Decapod Crustacea of the continental margin of southwestern and central Western Australia: preliminary identifications of 524 species from FRV Southern Surveyor voyage SS10-2005

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Abstract


A collection of Dendrobranchiata (44 species), Achelata (4 species), Anomura (127 species), Astacidea (4 species), Brachyura (227 species), Caridea (88 species), Polychelida (5 species), Stenopodidea (2 species) and Thalassinidea (23 species) from shelf edge and slope depths of south-western Australia is reported. Seventy-seven families are represented. Thirty-three per cent (175) of all species are suspected to be new species, eight per cent are new records for Australia, and a further 25% newly recorded for southern Western Australia.

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Introduction

The offshore fauna of southwestern Australia is poorly known relative to that of some other regions of Australia. Population centres in southeastern Australia and offshore oil and gas resources in the northwest have in different ways provided focus for exploration and some biological characterisation along the continental margins. Marine exploration in the southwest has largely been confined to coastal and shallow-water environments, particularly in a series of taxonomic workshops in Albany, Rottnest Island and Esperance. Decapod crustaceans from these regions were reviewed by Morgan and Jones (1991) and Jones and Morgan (1993). Crustacean collections made offshore and now residing in the Western Australian Museum are not extensive, those from the cruises of the FV Davena (1960) and HMAS Diamantina (1960s) being the most significant.

All of this is ironic because the first ever illustrations by Europeans of Australian marine animals were published in 1703 by the privateer William Dampier (1651–1715) (Dampier, 1703). Many of the shore collections made by François Peron and colleagues during the 1802 visit of the Naturaliste and Geographe to Australia were made in southwestern Australia (Milne Edwards, 1837). Later foreign expeditions also targeted the southwest (Balss, 1935).

During compilation of records for a guide to identification of southern Australian decapod Crustacea (Poore, 2004) it emerged that the southwest was less well known than the southeast of Australia. This impression is borne out by an analysis of the distribution of species along the southern Australian coast (O’Hara and Poore, 2000). These authors discovered that species composition varied with both latitude and longitude. Species richness was relatively constant from east to west but graded with latitude from high in the warm temperate regions around Perth and Sydney to low in cool-temperate southern Tasmania. They concluded that history as well as ecological hypotheses explain the latitudinal gradient of marine species richness in southern Australia, not the least being the invasion of the southwestern margin by animals of Indo-West Pacific origin.

Bioregionalisation of southwestern Australia depends now on geophysical surrogates and patterns in the distribution of fishes of the shelf and continental slope (Last et al., 2005). Three bioregions have been recognised along the WA coast with two intermediate regions in between: the Northwest Province, Central Western Transition Zone, Central Western Province, Southwestern Transition Zone and Southern Province.

The results presented here are part of a project mounted largely by CSIRO Marine and Atmospheric Research (CMAR) and Museum Victoria entitled “Mapping benthic ecosystems on the deep continental shelf and slope in Australia’s South West Region” to understand evolution and biogeography and support implementation of the SW Regional Marine Plan and
Commonwealth Marine Protected Areas”. The field work addresses four primary objectives:

1) test hypotheses on the evolution and biogeography of Australia’s biodiversity, in particular relating to species composition, distribution patterns and taxonomic surrogacy

2) validate and refine CSIRO’s optimised methodology for mapping deep water benthic ecosystems on the western continental margin and in sub-tropical locations to enhance its application to natural resource management at a national scale

3) document the benthic biodiversity and identify areas of high conservation values in the context of Commonwealth MPA declaration

4) validate, and permit refinement of, a marine bioregionalisation during the development of the SW Regional Marine Plan by the National Oceans Office.”

This report deals only with the crustacean Order Decapoda, one of the taxa chosen to test these hypothesis. It first outlines briefly where and how the new material was collected. Next, data on taxonomy and distribution associated with each taxon identified are presented with brief comments. The purpose of publishing summarised information is to alert taxonomists to this essentially new and previously undescribed fauna and to provide access to data for a distributional analysis of the region.

**Methods**

**Sampling program.** The data for this project were collected during two surveys undertaken from FRV Southern Surveyor, a 67 m converted stern-trawler. The first was completed in July–August 2005 when all the survey sites were mapped using multibeam acoustics, surveyed with a towed, high-resolution video system and sampled with sediment grabs. The second survey ran a reciprocal course and collected complementary benthic invertebrate epifauna and infauna using a benthic sled and beam trawl. The second survey provided the collections treated here. Follow-up cruises during 2007 with the same overall objectives continued the same sampling strategy along the Western Australian margin as far north as possible. Samples taken in 2007 are being identified in 2008 and will naturally add to the distributional records presented here.

**Stations.** Sampling was targeted at nested spatial scales of habitat – terrains of sediment and rocky substrata comprising features (mostly canyons and sediments terraces of the continental slope), within depth zones, across latitudes – to determine how biodiversity is distributed at particular scales. At the highest level, samples were allocated to enable comparison of the benthic bioregions already in use off the west and southwest coasts of Western Australia. Our collections come from 11 sites between Albany and Ningaloo (south of Exmouth) at notional depths of 100 and 400 m, and seven cross-depth transects (at intended depths of 100, 200, 400, 700 and 1000 m) made on special features of interest off Albany, Perth, Canyon, Abrolhos and Ningaloo (Fig. 1). Separate targeting of hard and soft seabed terrain types was undertaken successfully in most areas.

**Sampling gear.** Samples were obtained using two gears, the “Sherman sled” and a beam trawl. The Sherman sled is a CMAR-designed robust sled with 1.2-metre-wide opening (0.6 m high) and is fitted with a 25 mm stretched-mesh net (Lewis, 1999). On some occasions a secondary 1 mm-mesh net was fitted inside. The beam trawl was CMAR-modified version of the French IRD design, 4 metres wide and fitted with a 25 mm stretched-mesh net.

**Shipboard sorting.** Samples from the sled or beam trawl were placed into one or more plastic fish boxes on deck and transferred to the wet sorting tray below deck. The material was spread out, turned and broken up and individual decapods captured and placed in 150 x 80 mm plastic dishes in seawater in rough taxonomic groups. Individuals in these dishes were further separated into operational taxonomic units (OTUs that represented our initial separation of taxa) before being labelled with provisional names and station and acquisition numbers.

**Fixation and preservation.** Most crustaceans were fixed in formalin but some specimens of abundant species or limbs of others were placed directly into 95% ethanol. At Museum Victoria formalin-fixed material was transferred to fresh water to soak overnight and then to 70% ethanol.

**Identification.** Several helpers (acknowledged below) separated the collection into more refined OTUs under the guidance of the second author who made many initial identifications. The ultimate identification of species was made by the first author with reference to general texts, in particular Poore (2004) and Sakai (1976) and the considerable primary literature cited where relevant below. Although every attempt was made to be confident of identifications no specimens were compared with types. For this reason and because so many of the determinations were of species hitherto unrecorded from Australia, the identifications must be treated as provisional.

Besides zoological names at the lowest level possible, each species was assigned a unique “MoV” number, continuing a
series started at Museum Victoria for species collected in Bass Strait in 1990. Each MoV number is permanently associated with its taxon and independent of its accepted generic or higher classification. MoV numbers are part of the taxonomy module of the Museum Victoria KEmu® registration database.

Higher taxonomy follows that of Davie (2002a; 2002b), Poore (2004) and (Ng et al., 2008) (see page 35).

**Data storage**. Each specimen-lot was registered on the Museum Victoria KEmu® registration catalogue from which the records published below were generated.

**Presentation of taxonomic results**

The results are presented as species within genera within families within infraorders (Dendrobranchiata first, Pleocymenata infraorders next in alphabetical order). The order of families is alphabetical except for Brachyura where Ng et al.’s (2008) hierarchy is followed. For each family, the species found are summarised and the literature resources used cited.

Each species is listed by name with its authority when appropriate. Uncertain identifications are prefixed “cf.” and new species close to another known species are prefixed “aff.” “MoV” numbers are given for all taxa and used as specific names for uncertain or new species.

Specimen records for each species are summarised as follows: **Records**: the total number of specimens, with latitudinal range (to nearest minute) and depth range (in metres). The latitudinal range of all samples is from 20°59’S to 35°1’S. (The longitudinal range is 112°14´E to 118°43´E.) The shallowest actual sample depth was at 50 m and the deepest at 1260 m; most measured depths are near the intended depths of 100, 400, 700 and 1000 m. A tick ✓ at the end of this line indicates that a specimen or fraction of specimen was fixed directly in alcohol (most material was fixed in formalin).

**Distribution**: a general comment on published distribution plus a comment on whether the species is a new species, new for southwestern Australia, new for WA or all of Australia.

Reference: bibliographic citation used for identification.

Following the text for many species are coloured photographs. Those taken on board ship are by Karen Gowlett-Holmes. Photos of specimens taken at Museum Victoria after preservation and colour loss are by Anna McCallum or David Staples.

The entry under **Records** summarises the detailed collection data stored in the Museum Victoria KEmu® database. Sections of these data are publicly available at the Museum Victoria, Collections and Research website, “Search Natural Sciences collections”.


Here, it is possible to search on named species and “Map Selected Specimens and Species with Google Maps”. The resulting map is derived from all Museum Victoria records, not just those from this survey. The maps reveal the bias inherent in museum collections. The map of the apparent distribution of the common slipper lobster *Ibacus alticrenatus* includes 36 records from southeastern and western Australia but none apparently from the Great Australian Bight (Fig. 2). The species certainly occurs there, as it does along a substantial part of the eastern Australian coast but no collecting by Museum Victoria has been done in these regions.

It is also possible to map the same species through an OZCAM (Online Zoological Collections of Australian Museums) query of Australia’s fauna: http://www.ozcam.gov.au/cgi-bin/emu-dataportal.cgi.

A search on OZCAM returns a map using collection data from all relevant Australia museums.

It is not possible to search for undescribed species. A search on a genus is likely to return results for more than one species.

**Taxonomic results and commentary**

The collection of ~6083 specimens representing 524 provisional species is the first comprehensive characterisation of the fauna of the continental margin of southwestern Australia. For comparison, Poore’s (2004) identification guide to southern Australian marine decapods includes 800 species and the Zoological Catalogue of Australia enumeration of all named Australian marine Decapoda (Davie, 2002a, b) listed 2077 marine species. Poore’s (2004) guide covered southern Australia extending on the west coast as far north as Perth (31°S). Our estimate is that 76 species previously unrecorded south of Perth were found in this survey, i.e., a 9.4% increase over Poore’s enumeration from museum collections and literature.

The survey illustrates how little is known about the fauna of the continental margin of most of Australia. The eastern slope of NSW and Tasmania is best known. These collections are the first systematic samples from southern WA.

Overall, 175 species (33%) were new to science (Table 1). This figure is based on what we feel is a thorough review of the literature covering the fauna of Australia and the Indo-West Pacific. The number is probably an underestimate and is subject to further examination by taxonomic experts. Many of the so-called “new records” (88 species for Australia as a whole, 62 for WA and 69 for southern WA) may well prove to be new species, different from the similar species with which they have been identified. The highest percentage of new species was in the Thalassinidea (83% of 23 species), much higher than the next most novel infraorders (50% of 127 species of Anomura and 31% of 227 species of Brachyura).

Many species were rare. Forty-two per cent (222 species) were found in just one of 127 samples and a further 17% (89 species) in only two samples. This is a common feature of exploration of this type and hints that the number of species yet to be discovered is much larger than anticipated.
New Australian records (88 species or 6%) were characterised as such because they did not appear in Davie’s catalogues. Most were species already described from the Indo-West Pacific region (tropical and subtropical regions from Japan through to east Africa). In all cases, lack of time or few specimens prevented a thorough comparison between the WA material and original descriptions. Identifications in this category should be treated as probable at best – several may well be additional new species.

It is notable that several deep water species recently reported from Tasmanian seamounts have (with few exceptions) not been rediscovered in southern WA (Ahyong and Poore, 2004a, b).

**Invitation**

The process of identification of Decapoda necessitates familiarity with diverse morphologies, and access to many keys and descriptions. Most decapod taxonomists specialise in one or few families (either hermit crabs, or some crabs or prawns). No-one is a specialist in all 77 families recognised here. These results have depended on consulting the 188 original research papers and books cited below. Poore’s guidebook to southern (south of 31°S on the west coast) Australian decapods included only 24% of the species discovered in the southwest at these latitudes and a much smaller percentage of the total fauna. The collection offers considerable scope for taxonomic, evolutionary and biogeographic study. The material is available for study at Museum Victoria or on loan to crustacean taxonomists worldwide.
Table 1. Summary of numbers of species in genera, families and infraorders, including numbers of new Australian records, new records for Western Australia, and new records for southwestern Australia. Dendrobranchiata are listed first and infraorders of Pleocyemata next in alphabetical order.

<table>
<thead>
<tr>
<th>Infraorder</th>
<th>Family</th>
<th>Genus</th>
<th>Total species</th>
<th>New Australian species</th>
<th>New WA species</th>
<th>New record for SWA species</th>
<th>New species</th>
<th>% new spp</th>
</tr>
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<td></td>
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</tr>
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<td>Sicyoniidae</td>
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<td>Genus</td>
<td>Total species</td>
<td>New Australian species</td>
<td>New WA species</td>
<td>New record for S WA</td>
<td>New species</td>
<td>% new spp</td>
</tr>
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<td>--------------</td>
<td>--------------</td>
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<td>------------------------</td>
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<td>Porcellanidae</td>
<td>Polyonyx</td>
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ALL DECAPODA

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Dendrobranchiata – prawns

The Australian fauna is diverse and well studied. Many records are of benthopelagic species. Pérez Farfante & Kensley (1997) provided keys to families and genera but this work is supplemented by family and genus treatments. Forty-four species were recorded. Ten were new records for Australia, 11 range extensions along the WA coast to known Australian species and three probable new species.

Aristeidae

Of five species one is new to Australia and one to WA (Dall, 2001).

*Aristeus* cf. *mabahissae* Ramadan, 1938
MoV sp. 5301
Records: 4 specimens, 29°03′S–35°31′S, 1000–1076 m
Distribution: Indo-West Pacific
Reference: figure of *A. mabahissae* from Dall (2001)

*Aristeus* cf. *pallicauda* Komai, 1993
MoV sp. 5320
Records: 5 specimens, 21°58′S–22°04′S, 170–387 m
Distribution: Japan; first record for Australia if this species
Reference: figure of *A. pallicauda* from Dall (2001)

*Aristeus semidentatus* Bate, 1881
MoV sp. 5467
Records: 2 specimens, 31°57′S, 928–1170 m
Distribution: Indo-West Pacific; first record for WA
Reference: Dall (2001) [photo below]

*Aristeus virilis* (Bate, 1881)
MoV sp. 5465
Records: 8 specimens, 33°02′S–35°16′S, 978–1021 m
Distribution: Indo-West Pacific; first record for S WA
Reference: Dall (2001)

*Pseudaristeus sibogae* (De Man, 1911)
MoV sp. 5468
Records: 3 specimens, 21°58′S–22°00′S, 726–1010 m
Distribution: Indian Ocean, S Australia
Reference: Dall (2001)

Benthesicymidae

A single well-known species was recorded (Dall, 2001).

*Benthesicymus investigatoris* Alcock & Anderson, 1899
MoV sp. 5469
Records: 3 specimens, 21°56′S–29°03′S, 1000–1056 m
Distribution: Indo-West Pacific
Reference: Dall (2001)
Penaeidae

Of 16 species identified, only five could be confidently assigned to known Australia species. Six were new records for Australia (if not new species) and two probable new species. Crosnier (1985; 1991) provided key references for the most diverse genera and Grey et al. (1983) to the larger prawns.

**Metapenaeopsis crassimana** Racek & Dall, 1965
- MoV sp. 5479
- **Records:** 40 specimens, 24°37’S, 100 m
- **Distribution:** N, W and S Australia
- **Reference:** Grey et al. (1983)

**Metapenaeopsis aff. difficilis** Crosnier, 1991
- MoV sp. 5460
- **Records:** 17 specimens, 21°58’S, 107 m
- **Distribution:** Philippines, New Caledonia; new Australian record if correctly identified
- **Reference:** figure of M. difficilis from Crosnier (1991)

**Metapenaeopsis aff. vaillanti** (Nobili, 1904)
- MoV sp. 5462
- **Records:** 1 specimen, 24°37’S, 100 m
- **Distribution:** Red Sea; new Australian record if correctly identified
- **Reference:** figure of M. vaillanti from Crosnier (1991)

**Metapenaeopsis rosea** Racek & Dall, 1965
- MoV sp. 5480
- **Records:** 28 specimens, 20°59’S–24°37’S, 100–170 m
- **Distribution:** N and E Australia; new record for WA
- **Reference:** Grey et al. (1983)

**Metapenaeopsis velutina** (Dana, 1852)
- MoV sp. 5476
- **Records:** numerous specimens, 22°50’S–27°03’S, 100 m
- **Distribution:** Indo-West Pacific including Australia
- **Reference:** Crosnier (1991) [photo below]

**Penaeopsis sp. MoV 5458**
- MoV sp. 5458
- **Records:** 9 specimens, 22°50’S–35°11’S, 100–402 m
- **Distribution:** possible new species close to M. commensalis
- **Reference:** Crosnier (1991)

**Parapenaeus fissuroides** Crosnier, 1986
- MoV sp. 5307
- **Records:** 4 specimens, 21°59’S–22°04’S, 165–206 m
- **Distribution:** Indo-West Pacific; new record for Australia
- **Reference:** Crosnier (1985)

**Parapenaeus fissurus** (Bate, 1881)
- MoV sp. 5478
- **Records:** 9 specimens, 21°58’S–27°55’S, 106–253 m
- **Distribution:** W Pacific; new record for Australia
- **Reference:** Crosnier (1985)

**Parapenaeus longipes** Alcock, 1905
- MoV sp. 5308
- **Records:** 1 specimen, 22°04’S, 206–201 m
- **Distribution:** W Pacific; new record for Australia
- **Reference:** Crosnier (1985)

**Parapenaeus murrayi** Ramadan, 1938
- MoV sp. 5481
- **Records:** 24 specimens, 22°00’S–28°59’S, 324–411 m
- **Distribution:** W Pacific; new record for Australia
- **Reference:** Crosnier (1985)

**Parapenaeus sextuberculatus** Kubo, 1949
- MoV sp. 5482
- **Records:** 8 specimens, 22°04’S–24°33’S, 388–399 m
- **Distribution:** Indo-West Pacific including E Australia; new record for WA
- **Reference:** Crosnier (1985)

**Penaeopsis** sp. MoV 5466
- **Records:** 2 specimens, 21°58’S, 356–324 m
- **Distribution:** new species
- **Reference:** Pérez Farfante (1980)

**Penaeopsis** sp. MoV 5471
- **Records:** 15 specimens, 21°00’S–21°58’S, 373–408 m
- **Distribution:** new species
- **Reference:** Pérez Farfante (1980)

**Penaeus (Melicertus) marginatus** Randall, 1840
- MoV sp. 4883
- **Records:** 1 specimen, 21°59’S, 166 m
- **Distribution:** Indo-West Pacific; including N Australia
- **Reference:** Grey et al. (1983)

**Trachypenaeus (Trachysalambria) curvostris** (Stimpson, 1860)
- MoV sp. 5309
- **Records:** 3 specimens, 22°04’S–27°48’S, 101–123 m
- **Distribution:** Indo-West Pacific including Australia
- **Reference:** Grey et al. (1983)
Decapod Crustacea of the continental margin of southwestern and central Western Australia

**Sergestidae**

Two of the four species could not be identified because the specimens were incomplete. The third is a known Australian species and the fourth a new Australian record. Vereshchaka (2000) was consulted for Sergia.

