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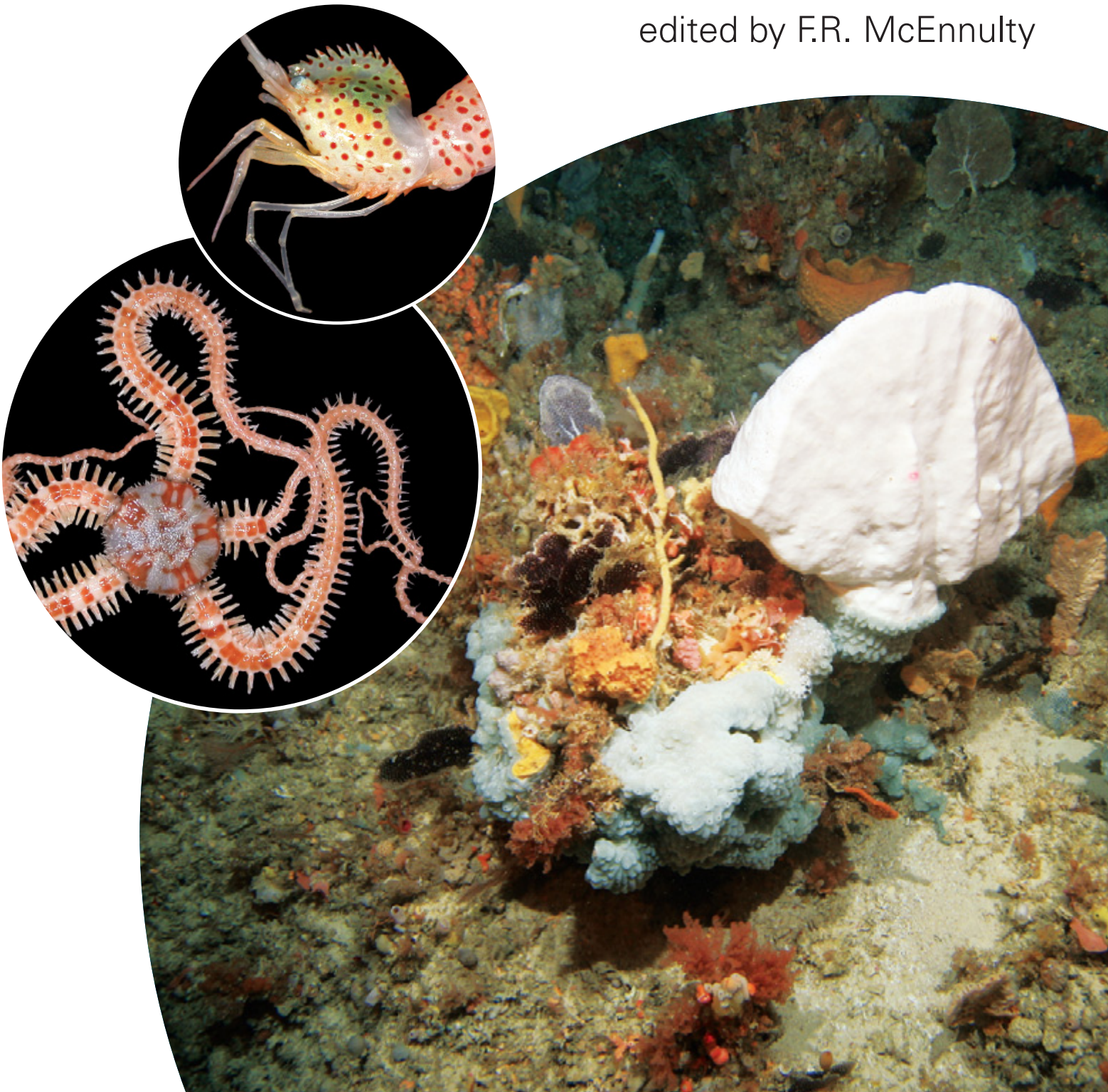
Deepwater Megabenthos

of south-western Australia

edited by F.R. McEnnulty



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Cover: The subterranean crustacean *Maarrka weeliwollii* from the Pilbara region of Western Australia, by J. Cocking.

