 ♂, paratypes WAM 37-66 ♀ (as allotype), WAM 50-66 to 60-66 11 specimens, AM P15325.
Type locality: 16 km E of Blackwood River, WA.

Distribution: WA (SW coastal); known only from limital area.
Ecology: burrowing, freshwater.
Reference: Austin, C.M. & Knott, B. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in south-western Australia: electrophoretic, morphological and habitat variation. *Aust. J. Zool.* **44**: 223–258 (suggested that *C. neocarinatus* is a possible synonym of *C. quinquecarinatus*).

Cherax neopunctatus Riek, 1969

Cherax neopunctatus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [913].
Type data: holotype AM P17813 ♂, paratypes AM P17814 ♀ (as allotype), AM P15496 22 specimens.
Type locality: Coff's Harbour Golf Course, NSW.

Distribution: NSW (SE coastal); known only from limital area.
Ecology: burrowing, detritus-feeder, freshwater, nocturnal.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales*. Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat and photograph).

Cherax nucifraga Short, 1991

Cherax nucifraga Short, J.W. (1991). *Cherax nucifraga*, a new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from the Northern Territory, Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **8**(1): 115–120 [115 figs 1–4].
Type data: holotype NTM Cr.007430 ♂.
Type locality: Palm Springs, near Channel Point, NT (ex stomach of Barramundi).

Distribution: NT (N coastal); known only from type locality.
Ecology: burrowing, freshwater; low lying, floodplain country very close to the sea.

Cherax parvus Short & Davie, 1993

Cherax parvus Short, J.W. & Davie, P.J.F. (1993). Two new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 69–80 [70 figs 1–4].
Type data: holotype QM W18121 ♂, paratypes QM W18123 ♀, QM W18133 6♂ 2♀, QM W17494 10♂ 4♀.
Type locality: O'Leary Creek, tributary of the Tully River above Koombooloomba Dam.

Distribution: QLD (NE coastal); known only from type locality, Upper Tully River catchment, Cardwell Range.
Ecology: freshwater, rock bottom, sand bottom; rainforest streams, low to moderate water flow, leaf litter, short burrows in open water.

Cherax plebejus (Hess, 1865)

Astacoides plebejus Hess, W. (1865). Beiträge zur Kenntniss der Decapoden-Krebse Ost-Australiens. *Arch. Naturgesch.* **31**: 127–173 pls 6–7 [164].
Type data: syntypes RMNH D986, ZMG* (a syntype was originally lodged in the ZMG under the catalogue number 124a, but it now appears to be lost and is not present in the SMF with the rest of the surviving Hess types).
Type locality: Sydney (presumed to be in error), NSW, see Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121.

Chaeraps intermedius Smith, G.W. (1912). The freshwater crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1912**: 144–170 [168 pl. 24 fig. 2, pl. 27].
Type data: syntypes NMV J11623 2 specimens.
Type locality: Western Australia.

Taxonomic decision for synonymy: Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [116].

Distribution: WA (SW coastal); known only from limital area.
Ecology: burrowing, freshwater; permanent pond, burrows in swampy ground that often dries out.
Reference: Austin, C.M. & Knott, B. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in south-western Australia: electrophoretic, morphological and habitat variation. *Aust. J. Zool.* **44**: 223–258 (suggested that *C. plebejus* is a synonym of *C. preissii*).

Cherax preissii (Erichson, 1846)

Astacus (Cheraps) preissii Erichson, W.F. (1846). Uebersicht der Arten der Gattung *Astacus*. *Arch. Naturgesch.* **xii**: 86–103, 375–377 [101].
Type data: neotype AM P2749 ♂.
Subsequent designation: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [377].
Type locality: near Albany, WA.

Cheraps preissii angustus McCulloch, A.R. (1914). Revision of the Freshwater Crayfishes of South Western Australia. *Rec. West. Aust. Mus.* 1(3): 228–235 pls 32, 35 [231 pl. 32] [as *Cheraps preissii* var. *angustus*].
Type data: lectotype AM P2749 ♂, paralectotypes AM P2750 ♀, AM P2751 ♀ (as allotype).
Subsequent designation: Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [377].
Type locality: Albany, WA.

Taxonomic decision for synonymy: Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388; Davie, P., this work (Erichson's types are considered lost; Riek (1951) took the unusual step of 'erecting the types of *Cheraps preissii* var. *angustus* McCulloch as the neotypes' (his words) of *C. preissii*, thus *C. preissii angustus* McCulloch, became a junior objective synonym of *Cherax preissii* (Erichson)).

Distribution: WA (SW coastal); known only from limital area, north of Perth to east of Albany, mainly inland.
Ecology: burrowing, freshwater, littoral; lotic and lentic freshwater, swamps and creeks that dry in summer.
References: Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 (as *Cherax bicarinatus angustus*); Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [900].

Cherax punctatus Clark, 1936

Cherax punctatus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [29 pls I(6), VI(25)].
Type data: syntypes NMV J890 1 specimen, NMV J11874 6 specimens.
Type locality: Cooran, QLD (not Coorari as stated by Clark), Eumundi, QLD.

Distribution: QLD (NE coastal); known only from limital area, Mary River catchment, SE QLD.
Ecology: burrowing; burrows found on clay hillsides independent of open water or the water table.
Reference: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 (appears to have confused this species with *C. depressus*).

Cherax quadricarinatus (von Martens, 1868)

Redclaw

Astacus quadricarinatus Martens, E. von (1868). Über einige neue Crustaceen. *Mber. K. Preuss. Akad. Wiss.* **1868**: 608–615 [617].
Type data: type status unknown.
Type locality: Cape York, QLD.

Distribution: NT (N coastal), QLD (N Gulf, NE coastal); known only from limital area, in exorheic drainage systems from Daly River, NT, to Normanby River, NE QLD, now translocated widely in eastern QLD.

Ecology: burrowing, coastal streams, freshwater, trade (aquaculture, food); permanent freshwater, absent from acidic swamps and perched lakes, short burrows in, or connected to, open water.

Cherax quinquecarinatus (Gray, 1845)

Astacus quinquecarinatus Gray, J.E. (1845). New species of the genus *Astacus*. pp. 405-411 *in* Eyre, E.J. (ed.) *Journal of Expedition of Discovery into Central Australia.* London [410].
Type data: lectotype BMNH 1968:219 ♂, paralectotype(s) BM 1968: 220 2 specimens*.
Subsequent designation: Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121.
Type locality: Swan River, WA.

Distribution: WA (SW coastal); known only from limital area, N of Perth to W of Albany, mainly coastal.
Ecology: burrowing, freshwater; short burrows or under stones on stream bed, when stones available there is little attempt at burrowing.
References: Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [113]; Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Cherax rhynchotus Riek, 1951

Cherax rhynchotus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [377 fig. 12].
Type data: holotype AM P4237 ♂, paratypes AM P39912 ♀ (as allotype), AM P39913 5 specimens.
Type locality: Mapoon, Gulf of Carpentaria, QLD.

Distribution: QLD (N Gulf, NE coastal); known only from limital area, N Cape York and Badu Island, Torres Strait.
Ecology: burrowing, freshwater; acidic coastal swamps and perched lakes, burrows connected to open water or water table.

Cherax robustus Riek, 1951

Cherax robustus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [376 fig. 10].
Type data: holotype AM P11967 ♂, paratypes AM P11968 ♀ (as allotype), AM P11969 49 specimens, AM P12831 22 specimens.
Type locality: Lake Birrabeen, Fraser Island.

Distribution: QLD (NE coastal); known only from limital area, Fraser Island and Cooloola to N Stradbroke Island, SE QLD.
Ecology: burrowing, freshwater; coastal sand dune wetlands, acid water, burrows connected to open water or water table.
Reference: Short, J.W. (2000). Freshwater and terrestrial Crustacea. pp. 58–67 *in, Wildlife of Tropical North Queensland.* Queensland Museum : South Brisbane 368 pp. [52] (colour photo and diagnostic characters).

Cherax rotundus Clark, 1941

Cherax rotundus Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [34].
Type data: syntypes NMV J11624.
Type locality: Muddy Creek, Severn, QLD [Severnlea, south of Stanthorpe, on the Severn River], see Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Cherax rotundus setosus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [385].
Type data: holotype AM P4739 ♂, paratype(s) AM P4740 1 ♂.
Type locality: Booral, Karuah River, Port Stephens, NSW.
Taxonomic decision for synonymy: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [902].

Distribution: NSW (SE coastal), QLD (Murray-Darling basin); known only from limital area.
Ecology: burrowing, freshwater.
References: Sokol, A. (1988). Morphological variation in relation to the taxonomy of the *destructor* Group of the genus *Cherax*. *Invertebr. Taxon.* **2**: 55–79 [71, 72] (considered that the type locality given by Clark (1941) may be erroneous as it has not been subsequently collected from this locality; also noted a number of significant morphological differences between the two nominal species and did not support synonymising the two taxa); Austin, C.M. (1996). Systematics of the freshwater crayfish genus *Cherax* Erichson (Decapoda: Parastacidae) in northern and eastern Australia: electrophoretic and morphological variation. *Aust. J. Zool.* **44**: 259–296 (also considered that the type locality given by Clark (1941) may be erroneous as, subsequently, it has not been collected from this locality; p. 280 notes that *C. rotundus* is only now known from the environs of Newcastle, NSW; on the basis of electrophoretic data, he also suggested that this should be a subspecies of *C. destructor*).

Cherax tenuimanus (Smith, 1912)

Marron

Chaeraps tenuimanus Smith, G.W. (1912). The freshwater crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1912**: 144–170 [166 pls 22, 27 fig. 30].
Type data: lectotype BMNH ♂.
Type locality: Margaret River, WA.

Distribution: WA (SW coastal); known only from limital area, cultured in WA outside of natural range and in SA, also widely cultured in QLD until the late

1980s but over the last decade most farmers have switched to Redclaws.
Ecology: burrowing, freshwater, trade (aquaculture, food); typically in deeper water.
References: Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [112]; Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Cherax urospinosus Riek, 1969

Cherax urospinosus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [916].
Type data: holotype AM P12846 ♂.
Type locality: Indooroopilly, Brisbane, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, freshwater.
Reference: Short, J.W. & Davie, P.J.F. (1993). Two new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 69–80 (a member of the *C. depressus* species complex).

Cherax wasselli Riek, 1969

Cherax wasselli Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [914].
Type data: holotype AM P15737 ♂, paratype(s) AM P15738.
Type locality: Bridge Spring, between Rocky River and Scrubby Creek, Cape York, QLD.

Distribution: QLD (NE coastal); known only from limital area.
Ecology: burrowing, freshwater.
Reference: Short, J.W. & Davie, P.J.F. (1993). Two new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 69–80 (a member of the *C. depressus* species complex).

Engaeus Erichson, 1846

Engaeus Erichson, W.F. (1846). Uebersicht der Arten der Gattung *Astacus*. *Arch. Naturgesch.* **xii**: 86–103, 375–377 [88, 89, 102] [first introduced as a subgenus of *Astacus*; elevated to generic rank by Huxley, T.H. (1879). On the classification and the distribution of the crayfishes. *Proc. Zool. Soc. Lond.* **1878**: 752–788 (769); gender masculine].
Type species: *Astacus (Engaeus) fossor* Erichson, 1846 by subsequent designation, see Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [37].

Austroastacus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [51] [gender masculine].
Type species: *Engaeus hemicirratulus* Smith & Schuster, 1913 by original designation.

Pseudengaeus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [47] [gender masculine].
Type species: *Pseudengaeus strictifrons* Clark, 1936 by original designation.

Taxonomic decision for synonymy: Hobbs, H.H., Jr (1974). Synopsis of the families and genera of crayfish. *Smithson. Contr. Zool.* **No. 164**: i–iii, 1–32 [20].

Generic reference: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614.

Engaeus affinis Smith & Schuster, 1913

Engaeus affinis Smith, G.W. & Schuster, E.H.J. (1913). The genus *Engaeus*, or the land-crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1913**: 112–127 [120 pls 17, 18 fig. 23].
Type data: syntypes NMV J3846 1 specimen, NMV J3849 1 specimen, NMV J3851 1 specimen, NMV J3853 4 specimens, NMV J4057 2 specimens, NMV J3844 5 specimens, NMV J3921 2 specimens; other probable syntypes NMV J3845, NMV J4066, NMV J4088.
Type locality: VIC: Warburton, (Fernshaw?), Upper Yarra, near Healesville, Warburton, Badger Creek, W face of Mt Dandenong, see Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Engaeus villosus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [44 pl. I fig. 10, pl. IX].
Type data: syntypes NMV J2903 3 specimens.
Type locality: Acheron River Flats, near Marysville, VIC.

Taxonomic decision for synonymy: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [879].

Distribution: VIC (SE coastal); known only from limital area.
Ecology: burrowing, swamp.
Reference: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614.

Engaeus australis Riek, 1969

Engaeus australis Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [905 figs 14D, 17B].
Type data: holotype NMV J910 ♂, paratype(s) NMV J3910 ♂.
Type locality: Lilly Pilly Gully, Wilson's Promontory, VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus cisternarius Suter, 1977

Engaeus cisternarius Suter, P.J. (1977). The biology of two species of *Engaaeus* (Decapoda: Parastacidae) in Tasmania. I. Species description of *Engaeus cisternaruis* sp. nov. *Aust. J. Mar. Freshwat. Res.* **28**(1): 77–84 [77 figs 1–3].
Type data: holotype TMH G1756 ♂, paratypes TMH G1757 ♀ (as allotype), TMH G1758, ♀, TMH G1759 2♂, TMH G1760 2♂ 1 juvenile.
Type locality: tributary of the Dip River, NW TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater; with clay bottom and rainforest.
Reference: Horwitz, P. & Knott, B. (1991). The faunal assemblage in freshwater crayfish burrows in sedgeland and forest at Lighting Plains, Western Tasmania. *Pap. Proc. Roy. Soc. Tasmania* **125**: 29–32 (variations and species occurrence and abundance in faunal assemblages of crayfish burrows).

Engaeus cunicularius (Erichson, 1846)

Astacus (Engaeus) cunicularius Erichson, W.F. (1846). Uebersicht der Arten der Gattung *Astacus*. *Arch. Naturgesch.* **xii**: 86–103, 375–377 [102].
Type data: holotype ZMB 1122.
Type locality: Tasmania, see Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Distribution: TAS; known only from limital area, endemic.
Ecology: freshwater.
References: Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 (description); Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [878] (as *Engaeus cunicularius*); Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614.

Engaeus curvisuturus Horwitz, 1990

Engaeus curvisuturus Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [498 figs 18, 43].
Type data: holotype NMV J14695 ♂, paratypes NMV J14696 ♀ (as allotype), NMV J14697 2 specimens.
Type locality: Yarra River plains, near bridge over Yarra River at Warburton.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: burrowing, freshwater.

Engaeus cymus (Clark, 1936)

Austroastacus cymus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [53, text-fig. 2].
Type data: syntypes NMV J895 7 specimens (only 7 from the 38 examined by Clark are in the collection).
Type locality: Buffalo River, Dondangadale, VIC.

Engaeus parvulus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [386].
Type data: holotype AM P11973 ♂, paratypes AM P11974 ♀ (as allotype), AM P11975.
Type locality: Blundells, Condor Creek, ACT.

Taxonomic decision for synonymy: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [489].

Distribution: NSW (Murray-Darling basin, SE coastal), VIC (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: freshwater; creeks or seepages in dry or wet sclerophyll forests, may be found at base of small trees where roots create water pockets, or under rotting logs, also recorded from a cave.

Engaeus disjuncticus Horwitz, 1990

Engaeus disjuncticus Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [544 figs 29, 51].
Type data: holotype TMH G3199 ♂, paratypes TMH 3200 ♀ (as allotype), NMV J14699 ♀, TMH G3201, TMH G3202.
Type locality: Rubicon River, due E of Elizabeth Town on Weetah Rd, N TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus fossor (Erichson, 1846)

Astacus (Engaeus) fossor Erichson, W.F. (1846). Uebersicht der Arten der Gattung *Astacus*. *Arch. Naturgesch.* **xii**: 86–103, 375–377 [102].
Type data: lectotype ZMB 1123, paralectotype(s) ZMB 1124. Subsequent designation: Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58.
Type locality: Tasmania.

Engaeus ignotus Clark, E. (1939). Tasmanian Parastacidae. *Pap. Proc. Roy. Soc. Tasmania* **1938**: 117–128 [124 pl. 13 figs 8, 8a].
Type data: syntypes NMV J878 3 specimens.
Type locality: Smithton, TAS.

Taxonomic decision for synonymy: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [878].

Distribution: TAS, VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus fultoni Smith & Schuster, 1913

Engaeus fultoni Smith, G.W. & Schuster, E.H.J. (1913). The genus *Engaeus*, or the land-crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1913**: 112–127 [126].
Type data: syntypes NMV J3967 1 specimen, NMV J3968 1 specimen.
Type locality: Cape Otway forest and Ferntree Gully, VIC.

Distribution: VIC (Murray-Darling basin); known only from limital area.
Ecology: freshwater.
Reference: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614.

Engaeus granulatus Horwitz, 1990

Engaeus granulatus Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [556 figs 31, 53].
Type data: holotype TM G3203 ♀, paratypes TM G3204 ♂ (as allotype), TM G3205, NMV J14701 2 specimens, NMV J14702 2 specimens.
Type locality: Browns Creek, upstream from road, at mouth of creek, E of Port Sorell, TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus hemicirratulus Smith & Schuster, 1913

Engaeus hemicirratulus Smith, G.W. & Schuster, E.H.J. (1913). The genus *Engaeus*, or the land-crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1913**: 112–127 [123 pl. 20–22 figs 34, 35].
Type data: syntypes NMV J903, NMV J3991 5 specimens, NMV J3995 1 specimen, NMV J3999 1 specimen, NMV J4001 1 specimen, NMV J4101 1 specimen, NMV J4000.
Type locality: VIC: Thorpdale; Warragul, Gippsland; near Thorpdale, Gippsland; Moyarra, S Gippsland; Trafalgar, see Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Engaeus jumbunna Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [905 fig. 14E].
Type data: holotype NMV J903 1 specimen.
Type locality: Kongwak, near Jumbunna, S Gippsland, VIC.

Taxonomic decision for synonymy: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [503].

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus karnanga Horwitz, 1990

Engaeus karnanga Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [465 figs 11, 49].
Type data: holotype NMV J14703 ♀, paratype(s) NMV J14704 ♂ (as allotype).
Type locality: Lilly Pilly Gully, Wilsons Promontory, VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: burrowing, freshwater, swamp.

Engaeus laevis (Clark, 1941)

Geocharax laevis Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [35 pl. X fig. 4].
Type data: holotype NMV J11617 ♀, paratype(s) NMV J2905 1 specimen.
Type locality: Bunyip, VIC.

Taxonomic decision for new combination: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [889].

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus lengana Horwitz, 1990

Engaeus lengana Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [566 figs 33, 44].
Type data: holotype TM G3208 ♂, paratypes TM G3209 ♀ (as allotype), NMV J14708 1 specimen, NMV J14709 1 specimen.
Type locality: E coast of Rocky Cape, National Park, TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater, interstitial waters; interstitial waters.

Engaeus leptorhynchus Clark, 1939

Engaeus leptorhynchus Clark, E. (1939). Tasmanian Parastacidae. *Pap. Proc. Roy. Soc. Tasmania* **1938**: 117–128 [122 pl. 13 figs 6, 6a].
Type data: syntypes NMV J3917 1 specimen (none of Clark's types can be found).
Type locality: Pioneer Mine, Derby, TAS.

Distribution: TAS; known only from limital area.
Ecology: freshwater.

Engaeus lyelli (Clark, 1936)

Geocharax lyelli Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [32, text-fig. 1].
Type data: lectotype NMV J904 1 specimen, paralectotype(s) NMV J906 1 specimen.
Type locality: Gisborne, VIC.

Taxonomic decision for new combination: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [880].

Distribution: VIC (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus mairener Horwitz, 1990

Engaeus mairener Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [550 figs 30, 53].
Type data: holotype TM G3210 ♂, paratypes TM G3211 ♀ (as allotype), TM G3212, TM G3213, NMV J14715 1 specimen, NMV J14716 1 specimen.
Type locality: Tea-tree swamp, off Big Hill Rd, 1 km E of Lefroy, NE TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus mallacoota Horwitz, 1990

Engaeus mallacoota Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [573 figs 34, 50].
Type data: holotype NMV J14712 1 specimen, paratypes NMV J14713 1 specimen (as allotype), NMV J14714 1 specimen, TM G3214.
Type locality: Double Creek, along Nature Trail, in Croajingolong National Park, on Genoa-Mallacoota Rd, E VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: burrowing, freshwater.

Engaeus martigener Horwitz, 1990

Engaeus martigener Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [578 fig. 35, 52].
Type data: holotype TM G3215, paratypes TM G3216 (as allotype), NMV J14717 1 specimen, NMV J14718 1 specimen.
Type locality: Fotheringate Creek, at Strzelecki Peaks, Flinders Is., SA.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus merosetosus Horwitz, 1990

Engaeus merosetosus Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [470 figs 12, 45].
Type data: holotype NMV J14719 ♂, paratypes NMV J14720 ♀ (as allotype), NMV J14721 1 specimen, NMV J14722 1 specimen.
Type locality: tributary of Waurn Ponds Creek, 2 km N of Mt Moriac, W VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: burrowing, freshwater.

Engaeus nulloporius Horwitz, 1990

Engaeus nulloporius Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [561 figs 32, 53].
Type data: holotype TM G3219 ♂, paratypes TM G3220 ♀ (as allotype), TM G3221, NMV J14723 1 specimen, NMV J14724 1 specimen.
Type locality: Tea-tree swamp, 1.5 km S of 3-way corner (Frankford, Glengarry, Birralee) of road, N TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater, swamp.

Engaeus orientalis Clark, 1941

Engaeus orientalis Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [39 pl. X fig. 8].
Type data: syntypes NMV J11615 21 specimens, NMV J11616 2 specimens (other material presumed lost).
Type locality: 11 miles N of Cann River in Cann River Valley, VIC.

Distribution: NSW (SE coastal), VIC (SE coastal); known only from limital area.
Ecology: burrowing, freshwater; creeks in wet sclerophyll forest or warm temperate rainforest, also dry sclerophyll forest creeks and tea tree swamps, plant roots.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat).

Engaeus orramakunna Horwitz, 1990

Engaeus orramakunna Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [583 figs 36, 52].
Type data: holotype TM G3222 ♂, paratypes TM G3223 ♀ (as allotype), TM G3224, TM G3225, NMV J14727 1 specimen, NMV J14728 1 specimen.
Type locality: tributary of Pipers River on Lilydale Rd, about 3 km S of Lilydale, NE TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus phyllocercus Smith & Schuster, 1913

Engaeus phyllocercus Smith, G.W. & Schuster, E.H.J. (1913). The genus *Engaeus*, or the land-crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1913**: 112–127 [122 pls 19, 21 fig. 30].
Type data: syntypes NMV J3953 2 specimens, NMV J3955 2 specimens, NMV J11620–22 3 specimens.
Type locality: VIC: Narracan, near Narracan River, Gippsland; Narracan River, Gippsland; Thorpdale and small creek near Thorpdale; Trafalgar, see Riek, E.F. (1969).

The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.
References: Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 (description); Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614.

Engaeus quadrimanus Clark, 1936

Engaeus quadrimanus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [41 pl. VIII fig. 32].
Type data: lectotype NMV J15711 1 specimen, paralectotypes NMV J879 2 specimens, NMV J3950–1 2 specimens, NMV J3928 1 specimen.
Subsequent designation: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [455].
Type locality: Warragul, Gippsland, VIC.

Engaeus marmoratus Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [39 pl. X fig. 7].
Type data: type status unknown (presumed lost).
Type locality: South Buchan, VIC.

Taxonomic decision for synonymy: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [455].

Distribution: VIC (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: burrowing, lentic, littoral; under stones in the shallow, marginal zone.

Engaeus rostrogaleatus Horwitz, 1990

Engaeus rostrogaleatus Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [588 figs 37, 47].
Type data: holotype NMV J14733 1 specimen, paratypes NMV J14734 1 specimen (as allotype), TMH G3226, TMH G3227.
Type locality: Ryton Junction on Midland Highway, about 30 kms due S of Morwell, Eastern Strzelecki Ranges, VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: burrowing, freshwater; in wet sclerophyll forest.

Engaeus sericatus Clark, 1936

Engaeus sericatus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [40 pl. VIII fig. 34].
Type data: syntypes NMV J905 2 specimens, NMV J3939 3 specimens, NMV J3941 1 specimen, NMV J3942 4 specimens (possible syntype AM P13216).
Type locality: VIC: Croydon, Mortlake and Warburton.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus spinicaudatus Horwitz, 1990

Engaeus spinicaudatus Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [594 figs 38, 53].
Type data: holotype TMH G3228 ♂, paratypes TMH G3229 ♀ (as allotype), NMV J14738 1 specimen, NMV J14737 1 specimen, TMH G3230.
Type locality: Surveyors Creek after Scottsdale on Old Waterhouse Rd, NE TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus sternalis (Clark, 1936)

Pseudengaeus sternalis Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [48 pl. IX fig. 41].
Type data: syntypes NMV J900 1 specimen (other types apparently lost).
Type locality: Warragul, Gippsland, VIC.

Distribution: VIC (SE coastal); known only from limital area, endemic.
Ecology: freshwater.
Reference: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [889].

Engaeus strictifrons (Clark, 1936)

Pseudengaeus strictifrons Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [47 pl. IX fig. 40].
Type data: syntypes NMV (presumed lost).
Type locality: Portland, VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.
Reference: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [887].

Engaeus tayatea Horwitz, 1990

Engaeus tayatea Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [599 figs 39, 52].
Type data: holotype TMH G3231, paratypes TMH G3232 (as allotype), NMV J14745 1 specimen, TMH G3233, NMV J14744 1 specimen.

Type locality: Pearly Brook near bridge on Pearly Brook Rd, 8 km W of Mt Horror, NE TAS.

Distribution: TAS; known only from limital area.
Ecology: burrowing, freshwater.

Engaeus tuberculatus Clark, 1936

Engaeus tuberculatus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [43 pl. IX fig. 39].
Type data: syntypes NMV J883 2 specimens (only 2 of Clark's 43 types can be found).
Type locality: Sherbrook Fall, VIC.

Engaeus connectus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [906 fig. 14F].
Type data: holotype NMV J882 ♂, paratypes ♀ (as allotype), NMV J11618 4 specimens (removed from J882).
Type locality: 2 miles S of Powelltown, Laver's Creek, on Noojee Road, VIC.

Taxonomic decision for synonymy: Horwitz, P. (1990). A taxonomic revision of species in the freshwater crayfish genus *Engaeus* Erichson (Decapoda: Parastacidae). *Invertebr. Taxon.* **4**(3): 427–614 [483].

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus urostrictus Riek, 1969

Engaeus urostrictus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [904 figs 14C, 17G].
Type data: holotype NMV J902 ♀, paratypes NMV J911 2 ♀, NMV J11619 3 (2 juveniles).
Type locality: Dandenong Creek, at Alpine Road, E of Melbourne, VIC.

Distribution: VIC (SE coastal); known only from limital area.
Ecology: freshwater.

Engaeus victoriensis Smith & Schuster, 1913

Engaeus victoriensis Smith, G.W. & Schuster, E.H.J. (1913). The genus *Engaeus*, or the land-crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1913**: 112–127 [121 pls 18–20 fig. 27].
Type data: lectotype (lost), paralectotypes NMV J3877 1 specimen, NMV J3895, NMV J3905 1 specimen, NMV J3897 1 specimen, NMV J3878 2 specimens, NMV J3879, NMV J3892 6 specimens, NMV J3888 1 specimen.
Subsequent designation: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.
Type locality: Dandenong Ranges, VIC.

Distribution: NSW (SE coastal), QLD (NE coastal), VIC (SE coastal); known only from limital area.
Ecology: burrowing, swamp, freshwater.

Reference: Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 (description).

Engaeus yabbimunna Horwitz, 1994

Engaeus yabbimunna Horwitz, P. (1994). A new species of the freshwater crayfish *Engaeus* Erichson (Decapoda: Parastacidae) from north-western Tasmania. *Mem. Mus. Vic.* **54**(2): 439–445 [439 fig. 1].
Type data: holotype NMV J34474 ♂, paratypes NMV J34475 ♀ (as allotype), QVM 10:11235 1 ♀, TMH G3529.
Type locality: Burnie Park, gully of Shorewell Creek below Oldacre Falls, TAS.

Distribution: TAS (Tas. coast); known only from type locality.
Ecology: burrowing, freshwater; creek sites where flood bed and seepage areas relatively undisturbed.

Engaewa Riek, 1967

Engaewa Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [106] [gender feminine].
Type species: *Engaewa subcoerulea* Riek, 1967 by original designation.

Generic references: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 (distribution); Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680 (revised generic diagnosis and key to species provided).

Engaewa pseudoreducta Horwitz & Adams, 2000

Engaewa pseudoreducta Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680 [670 figs 7C, 8B, 9B].
Type data: holotype WAM C23402 ♂, paratypes WAM C23401 ♀ (as allotype), WAM 4 ♂, 5 juveniles.
Type locality: near Osmington, NE of Margaret River, WA.

Distribution: WA (SW coastal); known only from limital area.
Ecology: burrowing, freshwater; typically burrow into sandy or loamy soil in heathlands dominated by myrtaceous shrubs.

Engaewa reducta Riek, 1967

Engaewa reducta Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [108 fig. 3].
Type data: holotype WAM C9503 ♂, paratypes WAM C9504 ♀ (as allotype), WAM C9605 ♂, AM P15741 1 ♀, 1 juvenile, WAM C9606 ♀, WAM C9607 ♂.
Type locality: N of Quindalup Common, near Dunsborough, SW WA.

Distribution: WA (SW coastal); known only from limital area, Cape Leeuwin-Naturaliste region, far SW WA.
Ecology: burrowing, freshwater.
Reference: Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680 (redescribed and figured).

Engaewa similis Riek, 1967

Engaewa similis Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [110 fig. 4].
Type data: holotype WAM C9505 ♀.
Type locality: Augusta, WA.

Distribution: WA (SW coastal); known only from limital area, Cape Leeuwin-Naturaliste region, far SW WA.
Ecology: burrowing, freshwater.
Reference: Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680 (redescribed and figured).

Engaewa subcoerulea Riek, 1967

Engaewa subcoerulea Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [107 fig. 2, pl. 1].
Type data: holotype WAM C9555 ♀, paratypes WAM C9601 1 intersex specimen, AM P15740 1 ♀ 1 intersex specimen, WAM C9602 ♀, WAM C9603 1 intersex specimen, WAM C9604 ♀.
Type locality: Inlet River, 24 km NW of Walpole, WA.

Distribution: WA (SW coastal); known only from limital area, Walpole-Shannon region, far SW WA.
Ecology: burrowing, sand bottom, swamp; found along margins of small streams and in and in roadside gutters.
Reference: Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680 (redescribed and figured).

Engaewa walpolea Horwitz & Adams, 2000

Engaewa walpolea Horwitz, P. & Adams, M. (2000). The systematics, biogeography and conservation status of species in the freshwater crayfish genus *Engaewa* Riek (Decapoda: Parastacidae) from south-western Australia. *Invertebr. Taxon.* **14**: 655–680 [673 figs 10A–J].
Type data: holotype WAM C23403 ♂, paratype(s) NMV J39560 ♂.
Type locality: The Knoll Scenic Drive, Walpole, WA.

Distribution: WA (SW coastal); known only from limital area, between Bow Bridge and Walpole, SW WA.
Ecology: burrowing, freshwater; restricted to seepages in forested areas, shallow burrows in organic rich soil.

Euastacus Clark, 1936

Euastacus Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [10] [gender masculine].
Type species: *Cancer serratus* Shaw, 1794 (= *Euastacus spinifer* (Heller, 1865; type designation was later changed to *Euastacus elongatus* Clark (= *E. armatus*), but this is invalid and original designation must stand, Davie, P., this work) by original designation.

Euastacoides Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [4] [gender masculine].
Type species: *Euastacoides setosus* Riek, 1956 by original designation.

Taxonomic decision for synonymy: Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [35].

Generic references: Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria. *Mem. Mus. Vic.* **47**(1): 1–57; Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (distribution—S and E Australia); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110.

Euastacus alienus Riek, 1969

Euastacus alienus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [907].
Type data: holotype AM P15722 ♀, paratypes AM P15723 ♂ (as allotype), AM P15724 1 juvenile.
Type locality: Bulahdelah Mtn, near Stroud, NSW.

Distribution: NSW (SE coastal); known only from limital area.
Ecology: freshwater.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat with photograph).

Euastacus armatus (von Martens, 1866)

Murray Cray

Astacus armatus Martens, E. von (1866). On a new species of *Astacus*. *Ann. Mag. Nat. Hist.* **17**(3): 359–360 [359].
Type data: syntypes ZMB*.
Type locality: Murray River, Australia.

Euastacus elongatus Clark, E. (1941). Revision of the genus *Euastacus* (Crayfishes, family Parastacidae), with notes on the distribution of certain species. *Mem. Natn. Mus. Vic.* **12**(1): 7–30, 7 pls [12 pl. 1].

Type data: syntypes NMV J874 1 specimen, NMV J6200 4 specimens, NMV J6201 1 specimen, NMV J6216 1 specimen.
Type locality: Murray River, Echuca and Jamieson River, VIC.

Taxonomic decision for synonymy: Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria. *Mem. Mus. Vic.* **47**(1): 1–57 [13].

Distribution: NSW (Murray-Darling basin, SE coastal), VIC (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: creeks, detritus-feeder, freshwater, omnivore, streams; also rivers in a variety of habitats including cleared pasture and dry and wet sclerophyll forests.
Reference: Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [18].

Euastacus australasiensis (H. Milne Edwards, 1837)

Astacus australasiensis Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [332].
Type data: syntypes MNHP 2 specimens*.
Type locality: Sydney area, NSW (as New Holland).

Astacoides nobilis Dana, J.D. (1852). *Crustacea. U.S. Exploring Expedition. During the years 1838, 1839, 1840, 1841, 1842.* Under the command of Charles Wilkes, U.S.N. Philadelphia : C. Sherman Vol. 13 1618 pp. [526 pl. 33 fig. 3a,b] [Pt 1: 1–685; Pt 2: 686–1618].
Type data: types lost in shipwreck of the sloop 'Peacock' in 1841.
Type locality: New South Wales.

Taxonomic decision for synonymy: Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [25].

Distribution: NSW (SE coastal); known only from limital area, Sydney-Blue Mountains region.
Ecology: swamp, freshwater; permanent creeks with rocky substrates, bordered by sclerophyll forest or rainforest feeds on decomposing plant material.
References: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [893]; Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat with photograph).

Euastacus balanensis Morgan, 1988

Euastacus balanensis Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [1 figs 3, 4].
Type data: holotype QM W10984 ♂, paratypes QM W10985 1♀, QM W10987 2♂, QM W10986 1♂ 1♀.
Type locality: tributary of Davies Creek, Lamb Range, Atherton Tableland.

Distribution: QLD (NE coastal); known only from limital area, Lamb and Bellenden Ker Ranges.
Ecology: freshwater; rainforest, high country above 800 m altitude.
Reference: Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus bidawalus Morgan, 1986

Euastacus bidawalus Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria. *Mem. Mus. Vic.* **47**(1): 1–57 [19 figs 10, 11].
Type data: holotype NMV J4526 ♂, paratype(s) AM P15313 2♂ 6♀.
Type locality: Chandlers Creek, near junction with Cann River, VIC.

Distribution: NSW (SE coastal), VIC (SE coastal); known only from limital area, E Gippsland, and far SW NSW.
Ecology: freshwater; with dry sclerophyll forest and heath on ridges.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat).

Euastacus bindal Morgan, 1989

Euastacus bindal Morgan, G.J. (1989). Two new species of the freshwater crayfish *Euastacus* Clark (Decapoda: Parastacidae) from isolated high country of Queensland. *Mem. Qld Mus.* **27**(2): 555–562 [555 fig. 2].
Type data: holotype QM W15582 ♀, paratype(s) QM W15582 ♂.
Type locality: Upper North Creek, Mt Elliot, NE QLD.

Distribution: QLD (NE coastal); known only from type locality.
Ecology: freshwater; flanked by rainforest, above 1000 m altitude.

Euastacus bispinosus Clark, 1941

Euastacus bispinosus Clark, E. (1941). Revision of the genus *Euastacus* (Crayfishes, family Parastacidae), with notes on the distribution of certain species. *Mem. Natn. Mus. Vic.* **12**(1): 7–30, 7 pls [22 pl. VII].
Type data: lectotype NMV J875 1 specimen, paralectotype(s) NMV J873.
Type locality: Glenelg River, VIC.

Distribution: SA (S Gulfs coast), VIC (SE coastal); known only from limital area, far SW VIC, and SE SA.
Ecology: freshwater, permanent pond; bordered by heath with vines and ferns in some sheltered valleys.

Euastacus brachythorax Riek, 1969

Euastacus brachythorax Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [912 fig. 16F].
Type data: holotype AM P15716 ♂, paratype(s) AM P15717 ♀ (as allotype).
Type locality: Brown Mtn, NSW.

Distribution: NSW (SE coastal); known only from limital area, far SE corner NSW.
Ecology: freshwater.
References: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (habitat photograph); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [26].

Euastacus clarkae Morgan, 1997

Euastacus clarkae Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [30 figs 13, 14].
Type data: holotype AM P34051 ♂, paratypes AM P34052 2♂ ♀, AM P34050 3♂ 3♀.
Type locality: tributary of Cockerawombeeba Creek, tributary of Forbes River, north of Birdwood, NSW.

Distribution: NSW (SE coastal); known only from type locality.
Ecology: freshwater; rainforest, along banks, above 670 m altitude.

Euastacus claytoni Riek, 1969

Euastacus claytoni Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [909 fig. 16D].
Type data: holotype AM P15728 ♂, paratypes AM P15729 ♀ (as allotype), AM P15311 14 specimens.
Type locality: Maclaughlin River, NSW.