*Sergestes* sp. MoV 5453  
**Records:** 1 specimen, 28°57´S, 678–686 m  
**Distribution:** incomplete specimen  
**Reference:** Pérez Farfante and Kensley (1997)

*Sergestes* sp. MoV 5454  
**Records:** 2 specimens, 28°57´S–35°31´S, 678–1110 m  
**Distribution:** incomplete specimen  
**Reference:** Pérez Farfante and Kensley (1997)

*Sergia fulgens* (Hansen, 1919)  
MoV sp. 5470  
**Records:** 7 specimens, 21°58´S, 373–732 m  
**Distribution:** Indonesia; new Australian record  
**Reference:** Vereshchaka (2000)

*Sergia prehensilis* (Bate, 1881)  
MoV sp. 5311  
**Records:** 1 specimen, 35°04´S, 379 m  
**Distribution:** cosmopolitan  
**Reference:** Vereshchaka (2000)

**Sicyonidae**

Of four species, two are new Australian records and another a probable new species (Crosnier, 2003).

*Sicyonia inflexa* (Kubo, 1949)  
MoV sp. 5312  
**Records:** 2 specimens, 27°55´S–28°57´S, 252–686 m  
**Distribution:** Indo-West Pacific including N WA  
**Reference:** one of several figures in Crosnier (2003)

*Sicyonia japonica* Balss, 1914  
MoV sp. 5313  
**Records:** 5 specimens, 21°58´S, 107 m  
**Distribution:** Indo-West Pacific; new Australian record  
**Reference:** Crosnier (2003)

*Sicyonia vitulans* (Kubo, 1949)  
MoV sp. 5314  
**Records:** 2 specimens, 24°37´S, 100 m  
**Distribution:** Indo-West Pacific; new Australian record  
**Reference:** Crosnier (2003)

*Sicyonia* sp. MoV 5455  
MoV sp. 5455  
**Records:** 1 specimen, 35°20´S, 213 m  
**Distribution:** new species  
**Reference:** Crosnier (2003)
Solenoceridae

All 14 species were identified using Dall (1999). All had been previously recorded from northern Australia but the southern or western ranges of nine were extended.

**Hadropenaeus lucasii** (Bate, 1881)
MoV sp. 5315

*Records:* numerous specimens, 21°00′S–35°10′S, 95–528 m
*Distribution:* Indo-West Pacific including Australia; first record for S WA
*Reference:* Dall (1999)

**Haliporoides sibogae** (De Man, 1907)
MoV sp. 5316

*Records:* numerous specimens, 21°58′S–27°08′S, 356–408 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Dall (1999) [photo below]

**Haliporus taprobanensis** Alcock & Anderson, 1899
MoV sp. 5317

*Records:* 2 specimens, 21°58′S, 690–732 m
*Distribution:* Indo-West Pacific; first record for S WA
*Reference:* Dall (1999)

**Hymenopenaeus halli** Bruce, 1966
MoV sp. 5461

*Records:* 2 specimens, 21°58′S–22°00′S, 373–1085 m
*Distribution:* Indo-West Pacific including E Australia; first record for WA
*Reference:* Dall (1999)

**Hymenopenaeus propinquus** (De Man, 1907)
MoV sp. 5318

*Records:* 3 specimens, 21°58′S–22°00′S, 658–754 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Dall (1999)

**Solenocera annectens** (Wood-Mason, 1891)
MoV sp. 5320

*Records:* 1 specimen, 21°57S, 690–702 m
*Distribution:* Philippines, Indonesia, WA; first record for S WA
*Reference:* Dall (1999)

**Solenocera barunajaya** Crosnier, 1994
MoV sp. 5463

*Records:* 14 specimens, 21°58′S–29°52′S, 373–414 m
*Distribution:* N WA and Arafura Sea; first record for S WA
*Reference:* Dall (1999) [photo below]

**Solenocera choprai** Nataraj, 1945
MoV sp. 5324

*Records:* 1 specimen, 22°04′S, 102 m
*Distribution:* Indo-West Pacific including N Australia; first record for S WA
*Reference:* Dall (1999)

**Solenocera comata** Stebbing, 1915
MoV sp. 5324

*Records:* 36 specimens, 24°33′S–24°33′S, 368–404 m
*Distribution:* Indo-West Pacific including N WA; first record for S WA
*Reference:* Dall (1999)

**Solenocera koelbeli** De Man, 1911
MoV sp. 5326

*Records:* 1 specimen, 21°58′S, 177–170 m
*Distribution:* Indo-West Pacific including N WA
*Reference:* Dall (1999)

**Solenocera melantho** De Man, 1907
MoV sp. 5464

*Records:* 3 specimens, 21°58′S, 177–170 m
*Distribution:* Indo-West Pacific including N WA
*Reference:* Dall (1999)

**Solenocera pectinata** (Bate, 1880)
MoV sp. 5327

*Records:* 5 specimens, 20°59′S, 100 m
*Distribution:* Indo-West Pacific including Australia; first record for WA
*Reference:* Dall (1999)

**Solenocera pectinulata** Kubo, 1949
MoV sp. 5328

*Records:* numerous specimens, 21°59′S–22°04′S, 100–396 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Dall (1999)

**Solenocera rathbuni** Ramadan, 1938
MoV sp. 5330

*Records:* 34 specimens, 21°59′S–24°01′S, 100–166 m
*Distribution:* Indo-West Pacific including N WA; first record for S WA
*Reference:* Dall (1999) [photo below]
Achelata – lobsters and bugs
These two families have been previously included in the Infraorder Palinura. We use the classification proposed by Ahyong and O’Meally (2004) and followed by Poore (2004).

Palinuridae
The sampling was not designed to catch lobsters but one species was taken. Its identification was confirmed with reference to Holthuis (1991).

Puerulus angulatus (Bate, 1888)
MoV sp. 4972
*Records:* 6 specimens, 21°58´S–22°50´S, 324–430 m
*Distribution:* Indo-West Pacific including N Australia; new record for S WA
*References:* Holthuis (1991); Griffin & Stoddart (1995) [photo below]

Scyllaridae
Two species of commercially-important bugs (*Ibacus* spp.) and two of smaller scyllarids were recorded, all identifiable from Holthuis (1985; 2002) and Poore (2004).

Crenarctus crenatus (Whitelegge, 1900)
MoV sp. 4974
*Records:* 1 specimen, 35°10´S, 99 m
*Distribution:* S Australia
*Reference:* Holthuis (2002) [photo below]

Ibacus alticrenatus Bate, 1888
MoV sp. 3873
*Records:* many specimens, 21°58´S–35°04´S, 324–490 m
*Distribution:* S Australia, common
*References:* Holthuis (1985; 2002) [photos below]

Ibacus peronii Leach, 1815
MoV sp. 1771
*Records:* 1 specimen, 24°01.43´S, 100 m
*Distribution:* S Australia

Remiarctus bertholdii (Paulson, 1875)
MoV sp. 4976
*Records:* 16 specimens, 20°59´S–22°04´S, 100–166 m
*Distribution:* Indo-West Pacific including N Australia; new record for S WA
*Reference:* Holthuis (2002) [photo below]
**Anomura – Hermit crabs, stone crabs, frog crabs and squat lobsters**

Families of this diverse group are listed in three superfamilies, Galatheoidea, Hippoidea and Paguroidea. Species number 127.

**Superfamily Galatheoidea**

Three families were represented by 56 species. Twenty (36%) are certain or probably new species. Nine are new records for Australia of species previously reported for the Indo-West Pacific and 13 new for WA or more southern records of WA species.

**Chirostylidae**

Five species were separated using Ahyong and Poore (2004a) and Baba (2005). One is a probable new species.

**Uroptychus australis** (Henderson, 1885)

MoV sp. 5249

*Records:* 4 specimens, 22°00′S–35°26′S, 658–988 m

*Distribution:* New Zealand, Indonesia, E Australia; first record for WA

*Reference:* Ahyong and Poore (2004a) [photo below]

**Uroptychus flindersi** Ahyong & Poore, 2004

MoV sp. 5447

*Records:* 2 specimens, 35°12′S, 431–408 m

*Distribution:* S Australia

*Reference:* Ahyong and Poore (2004a) [photo below]

**Uroptychus gracilimanus** (Henderson, 1885)

MoV sp. 5248

*Records:* 10 specimens, 33°00′S, 397–421 m

*Distribution:* Indo-West Pacific including E Australia; first record for WA

*Reference:* Ahyong and Poore (2004a) [photo below]

**Uroptychus hesperius** Ahyong & Poore, 2004

MoV sp. 5206

*Records:* 1 specimen, 35°26′S, 915 m

*Distribution:* S WA

*Reference:* Ahyong and Poore (2004a)

**Uroptychus sp. MoV 5181**

*Records:* 5 specimens, 27°48′S–29°52′S, 401–431 m

*Distribution:* new species

*Reference:* Ahyong and Poore (2004a) [photo below]
Galatheidae

Forty-five species were represented, of which nine are new records for Australia, ten new for Western Australia and two reported more further south than previously known. Eighteen (40%) are probable new species. Baba (1988; 2005) and Ahyong and Poore (2004b) were the most relevant sources. The number of new species could well be higher if the new range extensions of Indo-West Pacific species are discovered to be new species. The genus *Munida* was richest in species (19 species) *Galathea* and *Munidopsis* with seven species each and *Agononida* with six species.

*Agononida eminens* (Baba, 1988)

MoV sp. 5201

Records: 8 specimens, 21°58′ S–22°00′ S, 658–754 m ✓

Distribution: West Pacific including E Australia; first record for WA

Reference: Baba (2005) [photo below]

*Agononida incerta* (Henderson, 1888)

MoV sp. 5260

Records: many specimens, 21°58′ S–31°55′ S, 324–754 m ✓

Distribution: Indo-West Pacific including N Australia; first record for S WA

Reference: Ahyong and Poore (2004b) [photo below]

*Agononida pilosimanus* (Baba, 1969)

MoV sp. 5208

Records: 9 specimens, 27°08′ S–31°59′ S, 414–508 m

Distribution: West Pacific including Qld; first record for WA

Reference: Baba (2005)

*Agononida similis* (Baba, 1988)

MoV sp. 5205

Records: 2 specimens, 21°58′ S, 382 m

Distribution: Philippines; first record for Australia

Reference: Baba (2005)

*Agononida* sp. aff. *incerta* (Henderson, 1888)

MoV sp. 5207

Records: 5 specimens, 21°00′ S–22°50.48′ S, 399–430 m ✓

Distribution: new species

Reference: Ahyong and Poore (2004b)

*Agononida* sp. aff. *sabatesae* (Macpherson, 1994)

MoV sp. 5218

Records: 8 specimens, 31°37′ S–31°59′ S, 364–508 m

Distribution: new species close to New Caledonian species

Reference: Macpherson (1994)

*Allogalathea elegans* (Adams & White, 1848)

MoV sp. 5350

Records: 2 specimens, 22°04′ S–24°37′ S, 100–102 m

Distribution: Indo-West Pacific including Australia

Reference: Poore (2004: 231) [photo below]

*Enriquea leviantennata* (Baba, 1988)

MoV sp. 5202

Records: 3 specimens, 21°58′ S–22°04′ S, 373–391 m

Distribution: Indonesia, N and NE Australia; first record for WA

Reference: Baba (1988; 2005) [photo below]

*Galathea aff. orientalis* Stimpson, 1858

MoV sp. 5182

Records: 10 specimens, 22°50′ S–27°03′ S, 100–106 m

Distribution: new species; keys to *G. orientalis* but record for WA doubted by Baba

Reference: Haig (1974); Baba (2005)
Decapod Crustacea of the continental margin of southwestern and central Western Australia

**Galathea amboinensis** De Man, 1888  
MoV sp. 5258  
*Records:* 4 specimens, 24°01´S–27°48´S, 96–101 m  
*Distribution:* Indonesia, N Qld; first record for WA  
*Reference:* Baba (1988) [photo below]

**Galathea balssi** Miyake & Baba, 1964  
MoV sp. 5273  
*Records:* 3 specimens, 20°59´S–22°37´S, 100–382 m  
*Distribution:* West Pacific including Qld; first record for WA  
*Reference:* Baba (2005)

**Galathea consobrina** De Man, 1902  
MoV sp. 5257  
*Records:* 1 specimen, 34°53´S, 100–95 m  
*Distribution:* Philippines; first record for Australia  
*Reference:* Baba (1988)

**Galathea** sp. MoV 5179  
*Records:* 19 specimens, 20°59´S, 100 m  
*Distribution:* similar to *G. multilineata* from Japan–Philippines  
*Reference:* Baba (2005)

**Galathea** sp. MoV 5209  
*Records:* 2 specimens, 24°01´S, 100 m  
*Distribution:* new species  
*Reference:* Baba (2005)

**Galathea** sp. MoV 5244  
*Records:* 1 specimen, 22°50´S, 100 m  
*Distribution:* new species  
*Reference:* Baba (2005)

**Lauriea gardineri** (Laurie, 1926)  
MoV sp. 5259  
*Records:* 2 specimens, 22°50´S–27°03´S, 100–382 m  
*Distribution:* Indo-West Pacific including WA  

**Munida andamanica** Alcock, 1894  
MoV sp. 5212  
*Records:* 1 specimen, 21°00´S, 399–408 m

**Munida aprosoma** Ahyong & Poore, 2004  
MoV sp. 5197  
*Records:* 8 specimens, 29°00´S–31°57´S, 700–1170 m  
*Distribution:* NE Australia; first record for WA  
*Reference:* Ahyong and Poore (2004b) [photo below]

**Munida babai** Tirmizi & Javed, 1976  
MoV sp. 5178  
*Records:* 12 specimens, 20°59´S–21°59´S, 100–177 m  
*Distribution:* South Africa–Malaysia; first record for Australia  

**Munida disgrega** Baba, 2005  
MoV sp. 5210  
*Records:* 37 specimens, 35°22´S–35°22´S, 408–680 m  
*Distribution:* SE Australia; first record for WA  
*Reference:* Baba (2005)

**Munida haswelli** Henderson, 1885  
MoV sp. 3859  
*Records:* many specimens, 21°59´S–35°11´S, 130–728 m  
*Distribution:* S Australia  
*Reference:* Poore (2004) [photo below]

**Munida heteracantha** Ortmann, 1892  
MoV sp. 5196  
*Records:* 3 specimens, 21°58´S, 177–170 m  
*Distribution:* Indo-West Pacific including Qld; first record for WA  
*Reference:* Baba (1988) as *M. exigua*
**Munida roshanei** Tirmizi, 1966
MoV sp. 5180
*Records:* 31 specimens, 20°59´S–27°48´S, 93–123 m
*Distribution:* Aden–Andaman Sea; first record for Australia
*Reference:* Baba (1988)

**Munida rubridigitalis** Baba, 1994
MoV sp. 5211
*Records:* 9 specimens, 21°00´S–24°33´S, 396–411 m
*Distribution:* N Qld; first record for WA
*Reference:* Baba (1994) [photo below]

**Munida aff. amathea** Macpherson, 1995
MoV sp. 5203
*Records:* 1 specimen, 27°48´S, 431–416 m
*Distribution:* probably new species like *M. amathea* from Tuamotu
*Reference:* Baba (2005)

**Munida aff. rubiesi** Macpherson, 1991
MoV sp. 5183
*Records:* 23 specimens, 27°56´S–31°36´S, 329–704 m
*Distribution:* probably new species like *M. rubiesi* from Gulf of Aden
*Reference:* Baba (2005) [photo below]

**Munida aff. volantis** Macpherson, 2004
MoV sp. 5204
*Records:* 12 specimens, 27°55´S–31°55´S, 180–232 m
*Distribution:* probably new species like *M. volantis* from Fiji
*Reference:* Baba (2005) [photo below]

**Munida sp. MoV 5176**
*Records:* 3 specimens, 20°59´S, 101–100 m
*Distribution:* probably new species like *M. janetae* from E Indian Ocean
*Reference:* Baba (2005)

**Munida sp. MoV 5199**
*Records:* 1 specimen, 35°26´S, 912–922 m
*Distribution:* probably new species like *M. nesiotes* from Seychelles
*Reference:* Baba (2005) [photo below]

**Munida sp. MoV 5200**
*Records:* 1 specimen, 33°00´S, 421–414 m
*Distribution:* probably new species like *M. semoni* from West Pacific
*Reference:* Baba (2005) [photo next page]
Decapod Crustacea of the continental margin of southwestern and central Western Australia

*Munida* sp. MoV 5214

*Records:* 20 specimens, 22°04´S, 206–201 m
*Distribution:* new species like *M. babai* from South Africa–Malaysia
*Reference:* Baba (2005)

*Munida* sp. MoV 5215

*Records:* 2 specimens, 21°58´S, 356–324 m
*Distribution:* new species like *M. shaulu* from W Indian Ocean
*Reference:* Baba (2005)

*Munida* sp. MoV 5217

*Records:* 1 specimen, 22°04´S, 399–387 m
*Distribution:* new species
*Reference:* Baba (2005)

*Munida* sp. MoV 5245

MoV sp. 5245
*Records:* 1 specimens, 27°03´S, 106–106 m
*Distribution:* new species, incomplete specimen
*Reference:* Baba (2005)

*Munida* sp. MoV 5526

*Records:* 1 specimen, 22°004´S, 658–754 m
*Distribution:* new species near *M. andamanica*
*Reference:* Baba (2005)

*Munidopsis andamanica* MacGillchrist, 1905

MoV sp. 5253
*Records:* 8 specimens, 21°58´S, 726–732 m
*Distribution:* West Pacific, Indonesia; first record for Australia
*Reference:* Baba (2005: 284) [photo below]

*Munidopsis crenatirostris* Baba, 1988

MoV sp. 5251
*Records:* 17 specimens, 21°00´S–35°12´S, 396–754 m
*Distribution:* Philippines; first record for Australia
*Reference:* Baba (2005) [photo below]

*Munidopsis cylindrophthalma* (Alcock, 1894)

MoV sp. 5255
*Records:* 1 specimen, 21°58´S, 726–732 m
*Distribution:* Indo-West Pacific; first record for Australia
*Reference:* Baba (2005), Macpherson (2007) for colour photo

*Munidopsis dasypus* Alcock, 1894

MoV sp. 5252
*Records:* 4 specimens, 29°03´S, 1000–1037 m
*Distribution:* Indo-West Pacific including N WA; first record for S WA
*Reference:* Baba and Poore (2002: 50, WA record) [photo below]

*Munidopsis kensleyi* Ahyong & Poore, 2004

MoV sp. 5254
*Records:* 1 specimens, 21°55´S, 1260–1295 m
*Distribution:* S Australia
*Reference:* Baba and Poore (2002: as *M. dasypus*), Ahyong & Baba (Ahyong and Poore, 2004c)

*Munidopsis levis* (Alcock & Anderson, 1894)

MoV sp. 5256
*Records:* 1 specimen, 21°58´S, 726–732 m
*Distribution:* Andaman Sea, Philippines; first record for Australia
*Reference:* Baba (2005)
Munidopsis serricornis (Lovén, 1852)
MoV sp. 2677
Records: 1 specimen, 35°26´S, 900–915 m
Distribution: Indo-West Pacific including S Australia
Reference: Baba (2005), Baba and Poore (2002)

Paramunida stichus Macpherson, 1993
MoV sp. 5213
Records: 11 specimens, 23°59´S–24°33´S, 388–404 m
Distribution: Indonesia, New Caledonia; first record for Australia
Reference: Macpherson (1993)

Phylladiorhynchus pusillus (Henderson, 1885)
MoV sp. 0091
Records: 31 specimens, 23°59´S–35°10´S, 95–439 m
Distribution: Indo-West Pacific including S Australia
Reference: Poore (2004) [photo below]

Raymunida sp. MoV 5189
MoV sp. 5189
Records: 2 specimens, 21°57´S–29°48´S, 104–114 m
Distribution: new species
Reference: Macpherson and Machordom (2001) [photo below]

Porcellanidae

Lissoporcellana aff. quadrilobata (Miers, 1884)
MoV sp. 5226
Records: 12 specimens, 20°59´S, 101–100 m ✓
Distribution: probable new species like L. quadrilobata

Pachycheles sculptus (Milne Edwards, 1837)
MoV sp. 5221
Records: 3 specimens, 24°01´S–24°37´S, 101–100 m
Distribution: N WA; first record for S WA
Reference: Haig (1965) [photo below]

Petrolisthes militaris (Heller, 1862)
MoV sp. 5224
Records: 53 specimens, 21°59´S–28°59´S, 100–183 m ✓
Distribution: Indo-West Pacific including SW Australia
Reference: Haig (1965) [photo below]

Petrolisthes scabriculus (Dana, 1852)
MoV sp. 5220
Records: 2 specimens, 27°48.48´S, 96–98 m
Distribution: Indo-West Pacific including SW Australia
Reference: Haig (1965)
**Polyonyx biunguiculatus** (Dana, 1852)  
MoV sp. 5225  
**Records:** 26 specimens, 21°59´S–33°2´S, 95–166 m  
**Distribution:** Indo-West Pacific including WA  
**Reference:** Haig (1965)  

**Porcellanella triloba** White, 1851  
MoV sp. 5246  
**Records:** 1 specimen, 22°02´S, 106 m  
**Distribution:** WA  
**Reference:** Haig (1974)  

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**Superfamily Hippoidea**  
A single family can be reported, with two species.  

**Albuneidae**  
Two species previously reported from WA were collected and identified using Boyko (2002).  

**Albunea occulatus** Boyko, 2002  
MoV sp. 5223  
**Records:** 1 specimen, 25°54´S, 100 m  
**Distribution:** WA  
**Reference:** Boyko (2002: 315)  

**Stemonopa insignis** Efford & Haig, 1968  
MoV sp. 5222  
**Records:** 4 specimens, 24°01´S–25°54´S, 100 m  
**Distribution:** WA  
**Reference:** Boyko (2002: 224)
**Superfamily Paguroidea**

Hermit crabs are notoriously difficult to identify. Although many species have been described the literature is extremely scattered. McLaughlin (2003) has provided keys to families and genera that enabled access to the recent literature. Five families were represented among the 70 species recognised. It is highly probable that a more experienced taxonomist could identify some of the species to a lower level but the absence of both sexes proved an impediment in the many cases of rare taxa.

**Diogenidae**

Of 19 species, five were identifiable to species and the rest to genus level. One was a new record for Australia and another for WA. None of the recent literature reviewed by Davie (2002) or Poore (2004) proved useful. If this taxonomy is fair, three-quarters of the species discovered are new species.

**Calcinus**

*Calcinus* sp. MoV 5268

**Records:** 1 specimen, 24°37´S, 100 m

**Distribution:** probable new species

**Reference:** Morgan (1991: key) [photos below]

**Calcinus** sp. MoV 5389

**Records:** 8 specimens, 24°37´S–34°53´S, 95–100 m

**Distribution:** keys to *C. tropidomanus* Lewinsohn, 1981; new species or new Australian record

**Reference:** Poupin and McLaughlin (1998) [photo below]

**Calcinus** sp. MoV 5393

**Records:** 1 specimen, 27°48´S, 98 m

**Distribution:** probable new species

**Reference:** Poupin and McLaughlin (1998)

**Calcinus** sp. MoV 5396

**Records:** 1 specimen, 22°04´S, 102 m

**Distribution:** new species

**Reference:** Poupin and McLaughlin (1998)

**Ciliopagurus** cf. *krempfi* (Forest, 1952)

MoV sp. 5275

**Records:** 2 specimens, 22°50´S–29°48´S, 85–100 m

**Distribution:** new species or new Australian record; difficult to identify from key

**Reference:** Forest (1995: key) [photo below]

**Dardanus** sp. MoV 5262

**Records:** 2 specimens, 22°37´S–35°21´S, 92–382 m

**Distribution:** probable new species [photo below]

**Dardanus** sp. MoV 5264

**Records:** 1 specimen, 22°04´S, 106–101 m

**Distribution:** probable new species
**Dardanus** sp. MoV 5265
*Records:* 2 specimens, 21°59’S, 166 m
*Distribution:* probable new species [photos below]

**Dardanus** sp. MoV 5266
*Records:* 6 specimens, 25°55’S–33°58’S, 96–123 m
*Distribution:* probable new species [photo below]

**Dardanus** sp. MoV 5267
*Records:* 7 specimens, 21°59’S–24°37’S, 100–166 m
*Distribution:* probable new species [photos below]

**Diogenes** sp. MoV 5401
*Records:* 1 specimen, 24°37’S, 100 m
*Distribution:* probable new species
*Reference:* Morgan and Forest (1991)

**Paguristes aciculus** Grant, 1905
MoV sp. 5279
*Records:* numerous specimens, 21°58’S–35°22’S, 100–508 m
*Distribution:* E Australia; new record for WA
*Reference:* Poore (2004: key) [photo below]

**Paguristes longisetosus** Morgan, 1987
MoV sp. 5382
*Records:* 1 specimen, 22°37.04’S, 355–382 m
*Distribution:* S WA
*Reference:* Poore (2004: key) [photos below]

**Paguristes purpureantennatus** Morgan, 1987
MoV sp. 5331
*Records:* 2 specimens, 31°37’S–35°10’S, 97–210 m
*Distribution:* S WA
*Reference:* Poore (2004: key) [photo below]
Paguristes sp. MoV 5263
Records: 8 specimens, 21°58′S–22°02′S, 104–144 m
Distribution: new species
References: Poore (2004: key), Rahayu (2006) [photos below]

Paguristes sp. MoV 5277
Records: 30 specimens, 21°00′S–22°04′S, 165–411 m
Distribution: new species
References: Poore (2004: key), Rahayu (2006) [photos below]

Paguristes sp. MoV 5278
Records: 1 specimen, 21°59′S, 166 m
Distribution: new species
References: Poore (2004: key), Rahayu (2006) [photos below]

Paguristes sp. MoV 5394
Records: 5 specimens, 24°33′S–27°48′S, 112–388 m
Distribution: new species

Strigopagurus elongatus Forest, 1995
MoV sp. 1707
Records: 24 specimens, 31°37′S–35°21′S, 95–210 m
Distribution: S WA
References: Poore (2004: key) [photo below]
Lithodidae

One individual each of two species previously recorded from Tasmanian seamounts were found (Poore, 2004). Both are new species similar to named species from Japan and Peru (S. Ahyong, pers. comm.).

**Lithodes aff. longispina** Sakai, 1971

MoV sp. 2718

Records: 2 specimens, 31°58′S–35°26′S, 848–1050 m

Distribution: SE Australia; new record for WA (not *L. longispina* from Japan)

Reference: Poore (2004: 268) [photo below]

Paralomis cf. phrixa Macpherson, 1992

MoV sp. 2717

Records: 1 specimens, 35°26′S, 900–915 m

Distribution: Tas. Seamounts; new record for WA (not *P. phrixa* from Peru)

Reference: Poore (2004: 269) [photo below]

Paguridae

Half of all hermit crabs belong in this family. Half of the 33 species taken could not be identified beyond family level because each was represented by few specimens of only one sex. McLaughlin’s (1997) work on Indonesian species includes some of those identified to species level, including a new record for Australia and another for WA. At least three-quarters (24 species) are probable new species. No one genus was especially diverse.

**Anapagrides** sp. MoV 5399

Records: 2 specimens, 22°04′S–31°43′S, 102 m

Distribution: females only; new record for genus in Australia

Reference: McLaughlin (2003: key to genera)

**Bathypaguroopsis yaldwyni** McLaughlin, 1994

MoV sp. 2686

Records: 1 specimen, 31°55′S, 479–484 m

Distribution: New Zealand, Vic., Tas. Seamounts; new record for WA

Reference: McLaughlin (1994) [photo below]

**Cestopagurus** sp. MoV 5269

Records: 1 specimen, 31°55′S, 479–484 m

Distribution: female only; new record for genus in Australia

Reference: McLaughlin (2003: key to genera) [photo below]

**Hemipagurus** sp. MoV 5281

Records: 1 specimen, 22°50′S, 100 m
**Distribution**: probable new species; new record for genus in Australia
**Reference**: Asakura (2001) [photos below]

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**Lophopagurus (Lophopagurus) nanus** (Henderson, 1888)
MoV sp. 1591
**Records**: 4 specimens, 31°43´S–35°20´S, 97–213 m
**Distribution**: S Australia; first record for WA
**Reference**: Poore (2004: 274) [photo below]

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**Nematopagurus** sp. MoV 5380
**Records**: 2 specimens, 22°50´S, 100 m
**Distribution**: male only; probable new species
**Reference**: McLaughlin (2004) [photo below]

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**Lophopagurus (Australeremus) triserratus** (Ortmann, 1892)
MoV sp. 5332
**Records**: 14 specimens, 27°03´S–35°20´S, 97–213 m
**Distribution**: S Australia; first record for WA
**Reference**: Poore (2004: 274) [photo below]

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**Nematopagurus** sp. MoV 5383
**Records**: 2 specimens, 31°55´S–35°22´S, 194–232 m
**Distribution**: females only; probable new species
**Reference**: McLaughlin (2004) [photo below]

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**Michelopagurus** sp. MoV 5280
**Records**: 1 specimen, 31°57´S, 928–1170 m
**Distribution**: first record of genus from Australia
**Reference**: McLaughlin (1997: 481) [photo upper right]

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**Nematopagurus** sp. MoV 5384
**Records**: 15 specimens, 21°59´S, 166 m
**Distribution**: males and females; probable new species
Porcellanopagurus filholi de Saint Laurent & McLaughlin, 2000
MoV sp. 5398
Records: 1 specimen, 29°52’S, 414–401 m
Distribution: South Africa, New Zealand; first record for Australia
Reference: McLaughlin (2000) [photo below]

Propagurus haigae (McLaughlin, 1997)
MoV sp. 5333
Records: 9 specimens, 27°48’S–35°22’S, 394–428 m
Distribution: E Australia, Indonesia; first record for WA
Reference: McLaughlin and de Saint Laurent (1998) [photo below]

Pylopaguropsis zebr a (Henderson, 1893)
MoV sp. 5334
Records: 9 specimens, 21°59’S–24°37’S, 100–166 m
Distribution: Indo-West Pacific including N WA
Reference: McLaughlin and Haig (1989) [photo upper right]

Pylopaguropsis sp. MoV 5276
Records: 1 specimen, 25°54’S, 100–95 m
Distribution: male; new species
Reference: McLaughlin and Haig (1989)

Spiropagurus fimbriatus Lewinsohn, 1982
MoV sp. 5335
Records: 5 specimens, 21°58’S–22°04’S, 101–166 m
Distribution: Red Sea, N Qld; first record for WA
Reference: Lewinsohn (1982) [photo below]

Turleana albatrossae (McLaughlin & Haig, 1996)
MoV sp. 5284
Records: 8 specimens, 20°59’S–27°48’S, 96–106 m
Distribution: new record for Australia
Reference: McLaughlin and Haig (1996) [photo next page]
**Turleana multispina** McLaughlin, 1997

MoV sp. 5400

*Records:* 2 specimens, 23°59´S, 411 m

*Distribution:* Indonesia; new record for Australia

*Reference:* McLaughlin (1997)

**Pagurid** sp. MoV 5261

*Records:* 6 specimens, 22°51´S–22°50´S, 100–106 m

*Distribution:* can not be keyed to genus

*Reference:* McLaughlin (2003) [photo below]

**Pagurid** sp. MoV 5270

*Records:* 1 specimen, 29°03´S, 1000–1037 m

*Distribution:* male, similar to *Tomopagurus*

*Reference:* McLaughlin (2003) [photo upper right]

**Pagurid** sp. MoV 5271

*Records:* 3 specimens, 29°03´S, 1000–1037 m

*Distribution:* females only; can not be keyed to genus

*Reference:* McLaughlin (2003) [photo below]

**Pagurid** sp. MoV 5274

*Records:* 2 specimens, 35°25´S, 925–913 m

*Distribution:* females only; like *Lophopagurus*

*Reference:* McLaughlin (2003) [photo below]
**Pagurid** sp. MoV 5283
*Records:* 2 specimens, 21°56′S–29°03′S, 1000–1037 m
*Distribution:* males only; can not be keyed to genus

**Pagurid** sp. MoV 5285
*Records:* 1 specimen, 35°26′S, 900–915 m
*Distribution:* males only; can not be keyed to genus

**Pagurid** sp. MoV 5286
*Records:* 3 specimens, 10°59′S, 100 m
*Distribution:* males only; can not be keyed to genus

**Pagurid** sp. MoV 5381
*Records:* 2 specimens, 21°58′S–28°59′S, 170–183 m
*Distribution:* females only; can not be keyed to genus

**Pagurid** sp. MoV 5387
*Records:* 3 specimens, 31°58′S–31°57′S, 848–1170 m
*Distribution:* keys to *Parapagurodes*

**Pagurid** sp. MoV 5388
*Records:* 4 specimens, 31°58′S, 848–1050 m
*Distribution:* females only; can not be keyed to genus

**Pagurid** sp. MoV 5390
*Records:* 1 specimen, 22°50′S, 100 m
*Distribution:* male only; can not be keyed to genus

**Pagurid** sp. MoV 5391
*Records:* 4 specimens, 21°58′S, 107 m
*Distribution:* males and females; can not be keyed to genus

**Pagurid** sp. MoV 5392
*Records:* 2 specimens, 21°58′S–24°01′S, 100–107 m
*Distribution:* male and female; can not be keyed to genus

**Pagurid** sp. MoV 5402
*Records:* 3 specimens, 21°58′S, 732 m
*Distribution:* females only; can not be keyed to genus

**Parapaguridae**
Ten of the 13 species taken were identifiable using the works of Lemaitre (1996; 2004a; 2004b). Four were new records for WA.

**Oncopagurus indicus** (Alcock, 1905)
*MoV sp. 5336*
*Records:* 33 specimens, 21°58′S–35°25′S, 373–1037 m
*Distribution:* Indo-West Pacific including N Australia; new record for S WA
*Reference:* Lemaitre (1996) [photo below]

**Oncopagurus minutus** (Henderson, 1896)
*MoV sp. 5337*
*Records:* 6 specimens, 21°58′S–31°58′S, 732–1050 m
*Distribution:* Indo-West Pacific including E Australia; new record for WA
*Reference:* Lemaitre (1996)

**Oncopagurus monstrosus** (Alcock, 1894)
*MoV sp. 5338*
*Records:* many specimens, 22°50′S–35°26′S, 329–1050 m
*Distribution:* Indo-West Pacific including N WA; new record for S WA
*Reference:* Lemaitre (1996) [photo below]
**Paragiopagurus boletifer** (de Saint Laurent, 1972)
MoV sp. 5339
*Records:* 1 specimen, 22°37´S, 355–382 m
*Distribution:* Indo-West Pacific; new record for Australia
*Reference:* Lemaitre (1996) [photo below]

**Paragiopagurus diogenes** (Whitelegge, 1900)
MoV sp. 5340
*Records:* 36 specimens, 24°01´S–33°58’S, 96–407 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Lemaitre (1996) [photo below]

**Paragiopagurus sp. MoV 5272**
*Records:* 25 specimens, 21°00´S–33°00´S, 355–1010 m
*Distribution:* new species
*Reference:* Lemaitre (1996) [photo below]

**Paragiopagurus latimanus** Henderson, 1888
MoV sp. 5341
*Records:* 26 specimens, 22°00´S–35°23´S, 479–1110 m
*Distribution:* Indo-West Pacific including E Australia; first record for WA
*Reference:* Lemaitre (1999) [photo below]

**Paragiopagurus sp. MoV 5397**
*Records:* 9 specimens, 24°33´S, 388–368 m
*Distribution:* new species
*Reference:* Lemaitre (1996)

**Strobopagurus sp. MoV 5282**
*Records:* 11 specimens, 21°58´S–31°37´S, 364–1037 m
*Distribution:* new species
*Reference:* Lemaitre (2004b) [photo next page]
Decapod Crustacea of the continental margin of southwestern and central Western Australia

Sympagurus brevipes (de Saint Laurent, 1972)
MoV sp. 5342
Records: 1 specimen, 21°58′ S, 726–732 m
Distribution: Indo-West Pacific including N Australia; new record for S WA
Reference: Lemaitre (1996) [photos below]

Sympagurus dimorphus (Studer, 1883)
MoV sp. 5343
Records: 29 specimens, 31°55′ S–35°22′ S, 423–680 m
Distribution: Southern Ocean including Australia; first record for WA
Reference: Lemaitre (1996) [photo below]

Sympagurus planimanus (de Saint Laurent, 1972)
MoV sp. 5344
Records: 71 specimens, 21°58′ S, 726–732 m
Distribution: West Pacific including N WA
Reference: Lemaitre (1996)

Sympagurus villosus Lemaitre, 1996
MoV sp. 5345
Records: 2 specimens, 21°58′ S–22°00′ S, 324–1010 m
Distribution: eastern Australia; first record for WA

Pylochelidae
No pylochelids have been recorded for WA but the only identified species ranges across the Indian and SW Pacific. The second was represented by juveniles. The systematics of the family was reviewed by Forest (1987).

Pylocheles mortensenii Boas, 1926
MoV sp. 5346
Records: 1 specimen, 31°37′ S, 364–404 m
Distribution: Indo-West Pacific including Qld, New Zealand; first record for WA
Reference: Forest (1987) [photos below]

Pylochelidae sp. MoV 5395
Records: 2 specimens, 24°33′ S, 388–368 m
Distribution: juvenile specimens
Reference: Forest (1987)
Astacidea – scampi

Astacidea are represented in these collections by one family that includes some species of commercial interest.