Distribution: NSW (SE coastal); known only from limital area, Captains Flat-Cooma-Bombala region.
Ecology: burrowing, freshwater; juveniles under rocks, evidence of grass cropping on banks, greater than 800 m altitude.
References: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat with photograph); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [33].

Euastacus crassus (Riek, 1951)

Euastacus nobilis crassus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [383].
Type data: holotype AM P11937 ♂, paratypes AM P11938 ♀ (as allotype), AM P11939 2 specimens, AM P11940 11 specimens.
Type locality: Bendora, ACT.

Distribution: NSW (Murray-Darling basin), VIC (Murray-Darling basin); known only from limital area.
Ecology: nocturnal, rocky pools; small rocky pools, above 640 m altitude.
References: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [896]; Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (reproduction, habitat with photograph); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [37].

Euastacus dangadi Morgan, 1997

Euastacus dangadi Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [42 figs 19, 20].
Type data: holotype AM P34078 ♂, paratype(s) AM P34077 4♂ 3♀.
Type locality: Stockyard Creek, downstream of Cedar Park in Ingalba State Forest, north of Kempsey, NSW [30°53'S 152°48'E].

Distribution: NSW (SE coastal); known only from limital area, coastal mountains from about Coffs Harbour north to west of Port Macquarie, in the Clarence, Nambucca and Bellingen River drainage systems.
Ecology: freshwater; rainforest streams.

Euastacus dharawalus Morgan, 1997

Euastacus dharawalus Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [46 figs 21, 22].
Type data: holotype AM P34094 ♂, paratypes AM P13454 8♂ 2♀, AM P13452 7♂ 2♀, AM P13461 2♀, AM P15463 16 specimens.
Type locality: stream above Fitzroy Falls, NSW.

Distribution: NSW (SE coastal); known only from limital area, near the northern section of Morton National Park, SW of Robertson, NSW.
Ecology: freshwater; inhabits catacombs of holes in the soft stream bank.

Euastacus diversus Riek, 1969

Euastacus diversus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [908 fig. 20e].
Type data: holotype AM P15711 ♂, paratypes AM P15712 ♀ (as allotype), AM P15713 3♂ 7♀.
Type locality: 48 km N of Orbost.

Distribution: VIC (SE coastal); known only from limital area, E Gippsland.
Ecology: freshwater.

Euastacus eungella Morgan, 1988

Euastacus eungella Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [8 figs 5, 6].
Type data: holotype QM W10980 ♂, paratypes QM W10981 1♂ 4♀, QM W10982 3 juveniles, QM W10983 1♀, QM W4806 3♂ 3♀.
Type locality: tributary of Cattle Creek, near Mt Dalrymple, Eungella National Park, W of Mackay, QLD.

Distribution: QLD (NE coastal); known only from limital area, tributaries of Pioneer River, Clark Range, mid E QLD.
Ecology: freshwater; rainforest above 740 m altitude.
Reference: Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus fleckeri (Watson, 1935)

Astacopsis fleckeri Watson, K. (1935). A new *Astacopsis* from North Queensland. *Mem. Qld Mus.* **10**: 233–235 1 pl. [233 pl. 34].
Type data: holotype QM W581 ♂.
Type locality: Roots Creek near Mt Carbine in Mt Molloy district, 130 km W of Cairns, QLD.

Distribution: QLD (NE coastal); known only from limital area, Mt Carbine Tableland, NE QLD.
Ecology: freshwater; rainforest streams, in creeks that are well-shaded, with log and leaf litter abundant, above 1000 m altitude.
References: Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [11]; Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus gamilaroi Morgan, 1997

Euastacus gamilaroi Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [50].
Type data: holotype AM P13045 ♂, paratype(s) AM P34086 6♂ 6♀.
Type locality: Hanging Rock, near Nundle, NSW.

Distribution: NSW (SE coastal); known only from type locality.
Ecology: freshwater.

Euastacus gumar Morgan, 1997

Euastacus gumar Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [53 figs 25, 26].
Type data: holotype AM P34039 ♀, paratype(s) AM P34037–8 4♂ 7♀.
Type locality: Gorge Creek, Richmond Range State Forest, on Gorge Creek-Sextonville Road [28°45'S 152°42'E].

Distribution: NSW (SE coastal); known only from limital area, only from tributaries of the Clarence River, Richmond Range.
Ecology: freshwater; rainforest streams above 300 m altitude.

Euastacus guwinus Morgan, 1997

Euastacus guwinus Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [57 fig. 27].
Type data: holotype AM P34041 ♂, paratype(s) AM P34040 5♂ 3♀.
Type locality: Tianjara Creek, above Falls, tributary Shoalhaven River, near Tianjara, NSW [35°07'S 150°20'E].

Distribution: NSW (SE coastal); known only from type locality.
Ecology: freshwater; under rocks.

Euastacus hirsutus (McCulloch, 1917)

Astacopsis serratus hirsutus McCulloch, A.R. (1917). Notes on variation in *Astacopsis serratus* Shaw. *Rec. Aust. Mus.* **11**: 237–238 pl. xliii [238 pl. 43].
Type data: lectotype AM P3706 ♂, paralectotype(s) AM P3707–P3715.
Subsequent designation: Springthorpe, R.T. & Lowry, J.K. (1993). Catalogue of Crustacean type specimens in the Australian Museum: Malacostraca. *Tech. Rep. Aust. Mus.* **11**: 1–134.
Type locality: Belmore Falls Creek, above falls, Kangaroo River, NSW.

Euastacus keirensis Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [910 fig. 16C].
Type data: holotype AM P15725 ♂, paratypes AM P15726 ♀ (as allotype), AM P15727 13 specimens.
Type locality: Mt Keira, near Wollongong, NSW.

Taxonomic decision for synonymy: Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [64].

Distribution: NSW (SE coastal); known only from limital area, ranges from Mount Keira near Wollongong, south and west to just NE of Nowra (distance of 55 km).

Ecology: coastal streams, burrowing, freshwater; lotic and lentic freshwater, swamps, sheltered rocky areas, small creeks bordered by wet sclerophyll forest or rainforest, feeds on decomposing plant material, altitudes from 200–600 m.
References: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [894]; Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (distribution and habitat).

Euastacus hystricosus Riek, 1951

Euastacus hystricosus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [380].
Type data: holotype QM ♂ (lost), paratype QM W735 ♀ (as allotype).
Type locality: Yabba Creek, Maleny, QLD.

Distribution: QLD (NE coastal); known only from limital area, Conondale and Blackall Ranges, SE QLD.
Ecology: freshwater; wet sclerophyll forest and rainforest, above 550 m altitude.
References: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [896] (invalid lectotype designation); Morgan, G.J. (1991). The spiny fresh-water crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key); Smith, G., Borsboom, A., Lloyd, R., Lees, N. & Kehl, J. (1998). Habitat changes, growth and abundance of juvenile giant spiny crayfish, *Euastacus hystricosus* (Decapoda: Parastacidae), in the Conondale Ranges, south-east Queensland. *J. Proc. R. Soc. N.S.W.* **119**: 71–86.

Euastacus jagara Morgan, 1988

Euastacus jagara Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [44 figs 24, 25].
Type data: holotype QM W6471 ♂, paratype(s) QM W6471 1♂ 4♀.
Type locality: Flaggy Creek, Mistake Mtn via Laidley.

Distribution: QLD (NE coastal); known only from type locality.
Ecology: freshwater; rainforest at 900 m altitude.
Reference: Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus kershawi (Smith, 1912)

Astacopsis kershawi Smith, G.W. (1912). The freshwater crayfishes of Australia. *Proc. Zool. Soc. Lond.* **1912**: 144–170 [160 pls 19, 20].
Type data: lectotype NMV J869 ♂, paralectotypes NMV J11922 2♀, NMV J4528 5 specimens.
Type locality: Moe River, Gippsland West, VIC.

Distribution: VIC (Murray-Darling basin, SE coastal); known only from limital area, La Trobe River to east Gippsland.
Ecology: freshwater; in sclerophyll forests with vegetation along the creek bed.
References: Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria.*Mem. Mus. Vic.* **47**(1): 1–57; Morey, J.L. (1998). Growth, catch rates and notes on the biology of the Gippsland spiny freshwater crayfish, *Euastacus kershawi* (Decapoda: Parastacidae), in west Gippsland, Victoria. *J. Proc. R. Soc. N.S.W.* **119**: 55–69.

Euastacus maidae (Riek, 1956)

Euastacoides maidae Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [5].
Type data: holotype AM P12888 ♂, paratype(s) AM P34092 ♀ (as allotype).
Type locality: upper reaches of Currumbin Creek, QLD.

Taxonomic decision for new combination: Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [42].

Distribution: QLD (NE coastal); known only from limital area, upper Currumbin Creek, SE QLD.
Ecology: rainforest, freshwater; rainforest above 150 m altitude.
References; Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus monteithorum Morgan, 1989

Euastacus monteithorum Morgan, G.J. (1989). Two new species of the freshwater crayfish *Euastacus* Clark (Decapoda: Parastacidae) from isolated high country of Queensland. *Mem. Qld Mus.* **27**(2): 555–562 [558 fig. 3].
Type data: holotype QM W15583 ♂.
Type locality: headwaters of Kroombit Creek, Kroombit Tops, central QLD.

Distribution: QLD (NE coastal); known only from type locality.
Ecology: freshwater; rainforest, above 800 m altitude.

Euastacus neodiversus Riek, 1969

Euastacus neodiversus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [908].
Type data: holotype NMV J4531 ♂, paratype(s) NMV J4532 ♂.
Type locality: National Park, Wilson's Promontory, VIC.

Distribution: VIC (SE coastal); known only from limital area, far south Gippsland.
Ecology: freshwater.

Euastacus neohirsutus Riek, 1956

Euastacus neohirsutus Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [3].
Type data: holotype AM P34088 ♂, paratypes AM P34089 ♀ (as allotype), AM P13039 12 specimens.
Type locality: 32 km W of Dorrigo, NSW.

Euastacus aquilus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [911].
Type data: holotype AM P15718 ♂, paratypes AM P15719 ♀ (as allotype), AM P15720 6 specimens.
Type locality: near Point Lookout, New England National Park, NSW.

Taxonomic decision for synonymy: Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [71].

Distribution: NSW (SE coastal); known only from limital area, ranges from coastal mountains 20 kms NW of Coffs Harbour, south and west through the Dorrigo region to New England National Park and Mount Killiekrankie area.
Ecology: freshwater.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (distribution, habitat, reproduction).

Euastacus polysetosus Riek, 1951

Euastacus polysetosus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [384].
Type data: holotype AM P11917 ♂, paratypes AM P11918 ♀ (as allotype), AM P11919 12 specimens.
Type locality: Tubrabucca Creek, Hunter River, Barrington Tops, NSW.

Distribution: NSW (SE coastal); known only from limital area, only from Barrington Tops area, W of Taree, NSW.
Ecology: freshwater; bordered by forest, found under stones in shallows.
References: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (distribution and habitat); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [71].

Euastacus reductus Riek, 1969

Euastacus reductus Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [907 fig. 16B].
Type data: holotype AM P15731 ♂, paratypes AM P15732 ♀ (as allotype), AM P15733 11 specimens, AM P15322 4 specimens.
Type locality: Upper Allyn River, below the S end of Barrington Tops, NSW.

Distribution: NSW (SE coastal); known only from limital area, ranges from near Elands, SW of Comboyne, 100 km SW to Barrington Tops area, also on the Myall Range near Bulahdelah.
Ecology: freshwater; small streams through temperate rainforest, altitudes from 75–550 m.
References: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (reproduction, habitat with photograph); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [75].

Euastacus rieki Morgan, 1997

Euastacus rieki Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [79 figs 37, 38].
Type data: holotype AM P15299 ♂, paratype(s) AM P34095 8♂ 4♀.
Type locality: Snowy River Bridge, Mount Kosciusko, NSW.

Distribution: NSW (SE coastal); known only from limital area, ranges around the Snowy Mountains region, in drainages of the Snowy, Murray and Murrumbidgee Rivers.
Ecology: freshwater; high alpine and semi-alpine country, from 560–1520 m.

Euastacus robertsi Monroe, 1977

Euastacus robertsi Monroe, R. (1977). A new species of *Euastacus* (Decapoda: Parastacidae) from North Queensland. *Mem. Qld Mus.* **18**(1): 65–67 pl. 19 [65 pl. 19 fig. A–G].
Type data: holotype QM W5323 ♂, paratype(s) QM W5324 7♂ 11♀.
Type locality: Horan's Creek, Mt Finnigan National Park, NE QLD.

Distribution: QLD (NE coastal); known only from limital area, Mt Finnigan and Thornton Peak, NE QLD.
Ecology: freshwater; rainforest above 1000 m altitude.
Reference: Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus setosus (Riek, 1956)

Euastacoides setosus Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [4].
Type data: holotype AM P12887 ♂, paratypes AM P34093 ♀ (as allotype), AM P12823 23 specimens.
Type locality: Mt Glorious, QLD.

Distribution: QLD (NE coastal); known only from limital area, Mt Glorious, D'Aguillar Range, SE QLD.
Ecology: rainforest, freshwater; rainforest, above 500 m altitude.

References: Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [35] (as *Euastacus setosus*); Morgan, G.J. (1991). The spiny freshwater crayfish of Queensland. *Qld Nat.* **31**(1–2): 29–36 (key).

Euastacus simplex Riek, 1956

Euastacus simplex Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [2].
Type data: holotype AM P13048 ♂, paratypes AM P34090 ♀ (as allotype), AM P34091 ♀.
Type locality: 24 km N of Armidale NSW.

Distribution: NSW (SE coastal); known only from limital area, ranges from W of Dorrigo to Armidale and Gurya areas, NSW.
Ecology: freshwater; in small to medium-sized open streams, dry sclerophyll forest and cleared areas, 1100–1380 m altitude.
References: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (distribution and habitat with photograph); Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [83].

Euastacus spinichelatus Morgan, 1997

Euastacus spinichelatus Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [87 figs 41, 42].
Type data: holotype AM P34103 ♀, paratypes AM P33962 7 specimens, AM P33960 3♂ ♀, AM P33966 3♂.
Type locality: Fenwicks Creek, tributary of Hastings River, on Oxley Highway south of Yarrowitch, NSW [31°18'S 151°59'E].

Distribution: NSW (SE coastal); known only from limital area, from Hastings Range NW of Port Macquarie, and from mountains W of Comboyne, NSW.
Ecology: freshwater; in small streams through temperate rainforest and wet and dry sclerophyll forest, persist in cleared areas, at altitudes above 680 m.

Euastacus spinifer (Heller, 1865)

Sydney Crayfish

Cancer serratus Shaw, G. (1794). *Zoology of New Holland.* London : J. Davis 33 pp. 12 pls [21–23 pl. 8] [junior homonym of *Cancer serratus* Forskål, 1775 (Crustacea, Brachyura: Portunidae)].
Type data: status unknown BMNH*.
Type locality: New Holland (presumably Sydney)

Astacoides spinifer Heller, C. (1865). Crustaceen. *In, Reise der Österreichischen Fregatte 'Novara' um die Erdre, in den Jahren 1857, 1858, 1859,* unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zool. Theil. 2 (3) pp. 1–280 pls 1–25 [102 pl. IX].
Type data: holotype ZM.
Type locality: New Holland.

Astacopsis paramattensis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [202 pl. 27 fig. 1].
Type data: holotype BMNH ♀*.
Type locality: Paramatta River, Sydney, NSW.

Euastacus sydneyensis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [204 pl. 27 fig. 2].
Type data: holotype BMNH ♀*.
Type locality: Sydney, NSW.

Euastacus spinosus Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [2 pl. 1].
Type data: holotype AM P13033 ♂, paratypes AM P13032 ♀ (as allotype), AM P13034 ♀.
Type locality: upper reaches of Hastings River, NSW.

Euastacus clydensis Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 [911].
Type data: holotype AM P15491 ♂, paratypes AM P15489 ♀ (as allotype), AM P15488, AM P15490.
Type locality: Clyde River, near Brooman, Ulladulla, NSW.

Taxonomic decision for synonymy: Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [97–98].

Distribution: NSW (SE coastal); known only from limital area, from upper reaches of Hastings River NW of Port Macquarie south through Sydney and Blue Mountains to Clyde Mountain near Brooman.
Ecology: freshwater, gravel bottom, omnivore, sand bottom, predator; most abundant in deep lotic freshwater, feeds mainly on decaying plant matter, has been observed to hunt actively and capture tadpoles, from altitudes of 70–800 m.

Euastacus sulcatus Riek, 1951

Blue Spiny Crayfish, Lamington Spiny Crayfish

Euastacus sulcatus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [379].
Type data: holotype AM P11921 ♂, paratypes AM P11922 ♀ (as allotype), AM P11923 3 specimens, AM P11924, AM P13030 23 specimens.
Type locality: Binna Burra, Lamington National Park, QLD.

Euastacus cunninghami Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [379].
Type data: holotype AM P11929 ♀, paratypes AM P11930 ♂ (as allotype), AM P11931 7 specimens.
Type locality: Western slopes of Cunningham's Gap, QLD.

Taxonomic decision for synonymy: Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [22].

Distribution: NSW (SE coastal), QLD (NE coastal); known only from limital area, ranges from Mount Tambourine to the Lamington Plateau, southern QLD, west along the Macpherson Range bordering NSW.
Ecology: freshwater; inhabits small streams bordered by rainforest or wet sclerophyll, at altitudes over 300 m, feeds on decomposing plant material.

Euastacus suttoni Clark, 1941

Euastacus suttoni Clark, E. (1941). Revision of the genus *Euastacus* (Crayfishes, family Parastacidae), with notes on the distribution of certain species. *Mem. Natn. Mus. Vic.* **12**(1): 7–30, 7 pls [18 pl. V].
Type data: syntypes NMV J877 ♀, NMV J876 1 specimen.
Type locality: Wyberba, QLD.

Distribution: NSW (SE coastal), QLD (NE coastal); known only from limital area, ranges from the Stanthorpe area, southern QLD south to Dundee near Glen Innes, NSW.
Ecology: freshwater, swamp; above 680 m altitude bordered by open sclerophyll forest.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (diet, reproduction, habitat with photograph).

Euastacus urospinosus (Riek, 1956)

Euastacoides urospinosus Riek, E.F. (1956). Additions to the Australian freshwater crayfish. *Rec. Aust. Mus.* **24**: 1–6 [5].
Type data: holotype AM P12886 ♂.
Type locality: Obi Obi Creek, Maleny, QLD.

Distribution: QLD (NE coastal); known only from limital area, Conondale and Blackall Ranges, SE QLD.
Ecology: freshwater; rainforest, above 240 m altitude.
References: Morgan, G.J. (1988). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from Queensland. *Mem. Mus. Vic.* **49**(1): 1–49 [39] (as *Euastacus urospinosus*); Borsboom, A. (1998). Aspects of the biology and ecology of the Australian freshwater crayfish, *Euastacus urospinosus* (Decapoda: Parastacidae). *J. Proc. R. Soc. N.S.W.* **119**: 87–100.

Euastacus valentulus Riek, 1951

Euastacus valentulus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [380].
Type data: holotype QM ♂, paratype(s) ♂ juvenile* (presumed lost).
Type locality: upper reaches of Currumbin Creek, QLD.

Distribution: NSW (SE coastal), QLD (NE coastal); known only from limital area, ranges from Currumbin Creek, SE QLD south to Ballina area, NSW.
Ecology: diurnal, freshwater; small flowing tributaries, with rock rubble or gravel substrates, bordered by coastal rainforest or wet sclerophyll forest, from near sea level to about 600 m altitude.
Reference: Merrick, J.R. (1993). *Freshwater Crayfishes of New South Wales.* Milson's Point : Linnean Society of N.S.W. 127 pp. (reproduction, habitat and description).

Euastacus woiwuru Morgan, 1986

Euastacus woiwuru Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria. *Mem. Mus. Vic.* **47**(1): 1–57 [43 figs 20, 21].
Type data: holotype NMV J4527 ♂, paratypes NMV J4529 2 specimens, NMV J4530 1 specimen, NMV J45402 5 specimens.
Type locality: Dobson's Creek, Dandenong, VIC.

Distribution: VIC (Murray-Darling basin, SE coastal); known only from limital area, east of Melbourne.
Ecology: freshwater.

Euastacus yanga Morgan, 1997

Euastacus yanga Morgan, G.J. (1997). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda: Parastacidae) from New South Wales, with a key to all species of the genus. *Rec. Aust. Mus.* **23**: 1–110 [99 figs 46–48].
Type data: holotype AM P34100 ♂, paratypes AM P33925 ♀, AM P33934 ♂ 2♀, AM P33936 2♀, AMAM P33925 ♀, P33945 2♂ 3♀, AM P33946 2♂ 3♀, AM P33948 2♂ 2♀, AM P16192 ♂, AM P34104 6♂ 5♀, AM P19589 ♂.
Type locality: Double Creek, tributary of Boyne Creek near Pidgeon House, west of Ulladulla, NSW [35°22'S 150°15'E].

Distribution: NSW (SE coastal), VIC (SE coastal); known only from limital area, ranges from the Robertson and Bundanoon areas, NSW, to just inside the Victorian border W of Genoa.
Ecology: freshwater; generally from streams flowing through temperate rainforest or ferns, sometimes dry sclerophyll, from 60–720 m altitude.

Euastacus yarraensis (McCoy, 1888)

Astacopsis serratus yarraensis McCoy, F. (1888). *Astacopsis serratus* (Shaw sp.) var. *yarraensis. Prodromus Zool. Vict.* **2**: 225–227 pl. 16 [225 pl. 16].
Type data: syntypes BMNH* (lost).
Type locality: Yarra River, VIC, see Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918.

Distribution: VIC (Murray-Darling basin, SE coastal); known only from limital area, central southern VIC.
Ecology: freshwater; southerly flowing rivers.
Reference: Morgan, G.J. (1986). Freshwater crayfish of the genus *Euastacus* Clark (Decapoda, Parastacidae) from Victoria. *Mem. Mus. Vic.* **47**(1): 1–57 [49].

Euastacus yigara Short & Davie, 1993

Euastacus yigara Short, J.W. & Davie, P.J.F. (1993). Two new species of freshwater crayfish (Crustacea: Decapoda: Parastacidae) from northeastern Queensland rainforest. *Mem. Qld Mus.* **34**(1): 69–80 [75 figs 6–8].
Type data: holotype QM W18134 ♀, paratype(s) QM W18125 immature.
Type locality: O'Leary Creek, Cardwell Range, NE QLD.

Distribution: QLD (NE coast); known only from type locality.
Ecology: freshwater, leaf litter, rock bottom, sand bottom; pool at edge of creek, rainforest above 760 m altitude.

Geocharax Clark, 1936

Geocharax Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [31] [gender masculine].
Type species: *Geocharax gracilis* Clark, 1936 by original designation.

Range: Victoria and Tasmania.

Generic reference: Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40.

Geocharax falcata Clark, 1941

Geocharax falcata Clark, E. (1941). New species of Australian freshwater and land crayfishes (Family Parastacidae). *Mem. Natn. Mus. Vic.* **12**: 31–40 [36 pl. X fig. 5].
Type data: lectotype NMV J898 1 specimen, paralectotypes NMV J11879 10 specimens, NMV J894 10 specimens.
Type locality: Fyans Creek, (south of divide), Grampian Mountains, VIC.

Distribution: TAS, VIC (SE coastal); known only from limital area, NW TAS, W Bass Strait Islands, SW VIC.
Ecology: burrowing, creeks, drains, freshwater, swamp; creeks, drains.

Geocharax gracilis Clark, 1936

Geocharax gracilis Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [31 pl. I fig. 8, pl. 6,].
Type data: syntypes NMV J11880 33 specimens (possibly 7 more), NMV J907 5 specimens, NMV J13413 28 specimens.
Type locality: VIC: Gellibrand River, S of Colac, and Portland.

Distribution: TAS, VIC (SE coastal); known only from limital area, NW TAS, W Bass Strait Islands, SW VIC.
Ecology: burrowing, creeks, drains, freshwater, swamp; creeks, drains.

Gramastacus Riek, 1972

Gramastacus Riek, E.F. (1972). The phylogeny of the Parastacidae (Crustacea: Astacoidea), and description of a new genus of Australian freshwater crayfishes. *Aust. J. Zool.* **20**: 369–389 [385] [gender masculine].
Type species: *Gramastacus insolitus* Riek, 1972 by original designation.

Range: Victoria and South Australia.
Generic reference: Zeidler, W. & Adams, M. (1990). Revision of the Australian Crustacean genus of freshwater crayfish *Gramastacus* Riek (Decapoda: Parastacidae). *Invertebr. Taxon.* **3**: 913–924.

Gramastacus insolitus Riek, 1972

Gramastacus gracilis Riek, E.F. (1972). The phylogeny of the Parastacidae (Crustacea: Astacoidea), and description of a new genus of Australian freshwater crayfishes. *Aust. J. Zool.* **20**: 369–389 [386 figs 17, 20, 22].
Type data: holotype AM P38397 ♂, paratypes AM P38398 ♀ (as allotype), AM P38399 24 specimens, AM P17678 3 specimens, NMV J884 4 specimens, USNM, BMNH*.
Type locality: Dwyer's Creek, Grampians, W VIC.

Gramastacus insolitus Riek, E.F. (1972). The phylogeny of the Parastacidae (Crustacea: Astacoidea), and description of a new genus of Australian freshwater crayfishes. *Aust. J. Zool.* **20**: 369–389 [386 figs 2, 16, 19, 21].
Type data: holotype AM P37051 ♂, paratypes AM P37052 ♀ (as allotype), AM P37053 21 specimen, NMV J909 4 specimens, USNM*, NMV J884 4 specimens, BMNH*.
Type locality: 8 km SW of Moyston, W VIC.

Taxonomic decision for synonymy: Zeidler, W. & Adams, M. (1990). Revision of the Australian crustacean genus of freshwater crayfish *Gramastacus* Riek (Decapoda: Parastacidae). *Invertebr. Taxon.* **3**: 913–924 [916].

Distribution: SA (Murray-Darling basin, S Gulfs), VIC (Murray-Darling basin, SE coastal); known only from limital area.
Ecology: freshwater; free swimming in shallow swamps and in marginal zones of small streams.

Parastacoides Clark, 1936

Parastacoides Clark, E. (1936). The freshwater and land crayfishes of Australia. *Mem. Natn. Mus. Vic.* **10**: 5–58 [48] [gender masculine].
Type species: *Astacus tasmanicus* Erichson, 1846 by original designation.

Range: New South Wales, Victoria and Tasmania.
Generic reference: Sumner, C.E. (1978). A revision of the genus *Parastacoides* Clark (Crustacea: Decapoda: Parastacidae). *Aust. J. Zool.* **26**: 809–821.

Parastacoides tasmanicus (Erichson, 1846)

Taxonomic decision for subspecific arrangement: Sumner, C.E. (1978). A revision of the genus *Parastacoides* Clark (Crustacea: Decapoda: Parastacidae). *Aust. J. Zool.* **26**: 809–821 [819].

Distribution: NSW (SE coastal), TAS, VIC (SE coastal); known only from limital area.

Parastacoides tasmanicus inermis Clark, 1939

Parastacoides inermis Clark, E. (1939). Tasmanian Parastacidae. *Pap. Proc. Roy. Soc. Tasmania* **1938**: 117–128 [126 pl. 13 figs 10, 10].
Type data: syntypes NMV J889 2 specimens.
Type locality: Adamson's Peak, TAS.

Parastacoides sternalis Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [102 fig. 4].
Type data: holotype NMV J897 ♀.
Type locality: NE of Mt Bowes, TAS.

Taxonomic decision for synonymy: Sumner, C.E. (1978). A revision of the genus *Parastacoides* Clark (Crustacea: Decapoda: Parastacidae). *Aust. J. Zool.* **26**: 809–821 [819].

Distribution: NSW (SE coastal), TAS, VIC (SE coastal); known only from limital area.
Ecology: freshwater.
Reference: Horwitz, P. & Knott, B. (1991). The faunal assemblage in freshwater crayfish burrows in sedgeland and forest at Lighting Plains, Western Tasmania. *Pap. Proc. Roy. Soc. Tasmania* **125**: 29–32 (variations and species occurrence and abundance in faunal assemblages of crayfish burrows).

Parastacoides tasmanicus insignis Clark, 1939

Parastacoides insignis Clark, E. (1939). Tasmanian Parastacidae. *Pap. Proc. Roy. Soc. Tasmania* **1938**: 117–128 [126 pl. 13 figs 11, 11].
Type data: syntypes NMV J899 8 specimens.
Type locality: Melaleuca Creek, New Harbour, SW TAS.

Distribution: TAS; known only from limital area, SE coastal.
Ecology: freshwater; in button grass.
Reference: Sumner, C.E. (1978). A revision of the genus *Parastacoides* Clark (Crustacea: Decapoda: Parastacidae). *Aust. J. Zool.* **26**: 809–821 [820].

Parastacoides tasmanicus tasmanicus (Erichson, 1846)

Astacus tasmanicus Erichson, W.F. (1846). Uebersicht der Arten der Gattung *Astacus*. *Arch. Naturgesch.* **xii**: 86–103, 375–377 [94].
Type data: holotype ZMB ♀*.
Type locality: Tasmania (as Van Diemen's Land).

Parastacoides leptomerus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [387].
Type data: holotype AM P11979 ♀, paratypes AM P11980 ♂ (as allotype), AM P11981 3 specimens.
Type locality: Lake Lilla and Outlet stream, Cradle Mtn, TAS.

Parastacoides setosimerus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [386].
Type data: holotype AM P11976 ♂, paratypes AM P11977 ♀ (as allotype), AM P11978 9 specimens.
Type locality: Mt Rufus, TAS.

Parastacoides pulcher Riek, E.F. (1967). The freshwater crayfish of Western Australia (Decapoda: Parastacidae). *Aust. J. Zool.* **15**: 103–121 [106 fig. 6].
Type data: holotype NMV J908 ♂, paratype(s) NMV J11624 3 juveniles.
Type locality: Lake Pedder, SW TAS.

Taxonomic decision for synonymy: Sumner, C.E. (1978). A revision of the genus *Parastacoides* Clark (Crustacea: Decapoda: Parastacidae). *Aust. J. Zool.* **26**: 809–821 [819].

Distribution: TAS; known only from limital area, SE coastal.
Ecology: freshwater.

Tenuibranchiurus Riek, 1951

Tenuibranchiurus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [368, 369, 381] [gender masculine].
Type species: *Tenuibranchiurus glypticus* Riek, 1951 by original designation.

Range: SE Queensland.

Generic reference: Riek, E.F. (1969). The Australian freshwater crayfish (Crustacea: Decapoda: Parastacidae), with descriptions of new species. *Aust. J. Zool.* **17**: 855–918 (distribution—SE QLD).

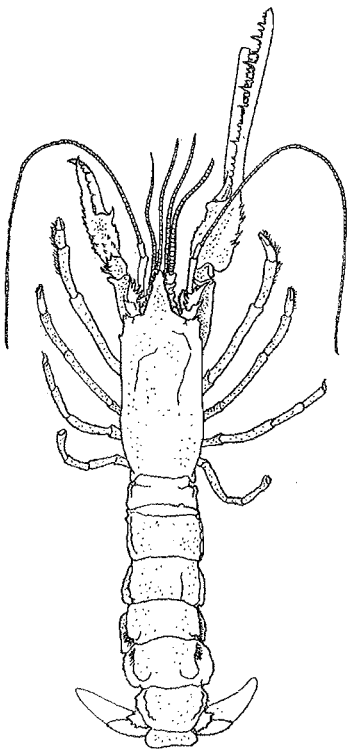
Tenuibranchiurus glypticus Riek, 1951

Tenuibranchiurus glypticus Riek, E.F. (1951). The Freshwater Crayfish (Family Parastacidae) of Queensland. *Rec. Aust. Mus.* **22**(4): 368–388 [382 fig. 13].
Type data: holotype AM P11970 ♂, paratypes AM P11971 ♀ (as allotype), AM P11972 3 specimens, Melbourne Ward (pers. coll.) 1 ♂.
Type locality: Caloundra, QLD.

Distribution: QLD (NE coastal); known only from limital area, Woodgate to Brisbane.
Ecology: freshwater, swamp, burrowing; ephemeral swamps and drainage channels.
Reference: Short, J.W. (1995). Freshwater and terrestrial Crustaceans. pp. 45–54 *in*, *Wildlife of Greater Brisbane*. Brisbane : Queensland Museum 340 pp. [53] (colour photo and diagnostic characters).

THAUMASTOCHELIDAE

INTRODUCTION



Thaumastochelopsis wardi
[from Holthuis 1991: fig. 37]

This family of deep water lobsters contains two genera: *Thaumastocheles* Wood-Mason, with three species; and the recently described, monotypic *Thaumastochelopsis* Bruce. They were considered very rare, there being fewer than ten specimens known until the discovery of the last-described species, *T. dochmiodon* Chan & de Saint Laurent, for which there is a good series of specimens. They are immediately recognisable by the large claw having a swollen palm, and remarkably long thin fingers that are armed with alternating long and short sharp spines along the gape—this has led to the common name of 'Pincer Lobsters'. Important works useful for identifying the Australian species are Bruce (1988), Chan & de Saint Laurent (1999) and Holthuis (1991).

Diagnosis

Body slightly depressed dorsoventrally; eyes strongly reduced, cornea lacking pigmentation; rostrum well developed; antennae long and thread-like, antennal scale bearing several large teeth along inner margin. Pereiopods 1–3 (occasionally also fifth) chelate, first pair enlarged into strong claws but very unequal. Sternal plate between fifth pereiopods fused with that between fourth pair; podobranchiae of first three pereiopods with discrete branchial and epipoditic parts; first pleopod of male without individual sperm conduit. Abdominal pleura short, quadrangular and without large ventral tooth; tailfan entirely calcified, telson quadrangular and unarmed. (Modified after Chan 1998).

References

Bruce, A.J. (1988). *Thaumastochelopsis wardi* gen. et sp. nov., a new blind deep-sea lobster from the Coral Sea (Crustacea: Decapoda: Nephropidea). *Invertebr. Taxon.* **2**: 903–914 figs 1–7

Chan, T.-Y. & de Saint Laurent, M. (1999). The rare lobster genus *Thaumastocheles* (Decapoda: Thaumastochelidae) from the Indo-Pacific, with description of a new species. *J. Crust. Biol.* **19**(4): 891–901

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

THAUMASTOCHELIDAE Bate, 1888

Thaumastochelidae Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [7, 11, 46].

Thaumastocheles Wood-Mason, 1874

Thaumastocheles Wood-Mason, J. (1874). Blind Crustacea. *J. Asiat. Soc. Bengal* **1874**: 180–181 [181] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 519. Addition to the *Official List of Generic Names in Zoology* of the names of twenty-three genera of Macrura Reptantia (Class Crustacea) and use of the Plenary Powers in regard to three matters concerned therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 133–168; gender masculine].
Type species: *Astacus zaleucus* Thomson, 1873 by monotypy.

Extralimital distribution: western Pacific Ocean, West Atlantic Ocean (Caribbean region).

Thaumastocheles dochmiodon Chan & de Saint Laurent, 1999

Thaumastocheles dochmiodon Chan, T.-Y. & de Saint Laurent, M. (1999). The rare lobster genus *Thaumastocheles* (Decapoda: Thaumastochelidae) from the Indo-Pacific, with description of a new species. *J. Crust. Biol.* **19**(4): 891–901 [891].
Type data: holotype NTOU H 1–6.1997 ♂, paratypes NTOU P 5.6.1991 ♂, NTOU P 27.4.1995 ♂, NTOU P 19.10.1995 ♂, NTOU P 6.1.1996 ♂, NTOU P 14.9.1996 ♂, NTOU P 24.9.1996 ♂, NTOU P 1–6.1997 12♂, NTOU P 1997-1998 26♂, MNHP ♂, USNM 3♂.
Type locality: north-eastern coast, Tai-Shi, I-Lan County, Taiwan.

Distribution: NT (N coast); southern Japan, Taiwan, South China Sea.
Ecology: benthic, continental slope, oceanic province; from 250–822 m depth.

Thaumastochelopsis Bruce, 1988

Thaumastochelopsis Bruce, A.J. (1988). *Thaumastochelopsis wardi* gen. et sp. nov., a new blind deep-sea lobster from the Coral Sea (Crustacea: Decapoda: Nephropidea). *Invertebr. Taxon.* **2**: 903–914 figs 1–7 [903 fig. 1] [gender feminine].
Type species: *Thaumastochelopsis wardi* Bruce, 1988 by monotypy and original designation.

Range: off NE Queensland.
Generic reference: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Thaumastochelopsis wardi Bruce, 1988

Australian Pincer Lobster (FAO)

Thaumastochelopsis wardi Bruce, A.J. (1988). *Thaumastochelopsis wardi* gen. et sp. nov., a new blind deep-sea lobster from the Coral Sea (Crustacea: Decapoda: Nephropidea). *Invertebr. Taxon.* **2**: 903–914 figs 1–7 [909 figs 1–7].
Type data: holotype NTM Cr.004231A ♀, paratype(s) NTM Cr.004231B ♂ (as allotype).
Type locality: 'Marian Plateau, off Townsville' Coral Sea, QLD.

Distribution: QLD (NE oceanic); west Pacific Ocean.
Ecology: benthic, continental slope, oceanic province; depth 425 m.

INFRAORDER: PALINURA

INTRODUCTION

This group includes the spiny lobsters (Palinuridae), slipper lobsters (Scyllaridae) and blind lobsters (Polychelidae). The first two families contain a number of commercially important food species. These lobsters had their greatest radiation in shallow subtidal waters, but some can be found to depths exceeding 2000 metres. Their fossil history stretches back to the Lower Triassic. Holthuis (1991) provided an excellent summary and keys to the families and genera.