Nephropidae

Four well-known species in two genera were recorded, all identifiable from Poore (2004) or Macpherson (1990; 1993). One is a new record for southern WA. The papers cited have figures.

*Metanephrops boschmai* (Holthuis, 1964)

MoV sp. 5067

*Records*: 17 specimens, 21°58´S–35°13´S, 324–554 m

*Distribution*: S and W Australia

*Reference*: Poore (2004: 165) [photos below]

*Metanephrops velutinus* Chan & Y3u, 1991

MoV sp. 5077

*Records*: 13 specimens, 22°04´S–35°12´S, 387–508 m

*Distribution*: West Pacific including Australia

*Reference*: Poore (2004: 165) [photo below]

*Nephrops acanthura* Macpherson, 1990

MoV sp. 4968

*Records*: 2 specimens, 21°55´S, 1260–1295 m

*Distribution*: Indo-West Pacific including S Australia

*Reference*: Poore (2004: 166)

*Nephrops stewarti* Wood-3Mason, 1872

MoV sp. 5068

*Records*: 1 specimen, 31°58´S, 848–1050 m

*Distribution*: Indo-West Pacific including N Australia; new record for S WA

*Reference*: Macpherson (1993) [photos below]
Brachyura – crabs

Thirty-two families were represented by 227 nominal species. The single reference to brachyuran crabs from a broad geographic region of Australia (Poore, 2004) was found to deal with only a small fraction of the species found. Numerous papers, especially recent works describing species from the Western Pacific and Indonesia, were consulted to make species determinations.

One quarter of all species (47 species) were first records for Australia, a further 22 species first records for WA and 31 first records for southern WA. Seventy-one species (31%) are new species. Some of the species noted as new to Australia or to WA should be considered tentative identifications until specimens are compared with types or representatives from type localities.

The family arrangement and sequence is that of Ng et al. (2008). Their list of all known species updates the classification used by Poore (2004). Families are listed in this sequence, genera and species alphabetically within families. The eubrachyuran subsection Thoracotremata was not represented.

Section Podotremata
- Superfamily Cyclodorippoidea
  - Cyclodorippidae
  - Cymonomidae
- Superfamily Dromoidea
  - Dromiidae
  - Dynomenidae
- Superfamily Homoloidea
  - Homolidae
  - Latreilliidae
- Superfamily Raninoidea
  - Raninidae

Section Eubrachyura

Subsection Heterotremata
- Superfamily Aethroidea
  - Aethridae
- Superfamily Calappoidea
  - Calappidae

Subsection Eubrachyura

Superfamily Cancroidea
- Atelecyelidae
- Superfamily Carpiloidea
  - Carpillidae
- Superfamily Corystoidea
  - Corystidae
- Superfamily Dorippoidea
  - Dorippidae
  - Ethusidae
- Superfamily Eriphioidea
  - Hypothalассidae
- Superfamily Goneplacoidae
  - Chasmacardinidae
  - Euryplacidae
  - Goneplacidae
  - Mathildellidae
- Superfamily Hexapodoidea
  - Hexapodidae
- Superfamily Leucosioidae
  - Iphiculidae
  - Leucosiidae
- Superfamily Majoidea
  - Epialtidae
  - Hymenosomatidae
  - Inachidae
  - Majidae
- Superfamily Palicoidea
  - Palicidae
- Superfamily Parthenopoidea
  - Parthenopidae
- Superfamily Pilumnoidea
  - Pilumnidae
- Superfamily Portunoidea
  - Portunidae
- Superfamily Retroplumoidea
  - Retroplumidae
- Superfamily Trapezioidea
  - Trapezidae
- Superfamily Xanthoidea
  - Panopeidae
  - Xanthidae
Section Podotremata

Superfamily Cyclodorippoidea

Cyclodorippidae

Three species were identified using Tavares (1993). All are new for WA.

Krangalangia spinosa (Zarenkov, 1970)

MoV sp. 5024

Records: 5 specimens, 31°58´ S, 848–1050 m

Distribution: N Australia; first record for S WA

Reference: Tavares (1993) [photo below]

Tymolus brucei Tavares, 1991

MoV sp. 5484

Records: 13 specimens, 21°00´ S–35°04´ S, 378–508 m

Distribution: N WA; first record for S WA

Reference: Tavares (1993)

Tymolus similis (Grant, 1905)

MoV sp. 5023

Records: many specimens, 22°04´ S–35°22´ S, 364–1050 m

Distribution: SE Australia; first record for S WA

Reference: Tavares (1993) [photo below]

Cynomonidae

Of two species, one is a new record for Australia and the other a probable new species. Ahyong and Brown (2003) provided a key to Indo-West Pacific species.

Cymonomus andamanicus Alcock, 1905

MoV sp. 5025

Records: 1 specimen, 29°50´ S, 408–427 m

Distribution: Indo-West Pacific; first record for Australia


Cymonomus sp. MoV 5001

Records: 12 specimens, 29°52´S–35°22´S, 401–1050 m

Distribution: new species

Reference: Ahyong and Brown (2003) [photo below]
Superfamily Dromioidea

Dromiidae

Three of the six species could be identified with the aid of McLay (1993). The others were placed in genera (one not previously recorded from Australia) using the same source but are not known species.

*Austrodromidia insignis* (Rathbun, 1923)

MoV sp. 3856

*Records*: 3 specimens, 27°48’–35°16’ S, 96–179 m

*Distribution*: S Australia

*Reference*: McLay (1993) [photo below]

*Dromia wilsoni* (Fulton & Grant, 1902)

MoV sp. 3854

*Records*: 16 specimens, 27°55’–35°37’ S, 95–253 m

*Distribution*: Indo-West Pacific and S Atlantic including Australia

*Reference*: McLay (1993) [photos below]

*Fultodromia nodipes* (Guérin-Ménéville, 1832)

MoV sp. 5029

*Records*: 3 specimens, 24°37’–35°10’ S, 97–100 m

*Distribution*: S Australia

*Reference*: McLay (1993) [photo below]

*Epigodromia* sp. MoV 5473

MoV sp. 5473

*Records*: 4 specimens, 35°20’ S, 212–213 m

*Distribution*: new species

*Reference*: McLay (1993) [photo upper right]

*Fultodromia* sp. MoV 5137

*Records*: 1 specimen, 27°48’ S, 123–112 m

*Distribution*: new species


*Takedromia* sp. MoV 5003

*Records*: 5 specimens, 22°51’–24°37’ S, 100 m

*Distribution*: new species, new record for genus in Australia

*Reference*: McLay (1993) [photo below]
**Dynomenidae**

One species was found (McLay, 1999), the first for southern WA.

_Hirsutodynemone spinosa_ (Rathbun, 1911)

MoV sp. 5030

_Records:_ 1 specimen, 27°03’S, 106 m

_Distribution:_ Indo-West Pacific including N Australia; first record for S WA

Reference: McLay (1999) [photo below]

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**Superfamily Homoloidea**

**Homolidae**

Among the seven species is a new Australian record and a possible new species (Guinot and Richer de Forges, 1995; Tan et al., 2000).

_Dagnaudus petterdi_ (Grant, 1905)

MoV sp. 5038

_Records:_ 9 specimens, 24°33’S–35°21’S, 364–490 m

_Distribution:_ E and S Australia, New Zealand, New Caledonia; new record for WA

Reference: Poore (2004) [photo below]

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_Homola orientalis_ Henderson, 1888

MoV sp. 5036

_Records:_ 24 specimens, 21°59’S–31°37’S, 165–404 m

_Distribution:_ Indo-West Pacific including Australia

Reference: Poore (2004) [photo below]

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_Homologenus braueri_ Doflein, 1904

MoV sp. 5139

_Records:_ 7 specimens, 21°55’S–31°43’S, 986–1295 m

_Distribution:_ Indo-West Pacific including WA

Reference: Guinot and Richer de Forges (1995) [photo next page]
Decapod Crustacea of the continental margin of southwestern and central Western Australia

**Homologenus malayensis** Ihle, 1912
MoV sp. 5039
**Records:** 24 specimens, 29°03´S–31°58´S, 848–1050 m
**Distribution:** West Pacific; first record for Australia
**Reference:** Guinot and Richer de Forges (1995) [photo below]

**Latreillopsis tetraspina** Dai & Chen, 1980
MoV sp. 5035
**Records:** 1 specimen, 27°48´S, 123–112 m ✓
**Distribution:** WA
**Reference:** Guinot and Richer de Forges (1995)

**Paramolopsis boasi** Wood-Mason, 1891
MoV sp. 5037
**Records:** 3 specimens, 21°00´S–22°04´S, 399–408 m ✓
**Distribution:** Indo-West Pacific including Australia
**Reference:** Guinot and Richer de Forges (1995)

**Yaldwynopsis** sp. MoV 5004
MoV sp. 5004
**Records:** 1 specimen, 31°37.27´S, 205–210 m ✓
**Distribution:** probable new species
**Reference:** Guinot and Richer de Forges (1995) [photo below]

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**Latreilliidae**

Two species were identified confidently using Castro et al. (2003). One was recorded from Australia for the first time.

**Eplumula australiensis** (Henderson, 1888)
MoV sp. 5040
**Records:** 11 specimens, 25°54´S–31°43´S, 100–253 m ✓
**Distribution:** Australia, New Zealand, New Caledonia
**Reference:** Williams (1982), Poore (2004) [photo below]

**Latreillia pennifera** Alcock, 1900
MoV sp. 5041
**Records:** 25 specimens, 20°59´S–22°04´S, 100–408 m ✓
**Distribution:** Indo-West Pacific; first record for Australia
**Reference:** Castro et al. (2003) [photo below]
Superfamily Raninoidea

Raninidae

Of five species, four were well-known Australia species (Goeke, 1985; Dawson and Yaldwyn, 2000). The fifth was a species known previously from Japan-Philippines and now recorded from WA.

Cosmonotus grayi Adams & White, 1848
MoV sp. 5293
Records: 2 specimens, 20°59’S–27°48’S, 100–123 m
Distribution: Indo-West Pacific including NW Australia; first record for S WA
Reference: Sakai (1976: pl. 20, fig. 3) [photo below]

Lyreus tridentatus De Haan, 1841
MoV sp. 5295
Records: 17 specimens, 21°00’S–31°55’S, 201–414 m ✓
Distribution: Indo-West Pacific including Australia
Reference: Goeke (1985) [photo right]

Lyreus stenops Wood Mason, 1887
MoV sp. 5140
Records: 4 specimens, 21°58.41’S–22°4.28’S, 101–177 m ✓
Distribution: West Pacific; new record for Australia
Reference: Goeke (1985) [photo right]

Notosceles serratifrons (Henderson, 1893)
MoV sp. 5294
Records: 21 specimens, 21°58’S–27°48’S, 106–166 m
Distribution: Indian Ocean including WA
Decapod Crustacea of the continental margin of southwestern and central Western Australia

Section Eubrachyura

Subsection Heterotremata

Superfamily Aethroidea

Aethridae

Two species previously treated as members of Leucosiidae (Davie, 2002) were identified with reference to Alcock (1895), Miers (1876) and Griffin (1972). Both were found further south than hitherto known.

Actaeomorpha erosa Miers, 1877
MoV sp. 5061
Records: 1 specimen, 27°48’S, 98 m
Distribution: Indo-West Pacific including Qld and N WA; new record for S WA
Reference: Miers (1876), Alcock (1895) [photo below]

Drachiella sculpta (Haswell, 1879)
MoV sp. 5060
Records: 4 specimens, 20°59’S–21°59’S, 100–166 m
Distribution: N Australia; new record for S WA, here to greater depths than previously
Reference: Griffin (1972) [photo below]
Superfamily Calappoidea

Calappidae

Six species in two genera were found and identified using two papers by Galil (1993; 1997). One species could not be identified and another appeared a new Australian record. Three species are new for WA.

**Calappa depressa** Miers, 1886  
MoV sp. 5016  
**Records:** 7 specimens, 22°50´S–29°48´S, 95–114 m  
**Distribution:** Indo-West Pacific including Australia  
**Reference:** Galil (1997) [photos below]

**Calappa lophos** (Herbst, 1785)  
MoV sp. 5017  
**Records:** 3 specimens, 20°59´S–22°04´S, 100–107 m  
**Distribution:** Indo-West Pacific including Australia  
**Reference:** Galil (1997) [photos below]

**Calappa pustulosa** Alcock, 1896  
MoV sp. 5018  
**Records:** 7 specimens, 20°59´S–22°04´S, 100–177 m  
**Distribution:** West Pacific; new record for Australia  
**Reference:** Galil (1997) [photos below]

**Mursia microspina** Davie & Short, 1989  
MoV sp. 5019  
**Records:** 3 specimens, 24°37´S–25°55´S, 100–120 m  
**Distribution:** West Pacific including NE Australia; new record for WA  
**Reference:** Galil (1997) [photos below]

**Mursia australiensis** Campbell, 1971  
MoV sp. 5020  
**Records:** 1 specimens, 31°36´S, 329–370 m  
**Distribution:** E Australia; new record for WA  
**Reference:** Galil (1993) [photos upper right]
Superfamily Cancroidea

Atelecyclidae
Two species, both apparently undescribed were recorded. They could not be identified using Salva and Feldmann (2001).

*Trichopeltarion* sp. MoV 5135

*Records:* 40 specimens, 27°48´S–35°13´S, 364–494 m

*Distribution:* new species different from those recorded from Tas. Seamounts

*Reference:* Poore et al. (1998) [photo below]

Superfamily Carpilioidea

Carpiliidae
A single species was recognised.

*Carpilus convexus* (Forskål, 1775)

MoV sp. 5080

*Records:* 1 specimen, 21°56´S, 134–132 m

*Distribution:* Indo-West Pacific including N Australia; new record for S WA


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*Trichopeltarion* sp. MoV 5138

Mov sp. 5138

*Records:* 3 specimens, 28°59´S–35°04´S, 378–407 m

*Distribution:* new species similar to *T. wardi* Dell, 1968

*Reference:* Dell (1968) [photo below]
Superfamily Corystoidea

Corystidae

One of the two species (if correctly identified) is a new Australian record for a species previously described from Taiwan (Ng et al., 2000).

Gomeza bicornis Gray, 1831
MoV sp. 5022
Records: 1 specimen, 25°54´S, 100 m ✓
Distribution: Indo-West Pacific including S Australia
Reference: Hale (Hale, 1927)

Jonas cf. choprai Serène, 1971
MoV sp. 5021
Records: 3 specimens, 25°55´S–27°48´S, 123–112 m
Distribution: possible new species similar to J. choprai from Taiwan
Reference: Ng et al.(2000) [photo below]

Superfamily Dorippoidea

Dorippidae

All three species were identified to genus using Manning and Holthuis (1981).

Dorippe quadridens (Fabricius, 1793)
MoV sp. 5026
Records: 1 specimen, 22°04´S, 102 m ✓
Distribution: Indo-West Pacific including Australia
Reference: Holthuis and Manning (1990)

Neodorippe callida Fabricius, 1798
MoV sp. 5027
Records: 1 specimen, 25°54´S, 100 m ✓
Distribution: Indo-West Pacific; new record for Australia (also known from Qld)
Reference: Holthuis and Manning (1990)

Paradorippe australiensis (Miers, 1884)
MoV sp. 5028
Records: 3 specimens, 24°37´S–25°54´S, 100–120 m ✓
Distribution: N Australia and W Papua; first record for S WA
Reference: Holthuis and Manning (1990),
**Ethusidae**

Four species were found but only one was tentatively identified using the keys and illustrations of Chen (1993). All are probable new species. The species of the family were previous treated as members of Dorippidae.

*Ethusa* cf. *granulosa* Ihle, 1916
MoV sp. 5006
*Records*: 2 specimens, 27°48´S–27°48´S, 112–436 m
*Distribution*: new species
*Reference*: Chen (1993: key)

*Ethusa* sp. MoV 5007
*Records*: 7 specimens, 21°56´S–31°43´S, (102) 848–1050 m
*Distribution*: new species
*Reference*: Chen (1993: key)

*Ethusa* sp. MoV 5008
*Records*: 1 specimen, 21°58´S, 726–732 m
*Distribution*: new species
*Reference*: Chen (1993: key)

*Ethusina* sp. MoV 5005
*Records*: 1 specimen, 31°58´S, 848–1050 m
*Distribution*: new species
*Reference*: Chen (1993: key) [photo below]

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**Superfamily Eriphioidea**

**Hypothalassiidae**

The only records are probable juveniles of a large commercially exploited species (Koh and Ng, 2000). The genus was placed in Eriphiidae by Poore (2004) and other authors.

*Hypothalassia acerba* Koh & Ng, 2000
MoV sp. 5114
*Records*: 2 specimens, 31°37´S–35°22´S, 195–210 m
*Distribution*: S Australia
*Reference*: Koh and Ng (2000) [photo below]
Superfamily Goneplacoidea

Chasmocarcinidae
Two species of *Camatopsis* and one of *Megaesthesius* were identified using Tesch (1918) and included in this family (rather than Goneplacidae) on the basis of arguments in Ng (1987).

*Camatopsis rubida* Alcock & Anderson, 1899
MoV sp. 5084
Records: 8 specimens, 21°58´S–22°04´S, 101–399 m
Distribution: Indo-West Pacific; new record for Australia
Reference: Sakai (1976)

*Camatopsis* sp. MoV 5086
Records: 1 specimen, 21°58´S, 373–382 m
Distribution: new species
References: Sakai (1976), Tesch (1918)

*Megaesthesius sagaedae* Rathbun, 1909
MoV sp. 5092
Records: 1 specimen, 22°04´S, 106–101 m
Distribution: Singapore; first record for Australia
Reference: Tesch (1918)

Euryplacidae
Both species are probable new species of *Heteroplax*. The genus has previously been included in Goneplacidae but we follow Ng et al. (2008) in placing them in Euryplacidae.

*Heteroplax* sp. MoV 4993
Records: 12 specimens, 22°04´S–27°55´S, 206–253 m
Distribution: new species
References: Sakai (1976), Tesch (1918)

*Heteroplax* sp. MoV 4994
Records: many specimens, 21°59´S–22°02´S, 105–206 m
Distribution: new species
References: Sakai (1976), Tesch (1918) [photo below]
Goneplacidae

The systematics of Goneplacidae and related families are difficult. Some species initially placed in this family were reassigned to other families (Chasmocarcinidae, Euryplacidae and Mathildellidae) on the basis of the arguments in Ng and Manuel-Santos (2007) and Ng (1987). Castro (2007) provided a key to genera of Goneplacinae, a subfamily used as a family here, but not all species could be identified confidently to genus or species.