Diagnosis

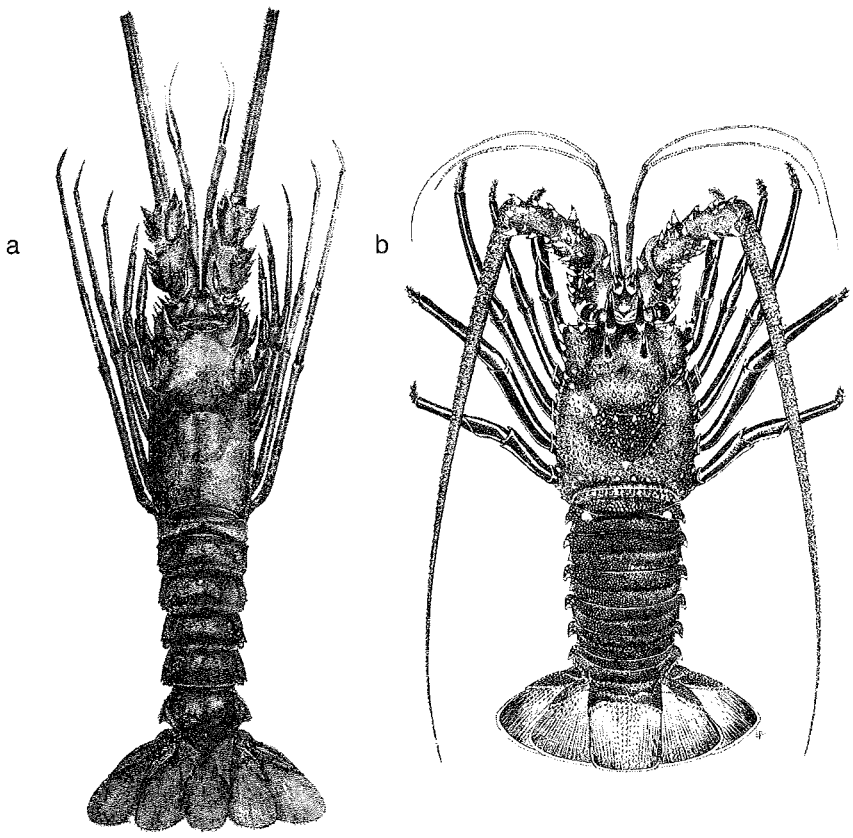
Carapace cylindrical, subovoid, or dorsoventrally compressed; eyes stalked, compound, generally well developed. Antennules biramous; peduncle 3-segmented. Antennal peduncle with five or fewer segments; exopod reduced; flagella sometimes modified. Mandibles usually with palp; molar and incisor processes usually not distinct. Maxillulae with endopodal palp. Maxillae biramous; with two bilobed endites. Endopod of first maxillipeds with two or fewer segments; usually with *crista dentata*. Thoracic appendages uniramous; first pair sometimes chelate; other pairs often subchelate. Abdomen with pleopods usually biramous; first pair frequently absent; male copulatory structures frequently present; telson, together with broad, biramous uropods, forms tailfan. Segmentation: head with 5 + 3 thoracic (maxillipeds); thorax with 5; abdomen with 6, excluding telson. Sexes separate; gonopores on coxae of third pereiopods of female, on fifth of male; male frequently with copulatory structure.
(After McLaughlin 1980).

References

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

McLaughlin, P.A. (1980). *Comparative Morphology of Recent Crustacea.* San Francisco : W.H. Freeman & Co. 177 pp.

PALINURIDAE



a, *Puerulus angulatus*; b, *Panulirus penicillatus*

[from a, de Man 1916: pl. 2 fig. 5; b, Holthuis 1991: fig. 285]

INTRODUCTION

This family contains Australia's most commercially important marine lobsters (or crayfish). Four of the eight known world genera are found. The Western Rock Lobster (*Panulirus cygnus*) is principally caught in waters off southern Western Australia, and forms the basis of the largest single species fishery in Australia, with a value in excess of $AUS200 million annually. The Southern Rock Lobster (*Jasus edwardsi*) and the Eastern Rock Lobster (*Jasus verreauxi*) are also significant economically, the latter attaining weights of up to 8 kg, making it the largest rock lobster in the world. Other tropical Spiny Lobsters (*Panulirus* species) are also very popular, but of less fisheries importance because they tend not to enter traps. Some deeper water species such as the Red Spear Lobster or Champagne Cray (*Linuparus trigonus*) and the Whip Lobster (*Puerulus angulatus*) are also found occasionally in the market-place, but are mostly an incidental or off-season fishery at present.

Important works for the identification and biology of Australian species include: George (1966, 1968, 1983); George & Kensler (1970); Phillips *et al.* (1980); Booth *et al.* (1990); Holthuis (1991); and Chan (1998). George & Main (1967) wrote an interesting account of the evolution of the Palinuridae.

Diagnosis

Moderate to large lobsters. Body tubular or slightly flattened dorsoventrally; setae, if present, few and scattered. Carapace subcylindrical or box-like, laterally rounded or straight; without a well-developed rostrum; ornamented with spines and granules of various sizes, sometimes with scale-like sculpture (*Justitia*). Eyes well developed, each protected by a strong, spinous frontal projection of the carapace (frontal horns). Antennae thick, very long, whip-like or spear-like; antennal scale absent; antennulae slender and each with two flagella which may be long or short. Bases of antennae often separated by a broad antennular plate, usually bearing some spines. In some genera a fleshy lobe is developed from the base of the antenna, and forms a stridulatory organ in conjunction with the smooth rim of the antennal plate; a low grating or sqeaking sound is produced by rubbing of the antenna. Pereiopods generally simple, non-chelate; first pair the same length, or only slightly longer than subsequent pairs (except in male *Justitia longimanus*), but often somewhat more robust. Abdomen and tailfan well developed, thickly muscled; posterior half of tailfan soft and flexible; abdominal somites either smooth or each provided with one or more transverse grooves.
(After Chan 1998).

References

Booth, J.D., Street, R.J. & Smith, P.J. (1990). Systematic status of the rock lobsters *Jasus edwardsi* from New Zealand and *Jasus novaehollandiae* from Australia. *N.Z. J. Mar. Freshwat. Res.* **24**(2): 239–249

Chan, T.-Y. (1998). Lobsters. pp. 973–1043 *in* Carpenter, K.E. & Niem, V.H. (eds) *FAO Species Identification Guide for Fisheries Purposes.* The living marine resources of the Western Central Pacific. Volume 2, Cephalopods, crustaceans, holothurians and sharks. Rome : FAO pp. 687–1396

de Man, J.G. (1916). Diagnoses of new species of macrurous decapod Crustacea from the *Siboga* Expedition. *Zool. Meded. (Leiden)* **2**: 147–151

George, R.W. (1966). Marine crayfish or spiny lobsters of Australia. *Aust. Fish. Newsl.* **25**(5): 25–28, 9 figs

George, R.W. (1968). Tropical spiny lobsters, *Panulirus* spp., of Western Australia (and the Indo-west Pacific). *J. R. Soc. W.A.* **51**(2): 33–38

George, R.W. (1983). New finds of deepwater "Lobster" on the Northwest shelf. *Fins, Fishery News Western Australia* **16**(1): 16–20 5 figs

George, R.W. & Kensler, C.B. (1970). Recognition of marine spiny lobsters of the *Jasus lalandii* group (Crustacea: Decapoda: Palinuridae). *N.Z. J. Mar. Freshwat. Res.* **4**(3): 292–311

George, R.W. & Main, A.R. (1967). The evolution of spiny lobsters (Palinuridae): a study of evolution in the marine environment. *Evolution* **21**: 803–820

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

Phillips, B.F., Morgan, G.R. & Austin, C.M. (1980). Synopsis of biological data on the Western Rock Lobster *Panulirus cygnus* George, 1962. *F.A.O Fisheries Synopsis* **128**: 1–64

PALINURIDAE Latreille, 1802

Palinurinidae Latreille, P.A. (1802). *Histoire naturelle, générale et particulière, des Crustacés et des Insectes.* Paris : F. Dufart Vol. 3 467 pp. [31] [as Palinurini; name, in corrected spelling, placed on Official List of Family Group Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 519. Addition to the *Official List of Generic Names in Zoology* of the names of twenty-three genera of Macrura Reptantia (Class Crustacea) and use of the Plenary Powers in regard to three matters concerned therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 133–168].

Jasus Parker, 1883

Taxonomic decision for subgeneric arrangement: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [95].

Extralimital distribution: S Atlantic, Indian and Pacific Oceans.

Jasus (Jasus) Parker, 1883

Jasus Parker, T.J. (1883). On the structure of the head in *Palinurus* with special reference to the classification of the genus. *Nature* **29**: 189–190 1 pl. [190] [name placed on the Official List of Generic Names in Zoology, see International Commission on Zoological Nomenclature (1961). Opinion 612. *Jasus* Parker, 1883 (Crustacea, Decapoda); added to the Official List. *Bull. Zool. Nomencl.* **18**: 312–315; gender masculine].
Type species: *Palinurus lalandii* H. Milne Edwards, 1837 by subsequent designation, see Holthuis, L.B. (1960). Proposed addition of the generic name *Jasus* Parker, 1883, to the Official List of Generic Names in Zoology (Class Crustacea, Order Decapoda). *Bull. Zool. Nomencl.* **17**(6–8): 193–196.

Palinosytus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [93] [junior objective synonym of *Jasus* Parker, 1883; name placed on the Official Index of Rejected and Invalid Genus-Group Names in Zoology, see International Commission on Zoological Nomenclature (1961). Opinion 612. *Jasus* Parker, 1883 (Crustacea, Decapoda); added to the Official List. *Bull. Zool. Nomencl.* **18**: 312–315; gender masculine].
Type species: *Palinurus lalandii* H. Milne Edwards, 1837 by subsequent designation, see Holthuis, L.B. (1960). Proposed addition of the generic name *Jasus* Parker, 1883, to the Official List of Generic Names in Zoology (Class Crustacea, Order Decapoda). *Bull. Zool. Nomencl.* **17**(6–8): 193–196.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [95].

Extralimital distribution: temperate Southern Hemisphere.

Jasus (Jasus) edwardsii (Hutton, 1875)

Red Rock Lobster (FAO), Southern Rock Lobster (Australia)

Palinurus edwardsii Hutton, F. (1875). Descriptions of two new species of Crustaceans from New Zealand: *Sesarma pentagona* and *Palinurus edwardsii*. *Trans. Proc. N.Z. Inst.* 7: 279–280 [279].
Type data: syntypes MONZ (apparently now lost, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [97]).
Type locality: 'Otago Heads' near Dunedin, South Island, New Zealand.

Jasus novaehollandiae Holthuis, L.B. (1963). Preliminary descriptions of some new species of Palinuridae (Crustacea Decapoda, Macrura Reptantia). *Proc. Konin. Neder. Akad. Weten.* **66C**: 54–60 [56].
Type data: holotype RMNH D10642 ♂, paratypes AM E734, AM E1086, AM E1087, AM E1088, AM E1322, USNM, NNML, RMNH D14509 2 specimens.
Type locality: off the coast of NSW near Maroubra, Sydney.

Taxonomic decision for synonymy: Booth, J.D., Street, R.J. & Smith, P.J. (1990). Systematic status of the rock lobsters *Jasus edwardsi* from New Zealand and *Jasus novaehollandiae* from Australia. *N.Z. J. Mar. Freshwat. Res.* **24**(2): 239–249 [239].

Distribution: NSW (Lower E coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Lower W coast, SW coast); New Zealand.
Ecology: coral reef, littoral, rock bottom, sublittoral; found on rocky onshore and offshore reefs with sufficient hiding places, nocturnal, mating and egg-laying occurs from May to July after female moults, depth 0 to 200 m.
Reference: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs [65] (natural history); Davie, P. this work (in literature

prior to 1963 the species was usually indicated as *Jasus lalandii* as it was not distinguished from the Cape Rock Lobster).

Jasus (Sagmariasus) Holthuis, 1991

Sagmariasus Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [104] [gender masculine].
Type species: *Palinurus verreauxi* H. Milne Edwards, 1851 by monotypy.

Extralimital distribution: SW Pacific.

Jasus (Sagmariasus) verreauxi (H. Milne Edwards, 1851)

Eastern Rock Lobster (Aust), Green Rock Lobster (FAO)

Palinurus verreauxi Milne Edwards, H. (1851). Observations sur le squelette tégumentaire des Crustacés Décapodes, et sur la morphologie de ces animaux. *Ann. Sci. Nat. (Zool.) (3e ser.)***16**: 221–291 (1–71) pls 8–11 [255, 290 pl. 8 fig. 15].
Type data: syntypes MNHP (probably lost, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [105]).
Type locality: New South Wales.

Palinurus huegelii Heller, C. (1862). Beiträge zur näheren kenntnis der Macrouren. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **45**(1): 389–426, 2 pls [393].
Type data: holotype NHMW.
Type locality: Sydney or New Zealand (Heller recorded the type locality as the Indian Ocean, but as the species is not known to occur there, Holthuis (1991: 105) gave evidence suggesting either Sydney or New Zealand), see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Palinurus tumidus Kirk, T.W. (1880). Description of a new species of *Palinurus*. *Trans. Proc. N.Z. Inst.* **12**: 313–314 pl. 9 [313].
Type data: holotype NMNZ 5700 ♂.
Type locality: Whaingaroa, W coast of the North Island, New Zealand.

Palinurus giganteus Kirk, T.W. (1880). Description of a new species of *Palinurus*. *Trans. Proc. N.Z. Inst.* **12**: 313–314 pl. 9 [313] [junior objective synonym of *Palinurus tumidus* Kirk, 1880].
Type data: holotype NMNZ 5700 ♂.
Type locality: Whaingaroa, W coast of the North Island, New Zealand.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [105].

Distribution: NSW (Lower E coast), QLD (Central E coast), TAS, VIC (Bass Strait); south-west Pacific Ocean.
Ecology: benthic, littoral, rock bottom, sand bottom, sublittoral; gravel bottom, depth 0 to 155 m.

Linuparus White, 1847

Linuparus White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [70] [gender masculine].
Type species: *Palinurus trigonus* von Siebold, 1824 by monotypy.

Podocratus Geinitz, H.B. (1849). Das Quadersandsteingebirge oder Kreidegebirge in Deutschland. 96 pp. [96] [gender masculine].
Type species: *Podocratus duelmense* Geinitz, 1849 by monotypy.

Thenops Bell, T. (1858). *A Monograph of the Fossil Malacostracous Crustacea of Great Britain.* Vol. 1 33 pp. [33] [gender masculine].
Type species: *Thenops scyllariformis* Bell, 1858 by monotypy.

Avus Ortmann, A.E. (1891). Dass. III. Die abteilungen der Raptantia Boas: Homaridea, Loricata und Thalassinidea. *Zool. Jb.* **6**: 1–58 pl. 1 [15, 21] [gender masculine].
Type species: *Palinurus trigonus* von Siebold, 1824 by monotypy.

Eolinuparus Mertin, H. (1941). Decapode Krebse aus dem subhercynen und Braunschweiger Emscher und Untersenon sowie Bemarkungen über einige verwandte Formen inder Oberkreide. *Nova Acta Leopoldina (n. ser.)***10**(68): 1–215 [215] [gender masculine].
Type species: *Thenops carteri* Reed, 1911 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [111].

Extralimital distribution: Indo-west Pacific Oceans.

Linuparus sordidus Bruce, 1965

Box Lobster, Oriental Spear Lobster (FAO), White Spear Lobster (Aust)

Linuparus sordidus Bruce, A.J. (1965). A new species of the genus *Linuparus* White, from the South China Sea (Crustacea Decapoda). *Zool. Meded. (Leiden)* **41**(1): 1–13 2 pls [1 pls 1, 2].
Type data: holotype BMNH 1965.5.21.1 ♀, paratype(s) RMNH D21213 ♂.
Type locality: South China Sea.

Distribution: NSW (SE oceanic), WA (NW coast); northern South China Sea.
Ecology: benthic, sand bottom, continental shelf, continental slope; depth 200–414 m.
References: George, R.W. (1983). New finds of deepwater "Lobster" on the Northwest shelf. *Fins, Fishery News Western Australia* **16**(1): 16–20 5 figs;

Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [236].

Linuparus trigonus (von Siebold, 1824)

Barking Crayfish (Australia), Japanese Spear Lobster (FAO), Red Spear Lobster (Aust)

Palinurus trigonus Siebold, G.T. de [P.F.von] (1824). *De historiae naaturalis in Japonia statu, nec non de augmento emolumentisque in decursu perscrutationum exspectandis Disserttio, cui accedunt Spicilegia Faune Japonicae.* Batavia 16 pp. [15].
Type data: lectotype RMNH D5611 1 dry specimen, paralectotype(s) RMNH D5610 3 dry specimens.
Subsequent designation: Holthuis, L.B. (1966). On spiny lobsters of the genera *Palinurellus*, *Linuparus* and *Puerulus* (Crustacea Decapoda, Palinuridae). *Proc. Sym. Crust. Ernak.* **1**: 260–278 [265].
Type locality: Omura Bay, Nagasaki, Kyushu, Japan.

Distribution: NSW (Lower E coast), QLD (NE coast), WA (NW coast); west Pacific (Japan, Korea, China, Taiwan, Vietnam, Philippines).
Ecology: benthic, sublittoral, continental shelf, continental slope; bottom sandy-mud, sometimes with shells, depth 30–414 m.
References: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [121] (full synonymy); Williams, A.B. (1986). Lobsters—Identification, world distribution, and the U.S. trade. *Mar. Fish. Rev.* **48**(2): 1–36 figs 1–80 (identification); Wassenberg, T.J. & Hill, B.J. (1989). Diets of four decapod crustaceans (*Linuparus trigonus*, *Metanephrops andamanicus*, *M. australiensis* and *M. boschmai*) from the continental shelf around Australia. *Mar. Biol.* **103**: 161–167; Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [111, 114].

Panulirus White, 1847

Phyllosoma Leach, W.E. (1818). A general notice of the animals taken by Mr. John Cranch, during the expedition to explore the source of the river Zaire. 1 unnumbered plate (1817), Appendix 4 (1818). pp. 407–419 *in* Tuckey, J.K. *Narrative of an Expedition to Explore the River Zaire,* Usually called the Congo, in South Africa, in 1816, under the direction of Captain J.K. Tuckey, R.N., to which is added, the Journal of Professor Smith, Some general observations on the country and its inhabitants, and an Appendix: Containing the natural history of that part of the Kingdom of Congo through which the Zaire flows. London : John Murray 498 pp. [pl. not numbered] [name suppressed under plenary powers of ICZN, see International Commission on Zoological Nomenclature (1958). Opinion 507. Use of the Plenary Powers to secure that the generic name *Panulirus* White, 1847 (Class Crustacea, Order Decapoda) shall be the oldest name for the genus concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **18**: 197–210, and placed on the Official Index of Rejected and Invalid Names in Zoology; gender neuter].
Type species: *Phyllosoma commune* Leach, 1818 by subsequent designation, see Holthuis, L.B. (1956). Proposed addition to the "Official List of Generic Names in Zoology" of the names of twenty-five genera of Macrura Reptantia (class Crustacea, order Decapoda), including proposals for the use of the plenary powers (a) to validate the spelling of "*Cherax*" and "*Cheraps*" by Erichson in 1846, (b) to suppress the specific name "*goudotii*" Guérin-Méneville, 1839, as published in the combination "*Astacoides goudotii*", and (c) to validate the emendation to "*Palinurus*" of the generic name "*Pallinurus*" Weber, 1795. *Bull. Zool. Nomencl.* **12**: 107–119.

Panulirus White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [69] [gender masculine].
Type species: *Palinurus japonicus* von Siebold, 1824 by subsequent designation, see Holthuis, L.B. (1956). Proposed addition to the "Official List of Generic Names in Zoology" of the names of twenty-five genera of Macrura Reptantia (class Crustacea, order Decapoda), including proposals for the use of the plenary powers (a) to validate the spelling of "*Cherax*" and "*Cheraps*" by Erichson in 1846, (b) to suppress the specific name "*goudotii*" Guérin-Méneville, 1839, as published in the combination "*Astacoides goudotii*", and (c) to validate the emendation to "*Palinurus*" of the generic name "*Pallinurus*" Weber, 1795. *Bull. Zool. Nomencl.* **12**: 107–119 [55].

Senex Pfeffer, G. (1881). Die Panzerkrebse des Hamburger Museum. *Verh. Naturwiss. Ver. Hamb.* **5**: 22–55 [30] [replacement name for, and thereby junior objective synonym of *Panulirus* White, 1847, junior homonym of *Senex* Gray, 1838 (Aves); gender masculine].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [128].

Extralimital distribution: circumtropical.

Panulirus cygnus George, 1962

Australian Spiny Lobster (FAO), Western Rock Lobster (Aust)

Panulirus cygnus George, R.W. (1962). Description of *Panulirus cygnus* sp. nov., the commercial crayfish (or spiny lobster) of Western Australia. *J. R. Soc. W.A.* **45**(4): 100–110 2 pls 4 figs [100 pls 1–2, text-figs].
Type data: holotype WAM 90-62 ♂, paratypes WAM 9319, WAM 257-37 to 260-37, WAM 64/5-53, WAM 40/1-58, WAM 51-58, WAM 53/4-58, RMNH D13107 5 specimens, RMNH D13107, WAM 69-58, 91-62 to 125-37 41 ♂ 53 ♀.
Type locality: Radar Reef, Rottnest Island, WA.

Distribution: WA (Central W coast, Lower W coast); known only from limital area.
Ecology: benthic, coral reef, littoral, rock reef, sublittoral; nocturnal, undertake limited migrations, depth 0 to 120 m.

Reference: Williams, A.B. (1986). Lobsters—Identification, world distribution, and the U.S. trade. *Mar. Fish. Rev.* **48**(2): 1–36 figs 1–80 (identification).

Panulirus femoristriga (von Martens, 1872)

White-whiskered Coral Crayfish

Palinurus femoristriga Martens, E. von (1872). Ueber Cubanische Crustaceen nach den Sammlungen Dr J. Gundlach's. *Arch. Naturgesch.* **38**(1): 77–147 pls 4, 5 [125].
Type data: holotype ZMB 1333 ♀.
Type locality: Amboina [Ambon], Moluccas, Indonesia.

Panulirus albiflagellum Chan, T.Y. & Chu, K.H. (1996). On the different forms of *Panulirus longipes femoristriga* (von Martens, 1872) (Crustacea: Decapoda: Palinuridae), with description of a new species. *J. Nat. Hist.* **30**: 367–387 [378].
Type data: holotype NTOU H-1984-9-14 ♂, paratypes NTOU P-1991-11-22 ♂, NTOU 1990 ♂, NTOU P-1990-12 1♂ 1♀, NTOU P-1991-8 ♂, NTOU P-1992-10-26 ♂, NTOU 1991-1992 9♂ 3♀, MNHP ♂, RMNH D17447 ♀.
Type locality: Keelung, Taiwan.

Taxonomic decision for synonymy: Chan, T.Y. & Ng, P.K.L. (2001). On the nomenclature of the commercially important spiny lobsters *Panulirus longipes femoristriga* (Von Martens, 1872), *P. bispinosus* Borradaile, 1899, and *P. albiflagellum* Chan & Chu, 1996 (Decapoda, Palinuridae). *Crustaceana* **74**(1): 123–127 [125].

Distribution: Australian distribution unknown (see below), east Indo-west Pacific Oceans (with certainty from Japan, Taiwan, Indonesia, Irian Jaya, Vietnam, and Maldive Islands, presumed present in Solomon Islands, New Hebrides and French Polynesia).
Ecology: coral reef, rock reef, subtidal; depth to about 20 m.
Reference: Davie, P., this work (*P. femoristriga* has been reported commonly from Australia as a subspecies of *P. longipes*, but as Chan & Ng (2001) have shown, the Australian records that have been confirmed, belong to *P. longipes bispinosus*. However, the distributional ranges of these two taxa are still uncertain, and it seems likely from the present records that true *P. femoristriga* will be found on the reefs of northern Australia, now that the distinguishing characters have been clearly defined. Therefore, provisionally, I am continuing to include this species in the Australian fauna).

Panulirus homarus (Linnaeus, 1758)

Scalloped Spiny Lobster (FAO)

Cancer homarus Linnaeus, C. (1758). Cancer. pp. 625–634 *in, Systema naturae per Regna Tria Naturae*, Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis. 10th edn Holmiae : L. Salvius 824 pp. [633].
Type data: lectotype specimen figured by Rumphius, G.E. (1705). *D'Amboinsche Rariteitkamer*, behelzende eene beschryvinge van allerhande zoo weeke als harde schaal-visschen, te weeten raare Krabben, Kreeften, en diergelyke Zeedieren, als mede allerhande Hoorntjes en Schulpen, die men in d'Amboinsche Zee vindt : daar beneven zommige Mineraalen, Gesteenten, en soorten van Aarde, die in d'Amboinsche, en zommige omleggende Eilanden gevonden worden : Verdeelt in drie bocken, &c. Rumpf, Georg Eberhard, 1627–1702. Amsterdam Vol. 1. 340 pp. 60 pls [pl. 1 fig. A].
Subsequent designation: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [140].
Type locality: Amboina [Ambon], Moluccas, Indonesia.

Palinurus dasypus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [300].
Type data: syntypes MNHP (no longer extant, not located in 1989).
Type locality: India.

Panulirus burgeri De Haan, W. (1841). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [159 pls 43, 44 fig. 1] [published from 1833–1850].
Type data: holotype RMNH D21129 dry ♂.
Type locality: Japan, probably Nagasaki area, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Panulirus burgeri megasculpta Pesta, O. (1915). Bemerkungen zu einigen Langusten (Palinuridae) und ihrer geographischen Verbreitung. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **124/I**: 3–12 2 figs 1 pl. [7].
Type data: syntypes BMNH 5♂ 2♀.
Type locality: Qishn, South Yemen.

Panulirus homarus rubellus Berry, P.F. (1974). A revision of the *Panulirus homarus* group of spiny lobsters (Decapoda, Palinuridae). *Crustaceana* **27**(1): 31–42 2 pls [41].
Type data: syntypes SAM, RMNH D29843 ♂ ♀, BMNH 1928.12.1.326, BMNH 1925.8.18.86–87.
Type locality: South Africa [Natal and Zululand], S Mozambique and SE Madagascar, Durban.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [128, 139].

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: littoral, rock bottom, sublittoral; often found in the surf zone, sometimes in somewhat turbid water, depth 1–90 m, usually 1 to 5 m.

Reference: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [128, 134] (full synonymy).

Panulirus longipes (A. Milne Edwards, 1868)

Taxonomic decision for subspecific arrangement: Chan, T.Y. & Ng, P.K.L. (2001). On the nomenclature of the commercially important spiny lobsters *Panulirus longipes femoristriga* (Von Martens, 1872), *P. bispinosus* Borradaile, 1899, and *P. albiflagellum* Chan & Chu, 1996 (Decapoda, Palinuridae). *Crustaceana* **74**(1): 123–127 [125].

Distribution: Christmas Island (Aust. Terr.), NSW (Lower E coast, SE oceanic), QLD (Central E coast, Great Barrier Reef, NE coast); Indo-west central Pacific Oceans.

Panulirus longipes bispinosus Borradaile, 1899

Coral Crayfish

Panulirus bispinosus Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897.* Cambridge : Cambridge University Press [418].
Type data: holotype UMZC ♂.
Type locality: Sandal Bay, Lifu, Loyalty Islands.

Distribution: NSW (Lower E coast), QLD (Central E coast, Great Barrier Reef, NE coast); west Pacific Ocean (Japan south through Micronesia, Papua New Guinea, New Hebrides, Fiji, Tonga, Cook Islands, and New Caledonia).
Ecology: coral reef, rock reef, subtidal; clear or slightly turbid water, nocturnal, depth 1 to 18 m.
References: Healey, A. & Yaldwyn, J. (1970). *Australian Crustaceans in Colour.* Sydney : A.H. & A.W. Reed 112 pp. [55] (colour photograph—as *P. longipes*); Chan, T.Y. & Chu, K.H. (1996). On the different forms of *Panulirus longipes femoristriga* (von Martens, 1872) (Crustacea: Decapoda: Palinuridae), with description of a new species. *J. Nat. Hist.* **30**: 367–387 [369] (description and figures, under the misidentification of *P. longipes femoristriga*).

Panulirus longipes longipes (A. Milne Edwards, 1868)

Coral Crayfish

Palinurus longipes Milne Edwards, A. (1868). Description de quelques Crustacés nouveaux provenant des voyages de M. Alfred Grandidier à Zanzibar et à Madagascar. *Nouv. Arch. Mus. Hist. Nat. Paris* **4**: 69–92 pls 19–21 [87 pl. 21].
Type data: lectotype MNHP* (no longer extant in 1989), paralectotype(s) MNHP*.
Type locality: Zanzibar.

Distribution: Christmas Island (Aust. Terr.); Indian Ocean.
Ecology: coral reef, rock reef, subtidal; clear or slightly turbid water, nocturnal, depth to 20 m.
Reference: George, R.W. (1968). Tropical spiny lobsters, *Panulirus* spp., of Western Australia (and the Indo-west Pacific). *J. R. Soc. W.A.* **51**(2): 33–38 (Christmas Is. record).

Panulirus ornatus (Fabricius, 1798)

Ornate Rock Lobster (Aust), Ornate Spiny Lobster (FAO)

Palinurus ornatus Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae.* Hafniae : Proft et Storch ii 572 pp. [400].
Type data: lectotype ZMUC.
Subsequent designation: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [149].
Type locality: 'in Oceano Indico' (presumed to be in the vicinity of Tranquebar, SE India).

Palinurus sulcatus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [297].
Type data: holotype (probable) MNHP Pa448 dry specimen.
Type locality: India.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [148].

Distribution: NSW (Central E coast), NT (Gulf of Carpentaria, N coast), QLD (Gulf of Carpentaria, NE coast), WA (Central W coast, Lower W coast, NW coast); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, rock bottom, sand bottom, sublittoral; often found near mouths of rivers, depth 1 to 8 m (and 50 m).
Reference: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [138] (full synonymy).

Panulirus penicillatus (Olivier, 1791)

Coral Cray (Aust), Pronghorn Spiny Lobster (FAO)

Astacus penicillatus Olivier, A.G. (1791). Écrevisse, *Astacus*. pp. 327–349 *in* Olivier, A.G. (ed.) *Encyclopédie Méthodique d'Histoire naturelle des Insectes.* Paris : Agasse Vol. 6 [343].
Type data: syntypes (probable) MNHP 7 specimens (Lamarck collection).
Type locality: Indian Ocean.

Palinurus gigas Lamarck, J.B. (1801). Crustacés. pp. 1–432 *in* Lamarck, J.B. (ed.) *Système des animaux sans vertèbres.* Paris : Maillard [*nom. nov.* for *Astacus penicillatus* Olivier, 1791].

Palinurus ehrenbergi Heller, C. (1861). Synopsis der im rothen Meere vorkommenden Crustaceen. *Verh. Zool.-Bot. Ges. Wien* **11**: 3–32 [25].
Type data: syntypes NHMW.
Type locality: 'Coseir' [Quseir, Red Sea coast of Egypt].

Cancer theresae Curtiss, A. (1938). *A short Zoology of Tahiti in the Society Islands*. New York : Self-published pp. i–xvi 1–193 [161].
Type data: no type designated; named after a specimen 'at Tautira, in Barrier Reef', Tahiti.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [151].

Distribution: WA (Central W coast, NW coast); Indo-west Pacific Oceans, tropical east Pacific.
Ecology: littoral, rock bottom, sublittoral; in clear water, often in surf zones and in surge channels—often near arid coasts and small islands, nocturnal, hides in rocks and sand, depth 1 to 4 m.
Reference: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [125] (full synonymy).

Panulirus polyphagus (Herbst, 1793)

Mud Spiny Lobster (FAO)

Cancer (Astacus) polyphagus Herbst, J.F.W. (1793). *Versuch einer Naturgeschichte der Krabben und Krebse nebst einer Systematischen Beischreibung ihrer Verschieden Arten*. 3 volumes. Berlin & Stralsund [90 pl. 32].
Type data: holotype (probable) ZMB Herbst 1973♂.
Type locality: 'Das Vaterland ist Ostindien' (most likely in the vicinity of Tranquebar, south-east India).

Palinurus fasciatus Fabricius, J.C. (1798). *Supplementatione Entomologiae Systematicae*. Hafniae : Proft et Storch ii 572 pp. [401].
Type data: syntypes MZC 3 specimens.
Type locality: Tranquebar, SE India, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [153].

Panulirus orientalis Doflein, F. (1900). Weitere Mitteilungen über dekapode Crustaceen der k. bayerischen Staatssammlungen. S.-B. *Abh. Bayer. Akad. Wiss.* **30**: 125–145 figs 1–3 [130].
Type data: holotype ZSMB (probably lost, not located in 1989).
Type locality: originally stated as Japan, but now considered to be unknown, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [153].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [131, 152].

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: rock bottom, sublittoral; often found in river mouths, in turbid water, depth range 3 to 90 m.
Reference: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [136] (full synonymy).

Panulirus versicolor (Latreille, 1804)

Painted Rock Lobster (Aust), Painted Spiny Lobster (FAO)

Palinurus versicolor Latreille, P.A. (1804). Das Langouste du Muséum national d'Historie naturelle. *Ann. Mus. Natn. Hist. Nat. Paris* **3**: 388–395 [394].
Type data: syntypes MNHP*.
Type locality: Mauritius (restricted type locality, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [156]).

Palinurus taeniatus Lamarck, J.B.P.A. (1818). *Histoire Naturelle des Animaux sans vertèbres*, présentant les caractères généraux et particuliers de ces animaux, leur distribution, leurs classes, leurs familles, leurs genres, et la citation des principales espèces qui s'y rapportent; précédée d'une Introduction offrant la Détermination des caractères essentiels de l'Animal, sa distinction du végétal et des autres corps naturelles, enfin, l'Exposition des Principes fondamentaux de la Zoologie. Vol. 5. 612 pp. [211].
Type data: syntypes MNHP 3 specimens*; (it is possible that the type material of *taeniatus* and *versicolor* is the same).
Type locality: Australia (as Nouvelle Hollande) but probably Mauritius or Timor, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Palinurus ornatus decoratus Heller, C. (1865). Crustaceen. *In, Reise der Österreichischen Fregatte 'Novara' um die Erdre, in den Jahren 1857, 1858, 1859*, unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zool. Theil. 2 (3) pp. 1–280 pls 1–25 [99].
Type data: syntypes BMNH*.
Type locality: Java, Indonesia.

Puer spiniger Ortmann, A.E. (1894). Crustaceen. *In*, Semon, R. Zoologische Forshungreisen in Australien und dem Malayischen Archipel. *Denkschr. Med.-Naturwiss. Ges. Jena* **8**(1): 1–80 pls 1–3 [19 pl. 2 fig. 2].
Type data: syntypes whereabouts unknown*.
Type locality: Amboina [Ambon], Moluccas, Indonesia.

Panulirus demani Borradaile, L.A. (1899). On the Stomatopoda and Macrura brought by Dr Willey from the South Seas. pp. 395–428 *in* Willey, A. (ed.) *Zoological*

Results based on Material from New Britain, New Guinea, Loyalty Islands and Elsewhere, collected during the Years 1895, 1896, and 1897. Cambridge : Cambridge University Press [418].
Type data: syntypes UMZC 1 ♂, ZIJ, ZMLG 2 juveniles.
Type locality: Blanche Bay, New Britain; Amboina [Ambon], Moluccas, Indonesia; New Guinea; Thursday Island, QLD; Java Sea, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Senex ornatus laevis Lanchester, W.F. (1901). On the Crustacea collected during the "Skeat" Expedition to the Malay Peninsula, together with a Note on the Genus *Actaeopsis*. Part I. Brachyura, Stomatopoda and Macrura. *Proc. Zool. Soc. Lond.* **1901**(2): 533–574 pls 33, 34 [557].
Type data: holotype UMZC ♂.
Type locality: Songkhla, S Thailand (as 'Singora').

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [132, 156].

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, great Barrier Reef, Gulf of Carpentaria, NE coast, NE oceanic), WA (N coast); Indo-west central Pacific Oceans (eastern Africa to southern Japan and east to French Polynesia).
Ecology: coral reef, cryptozoic, littoral, sublittoral; often on seaward edges of the reef plateau, in clear water and surf areas, nocturnal, depth to 15 m.

Projasus George & Grindley, 1964

Projasus George, R.W. & Grindley, J.R. (1964). *Projasus* — a new generic name for Parker's crayfish, *Jasus parkeri* Stebbing (Palinuridae: "Silentes"). *J. R. Soc. W.A.* **47**: 87–90 [87] [gender masculine].
Type species: *Jasus parkeri* Stebbing, 1902 by original designation.

Extralimital distribution: Atlantic (SW Africa), Indo-Pacific.
Generic reference: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [158] (key to species).

Projasus parkeri (Stebbing, 1902)

Parker's crayfish

Jasus parkeri Stebbing, T.R.R. (1902). South African Crustacea, Part II. *Mar. Invest. S. Afr.* **2**: 1–92 pls 5–16 [39 pl. 7].
Type data: holotype SAM A993 ♂.
Type locality: Buffalo River north 15 miles, Natal, South Africa.
Distribution: NSW (SE oceanic); Atlantic Ocean (south-west Africa), Indian Ocean (SE Africa, St Paul Island), Pacific Ocean (New Zealand).
Ecology: benthic, continental slope; from 370–880 m depth.
Reference: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [236].

Puerulus Ortmann, 1897

Puer Ortmann, A.E. (1891). Dass. III. Die abteilungen der Raptantia Boas: Homaridea, Loricata und Thalassinidea. *Zool. Jb.* **6**: 1–58 pl. 1 [15, 37] [junior homonym of *Puer* Lefebvre, 1842 (Insecta); gender masculine].
Type species: *Panulirus angulatus* Bate, 1888 by subsequent designation, see Calman, W.T. (1909). The genus *Puerulus*, Ortmann and the post-larval development of the Spiny Lobsters (Palinuridae). *Ann. Mag. Nat. Hist.* **3**: 441–446 [442].