Carcinoplax sp. MoV 4996
Records: 1 specimen, 21º59’S, 166 m
Distribution: new species
Reference: Guinot (1989)

Carcinoplax sp. MoV 4998
Records: 6 specimens, 27º48’S–35º22’S, 416–695 m
Distribution: new species
Reference: Guinot (1989)

Notonyx nitidus Milne Edwards, 1873
MoV sp. 5088
Records: 2 specimens, 22º51’S–22º02’S, 100–105 m
Distribution: West Pacific; first record for Australia
Reference: Clark and Ng (2006) [photo below]

Psopheticus stridulans Wood-Mason, 1892
MoV sp. 5032
Records: 23 specimens, 21º58’S–33º00’S, 373–423 m
Distribution: Indo-West Pacific; first record for Australia
Reference: Sakai (1976) [photo below]

Pycnoplax hispinosa (Rathbun, 1914)
MoV sp. 4991
Records: 18 specimens, 21º58’S–22º04’S, 170–206 m
Distribution: first record for Australia

Pycnoplax meridionalis (Rathbun, 1923)
MoV sp. 3862
Records: 7 specimens, 31º37’S–35º23’S, 147–776 m
Distribution: S Australia

Pycnoplax victoriensis (Rathbun, 1923)
MoV sp. 5031
Records: 3 specimens, 28º59’S–35º21’S, 389–704 m
Distribution: SE Australia; first record for S WA

Pycnoplax cf. surugensis (Rathbun, 1932)
MoV sp. 4992
Records: 14 specimens, 21º55’S–31º57’S, 848–1295 m
Distribution: probable new species close to Japanese species

Pycnoplax sp. MoV 5124
Records: 1 specimen, 21º59’S, 166 m
Distribution: new species
Reference: Guinot (1989)
Mathildellidae

Two species previously considered members of Goneplacidae were found. Family placement follows Ng et al. (2008).

**Mathildella serrata** (Sakai, 1974)

MoV sp. 5112

**Records:** 13 specimens, 27°55´S–35°22´S, 205–915 m ✓

**Distribution:** West Pacific; new record for Australia, also known from SE Australia

**Reference:** Ng and Chan (2000) [photo below]

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**Platypilumnus soelae** Garth, 1987

MoV sp. 5033

**Records:** 2 specimens, 21°58´S, 356–324 m

**Distribution:** N WA; first record for S WA

**Reference:** drawing from Garth (1987)

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**Mathildellid** sp. MoV 4997

**Records:** 1 specimen, 31°58´S, 848–1050 m

**Distribution:** juvenile of new species difficult to place in genus; may belong in Goneplacidae

**Reference:** Tesch (1918) [photo below]

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Superfamily Hexapodidae

Hexapodidae

The only species has been recorded before only from Japan to Indonesia (Manning and Holthuis, 1981).

**Hexaplax megalops** Dolflein, 1904

MoV sp. 5034

**Records:** 11 specimens, 21°00´S–22°04´S, 387–408 m ✓

**Distribution:** West Pacific; new record for Australia

**References:** Manning and Holthuis (1981: key), Sakai (1976) [photo below]
Superfamily Leucosioidea

Iphiculidae

The single species was previously treated as a member of Leucosiidae. It is a new record for Australia.

**Iphiculus spongiosus** Adams & White, 1848

*MoV* sp. 5113

*Records:* 10 specimens, 20°59′S–22°04′S, 100–107 m

*Distribution:* Indo-West Pacific; new record for Australia

*Reference:* Chen (1989)

Leucosiidae

Numerous species are known from Australia but not all in these samples could be identified to species. The Western Australian fauna was reviewed by Tyndale-Biscoe and George (1962). Tentative identifications were made using names of species described from more northern parts of the West Pacific.

The family was represented by 30 species (many in just one sample) in ten genera. For some genera the literature is scattered but Alcock (1895) and Sakai (1976) are useful to identify genera. Chen (1989), Tan and Ng (1996) and Tan (1996) included similar or the same species. Thirteen species are new (42%) and four are new records for Australia.

**Arcania cornuta** (MacGillchrist, 1905)

*MoV* sp. 5045

*Records:* 4 specimens, 21°58′S–25°55′S, 120–177 m

*Distribution:* Indo-West Pacific including Qld; new record for WA

*References:* Chen (1989), Galil (2001a) [photo below]

**Arcania elongata** Yokoya, 1933

*MoV* sp. 5042

*Records:* 3 specimens, 21°59′S–30°59′S, 100–166 m

*Distribution:* Japan, Qld, NSW; first record for WA

*Reference:* Galil (2001a) [photo below]

**Arcania gracilis** (Henderson, 1893)

*MoV* sp. 5047

*Records:* 4 specimens, 20°59′S–21°59′S, 100–166 m

*Distribution:* Indo-West Pacific including WA; first record for S WA

*Reference:* Galil (2001a)
Arcania muricata Galil, 2001
MoV sp. 5046
Records: 4 specimens, 20°59´S–21°58´S, 100–177 m
Distribution: Indo-West Pacific including NT; first record for S WA
Reference: Galil (2001a) [photo below]

Arcania novemspinosa (Adams & White, 1849)
MoV sp. 5043
Records: 1 specimen, 25°55´S, 120 m
Distribution: Indo-West Pacific including WA
Reference: Galil (2001a) [photo below]

Arcania septemspinosa (Fabricius, 1787)
MoV sp. 5044
Records: 7 specimens, 20°59´S–22°04´S, 100–177 m
Distribution: Indo-West Pacific including NT, Qld; new record for WA
Reference: Galil (2001a) [photo below]

Arcania sp. MoV 4980
Records: 3 specimens, 27°48´S–29°48´S, 96–114 m
Distribution: new species like A. sagamiensis from Japan
Reference: Galil (2001a) [photo below]

Arcania sp. MoV 4987
Records: 2 specimens, 22°50´S–24°37´S, 100 m
Distribution: new species like A. septemspinosa
Reference: Galil (2001a) [photo below]

Ebalia tuberculosa (Milne Edwards, 1873)
MoV sp. 0710
Records: many specimens, 21°59´S–35°22´S, 212–539 m
Distribution: Indo-West Pacific including Australia
**Ebalia** sp. MoV 4981  
**Records:** 6 specimens, 22°50´S–24°01 ´S, 100 m  
**Distribution:** new species like *E. dimorphoides*  
**Reference:** Chen (1989) [photo below]

**Ebalia** sp. MoV 4989  
**Records:** 3 specimens, 20°59´S–21°58´S, 100–107 m  
**Distribution:** new species  
**Reference:** Chen (1989) [photo below]

**Ebalia** sp. MoV 4990  
**Records:** 1 specimen, 28°59´S, 180–183 m  
**Distribution:** new species  

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**Leucosia haematosticta** Adams & White, 1849  
MoV sp. 5053  
**Records:** 1 specimen, 25°54´S, 100 m  
**Distribution:** Indo-West Pacific including Australia; new record for S WA  
**Reference:** Poore (2004) [photo below]

**Leucosia ocellata** Bell, 1855  
MoV sp. 5064  
**Records:** 1 specimen, 21°58´S, 177–170 m  
**Distribution:** N Australia; new record for S WA  
**Reference:** Campbell and Stephenson (1970) [photo below]
**Leucosia whitei** Bell, 1855  
MoV sp. 5052  
Records: 1 specimen, 20°59’S, 100 m  
Distribution: Indo-West Pacific including Australia  
Reference: Arnold and George (1987) [photo below]

**Leucosia** sp. MoV 4985  
Records: 1 specimen, 22°04’S, 102 m  
Distribution: new species like *L. foresti*  
Reference: Chen (1989) [photo below]

**Merocryptus lambriformis** Milne Edwards, 1873  
MoV sp. 3864  
Records: 6 specimens, 35°20’S–35°22’S, 161–213 m  
Distribution: West Pacific including Australia  
Reference: Poore (2004) [photo below]

**Myra curtimana** Galil, 2001  
MoV sp. 5050  
Records: 15 specimens, 21°57’S–35°25’S, 100–1031 m  
Distribution: West Pacific including WA  
Reference: Galil (2001b) [photo below]

**Myra** sp. MoV 4983  
Records: 3 specimens, 20°59’S, 100 m  
Distribution: new species  
Reference: Galil (2001b) [photo below]
Decapod Crustacea of the continental margin of southwestern and central Western Australia

**Myrine kessleri** (Paulson, 1875)
MoV sp. 5051
*Records*: 2 specimens, 20°59´S–21°57´S, 100–114 m
*Distribution*: Indo-West Pacific including N Australia; first record for S WA
*Reference*: Galil (2001b) [photo below]

**Oreophorus reticulatus** Adams & White, 1849
MoV sp. 5062
*Records*: 2 specimens, 20°59´S–27°48´S, 100–123 m
*Distribution*: Indo-West Pacific; new record for Australia
*Reference*: Tan and Ng (1996) [photo below]

**Parilia major** Sakai, 1961
MoV sp. 5055
*Records*: 1 specimen, 22°04´S, 396–391 m
*Distribution*: Japan; new record for Australia (doubtful identification)
*Reference*: Sakai (1976) [photo below]

**Philyra** sp. MoV 4984
*Records*: 1 specimen, 24°01´S, 100 m
*Distribution*: new species
*Reference*: Poore (2004) [photo below]

**Randallia eburnea** Alcock, 1896
MoV sp. 5048
*Records*: 16 specimens, 21°59´S–35°21´S, 100–404 m
*Distribution*: Indo-West Pacific including Australia
*Reference*: Chen (1989) [photo below]

**Randallia pustuloides** Sakai, 1961
MoV sp. 5049
*Records*: 2 specimens, 21°58´S, 373–382 m
*Distribution*: Japan, Philippines; new record for Australia
*Reference*: Chen (1989) [photo below]

**Randallia sp.** MoV 4977
*Records*: 1 specimen, 22°37´S, 355–382 m
*Distribution*: new species
*Reference*: Chen (1989) [photo next page]
Randallia sp. MoV 4978
Records: 40 specimens, 20°59’S–27°48’S, 100–166 m
Distribution: new species
Reference: Chen (1989) [photo below]

Randallia sp. MoV 4979
Records: 1 specimen, 21°58’S, 107 m
Distribution: new species
Reference: Chen (1989)

Randallia sp. MoV 4986
Records: 1 specimen, 21°59’S, 166 m
Distribution: new species similar to R. speciosa
Reference: Chen (1989)

Superfamily Majoidea

Epialtidae

The family name Epialtidae is used to include what were previously treated as subfamilies Epialtinae and Pisinae of Majidae. We follow the arrangement of Ng et al. (2008). Taxonomy follows Griffin and Tranter (1986) who reviewed the fauna and provided keys to Majidae in the broadest sense. Reference to older and more recent papers was required for some genera (Griffin, 1970, 1973; Guinot and Richer de Forges, 1982, 1985). The 14 species include several new records, one from Australia, and three new species under study by B. Richer de Forges.

Austrolibinia gracilipes (Miers, 1879)
MoV sp. 5162
Records: 4 specimens, 20°59’S, 100 m
Distribution: Indonesia, PNG, N Australia; first record for S WA
Reference: Miers (1879: pl. 4, fig. 4) [photo below]

Griffinia lappacea (Rathbun, 1918)
MoV sp. 5173
Records: 1 specimen, 34°00’S, 467–490 m
Distribution: Australia
Reference: Griffin and Tranter (1986) [photo below]
Hyastenus convexus Miers, 1884
MoV sp. 5169
Records: 24 specimens, 20°59’S–28°58’S, 95–120 m
Distribution: Indo-West Pacific, N Australia; first record for S WA
Reference: Griffin and Tranter (1986) [photo below]

Lahaina agassizii (Rathbun, 1902)
MoV sp. 5172
Records: 18 specimens, 22°50’S–33°58’S, 96–100 m
Distribution: Indo-West Pacific including Australia
Reference: Griffin and Tranter (1986) [photo below]

Naxioides robillardi (Miers, 1882)
MoV sp. 5174
Records: 1 specimen, 21°58’S, 177–170 m
Distribution: Indo-West Pacific including E Australia; first record for WA
Reference: Poore (2004) [photo below]

Naxioides taurus (Pocock, 1890)
MoV sp. 5165
Records: 1 specimen, 21°01’S, 93 m
Distribution: Indo-West Pacific including N Australia; first record for WA
Reference: Griffin and Tranter (1986) [photo upper right]

Naxioides tenuirostris (Haswell, 1880)
MoV sp. 5164
Records: 1 specimen, 27°55’S, 253 m
Distribution: Indo-West Pacific including N Australia; first record for WA
Reference: Griffin and Tranter (1986) [photo below]

Phalangipus filiformis Rathbun, 1916
MoV sp. 5160
Records: 2 specimens, 20°59’S–22°4’S, 100 m
Distribution: Indo-West Pacific including N Australia; first record for S WA
Reference: Griffin (1973) [photo below]
**Phalangius hystrix** (Miers, 1884)
MoV sp. 5161
Records: 27 specimens, 21°58’S–27°48’S, 100–166 m
Distribution: Indo-West Pacific including WA
Reference: Griffin (1973) [photos below]

**Rochinia aff. luzonica** (Rathbun, 1916)
MoV sp. 5168
Records: 5 specimens, 29°00’S–31°37’S, 329–439 m
Distribution: new species
Reference: Griffin (1976) [photo below]

**Rochinia fultoni** (Grant, 1905)
MoV sp. 3895
Records: 1 specimen, 27°55’S, 253 m
Distribution: SE Australia; first record for WA
Reference: Poore (2004) [photo below]

**Rochinia strangeri** Serène & Lohavanijaya, 1973
MoV sp. 5538
Records: 1 specimens, 29°3.39’S, 1000–1037 m
Distribution: S China Sea; first record for Australia
Reference: Serène and Lohavanijay (1973) (det. B. Richer de Forges)

**Rochinia sp. MoV 5119**
Records: numerous specimens, 29°52’S–3504’S, 329–414 m
Distribution: new species
Reference: Griffin and Tranter (1986)

**Rochinia sp. MoV 5136**
Records: 3 specimens, 21°58’S–23°59’S, 324–411 m
Distribution: new species close to “Sphenocarcinus carbunculus” Rathbun, 1906” from Hawaii
Reference: Rathbun (1906)

**Epialtid sp. MoV 5134**
Records: 1 specimen, 33°58’S, 96 m
Distribution: new species, genus uncertain, possibly *Thycanophrys*
Reference: Griffin and Tranter (1986) [photo below]
Hymenosomatidae

One of the two species could not be identified beyond genus from Lucas (1980) or Ng and Chuang (1996).

**Halicarcinus** sp. MoV 5002
*Records:* 3 specimens, 28°58´S–35°10´S, 86–107 m
*Distribution:* new species
*References:* Lucas (1980), Ng and Chuang (1996) [photo below]

Trigonoplax longirostris McCulloch, 1908
*MoV sp. 1678
Records:* 1 specimen, 31°43´S, 102 m
*Distribution:* Australia; recorded at depth
*Reference:* Lucas (1980) [photo below]

Inachidae

The Inachidae were treated as a subfamily of Majidae in earlier literature but are elevated to family rank in this report as advocated by Ng et al. (2008). Taxonomy follows Griffin and Tranter (1986) who reviewed the fauna and provided keys to Majidae in the broadest sense. Inachidae include 20 species of which two are new and three are new Australian records. Reference to older and more recent papers was required for some genera (Griffin, 1970, 1973).

**Achaeus brevirostris** (Haswell, 1879)
*MoV sp. 5347
Records:* 3 specimens, 21°58´S–27°48´S, 100–123 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Griffin and Tranter (1986) [photo below]

**Achaeus curvirostris** (Milne Edwards, 1873)
*MoV sp. 3851
Records:* 4 specimens, 27°48´S–33°02´S, 95–123 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Griffin and Tranter (1986) [photo below]

**Achaeus lacertosus** Stimpson, 1857
*MoV sp. 5150
Records:* 4 specimens, 21°58´S–27°48´S, 100–123 m
*Distribution:* Indo-West Pacific including Australia; new record for S WA
*Reference:* Griffin and Tranter (1986)

**Achaeus** sp. MoV 5122
*Records:* 2 specimens, 22°50´S–27°48´S, 123–100 m
*Distribution:* new species
*Reference:* Griffin and Tranter (1986)
**Achaeus** sp. MoV 5123  
*Records:* 3 specimens, 27°48.29’S, 123–112 m  
*Distribution:* recorded as undescribed species by Griffin  
*Reference:* Griffin (1970)

**Camposcia retusa** Latreille, 1829  
MoV sp. 5151  
*Records:* 1 specimens, 31°43.28’S, 102 m  
*Distribution:* Indo-West Pacific including Australia; new record for S WA  
*Reference:* Griffin and Tranter (1986) [photo below]

**Cyrtomaia maccullochi** Rathbun, 1918  
MoV sp. 5146  
*Records:* 34 specimens, 27°08’S–35°12’S, 378–728 m  
*Distribution:* Indo-West Pacific including Australia  
*Reference:* Griffin and Tranter (1986) [photo below]

**Cyrtomaia murrayi** Miers, 1886  
MoV sp. 5147  
*Records:* 3 specimens, 27°55’S–31°37’S, 252–404 m  
*Distribution:* Indo-West Pacific including Australia  
*Reference:* Griffin and Tranter (1986) [photo upper right]

**Dorhynchus ramusculus** (Baker, 1906)  
MoV sp. 5159  
*Records:* 10 specimens, 29°52.04’S–35°21.53’S, 212–490 m  
*Distribution:* New Zealand, S Australia  
*References:* Poore (2004) [photo below]

**Dumea latipes** (Haswell, 1880)  
MoV sp. 1338  
*Records:* 3 specimens, 31°43’S, 102 m  
*Distribution:* S Australia  

**Ephippias endeavouri** Rathbun, 1918  
MoV sp. 5158  
*Records:* 4 specimens, 31°43’S–35°22’S, 102–196 m  
*Distribution:* SE and SW Australia  
*References:* Poore (2004) [photo below]
**Grypachaeus hyalinus** Alcock & Anderson, 1894

MoV sp. 5148

*Records:* 2 specimens, 20°59.05′S–24°01′S, 100 m

*Distribution:* Indian Ocean, new Australian record

*References:* Griffin and Tranter (1986) [photo below]

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**Oncinopus aranea** De Haan, 1839

MoV sp. 5154

*Records:* 1 specimen, 27°08′S, 414–405 m

*Distribution:* W Pacific, including Australia

*References:* Poore (2004) [photo below]

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**Oncinopus cf. angustifrons** Takeda & Miyake, 1969

MoV sp. 5120

*Records:* 3 specimens, 24°01′S–31°43′S, 100–183 m

*Distribution:* Japan, Phillipines, new Australian record if correctly identified

*References:* Griffin and Tranter (1986) [photo below]

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**Physachaeus ctenurus** Alcock, 1895

MoV sp. 5149

*Records:* 56 specimens, 29°52′S–35°21′S, 364–528 m

*Distribution:* Andaman Sea, new Australian record

*References:* Andaman Sea, new Australian record

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**Platymaia wyvillethomsoni** Miers, 1886

MoV sp. 5157

*Records:* 24 specimens, 23°59′S–35°12′S, 364–431m

*Distribution:* West Pacific, Australia

*References:* Guinot and Richer de Forges (1985) [photo below]

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**Oncinopus neptunus** Adams & White, 1848

MoV sp. 5155

*Records:* 6 specimens, 24°37′S–31°43′S, 95–100 m

*Distribution:* Indo-West Pacific, including Australia

*References:* Poore (2004) [photo upper right]
Platymaia fimbriata Rathbun, 1916
MoV sp. 5156
Records: 1 specimen, 21°58´S, 726–732 m
Distribution: West Pacific, Australia
References: Guinot and Richer de Forges (1985)

Sunipea indicus (Alcock, 1895)
MoV sp. 5171
Records: 14 specimens, 22°51´S–29°48´S, 85–123m
Distribution: Andaman Sea, new Australian record
References: Griffin and Tranter (1986) [photo below]

Majidae
The family name Majidae is used in this report in the narrow sense advocated by Ng et al. (2008). The subfamilies used by, for example Davie (2002), are treated as families: Epialtinae and Pisinae together as Epialtidae; Planoterginae and Majinae as Majidae; and Inachinae as Inachidae. Taxonomy follows Griffin and Tranter (1986) who reviewed the fauna and provided keys to Majidae in the broadest sense. Forty-eight species of majids in the broadest sense were recognised of which 14 belong to Majidae s. s. Five species are new records of Indo-West Pacific species in Australia and four are new species.