Puerulus Ortmann, A.E. (1897). *Puerulus* nom. nov. pro *Puer. Am. J. Sci. Arts* **4**(4): 290 [290] [replacement name for *Puer* Ortmann, 1891; gender masculine].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [161].

Extralimital distribution: Indo-west Pacific Oceans. See: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Puerulus angulatus (Bate, 1888)

Banded Whip Lobster (FAO), Dwarf Lobster, Whip Lobster (Aust)

Panulirus angulatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [81 pl. 11 figs 2–4].
Type data: holotype BMNH 88.22 ♂.
Type locality: Eastern Pacific, N of New Guinea (*Challenger* Stn 219).

Puerulus gracilis Kubo, I. (1939). A new Spiny Lobster, *Puerulus gracilis*. *Bull. Jap. Soc. Scient. Fish.* **7**: 316–318 2 figs [316 figs 1, 2].
Type data: type status and whereabouts unknown ♀.
Type locality: off Kominato, Prov. Bosyu [Honshu], Japan.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [161].

Distribution: NSW (SE oceanic), QLD (NE oceanic), WA (NW coast, NW oceanic); Indo-west Pacific Oceans (South Africa to Japan).
Ecology: sandy-mud bottom, benthic, continental shelf, continental slope; depth 180 to 536 m, mainly 300–400 m.
Reference: Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [237].

Puerulus velutinus Holthuis, 1963

Velvet Whip Lobster

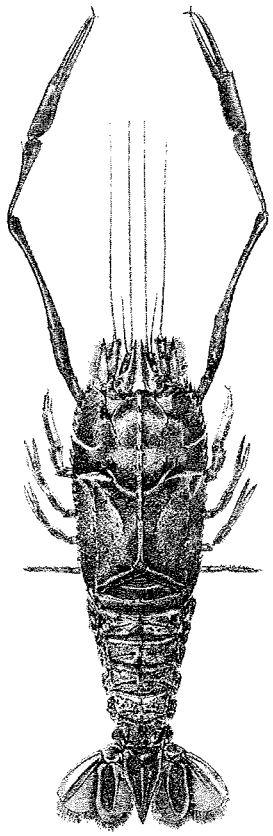
Puerulus velutinus Holthuis, L.B. (1963). Preliminary descriptions of some new species of Palinuridae (Crustacea Decapoda, Macrura Reptantia). *Proc. Konin. Neder. Akad. Weten.* **66C**: 54–60 [55].
Type data: holotype ZMA De101.823 ♂, paratypes ZMA De101.823, ZMA 101.824*.
Type locality: between Roti and Timor, Lesser Sunda Islands, Indonesia (*Siboga* Stn 297).

Distribution: WA (NW coast); Lesser Sunda Islands, SW Philippines, Moluccas Island.
Ecology: benthic, sandy-mud bottom, sublittoral; depth 485–683 m.

POLYCHELIDAE

INTRODUCTION

The peculiar looking crustaceans grouped in this small family are known collectively as 'blind lobsters' because their eyes are greatly reduced and non-pigmented. They are only found in deep water from about 200 to more than 2000 metres. Three genera occur in Australian waters. They have been studied by Griffin & Stoddart (1995) and Galil (2000), who recorded 32 species worldwide and 14 from Australian waters. Currently, S. Ahyong & D. Brown (AM) are preparing a review of additional Australian material.



Polycheles nanus
[from de Man 1916: pl. 1 fig. 2]

Diagnosis

Small to moderate-sized more or less flattened deep water lobsters. Carapace with rostrum lacking or rudimentary; eyes small, cornea lacking pigmentation; antennae fine, shorter than body length. First four pairs of pereiopods chelate; first pair long, relatively slender, chelae swollen. Tailfan entirely calcified; telson pointed.
(After Chan 1998).

References

Chan, T.-Y. (1998). Lobsters. pp. 973–1043 *in* Carpenter, K.E. & Niem, V.H. (eds) *FAO Species Identification Guide for Fisheries Purposes.* The living marine resources of the Western Central Pacific. Volume 2, Cephalopods, crustaceans, holothurians and sharks. Rome : FAO pp. 687–1396

de Man, J.G. (1916). Diagnoses of new species of macrurous decapod Crustacea from the *Siboga* Expedition. *Zool. Meded. (Leiden)* **2**: 147–151

Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387

Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263

POLYCHELIDAE Wood-Mason, 1875

Polychelidae Wood-Mason, J. (1875). On the genus *Deidamia* Willemoes-Suhm. *Ann. Mag. Nat. Hist. (4)***15**: 131–135 [132].

Pentacheles Bate, 1878

Pentacheles Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [276].
Type species: *Pentacheles laevis* Bate, 1878 by subsequent designation, see Fowler, H.W. (1912). The Crustacea of New Jersey. *Rep. N.J. Mus.* **1911**: 29–650 [569].

Pentacheles laevis Bate, 1878

Pentacheles laevis Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [278].
Type data: lectotype BMNH 1888.22 ♀.
Subsequent designation: Sund, O. (1920). The "Challenger" Eryonidea (Crustacea). *Ann. Mag. Nat. Hist.* **6**: 220–226 [224].
Type locality: off the Moluccas, Indonesia (*Challenger* Stn 214).

Pentacheles gracilis Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [279].
Type data: holotype BMNH 1888.22 ♀.
Type locality: off Fiji (*Challenger* Stn 174C).

Polycheles granulatus Faxon, W. (1893). Reports on the Dredging Operations off the West Coast of Central America to the Galapagos, to the West Coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, Carried on by the U.S.Fish Commission Steamer "Albatross" during 1891, Lieut. Commander Z.L. Tanner, U.S.N., Commanding, VI: Preliminary Description of New Species of Crustacea. *Bull. Mus. Comp. Zool.* **24**(7): 149–220 [197].
Type data: holotype MCZ 4578 ♀.
Type locality: Gulf of Panama.

Polycheles beaumontii Alcock, A.W. (1894). Natural history notes from Indian Marine Survey Steamer "Investigator". Ser II, No. 1. On the result of deep-sea dredging during the season of 1890–1891. *Ann. Mag. Nat. Hist.* **13**: 225–245 [236].
Type data: holotype IM 520/7 ♂.
Type locality: off Colombo, Sri Lanka.

Polycheles dubius Bouvier, E.L. (1905). Sur les Palinurides et les Eryonides recueillis dans l'Atlantique orientale par les expéditions françaises et monégasques. *C. R. Séances Acad. Sci.* **140**: 479–482 [480].
Type data: lectotype MNHP Pa34 ♀, paralectotypes MNHP Pa34 2 specimens, MNHP Pa1138 1 specimen.
Subsequent designation: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [303].
Type locality: off the Azores.

Polycheles eryoniformis Bouvier, E.L. (1905). Sur les Crustacés Décapodes (abstraction faite des Carides) recueillis par le yacht "*Princesse Alice*" au cours de la campagne de 1905. *C. R. Séances Acad. Sci.* **141**: 644–647 [644].
Type data: syntypes MNHP*.
Type locality: south of Madeira.

Taxonomic decision for synonymy: Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text-figs 1–79 pls 1–24 [899]; Selbie, C.M. (1914). The Decapoda Reptantia of the coasts of Ireland. Part 1. Palinura, Astacura and Anomura (except Paguridea). *Sci. Invest. Fish. Branch Dep. Agr. Ireland* **1914**: 1–116 [23]; Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [301–305].

Distribution: NSW (SE oceanic, Tasman Sea), TAS (SE oceanic), VIC (SE oceanic); Lord Howe Rise, Atlantic-Indo-Pacific.
Ecology: continental rise, continental slope; from 347–2505 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [301–305].

Pentacheles validus A. Milne Edwards, 1880

Pentacheles validus Milne Edwards, A. (1880). No. 1. Reports on the results of dredging under the supervision of Alexander Agassiz, in the Gulf of Mexico, and in the Caribbean Sea, 1877, '78, '79, by the U.S. Coast Survey Steamer "Blake". Lieut.-Commander C.D. Sigsbee, U.S.N., and Commander J.R. Bartlett, U.S.N., Commanding. VIII. Etudes préliminaires sur les Crustacés. *Bull. Mus. Comp. Zool.* **8**(1): 1–68 pls 1–2 [65].
Type data: holotype MCZ 4041.
Type locality: off Bequia, Antilles (*Blake* Stn 236).

Pentacheles debilis Smith, S.I. (1884). XV. Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [360].
Type data: lectotype USNM 7145 ♂, paralectotype(s) USNM 7146 ♂.
Subsequent designation: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [308–311].
Type locality: off New England, USA (*Albatross* Stn 2074).

Pentacheles debilis armatus Bouvier, E.L. (1905). Palinurides et Eryonides recueillis dans l'Atlantique orientale pendant les campagnes de l'"Hirondelle" et de la "Princesse-Alice". *Bull. Mus. Océanogr. Monaco* **28**: 1–7 [4] [as *Pentacheles debilis* var. *armatus* Bouvier, 1905].
Type data: lectotype MNHP Pa15 juvenile, paralectotypes MNHP Pa14 2 juveniles, MNHP Pa16 2 juveniles.

Subsequent designation: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [308–311].
Type locality: Canary Islands (*Talisman* Stn 39).

Pentacheles demani Stebbing, T.R.R. (1917). IX. South African Crustacea. *Ann. S. Afr. Mus.* **17**: 23–46 [28].
Type data: holotype BMNH 1928.12.1.337 ♀.
Type locality: off Cape Point Lighthouse, South Africa.

Pentacheles chilensis Sund, O. (1920). The "Challenger" Eryonidea (Crustacea). *Ann. Mag. Nat. Hist.* **6**: 220–226 [226].
Type data: holotype BMNH 1888.22 ♀.
Type locality: off Juan Fernandez Islands (*Challenger* Stn 300).

Taxonomic decision for synonymy: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [308–311].

Distribution: SA (S oceanic), TAS (SE oceanic); Atlantic-Indo-Pacific.
Ecology: bathyal, benthic, continental rise, continental slope; from 914–3365 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [308–311].

Polycheles Heller, 1862

Polycheles Heller, C. (1862). Beiträge zur näheren kenntnis der Macrouren. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **45**(1): 389–426, 2 pls [389] [gender masculine].
Type species: *Polycheles typhlops* Heller, 1862 by monotypy.

Stereomastis Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [154] [validated under the plenary powers; gender feminine].
Type species: *Pentacheles suhmi* Bate, 1878 by subsequent designation, see Holthuis, L.B. (1962). Forty-seven genera of Decapoda (Crustacea); Proposed addition to the Official List. *Bull. Zool. Nomencl.* **19**: 183, 232–252.

Taxonomic decision for synonymy: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [311].

Extralimital distribution: Atlantic, Indo-Pacific Oceans.

Polycheles aculeatus Galil, 2000

Polycheles aculeatus Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [312–315].
Type data: holotype MNHP Pa1423 ♂, paratypes MNHP Pa1427 ♀ ♂, WAM C23588 ♀, USNM 356448 ♀.
Type locality: New Caledonia [22°35.6'S 166°26.2'E].

Distribution: NSW (SE oceanic), QLD (SE oceanic), WA (NW oceanic); Indo-West Pacific (New Caledonia, Indonesia, Japan).
Ecology: bathyal, benthic, continental slope; from 144–1053 m.

Polycheles auriculatus (Bate, 1878)

Pentacheles auriculatus Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [280].
Type data: holotype BMNH 1888.22 ♂.
Type locality: off Kandavu Is., Fiji [19°07.5'S 178°19.35'E].

Distribution: WA (NW oceanic); Indo-West Pacific (French Polynesia, New Caledonia, Philippines).
Ecology: bathyal, benthic, continental slope; from 532–1500 m.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [315–317].

Polycheles baccatus Bate, 1878

Polycheles baccatus Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [278].
Type data: lectotype BMNH 1888.22 ♂, paralectotype(s) BMNH 1888.22 ♂ 2 ♀.
Subsequent designation: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [317–319].
Type locality: near Fiji [19°10'S 179°40'E].

Distribution: NSW (SE oceanic), QLD (SE oceanic); Indo-west Pacific (Indonesia, Philippines, New Caledonia, Fiji).
Ecology: bathyal, benthic, continental slope; from 300–1250 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [317–319].

Polycheles enthrix (Bate, 1878)

Pentacheles enthrix Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [280 pl. 13 figs 1–3].
Type data: syntypes BMNH 1888.22 ♀ (other syntypes lost).
Type locality: near Kermadec Island, south-west Pacific [29°55'S 178°14'W], New Hebrides [Vanuatu] [19°10'S 179°40'E].

Distribution: NSW (SE oceanic), QLD (NE oceanic, SE oceanic); west Pacific Ocean (Kermadec Islands, Fiji, Taiwan, Japan).
Ecology: bathyal, benthic, continental rise, continental slope; from 229–1152 m depth.

Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [322–325].

Polycheles helleri Bate, 1878

Polycheles helleri Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [277].
Type data: syntypes BMNH 1888.22 ♂, BMNH 1888.22 ♀.
Type locality: near Kermadec Island, south-west Pacific [29°55'S 178°14'W], north of Papua New Guinea [2°33'S 144°04'E].

Distribution: QLD (NE oceanic); Indo-West Pacific Ocean (Japan, New Caledonia, New Guinea, Indonesia, Madagascar).
Ecology: bathyal, benthic, continental rise; from 787–2150 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [327–329].

Polycheles nanus (Smith, 1884)

Pentacheles nanus Smith, S.I. (1884). XV. Report on the decapod Crustacea of the Albatross dredgings off the east coast of the United States in 1883. *Report of the United States Fish Commission* **10**: 345–426 [359].
Type data: lectotype USNM 5714 ♂.
Subsequent designation: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [329–332].
Type locality: USA [38°44N 72°38W], *Albatross* stn 2102 (SW of Cape Cod).

Pentacheles andamanensis Alcock, A.W. (1894). Natural history notes from Indian Marine Survey Steamer "Investigator". Ser II, No. 1. On the result of deep-sea dredging during the season of 1890–1891. *Ann. Mag. Nat. Hist.* **13**: 225–245 [239].
Type data: holotype IM 532/7 ♀*.
Type locality: off Travancore Coast, India [7°04.00'N 76°34.25'E].

Polycheles grimaldii Bouvier, E.L. (1905). Sur les Palinurides et les Eryonides recueillis dans l'Atlantique orientale par les expéditions françaises et monégasques. *C. R. Séances Acad. Sci.* **140**: 479–482 [481].
Type data: holotype MNHP Pa21 ♀.
Type locality: off Senegal.

Taxonomic decision for synonymy: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [329–332].

Distribution: NSW (SE oceanic, Tasman Sea), QLD (NE oceanic); Lord Howe Rise, Atlantic-Indo-West Pacific.
Ecology: bathyal, benthic, continental rise, continental slope; from 300–4000 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [329–332].

Polycheles phosphorus (Alcock, 1894)

Pink Blind Lobster

Pentacheles phosphorus Alcock, A.W. (1894). Natural history notes from Indian Marine Survey Steamer "Investigator". Ser II, No. 1. On the result of deep-sea dredging during the season of 1890–1891. *Ann. Mag. Nat. Hist.* **13**: 225–245 [240].
Type data: lectotype IM 6873/9 ♀, paralectotypes AM G1477 ♂, IM numerous specimens.
Subsequent designation: Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [169].
Type locality: Bay of Bengal.

Distribution: WA (NW coast); Indo-west Pacific Oceans (Arabian Sea, eastern Indian Ocean, New Caledonia, Japan, Indonesia, Philippines).
Ecology: benthic, sandy-mud bottom, continental rise, continental slope, oceanic province; depth 200–1354 m.
References: Davie, P., this work (specimens reported by Galil (2000) from Pacific localities and WA represent an undescribed species to be described by S. Ahyong & D. Brown); Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [336–339].

Polycheles sculptus (Smith, 1880)

Polycheles sculptus Smith, S.I. (1880). Notice of a new species of the 'Willemoesia group of Crustacea' (recent Eryontidae). *Proc. U.S. Natn. Mus.* **2**: 345–353 pl. 7 [346 pl. 7].
Type data: holotype USNM 39957 ♂.
Type locality: off the coast of Nova Scotia, south-east of Sable Island, NW Atlantic [43°10'N 61°20'W].

Pentacheles spinosus Milne Edwards, A. (1880). No. 1. Reports on the results of dredging under the supervision of Alexander Agassiz, in the Gulf of Mexico, and in the Caribbean Sea, 1877, '78, '79, by the U.S. Coast Survey Steamer "Blake". Lieut.-Commander C.D. Sigsbee, U.S.N., and Commander J.R. Bartlett, U.S.N., Commanding. VIII. Etudes préliminaires sur les Crustacés. *Bull. Mus. Comp. Zool.* **8**(1): 1–68 pls 1–2 [66].
Type data: syntypes MCZ 2794 2 specimens, MCZ 2795 1 specimen, MCZ 3076 1 specimen.
Type locality: West of Tortugas, off Dominica, off Guadeloupe.

Taxonomic decision for synonymy: Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [170].

Distribution: NSW (SE oceanic); Atlantic-Indo-Pacific Oceans.
Ecology: bathyal, benthic, continental rise, continental slope; from 200–4000 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [340–346].

Polycheles suhmi (Bate, 1978)

Pentacheles suhmi Bate, C.S. (1878). On the *Willemoesia* group of Crustacea. *Ann. Mag. Nat. Hist.* **2**: 273–283, 484, 489 pl. 13 [278].
Type data: holotype BMNH 1888.22 ♂.
Type locality: off West Coast of Patagonia [47°48'S 74°48'W].

Distribution: NSW (SE oceanic); South Atlantic Ocean off western South Africa, SE Pacific off SW coast of South America.
Ecology: bathyal, benthic, continental rise, continental slope; from 223–2195 m depth.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [344–346].

Polycheles surdus Galil, 2000

Polycheles surdus Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [347–349].
Type data: holotype SAM A41 702 ♂, paratype(s) SAM A41 702 ♂.
Type locality: off Mozambique [18°14'S 37°31'E].

Distribution: NSW (N coast, Central coast); Madagascar and Mozambique to Australia, Indonesia, New Zealand, New Caledonia to Hawai'i, Marquesas and the Nazca Ridge.
Ecology: benthic, continental rise, continental slope, oceanic province, sand bottom; depth 350–1525 m.

Polycheles typhlops Heller, 1862

Polycheles typhlops Heller, C. (1862). Beiträge zur näheren kenntnis der Macrouren. *Sitzungsber. Math.-Phys. Kl. K. Bayer. Akad. Wiss. Muench.* **45**(1): 389–426, 2 pls [392 pl. 1 figs 1–6].
Type data: holotype NHMW ♂.
Type locality: off Sicily.

Pentacheles agassizii Milne Edwards, A. (1880). No. 1. Reports on the results of dredging under the supervision of Alexander Agassiz, in the Gulf of Mexico, and in the Caribbean Sea, 1877, '78, '79, by the U.S. Coast Survey Steamer "Blake". Lieut.-Commander C.D. Sigsbee, U.S.N., and Commander J.R. Bartlett, U.S.N., Commanding. VIII. Etudes préliminaires sur les Crustacés. *Bull. Mus. Comp. Zool.* **8**(1): 1–68 pls 1–2 [65].
Type data: holotype MNHP Pa32 ♀, paratypes MCZ 2789 1 specimen, MCZ 2790 1 specimen, MCZ 2792 2 specimens, MCZ 4042 ♂.
Type locality: West Indies.

Polycheles doderleini Riggio, G. (1885). Appunti di Carcinologica Siciliana. Sul Polycheles doederleini, Riggio et Heller. *Naturalista Siciliano* **4**: 99–104, 140–46 pl. 3 [99 pl. 3].
Type data: holotype ♀ ZMP.
Type locality: Palermo.

Pentacheles hextii Alcock, A.W. (1894). Natural history notes from Indian Marine Survey Steamer "Investigator". Ser II, No. 1. On the result of deep-sea dredging during the season of 1890–1891. *Ann. Mag. Nat. Hist.* **13**: 225–245 [237].
Type data: lectotype IM 6767-6770/9 ♂.
Subsequent designation: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [358].
Type locality: Andaman Sea (*Investigator* Stn 115).

Polycheles intermedius Balss, H. (1914). Diagnosen neuer Macruren der Valdivia Expedition. *Zool. Anz.* **44**: 592–599 [599].
Type data: type status unknown.
Type locality: between Iceland and the Hebrides.

Taxonomic decision for synonymy: Bouvier, E.L. (1905). Sur les Palinurides et les Eryonides recueillis dans l'Atlantique orientale par les expéditions françaises et monégasques. *C. R. Séances Acad. Sci.* **140**: 479–482 [480–481]; Kemp, S.W & Sewell, S.R.B. (1912). Notes on the Decapoda in the Indian Museum III. The species obtained by the R.I.M.S.S. "*Investigator*" during the survey season 1910-1911. *Rec. Indian Mus.* **7**: 15–32; Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [354].

Distribution: NSW (SE oceanic), QLD (NE oceanic), WA (NW oceanic); Indo-west Pacific Oceans, Atlantic north to Iceland, Mediterranean.
Ecology: benthic, continental rise, continental slope, oceanic province, sand bottom; depth 183-2195 m.
Reference: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [354–359].

Willemoesia Grote, 1873

Deidamia Willemoes-Suhm, R. von, *in* Wyville Thompson, C. (1873). Notes from the "Challenger" II. *Nature* **8**: 51 [51].
Type species: *Deidamia leptodactyla* Willemoes-Suhm, 1873 by monotypy.

Willemoesia Grote, A.R. (1873). "Deidamia" — Letters to the Editor. *Nature* **8**: 485 [485] [*nom. nov.* for *Deidamia* Willemoes-Suhm, 1873; gender feminine].

Willemoesia pacifica Sund, 1920

Willemoesia pacifica Sund, O. (1920). The "Challenger" Eryonidea (Crustacea). *Ann. Mag. Nat. Hist.* **6**: 220–226 [223].
Type data: holotype BMNH 1888.22 ♂.
Type locality: off Juan Fernanadez Islands [33°42'S 78°18'W].

Willemoesia bonaspei Kensley, B.F. (1968). Deep sea decapod Crustacea from west of Cape Point, South Africa. *Ann. S. Afr. Mus.* **50**(12): 283–323 [294 figs 4, 5].

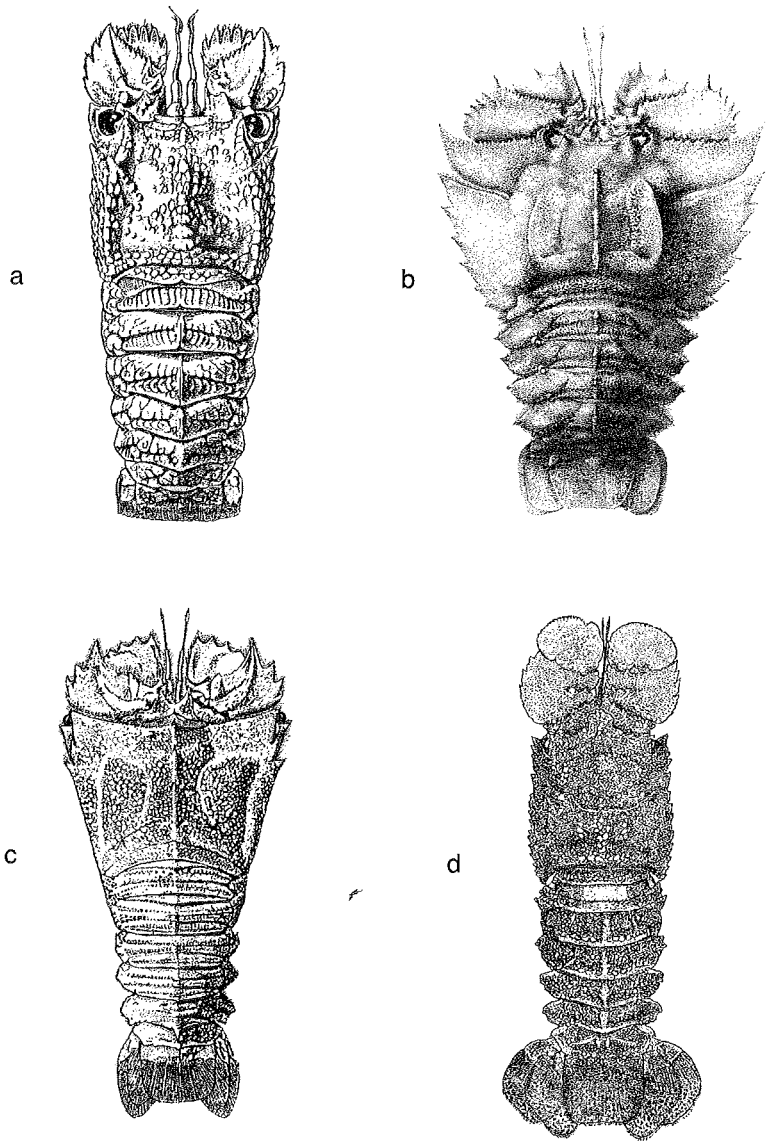
Type data: holotype SAM A12636 ♀, paratypes SAM A10473 2♂, SAM A10497 ♂, SAM A10465 2♂, SAM A10508 3♂, SAM A10485 ♂.
Type locality: west of Cape Point, South Africa.

Taxonomic decision for synonymy: Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [367–368].

Distribution: SA (S oceanic); south-east Atlantic (west of Cape Point South Africa), South Pacific.
Ecology: benthic, continental rise, oceanic province; from 2475–5000 m depth.

References: Bage, F. (1938). Crustacea Decapoda (in part). *Scientific Reports of the Australasian Antarctic E* **2**(6): 1–13 [9] (recorded from southern Australia as *W. leptodactyla* Willemoes-Suhm); Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [251]; Galil, B.S. (2000). Crustacea Decapoda: Review of the genera and species of the family Polychelidae Wood-Mason, 1874. *Mém. Mus. natn. Hist. nat. Paris* **184**: 285–387 [367–368].

SCYLLARIDAE



a, Scyllarinae: *Scyllarus martensii*; b, Ibacinae: *Ibacus peronii*; c, Theninae: *Thenus orientalis*; d, Arctidinae: *Arctides antipodarum*.

[from Holthuis 1991: a, fig. 421; b, fig. 206; c, fig. 327; d, fig. 427]

INTRODUCTION

Members of this family are commonly referred to as 'Slipper Lobsters'. They are typically bottom-dwelling, and found from shallow inshore waters out onto the continental slope to nearly 500 metres depth. Some such as *Thenus* and *Ibacus* species are more typically soft bottom inhabitants, which allows them to be trawled easily, but others such as the large *Scyllarides*, *Arctides* and *Parribacus* species live in caves and crevices on reefs, and are encountered mainly by SCUBA divers. Species of *Thenus* (Moreton Bay Bugs) and *Ibacus* (Balmain Bug) are of considerable economic importance, particularly to the east coast fishery. A revisionary study of *Thenus* has been undertaken by Burton & Davie, and new names are to be proposed for the two Australian species.

Four subfamilies were recognised by Holthuis (1985), and the Australian genera are allocated thus: Scyllarinae Latreille, 1825—*Scyllarus*; Theninae Holthuis, 1985—*Thenus*; Ibacinae Holthuis, 1985—*Ibacus* and *Parribacus*; Arctidinae Holthuis, 1985—*Arctides* and *Scyllarides*. The most important works dealing with the Australian fauna are: Holthuis (1991) and Brown & Holthuis (1998). Holthuis (1996) provided an interesting historical account of the Scyllaridae collected during the 1800–1804 French Expedition to Australia including the original figures of Leseur and notes by Péron.

Diagnosis

Small to moderately large lobsters. Body often strongly depressed, carapace laterally angular, rostrum absent or minute; eyes small but distinct and pigmented, enclosed within distinct orbits; no large frontal horns. Antennae short, broad, extremely flattened and plate or scale-like; antennules short and slender, with short flagella. All pereiopods similar in size and non-chelate (except *Scyllarus cultrifer* which has pereiopods 3 and 4 subchelate). Abdomen and tailfan well developed and powerful; posterior half of tailfan soft and flexible. (After Chan 1998).

References

Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9

Chan, T.-Y. (1998). Lobsters. pp. 973–1043 *in* Carpenter, K.E. & Niem, V.H. (eds) *FAO Species Identification Guide for Fisheries Purposes.* The living marine resources of the Western Central Pacific. Volume 2, Cephalopods, crustaceans, holothurians and sharks. Rome : FAO pp. 687–1396

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

Holthuis, L.B. (1996). The scyllarid lobsters (Crustacea: Decapoda: Palinuridea) collected by F. Péron and C. A. Lesueur during the 1800-1804 expedition to Australia. *Zoologische Mededelingen (Leiden)* **70**: 261–270

SCYLLARIDAE Latreille, 1825

Scyllarides Latreille, P.A. (1825). *Familles naturelles du règne animal*, exposées succinctement et dans un ordre analytique, avec l'indication de leurs genres. Paris : Baillère 2nd Edn 570 pp. [278] [name placed on the Official List of Family Names in Zoology, see International Commission on Zoological Nomenclature (1958). Opinion 519. Addition to the *Official List of Generic Names in Zoology* of the names of twenty-three genera of Macrura Reptantia (Class Crustacea) and use of the Plenary Powers in regard to three matters concerned therewith. *Opin. Declar. Int. Comm. Zool. Nomencl.* **19**: 133–168].

Arctidinae Holthuis, L.B. (1985). A revision of the family Scyllaridae (Crustacea: Decapoda: Macrura). I. Subfamily Ibacinae. *Zool. Verh.* **218**: 1–130 figs 1–27 [10].

Ibacinae Holthuis, L.B. (1985). A revision of the family Scyllaridae (Crustacea: Decapoda: Macrura). I. Subfamily Ibacinae. *Zool. Verh.* **218**: 1–130 figs 1–27 [10].

Theninae Holthuis, L.B. (1985). A revision of the family Scyllaridae (Crustacea: Decapoda: Macrura). I. Subfamily Ibacinae. *Zool. Verh.* **218**: 1–130 figs 1–27 [10, 12].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [171].

Arctides Holthuis, 1960

Arctides Holthuis, L.B. (1960). Preliminary descriptions of one new genus, twelve new species and three new subspecies of scyllarid lobsters (Crustacea Decapoda Macrura). *Proc. Biol. Soc. Wash.* **73**: 147–154 [154] [gender masculine].
Type species: *Scyllarus guineensis* Spengler, 1799 by original designation.

Extralimital distribution: Atlantic and Indo-Pacific Oceans. See: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [174].

Arctides antipodarum Holthuis, 1960

Red Flapjack (Aust), Rough Spanish Lobster (FAO)

Arctides antipodarum Holthuis, L.B. (1960). Preliminary descriptions of one new genus, twelve new species and three new subspecies of scyllarid lobsters (Crustacea Decapoda Macrura). *Proc. Biol. Soc. Wash.* **73**: 147–154 [154].
Type data: holotype RMNH D10648 ♂, paratype(s) RMNH D10308 1 specimen.
Type locality: off Malabar, NSW.

Distribution: NSW (Central E coast, Lower E coast); New Zealand.
Ecology: rock bottom, benthic, continental shelf, subtidal; prefer clear water and rocky bottom, depth 5 to 146 m, usually between 5 and 30 m.

Ibacus Leach, 1815

Ibacus Leach, W.E. (1815). *The Zoological Miscellany*; being descriptions of new or interesting animals ... illustrated with coloured figures drawn from nature by R.P. Nodder &c.. London : E. Nodder & Son Vol. 2 154 pp., 8 unnumbered, atlas pls 61–120 [151] [gender masculine].
Type species: *Ibacus peronii* Leach, 1815 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans.
Generic reference: Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [114] (review of Australian species and key to genus).

Ibacus alticrenatus Bate, 1888

Deep Water Bug (Aust), Velvet Fan Lobster (FAO), White-Tailed Bug

Ibacus alticrenatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [63 pl. 9 fig. 2].
Type data: syntypes BMNH 88.22 4 specimens.
Type locality: *Challenger* Stn 167, W of New Zealand.

Ibacus alticrenatus septemdentatus Grant, F.L.S. (1905). Crustacea dredged off Port Jackson in deep water. *Proc. Linn. Soc. N.S.W.* **30**(2): 312–324 [322 pl. 11 fig. 2].
Type data: syntypes AM G5424 2 specimens.
Type locality: 43 km E of Port Jackson, NSW.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [197, 200].

Distribution: NSW (Lower E coast, SE oceanic), QLD (NE coast), SA (Great Australian Bight, S Gulfs coast), VIC (Bass Strait), WA (Central W coast, Lower W coast, NW coast); New Zealand.
Ecology: burrowing, sand bottom, sublittoral, benthic, continental shelf, continental slope, trade (commercially important as bycatch product of prawn and scallop fishery); digs into substrate and covers itself with mud and sand, ovigerous females from May to October, depth 20 to 686 m.
References: Holthuis, L.B. (1985). A revision of the family Scyllaridae (Crustacea: Decapoda: Macrura). I. Subfamily Ibacinae. *Zool. Verh.* **218**: 1–130 figs 1–27 (description and development); Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [120].

Ibacus brevipes Bate, 1888

Ibacus brevipes Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [62 pl. 9 fig. 1].

Distribution: QLD (NE coast); Indo-west Pacific (South China Sea, Philippines, Indonesia, Moluccas, New Caledonia).
Ecology: benthic, continental shelf, continental slope, soft bottom; from 186–457 m depth.
Reference: Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [124].

Ibacus brucei Holthuis, 1977

Glabrous Fan Lobster (FAO)

Ibacus brucei Holthuis, L.B. (1977). Two new species of Scyllarid lobsters (Crustacea Decapoda, Palinuridae) from Australia and the Kermadec Islands, New Zealand. *Zool. Meded. (Leiden)* **52**(15): 191–200, 2 text-figs 2 pls [191 pls 1, 2].
Type data: holotype RMNH D24744 ♂, paratypes RMNH D25524 1♂, MZC 1♂, AMP 25056 1♂, AM P25072 2♂.
Type locality: due E of Point Lookout, North Stradbroke Island, QLD.

Distribution: NSW (Central E coast), QLD (Central E coast); Kermadec Islands, New Zealand.
Ecology: benthic, continental shelf, continental slope, soft bottom, trade (sold commercially in eastern Australia); soft substrates with stones, depth 83–559 m.
Reference: Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [127].

Ibacus chacei Brown & Holthuis, 1998

Smooth Bug

Ibacus chacei Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [115 figs 2A, 3A,B, pl. 1].
Type data: holotype AM P32741 ♂, paratypes AM P32742 ♂, AM P31407 3♂ 3♀, AM P31548 2♂ 1♀, AM P15589 ♀, AM P15590 ♀, AM E2026 1♂ 1♀, AM P31406 1♂ 4 ♀, AM P31553 1♂ 1♀, QM W3054 1♂, TMH G1110 2♂, NTM Cr.012310 2♀, USNM 243402 2♀, QM W15358 ♀, QM W14341 ♂, RMNH D37610 1♂ 1♀ 1 juvenile, RMNH D25520 1 juvenile, RMNH D25521 ♂, RMNH D25522 1♂ 1♀ 2 juveniles, RMNH D25523 ♂, RMNH D36219 ♀.
Type locality: SE of Cape Hawke, NSW [32°18'S 152°43'E].

Distribution: NSW (Central E coast, Lower E coast), QLD (NE coast); known only from limital area, from SE of Innisfail, QLD south to NE of Batemans Bay, NSW.
Ecology: benthic, continental shelf, continental slope, subtidal, trade (trawled commercially); from 22–330 m depth.
Reference: Stewart, J., Kennelly, S.J. & Hoegh-Guldberg, O. (1997). Size at sexual maturity and the reproductive biology of two species of scyllarid lobster from New South Wales and Victoria, Australia. *Crustaceana* **70**(3): 344–367 [344] (reproductive biology).

Ibacus novemdentatus Gibbes, 1850

Smooth Fan Lobster (FAO)

Ibacus novemdentatus Gibbes, L.R. (1850). On the Carcinological Collections of the Cabinets of natural History in the United States. With an Enumeration of the Species contained therein, and Descriptions of new Species. *Proc. Am. Ass. Advant. Sci.* **3**: 167–201 [193].
Type data: holotype whereabouts unknown ('Cabinet of the Lyceum of Natural History, of New York').
Type locality: unknown.

Distribution: NT (N coast), WA (N coast, NW coast); Indo-west Pacific Oceans.
Ecology: sublittoral, benthic, continental shelf, continental slope, soft bottom; substrates of fine sand, depth 37 to 400 m.
References: Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [129]; Davie, P., this work (sometimes confused with *Ibacus ciliatus* or *I. peronii*).

Ibacus peronii Leach, 1815

Balmain Bug (Aust), Butterfly Fan Lobster (FAO)

Ibacus peronii Leach, W.E. (1815). *The Zoological Miscellany*; being descriptions of new or interesting animals ... illustrated with coloured figures drawn from nature by R.P. Nodder &c.. London : E. Nodder & Son Vol. 2 154 pp., 8 unnumbered, atlas pls 61–120 [152 pl. 119].
Type data: holotype MNHP Pa146.
Type locality: Sea Elephant Bay, King Island, Bass Strait, Australia, see Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [134].

Scyllarus incisus Leach, W.E. (1815). *The Zoological Miscellany*; being descriptions of new or interesting animals ... illustrated with coloured figures drawn from nature by R.P. Nodder &c.. London : E. Nodder & Son Vol. 2 154 pp., 8 unnumbered, atlas pls 61–120.
Type data: type status unknown.
Type locality: Australia (as New Holland), see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Phyllosoma duperreyi Guérin-Méneville, F.É. (1844). *Iconographie du règne animal de G. Cuvier*, ou représentation d'après nature de l'une des espèces les plus remarquables, et souvent non figurées, de chaque genre d'animaux. Avec un text descriptif mis au courant de la

science. Ouvrage pouvant servir d'atlas à tous les traités de zoologie. 450 plates in 45 livraisons. Crustacea: 48 pp. 36 pls Paris : J.B. Baillière [published from1829–1844].
Type data: syntypes MNHP* (no longer extant).
Type locality: Port Jackson, NSW.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [199, 205].

Distribution: NSW (Lower E coast), QLD (Central E coast), SA (Great Australian Bight), TAS (Tas. coast), VIC (Bass Strait), WA (Lower W coast); known only from limital area, north as far as Moreton Bay on the east coast.
Ecology: sand bottom, sublittoral, benthic, continental shelf, continental slope, trade (commercially important in NSW, Victoria and WA; mainly taken as bycatch of prawn and scallop fisheries); found on soft substrates, depth 4 to 250 m.
References: Stewart, J. & Kennelly, S.J. (1997). Fecundity and egg-size of the Balmain bug *Ibacus peronii* Leach, 1815) (Decapoda, Scyllaridae) off the east coast of Australia. *Crustaceana* **70**(2): 191–197 figs 1–3 [191]; Stewart, J., Kennelly, S.J. & Hoegh-Guldberg, O. (1997). Size at sexual maturity and the reproductive biology of two species of scyllarid lobster from New South Wales and Victoria, Australia. *Crustaceana* **70**(3): 344–367 [344].

Ibacus pubescens Holthuis, 1960

Deepwater Velvet Bug

Ibacus ciliatus pubescens Holthuis, L.B. (1960). Preliminary descriptions of one new genus, twelve new species and three new subspecies of scyllarid lobsters (Crustacea Decapoda Macrura). *Proc. Biol. Soc. Wash.* **73**: 147–154 [147].
Type data: holotype USNM 104285 ♂, paratype(s) RMNH D15413 2 specimens.
Type locality: Stn D5394, near Talajit Island, Philippines.

Taxonomic decision for new combination: Chan, T.-Y. (1997). Crustacea Decapoda: Palinuridae, Scyllaridae and Nephropidae collected in Indonesia by the KARUBAR Cruise, with an identification key for the species of *Metanephrops*. pp. 409–431 *in* Crosnier, A. & Bouchet, P. Résultats des Campagnes MUSORSTOM, Volume 16. *Mém. Mus. natn. Hist. nat. Paris* **172**: 1–667 [412] (full species status).

Distribution: NT (N coast), WA (N coast, NW coast); Philippines, Indonesia.
Ecology: benthic, continental shelf, continental slope, soft bottom, subtidal; from 151–750 m depth.
References: Brown, D.E. & Holthuis, L.B. (1998). The Australian species of the genus *Ibacus* (Crustacea: Decapoda: Scyllaridae), with the description of a new species and addition of new records. *Zool. Meded. (Leiden)* **72**(10): 113–141 figs 1–3 pls 1–9 [135].

Parribacus Dana, 1852

Parribacus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [14] [gender masculine].
Type species: *Scyllarus antarcticus* Lund, 1793 by subsequent designation, see Ward, M. (1942). Notes on the Crustacea of the Desjardins Museum, Mauritius Institute with descriptions of new genera and species. *Bull. Maurit. Inst.* **2**(2): 49–113 pls 5–6 [61].

Extralimital distribution: Indo-Pacific-east-Atlantic Oceans. See: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Parribacus antarcticus (Lund, 1793)

Sculptured Mitten Lobster

Scyllarus antarcticus Lund, N.T. (1793). Slaegten Scyllarus. Iagttagelser til Insekternes Historie. I. *Skr. Naturh.-Selsk. Kiobenhavn.* **2**(2): 17–22 [22].
Type data: lectotype* (type material not cited in original publication; lectotype is specimen figured on pl. 2 fig. C of Rumphius, G.E. (1705). *D'Amboinsche Rariteitkamer*, behelzende eene beschryvinge van allerhande zoo weeke als harde schaalvisschen, te weeten raare Krabben, Kreeften, en diergelyke Zeedieren, als mede allerhande Hoorntjes en Schulpen, die men in d'Amboinsche Zee vindt : daar beneven zommige Mineraalen, Gesteenten, en soorten van Aarde, die in d'Amboinsche, en zommige omleggende Eilanden gevonden worden : Verdeelt in drie bocken, &c. Rumpf, Georg Eberhard, 1627–1702. Amsterdam Vol. 1. 340 pp. 60 pls).
Subsequent designation: Holthuis, L.B. (1956). Proposed addition to the "Official List of Generic Names in Zoology" of the names of twenty-five genera of Macrura Reptantia (class Crustacea, order Decapoda), including proposals for the use of the plenary powers (a) to validate the spelling of "*Cherax*" and "*Cheraps*" by Erichson in 1846, (b) to suppress the specific name "*goudotii*" Guérin-Méneville, 1839, as published in the combination "*Astacoides goudotii*", and (c) to validate the emendation to "*Palinurus*" of the generic name "*Pallinurus*" Weber, 1795. *Bull. Zool. Nomencl.* **12**: 107–119 [111].
Type locality: Amboina [Ambon], Moluccas, Indonesia.

Ibacus ciliatus Guilding, L. (1825). An account on some rare West-Indian Crustacea. *Trans. Linn. Soc. Lond.* **14**: 334–338 [337].
Type data: syntypes whereabouts unknown.
Type locality: 'Caribeo mari' [probably near St Vincent].

Scyllarus carinatus Guilding, L. (1825). An account on some rare West-Indian Crustacea. *Trans. Linn. Soc. Lond.* **14**: 334–338 [336].
Type data: syntypes whereabouts unknown.
Type locality: 'mari Caribeo' [probably near St Vincent].

Ibacus parrae Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [288].

Type data: syntypes MNHP Pa409 1 specimen, MNHP Pa465 1 specimen.
Type locality: 'les Antilles' (restricted to Cuba by Holthuis, L.B. (1985). A revision of the family Scyllaridae (Crustacea: Decapoda: Macrura). I. Subfamily Ibacinae. *Zool. Verh.* **218**: 1–130 figs 1–27 [73]), Cuba.

Parribacus antarcticus carinatus Pfeffer, G. (1881). Die Panzerkrebse des Hamburger Museum. *Verh. Naturwiss. Ver. Hamb.* **5**: 22–55 [49].
Type data: holotype ZMH ♂.
Type locality: 'Südsee' [South Pacific].

Parribacus papyraceus Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [897 pl. 18 fig. 5].
Type data: holotype USNM 30265 ♂.
Type locality: S coast of Molokai Island, Hawai'ian Archipelago.

Cancer barffi Curtiss, A. (1938). *A Short Zoology of Tahiti in the Society Islands.* New York : Self-published pp. i–xvi 1–193 [164].
Type data: no type designated; described from specimen 'on the Barrier Reef at Tautira', Tahiti.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [209].

Distribution: WA (NW coast); Western Atlantic, Indo-west Pacific Oceans.
Ecology: benthic, coral reef, littoral, rock bottom, sand bottom, sublittoral; depths 0 to 20 m.

Parribacus caledonicus Holthuis, 1960

Caledonian Mitten Lobster (FAO)

Parribacus caledonicus Holthuis, L.B. (1960). Preliminary descriptions of one new genus, twelve new species and three new subspecies of scyllarid lobsters (Crustacea Decapoda Macrura). *Proc. Biol. Soc. Wash.* **73**: 147–154 [147] [formerly not distinguished from *P. antarcticus*].
Type data: holotype RMNH D14506 ♀, paratypes RMNH D1853 2♀, RMNH D4937 dry ♂, RMNH D5493 dry ♂, RMNH D5496 dry ♂, RMNH D5497 dry ♀, RMNH D14577 1 specimen, RMNH D24745 2♂ 1♀.
Type locality: 'Ile des Pins' on reef, New Caledonia.

Distribution: QLD (Great Barrier Reef, NE coast); south-west Pacific Ocean.
Ecology: coral reef, benthic, subtidal; usually on exposed side of reefs nocturnal, hide in crevices and marine caves through the day.
Reference: Holthuis, L.B. (1985). A revision of the family Scyllaridae (Crustacea: Decapoda: Macrura). I. Subfamily Ibacinae. *Zool. Verh.* **218**: 1–130 figs 1–27 (description).

Scyllarides Gill, 1898

Pseudibacus Guérin-Méneville, F.É. (1855). Notice sur un nouveau genre de Crustacés de la Scyllarinés. *Revue Mag. Zool.* **7**(2): 137–141 [137] [name suppressed, see International Commission on Zoological Nomenclature (1954). Opinion 293. Validation, under the Plenary Powers, of the generic name *Scyllarides* Gill, 1898 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **8**: 131–142; gender masculine].
Type species: *Pseudibacus veranyi* Guérin-Méneville, 1855 (= *Scyllarides latus*) by monotypy.

Scyllaridia Bell, T. (1857). *Monograph of the Fossil Malacostracous Crustacea of Great Britain.* Vol. 1 [35] [name suppressed, see International Commission on Zoological Nomenclature (1954). Opinion 293. Validation, under the Plenary Powers, of the generic name *Scyllarides* Gill, 1898 (Class Crustacea, Order Decapoda). *Opin. Declar. Int. Comm. Zool. Nomencl.* **8**: 131–142; gender feminine].
Type species: *Scyllaridia koenigi* Bell, 1857 by monotypy.

Scyllarides Gill, T. (1898). The Crustacean genus *Scyllarides*. *Science* **7**(I): 98–99 [98] [gender masculine].
Type species: *Scyllarus aequinoctialis* Lund, 1793 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [178].

Extralimital distribution: Indo-Pacific-Atlantic Oceans.

Scyllarides haanii (De Haan, 1841)

Aesop Slipper Lobster (FAO)

Scyllarus haanii De Haan, W. (1841). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [152 pl. 38 fig. 1] [published from 1833–1850].
Type data: lectotype RMNH D5520 dry ♂, paralectotypes RMNH D5519 1 dry specimen (1823–1834; collected P.F. von Siebold & H. Burger; coll. B2; paralectotype of *Scyllarus haanii* von Siebold, MS and *Scyllarus haanii* de Haan, 1841.), RMNH D5520 1 specimen (1823–1834; collected P. F. von Siebold & H. Burger.).
Type locality: 'Japonica', probably Nagasaki, Kyushu, Japan.

Distribution: Lord Howe Island, NSW (SE oceanic), WA (Lower W coast); Indo-west central Pacific Oceans.
Ecology: rock bottom, benthic, continental shelf, reef, subtidal; depth 10 to 135 m.
References: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [96] (full synonymy); George, R.W. & Griffin, D.J.G. (1973). Two shovel-nosed lobsters

of the genus *Scyllarides* (Decapoda, Scyllaridae) new to Australia. *Crustaceana* **24**(1): 144–146 [145] (first Australian record).

Scyllarides squammosus (H. Milne Edwards, 1837)

Blunt Slipper Lobster (FAO), Slipper Lobster (Aust)

Scyllarus australis Fabricius, J.C. (1781). *Species Insectorum* exhibentes eorum Differentias, specificas, Synonyma auctorum, Loca natalia, Metamorphosia adiectis Observationibus, Descriptionibus. Hamburg & Kilonii : C.E. Bohnii Vol. 2 viii 552 pp. [questionably synonymised with *S. squamosus* by Holthuis (1991: 194), but as the type has been lost, and the type locality is non-specific, its identity remains uncertain, and therefore the name should not be given nomenclatural precedence at present].
Type data: type status unknown (apparently lost).
Type locality: 'Oceano australiori', see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292.

Scyllarus squammosus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [284].
Type data: syntypes MNHP (lost).
Type locality: Mauritius.

Scyllarus sieboldi De Haan, W. (1841). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [152 pls 36–37 fig. 1] [published from 1833–1850].
Type data: lectotype RMNH D959 ♂, paralectotypes RMNH D971 2♀, RMNH D1861 3 specimens, RMNH D5514 2 dry specimens, RMNH D5515 mouthparts dry (mouthparts of D5516.), RMNH D5516 3♂ 3♀ dry specimens. Subsequent designation: Yamaguchi, T. & Baba, K. (1993). Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the National Natuurhistorisch Museum in Leiden and other museums. pp. 145–563 *in* Yamaguchi, T. (ed.) *Ph.F. von Siebold and Natural History of Japan Crustacea.* Japan : Shimoda Printing Inc. [255].
Type locality: Nagasaki, Kyushu, Japan.

Pseudibacus pfefferi Miers, E.J. (1882). On some Crustaceans collected at Mauritius. *Proc. Zool. Soc. Lond.* **1882**: 339–342 pl. 20, 538–543 pl. 36 [542 pl. 36 figs 2, 3].
Type data: syntypes BMNH 81.7 3 specimens*.
Type locality: Mauritius.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [179, 194].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), WA (Central W coast); Indo-west Pacific.

Ecology: coral reef, rock bottom, benthic, rock reef, subtidal; nocturnal, depth to 80 m, most common 20 to 50 m.
References: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [99] (full synonymy); George, R.W. & Griffin, D.J.G. (1973). Two shovel-nosed lobsters of the genus *Scyllarides* (Decapoda, Scyllaridae) new to Australia. *Crustaceana* **24**(1): 144–146 [145] (first Australian record).

Scyllarus Fabricius, 1775

Scyllarus Fabricius, J.C. (1775). *Systema Entomologiae,* sistens Insectorum Classes, Ordines, Genera, Species, adiectis Synonymis, Locis, Descriptionibus, Observationibus. Korte : Flensburgi & Lipsiae xxvii 832 pp. [413] [gender masculine].
Type species: *Cancer arctus* Linnaeus, 1758 by monotypy.

Chrysoma Risso, A. (1827). *Histoire naturelle des principales productions de l'Europe méridionale et particulièrement de celles des environs de Nice et des Alpes-Maritimes.* Paris : F.-G. Levrault Vol. 5 pp. i–vii, 1–403 pls 1–3 [88] [gender neuter].
Type species: *Chrysoma mediterraneum* Risso, 1827 by monotypy.

Arctus De Haan, W. (1849). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [xx, 238] [gender masculine].
Type species: *Cancer arctus* Linnaeus, 1758 by absolute tautonomy.

Arctus Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [14] [gender masculine].
Type species: *Arctus ursus* Dana, 1852 (replacement name for *Cancer arctus* Linnaeus, 1758) by monotypy.

Nisto Sarato, C. (1885). Etudes sur les Crustacés de Nice, genre *Arctus* Dana, susgenre *Nisto* Nob. *Monit. Etranges Nice* **9** No. 222 [3] [gender masculine].
Type species: *Nisto laevis* Sarato, 1885 (= *Cancer arctus* Linnaeus, 1758) by subsequent designation, see Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [216].

Yalomus Rafinesque, C.S. *in* Holthuis, L.B. (1985). Rafinesque's crustacean genera *Heterelos* and *Yalomus*. *Zool. Meded. (Leiden)* **59**(13): 133–147 [141] [gender masculine].
Type species: *Yalomus depressus* Rafinesque *in* Holthuis, 1985 (= *Cancer arctus* Linnaeus, 1758) by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [216].

Extralimital distribution: Indo-west Pacific and Atlantic Oceans.

Scyllarus amabilis Holthuis, 1963

Scyllarus amabilis Holthuis, L.B. (1963). Preliminary descriptions of some new species of Palinuridae (Crustacea Decapoda, Macrura Reptantia). *Proc. Konin. Neder. Akad. Weten.* **66C**: 54–60 [59].
Type data: holotype AM P14517 ♀.
Type locality: near entrance to Roebuck Bay, Broome, WA.

Distribution: WA (SW coastal); known only from limital area, endemic.
Ecology: benthic, subtidal.

Scyllarus bertholdii Paul'son, 1875

Two-spot Locust Lobster (FAO)

Scyllarus haani Berthold, A.A. (1845). Ueber verschiedene neue oder seltene Reptilien aus Neu Granada und Crustaceen aus China. *Nachr. Ges. Wiss. Gottingen* **1845**: 37–49 [45] [junior homonym of *Scyllarus haani* De Haan, 1841].
Type data: lectotype RMNH D5518 ♀, paralectotype(s) SMF 7 MG 233 ♀.
Subsequent designation: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [221] (under the name of *S. bertholdii* Paulson, 1875; this specimen listed as a syntype of *S. haanii* Berthold, by Fransen, C.H.J.M., Holthuis, L.B. & Adema, J.P.H.M. (1997). Type-catalogue of the Decapod Crustacea in the collections of the National Natuurhistorisch Museum, with appendices of pre-1900 collectors and material. *Zool. Verh.* **311**: i–xvi, 1–344 [66]).
Type locality: China.

Scyllarus sinensis White, A. (1847). *List of the Specimens of Crustacea in the Collection of the British Museum.* London : British Museum viii 143 pp. [67] [*nom. nud.*].

Scyllarus bertholdii Paul'son, O.M. (1875). *Studies on Crustacea of the Red Sea with Notes regarding other Seas.* Part I. Podophthalmata and Edriophthalmata (Cumacea). Jerusalem : The Israel Program for Scientific Translations 164 pp. 21 pls [97] [reissued and translated by F.D. Por, 1961; *nom. nov.* for *S. haanii* Berthold, 1845].

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [221].

Distribution: NT (Gulf of Carpentaria, N coast), WA (Central W coast, NW coast); east Indo-west Pacific Oceans (Indonesia to China).
Ecology: sublittoral, benthic, continental shelf; found on soft substrate including coralline algae, depth 15 to 150 m, usually 40 to 75 m.
References: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [94] (full synonymy); Chan, T.Y. & Yu, H.P. (1986). A report on the *Scyllarus* Lobsters (Crustacea: Decapoda: Scyllaridae) from Taiwan. *J. Taiwan Mus.* **39**(2): 147–174, text–figs 1, 2 pls 1–10.

Scyllarus crenatus (Whitelegge, 1900)

Arctus crenatus Whitelegge, T. (1900). Crustacea, Part 1. *In* Scientific results of the trawling Expedition of H.M.C.S. "Thetis" off the coast of New South Wales in February and March, 1898. *Mem. Aust. Mus.* **4, 1**(2): 135–199 figs 11–14 pls 32–35 [194 fig. 14].
Type data: syntypes AM G2393 2♂.
Type locality: 5.5–6.5 km off Wata Mooli, NSW.

Distribution: NSW (SE coastal); known only from limital area, endemic.
Ecology: benthic, subtidal.
Reference: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [216].

Scyllarus martensii Pfeffer, 1881

Striated Locust Lobster (FAO)

Scyllarus martensii Pfeffer, G. (1881). Die Panzerkrebse des Hamburger Museum. *Verh. Naturwiss. Ver. Hamb.* **5**: 22–55 [48].
Type data: syntypes ZMH K7955 2♀.
Type locality: unknown (locality not listed in original description, but most likely SE Asia).

Distribution: NT (N coast), QLD (NE coast), WA (Central W coast, NW coast); Indo-west Pacific Oceans.
Ecology: sublittoral, benthic, continental shelf; found on soft smooth substrates sometimes with shells, pumice, forminiferans or bryozoans, depth 6 to 79 m, usually 10 to 50 m.
References: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [96] (full synonymy); Chan, T.Y. & Yu, H.P. (1986). A report on the *Scyllarus* Lobsters (Crustacea: Decapoda: Scyllaridae) from Taiwan. *J. Taiwan Mus.* **39**(2): 147–174, text–figs 1, 2 pls 1–10.

Scyllarus mawsoni (Bage, 1938)

Arctus mawsoni Bage, F. (1938). Crustacea Decapoda (in part). *Scientific Reports of the Australasian Antarctic E* **2**(6): 1–13 [10 pl. iv fig. 2, 2a].
Type data: syntypes AM P11309 2 specimens, AM P14942 1 specimen.
Type locality: Maria Island, TAS [42°40'S 148°15'E].

Distribution: NSW (SE oceanic), SA (Great Australian Bight, S Gulfs coast, S oceanic), TAS (S oceanic, SE oceanic, Tas. coast), VIC (S oceanic, SE coastal, SE oceanic); known only from limital area.
Ecology: bathyal, benthic, continental shelf, continental slope; from 108–540 m depth.
References: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [216]; Griffin, D.J.G. & Stoddart, H.E. (1995). Deep-water decapod Crustacea from eastern Australia: lobsters of the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae. *Rec. Aust. Mus.* **47**(3): 231–263 [253].

Scyllarus rugosus H. Milne Edwards, 1837

Hunchback Locust Lobster (FAO)

Scyllarus rugosus Milne Edwards, H. (1837). *Histoire Naturelle des Crustacés, comprenant l'anatomie, la physiologie et la classification de ces animaux.* Paris : Libraire Encyclopedique de Roret Vol. 2 532 pp., Atlas 32 pp., 42 pls [283].
Type data: holotype MNHP (no longer extant).
Type locality: Pondicherry, SE India.

Arctus tuberculatus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [70 pl. 10 figs 1, 2].
Type data: syntypes BMNH.
Type locality: between New Guinea and Australia (*Challenger* Stn 190).

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [225].

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: sublittoral, benthic, continental shelf; sandy to muddy bottoms, sometimes with coral, shell or grit, depth 20 to 60 m, rarely reported from 100 or 200 m.

Scyllarus umbilicatus Holthuis, 1977

Scyllarus umbilicatus Holthuis, L.B. (1977). Two new species of Scyllarid lobsters (Crustacea Decapoda, Palinuridae) from Australia and the Kermadec Islands, New Zealand. *Zool. Meded. (Leiden)* **52**(15): 191–200, 2 text–figs 2 pls [195 figs 1–2].
Type data: holotype AM P8232 ♂, paratypes AM P18012 ♂, RMNH D20143 ♀.
Type locality: 4.8 km N of Green Cape, S NSW.

Distribution: NSW (Lower E coast), QLD (Central E coast); known only from limital area.
Ecology: sublittoral, benthic, continental shelf; depths 55 to 146 m.

Thenus Leach, 1816

Thenus Leach, W.E. (1816). A tabular view of the external characters of four classes of animals which Linné arranged under Insecta: with the distribution of the genera composing three of these classes into orders and &c. and descriptions of several new genera and species. *Trans. Linn. Soc. Lond.* **11**: 306–400 & 'Errata' [dated 1815, but published 24 January, 1816] [335, 338] [gender masculine].
Type species: *Thenus indicus* Leach, 1816 by monotypy.

Sagaritis Billberg (1820). *Enumeratio Insectorum in Museo Gust.Joh.Billberg.* [n.s.] [134] [gender feminine].
Type species: *Scyllarus orientalis* Lund, 1793 by monotypy.

Scyllibacus Desjardins, J. (1831). [no title]. *Proc. Comm. Sci. Corr. Zool. Soc. London* **1**: 46 [46] [if *Scyllibacus orientalis* Desjardins is an alternative combination of *Scyllarus orientalis* Lund, 1793, *Scyllibacus* is suppressed as a junior objective synonym; gender masculine].
Type species: *Scyllibacus orientalis* Desjardins, 1831 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [227].

Extralimital distribution: Indo-west Pacific Oceans.
Generic references: Davie, P., this work (*Thenus* is currently being revised by Burton & Davie. Two species are recognised in the literature from Australia, *T. orientalis* and *T. indica*, but the revision (soon to be published) will exclude both these species from the Australian fauna, and name two new species in their place); Burton, T.E. (1996). Comparative spermiomorphism and taxonomic implications within the Genus *Thenus* (Decapoda : Scyllaridae). *J. Submicro. Cytol. Pathol.* **28**(4): 499–506.

Thenus indicus Leach, 1816

Moreton Bay Bug

Thenus indicus Leach, W.E. (1816). A tabular view of the external characters of four classes of animals which Linné arranged under Insecta: with the distribution of the genera composing three of these classes into orders and &c. and descriptions of several new genera and species. *Trans. Linn. Soc. Lond.* **11**: 306–400 & 'Errata' [dated 1815, but published 24 January, 1816] [338].
Type data: syntypes BMNH 107a54, BMNH 107a ♀, BMNH 107h ♀.
Type locality: 'mari Indico', Indian Ocean, India.

Distribution: 200 m bathymetric (Gulf of Carp., N coast, NE coast); Indo-west Pacific.
Ecology: benthic, subtidal; muddy-sand substrates.
References: Jones, C.M. (1990). Morphological characteristics of bay lobsters, *Thenus* species, Leach (Decapoda, Scyllaridae), from north-eastern Australia. *Crustaceana* **59**(3): 265–275; Jones, C.M. (1993). Population structure of *Thenus orientalis* and *T. indicus* (Decapoda: Scyllaridae) in northeastern Australia. *Mar. Ecol. Progr. Ser.* **97**(2): 143–155.

Thenus orientalis (Lund, 1793)

Flathead Lobster (FAO), Moreton Bay Bug, Slipper Lobster

Scyllarus orientalis Lund, N.T. (1793). Slaegten Scyllarus. Iagttagelser til Insekternes Historie. I. *Skr. Naturh.-Selsk. Kiobenhavn.* **2**(2): 17–22 [22].
Type data: neotype ZRC 1999.0481 ♀.
Subsequent designation: Davie, P.J.F. & Burton, T.E. (2000). *Scyllarus orientalis* Lund, 1793 (currently *Thenus orientalis*; Crustacea, Decapoda): proposed designation of a neotype. Case 3135. *Bull. Zool. Nomencl.* **57**(2): 84–86 [85].
Type locality: Padang, Sumatra, Indonesia.

Distribution: NT (Gulf of Carpentaria, N coast), QLD (Central E coast, Gulf of Carpentaria, NE coast), WA (Central W coast, NW coast); Indo-west Pacific Oceans.

Ecology: sand bottom, sublittoral; soft substrate sometimes with shells or gravel, depth 8 to 70 m, usually 10 to 50 m.
References: Holthuis, L.B. (1946). Biological results of the Snellius Expedition XIV. The Decapoda Macrura of the Snellius Expedition. I. The Stenopodidae, Nephropsidae, Scyllaridae and Palinuridae. *Temminckia* **7**: 1–177 11 pls [106] (synonymy); Jones, C.M. (1990). Morphological characteristics of bay lobsters, *Thenus* species, Leach (Decapoda, Scyllaridae), from north-eastern Australia. *Crustaceana* **59**(3): 265–275; Jones, C.M. (1993). Population structure of *Thenus orientalis* and *T. indicus* (Decapoda: Scyllaridae) in northeastern Australia. *Mar. Ecol. Progr. Ser.* **97**(2): 143–155.

INFRAORDER: THALASSINIDEA

INTRODUCTION

The infraorder Thalassinidea in Australia comprises nine families of mud and coral 'lobsters', namely Axiidae Huxley, 1879, Callianassidae Dana, 1852, Ctenochelidae Manning & Felder, 1991, Laomediidae Borradaile, 1903, Micheleidae Sakai, 1992, Strahlaxiidae Poore, 1994, Thalassinidae Latreille, 1831, Thomassinidae de Saint Laurent, 1979, and Upogebiidae Borradaile, 1903. Together these comprise 38 genera and 79 species.

The work of Poore & Griffin (1979) is the foundation of the taxonomy of this group in Australia, but our systematic understanding has grown dramatically since its publication, with a number of workers across the world taking an active interest. Poore (1994) and Tudge *et al.* (2000), have provided excellent overviews and critical analyses of the relationships of the families and subfamilies within the infraorder. Other works reviewing and revising individual families and genera, are cited in their respective family introductions. Poore (1994) gave a key to superfamilies and families.

Thalassinideans occur in a wide variety of habitats from the intertidal zone to at least 2500 metres depth, and range from species that burrow in estuarine mud banks to others living commensally in sponges and cavities in coral. Currently, 516 species are known worldwide (see Dworschak 2000). Amongst the largest and most dramatic of the thalassinideans are species of the nominotypical genus *Thalassina*, commonly known as mud or mangrove lobsters. These crustaceans are responsible for considerable bioturbation in tropical mangrove swamps through construction of their large and characteristic mud mounds.

Diagnosis

Reptant decapods without a thelycum in the female; with pereiopods 1–5 having the basis and ischium fused; with pereiopod 1 chelate and carpus-propodus articulation slight; pereiopod 2 chelate or simple; always with dense row of long setae on lower margin; pereiopod 3 simple; pereiopod 4 simple or subchelate; pereiopod 5 chelate or subchelate; without arthrobranch on thoracomere 1. (After Poore 1994).

References

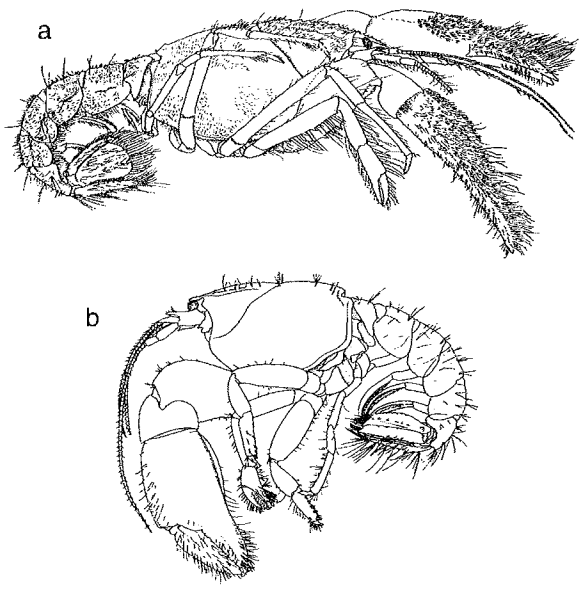
Dworschak, P.C. (2000). Global Diversity in the Thalassinidea (Decapoda). *J. Crust. Biol.* **20**(Spec. No. 2): 238–245

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321

Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149

AXIIDAE



a, *Acanthaxius polychaetes*; b, *Platyaxius brevirostris*
[from Sakai 1994: a, fig. 11; b, fig. 4]

INTRODUCTION

This family of thalassinid lobsters is found worldwide in both tropical and temperate waters. Species can be found from the intertidal zone down to at least 2500 metres depth, and while most are free living in burrows in the substrate, some also live commensally. The most important recent work dealing with Australian axiids is that of Sakai (1994).

Axiidae have received particular attention from taxonomists in recent years, resulting in description of many new genera (in particular see Kensley 1989; Sakai & de Saint Laurent 1989; Sakai 1994). Sakai & de Saint Laurent (1989) recognised a new subfamily, Coralaxiinae, for *Coralaxius* Kensley & Gore, but this genus is not represented in Australia. Following their classificatory system, all the Australian genera would be included in the Axiinae. Poore (1994) provided a key to genera.

Diagnosis

Reptant decapods without a thelycum in the female. Carapace posterior margin with lateral lobes; linea thalassinica absent; rostrum usually spinose, apically acute; eye usually pigmented; eyestalks cylindrical; antenna 1 with article 3 about as long as article 2; maxilla 2 scaphognathite with 1–2 long setae on posterior margin; gill elements paired. Pereiopods 1–5 with basis and ischium fused; pereiopod 1 chelate, carpus-propodus articulation slight; pereiopod 2 chelate; always with dense row of long setae on lower margin; pereiopod 3 simple; pereiopod 4 simple or subchelate, coxa more or less cylindrical; propodus of pereiopods 3 and 4 linear or broadened; pereiopod 5 chelate or subchelate, without arthrobranch on thoracomere 1; pleuron of abdominal somite 1 produced; abdominal somite 2 less than twice as long as 1; pleopods with appendix interna; pleopod 2 similar to pleopod 3–5; male pleopod 2 endopod foliaceous with small appendix masculina

attached mesially; exopods of pleopods 2–5 not laterally lobed; uropodal endopod ovate. Pereiopods 2–4 without setal-rows, abdominal somite 6 with longitudinal setal-row. (After Poore 1994).

References

Kensley, B. (1989). New genera in the Thalassinidean families Calocarididae and Axiidae. *Proc. Biol. Soc. Wash.* **102**(4): 960–967

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202

Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104

AXIIDAE Huxley, 1879

Axiidae Huxley, T.H. (1879). On the classification and the distribution of the crayfishes. *Proc. Zool. Soc. Lond.* **1878**: 752–788 [785].

Coralaxiinae Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [10].

Taxonomic decision for synonymy: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [2].

Acanthaxius Sakai & de Saint Laurent, 1989

Acanthaxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [66].
Type species: *Axiopsis (Axiopsis) pilocheira* Sakai, 1987 by original designation.

Extralimital distribution: Indo-Pacific Oceans.

Acanthaxius polychaetes Sakai, 1994

Acanthaxius polychaetes Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [193 figs 11–13].
Type data: holotype NTM Cr.007156 ♂.
Type locality: SE of Cairns, N QLD [17°57.5'S 147°03.5'E].

Distribution: QLD (NE oceanic); known only from type locality.
Ecology: benthic, continental slope; depth 259–260 m.

Ambiaxius Sakai & de Saint Laurent, 1989

Ambiaxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [54].
Type species: *Calocaris alcocki* McArdle, 1900 by original designation.

Callistocaris Kensley, B. (1989). New genera in the Thalassinidean families Calocarididae and Axiidae. *Proc. Biol. Soc. Wash.* **102**(4): 960–967 [961] [junior objective synonym of *Ambiaxius* Sakai, 1989].
Type species: *Calocaris alcocki* McArdle, 1900 by original designation.

Taxonomic decision for synonymy: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [177].

Extralimital distribution: Indo-west Pacific (South Africa, Sri Lanka, New Caledonia), west Atlantic (West Indies).

Ambiaxius franklinae Sakai, 1994

Ambiaxius franklinae Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [177 figs 1, 2].
Type data: holotype QM WI3237 ♀.
Type locality: North-west Shelf, WA.

Distribution: WA (NW oceanic); known only from type locality.
Ecology: benthic, continental rise; depth 1310–1357 m.

Axiopsis Borradaile, 1903

Axiopsis Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638 [538].
Type species: *Axius affinis* de Man, 1887 by original designation.

Extralimital distribution: tropical Indo-west to eastern Pacific, and west Atlantic Oceans.
Generic reference: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [76].

Axiopsis consobrina de Man, 1905

Axiopsis consobrina de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [595].
Type data: type status unknown ZMA*.
Type locality: Sulu Sea, Indonesia.

Distribution: Cocos (Keeling) Islands, QLD (NE coast), WA (NW coast, NW oceanic); Indonesia.
Ecology: coral reef, sublittoral, benthic, continental shelf; depth 75–275 m.

Axius Leach, 1815

Axius Leach, W.E. (1816). A tabular view of the external characters of four classes of animals which Linné arranged under Insecta: with the distribution of the genera composing three of these classes into orders and &c. and descriptions of several new genera and species. *Trans. Linn. Soc. Lond.* **11**: 306–400 & 'Errata' [dated 1815, but published 24 January, 1816] [335, 343] [gender masculine].
Type species: *Axius stirhynchus* Leach, 1815 by monotypy.

Extralimital distribution: England to Mediterranean, Atlantic coast of America.
Generic reference: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [26].

Axius australiensis (de Man, 1925)

Axiopsis australiensis de Man, J.G. (1925). Uber neue oder wenig bekannte Axiidae. *Mitt. Zool. Mus. Berl.* **12**: 117–140 7 figs [127 fig. 4].
Type data: type status unknown MB* (presumed museum of deposition).
Type locality: Port Jackson, NSW.

Taxonomic decision for new combination: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [26, 101] (as *Axius australiensis*).

Distribution: NSW (Central E coast, Lower E coast), VIC (Bass Strait); known only from limital area.
Ecology: burrowing, low intertidal.

Bouvieraxius Sakai & de Saint Laurent, 1989

Bouvieraxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [45].
Type species: *Axius longipes* Bouvier, 1905 by original designation.

Posthonocaris Kensley, B. (1989). New genera in the Thalassinidean families Calocaridídae and Axiidae. *Proc. Biol. Soc. Wash.* **102**(4): 960–967 [964] [gender feminine].
Type species: *Axius rudis* Rathbun, 1906 by original designation.

Taxonomic decision for synonymy: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [176].

Extralimital distribution: Indo-west Pacific Oceans, Caribbean.

Bouvieraxius rudis (Rathbun, 1906)

Axius rudis Rathbun, M.J. (1906). The Brachyura and Macrura of the Hawaiian Islands. *Bull. U.S. Fish. Comm.* **23**(3): 827–930, text–figs 1–79 pls 1–24 [894 fig. 51].
Type data: holotype USNM 30535 ♀.
Type locality: S coast of Molokai Is., Hawai'i.

Distribution: WA (NW coast); Indo-west Pacific (Madagascar, New Caledonia, Hawai'i).
Ecology: benthic, continental shelf, continental slope; depth 73–426 m.
Reference: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [177].

Calaxius Sakai & de Saint Laurent, 1989

Calaxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [84].
Type species: *Calaxius acutirostris* Sakai & de Saint Laurent, 1989 by original designation.

Extralimital distribution: tropical Indo-west Pacific, western Atlantic.

Generic reference: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [192].

Calaxius acutirostris Sakai & de Saint Laurent, 1989

Calaxius acutirostris Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [86 figs 23–25].
Type data: holotype MNHP 447 ♂.
Type locality: Madagascar.

Distribution: QLD (NE oceanic); Indo-west Pacific (Madagascar, Philippines).
Ecology: benthic, continental slope; depth 219–400 m.
Reference: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [192] (Australian record).

Calocarides Wollebaek, 1908

Calocarides Wolleboek, A. (1908). Remarks on Decapod Crustaceans of the North Atlantic and the Norwegian Fjords (I & II). *Bergens Museums Aarbog* **12**: 1–74 pls 1–13 [23].
Type species: *Euconaxius coronata* Trybom, 1904 by subsequent designation, see Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [78].

Extralimital distribution: Atlantic-Indo-Pacific Oceans.

Calocarides werribee (Poore & Griffin, 1979)

Axiopsis (Axiopsis) werribee Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [232 figs 5, 6].
Type data: holotype NMV J280 ♀, paratypes AM P25276–25286, NMV J281–J300 21 specimens.
Type locality: Central Port Phillip Bay, VIC.

Taxonomic decision for new combination: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [84].

Distribution: TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: sublittoral, benthic; clay sediments, depth 10–25 m.
Reference: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [177].

Dorphinaxius Sakai & de Saint Laurent, 1989

Dorphinaxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [33].
Type species: *Axiopsis (Dorphinaxiu)s appendiculis* Poore & Griffin, 1979 by original designation.