Entomonyx depressus Sakai, 1974
MoV sp. 5167
Records: 5 specimens, 22°50´S, 100 m
Distribution: Japan; new record for Australia
Reference: Griffin and Tranter (1986) [photo below]

Entomonyx spinosus Miers, 1884
MoV sp. 5166
Records: 13 specimens, 22°50´S–35°21´S, 100–179 m
Distribution: Indo-West Pacific including N WA; first record for S WA
Reference: Griffin and Tranter (1986) [photo below]
Leptomithrax globifer Rathbun, 1918
MoV sp. 5144
Records: 17 specimens, 35°37’S–35°22’S, 99–196 m
Distribution: S Australia; first positive record for S WA
Reference: Poore (2004) [photo below]

Leptomithrax sternocostulatus (Milne Edwards, 1851)
MoV sp. 0703
Records: 5 specimens, 28°58’S–35°37’S, 86–106 m
Distribution: S Australia
Reference: Poore (2004) [photo below]

Leptomithrax sp. MoV 5133
Records: 1 specimen, 27°48’S, 123–112 m
Distribution: new species
Reference: Griffin and Tranter (1986) [photo upper right]

Leptomithrax sp. MoV 5121
Records: 3 specimens, 28°39’S–34°49’S, 50–232 m
Distribution: new species
Reference: Griffin and Tranter (1986) [photo below]

Maja confragosa Griffin & Tranter, 1986
MoV sp. 5152
Records: 1 specimen, 22°37’S, 355–382 m
Distribution: Indonesia; new record for Australia
Reference: Griffin and Tranter (1986) [photo below]
Maja gibba Alcock, 1895  
MoV sp. 5145  
Records: 1 specimen, 22°37´S, 355–382 m  
Distribution: West Pacific; first record for Australia  
Reference: Griffin and Tranter (1986) [photo below]

Maja suluensis Rathbun, 1916  
MoV sp. 5143  
Records: 1 specimen, 24°02´S, 100 m  
Distribution: Indonesia; first record for Australia  
Reference: Griffin and Tranter (1986) [photo below]

Planotergum mirabile Balss, 1935  
MoV sp. 5153  
Records: 1 specimen, 28°58´S, 85 m ✓  
Distribution: Indo-West Pacific including Australia  
Reference: Davie (2002) [photo upper right]

Prismatopus brevispinosus Yokoya, 1933  
MoV sp. 5298  
Records: 5 specimens, 31°36´S, 329–370 m  
Distribution: Japan; first record for Australia  
Reference: Sakai (1976: 251) [photo below]

Prismatopus occidentalis Griffin, 1970  
MoV sp. 5163  
Records: 12 specimens, 27°55´S–35°20´S, 179–253 m  
Distribution: WA endemic  
Reference: Poore (2004) [photo below]
**Prismatopus** sp. MoV 5125  
*Records:* 1 specimen, 24°37' S, 100 m  
*Distribution:* new species  
*Reference:* Griffin and Tranter (1986) [photo below]

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**Superfamily Palicoidea**

**Palicidae**

In spite of the recent thorough study by Castro (2000), two of the five species could not be confidently identified beyond genus.

**Micropalicus vietnamensis** (Zarenkov, 1968)  
MoV sp. 5058  
*Records:* 5 specimens, 21°58'–22°00' S, 170–754 m  
*Distribution:* West Pacific, NW Australia  
*References:* Castro and Davie (2003) [photo below]

**Neopalicus jukesii** (White, 1847)  
MoV sp. 5000  
*Records:* 1 specimen, 27°48' S, 123–112 m  
*Distribution:* West Pacific, NW Australia  
*References:* Castro and Davie (2003)

**Paliculus kyusyuensis** (Yokoya, 1933)  
MoV sp. 5057  
*Records:* 5 specimens, 23°59'–24°33' S, 388–412 m  
*Distribution:* Indo-West Pacific, Qld, Australia  
*References:* Castro and Davie (2003)

**Parapalicus** sp. MoV 4999  
*Records:* 25 specimens, 20°59'–22°04' S, 100–177 m  
*Distribution:* new species  
*References:* Castro (2000) [photo below]
**Pseudopalicus macromeles** Castro, 2000  
MoV sp. 5056  
*Records:* 10 specimens, 27°55’S–35°20’S, 194–252 m  
*Distribution:* Australia  
*References:* Castro (2000) [photo below]

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**Superfamily Parthenopoidea**

**Parthenopidae**

Nine species were collected, of which only three could be confidently identified. Generic placement was made with reference to Sakai (1976) whose keys reflect those in Flipse (1930). Species identifications referred to Ng (1996), Garth and Davie (1995), Davie and Turner (1994) and Ahyong (2008).

**Aulacolambrus** sp. MoV 5014  
*Records:* 2 specimens, 20°59’S, 100 m  
*Distribution:* new species like *A. sibogae*  
*Reference:* Flipse (1930)

**Garthambrus** cf. *lacunosa* (Rathbun, 1906)  
MoV sp. 5011  
*Records:* 1 specimen, 31°36’S, 329–370 m  
*Distribution:* new species close to Hawaiian *G. lacunosa* and *G. tani* Ahyong, 2008  
*References:* Ng (1996), Ahyong (2008)

**Garthambrus** cf. *stellatus* (Rathbun, 1906)  
MoV sp. 5063  
*Records:* 1 specimen, 22°37’S, 355–382 m  
*Distribution:* identification of Hawaiian species uncertain  
*Reference:* Ng (1996) [photo below]

**Parthenope chondrodes** Davie & Turner, 1994  
MoV sp. 5010  
*Records:* 7 specimens, 20°59’S–25°55’S, 100–120 m  
*Distribution:* WA; new record for S WA  
*Reference:* Davie and Turner (1994) [photo below]
Platylambrus validus De Haan, 1837
MoV sp. 5065
Records: 2 specimens, 21°59′ S–31°55′ S, 165–232 m
Distribution: West Pacific including NE Australia; first record for WA
Reference: Campbell and Stephenson (1970)

Pseudolambrus sp. MoV 5009
Records: 18 specimens, 22°50′ S–27°48′ S, 123–100 m
Distribution: new species like P. beaumontii
Reference: Sakai (1976: 276, key)

Rhinolambrus sp. MoV 5012
Records: 1 specimen, 27°48′ S, 123–112 m
Distribution: new species like R. spinifer
Reference: Flipse (1930)

Thyrolambrus excavatus Baker, 1905
MoV sp. 5064
Records: 8 specimens, 27°48′ S–35°10′ S, 85–169 m
Distribution: S Australia; new record for WA
Reference: Baker (1905) [photo below]

Parthenopid sp. MoV 5015
Records: 2 specimens, 35°11′ S, 157–147 m
Distribution: new species not readily assigned to genus
Reference: Flipse (1930)

Superfamily Pilumnoidea

Pilumnidae
Three subfamilies were represented by 21 species. Half (ten species) are probably new species. Genera are listed alphabetically and subfamily names appear after species names.

Subfamily Eumedoninae was represented by one well-known species.

Subfamily Pilumninae included 15 species of which seven could be provisionally identified by P. Davie. Five are new records for WA. Where no reference is given, identification relies on P. Davie’s unpublished notes.

Subfamily Rhizopinae was represented by five species, two identifiable to species but neither previously recorded from Australia (Tesch, 1918; Ng, 1987).

Bathypilumnus pugilator (Milne Edwards, 1873) (Pilumninae)
MoV sp. 5095
Records: 2 specimens, 24°01′ S, 100 m
Distribution: New Caledonia, Qld; first record for WA

Caecopilumnus piroculatus (Rathbun, 1911) (Rhizopinae)
MoV sp. 5090
Records: 1 specimen, 27°48′ S, 98 m
Distribution: Indonesia; first record for Australia

Cryptolutea arafurensis Davie & Humpherys, 1997 (Rhizopinae)
MoV sp. 5085
Records: 1 specimen, 22°04′ S, 106–101 m
Distribution: N Australia; first record for S WA
Reference: Davie and Humpherys (1997)

Eumedonus niger Milne Edwards, 1834 (Eumedoninae)
MoV sp. 5111
Records: 2 specimens, 27°03′ S–27°48′ S, 106–123 m
Distribution: West Pacific including Australia
Reference: Chia and Ng (2000) [photo below]
**Heteropilumnus** *sp.* MoV 5101 (Rhizopinae)

*Records:* 3 specimens, 25°54’S–35°22’S, 100–196 m ✓

*Distribution:* new species

*Reference:* Ng (1987)

**Lophoplax** *sp.* MoV 5105 (Pilumninae)

*Records:* 1 specimen, 21°01’S, 93 m

*Distribution:* synonymous with a new genus and species from N Australia (P. Davie, pers. comm.)

*Reference:* Tesch (1918)

**Mertonia lanka** Laurie, 1906 (Rhizopinae)

MoV sp. 5091

*Records:* 1 specimen, 24°01’S, 100 m

*Distribution:* Indian Ocean; first record for Australia

**Paraselwynia** *sp.* MoV 5089 (Rhizopinae)

*Records:* 1 specimen, 33°58’S, 96 m

*Distribution:* new species, generic assignment problematic

*Reference:* Tesch (1918)

**Pilumnopeus** *sp.* MoV 5106 (Pilumninae)

*Records:* 1 specimen, 22°02’S, 106 m

*Distribution:* new species

**Pilumnus** *cf.* *haswelli* De Man, 1888 (Pilumninae)

MoV sp. 5104

*Records:* 1 specimen, 21°01’S, 93 m

*Distribution:* first record for Australia if correctly identified

**Pilumnus** *cf.* *hirsutus* Stimpson, 1858 (Pilumninae)

MoV sp. 5098

*Records:* 4 specimens, 20°59’S–27°03’S, 100–414 m

*Distribution:* new record for Australia

**Pilumnus kingstoni** (Rathbun, 1923) (Pilumninae)

MoV sp. 5097

*Records:* 8 specimens, 27°55’S–35°22’S, 105–253 m ✓

*Distribution:* S Australia; first record for WA

*Reference:* Poore (2004) [photo below]

**Pilumnus** *cf.* *propinquus* Nobili, 1905 (Pilumninae)

MoV sp. 5297

*Records:* 2 specimens, 25°54’S, 100 m

*Distribution:* new record for Australia

**Pilumnus** *cf.* *schellenbergi* Balss, 1933 (Pilumninae)

MoV sp. 5100

*Records:* 2 specimens, 21°59’S, 166 m

*Distribution:* new record for Australia [photo below]

**Pilumnus** *cf.* *spinicarpus* Grant & McCulloch, 1906 (Pilumninae)

*Records:* 24 specimens, 21°57’S–29°48’S, 100–183 m ✓

*Distribution:* N Australia; new record for S WA if correctly identified [photo below]

**Pilumnus** *sp.* MoV 5094 (Pilumninae)

*Records:* 4 specimens, 20°59’S–28°59’S, 100–183 m ✓

*Distribution:* new species [photo below]

**Pilumnus** *sp.* MoV 5103 (Pilumninae)

*Records:* 1 specimen, 21°59’S, 166 m

*Distribution:* new species

**Pilumnus** *sp.* MoV 5474 (Pilumninae)

*Records:* 1 specimen, 24°37’S, 100 m

*Distribution:* new species
**Pilumnus** sp. MoV 5475 (Pilumninae)
*Records:* 1 specimen, 27°48´S, 123–112 m
*Distribution:* new species

**Pilumnid** sp. MoV 4995 (Pilumninae)
*Records:* 1 specimen, 31°58´S, 848–1050 m
*Distribution:* new species [photo below]

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**Superfamily Portunoidea**

**Portunidae**

Twenty-five species of swimming crabs were found, four not identifiable to species and one probably belonging to a new genus according to V. Spiridonov who examined some specimens. Half of the species are widespread in the Indo-West Pacific but only a few are newly recorded from Australia or WA. Identification was largely possible with reference to Stephenson (1972) and the earlier papers by this author but Wee and Ng (1995) was useful for *Charybdis* in particular and Davie and Crosnier (2006) for a recently described species.

**Charybdis (Charybdis) miles** (De Haan, 1835)
*MoV* sp. 5127
*Records:* 4 specimens, 21°58´S–21°59´S, 165–177 m
*Distribution:* Indo-West Pacific including N and E Australia; first record for WA
*Reference:* Poore (2004) [photo below]

**Charybdis (Goniohellenus) hongkongensis** Shen, 1934
*MoV* sp. 5190
*Records:* 1 specimen, 24°37´S, 100 m
*Distribution:* West Pacific; first record for Australia
*Reference:* Wee and Ng (1995) [photo below]

**Echinolatus poorei** Davie & Crosnier, 2006
*MoV* sp. 5141
*Records:* 22 specimens, 34°53´S–35°22´S, 95–484 m
*Distribution:* S Australia; first record for WA
**Libystes paucidentatus** Stephenson & Campbell, 1960
MoV sp. 5188
*Records:* 1 specimen, 21°58´S, 177–170 m
*Distribution:* New Guinea, Qld; first record for WA
*Reference:* Stephenson (1972) [photo below]

**Liocarcinus corrugatus** (Pennant, 1777)
MoV sp. 5128
*Records:* 10 specimens, 24°37´S–27°48´S, 96–123 m
*Distribution:* Indo-West Pacific including Australia

**Lissocarcinus orbicularis** Dana, 1852
MoV sp. 5441
*Records:* 1 specimen, 22°50´S, 100 m
*Distribution:* Indo-West Pacific including Australia (from gut of holothurian)
*Reference:* Sakai (1976) [photo upper right]

**Lupocyclus philippinensis** Semper, 1880
MoV sp. 5130
*Records:* 14 specimens, 20°59´S–24°37´S, 100–107 m
*Distribution:* Indo-West Pacific including NE Australia; first record for WA
*Reference:* Leene (1940) [photo below]

**Lupocyclus quinquedentatus** Rathbun, 1906
MoV sp. 5142
*Records:* 1 specimen, 25°54´S, 100 m
*Distribution:* West Pacific; first record for Australia
*Reference:* Leene (1940) [photo below]
Lupocyclus sp. aff. tugelae Barnard, 1950
MoV sp. 5185
*Records*: 6 specimens, 21°59´S–27°48´S, 100–166 m
*Distribution*: new species close to *L. tugelae* (Indo-West Pacific including N WA)
*Reference*: Barnard (1950) [photo below]

Nectocarcinus spinifrons Stephenson, 1961
MoV sp. 5129
*Records*: 12 specimens, 24°37´S–33°02´S, 95–102 m
*Distribution*: SW Australia
*Reference*: Poore (2004) [photo below]

Ovalipes elongatus Stephenson & Rees, 1968
MoV sp. 5192
*Records*: 1 specimen, 35°21´S, 91 m
*Distribution*: New Zealand, Lord Howe; first record for WA
*Reference*: Stephenson (1972) [photo upper right]

Ovalipes iridescens (Miers, 1886)
MoV sp. 5132
*Records*: 79 specimens, 22°37´S–27°48´S, 355–1010 m
*Distribution*: Indo-West Pacific including Vic.; first record for WA
*Reference*: Stephenson (1972) [photo below]

Parathranites orientalis (Miers, 1886)
MoV sp. 5031
*Records*: many specimens, 21°59´S–30°59´S, 100–183 m
*Distribution*: Indo-West Pacific including E Australia; first record for WA
*Reference*: Stephenson (1972) [photo next page]
**Parathranites** sp. MoV 5290
*Records:* 7 specimens, 22°50´S, 100 m
*Distribution:* new species? (det. V. Spiridonov) [photo below]

**Portunus aff. argentatus** (Milne Edwards, 1861)
MoV sp. 5287
*Records:* 45 specimens, 21°57´S–22°04´S, 101–107 m
*Distribution:* new species? (det. V. Spiridonov) [photo below]

**Portunus (Monomia) haanii** (Stimpson, 1858)
MoV sp. 5125

**Records:** 18 specimens, 22°04´S–33°58´S, 96–102 (1085) m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Poore (2004) [photo below]

**Portunus (Xiphonectes) hastatoides** Fabricius, 1798
MoV sp. 5189
*Records:* 1 specimen, 21°59´S, 166 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Stephenson (1972) [photo below]

**Portunus (Xiphonectes) longispinosus** (Dana, 1852)
MoV sp. 5191
*Records:* 36 specimens, 22°50´S–24°01´S, 100 m
*Distribution:* Indo-West Pacific including N Australia; first record for WA – a species complex according to Davie
*Reference:* Davie (2002) [photo below]

**Portunus** aff. **orbitosinus** Rathbun, 1911
MoV sp. 5288
*Records:* 1 specimen, 21°58´S, 107 m
*Distribution:* new species? (det. V. Spiridonov) [photo next page]
Portunus nipponensis (Sakai, 1938)
MoV sp. 5126
Records: 1 specimen, 22°50’S, 100 m
Distribution: Japan; first record for WA
Reference: Stephenson (1972) [photo below]

Portunus (Xiphonectes) pulchicristatus (Gordon, 1931)
MoV sp. 5184
Records: many specimens, 20°59’S–21°59’S, 100–166 m
Distribution: Indo-West Pacific including NW Australia; first record for WA
Reference: Davie (2002) [photo upper right]

Thalamita macropus Montgomery, 1931
MoV sp. 5187
Records: 20 specimens, 21°59’S–33°58’S, 85–210 m
Distribution: N Australia
Reference: Poore (2004) [photo below]

Thalamita sexlobata Miers, 1886
MoV sp. 5186
Records: 1 specimen, 27°48’S, 123–112 m
Distribution: Indo-West Pacific including Qld; first record for WA
Reference: Stephenson (1972) [photo below]
**Thalamita spinifera** Borradaile, 1902
MoV sp. 5291
*Records:* 3 specimens, 20°59’S–27°48’S, 100–123 m
*Distribution:* Indo-West Pacific including Cartier Reef; first record for S WA (det. V. Spiridonov)
*Reference:* Short and Davie (1993) [photo below]

**Portunid** sp. MoV 5289
*Records:* 5 specimens, 35°21’S, 91 m
*Distribution:* probable new genus and new species (det. V. Spiridonov) [photo below]

**Superfamily Retroplumidae**

**Retroplumidae**
A single species, doubtfully identified using de Saint Laurent (1989) is the first record of the family from Australia.

**Retropluma cf. quadrata** de Saint Laurent, 1989
MoV sp. 5093
*Records:* 1 specimen, 21°58’S, 373–382 m
*Distribution:* if correctly identified, first Australian record for W Pacific species
*Reference:* de Saint Laurent (1989)
Superfamily Trapezioidea

Trapeziidae
The only species is recorded for the first time from Australia (Castro et al., 2004).

Quadrella reticulata Alcock, 1898
MoV sp. 5059
*Records:* 6 specimens, 21°57´S–27°48´S, 96–104 m ✓
*Distribution:* Indo-West Pacific; first record for Australia
*Reference:* Castro et al. (2004) [photo below]

Superfamily Xanthoidea

Panopeidae
A single species was identified using Ng’s (1998) key to families and Davie (2002).

Homoioplax haswelli (Miers, 1884)
MoV sp. 5485
*Records:* 1 specimen, 21°58´S, 177–170 m
*Distribution:* Indo-West Pacific including N Australia; first record for S WA
Xanthidae

Eighteen species were found but proved difficult to identify using the standard text (Serène, 1984). With the help of Peter Davie, Queensland Museum, 13 taxa were identified to species or probable species using his unpublished notes. Of those that were identified to species, five are new Australian records.

**Actaea calculosa** (Milne Edwards, 1834)
MoV sp. 5116
*Records:* 1 specimen, 33°58´S, 96 m
*Distribution:* Australia
*Reference:* Poore (2004) [photo below]

**Actaea peronii** Milne Edwards, 1834
MoV sp. 1656
*Records:* 6 specimens, 33°02´S–35°20´S, 95–100 m
*Distribution:* Australia
*Reference:* Poore (2004) [photo below]

**Atergatopsis cf. alcocki** (Laurie, 1906)
MoV sp. 5117
*Records:* 2 specimens, 21°59´S, 166 m
*Distribution:* Indo-West Pacific including Qld; first record for Australia (det. P. Davie)
*Reference:* Sakai (1976) [photo below]

**Calvactaea tumida** Ward, 1933
MoV sp. 5083
*Records:* 1 specimen, 22°04´S, 106–101 m
*Distribution:* Indo-West Pacific including Australia
*Reference:* Poore (2004) [photo below]
Chlorodiella laevissima (Dana, 1852)
MoV sp. 5110
Records: 2 specimens, 27°03’S, 97 m
Distribution: Indo-West Pacific including Australia
Reference: Serène (1984: pl. 36D) [photo below]

Monodaeus tuberculidens (Rathbun, 1911)
MoV sp. 5075
Records: 3 specimens, 21°59’S–21°56’S, 132–166 m
Distribution: E Indian Ocean; first record for Australia (det. P. Davie) [photo below]

Demania wardi Garth & Ng, 1985
MoV sp. 5071
Records: 1 specimen, 21°59’S, 166 m
Distribution: West Pacific including Qld; first record for WA (det. P. Davie)
Reference: Davie (1989) [photo below]

Medaeus sp. MoV 5081
Records: 1 specimen, 21°59’S, 166 m
Distribution: new species (det. P. Davie) [photo upper right]

Nanocassiope sp. MoV 5087
Records: 1 specimen, 31°43’S, 102 m
Distribution: new species (det. P. Davie) [photo below]

Nanocassiope sp. MoV 5299
Records: many specimens, 20°59’S–31°43’S, 85–120 m
Distribution: new species close to N. alcocki (Rathbun, 1902). Several colour morphs were separated in some stations but colour and morphology of the anterolateral carapace could not be correlated by Poore.
**Novactaea cf. michaelseni (Odhner, 1925)**
MoV sp. 5074
*Records:* 9 specimens, 24°37′S–35°11′S, 97–1157 m
*Distribution:* WA (det. P. Davie) [photo]

**Palapedia pelsartensis (Serène, 1972)**
MoV sp. 5219
*Records:* 1 specimen, 24°01′S, 100 m
*Distribution:* WA
*Reference:* Ng (1993) [photo upper right]

**Palapedia valentini** Ng, 1993
MoV sp. 5118
*Records:* 1 specimen, 27°48′S, 123–112 m
*Distribution:* Singapore; new record for Australia
*Reference:* Ng (1993) [photo below]

**Paractaea rufopunctata** (Milne Edwards, 1834)
MoV sp. 5073
*Records:* 1 specimen, 21°59′S, 166 m
*Distribution:* Indo-West Pacific, Atlantic including Australia (det. P. Davie) [photo next page]
Decapod Crustacea of the continental margin of southwestern and central Australia

**Paractaea** sp. MoV 5109

*Records:* 3 specimens, 29°48´S, 114 m  
*Distribution:* new species (det. P. Davie) [photo below]

**Paraxanthias** aff. *pachydactylus* (Milne Edwards, 1867)

*MoV sp. 5076*  
*Records:* 4 specimens, 27°55´S, 253 m  
*Distribution:* possible new species close to Indo-West Pacific-Australian species (det. P. Davie) [photo below]

**Paraxanthodes** *cf. cumatodes* (McGilchrist, 1905)

*MoV sp. 5072*  
*Records:* 1 specimen, 28°59´S, 183 m  
*Distribution:* new record for Australia if correctly identified (det. P. Davie) [photo below]

**Platypodia** *cf. semigranosa* (Heller, 1861)

*MoV sp. 5082*  
*Records:* 1 specimen, 27°48´S, 98 m  
*Distribution:* Indo-West Pacific including Qld; first record for WA (det. P. Davie)
Caridea – shrimps

Seventeen families were represented by 88 nominal species. Twenty (23%) are new species, 13 new records for Australia, 14 new records for WA and 17 new records for S WA. Caridean shrimps can be identified to family and genus using the keys of Holthuis (1993). More recent works apply for some families. Families are arranged alphabetically.

Alpheidae

Eighteen species were separated using the three papers on the Australian fauna by Banner and Banner (1973; 1975; 1982). *Alpheus* and *Synalpheus* are the dominant genera. Eleven species were identified to known species, all widely distributed in the Indo-West Pacific region and already known from WA. Seven species could not be identified because of insufficient material (listed here as new). The family is renowned for cryptic species and a difficult taxonomy.

**Alpheopsis aff. trispinosa** (Stimpson, 1861)
MoV sp. 5410
Records: 1 specimen, 33°58´S, 96 m
Distribution: new species slightly different from Indo-West Pacific-Australian species
Reference: Banner and Banner (1982) [photo below]

**Alpheopsis sp.** MoV 5407
Records: 1 specimen, 21°59´S, 166 m
Distribution: new species
Reference: Banner and Banner (1973)

**Alpheopsis sp.** MoV 5408
Records: 2 specimens, 22°50.55´S–31°37´S, 100–210 m
Distribution: new species
Reference: Banner and Banner (1973)

**Alpheus alcyone** De Man, 1902
MoV sp. 5419
Records: 1 specimen, 22°51´S, 100 m
Distribution: Indo-West Pacific including WA
Reference: Banner and Banner (1982: 110)

**Alpheus hailstonei** Coutière, 1905
MoV sp. 5420
Records: 34 specimens, 27°48´S–35°11´S, 95–210 m
Distribution: Indo-West Pacific, including WA
Reference: Banner and Banner (1982: 38) [photos upper right]

**Alpheus paralcyone** Coutière, 1905
MoV sp. 5418
Records: 2 specimens, 20°59´S–25°54´S, 100 m
Distribution: Indo-West Pacific including WA
Reference: Banner and Banner (1982: 113)

**Alpheus parasocialis** Banner & Banner, 1982
MoV sp. 0722
Records: 2 specimens, 35°14´S., 728–710 m
Distribution: Indo-West Pacific including WA
Reference: Banner and Banner (1982: 72)

**Alpheus sp.** MoV 5403
Records: 8 specimens, 22°50´S–25°54´S, 100 m
Distribution: new species close to Australian *A. heronicus*
Reference: Banner and Banner (1982)

**Alpheus sp.** MoV 5405
Records: 2 specimens, 35°10´S, 97 m
Distribution: new species close to Australian *A. rapacida*
Reference: Banner and Banner (1982)

**Alpheus sp.** MoV 5406
Records: 13 specimens, 21°58´S–27°08´S, 373–414 m
Distribution: new species
Reference: Banner and Banner (1982)
Decapod Crustacea of the continental margin of southwestern and central Western Australia

**Alpheus** sp. MoV 5409

*Records:* 8 specimens, 35°20´S–35°37´S, 99–179 m
*Distribution:* new species close to *A. distinguendus*
*Reference:* Banner and Banner (1982) [photo below]

**Synalpheus comatularum** (Haswell, 1882)

*MoV* sp. 5413

*Records:* 5 specimens, 22°50´S–27°48´S, 96–100 m
*Distribution:* Indo-West Pacific including WA
*Reference:* Banner and Banner (1975) [photo below]

**Synalpheus lophodactylus** Coutière, 1908

*MoV* sp. 5417

*Records:* 5 specimens, 28°58´S, 85 m
*Distribution:* Indo-West Pacific including WA
*Reference:* Banner and Banner (1975: 350)

**Synalpheus neomeris** (De Man, 1897)

*MoV* sp. 5412

*Records:* 1 specimen, 27°48´S, 123–112 m
*Distribution:* Indo-West Pacific including WA
*Reference:* Banner and Banner (1975: 357)

**Synalpheus neptunus** (Dana, 1852)

*MoV* sp. 5416

*Records:* 21 specimens, 21°59´S–33°58´S, 96–166 m
*Distribution:* Indo-West Pacific including WA
*Reference:* Banner and Banner (1975: 317) [photo below]

**Synalpheus nilandensis** Coutière, 1905

*MoV* sp. 5414

*Records:* 6 specimens, 22°37´S–25°54´S, 100–382 m
*Distribution:* Indo-West Pacific including WA
*Reference:* Banner and Banner (1975)

**Synalpheus streptodactylus** Coutière, 1905

*MoV* sp. 5415

*Records:* 8 specimens, 21°58´S–27°48´S, 96–112 m
*Distribution:* Indo-West Pacific including WA (some taken from crinoid)
*Reference:* Banner and Banner (1975: 362)

**Synalpheus theano** De Man, 1910

*MoV* sp. 5411

*Records:* 1 specimen, 27°03´S, 106 m
*Distribution:* Indo-West Pacific including WA
*Reference:* Banner and Banner (1975: 314)
Anchistioididae

The family was treated by Chace (1993). Our specimen was identified by A.J. Bruce.

*Anchistioides willeyi* (Borradaile, 1899)
MoV sp. 5424
*Records:* 1 specimen, 20°59’S, 100 m
*Distribution:* Indo-West Pacific including GBR, first record for WA
*Reference:* Chace (1993); det. A.J. Bruce

Bathypalaemonellidae

A single known species was recorded (Chace, 1997).

*Bathypalaemonella pilosipes* Bruce, 1986
MoV sp. 5449
*Records:* 5 specimens, 29°03’S, 1000–1037 m
*Distribution:* northern WA and Philippines, previously recorded to 400 m depth; new record for S WA
*Reference:* Chace (1997)

Bresiliidae

One species previously recorded from NSW was identified using Kensley (1983).

*Discias brownae* Kensley, 1983
MoV sp. 5428
*Records:* 1 specimen, 35°11’S, 157–147 m
*Distribution:* NSW; new record for WA
*Reference:* Kensley (1983)

Campylonotidae

A single well known southern species was recorded and identified from Poore (2004).

*Campylonotus rathbunae* Schmitt, 1926
MoV sp. 1806
*Records:* 5 specimens, 35°22’S–35°22’S, 676–728 m
*Distribution:* southern Australian, New Zealand
*Reference:* Poore (2004) [photo below]
Crangonidae

The collection contains ten species of which six belong to known cosmopolitan or Indo-West Pacific species. None of the six are previously recorded from WA and only two from eastern Australia (Poore, 2004). The principal recent reference is by Chace (1984) and good illustrations appeared in De Man (1920). Uncertainty surrounds the specific and generic identification of some taxa.

**Aegaeon lacazei** (Gourret, 1887)
MoV sp. 1873
*Records:* 18 specimens, 24°33´S–31°00´S, 100–414 m ✓
*Distribution:* cosmopolitan; new record for WA
*Reference:* Chan (1996) [photo below]

**Metacrangon** sp. MoV 5423
*Records:* 16 specimens, 31°59´S–35°22´S, 408–728 m
*Distribution:* new species
*Reference:* Holthuis (1993) [photo below]

**Parapontocaris aspera** Chace, 1984
MoV sp. 5349
*Records:* 9 specimens, 21°58´S–22°04´S, 373–399 m
*Distribution:* Philippines; new Australian record
*Reference:* Chace (1984: 31)

**Parapontocaris levigata** Chace, 1984
MoV sp. 5350
*Records:* 22 specimens, 21°58´S–22°04´S, 324–399 m ✓
*Distribution:* Philippines; new Australian record
*Reference:* Chace (1984: 34) [photo upper right]

**Parapontophilus junceus** (Bate, 1888)
MoV sp. 5351
*Records:* 28 specimens, 22°00´S–35°22´S, 539–1077 m
*Distribution:* Indonesia-Philippines; new Australian record
*Reference:* Chace (1984: 53) [photo below]

**Philocheras** sp. MoV 5422
*Records:* 4 specimens, 21°58´S–25°55´S, 101–120 m ✓
*Distribution:* new species close to *P. magnicolus*
*Reference:* Chace (1984); Komai and Chan (2007) [photo below]

**Philocheras** sp. MoV 5439
*Records:* 1 specimen, 23°59´S, 411 m
*Distribution:* new species

**Pontocaris pennata** Bate, 1888
MoV sp. 5353
*Records:* 5 specimens, 20°59´S–22°04´S, 102 m
*Distribution:* Indo-West Pacific, Indonesia; new Australian record
*Reference:* Chace (1984: 42); De Man (1920: pl. 24, fig. 70) [photo below]
**Pontocaris propensalata** Bate, 1888
MoV sp. 5354
*Records:* 2 specimens, 21°59′ S, 166 m
*Distribution:* Philippines, Indonesia, NSW; new record for WA
*Reference:* Chace (1984: 43); De Man (1920: pl. 24, fig. 71)

**Sabinea** sp. MoV 5421
*Records:* 1 specimen, 33°00′ S, 421–414 m
*Distribution:* like *S. indica* but carapace strongly depressed posterior to middorsal crest
*Reference:* De Man (1920: pl. 25, fig. 75) [photo below]

**Eugatonotonotidae**
The only species is previously recorded from NW Australia (Chace, 1997).

**Eugatonotonotus chacei** Chan & Yu, 1991
MoV sp. 5429
*Records:* 1 specimen, 22°04′ S, 399–387 m
*Distribution:* Eastern Pacific, NW Australia; new record for S WA
*Reference:* Chace (1997: 23) [photo below]
Gyphocrangonidae

Two described species known from Australia, one new Australian record, one newly recorded for S WA, and a fourth identified with some uncertainty to a Japanese species comprise the collection. Komai’s recent paper (2004) is comprehensive.

**Gyphocrangon lineata** Komai, 2004
MoV sp. 5356
*Records*: 2 specimens, 21°58´S–22°00´S, 658–754 m
*Distribution*: Indonesia, NW Australia; new record for S WA
*Reference*: Komai (2004) [photos below]

**Gyphocrangon cf. perplexa** Komai, 2004
MoV sp. 5357
*Records*: 4 specimens, 21°58´S, 726–732 m, stn 159(4)
*Distribution*: probable new species similar to this Japanese species

**Gyphocrangon confusa** Komai, 2004
MoV sp. 5355
*Records*: 1 specimen, 29°00´S, 704–700 m
*Distribution*: Indonesia, NW Australia; new record for S WA
*Reference*: Komai (2004: 597) [photo below]

**Gyphocrangon sibogae** De Man, 1918
MoV sp. 5358
*Records*: 1 specimen, 21°55´S, 1260–1295 m
*Distribution*: Indonesia, new Australian record
*Reference*: Komai (2004) [photos below]
Hippolytidae

Five species were identified with reference to Poore (2004) and Chace (1997). Two were recorded for the first time from WA. Two are new species, one previously recorded from the Tasmanian seamounts.

**Eualus** sp. MoV 2681

*Records*: 5 specimens, 35°25’S–35°26’S, 900–980 m  
*Distribution*: Tas. Seamounts; new species  
*Reference*: Poore et al. (1998) [photo below]

**Lebbeus** sp. MoV 5425

*Records*: 1 specimen, 35°12’S, 431–408 m  
*Distribution*: new species  
*Reference*: Chace (1997) [photos below]

**Lysmata amboinensis** (De Man, 1888)

MoV sp. 5359  
*Records*: 1 specimen, 22°50’S, 100 m  
*Distribution*: Indo-West Pacific species; new record for S WA  
*Reference*: Chace (1997) [photos below]

**Merhippolyte chacei** Kensley, Tranter & Griffin, 1987

MoV sp. 2615  
*Records*: 5 specimens, 35°14’S–35°22’S, 676–728 m  
*Distribution*: NSW, Tas., new WA record  
*Reference*: Kensley et al. (1987) [photo below]

**Tozeuma tomentosum** (Baker, 1904)

MoV sp. 5361  
*Records*: 16 specimens, 20°59’S–27°03’S, 100 m  
*Distribution*: SA (doubtful record from Japan); new WA record  
*Reference*: Chace (1997: 95) [photo below]
**Nematocarcinidae**

Three of four species of *Nematocarcinus*, previously recorded from WA, could be identified (Hanamura and Evans, 1996; Burukovskii, 2000). The fourth is an undescribed species recorded by Poore (2004).

*Nematocarcinus hanamuri* Burukovskii, 2000  
MoV sp. 5452  
*Records*: 3 specimens, 21°55´S, 1260–1295 m  
*Distribution*: SW Australia  

*Nematocarcinus productus* Bate, 1888  
MoV sp. 5450  
*Records*: 2 specimens, 35°31´S–35°31´S, 1073–1110 m  
*Distribution*: Indo-West Pacific, WA; new record for S WA  

*Nematocarcinus tenuirostris* Bate, 1888  
MoV sp. 5451  
*Records*: 1 specimen, 21°55´S, 1260–1295 m  
*Distribution*: Indo-West Pacific, WA  

*Nematocarcinus* sp. MoV 5456  
MoV sp. 5456  
*Records*: 2 specimens, 35°16´S–35°31´S, 978–1110 m  
*Distribution*: cosmopolitan, including WA  
*Reference*: Poore (2004: fig. 17d) [photo below]

**Oplophoridae**

The seven species include one new record for Australia (Chace, 1986).