Extralimital distribution: New Zealand (Kermadec Islands).

Dorphinaxius kermadecensis (Chilton, 1911)

Iconaxiopsis kermadecensis Chilton, C. (1911). The Crustacea of the Kermadec Islands. *Trans. Proc. N. Z. Inst. (Zoology)***43**: 544–573 [550 figs 1, 2].
Type data: syntypes BMNH 1912.5.25.44-46 3 fragmented specimens.
Type locality: Meyer Is. and Coral Bay, Kermadec Ils.

Axiopsis (Paraxiopsis) appendiculis Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [224 fig.1].
Type data: holotype AM P9359 ♀, paratypes AM P24672, AM P24673, AM P24674, AM P24687, AM P9063, AM P9365, AM P18557, AM P7474, AM P20827, AM P21116, AM P1511–4, AM P25293, AM P265, AM P15037, AM P8694, AM P24688, AM P8624.
Type locality: Shell Harbour, NSW.

Taxonomic decision for synonymy: Davie, P., this work (from unpublished manuscript courtesy of Dr Brian Kensley); taxonomic decision for new combination: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [34].

Distribution: NSW (Central E coast, Lower E coast); Kermadec Is, New Zealand.
Ecology: benthic, low intertidal, reef, shallow subtidal; found under stones, depth to 5 m.

Eiconaxius Bate, 1888

Eiconaxius Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [40].
Type species: *Eiconaxius acutifrons* Bate, 1888 by subsequent designation, see Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638 [537].

Iconaxiopsis Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [193].
Type species: *Iconaxiopsis laccadivensis* Alcock, 1901 by subsequent designation, see Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638 [537].

Taxonomic decision for synonymy: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [15].

Extralimital distribution: tropical Indo-west Pacific to Panama, eastern Pacific, and the West Indies and Gulf of Mexico.

Eiconaxius kimbla Kensley, 1996

Eiconaxius kimbla Kensley, B. (1996). New thalassinidean shrimp from the Pacific Ocean (Crustacea: Decapoda: Axiidae and Calocarididae). *Bull. Mar. Sci.* **59**(3): 469–489 [481 fig. 8].
Type data: holotype AM P25015 ♀, paratypes AM P25015 2♂, USNM 243595 ♂.
Type locality: 9 miles east of Moreton Bay, SE QLD [27°06'E 153°37'E].

Distribution: 200 m bathymetric (Central E coast); known only from type locality.
Ecology: benthic, continental shelf; from 140–148 m depth.

Eutrichocheles Wood-Mason, 1876

Eutrichocheles Wood-Mason, J. (1876). On the *Astacus modestus* of Herbst. *Ann. Mag. Nat. Hist.* **17**: 264 [264].
Type species: *Cancer modestus* Herbst, 1796 by original designation.

Extralimital distribution: Indo-west central Pacific Oceans.
Generic references: Kensley, B. (1996). The genus *Paraxiopsis* De Man, with descriptions of new species from the Western Atlantic (Crustacea: Decapoda: Axiidae). *Bull. Mar. Sci.* **58**: 709–729 [711] (*Paraxiopsis* de Man, 1905 removed from synonymy); Ngoc-Ho, N. (1998). Le genre *Eutrichocheles* Wood-Mason, 1876 (Crustacea, Decapoda, Thalassinidea) en Polynésie française et au Vietnam avec description de deux espéces nouvelles. *Zoosystema* **20**: 363–378.

Eutrichocheles austrinus Sakai, 1994

Eutrichocheles austrinus Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [185 figs 6, 7].
Type data: holotype NTM Cr.000842 ♀, paratype(s) NTM Cr.000799 1 ♀.
Type locality: Darwin. NT.

Distribution: NT (N coast); known only from type locality.
Ecology: benthic, low intertidal, reef.

Eutrichocheles pumilus Sakai, 1994

Eutrichocheles pumilus Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [188 figs 8, 9].
Type data: holotype NTM Cr.004557 ♀.
Type locality: Port Essington, Cobourg Peninsula, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: sublittoral, benthic, reef; apparently from in sponge, to 40 m depth.

Oxyrhynchaxius Parisi, 1917

Oxyrhynchaxius Parisi, B. (1917). I Decapodi giapponesi del Museo di Milano. V. Galatheidea e Reptantia. *Atti Soc. Ital. Sci. Nat.* **56**: 1–24 [17].
Type species: *Oxyrhynchaxius japonicus* Parisi, 1917 by monotypy.

Extralimital distribution: central Indo-west Pacific (Japan to Taiwan and Hong Kong).

Generic reference: Lin, F-J, Kensley, B. & Chan, T-Y. (2000). The rare axiid genus *Oxyrhynchaxius* Parisi, 1917 (Decapoda: Thalassinidea), with a description of a new species from Australia. *J. Crust. Biol.* **20**(2): 199–206.

Oxyrhynchaxius manningi Lin, Kensley & Chan, 2000

Oxyrhynchaxius manningi Lin, F-J, Kensley, B. & Chan, T-Y. (2000). The rare axiid genus *Oxyrhynchaxius* Parisi, 1917 (Decapoda: Thalassinidea), with a description of a new species from Australia. *J. Crust. Biol.* **20**(2): 199–206 [203 figs 3c,d,f, 4].
Type data: holotype NMV J15419 ♀, paratype(s) NMV J15419 ♀.
Type locality: North West Shelf between Port Hedland and Dampier, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: benthic, continental shelf; probably soft bottom, from 134 m depth.

Paraxiopsis de Man, 1905

Paraxiopsis de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [597].
Type species: *Axius brocki* de Man, 1888 by original designation.

Extralimital distribution: Atlantic and Indo-Pacific Oceans.

Generic reference: Kensley, B. (1996). The genus *Paraxiopsis* De Man, with descriptions of new species from the Western Atlantic (Crustacea: Decapoda: Axiidae). *Bull. Mar. Sci.* **58**: 709–729 [711] (removed from synonymy with *Eutrichocheles* Wood Mason, 1875).

Paraxiopsis brocki (de Man, 1888)

Axius brocki de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [475 pl. 20 fig. 3].
Type data: holotype whereabouts unknown (not determined).
Type locality: Ambon, Indonesia.

Taxonomic decision for new combination: de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [597].

Distribution: NT (N coast), WA (Central W coast, Lower W coast, NW coast); east Indo-west Pacific Oceans (Timor Sea, Indonesia, Borneo, Okinawa).
Ecology: coral reef, low intertidal, subtidal; depth to 83 m.
References: Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [185]; Kensley, B. (1996). The genus *Paraxiopsis* De Man, with descriptions of new species from the Western Atlantic (Crustacea: Decapoda: Axiidae). *Bull. Mar. Sci.* **58**: 709–729 [712] (redescribed).

Platyaxius Sakai, 1994

Platyaxius Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [180] [gender masculine].
Type species: *Platyaxius brevirostris* Sakai, 1994 by original designation.

Platyaxius brevirostris Sakai, 1994

Platyaxius brevirostris Sakai, K. (1994). Eleven species of Australian Axiidae (Crustacea: Decapoda: Thalassinidea) with descriptions of one new genus and five new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **11**: 175–202 [181 figs 4, 5].
Type data: holotype NTM Cr.000784a ♂, paratype(s) NTM Cr.000784b 1 ♀.
Type locality: North-west Shelf, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: benthic, continental shelf; depth 141 m.

Scytoleptus Gerstaecker, 1856

Scytoleptus Gerstaecker, A. (1856). Carcinologishes Beitrage. *Arch. Naturgesch.* **22**(1): 101–162 pls 4–6 [155 pl. VI].
Type species: *Scytoleptus serripes* Gerstaecker, 1856 by monotypy.

Evaxius Kingsley, J.S. (1882). Carcinological notes, No. 5. *Bull. Essex Institute* **14**: 105–132, 2 pls [130].
Type species: *Evaxius tricarinatus* Kingsley, 1882 by original designation.

Taxonomic decision for synonymy: de Man, J.G. 91925). The decapoda of the Siboga-Expedition. Part VI. The Axiidae collected by the Siboga-Expedition. *Siboga Exped. Monogr.* **39a**(5): 1–128, 10 pls.

Extralimital distribution: Indo-west Pacific Oceans (South Africa to Indonesia).

Generic reference: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [36].

Scytoleptus serripes Gerstaecker, 1856

Scytoleptus serripes Gerstaecker, A. (1856). Carcinologishes Beitrage. *Arch. Naturgesch.* **22**(1): 101–162 pls 4–6 [158 pl. 6 figs 1–4].
Type data: type status unknown.
Type locality: South Africa.

Evaxius tricarinatus Kingsley, J.S. (1882). Carcinological notes, No. 5. *Bull. Essex Institute* **14**: 105–132 2 pls [130 pl. 1 fig. 1].
Type data: holotype MBNH*.
Type locality: Zanzibar.

Taxonomic decision for synonymy: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [243].

Distribution: NT (N coast), WA (Central W coast, NW coast); Indo-west Pacific Oceans (South Africa to Indonesia).
Ecology: coral reef, benthic, subtidal; to 36 m depth.

Spongiaxius Sakai & de Saint Laurent, 1989

Spongiaxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [41].
Type species: *Axiopsis brucei* Sakai, 1986 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

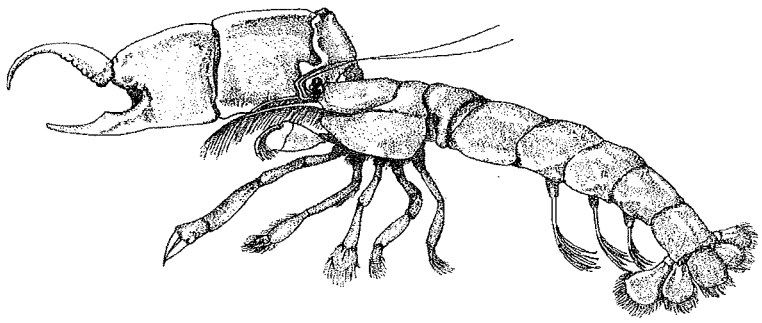
Spongiaxius brucei (Sakai, 1986)

Axiopsis brucei Sakai, K. (1986). *Axiopsis brucei* sp. nov., a new sponge inhabiting axiid (Crustacea: Decapoda: Thalassinidea), from north-west Australia. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 11–20 [12 figs 1–6].
Type data: holotype NTM Cr.000610A ♂, paratypes NTM Cr.000610B ♀ (as allotype), NTM Cr.000605 ♀, NTM Cr.000607 4 ♀, NTM Cr.000608 1 ♂, NTM Cr.000611 1 ♀, AM P34217 1 ♂, USNM 228682 1 ♀, RMNH 36516 2 ♀, RMNH D36516 ♀, BMNH 1986:300 1 ♂.
Type locality: North-west shelf, WA.

Taxonomic decision for new combination: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [44].

Distribution: WA (NW oceanic); known only from type locality.
Ecology: benthic, commensal, continental slope; in hexactinellid sponge, 454 m depth.

CALLIANASSIDAE



Trypaea australiensis [from Holthuis 1991: fig. 441]

INTRODUCTION

The first major modern work dealing with callianassids in Australia was that of Poore & Griffin (1979), and this was the springboard for several other useful papers including those of Sakai (1984, 1988) and Ngoc-Ho (1994). Poore (1994) provided a key to genera.

Trypaea Dana, 1852, is retained here for the well-known eastern Australian 'Ghost Nipper' (*T. australiensis* Dana, 1852), following its usage by Manning & Felder (1991). Sakai (1999) placed it back into synonymy of *Callianassa*, but G. Poore (*in litt.*) still considers *Trypaea* to be distinctive at the generic level.

Manning & Felder (1991) divided the Callianassidae into four subfamilies: Callianassinae Dana, 1852, Cheraminae Manning & Felder, 1991, Callichirinae Manning & Felder, 1991, and Eucalliinae Manning & Felder, 1991. To these have been added the Anacalliacinae Manning & Felder, 1991 (originally described as a subfamily of the Ctenochelidae, but later moved into the Callianassidae by Poore (1994)), and the Calliapaguropinae Sakai, 1999. Recently, Callichirinae and Cheraminae were placed into synonymy with Callianassinae by Sakai (1999). It is not clear that a final consensus on subfamily definitions has emerged, and as there are relatively few genera in Australian waters, they are not here allocated to subfamilies. Sakai (1999) should be consulted for the latest interpretation, and for more extensive citations to earlier work on Callianassidae. Tudge *et al.* (2000) did not agree with the changes proposed by Sakai (1999), but the generic placement of many species, especially species of *Callianassa*, remains uncertain.

Diagnosis

Reptant decapods without a thelycum in the female; with pereiopods 1–5 having basis and ischium fused. Pereiopod 1 chelate, carpus-propodus articulation slight; unequal or equal; merus with straight or toothed lower margin; pereiopod 2 chelate, always with dense row of long setae on lower margin; pereiopod 3 simple, propodus without distal spiniform seta on lower margin, with proximal heel on lower margin; pereiopod 4 simple or subchelate, coxa flattened, mobile; pereiopod 5 chelate or subchelate, without arthrobranch on thoracomere 1; pereiopods 2–4 sometimes with setal-rows. Thoracic sternite 7 narrow. Posterior margin of carapace evenly curved, rarely with cardiac prominence; with or without lateral lobes; linea thalassinica present, complete, lateral to antennae; cervical groove complete, linea anomurica and transverse cardiac line rarely present; rostrum obsolete or a spike; eyestalks

flattened, rarely cylindrical; antenna 1 with article 3 as long as or longer than article 2; maxilla 2 scaphognathite without long seta on posterior margin; gill elements paired; pleurobranchiae absent; abdominal somite 1 without anterolateral lobes; weakly chitinised; pleuron weak; pleopods with or without appendix interna, reduced if present; pleopod 2 different from pleopods 3–5, sexually modified; pleopods 3–5 with broad interacting rami; endopod with appendices internae in both sexes; uropodal exopod with thickened anterodorsal setose margin. Abdominal somites 1–2 different in shape from 3–5; only somite 6 with setal-rows. (After Poore 1994; Sakai 1999).

References

Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28

Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292

Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792

Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321

Sakai, K. (1984). Some Thalassinideans (Decapoda: Crustacea) from Heron Is., Queensland, Eastern Australia, and a new species of *Gourretia* from East Africa. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(11): 95–108

Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69

Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152

Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149

CALLIANASSIDAE Dana, 1852

Callianassidae Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [12, 14] [name placed on the Official List of Family Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424].

Biffarius Manning & Felder, 1991

Biffarius Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 [769] [gender masculine].
Type species: *Callianassa biformis* Biffar, 1971 by original designation.

Extralimital distribution: Atlantic and Indo-Pacific Oceans.

Biffarius arenosus (Poore, 1975)

Sand Ghost Shrimp

Callianassa arenosa Poore, G.C.B. (1975). Systematics and distribution of *Callianassa* (Crustacea: Decapoda: Macrura) from Port Phillip Bay, Australia, with descriptions of two new species. *Pac. Sci.* **29**(2): 197–209 8 figs [197 figs 1, 2].
Type data: holotype NMV J271 ♀, paratypes NMV J273 10 specimens, NMV J272 1 specimen (allotype).
Type locality: eastern side, Port Phillip Bay, VIC.

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [142].

Distribution: NSW (Lower E coast), QLD (Central E coast), TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: estuarine, littoral, sand bottom, silt bottom, shallow sublittoral, burrowing.
References: Boon, P.I., Bird, F.L. & Bunn, S.E. (1997). Diet of the intertidal callianassid shrimps *Biffarius arenosus* and *Trypaea australiensis* (Decapoda: Thalassinidea) in Western Port (southern Australia), determined with multiple stable-isotope analyses. *Mar. Freshw. Res.* **48**(6): 503–511: Bird, F.L. & Poore, G.C.B. (1999). Functional burrow morphology of *Biffarius arenosus* (Decapoda: Callianassidae) from southern Australia. *Mar. Biol.* **134**: 77–87; Bird, F.L., Ford, P.W. & Hancock, G.J. (1999). Effect of burrowing macro-benthos on the flux of dissolved substances across the water-sediment interface. *Mar. Freshwater Res.* **50**: 523–532.

Biffarius ceramicus (Fulton & Grant, 1906)

Ceramic Ghost Shrimp; Large-clawed Burrower

Callianassa ceramica Fulton, S.W. & Grant, F.E. (1906). Some little known Victorian decapod Crustacea, with descriptions of new species.—No. III. *Proc. R. Soc. Vic. (2)***19**(1): 5–15 pls 3–5 [12 pl. 5].
Type data: holotype NMV J880 1 specimen, paratypes AM G5666, NMV.
Type locality: Western Port (reef near pier at Shoreham), VIC.

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [142].

Distribution: SA (S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Lower W coast, SW coast); known only from limital area.
Ecology: burrowing, littoral, sand bottom, sublittoral.
References: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs (illustration and description); Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [41].

Biffarius lewtonae (Ngoc-Ho, 1994)

Callianassa lewtonae Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [52 fig. 1].
Type data: holotype NMV J22659 ovigerous ♀, paratype(s) NMV J22684 ♀.
Type locality: reef front, Britomart Reef, QLD.

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [143].

Distribution: QLD (NE coast); known only from type locality.
Ecology: coral reef, littoral, sand bottom, benthic.

Biffarius limosus (Poore, 1975)

Callianassa limosa Poore, G.C.B. (1975). Systematics and distribution of *Callianassa* (Crustacea: Decapoda: Macrura) from Port Phillip Bay, Australia, with descriptions of two new species. *Pac. Sci.* **29**(2): 197–209 8 figs [201 figs 4, 5].
Type data: holotype NMV J274 ♀, paratypes NMV J275 ♂ (as allotype), NMV J276 10 specimens.
Type locality: central Port Phillip Bay, about 8 km off Dromana, VIC.

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [143].

Distribution: NSW (Lower E coast), TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: sublittoral, burrowing, continental shelf; muddy to clay substrates, low tide to 100 m depth.

Biffarius poorei (Sakai, 1999)

Callianassa poorei Sakai, K. (1999). A new species, *Callianassa poorei* sp. nov. (Decapoda: Crustacea: Callianassidae) from Tasmania. *J. Mar. Biol. Assoc. U.K.* **79**: 373–374 [373 figs 1, 2].
Type data: holotype NMV J-44737 ♂, paratype(s) NMV J-44737 ♂ 2♀.
Type locality: Great Oyster Bay, east coast of TAS [42°09'S 148°10'E].

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [141].

Distribution: TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: benthic, burrowing, low intertidal, subtidal; to 10 m depth; sand to muddy sand substrates.
Reference: Poore, G.C.B. (1975). Systematics and distribution of *Callianassa* (Crustacea: Decapoda: Macrura) from Port Phillip Bay, Australia, with descriptions of two new species. *Pac. Sci.* **29**(2): 197–209 8 figs (misidentified as *Callianassa ceramica*).

Callianassa Leach, 1814

Callianassa Leach, W.E. (1814). Entry: Crustacealogy. pp. 385–437 *in*, *The Edinburgh Encyclopedia conducted by David Brewster LLD.* Vol. VII(2). Edinburgh [400] [gender feminine].
Type species: *Cancer (Astacus) subterraneus* Montagu, 1808 by monotypy.

Montagua Entry: Crustacealogy. pp. 385–437 *in*, *The Edinburgh Encyclopedia conducted by David Brewster LLD.* Vol. VII(2). Edinburgh [436] [junior objective synonym of *Callianassa* Leach, 1814; gender feminine].
Type species: *Cancer (Astacus) subterraneus* Montagu, 1808 by monotypy.

Gebios Risso, A. (1822). Mémoire sur quelques nouveaux Crustacés de la mer de Nice. *J. Phys. Chim. Hist. Nat.* **95**: 241–248 [243] [gender masculine].
Type species: *Gebios davianus* Risso, 1822 (= *Cancer candidus* Olivier, 1792) by monotypy.

Mesostylus Bronn, H.G. & Roemer, C.F. von (1852). *Lethaea geognostica.* Edn 3, Vol. 2(5), p. 353 [353] [gender masculine].
Type species: *Pagurus faujasi* Desmarest, 1822 by monotypy.

Calliactites Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638 [545] [gender masculine].
Type species: *Callianassa secura* Lanchester, 1902 by original designation.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [239].

Extralimital distribution: Indo-Pacific and Atlantic Oceans.

Generic references: Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 (taxonomic revision of genera); Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [11].

Callianassa acutirostella Sakai, 1988

Callianassa acutirostella Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [57].
Type data: holotype NTM Cr.000786 ♀.
Type locality: Northwest Shelf, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: sublittoral, benthic, burrowing; from 82 m depth.

Callianassa amboinensis de Man, 1888

Callianassa amboinensis de Man, J.G. (1888). Bericht über die von Herrn Dr. J. Brock im indischen Archipel gesammelten Decapoden und Stomatopoden. *Arch. Naturgesch.* **53**(1): 215–600 pls 7–22, 22a [480 pl. 20 fig. 4].
Type data: holotype SMF ♀* (originally deposited in the Zoologisches Museum Göttingen, but this collection was transferred to the Senckenberg Museum, Frankfurt).
Type locality: Amboina [Ambon], Indonesia.

Distribution: NT (N coast), QLD (Great Barrier Reef), WA (NW coast); Indo-west Pacific Oceans (Indonesia, Elat, Israel, Gulf of Aquaba).
Ecology: coral reef, sublittoral, benthic; to 36 m depth.
Reference: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [39].

Callianassa joculatrix de Man, 1905

Callianassa joculatrix de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [610].
Type data: syntypes RMNH D1170 ♀.
Type locality: Djangkar, Java, Indonesia.

Distribution: NT (N coast), QLD (NE coast); east Indo-west Pacific Oceans (Indonesia, New Caledonia, Taiwan, south Vietnam).
Ecology: sublittoral, benthic, continental shelf, continental slope, coral reef; corals, coral sand, depth 12–350 m.
Reference: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [266] (described and figured).

Callianassa parvula Sakai, 1988

Callianassa parvula Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [59 fig. 3].
Type data: holotype NTM Cr.000783 ♂.
Type locality: North-west Shelf, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: sublittoral, benthic, continental shelf; from 83 m depth.

Calliax de Saint-Laurent, 1973

Calliax de Laurent, M. (1973). Sur la systématique et la phylogénie des Thalassinidea: définition des familles des Callianassidae et des Upogebiidae et diagnoses de cinq genéres nouveaux (Crustacea Decapoda). *C. R. Séances Acad. Sci.* **277**: 513–516 [514].
Type species: *Callianassa lobata* De Gaillande & Lagardere, 1966 by original designation.

Extralimital distribution: Indo-west Pacific, Mediterranean, eastern and western Atlantic.

Generic reference: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [109].

Calliax aequimana (Baker, 1907)

Ambidextrous Burrower

Callianassa aequimana Baker, W.H. (1907). Notes on South Australian Decapod Crustacea. Part V. *Trans. R. Soc. S. Aust.* **31**(5): 173–191 pls 23–25 [182 pl. 24 figs 1–8].
Type data: holotype SAMA C901, paratypes SAMA C902, AM P148 10 specimens.
Type locality: Kingston, SA.

Distribution: NSW (Lower E coast), QLD (Central E coast), SA (S Gulfs coast), VIC (Bass Strait), WA (Lower W coast, SW coast); east Indo-west Pacific Oceans (Maldive Archipelago).
Ecology: estuarine, littoral, mud flats, sublittoral; to 9 m depth.
References: Hale, H.M. (1927). *The Crustaceans of South Australia. Part I (Eumalacostraca).* Adelaide : Government Printer 201 pp. 202 figs (illustration and description); Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [245] (redescription—as *Callianassa aequimana*).

Calliax bulimba (Poore & Griffin, 1979)

Callianassa bulimba Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [257].
Type data: holotype QM W1525 ♂.
Type locality: Mud Is., Moreton Bay, QLD.

Taxonomic decision for new combination: Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [53] (in key).

Distribution: QLD (Central E coast); known only from type locality.
Ecology: sublittoral.

Calliax tooradin (Poore & Griffin, 1979)

Callianassa tooradin Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [275 fig. 36].
Type data: holotype NMV J301 ♀, paratypes NMV J302 2 specimens, NMV J303 1 specimen.
Type locality: off Crib Point, Western Port, VIC.

Taxonomic decision for new combination: Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [275].

Distribution: VIC (Bass Strait); known only from type locality.
Ecology: sand bottom, sublittoral.

Cheramus Bate, 1888

Cheramus Bate, C.S. (1888). Report on the Crustacea Macrura collected by H.M.S. Challenger during the years 1873–76. *Rep. Scient. Res. Voy. H.M.S. Challenger* **24**: 1–942, i–xc figs 1–76 pls 1–150 [30].
Type species: *Cheramus batei* Borradaile, 1903 (*nom. nov.* for *Cheramus occidentalis* Bate, 1888) by subsequent designation, see Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 [780].

Extralimital distribution: Atlantic and Indo-Pacific Oceans.

Cheramus praedatrix (de Man, 1905)

Callianassa praedatrix de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [607].
Type data: lectotype ZMA De 102.433 ♀.
Subsequent designation: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [51].
Type locality: between islands of Wowoni and Buton, Indonesia [04°20'S 122°58'E].

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [145].

Distribution: WA (NW coast); Indonesia.
Ecology: sublittoral, benthic, continental shelf; known from 41–94 m depth.
Reference: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [51].

Cheramus propinquus (de Man, 1905)

Callianassa propinqua de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [609].

Type data: lectotype ZMA De 102.432 ♀.
Subsequent designation: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [51].
Type locality: Kwandang Bay entrance, Indonesia [00°58.5'N 122°55'E].

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [145].

Distribution: WA (NW coast); east Indo-west Pacific Oceans (Indonesia, New Caledonia).
Ecology: benthic, continental shelf, continental slope; shelly sand to mud substrates, from 75–300 m.
Reference: Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [54].

Cheramus sibogae (de Man, 1905)

Callianassa sibogae de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [613].
Type data: lectotype ZMA De 102.439 ♂.
Subsequent designation: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [52].
Type locality: off Djankar, Java Anchorage, Indonesia [07°46'S 114°30.5'E].

Taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [145].

Distribution: WA (NW coast); Indonesia.
Ecology: benthic, continental shelf, continental slope; from 134–330 m depth.
Reference: Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [54].

Corallianassa Manning, 1987

Corallianassa Manning, R.B. (1987). Notes on the western Atlantic Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **100**(2): 386–401, 9 text-figs [392] [gender feminine].
Type species: *Callianassa longiventris* A. Milne Edwards, 1870 by original designation.

Extralimital distribution: Atlantic and Indo-Pacific Oceans.

Corallianassa collaroy (Poore & Griffin, 1979)

Callianassa collaroy Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [260 figs 24, 25].
Type data: holotype AM P16305 ♂, paratypes AM P13163, AM P8869 2 specimens.
Type locality: Long Reef, Collaroy, NSW.

Distribution: NSW (Lower E coast); west Pacific (Moorea, French Polynesia).
Ecology: coral reef, sand bottom, low intertidal; among boulders.

Glypturus Stimpson, 1866

Glypturus Stimpson, W. (1866). Descriptions of new genera and species of macrurous Crustacea from the coasts of North America. *Proc. Chicago Acad. Sci.* **1**: 46–48 [46] [gender masculine].
Type species: *Glypturus acanthochirus* Stimpson, 1866 by monotypy.

Extralimital distribution: Indo-west Pacific, eastern Pacific, eastern and western Atlantic. See: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [72].
Generic reference: Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [55] (key to species).

Glypturus haswelli (Poore & Grifin, 1979)

Callianassa haswelli Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [263 figs 26, 27].
Type data: holotype AM P24814 ♀, paratypes AM P24814 1 specimen, AM P274 1 specimen, NMV Kershaw Coll. 1 specimen, AM P20833 1 specimen.
Type locality: Whitsunday Group, QLD.

Distribution: QLD (Great Barrier Reef, NE coast); known only from limital area.
Ecology: marine; no precise habitat data available.

Glypturus karumba (Poore & Griffin, 1979)

Callianassa karumba Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [266 figs 30, 31].
Type data: holotype AM P24678 ♂.
Type locality: Norman River, Karumba, QLD.

Distribution: QLD (Gulf of Carpentaria, NE coast); known only from limital area.
Ecology: sublittoral, burrowing, estuarine, low intertidal.

Glypturus martensi (Miers, 1884)

Callianassa martensi Miers, E.J. (1884). On some Crustaceans from Mauritius. *Proc. Zool. Soc. Lond.* **1884**: 10–17 pl. 1 [13 pl. 1 fig. 1].
Type data: holotype BMNH 1883.18 ♂.
Type locality: Mauritius.

Distribution: QLD (Central E coast, Great Barrier Reef, NE coast); Indo-west Pacific Oceans (Mauritius to Japan).
Ecology: coral reef, littoral, sublittoral.
Reference: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [83].

Glypturus mucronatus (Strahl, 1861)

Callianassa mucronata Strahl, C. (1861). Über einige neue von Hrn F. Jagor eingesandte Thalassinen und die systematische Stellung dieser Familie. *Mber. dt. Akad. Wiss. Berl.* **1861**: 1055–1072 14 figs [1056].
Type data: holotype MB 1128 ♀.
Type locality: Luzon, Philippines.

Callianassa novaeguineae Thallwitz, J. (1891). Decapoden-Studien insbesondere basirt auf A.B.Meyer's Sammlungen im Ostindischen Archipel, nebst einer aufzahlung der Decapoden und Stomatopoden des Dresdener Museums. *Abh. Ber. K. Zool. Anthropol.-Ethnogr. Mus. Dres.* **1890–91**(3): 1–56 1 pl. [31].
Type data: type status unknown MTKD* (probably destroyed during WWII).
Type locality: NW New Guinea.

Taxonomic decision for synonymy: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [273]; taxonomic decision for new combination: Tudge, C.C., Poore, G.C.B. & Lemaitre, R. (2000). Preliminary phylogenetic analysis of generic relationships within the Callianassidae and Ctenochelidae (Decapoda: Thalassinidea: Callianassoidea). *J. Crust. Biol.* **20**: 129–149 [144].

Distribution: QLD (NE coast); east Indo-west Pacific Oceans (East Africa and Madagascar to Philippines and Papua New Guinea).
Ecology: coral reef, benthic.

Neocallichirus Sakai, 1988

Neocallichirus Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [61] [gender masculine].
Type species: *Neocallichirus horneri* Sakai, 1988 by original designation.

Extralimital distribution: east Indo-west Pacific Oceans. See: Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69.

Generic reference: Sakai, K. (1999). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152 [84] (key to species on pp. 94–95).

Neocallichirus angelikae Sakai, 2000

Neocallichirus angelikae Sakai, K. (2000). A new species of *Neocallichirus*, *N. angelikae* from South Australia (Decapoda: Callianassidae). *Mitt. Hamb. Zool. Mus. Inst.* **97**: 91–98.
Type data: holotype MGH K-38196 ♀.
Type locality: N Ceduna, Murat Bay, Great Australian Bight, SA [32°07'S 133°40'E].

Distribution: SA (S Gulfs coast); known only from type locality.
Ecology: benthic, burrowing, intertidal; stony flat.

Neocallichirus caechabitator Sakai, 1988

Neocallichirus caechabitator Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [67 figs 9, 10].
Type data: holotype NTM Cr.00803 ♀.
Type locality: False Creek Point, Shoal Bay, Darwin, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: benthic, shallow subtidal; from 1 m depth.

Neocallichirus darwinensis Sakai, 1988

Neocallichirus darwinensis Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [62 figs 5, 6].
Type data: holotype NTM Cr.000090 ♀.
Type locality: Mindil Beach, Darwin, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: benthic, low intertidal, shallow subtidal.

Neocallichirus denticulatus Ngoc-Ho, 1994

Neocallichirus denticulatus Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [56 fig. 4].
Type data: holotype NMV J22658 ♀, paratype(s) MNHP Th1246*.
Type locality: NE of Townsville, QLD.

Distribution: QLD (NE coast); known only from type locality.
Ecology: benthic, subtidal; muddy-sand substrate, depth 24–26 m.

Neocallichirus horneri Sakai, 1988

Neocallichirus horneri Sakai, K. (1988). A new genus and five new species of Callianassidae (Crustacea: Decapoda: Thalassinidea) from Northern Australia. *Beagle, Rec. N.T. Mus. Arts Sci.* **5**(1): 51–69 [65].
Type data: holotype NTM Cr.000846 ♀, paratype(s) NTM Cr.002048 1♂.
Type locality: Nightcliff, Darwin, NT.

Distribution: NT (N coast); known only from type locality.
Ecology: benthic, burrowing, low intertidal.

Trypaea Dana, 1852

Trypaea Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [14] [gender feminine].
Type species: *Trypaea australiensis* Dana, 1852 by monotypy.

Generic reference: Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 [774] (name resurrected from synonymy).

Trypaea australiensis Dana, 1852

Australian Ghost Shrimp (FAO), Ghost Nippers (Aust), Marine Yabby (Aust)

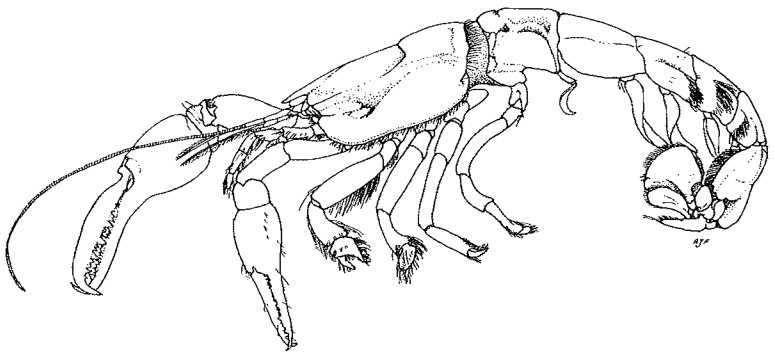
Trypaea australiensis Dana, J.D. (1852). Conspectus Crustaceorum quae in Orbis Terrarum circumnavigatione, Carolo Wilkes e classe Reipublicae Foederatae Duce, lexit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **6**: 10–28 [19] [figures in Dana, J.D. (1852). Crustacea. *U.S. Explor. Exped.* **13**: 1–685].
Type data: syntypes (lost).
Type locality: District of Illawarra, S Sydney, NSW.

Trypaea porcellana Kinahan, J.R. (1856). Remarks on the Habits and Distribution of Marine Crustacea on the eastern shores of Port Philip, Victoria, Australia, with descriptions of undescribed Species and Genera. *J. R. Dublin Soc.* **1**(3): 111–134 [130 pl. 4 fig. 2].
Type data: syntypes NMI 2 specimens*.
Type locality: St Kilda, VIC.

Taxonomic decision for synonymy: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [250].

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), VIC (Bass Strait); known only from limital area.
Ecology: burrowing, estuarine, littoral, sand bottom, sublittoral.
References: Hailstone, T.S. & Stephenson, W. (1961). The Biology of *Callianassa (Trypaea) australiensis* Dana 1852 (Crustacea, Thalassinidea). *Univ. Qld Pap. Dept Zool.* **1**(12): 259–285 3 pls; Boon, P.I., Bird, F.L. & Bunn, S.E. (1997). Diet of the intertidal callianassid shrimps *Biffarius arenosus* and *Trypaea australiensis* (Decapoda: Thalassinidea) in Western Port (southern Australia), determined with multiple stable-isotope analyses. *Mar. Freshw. Res.* **48**(6): 503–511.

CTENOCHELIDAE



Ctenocheles collini [A.J. Francis]

INTRODUCTION

This small family of benthic mud-shrimps occurs in all oceans. Species are typically found burrowing in muddy-sand bottoms from shallow sublittoral shelf waters to the deeper zones of the continental slope. Only two species inhabit Australian waters: the rare, large, and remarkable looking, *Ctenocheles collini* Ward, 1945, indigenous to Moreton Bay, and *Gourettia coolibah* Poore & Griffin, 1979. Poore (1994) provided a key to genera.

Manning & Felder (1991) erected three subfamilies: Ctenochelinae, Callianopsinae, and Anacalliinae. Sakai (1999a) subsequently added Gourettinae, while Sakai (1999b) transferred Anacallinae to the Callianassidae. Two monotypic subfamilies are presently recognised: Ctenochelinae, with *Ctenocheles* and Gourettinae with *Gourettia*.

Diagnosis

Reptant decapods without a thelycum in the female. Carapace with linea thalassinica present, lateral to antennae; posterior margin of carapace evenly curved, with cardiac prominence; eyestalks flattened; rostrum obsolete or a spike; antenna 1 with article 3 as long as or longer than article 2. Pereiopods 1–5 having basis and ischium fused; first pereiopods unequal. Pereiopod 1 chelate, carpus-propodus articulation slight, merus with straight or toothed lower margin; pereiopod 2 chelate, always with dense row of long setae on lower margin; pereiopod 3 simple, propodus without distal spiniform seta on lower margin, propodus linear or weakly ovate; pereiopod 4 simple or subchelate, coxa flattened, mobile; pereiopod 5 chelate or subchelate; without arthrobranch on thoracomere 1; pereiopods 3 and 4 propodus with or without spiniform setae; pereiopods 2–4 and abdominal somites sometimes with setal-rows. Maxilla 2 scaphognathite without long seta on posterior lobe. Gill elements paired. Pleuron of abdominal somite 1 weak; abdominal somite 1 without anterolateral lobes, weakly chitinised; thoracic sternite 7 narrow; pleopods with or without appendix interna, reduced if present; pleopod 2 similar to pleopods 3–5, rami lanceolate; uropodal exopod simply ovate; only abdominal somite 6 sometimes with setal-rows. (After Poore 1994).

References

Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321

Sakai, K. (1999a). Redescription of *Ctenocheles balssi* Kishinouye, 1926, with comments on its systematic position and establishment of a new subfamily Gourretiinae (Decapoda, Callianassidae). *Crustaceana* **72**(1): 85–97

Sakai, K. (1999b). Synopsis of the family Callianassidae, with keys to subfamilies, genera and species, and the description of new taxa (Crustacea: Decapoda: Thalassinidea). *Zool. Verh.* **326**: 1–152

Ward, M. (1945). A new Crustacean. *Mem. Qld Mus.* **12**(3): 134–135 1 pl.