*Acanthephyra armata* Milne Edwards, 1881  
MoV sp. 5362  
*Records*: 9 specimens, 21°58´S–22°00´S, 658–1010 m  
*Distribution*: cosmopolitan, WA; new record for S WA  
*Reference*: Wadley and Evans (1992: 13) [photo below]

*Acanthephyra faxoni* Calman, 1939  
MoV sp. 5430  
*Records*: 3 specimens, 21°56´S–22°00´S, 1051–1077 m  
*Distribution*: Indo-West Pacific; new Australian record  
*Reference*: Chace (1986: key)

*Acanthephyra quadrispinosa* Kemp, 1939  
MoV sp. 1840  
*Records*: 7 specimens, 21°55´S–35°04´S, 378–1295 m  
*Distribution*: cosmopolitan, including WA  
*Reference*: Wadley and Evans (1992) [photo below]

*Janicella spinicauda* (Milne Edwards, 1883)  
MoV sp. 5431  
*Records*: 2 specimens, 22°00´S, 983–1010 m  
*Distribution*: cosmopolitan, including WA; new record for S WA  
*Reference*: Hanamura (1987)

*Oplophorus gracilirostris* Milne Edwards, 1881  
MoV sp. 5363  
*Records*: 3 specimens, 21°58´S–22°50´S, 356–430 m  
*Distribution*: cosmopolitan, including WA  
*Reference*: Hanamura (1987) [photo next page]
Oplophorus novaezeelandiae (De Man, 1931)
MoV sp. 1845
Records: 1 specimen, 35°16´S, 978–980 m
Distribution: cosmopolitan, including WA
Reference: Kensley et al. (1987) [photo below]

Systellaspis debilis (Milne Edwards, 1881)
MoV sp. 1841
Records: 3 specimens, 22°00´S–22°00S, 983–1085 m
Distribution: cosmopolitan, including WA

Palaemonidae

Although common in shallow waters this family was represented by only three specimens. The identifications below are by A.J. Bruce.

Periclimenes aleator Bruce, 1991
MoV sp. 5448
Records: 1 specimen, 21°00´S, 399–408 m
Distribution: Loyalty Is., new record for Australia
Reference: Bruce (1991); det. A.J. Bruce

Palaemonid sp. MoV 5437
Records: 2 specimens, 29°48´S, 114 m
Distribution: new genus and species
Reference: det. A.J. Bruce
Pandalidae
Of 21 species of mostly benthopelagic shrimps, 15 are recorded outside their known range. Three are new Australian records of Indo-West Pacific species and four probable new species. Four studies have covered the family in this region (Chace, 1985; Hanamura and Takeda, 1987; Crosnier, 1988; Hanamura and Evans, 1996).

Chlorotocella spinicaudus (Milne Edwards, 1837)
MoV sp. 0995
Records: 1 specimen, 23°59´S, 411 m
Distribution: common southern Australian species

Chlorotocus sp. MoV 5443
Records: 1 specimen, 21°58´S, 356–324 m
Distribution: new species
References: Hanamura and Takeda (1987); Hanamura and Evans (1996)

Heterocarpoides levicarina Bate, 1888
MoV sp. 5364
Records: 14 specimens, 21°58´S–22°04´S, 101–206 m
Distribution: Indo-West Pacific, including Indonesia; new Australian record
Reference: Chace (1985: 17)

Heterocarpus dorsalis Bate, 1888
MoV sp. 5365
Records: 25 specimens, 21°55´S–31°57´S, 726–1260 m
Distribution: cosmopolitan, including Australia
Reference: Wadley and Evans (1992) [photos below]

Heterocarpus hayashii Crosnier, 1988
MoV sp. 5541
Records: 16 specimens, 21°58´S–27°08´S, 373–431 m
Distribution: West Pacific, including GBR, Australia; new record for WA
Reference: Crosnier (1988) [photo upper right]

Heterocarpus tricarinatus Alcock & Anderson, 1894
MoV sp. 5366
Records: 5 specimens, 21°55´S, 1260–1295 m
Distribution: Indo-West Pacific, including N WA; new record for S WA
Reference: Hanamura and Evans (1996: 9) [photo below]

Heterocarpus woodmasoni Alcock, 1901
MoV sp. 5367
Records: 18 specimens, 21°58´S–22°50´S, 373–430 m
Distribution: Indo-West Pacific, including N Australia; new record for S WA
Reference: Hanamura and Evans (1996: 10) [photo below]

Heterocarpus MoV sp. 5540
Records: 25 specimens, 21°00´S–22°04´S, 399–411 m
Distribution: new species
Reference: Crosnier (1988) [photo below]

Plesionika bifurca Alcock & Anderson, 1894
MoV sp. 5444
Records: 2 specimens, 22°00´S, 983–1010 m
Distribution: Indo-West Pacific, including N Australia; first record for S WA
Reference: Hanamura and Takeda (1987); Chace (1985)
**Plesionika binoculus** (Bate, 1888)
MoV sp. 5447
*Records:* 6 specimens, 21°59’S, 166 m
*Distribution:* Arafura Sea; first record for S WA
*Reference:* Chace (1985: key)

**Plesionika cf. kensleyi** Chace, 1985
MoV sp. 5369
*Records:* 33 specimens, 22°04’S–35°14’S, 212–1050 m
*Distribution:* rostrum more compact than *P. kensleyi*; new Australian record or new species
*Reference:* Chace (1985: 77) [photo below]

**Plesionika cf. philippinensis** Chace, 1985
MoV sp. 5370
*Records:* 1 specimen, 21°57’S, 104–114 m
*Distribution:* new Australian record or new species
*Reference:* Chace (1985: 99)

**Plesionika edwardsii** (Brandt, 1851)
MoV sp. 5368
*Records:* 6 specimens, 24°33’S–31°55’S, 364–484 m
*Distribution:* cosmopolitan; new record for WA
*Reference:* Chace (1985: 62)

**Plesionika orientalis** Chace, 1985
MoV sp. 5445
*Records:* many specimens, 21°58’S–35°12’S, 324–695 m
*Distribution:* Indo-West Pacific usually as *P. martia orientalis*; first record for S WA
*Reference:* Chace (1985: 62) [photo below]

**Plesionika reflexa** Chace, 1985
MoV sp. 5371
*Records:* 40 specimens, 21°00’S, 399–408 m
*Distribution:* Indo-West Pacific, including N Australia; first record for S WA
*Reference:* Hanamura and Takeda (1987)

**Plesionika serratifrons** Borradaile, 1899
MoV sp. 5373
*Records:* many specimens, 21°58’S–27°55’S, 100–253 m
*Distribution:* Indo-West Pacific; new record for Australia
*Reference:* Chace (1985: 123) [photos below]

**Plesionika spinidorsalis** (Rathbun, 1906)
MoV sp. 5374
*Records:* 23 specimens, 21°58’S–22°04’S, 356–754 m
*Distribution:* Indo-West Pacific, including N WA; new record for S WA
*Reference:* Hanamura and Takeda (1987); Chase (1985)

**Plesionika spinipes** Bate, 1888
MoV sp. 5446
*Records:* 3 specimens, 22°04’S, 106–101 m
*Distribution:* Indo-West Pacific, including E Australia; new record for WA
*Reference:* Chace (1985: key)

**Plesionika sp. MoV 5457**
*Records:* 1 specimen, 35°16’S, 980–976 m
*Distribution:* probable new species
*Reference:* Chace (1985)

**Procletes levicarina** (Bate, 1888)
MoV sp. 5483
*Records:* 2 specimens, 21°59’S, 166 m
*Distribution:* Indo-West Pacific, including N Australia; new record for S WA
*Reference:* Holthuis (1993)
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**Pasiphaeidae**

The six species included three already known from WA, two new WA records and a probable new species. Hanamura & Evans (1994) is a key reference.

*Alainopasiphaea australis* (Hanamura, 1989)

**MoV sp. 1895**

**Records:** 2 specimens, 35°22´S, 676–680 m

**Distribution:** southern Australia

**References:** Hayashi (2004), Poore (2004); Hanamura (1989)

*Eupasiphae* sp. MoV 5427

**Records:** 2 specimens, 21°56´S–21°58´S, 726–1050 m

**Distribution:** new species

**Reference:** Hanamura and Evans (1994)

*Leptochela sydniensis* Dukin & Colefax, 1940

**MoV sp. 0723**

**Records:** 5 specimens, 22°04´S–35°18´S, 95–210 m

**Distribution:** Indo-West Pacific, including N, E and S Australian coasts; first record for WA

**Reference:** Hanamura and Evans (1994) [photo below]

*Pasiphaea kapala* Kensley, Tranter & Griffin, 1987

**MoV sp. 5432**

**Records:** 2 specimens, 35°22´S, 685–695 m

**Distribution:** southern Australia

**Reference:** Poore (2004)

*Pasiphaea longitaenia* Kensley, Tranter & Griffin, 1987

**MoV sp. 5377**

**Records:** 1 specimen, 22°00´S, 983–1010 m

**Distribution:** NSW; new record for WA

**Reference:** Kensley et al. (1987)

*Pasiphaea tarda* Krøyer, 1845

**MoV sp. 5433**

**Records:** 1 specimen, 35°31´S, 1074–1080 m

**Distribution:** cosmopolitan, including S WA

**Reference:** Hanamura and Evans (1994)

**Processidae**

Chace (1997) is the key reference. The three species included one known previously from WA, and two newly recorded for Australia. None has been adequately figured recently.

*Hayashidonus japonicus* (De Haan, 1844)

**MoV sp. 5434**

**Records:** 2 specimens, 21°59´S–22°04´S, 101–166 m

**Distribution:** Indo-West Pacific including Indonesia; new record for Australia

**Reference:** Chace (1997: 33)

*Processa gracilis* Baker, 1907

**MoV sp. 5376**

**Records:** 1 specimen, 33°58´S, 96 m

**Distribution:** SA; first record for WA

**Reference:** Poore (2004: 128)

*Processa longirostris* Hayashi, 1975

**MoV sp. 5426**

**Records:** 8 specimens, 21°58´S–24°01´S, 100–107 m

**Distribution:** S Vietnam; new Australian record

**References:** Hayashi (1975: key); Noël (1986: key)
Rhynchocinetidae
Two described species, one known from southern Australia and the other from northern Australia, were found and identified using Okuno (1994) and Chace (1997).

Rhynchocinetes brucei Okuno, 1994
MoV sp. 5378
Records: 17 specimens, 21°59´S–35°13´S, 100–494 m
Distribution: West Pacific, NE Australia; new record for WA
Reference: Okuno (1994) [photo below]

Rhynchocinetes enigma Okuno, 1997
MoV sp. 3978
Records: 19 specimens, 31°37´S–35°21´S, 97–210 m
Distribution: S Australia; new record for WA
Reference: Poore (2004: 76) [photo below]

Thalassocarididae
One Indo-West Pacific species was recorded for the first time from Australia (Chace, 1985).

Thalassocaris crinita (Dana, 1852)
MoV sp. 5379
Records: 6 specimens, 22°50´S–27°03´S, 97–100 m
Distribution: Indo-West Pacific; first record for Australia
Reference: Chace (1985: 7)
**Polychelida – deep sea lobsters**

The Australian fauna is well studied and two papers enabled the collections (59 individuals) to be identified (Galil, 2000; Ahyong and Brown, 2002).

**Polychelidae**

All five species in two genera are already described. *Polychelus coccifer* Galil, 2000 was previously recorded from Indonesia so this record from northerly stations is not unexpected.

*Pentacheles laevis* Bate, 1878

MoV sp. 3980

**Records:** 5 specimens, 31°57’S–35°31’S, 928–1170 m

**Distribution:** cosmopolitan species, including S Australia

**References:** Ahyong and Brown (2002) [photo below]

*Polycheles auriculatus* (Bate, 1878)

MoV sp. 4975

**Records:** 36 specimens, 21°56’S–35°14’S, 658–1037 m

**Distribution:** Indo-West Pacific species, including WA

**References:** Ahyong and Brown (2002) [photo below]

*Polycheles coccifer* Galil, 2000

MoV sp. 4973

**Records:** 3 specimens, 21°58’S–21°58’S, 324–382 m

**Distribution:** Indo-West Pacific; first record for Australia

**References:** Galil (2000) [photos below]

*Polycheles suhmi* (Bate, 1878)

MoV sp. 3979

**Records:** 2 specimens, 35°14’S–35°22’S, 676–728 m

**Distribution:** Southern Ocean, including NSW–Tas.; first record for WA

**References:** Galil (2000) [photo below]

*Polycheles typhlops* Heller, 1862

MoV sp. 5069

**Records:** 3 specimens, 21°58’S–22°04’S, 373–399 m

**Distribution:** cosmopolitan species

**References:** figures from Galil (2000)
Stenopodidea – coral shrimps

Stenopodidean shrimps can be identified to family and genus using the keys of Holthuis (1993). One species was represented by one individual of a species previously recorded from the region but not so far south. The other was just a cheliped but could be identified as probably a species not recorded from Australia.

Stenopodidae

Two species were found, one known from coral in Indonesia and northern WA and the other, represented in this collection by a single cheliped, from throughout the Indo-West Pacific.

Engystenopus cf. palmipes Alcock & Anderson, 1894

MoV sp. 5545

Records: 1 detached cheliped (pereopod 3), 22°04’S, 400 m

Distribution: Bay of Bengal, Philippines; new record for Australia (det. J. Goy from photo of cheliped)

References: De Saint Laurent and Cleva (1981) [photo below]

Odontozona sculpticaudata Holthuis, 1946

MoV sp. 5442

Records: 1 specimen, 22°50’S, 100 m

Distribution: Indo-West Pacific species, including N Australia; new record for S WA

References: Holthuis (1946)

Thalassinidea – ghost and sponge shrimps

Six families (of 11 known) are represented by 23 species. The collection is not large, 51 individuals of which 13 belonged in one species. Surprisingly, only four species could be identified, one of these with a Korean species newly recorded from Australia. The fraction of new species is 82%. Several seemed not to fit well with presently diagnosed genera. Published keys to families and genera (Poore, 1994) are now superceded by an interactive DELTA-based key in preparation by Poore. Poore and Griffin (1979) covered all the Australian species then known but as citations below indicate, the number has grown since.

Axiidae

Of the eight species, at least one is most probably a new genus. None belong in the taxa described by Sakai (1986; 1994) or Kensley (1989). One is tentatively identified as a species described from Korea.

Acanthaxius sp. MoV 4956

Records: 1 specimen, 21°59’S, 166 m

Distribution: new species

Reference: Ngoc-Ho (2006) [photo below]

Axiopsis tsushimaensis Sakai, 1992

MoV sp. 5440

Records: 2 specimens, 29°48’S–35°11’S, 113–157 m

Distribution: Korea, Japan; new record for Australia

Reference: Sakai (1992)

Axiopsis sp. MoV 5435

Records: 2 specimens, 27°48’S, 96–98 m

Distribution: new species

Reference: Poore (1994)
**Bouvieraxius** sp. MoV 4959

*Records:* 1 specimen, 27°08’S, 414–405 m  
*Distribution:* new species  
*Reference:* Poore (1994) [photo below]

**Calocarides** sp. MoV 4955

*Records:* 3 specimens, 25°54’S–27°03’S, 97–100 m  
*Distribution:* new species  
*Reference:* Poore (1994) [photos below]

**Calocarides** sp. MoV 4957

*Records:* 1 specimen, 25°55’S, 404–407 m  
*Distribution:* new species  
*Reference:* Poore (1994) [photo upper right]

**Dorphinaxius** sp. MoV 4958

*Records:* 1 specimen, 20°59’S, 100 m  
*Distribution:* new species  
*Reference:* Poore (1994)

**Marianaxius** sp. MoV 5436

*Records:* 1 specimens, 29°48’S, 114 m  
*Distribution:* new species  

**Axiid** sp. MoV 5527

*Records:* 1 specimens, Station not recorded  
*Distribution:* new species, genus indetermined

**Axiid** sp. MoV 4954

*Records:* 1 specimen, 33°00’S, 423–397 m  
*Distribution:* new species, possibly new genus  
*Reference:* Poore (1994) [photo below]
Callianassidae

There are only one or two individuals of each of the six species, sometimes incomplete as is typical of members of this family. One species has already been described in a manuscript in press (Poore, in press) but the others are not in papers dealing with the fauna of this region (Sakai, 1988; Ngoc-Ho, 1994; Poore, in press). Generic concepts in Callianassidae are unclear – most could not be placed in one of the 20 genera diagnosed in a DELTA key currently under construction. The most recent reviews of the family (Sakai, 1999, 2005) proposed an idiosyncratic taxonomy that does not recognise many traditionally recognised genera. For the time being, most species in this collection are tentatively placed in the catch-all ‘Callianassa’.

**Callianassa sp. MoV 4964**

*Records*: 1 specimen, 22°50’S, 100 m  
*Distribution*: WA  
*Reference*: Poore (in press)

**Callianassa sp. MoV 4961**

*Records*: 2 specimens, 22°04’S, 206–201 m  
*Distribution*: new species

**Callianassa sp. MoV 4962**

*Records*: 1 specimen, 22°04’S, 206–201 m  
*Distribution*: new species

**Callianassa sp. MoV 4963**

*Records*: 1 specimen, 29°48’S, 114 m  
*Distribution*: new species

**Callianassa sp. MoV 4966**

*Records*: 1 specimen, 21°58’S, 107 m  
*Distribution*: new species

**Corallianassa sp. MoV 4965**

*Records*: 2 specimens, 31°43’S–35°11’S, 102–169 m  
*Distribution*: new species [photos below]

Calocarididae

The single species belongs to a genus not previously recorded from Australia.

**Ambiaxius** sp. MoV 4967

*Records*: 2 specimens, 33°00’S, 423–397 m  
*Distribution*: new species  
*Reference*: Sakai and Ohta (2005)
Gourretiidae

One new species was found whose generic identification is problematic. The nomenclature, composition and definition of this family is subject to considerable debate. The views of Sakai (2005) who provided the most recent revision are not necessarily followed here (see too Callianassidae).

*Lipkecallianassa* sp. MoV 4960

*Records*: 8 specimens, 21°59′S–22°04′S, 100–206 m

*Distribution*: generic placement of the species is problematic


Micheleidae

The single specimen in each of two genera does not belong to any of the Western Australian (or other) species described by Poore (1997; in press).

*Michelea* sp. MoV 4969

*Records*: 1 specimen, 27°48′S, 123–112 m

*Distribution*: new species

*Reference*: Poore (1997)

*Tethisea* sp. MoV 5472

*Records*: 1 specimen, 35°22′S, 419–460 m

*Distribution*: new species, possibly new genus

*Reference*: Poore (1997)
Upogebiidae

All three species were identified by N. Ngoc-Ho and have been previously recorded from Australia.

**Upogebia ancylodactyla** De Man, 1905
MoV sp. 5078
*Records:* 2 specimens, 31°43’ S, 102 m
*Distribution:* Indonesia–Philippines, N Australia; new record for S WA
*Reference:* Sakai (1993) [photo below]

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**Upogebia holthuisi** Sakai, 1982
MoV sp. 4970
*Records:* 2 specimens, 25°54’ S, 100 m
*Distribution:* New Caledonia, Pacific, first record for Australia
*Reference:* Sakai (1982)

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**Upogebia bowerbanki** (Miers, 1884)
MoV sp. 4971
*Records:* 13 specimens, 21°57’ S, 104–114 m
*Distribution:* S Australia
*Reference:* Poore (2004) [photos below]
Acknowledgements
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