CTENOCHELIDAE Manning & Felder, 1991

Ctenochelidae Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 [784].

Ctenocheles Kishinouye, 1926

Ctenocheles Kishinouye, K. (1926). Two rare and remarkable forms of macrurous Crustacea from Japan. *Annot. Zool. Jpn.* **11**: 63–70 2 figs [63] [gender masculine].
Type species: *Ctenocheles balssi* Kishinouye, 1926 by monotypy.

Extralimital distribution: Atlantic and west Pacific Oceans. See: Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 [784].
Generic reference: Holthuis, L.B. (1967). A survey of the genus *Ctenocheles* (Crustacea: Decapoda, Callianassidae), with a discussion of its zoogeography and its occurrence in the Atlantic Ocean. *Bull. Mar. Sci.* **17**(2): 376–385.

Ctenocheles collini Ward, 1945

Ctenocheles collini Ward, M. (1945). A new Crustacean. *Mem. Qld Mus.* **12**(3): 134–135 1 pl. [134 pl. 13].
Type data: holotype QM (lost), paratype(s) QM W3536 3 specimens.
Type locality: Mud Island, Moreton Bay, QLD.

Distribution: QLD (Central E coast); known only from type locality and its vicinity.
Ecology: low intertidal, sublittoral, benthic, burrowing; depth to 40 m.

Reference: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [277].

Gourretia de Saint Laurent, 1973

Gourretia de Saint Laurent, M. (1973). Sur la systématique et la phylogénie des Thalassinidea: definition des familles des Callianassidae et des Upogebiidae et diagnose de cinq genres nouveaux (Crustacea Decapoda). *C. R. Séances Acad. Sci.* **277**: 513–516 [514].
Type species: *Callianassa denticulata* Lutze, 1937 (a junior synonym of the originally nominated, but preoccupied, *Callianassa subterranea* var. *minor*, Gourret, 1887, see Lewinsohn, Ch. & Holthuis, L.B. (1986). The Crustacea Decapoda of Cyprus. *Zool. Verh.* **230**: 1–64 [24]) by original designation.

Extralimital distribution: east-Atlantic, Mediterranean, east-Indian Ocean. See: Manning, R.B. & Felder, D.L. (1991). Revision of the American Callianassidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(4): 764–792 [785].

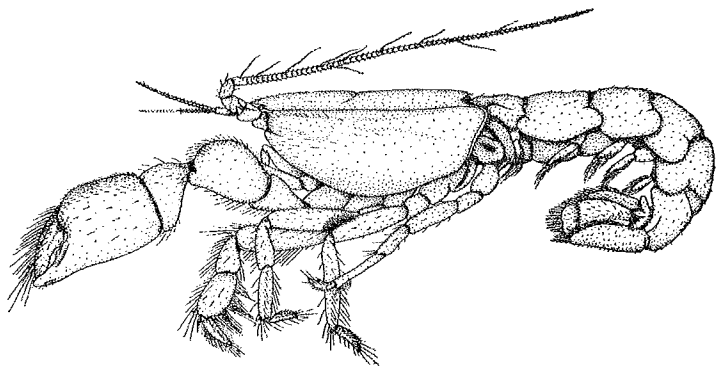
Generic reference: Sakai, K. (1999). Redescription of *Ctenocheles balssi* Kishinouye, 1926, with comments on its systematic position and establishment of a new subfamily Gourretiinae (Decapoda, Callianassidae). *Crustaceana* **72**(1): 85–97 [95] (designated type genus for new subfamily Gourretiinae).

Gourretia coolibah Poore & Griffin, 1979

Gourretia coolibah Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [278 figs 38, 39].
Type data: holotype WAM 66-75 ♀.
Type locality: 346 km ENE of Troughton Is., Joseph Bonaparte Gulf, WA.

Distribution: WA (NW coast); known only from type locality.
Ecology: sublittoral, benthic, burrowing, continental shelf; depth 58 m.

LAOMEDIIDAE



Laomedia healyi [from Yaldwyn & Wear 1972: fig. 1]

INTRODUCTION

This family of burrowing mud shrimps is represented in Australia by two species: *Laomedia healyi* Yaldyn & Wear, 1970, and *L. barronensis* Ngoc-Ho & Yaldwyn, 1997. Both are cryptic species confined to intertidal mangroves of eastern Australia. Larvae of an unidentified species belonging to a second genus, *Jaxea* Nardo, have been recorded from the plankton off eastern Australia by Dakin & Colefax (1940), but no adult *Jaxea* species have ever been captured. Ngoc-Ho (1997) and Ngoc-Ho & Yaldwyn (1997) reviewed the living species of *Laomedia* and provided a key to the genus. Poore (1994) provided a key to world genera.

Diagnosis

Reptant decapods without a thelycum in the female. Carapace with linea thalassinica present; posterior margin with lateral lobes, rostrum minute; eyestalks cylindrical; maxilla 2 scaphognathite with several thickened setae on posterior lobe; antenna 1 with article 3 as long as or longer than article 2; gill elements paired. Pereiopods 1–5 having basis and ischium fused; first pereiopods equal; pereiopod 1 chelate, carpus-propodus articulation slight; pereiopod 2 simple; always with dense row of long setae on lower margin; pereiopod 3 simple, propodus linear; pereiopod 4 simple or subchelate, coxa cylindrical; propodus of pereiopods 3 and 4 with a few spiniform setae on lower margin; pereiopod 5 chelate or subchelate; without arthrobranch on thoracomere 1; propodus of pereiopods 3 and 4 with or without spiniform setae; pereiopods 2–4 and abdominal somites sometimes with setal-rows. Thoracic sternite 7 narrow. Abdominal somite 1 chitinised, with anterolateral lobes, pleuron weak; pleopod 2 similar to pleopods 3–5, rami lanceolate; pleopods without appendix interna; uropodal exopod ovate; pereiopods 2–4 and abdominal somites without setal-rows. (After Poore 1994).

References

Dakin, W.J. & Colefax, A.N. (1940). The plankton of the Australian coastal waters of New South Wales, Part No. 1: With special reference to the seasonal distribution, the phytoplankton, and the planktonic Crustacea, and in particular, the Copepoda and crustacean larvae, together with an account of the more frequent members of the groups *Mysidacea*, *Euphausiacea*, *Amphipoda*, *Mollusca*, *Tunicata*, *Chaetognatha*, and some reference to the fish eggs and fish larvae. *Univ. Sydney, Dept. Zool., Monogr* **1**: 1–215 303 figs 4 pls

Ngoc-Ho, N. (1997). The genus *Laomedia* De Haan, 1841 with description of a new species from Vietnam (Crustacea, Thalassinidae, Laomediidae). *Zoosystema* **19**: 729–747

Ngoc-Ho, N. & Yaldwyn, J.C. (1997). A new species of *Laomedia* (Crustacea, Thalassinidea, Laomediidae) from Australia with notes on its ecology. *Zoosystema* **19**: 337–343

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Yaldwyn, J.C. & Wear, R.G. (1970). Preliminary description of a new burrowing mud-shrimp from eastern Australia (Crustacea, Macrura Reptantia, Laomediidae). *Aust. Zool.* **15**: 384–385, 1 fig.

LAOMEDIIDAE Borradaile, 1903

Laomediidae Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638.
Type genus: *Laomedia* De Haan, 1841.

Laomedia De Haan, 1841

Laomedia De Haan, W. (1841). Crustacea. pp. 1–243 pls A–J, L–Q, 1–55, circ. tab. 2 *in* von Siebold, P.F. *Fauna Japonica sive Descriptio Animalium, quae in Itinere per Japoniam*, Jussu et Auspiciis Superiorum, qui Summum in India Batava Imperium Tenent, Suscepto, Annis 1823–1830 Collegit, Notis, Observationibus et Adumbrationibus Illustravit. Leiden : Lugundi-Batavorum [164] [published from 1833–1850].
Type species: *Laomedia astacina* De Haan, 1841 by monotypy.

Extralimital distribution: west Pacific Ocean. See: Ngoc-Ho, N. (1997). The genus *Laomedia* De Haan, 1841 with description of a new species from Vietnam (Crustacea, Thalassinidae, Laomediidae). *Zoosystema* **19**: 729–747 [731] (review of living species).

Generic reference: Ngoc-Ho, N. & Yaldwyn, J.C. (1997). A new species of *Laomedia* (Crustacea, Thalassinidea, Laomediidae) from Australia with notes on its ecology. *Zoosystema* **19**: 337–343 [342] (key to species).

Laomedia barronensis Ngoc-Ho & Yaldwyn, 1997

Laomedia barronensis Ngoc-Ho, N. & Yaldwyn, J.C. (1997). A new species of *Laomedia* (Crustacea, Thalassinidea, Laomediidae) from Australia with notes on its ecology. *Zoosystema* **19**: 337–343 [338 figs 1, 2].
Type data: holotype AM P18362 ♀.
Type locality: Barron R., Cairns, N QLD [16°55'S 145°46'E].

Distribution: QLD (NE coast); known only from type locality.
Ecology: burrowing, estuarine, intertidal, mangrove; from a *Sesarma* burrow system in muddy bank of river.

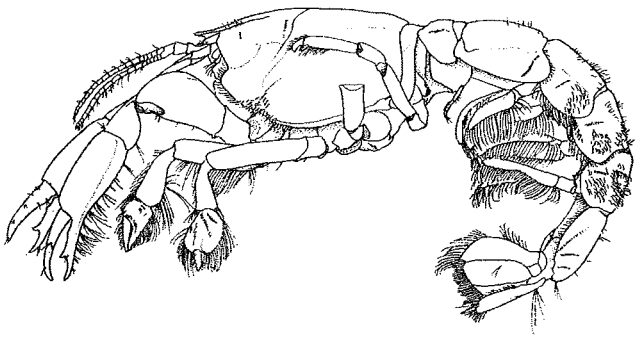
Laomedia healyi Yaldwyn & Wear, 1970

Pink Mangrove Lobster

Laomedia healyi Yaldwyn, J.C. & Wear, R.G. (1970). Preliminary description of a new burrowing mud-shrimp from eastern Australia (Crustacea, Macrura Reptantia, Laomediidae). *Aust. Zool.* **15**: 384–385, 1 fig. [384 fig. 1].
Type data: holotype AM P15820 ♀, paratypes AM P4746 1 ♀, AM P10725 5 ♂ 2 ♀, AM P11578 1 ♀, AM P12944 1 ♀, AM P13506 1 ♀, AM P15057 1 ♂, AM P15058 1 ♀, AM P15819 1 ♂, AM P18361 1 ♀, RMNH D29867 ♀, RMNH D29868 ♂.
Type locality: Careel Bay, Pittwater, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast), VIC (Bass Strait); known only from limital area.
Ecology: burrowing, littoral, mangrove.
References: Yaldwyn, J.C. & Wear, R.G. (1972). The eastern Australian burrowing mud-shrimp, *Laomedia healyi* (Crustacea, Macrura, Reptantia, Laomediidae) with notes on larvae of the genus *Laomedia*. *Aust. Zool.* **17**: 126–141 pls 6–7 (full description); Davie, P. (1998). *Wild Guide to Moreton Bay.* Wildlife and habitats of a beautiful Australian coast — Noosa to the Tweed. Brisbane : Queensland Museum xxiv 408 pp. [43] (colour photograph).

MICHELEIDAE



Meticonaxius soelae [from Sakai 1992: fig. 6]

INTRODUCTION

This small family of thalassinidean benthic shrimps is found in all tropical oceans and extends south to South Africa and southern Australia. It is represented in Australia by three genera. Poore (1997) reviewed the family, and Poore (1994) provided a key to genera.

Diagnosis

Soft-bodied or firm thalassinidean shrimps. Rostrum present with lateral carinae (rarely absent). No linear thalassinica. Cephalothorax laterally compressed, ending midposteriorly as a median lobe separate from produced posterolateral margins of carapace which are thickened to form a marginal ridge. Thoracic sternite 7 visible between coxae of pereiopods 4 only as a narrow ridge. Coxae 4 flattened, mobile, condyle with thoracic sternite 7 functional. Abdominal somite 1 less than half length of abdominal somite 2 and with pleuron obscure. Abdominal somite 2 pleuron overlaps abdominal somite 1. Cephalothorax, rostrum, abdomen, telson and all limbs without armature (obsolete rostral dentition and low medial and lateral rostral carinae may be present). Anterior cephalothorax and at least abdominal somites 1 and 6 (usually all) with lateral setal rows; lateral surfaces of propodi of pereiopods 2–4 with similar setal rows. Antenna 1 peduncle article elongate and waisted, article 3 longer than article 2. Antenna 2 with scaphocerite articulating and prominent, rarely small. Mandibular incisor toothed only posteriorly, asymmetrical. Maxilla 2 scaphognathite with one or two long setae extending into branchial chamber. Maxilliped 3 pediform, carpus longer than propodus, propodus never flattened. Pereiopods 1 unequal; merus with straight lower margin, sometimes with few spines; proximal part of propodus elongate (about twice as long as wide); fingers as long as proximal part. Pereiopod 2 chelate. Pereiopods 2–4 with flattened propodi, longer than wide, without single marginal spiniform seta (rows of spiniform setae laterally in *Michelea*). Epipods broadly lamellate; podobranchs 3–6 usually present; two arthrobranchs on each of thoracomeres 3–7; pleurobranchs 5–7 present or absent. Male pleopod 1 with triangular second article, appendix interna only represented by hooks. Appendix masculina free. Pleopod 2 not modified, similar to pleopods 3–5; all with foliaceous rami, well-developed appendix interna. Uropodal exopod without transverse suture; endopod more or less triangular. (After Poore 1997).

References

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420

Sakai, K. (1992). The families Callianideidae and Thalassinidae, with the description of two new subfamilies, one new genus and two new species. *Naturalists* **4**: 1–33

MICHELEIDAE Sakai, 1992

Micheleinae Sakai, K. (1992). The families Callianideidae and Thalassinidae, with the description of two new subfamilies, one new genus and two new species. *Naturalists* **4**: 1–33 [18].

Meticonaxiinae Sakai, K. (1992). The families Callianideidae and Thalassinidae, with the description of two new subfamilies, one new genus and two new species. *Naturalists* **4**: 1–33 [19].

Taxonomic decision for synonymy: Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [354].

Meticonaxius de Man, 1905

Meticonaxius de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [592].
Type species: *Meticonaxius monodon* de Man, 1905 by monotypy.

Metaxius Bouvier, E.L. (1905). Sur les Thalassinidés recueillis par le *Blake* dans la mer des Antilles et le golfe du Mexique. *C. R. Séances Acad. Sci.* **141**: 802–806 [804].
Type species: *Metaxius microps* Bouvier, 1905 by monotypy.

Taxonomic decision for synonymy: Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [364] (also emended diagnosis and key to species).

Extralimital distribution: Indo-west Pacific and Atlantic Oceans.

Meticonaxius soelae Sakai, 1992

Meticonaxius soelae Sakai, K. (1992). The families Callianideidae and Thalassinidae, with the description of two new subfamilies, one new genus and two new species. *Naturalists* **4**: 1–33 [21 figs 6–8].
Type data: holotype NTM Cr.009506 ♀.
Type locality: Coral Sea, off NE QLD (FRV *Soela*, Cruise 0186, Stn 69) [17°59.4'S 147°64'E].
Distribution: QLD (NE oceanic); known only from type locality.
Ecology: benthic.

Michelea Kensley & Heard, 1991

Michelea Kensley, B. & Heard, R.W. (1991). An examination of the shrimp family Callianideidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(3): 493–537 [519] [gender feminine].
Type species: *Callianidea vandoverae* Gore, 1987 by original designation.

Extralimital distribution: Pacific Ocean.

Generic reference: Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [374] (key to species and distributions).

Michelea hortus Poore, 1997

Michelea hortus Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [378 fig. 16].
Type data: holotype WAM 57-75 ♀.
Type locality: 1.5 miles W of S end of Garden Island, WA [32°12'S 115°40'E].

Distribution: WA (SW coast); known only from type locality.
Ecology: benthic, continental shelf.

Michelea leura (Poore & Griffin, 1979)

Callianidea leura Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [281 figs 40, 41].
Type data: holotype AM P25292 ♀, paratype(s) AM P5574 1 specimen.
Type locality: Masthead Is., Capricorn Group, QLD [23°25'S 151°55'E].

Taxonomic decision for new combination: Kensley, B. & Heard, R.W. (1991). An examination of the shrimp family Callianideidae (Crustacea: Decapoda: Thalassinidea). *Proc. Biol. Soc. Wash.* **104**(3): 493–537 [519].

Distribution: QLD (Great Barrier Reef); known only from limital area.
Ecology: coral reef, sublittoral, benthic, low intertidal.

Michelea microphylla Poore, 1997

Michelea microphylla Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [386 figs 20, 21].
Type data: holotype NMV J1263 ♂ (juvenile).
Type locality: Crib Point, Western Port, VIC [38°19.92'S 145°13.95'E].

Distribution: VIC (Bass Strait); known only from type locality.
Ecology: benthic, subtidal; sand/gravel bottom, 19 m depth.

Michelea paraleura Poore, 1997

Michelea paraleura Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [390 figs 23, 24].
Type data: holotype AM P5574 ♀ (originally paratype of *Callianidea leura* Poore & Griffin, 1979, = *Michelea leura*), paratypes NMV J22685 ♂, NMV J27643 1 specimen.
Type locality: Holbourne Island, QLD [19°42'S 148°21'E].

Distribution: NT (N coast), QLD (Great Barrier Reef); known only from limital area.
Ecology: benthic, coral reef, low intertidal, shallow subtidal.

Tethisea Poore, 1994

Tethisea Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120 [99, 100].
Type species: *Tethisea indica* Poore, 1994 by original designation.

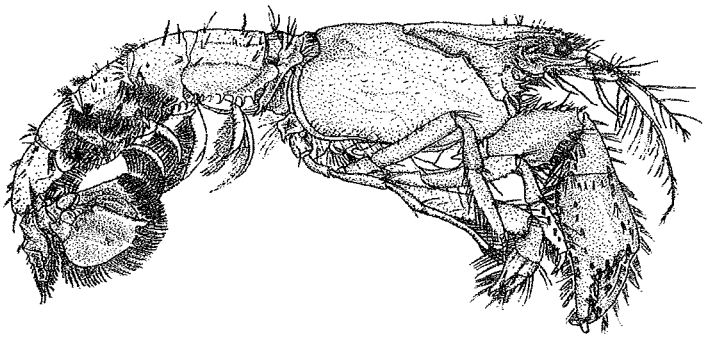
Extralimital distribution: Indo-west Pacific.

Tethisea mindoro Poore, 1997

Tethisea mindoro Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [398].
Type data: holotype MNHP Th-1222 ♀.
Type locality: W of Mindoro, Philippines [12°31.2'N 120°39.3'E].

Distribution: WA (NW coast); Philippines.
Ecology: benthic, continental shelf, muddy-sand; from 92–134 m depth.

STRAHLAXIIDAE



Neaxius acanthus [from Tirmizi 1983: fig. 1]

INTRODUCTION

This small family of thalassinidean benthic shrimps was described only recently to accommodate three genera, *Neaxius* Borradaile, 1903, *Strahlaxius* Sakai & de Saint Laurent, 1989, and *Neaxiopsis* Sakai & de Saint Laurent, 1989, all previously placed in the Axiidae. The Strahlaxiidae is represented in Australia by *Neaxius* and *Strahlaxius*, each with two species. Probably the best known is *Neaxius glyptocercus* von Martens, a large, orange-red, lobster-like thalassinid reaching about 100 mm in length, that is very common in sheltered embayments of northern Australia such as Moreton Bay.

Diagnosis

Reptant decapods without a thelycum in the female. Carapace with lateral lobes on posterior margin; linea thalassinica absent; rostrum usually spinose, apically bifid; eye usually pigmented; eyestalks cylindrical; antenna 1 with article 1 as long as article 2, and article 3 about as long as article 2; maxilla 2 scaphognathite with 1–2 long setae on posterior margin; gill elements paired. Pereiopods 1–5 with basis and ischium fused; pereiopod 1 chelate and carpus-propodus articulation slight; pereiopod 2 chelate; always with dense row of long setae on lower margin; pereiopod 3 simple; pereiopod 4 simple or subchelate, coxa more or less flattened; propodus of pereiopods 3 and 4 broadened; pereiopod 5 chelate or subchelate, without arthrobranch on thoracomere 1. Pleuron of abdominal somite 1 not produced; abdominal somite 2 twice as long as 3; pleopods with appendix interna; pleopod 2 similar to pleopod 3–5; uropodal rami lamellate; male pleopod 2 endopod foliaceous with small appendix masculina attached mesially; exopods of pleopods 2–5 laterally lobed; uropodal endopod triangular. Pereiopods 2–4 and abdominal somites with some setal-rows. (After Poore 1994).

References

Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104

Tirmizi, N.A. (1983). Four axiids (Decapoda, Thalassinidea) from Indonesia. *Researches on Crustacea* **12**: 85–95

STRAHLAXIIDAE Poore, 1994

Strahlaxiidae Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120 [100].

Neaxius Borradaile, 1903

Neaxius Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638 [537].
Type species: *Axia acanthus* A. Milne Edwards, 1879 by original designation.

Extralimital distribution: Indo-west Pacific Oceans. See: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104.

Neaxius acanthus (A. Milne Edwards, 1879)

Axia acantha Milne Edwards, A. (1879). Additions à la famille des thalassiniens. *Bull. Soc. philomath. Paris* **3**(7): 110–113 [110].
Type data: type status unknown MNHP*.
Type locality: New Caledonia.

Eiconaxius taliliensis Borradaile, L.A. (1900). On the Stomatopoda and Macrura brought by Dr. Willey from the South seas. pp. 395–428 *in* Willey, A. (ed.) *On the Stomatopoda and Macrura brought by Dr Willey from the South Seas.* Cambridge : Cambridge University Press Pt 4 [420 figs 15a–c].
Type data: syntypes UMZC 1 ♂ 1 ♀.
Type locality: Talili Bay, New Britain.

Axius acanthus mauritianus Bouvier, E.L. (1914). Sur la fauna carcinologique de l'Ile Maurice. *C. R. Séances Acad. Sci.* **159**: 698–704 [704].
Type data: type status unknown MNHP ♂ ♀ * (probable depository institution).
Type locality: Port Louis, Mauritius.

Taxonomic decision for synonymy: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [30].

Distribution: QLD (NE coast); Indo-west Pacific Oceans.
Ecology: sublittoral, benthic.

References: Bouvier, E.L. (1915). Décapodes marcheurs (Reptantia) et Stomatopodes, recueillis à l'île Maurice par M. Paul Carié. *Bull. Scienti. Fr. Belg. (7)***48**(3): 178–318 figs 1–42 pls 4–7 [196 fig. 7] (full description of *Axius acanthus mauritianus*); Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [235] (Australian record and diagnostic characters); Mukai, H. & Sakai, K. (1992). Morphology and quantitative characteristics of *Neaxius acanthus* (A. Milne Edwards, 1878) (Thalassinidea: Axiidae) in the Papua New Guinean seagrass bed. *Benth. Res.* **43**: 47–52 (in Japanese with English abstract).

Neaxius glyptocercus von Martens, 1868

Red Mud Lobster

Neaxius glyptocercus Martens, E. von (1868). Über einige neue Crustaceen. *Mber. K. Preuss. Akad. Wiss.* **1868**: 608–615 [613].
Type data: type status and whereabouts unknown (museum not determined).
Type locality: Cape York, Australia.

Distribution: NT (N coast), QLD (Central E coast, NE coast); known only from limital area.
Ecology: benthic, burrowing, low intertidal, muddy-sand, shallow subtidal.
marine and brackish.
Reference: Davie, P. (1998). *Wild Guide to Moreton Bay.* Wildlife and habitats of a beautiful Australian coast — Noosa to the Tweed. Brisbane : Queensland Museum xxiv 408 pp. [98] (colour photograph).

Strahlaxius Sakai & de Saint Laurent, 1989

Strahlaxius Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [24].
Type species: *Axius plectrorhynchus* Strahl, 1861 by original designation.

Extralimital distribution: Indo-west Pacific Oceans.

Strahlaxius plectrorhynchus (Strahl, 1861)

Slow Shrimp

Axius plectrorhynchus Strahl, C. (1861). Über einige neue von Hrn F. Jagor eingesandte Thalassinen und die systematische Stellung dieser Familie. *Mber. dt. Akad. Wiss. Berl.* **1861**: 1055–1072 14 figs [1060 figs 2, 4, 11].
Type data: holotype ZMB ♀ adult* (probable depository Institution).
Type locality: Luzon.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, Great Barrier Reef, NE coast), SA (S Gulfs coast), WA (Lower W coast); east Indo-west Pacific Oceans.
Ecology: burrowing, coral reef, littoral, sublittoral; found at edge of beach rock, vertical burrows, depth to 13 m.
Reference: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [24].

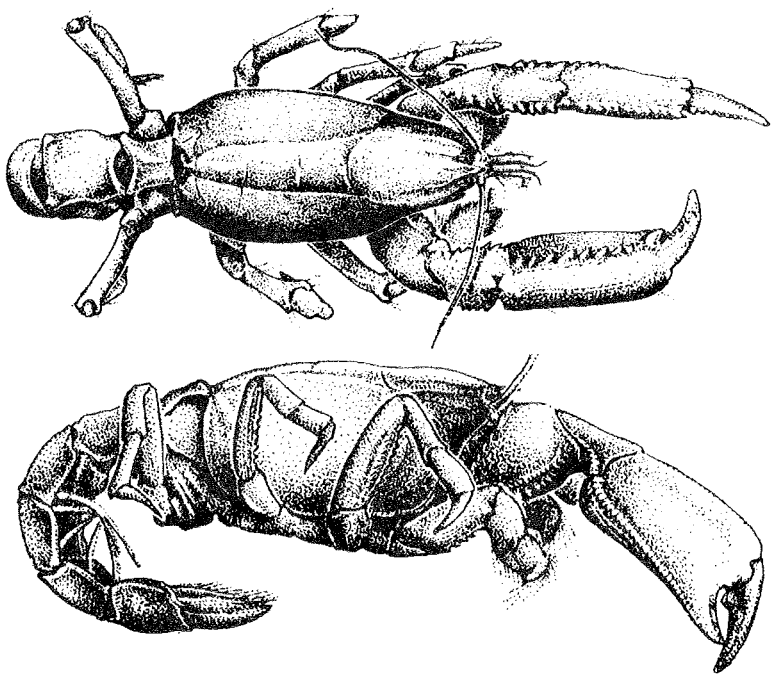
Strahlaxius waroona (Poore & Griffin, 1979)

Axius (Neaxius) waroona Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [240 fig. 10].
Type data: holotype WAM 20-75 ♀, paratypes WAM 73-75, WAM 151-76, WAM 9-75, WAM 432-73, WAM 130-75, WAM 174-31, SAMA C880, AM P8676, AM P24662, AM P25291, AM P4841, AM P24664, AM G5757.
Type locality: N side of Cape Naturaliste, WA.

Taxonomic decision for new combination: Sakai, K. & de Saint Laurent, M. (1989). A check list of Axiidae (Decapoda, Crustacea, Thalassinidea, Anomura), with remarks and in addition descriptions of one new subfamily, eleven new genera and two new species. *Naturalists* **3**: 1–104 [25].

Distribution: QLD (NE coast), SA (S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait), WA (Lower W coast); known only from limital area.
Ecology: littoral; under rocks.

THALASSINIDAE



Thalassina squamifera [from Murray & Hanley 1986: fig. 3a, d]

INTRODUCTION

The family Thalassinidae comprises a single genus, *Thalassina*, with two currently recognised extant species. At present, only *Thalassina squamifera* is recorded from Australia. However, in a revision of the genus *Thalassina* underway (de Saint Laurent & Ngoc-Ho, pers. comm.), a second species, *Thalassina emerii* Bell, 1844, will be recognised from NW Australia. Previously, this species was only known from fossil material.

Thalassinids are commonly known as mud or mangrove lobsters and are responsible for considerable bioturbation in tropical mangrove swamps through construction of their large and characteristic mud mounds. The mounds of the Australian *Thalassina squamifera* are considerably smaller than those of the SE Asian *T. anomala*. Poore & Griffin (1979) and Dworschak (1992) should be consulted for specific differences.

Diagnosis

Reptant decapods without a thelycum in the female. Carapace posterior margin with lateral lobes; linea thalassinica present; eyestalks cylindrical; antenna 1 with article 3 about as long as article 2; maxilla 2 scaphognathite with thickened setae on posterior margin; gill elements irregular, filamentous proximally and plate-like distally. Pereiopods 1–5 with basis and ischium fused; pereiopods 1 and 2 subchelate; pereiopod 2 always with dense row of long setae on lower margin; pereiopod 3 simple, without arthrobranch on thoracomere 1; pereiopods 3 and 4 propodus with spiniform seta; pereiopods 2–4 and abdominal somites without setal-rows; pleuron of abdominal somite 1 produced; pleopods 3–5 without appendix interna (vestigial on male pleopod 2); pleopod 2 similar to pleopods 3–5; uropodal rami linear. (After Poore 1994).

References

Bell, T. (1844). On the *Thalasina Emerii*, a fossil crustacean, forwarded by Mr. W.S. MacLeay, from New Holland. *Proc. Geol. Soc. Lond.* **4**(2): 360–362 1 fig.

Dworschak, P.C. (1992). The Thalassinidea in the Museum of Natural History, Vienna; with some remarks on the biology of the species. *Ann. Naturhist. Mus. Wien* **93**: 189–238

Murray, P.F. & Hanley, J.R. (1986). Unmuddling the Mudlobster; Observations on the age and taphonomy of fossil *Thalassina*. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 59–70

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321

THALASSINIDAE Latreille, 1831

Thalassinidae Latreille, P.A. (1831). *Cours d'entomologie ou de l'histoire naturelle des Crustacés, des Arachnides, des Myriopodes et des Insectes.* Exposition méthodique des ordres, des familles et des genres des trois premières classes. Vol. XII 568 + 26 pp. [377] [name placed on the Official List of Family Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424].

Thalassina Latreille, 1806

Thalassina Latreille, P.A. (1806). *Genera crustaceorum et Insectorum secundum ordinem naturalem in familias disposita.* Parisiis et Argentorati. Vol. I. xviii 302 pp. pls 1–16 [51] [gender feminine].
Type species: *Thalassina scorpionides* Latreille, 1806 by monotypy.

Extralimital distribution: Indo-west Pacific Oceans.

Species excluded from limital area: THALASSINIDAE: *Thalassina maxima* Hess, 1865, Davie, P., this work, (this species was described by Hess from 'Sydney' (holotype ZMG 227 ♂, now housed in SMF). It has been re-examined as part of the revision of the genus by Ngoc-Ho & de Saint Laurent, and found to be a junior synonym of *Thalassina anomala*, a species not otherwise found in Australia).

Thalassina emerii Bell, 1844

Thalassina antiqua Bell, T. (1844). [a notice of the reading of Prof. Bell's paper to the Geological Society]. *Ann. Nat. Hist.* **14**: 455 [455] [*nom. nud.*].

Thalassina emerii Bell, T. (1844). On the *Thalasina Emerii*, a fossil crustacean, forwarded by Mr. W.S. MacLeay, from New Holland. *Proc. Geol. Soc. Lond.* **4**(2): 360–362 1 fig. [93].
Type data: holotype BMNH fossilised ecdysis*.
Type locality: 'New Holland', but considered likely to have come from the region of Anson Bay, near the mouth of the Daly River, NT, see Etheridge, R. & McCulloch, A.R. (1916). Sub-fossil crustaceans from the coasts of Australia. *Rec. Aust. Mus.* **11**: 1–14 pls 1–7 [2].

Distribution: NT (N coast); southern New Guinea.
Ecology: estuarine, intertidal, mangrove.
Reference: Davie, P., this work (this species, previously only known from fossil material, has been recently identified from museum specimens from NW Australia as part of a revision being undertaken by Ngoc-Ho and de Saint Laurent of the Muséum National d'Histoire Naturelle, Paris).

Thalassina squamifera de Man, 1915

Mud Lobster

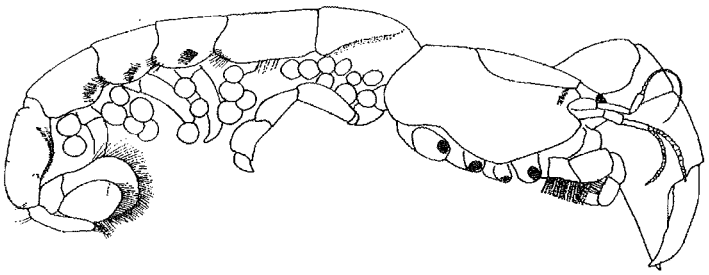
Thalassina anomala squamifera de Man, J.G. (1915). Zur Fauna von Nord-Neuguinea. Nach den Sammlungen von Dr. P.N. van Kampen und K. Gjellerup in den Jahren 1910–1911. Macrura. *Zool. Jb.* **38**: 385–458 pls 27–29 [445 pl. 29 fig. 16].
Type data: type status unknown.
Type locality: Karakelong, Indonesia.

Distribution: NT (N coast), QLD (Central E coast, NE coast), WA (Central W coast, NW coast); east Indo-west Pacific Oceans.

Ecology: burrowing, mangrove, mud feeder, intertidal; depth to 13 m.

References: Campbell, B.M. & Woods, J.T. (1970). Quaternary Crustaceans from Northern Australia in the collections of the Bureau of Mineral Resources, Canberra. *Palaeontological Papers, 1967.* Bulletin 108. Extract No. 2: 41–42 [41] (elevated to specific rank); Murray, P.F. & Hanley, J.R. (1986). Unmuddling the Mudlobster; Observations on the age and taphonomy of fossil *Thalassina*. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **3**(1): 59–70 (as *Thalassina anomala*).

THOMASSINIIDAE



Thomassinia aimsae [from Poore 1997, fig. 34A]

INTRODUCTION

This small group of thalassinidean shrimps includes three genera found in the tropical eastern Atlantic and Indo-west Pacific Oceans. Only one species, *Thomassinia aimsae* Poore, 1997, has been described from Australia. Poore (1997) reviewed the family, and Poore (1994) provided a key to genera.

Diagnosis

Firm-bodied or soft thalassinidean shrimps. Rostrum absent or present only as sharp spine. Linear thalassinica lateral to eyestalks, complete or incomplete. Cephalothorax usually broad, ending posteriorly as a median convexity not separate from posterolateral margins of carapace. Without anterolateral lobes on abdominal somite 1, anterodorsal tergite weak; no thickening of posterolateral carapace margins. Thoracic sternite 7 broad, visible between coxae of pereiopods 4 only as a flat plate. Coxae 4 flattened, immobile, without condyle with thoracic sternite 7. Abdominal somite 1 almost as long as abdominal somite 2 and with pleuron broadly rounded (rarely acute). Abdominal somite 2 pleuron not overlapping abdominal somite 1. Cephalothorax, rostrum, abdomen, telson and all limbs without armature. Anterior cephalothorax and at least abdominal somites 1 and 6, sometimes other, with weak lateral setal rows; lateral surfaces of propodi of pereiopods 2–4 sometimes with similar setal rows. Antenna 1 peduncle article 1 as long as 2 and 3. Antenna 2 with scaphocerite minute, barely articulating. Mandibular incisor toothed anteriorly and posteriorly, symmetrical. Maxilla 2 scaphognathite with one long setae extending into branchial chamber. Maxilliped 3 pediform, sometimes specialised; exopod present or absent. Pereiopods 1 unequal; merus ovate, with convex posterior margin; proximal part of propodus broad (about as long as wide); fingers shorter than proximal part. Pereiopod 2 chelate. Pereiopods 2–4 with flattened propodi. Pereiopods 3 and 4 propodi (or at least 3) bearing single distal spiniform seta on lower margin. Epipods linear, reduced anteriorly; podobranchs rudimentary or absent; two arthrobranchs various, present, reduced or lost; pleurobranchs absent. Male pleopod 1 absent. Appendix masculina fused to appendix interna (rarely separate). Pleopod 2 not modified, similar to pleopods 3–5; all with foliaceous rami, and well-developed appendix interna. Uropodal exopod without transverse suture; endopod more or less ovate. (After Poore 1997).

References

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420

THOMASSINIIDAE de Saint Laurent, 1979

Thomassiniinae de Saint Laurent, M. (1979). Sur la classification et la phylogénie des Thalassinides: définition des familles des Callianassidae et des Upogebiidae et diagnose de cinq genres nouveaux. *C. R. Séances Acad. Sci.* **288**: 1395–1397 [1396].

Thomassinia de Saint Laurent, 1979

Thomassinia de Saint Laurent, M. (1979). Sur la classification et la phylogénie des Thalassinides: définition des familles des Callianassidae et des Upogebiidae et diagnose de cinq genres nouveaux. *C. R. Séances Acad. Sci.* **288**: 1395–1397 [1396].
Type species: *Thomassinia gebioides* de Saint Laurent, 1979 by original designation.

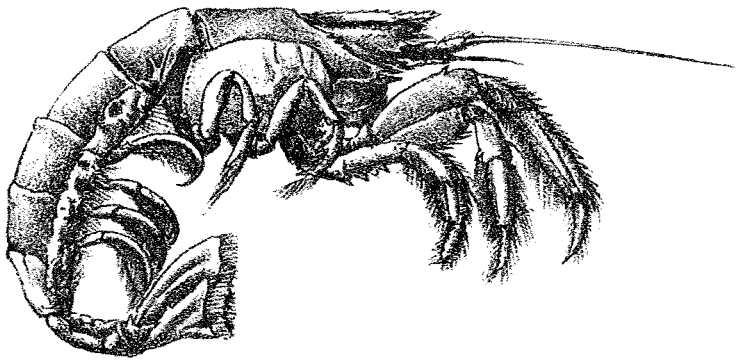
Extralimital distribution: Indo-west Pacific.

Thomassinia aimsae Poore, 1997

Thomassinia aimsae Poore, G.C.B. (1997). A review of the thalassinidean families Callianideidae Kossmann, Micheleidae Sakai, and Thomassiniidae de Saint Laurent (Crustacea, Decapoda) with descriptions of fifteen new species. *Zoosystema* **19**(2–3): 345–420 [410 figs 34, 35].
Type data: holotype NMV J21766 ♀.
Type locality: Davies Reef, QLD [18°50'S 147°39'E].

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: benthic, coral reef, shallow subtidal; from 5 m depth.

UPOGEBIIDAE



Upogebia spinifrons [from Haswell 1882: pl. 3 fig. 5]

INTRODUCTION

Upogebiids are represented by five genera in Australia. They occur in a wide variety of habitats from the intertidal zone to at least 200 metres depth, and from burrowing in estuarine mud banks to living in sponges and cavities in coral. Key works to identify Australian species are those of Poore & Griffin (1979), Sakai (1982, 1993), and Ngoc-Ho (1994). Poore (1994) provided a key to genera.

Diagnosis

Reptant decapods without a thelycum in the female. Carapace with linea thalassinica present; posterior margin of carapace evenly curved; antenna 1 with article 3 as long as or longer than article 2; rostrum usually broad, spinose and dorsally setose; eyestalks cylindrical; maxilla 2 scaphognathite without long seta on posterior lobe; gill elements paired. Pereiopods 1–5 having basis and ischium fused; first pereiopods equal, chelate and carpus-propodus articulation slight; pereiopod 2 simple; always with dense row of long setae on lower margin; pereiopod 3 simple, propodus linear; pereiopod 4 simple or subchelate, coxa cylindrical; pereiopod 5 chelate or subchelate, without arthrobranch on thoracomere 1; pereiopods 3 and 4 propodus without spiniform setae on lower margin. Thoracic sternite 7 narrow. Abdominal somite 1 chitinised, without anterolateral lobes, pleuron weak; pleopod 2 similar to pleopods 3–5, rami lanceolate, pleopods without appendix interna; uropodal exopod triangular; pereiopods 2–4 and abdominal somites without setal-rows. (After Poore 1994).

References

Haswell, W.A. (1882). *Catalogue of the Australian Stalk- and Sessile-eyed Crustacea.* Sydney : Australian Musuem XXIV 326 pp. 4 pls

Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78

Poore, G.C.B. (1994). A phylogeny of the families of Thalassinidea (Crustacea: Decapoda) with keys to families and genera. *Mem. Mus. Vic.* **54**: 79–120

Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321

Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs

Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114

UPOGEBIIDAE Borradaile, 1903

Upogebiinae Borradaile, L.A. (1903). On the classification of the Thalassinidea. *Ann. Mag. Nat. Hist.* **12**(7): 534–551, 638 [542] [name placed on the Official List of Family Names in Zoology, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424].
Type genus: *Upogebia* Leach, 1814.

Gebiadae Haworth, A.H. (1825). A new binary arrangement of the macrurus Crustacea. *Phil. Mag. Journ.* **65**: 183–184 [184].
Type genus: *Gebia* Leach, 1815.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [232].

Acutigebia Sakai, 1982

Acutigebia Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [69] [first introduced as a subgenus of *Upogebia* Leach, 1814].
Type species: *Gebia danai* Miers, 1876 (=*Upogebia (Acutigebia) danai* (Miers, 1876)) by original designation.

Extralimital distribution: west Pacific (Japan to New Zealand).

Acutigebia kyphosoma Sakai, 1993

Acutigebia kyphosoma Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [105 figs 10, 11].
Type data: holotype NTM Cr.000782 ♀.
Type locality: North-west Shelf, WA [19°55.0'S 117°54.4'E].

Distribution: WA (NW coast); known only from type locality.
Ecology: benthic, continental shelf.

Acutigebia simsoni (Thomson, 1893)

Sand-borer

Gebia simsoni Thomson, G.M. (1892). Notes on Tasmania Crustacea, with descriptions of new species. *Pap. Proc. Roy. Soc. Tasmania* **1892**: 45–76 pls 1–6 [49 pl. 1 figs 3–5].
Type data: holotype ♀.
Type locality: E coast of Tasmania.

Distribution: NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, NE coast), SA (Great Australian Bight, S Gulfs coast), TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: littoral, sublittoral, benthic, burrowing.
References: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 (redescription); Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [71].

Acutigebia trypeta Sakai, 1970

Acutigebia trypeta Sakai, K. (1970). A new coral burrower, *Upogebia trypeta* sp. nov. collected from Amami-Oshima, Japan. *Publ. Seto Mar. Biol. Lab.* **18**: 49–56, text–figs 1–2 [49, text-figs 1, 2A–B].
Type data: holotype SMF 7802 ♀, paratypes SMF 7798 2♂ 3♀, MNHP Th443 1♀.
Type locality: Maya, Amami-Oshima, Japan.

Distribution: QLD (Great Barrier Reef, NE coast); west Pacific Ocean.
Ecology: coral reef, burrowing, low intertidal, shallow subtidal.
Reference: Sakai, K. (1984). Some Thalassinideans (Decapoda: Crustacea) from Heron Is., Queensland, Eastern Australia, and a new species of *Gourretia* from East Africa. *Beagle, Occ. Pap. N.T. Mus. Arts Sci.* **1**(11): 95–108 [104] (first Australian record).

Gebiacantha Ngoc-Ho, 1989

Gebiacantha Ngoc-Ho, N. (1989). Sur le genre *Gebiacantha* gen. nov. avec la description de cinq espèces nouvelles (Crustacea, Thalassinidea, Upogebiidae). *Bull. Mus. Natn. Hist. Nat. Paris* **11**(4): 117–145 figs 1–9 [118].
Type species: *Upogebia talismani* Bouvier, 1915 by original designation.

Extralimital distribution: East-Atlantic, Indo-west Pacific.

Generic reference: Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [59] (key to species).

Gebiacantha acutispina (de Saint Laurent & Ngoc-Ho, 1979)

Upogebia acutispina de Saint Laurent, M. & Ngoc-Ho, N. (1979). Description de deux espèces nouvelles du genre *Upogebia* Leach, 1814 (Decapoda, Upogebiidae). *Crustaceana* **37**(1): 57–70 [57 figs 1–5, 9–21].
Type data: holotype BMNH 1892.3.26 ♀, paratypes BMNH 1892.3.26 2♂, MNHP Th538 1 specimen.
Type locality: Holothuria Bank, Australia.

Upogebia niugini Poore, G.C.B. (1982). *Upogebia niugini* (Crustacea) a new shrimp from Papua New Guinea. *Proc. R. Soc. Vic.* **94**(4): 169–172 [169 figs 1, 2].
Type data: holotype NMV J1653 ♀, paratype(s) NMV J1654 1♂ 1♀.
Type locality: Port Moresby, 80 km off eastern side of Esade Reef, Papua New Guinea.

Taxonomic decision for synonymy: Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [98].

Distribution: WA (NW coast); Papua New Guinea.
Ecology: sublittoral, benthic, burrowing.

Gebiacantha ceratophora (de Man, 1905)

Upogebia (Upogebia) ceratophora de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [602].
Type data: syntypes ZMA 2♀.
Type locality: Savu, anchorage off Seba, Indonesia (*Siboga* Stn 58).

Distribution: QLD (NE coast); Indonesia.
Ecology: muddy-sand, sublittoral, benthic, burrowing; depth 36 m.
Reference: Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [64].

Gebiacantha poorei Ngoc-Ho, 1994

Gebiacantha poorei Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [64 fig. 6].
Type data: holotype NMV J17919 ♂, paratypes NMV J22667 ♂, NMV J17921 ♂.
Type locality: NE of Townsville, QLD.

Distribution: QLD (NE coast); known only from type locality.
Ecology: sublittoral, benthic, burrowing, mud bottom; depth 23–34 m.

Gebiacantha priochela Sakai, 1993

Gebiacantha priochela Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [100 figs 7–9].
Type data: holotype NTM Cr.007322A ♂, paratypes BLT 5667 2♂ 2♀, RMNH D41762 2♂ 2♀, SMF 19478 2♂, USNM 25295 2♂ 2♀, NTM Cr.007345A 119♂ 114♀, NTM Cr.000818 1♀, NTM Cr.00785 2♀, NTM Cr.0007322B 1♂, NTM Cr.007322C ♀ (as allotype), NTM Cr.008501 2♂, NTM Cr.008502 2♂, NTM Cr.000790 2♀.
Type locality: W of Fog Bay, NT.

Distribution: NT (N coast), QLD (Great Barrier Reef, NE coast), WA (NW coast); known only from limital area.
Ecology: sublittoral, benthic, burrowing, muddy-sand.

Neogebicula Sakai, 1982

Neogebicula Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [8, 72] [first introduced as a subgenus of *Upogebia* Leach, 1814; gender feminine].
Type species: *Neogebicula alaini* Sakai, 1982 by original designation.

Extralimital distribution: Indo-west Pacific.

Generic reference: Ngoc-Ho, N (1995). *Neogebicula wistari* new species from Australia, with a redefinition of *Neogebicula* Sakai, 1982 (Crustacea: Thalassinidea: Upogebiidae). *Crust. Res.* **24**: 78–84 [79, 81] (generic review).

Neogebicula fallax (de Man, 1905)

Upogebia (Upogebia) fallax de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [601].
Type data: holotype ZMA ♂*.
Type locality: Samau, West Timor, Indonesia.

Distribution: NT (N coast); Indonesia.
Ecology: benthic, subtidal.
Reference: Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [95].

Neogebicula wistari Ngoc-Ho, 1995

Neogebicula wistari Ngoc-Ho, N (1995). *Neogebicula wistari* new species from Australia, with a redefinition of *Neogebicula* Sakai, 1982 (Crustacea: Thalassinidea: Upogebiidae). *Crust. Res.* **24**: 78–84 [81 figs 1, 2].
Type data: holotype QM W20763 ♀, paratype(s) MNHP Th1294 ♀.
Type locality: Wistari Reef, southern Great Barrier Reef [23°29'S 151°53'E].

Distribution: QLD (Great Barrier Reef); known only from type locality.
Ecology: benthic, sand bottom, subtidal.

Upogebia Leach, 1814

Gerbios Bosc, L.A.G. (1813). Essai historique sur les crustacés de la mer de Nice par M. RISSO (extrait d'un rapport fait par M. Bosc à l'Institut en 1812). *Nouv. Bull. Soc. Philomath. Paris* **3**(66): 233–234 [233] [name suppressed, see International Commission on Zoological Nomenclature (1956). Opinion 434. Use of the Plenary Powers to secure that the name *Upegebia* [Leach], [1814], and *Processa* Leach, [1815], shall be the oldest names for the genera in question and that the family-group names based on these generic names shall be the oldest available names for the family-group taxa concerned. *Opin. Declar. Int. Comm. Zool. Nomencl.* **14**: 403–424; gender feminine].
Type species: *Thalassina littoralis* Risso, 1816 (= *Astacus pusillus* Petagna, 1792) by subsequent designation, see Holthuis, L.B. (1954). Proposed use of the plenary powers to validate the generic names *Upogebia* Leach, 1814, and *Processa* Leach, 1815. *Bull. Zool. Nomencl.* **9**(11): 334–340.

Upogebia Leach, W.E. (1814). Entry: Crustacealogy. pp. 385–437 *in*, *The Edinburgh Encyclopedia conducted by David Brewster LLD*. Vol. VII(2). Edinburgh [400] [Holthuis, L.B. (1954). Proposed use of the plenary powers to validate the generic names *Upogebia* Leach, 1814, and *Processa* Leach, 1815. *Bull. Zool. Nomencl.* **9**(11): 334–340; gender feminine].
Type species: *Cancer (Astacus) stellatus* Montague, 1808 by monotypy.

Gebia Leach, W.E. (1816). A tabular view of the external characters of four classes of animals which Linné arranged under Insecta: with the distribution of the genera composing three of these classes into orders and &c. and descriptions of several new genera and species. *Trans. Linn. Soc. Lond.* **11**: 306–400 & 'Errata' [dated 1815, but published 24 January, 1816] [335, 342] [gender feminine].
Type species: *Cancer (Astacus) stellatus* Montagu, 1808 by subsequent designation, see Lucas, H. (1835). *In, Dictionnaire pittoresque d'Histoire naturelle*. p. 353.

Bigea Nardo, G.D. (1847). *Sinonimia moderna delle specie registrate nell'opera intitolata: Descrizone de Crostacei, de Testacei e de Pesci che abitanao le lagune e golfo veneto rappresentati ... dall' Abate Stefano Chiereghini.* Venezia : Clodiense xi 127 pp. [8] [gender feminine].
Type species: *Bigea tipica* Nardo, 1847 by monotypy.

Calliadne Strahl, C. (1861). Über einige neue von Hrn F. Jagor eingesandte Thalassinen und die systematische Stellung dieser Familie. *Mber. dt. Akad. Wiss. Berl.* **1861**: 1055–1072 14 figs [1064] [gender feminine].
Type species: *Calliadne savignii* Strahl, 1862 by monotypy.

Gebiopsis Milne Edwards, A. (1868). Observations sur la faune carcinologique des îles du Cap.-Vert. *Nouv. Arch. Mus. Hist. Nat. Paris* **4**: 49–68 [63] [gender feminine].
Type species: *Gebiopsis nitidus* A. Milne Edwards, 1868 by monotypy.

Gebicula Alcock, A. (1901). *A Descriptive Catalogue of the Indian Deep-sea Crustacea Decapoda Macrura and Anomala in the Indian Museum.* Being a revised account of the deep-sea species collected by the Royal Indian marine survey ship "Investigator". Calcutta : Indian Museum Vol. 4 286 pp. 3 pls [201] [gender feminine].
Type species: *Gebicula exigua* Alcock, 1901 by monotypy.

Taxonomic decision for synonymy: Holthuis, L.B. (1991). FAO Species Catalogue. Vol. 13. Marine lobsters of the world. An annotated and illustrated catalogue of species of interest to fisheries known to date. *FAO Fisheries Synopsis* **No. 125, 13**: i–viii, 1–292 [232].

Extralimital distribution: Indo-Pacific Oceans.

Upogebia anacanthus Ngoc-Ho, 1994

Upogebia anacanthus Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [70 fig. 9].
Type data: holotype NMV J22668 ♂ juvenile, paratypes MNHP Th1253, NMV J22670 5 juveniles, NMV J22671 2 juveniles.
Type locality: NE of Townsville, QLD.

Distribution: QLD (NE coast); known only from limital area.
Ecology: muddy sand bottom, sublittoral, benthic, burrowing, sand bottom; depth to 34 m.

Upogebia ancylodactyla de Man, 1905

Upogebia (Gebiopsis) ancylodactyla de Man, J.G. (1905). Diagnoses of new species of Macrurous decapod Crustacea from the 'Siboga Expedition'. *Tijdschr. Ned. Dierk. Vereen.* **9**(2): 587–614 [599].

Type data: type status unknown ZMA*.
Type locality: Smau Island, near Timor, Indonesia.

Distribution: NT (N coast); Indonesia, Singapore, Philippines.
Ecology: sublittoral, benthic, burrowing.
Reference: Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [90].

Upogebia bowerbankii (Miers, 1884)

Sponge Shrimp

Gebiopsis bowerbankii Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2*. Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [282].
Type data: holotype BMNH 1861.97 ♂.
Type locality: Freemantle, WA.

Upogebia octoceras australiensis de Man, J.G. (1927). A contribution to the knowledge of twenty-one species of the genus *Upogebia* Leach. *Capita Zool.* **2**(5): 1–58 6 pls [14].
Type data: type status unknown.
Type locality: Port Jackson, NSW.

Taxonomic decision for synonymy: Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [90].

Distribution: NSW (Central E coast, Lower E coast), NT (N coast), QLD (Central E coast, NE coast), SA (S Gulfs coast), WA (Lower W coast, NW coast, SW coast); known only from limital area.
Ecology: sublittoral, benthic, continental shelf; often taken in sponges, depth 6 to 200 m.

Upogebia carinicauda (Stimpson, 1860)

Gebia carinicauda Stimpson, W. (1860). Crustacea Macrura. Pars VIII of Prodromus descriptionis animalium evertebratorum, quae in Expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaladaro Ringgold et Johanne Rodgers Ducibus, observavit et descripsit. *Proc. Acad. Nat. Sci. Phila.* **12**: 22–47 [23].
Type data: type status unknown (probably lost).
Type locality: Hong Kong.

Gebia intermedia de Man, J.G. (1888). Report on the Podophthalmous Crustacea of the Mergui Archipelago, collected for the Trustees of the Indian Museum, Calcutta, by Dr John Anderson, F.R.S., Superintendent of the Museum. Part V. *J. Linn. Soc.* **22**(140): 241–305 pls 16–19 [256 pl. 16 figs 6–8].
Type data: lectotype BMNH 86.52 ♀.
Subsequent designation: Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [37].
Type locality: Mergui Archipelago.

Upogebia carinicauda gracilipes de Man, J.G. (1926). Beschreibung zweier Arten von Decapoda Macrura von der Insel Buka (Salamon-inseln). *Mitt. Zool. Mus. Berl.* **12**: 339–345 [343].
Type data: syntypes ZMB 20871 ♀.
Type locality: Pitatuki, Buka, New Guinea.

Upogebia kempi Sankolli, K.N. (1972). The Thalassinoidea of Maharashtra. *J. Bombay Nat. Hist. Soc.* **68**: 671–682, text–figs 9–10 [671, text-figs 9–10].
Type data: holotype ZSI ♀, paratypes RMNH D16172 1 specimen, RMNH D29947 ♂, RMNH D29948 ♀, RMNH D29949 ♂, RMNH D29950 ovigerous ♀.
Type locality: Bombay, India.

Taxonomic decision for synonymy: Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [35].

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); Indo-west Pacific Oceans.
Ecology: sublittoral, benthic, burrowing.

Upogebia darwinii (Miers, 1884)

Gebiopsis darwinii Miers, E.J. (1884). Crustacea. *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert' 1881–2*. Part I. The collections from Melanesia. Part II. Collections from the western Indian Ocean. London : British Museum. pp. 178–322, 513–575 pls 18–32, 46–51 [281 pl. 32 fig. A].
Type data: lectotype BMNH 82.7 1 ♂.
Subsequent designation: Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [20].
Type locality: Port Darwin, NT.

Gebia (Gebiopsis) hexaceras Ortmann, A.E. (1894). Crustaceen. *In*, Semon, R. Zoologische Forshungreisen in Australien und dem Malayischen Archipel. *Denkschr. Med.-Naturwiss. Ges. Jena* **8**(1): 1–80 pls 1–3 [23 pl. 3 fig. 1].
Type data: type status and whereabouts unknown*.
Type locality: Thursday Island, Tores Strait.

Upogebia (Gebiopsis) octoceras Nobili, G. (1904). Diagnoses préliminaires de vingt-huit espèces nouvelles de Stomatopodes et Décapodes Macroures de la Mer Rouge. *Bull. Mus. Natn. Hist. Nat. Paris* **10**: 228–238 [236].
Type data: lectotype MNHP MPTh24 ♂.
Subsequent designation: Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [20].
Type locality: Aden, Obock and Perim [Gulf of Aden].

Taxonomic decision for synonymy: Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [88].

Distribution: NT (N coast), QLD (NE coast), WA (Lower W coast, NW coast); Indo-west Pacific Oceans.
Ecology: coral reef, littoral, sand bottom, sublittoral, benthic; associated with sponges.
Reference: Ngoc-Ho, N. (1977). The larval development of *Upogebia darwinii* (Crustacea, Thalassinidae) reared in the laboratory, with a redescription of the adult. *J. Zool., London* **181**: 439–464.

Upogebia dromana Poore & Griffin, 1979

Upogebia dromana Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [295 figs 47, 48].
Type data: holotype NMV J304 ♀, paratypes AM P24680 1 specimen, AM P24691 1 specimen, AM P25269–275 12 specimens, NMV J306–J315 16 specimens.
Type locality: 2 km W of Fisherman Point, Mornington, eastern side Port Phillip Bay, VIC.

Distribution: NSW (Central E coast, Lower E coast), TAS (Tas. coast), VIC (Bass Strait); known only from limital area.
Ecology: sand bottom, silt bottom, sublittoral, benthic; depth 10–20 m.

Upogebia giralia Poore & Griffin, 1979

Upogebia giralia Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [297 fig. 49].
Type data: holotype WAM 123-75 ♂, paratypes WAM 124-75 1 specimen, AM P24806 6 specimens, AM P24807 1 specimen.
Type locality: Learmonth, WA.

Distribution: NT (N coast), QLD (NE coast), WA (NW coast); known only from limital area.
Ecology: littoral, mangrove, benthic, burrowing.
Reference: Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [72] (range extended across northern Australia).

Upogebia neglecta de Man, 1927

Upogebia neglecta de Man, J.G. (1927). A contribution to the knowledge of twenty-one species of the genus *Upogebia* Leach. *Capita Zool.* **2**(5): 1–58 6 pls [34 fig. 13].
Type data: holotype AM P1545 ♀.
Type locality: Port Stephens, NSW.

Distribution: NSW (Lower E coast); known only from type locality.
Ecology: sublittoral, benthic, burrowing.

Upogebia spinifrons (Haswell, 1882)

Gebia spinifrons Haswell, W.A. (1882). Description of some new species of Australian Decapoda. *Proc. Linn. Soc. N.S.W.* **6**(4): 750–763 [762].
Type data: syntypes AM P1544 ♀ (type status doubtful), AM G5186 (possible syntype); invalid designation of holotype status for specimen P1544 by Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [58].
Type locality: Port Stephens, NSW.

Distribution: NSW (Central E coast, Lower E coast), QLD (Central E coast, NE coast); Gulf of Aden, western Indian Ocean.
Ecology: sublittoral, benthic, burrowing, soft bottom; depth 12–25 m.
References: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [305]; Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [58]; Sakai, K. & Türkay, M. (1995). Two Upogebiid from the Persian-Arabian Gulf, with the Description of a Related New Species from Taiwan (Crustacea: Decapoda: Upogebiidae). *Senckenberg. Marit.* **25**(4/6): 197–208 [202] (status of types discussed; new figures provided).

Upogebia tractabilis (Hale, 1941)

Calliadne tractabilis Hale, H.M. (1941). Decapod Crustacea. *B.A.N.Z. Antarc. Res. Exped. 1929–1931* **4**(9): 257–285 figs [276, text-fig. 11].
Type data: holotype SAMA C888 ovigerous ♀, paratypes SAMA C4103, SAMA C4249.
Type locality: Gulf St Vincent, SA.

Distribution: QLD (NE coast), SA (S Gulfs coast), WA (Lower W coast, NW coast, SW coast); known only from limital area.
Ecology: sublittoral, benthic; often associated with sponges, Queensland record from coral, depth to 75 m.
References: Poore, G.C.B. & Griffin, D.J.G. (1979). The Thalassinidea (Crustacea: Decapoda) of Australia. *Rec. Aust. Mus.* **32**(6): 217–321 [307]; Ngoc-Ho, N. (1994). Some Callianassidae and Upogebiidae from Australia with descriptions of four new species (Crustacea: Decapoda: Thalassinidea). *Mem. Mus. Vic.* **54**: 51–78 [74].

Wolffogebia Sakai, 1982

Wolffogebia Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [75].
Type species: *Wolffogebia phuketensis* Sakai, 1982 by original designation.

Extralimital distribution: east Indo-west Pacific Oceans. See: Ngoc-Ho, N. (1994). Notes on some Indo-Pacific Upogebiidae with descriptions of four new species (Crustacea: Thalassinidea). *Mem. Qld Mus.* **35**(1): 193–216 [210].

Wolffogebia inermis Sakai, 1982

Wolffogebia inermis Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [81 figs 17c, 18g, 19a–b].
Type data: holotype ZMA 1 ♂.
Type locality: Mocara Tangerang, Java, Indonesia.

Distribution: NT (N coast); Indonesia, Vietnam.
Ecology: burrowing, intertidal, mangrove.
Reference: Sakai, K. (1993). On a collection of Upogebiidae (Crustacea, Thalassinidea) from the Northern Territory Museum, Australia, with the description of two new species. *Beagle, Rec. N.T. Mus. Arts Sci.* **10**(1): 87–114 [109] (first Australian record).

Wolffogebia obtifrons Sakai, 1982

Wolffogebia obtifrons Sakai, K. (1982). *Revision of Upogebiidae (Decapoda, Thalassinidea) in the Indo-west Pacific Region.* Researches on Crustacea. Special Number 1. Tokyo : The Carcinological Society of Japan 106 pp. 7 pls 20 figs [80].
Type data: holotype ZMH ♀ (Australian Expedition 1975–1976, Nr 30).
Type locality: Port Hedland, NW Australia.

Distribution: WA (NW coast); known only from type locality.
Ecology: burrowing, intertidal.

APPENDIX I

ABBREVIATIONS AND SYMBOLS

ACT	Australian Capital Territory
alt.	altitude
Art.	Article
Bd	Band
E	east, eastern
ed. / eds	editor / editors
edn	edition
emend.	emendation
fasc.	fascicule
fig. / figs	figure / figures
ft	feet
ICZN	International Code of Zoological Nomenclature
Is. / Ils	Island / Islands
km	kilometre
Lfg	Lieferung
livr.	livraison
m	metre
ms	manuscript
Mt / Mtn / Mts	Mount / Mountain / Mountains
N	north, northern
Nat.	Natural
Natl	National
no.	number
nom. nov.	*nomen novum* (new replacement name)
nom. nud.	*nomen nudum* (not an available name)
nov. comb.	*nova combinatio* (new combination)
ns	new series
NSW	New South Wales
NT	Northern Territory
p. / pp.	page / pages
pl. / pls	plate / plates
pt / pts	part / parts
QLD	Queensland
S	south, southern
SA	South Australia
ser.	series
sp. / spp.	species
TAS	Tasmania
Tom.	Tome / Tomus
var.	variety
Verl.	Verlag
VIC	Victoria
Vol.	Volume
W	west, western
WA	Western Australia
[name]	square brackets enclosing a valid or available name indicate a qualification of the use of that name in the context in which it appears.
*	an asterisk associated with type data indicates the type(s) has not been seen by the author; an asterisk associated with a distribution or an ecological descriptor implies that the information has not been confirmed.
♂	male(s)
♀	female(s)

APPENDIX II

MUSEUM ACRONYMS

AHF	Allan Hancock Foundation, Los Angeles, California, USA
AM	Australian Museum, Sydney, New South Wales, Australia
AM(MMUS)	Australian Museum (Macleay Museum Collection), Sydney New South Wales, Australia
AMNH	American Museum of Natural History, New York, USA
ANSP	Academy of Natural Sciences, Philadelphia, Pennsylvania, USA
BDHU	Biological Department of Hangzhou University, Hangzhou, China
BLIH	Biological Laboratory, Imperial Household of Japan, Tokyo, Japan
BLT	Biological Laboratory, Shikoku University, Tokushima, Japan
BMNH	Natural History Museum (formerly British Museum (Natural History)), London, England
BNM	Beijing Natural History Museum, Beijing, People's Republic of China
BOC	Bingham Oceanographic Collection, New Haven, Connecticut, USA
BPBM	Bernice P. Bishop Museum, Honolulu, Hawai'i, USA
CAS	California Academy of Sciences, San Francisco, California, USA
CBM	Natural History Museum and Institute, Chiba
CMNZ	Canterbury Museum, Christchurch, New Zealand
CMW	Colonial Museum, Wellington, New Zealand
CUMZB	Chulalongkorn University, Museum of Zoology, Bangkok, Thailand
DFRIS	Donghai Fisheries Research Institute, Shanghai, China
DM	Desjardins Museum, Mauritius
DMB	Durban Museum, Durban, South Africa
GMNH	Muséum d'Histoire Naturelle, Genève, Switzerland
HNHM	Hungarian Natural History Museum, Budapest, Hungary
IM	Indian Museum, Calcutta, India
INM	Irish National Museum, Dublin, Ireland
INPA	Instituto Nacional de Pesquisas de Amazonia, Manaus, Brazil
IOAN	Shirshov Institute of Oceanography, Academy of Sciences, Moscow, Russia
ION	Institut Océanographique de Nhatrang, Nhatrang, Vietnam
IOQ	Institute of Oceanology, Academia Sinica, Qingdao, China
KNHM	Kitakyushu Natural History Museum, Japan
KPMNH	Kanagawa Prefectural Museum of Natural History, Odawara, Kanagawa, Japan
LACM	Los Angeles County Museum, Los Angeles, California, USA
LIPI	Puslitbang Oseanologi LIPI, Jakarta, Indonesia
LIVCM	Liverpool County Museum, Liverpool, England
MB	Museum für Naturkunde an der Universität Humbolt zu Berlin, Berlin, Germany
MBNH	Museum of the Boston Society of Natural History, Boston, USA
MCG	Museo Civico di Storia Naturale 'Giacomo Doria', Genoa, Italy
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
MFP	Museo Felipe Poey, La Habana
MGH	Museum Godeffroy, Hamburg (now in ZMH), Germany
MK	Kiev Museum, Kiev, Russia
MMBL	Manazuru Marine Biological Laboratory, Japan
MNHP	Muséum National d'Histoire Naturelle, Paris, France
MOM	Musée Océanographique de Monaco, Monaco
MONZ	Museum of New Zealand Te Papa Tongaewa (formerly National Museum of New Zealand), Wellington, New Zealand
MPL	Musée de Port Louis, Mauritius Institute, Mauritius
MRAC	Musée Royal de l'Afrique Centrale, Tervuren, Belgium
MS	Musée de Zoologie de l'Université de Strasbourg, France
MSB	Museum Sophia, Sophia, Bulgaria
MSNM	Museo Civico di Storia Naturale di Milano, Italy
MSNT	Museo Civico di Storia Naturale di Torino, Italy
MTKD	Museum für Tierkunde, Dresden, Germany
MTQ	Museum of Tropical Queensland, Townsville, Queensland, Australia
MVZ	Museum of Vertebrate Zoology, University of California, Berkeley, USA
MZUF	Museo Zoologico, Università, Firenze, Italy
MZUM	Museum of Zoology, University of Moscow, Russia
MZUN	Museum of Zoology, University of Napoli, Italy
MZUS	Musée de Zoologie de l'Université de Strasbourg, France

MZUT	Museo e Instituto di Zoologia Sistematica dell'Universitá di Torino, Turin, Italy
NHMB	Naturhistorisches Museum, Basel, Switzerland
NHMW	Naturhistorisches Museum, Wien, Austria
NHRM	Naturhistoriska Riksmuseet, Stockholm, Sweden
NIOJ	National Institute of Oceanology, Jakarta, Indonesia
NM	National Museum, Nairobi, Kenya
NMI	National Museum of Ireland, Dublin, Ireland
NMNZ	National Museum of New Zealand (formerly DMNZ), Wellington, New Zealand
NMP	Natal Museum, Pietermaritzburg, South Africa
NMPh	National Museum of the Philippines, Manilla, Philippines
NMS	National Museum of Singapore, Singapore
NMV	Museum Victoria, Melbourne, Victoria, Australia
NSMT	National Science Museum (Natural History), Tokyo, Japan
NTM	Northern Territory Museum and Art Galleries, Darwin, Northern Territory, Australia
NTOU	National Taiwan Ocean University, Keelung, Taiwan
NZOI	New Zealand Oceanographic Institute, Wellington, New Zealand
OCMT	Odawara Carcinological Museum, Tokyo, Japan
ORSTOM	Institut de recherche pour le développement (IRD), formerly Laboratory of Oceanography, Nouméa, New Caledonia
PMAM	Beijing Natural History Museum, Beijing, People's Republic of China
PMBC	Phuket Marine Biological Centre Reference Collection, Phuket, Thailand
PMJ	Phyletisches Museum, Jena, Germany
QM	Queensland Museum, Brisbane, Queensland, Australia
QVM	Queen Victoria Museum, Launceston, Tasmania, Australia
RDC	Research & Development Center for Oceanography, Jakarta, Indonesia
RIB	Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium
RM	Raffles Museum, Singapore
RMNH	Nationaal Natuurhistorisch Museum (formerly Rijksmuseum van Natuurlijke Historie), Leiden, Netherlands
SAM	South African Museum, Cape Town, South Africa
SAMA	South Australian Museum, Adelaide, South Australia, Australia
SCSFI	South China Sea Fisheries Institute, People's Republic of China
SIO	Scripps Institution of Oceanography, University of California, San Diego, USA
SMBL	Museum of the Seto Marine Biological Laboratory, Sirahama, Japan
SME	Station Marine d'Endoume, Marseille, France
SMF	Natur-Museum und Forschungsinstitut, Senckenberg, Frankfurt-am-Main, Germany
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany
SUFS	Shimonoseki University of Fisheries, Shimonoseki, Japan
TAU	Zoological Museum of Tel Aviv University, Israel
TM	Transvaal Museum, Pretoria, South Africa
TMH	Tasmanian Museum and Art Gallery, Hobart, Tasmania, Australia
UMMZ	University of Michigan, Michigan, USA
UMZC	University Museum, Department of Zoology, Cambridge, England
USNM	US National Museum, Smithsonian Institution, Washington DC, USA
VMM	Vanderbilt Marine Museum, Long Island, New York, USA
VNIRO	Institute of Oceanography, Moscow, Russia
WAM	Western Australia Museum, Perth, Western Australia, Australia
YCM	Yokosuka City Museum, Yokosuka, Japan
ZIJ	Zoological Institute, University of Jena, Germany
ZIL	Academy of Sciences, Zoological Institute, St Petersburg, Russia
ZIUU	Uppsala Universitets Zoologiska Museum, Uppsala, Sweden
ZLKU	Zoological Laboratory Kyushu University, Japan
ZMA	Zoologisch Museum, Universiteit van Amsterdam, Amsterdam, The Netherlands
ZMB	Museum für Naturkunde an der Universität Humbolt zu Berlin, Berlin, Germany
ZMG	Zoologisches Museum, Göttingen, Germany
ZMH	Zoologisches Museum für Hamburg, Hamburg, Germany
ZMLG	Zoologisches Museum, Lübeck, Germany
ZMM	Moscow State University, Moscow, Russia
ZMP	Zoological Museum, Palermo, Italy
ZMUC	Zoological Museum, University of Copenhagen, Copenhagen, Denmark
ZRC	Zoological Reference Collection, National University of Singapore, Singapore
ZSI	Zoological Survey of India, Calcutta, India (at Indian Museum)
ZSMB	Zoologische Staatssammlung, München, Bavaria, Germany

APPENDIX III

TAXONOMIC DECISIONS MADE IN THIS WORK

Decisions made by P.J.F. Davie unless indicated otherwise.

Species excluded from the Australian list

Parapenaeus fissurus (Bate, 1881)
Parapenaeus longipes Alcock, 1905
Thalassina maxima Hess, 1865

New status

Alpheus inopinatus Holthuis & Gottlieb, 1958 and *Alpheus lobidens polynesica* Banner & Banner, 1975 removed from synonymy of *Alpheus lobidens* De Haan, 1844
Automate gardineri Courtièr, 1902 removed from synonymy of *Automate dolichognatha* de Man, 1888
Megokris Pérez Farfante & Kensley, 1997 treated as a subgenus of *Trachypenaeus* Alcock, 1901

New synonyms

Apopontonia tridentata Bruce, 1988 by A.J. Bruce
Axiopsis (Paraxiopsis) appendiculis Poore & Griffin, 1979
Cheraps preissii angustus McCulloch, 1914
Macrobrachium adscitum adscitum Riek, 1951 by J.W. Short
Macrobrachium atactum atactum Riek, 1951 by J.W. Short
Macrobrachium atactum ischnomorphum Riek, 1951 by J.W. Short
Macrobrachium atactum sobrinum Riek, 1951 by J.W. Short
Macrobrachium australiense crassum Riek, 1951 by J.W. Short
Macrobrachium australiense cristatum Riek, 1951 by J.W. Short
Macrobrachium australiense eupharum Riek, 1951 by J.W. Short
Macrobrachium glypticum Riek, 1951 by J.W. Short

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SUMMARY OF PROPOSED AND PUBLISHED VOLUMES/PARTS

The published works are derived from the *Zoological Catalogue of Australia* database. Taxa in the Australian fauna are divided among volumes to form sets of about 1800–2000 species available names, such that each volume comprises the whole or part of one or more major groups. Initially, volume numbers were assigned consecutively to volumes as they were published. From volume eleven, the numbering sequence is basically phylogenetic as indicated below. This system will accommodate anticipated changes to the classification of certain taxa, as well as the addition of further parts as required. Several volumes depart from this systematic arrangement, instead containing convenient assemblages of taxa, *e.g.* Vol. 6: the aquatic insect orders, Vol. 8: Non-Marine Mollusca. Authors and publication dates are given for published sections of the *Catalogue*.

Inquiries concerning access to information contained on the database should be addressed to the Series Manager, Zoological Catalogue of Australia, ABRS, GPO Box 787, Canberra, ACT 2601, Australia.

1 AMPHIBIA, REPTILIA, **see Vol. 36**

2 HYMENOPTERA, **see Vol. 32.5**

3 ARACHNIDA, **see Vol. 20.2**

4 COLEOPTERA, **see Vol. 29.1**

5 MAMMALIA, **see Vol. 38**

6 EPHEMEROPTERA, MEGALOPTERA, ODONATA, PLECOPTERA, TRICHOPTERA, **see Vol. 25**

7 PISCES, **see Vol. 35.1**

8 MOLLUSCA, **see Vol. 17.1**

9 COLEOPTERA, **see Vol. 29.4**

10 HYMENOPTERA, **see Vol. 32.6**

11 PROTOZOA

- 11.1 Mastigophora, Opalinata, Sarcodina (part)
- 11.2 Sarcodina: Arcellinida; Testacea; Foraminiferida
- 11.3 Labyrinthulata, Apicomplexa, Microspora, Myxozoa, Ascetospora, Ciliophora

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