RECORDS OF THE WESTERN AUSTRALIAN MUSEUM
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The deepwater megabenthic invertebrates on the western continental margin of Australia (100–1100 m depths): composition, distribution and novelty

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ABSTRACT – Taxonomic study of the first regional scale collection of deepwater invertebrate megabenthos from Australia's western continental margin reveals a previously undiscovered high species richness and novelty. Benthic samples were taken systematically at 19 sites from Albany to Barrow Island (~35ºS to 21ºS) on the deep continental shelf (100 m depth) and upper continental slope (400 m). At some sites, additional samples were taken across-shelf at depths of 200 m, 700 m and 1000 m, with a couple as deep as 1200 m and 1500 m. Multibeam (swath) mapping of complex seabed topography enabled targeted collection of the epifauna on hard and soft substrates and targetting of features including submarine canyons.

A total of 2001 species including 396 (20%) confirmed new species, 876 (44%) previously described species and 727 (36%) uncertain species were identified within the taxa Porifera (Demospongiae), Cnidaria (Octocorallia, Antipatharia and Scleractinia), Mollusca, Echinodermata, Crustacea (Decapoda), Pycnogonida and Ascidiacea. The high proportion of new and uncertain species stemmed from poor knowledge of entire major groups (e.g. the Demospongiae), and from less well studied deep-sea taxa within otherwise well-known groups (e.g. the Bivalvia). Over half the species (1075) were collected only once. Distributional patterns of taxa show the western margin is an overlap zone of tropical and temperate fauna with a strong Indo-Pacific affinity (42% of described species) but an endemic fauna also exists (17% of described species).

This paper provides an annotated checklist of all these identified species, along with live colour images of over half the species. All species can be cross-referenced to images and other collection information via a unique eight-digit computer code maintained in the Codes for Australasian Aquatic Biota database.

The research provides valuable information for consideration in the regional marine planning process and all biological specimens are lodged in Australian museums to enable ongoing examination of the diverse and largely undescribed fauna.

KEYWORDS: taxonomy, megabenthos, biodiversity, new species, biogeography, continental slope

INTRODUCTION

SCOPE

Knowledge of the benthic invertebrates on the western continental shelf and slope of Australia is limited. Collections by French and English explorers in the 18th and 19th centuries generally were from shallow coastal waters of considerably less than 100 m depth. This first account of composition, geographic range and novelty of deep megabenthic invertebrates from the vast western continental margin of Australia constitutes a significant advance in knowledge for this region. Our data are from the first systematic survey of the deep shelf and slope, and are based on authoritative taxonomic identifications for six dominant taxa of megabethos (i.e. animals large enough to be sorted without microscopy and easily caught in bottom trawls with 25 mm stretched-mesh net cod-ends) from the survey. The information will aid regional marine management planning by providing insights into areas of high species diversity and endemism, and the associations of fauna with their habitats and geological features affecting their distribution.

BACKGROUND

Deep continental margins, especially the deep continental shelf and continental slope to depths of about 1500 m, are areas of expanding human use for fishing and for mineral, oil and gas extraction, and a priority target for conservation (Williams et al. 2009; Buhl-Mortensen et al. 2010). Knowledge of species distributions, and biogeographical patterns, are fundamental in planning for sustainable use and effective conservation of these often large marine areas. Australia's current ecosystem-based, integrated and regional-scale planning initiatives depend on the identification of natural 'bioregions' as planning units. Such 'bioregions' initially only incorporated data on the distribution of fishes (Heap et al. 2005; Last et al. 2005) because benthic invertebrate biodiversity was insufficiently known or integrated to be included in the national scale analysis of biological distributions. Accordingly, it was uncertain to what extent the distributions of fishes represented the distributions of the larger benthic invertebrates in this national bioregionalisation. The gaps in knowledge, and the imperative for Australia to implement its national network of marine protected areas by 2012, were primary stimuli for additional surveys of benthic invertebrates in Australian waters. This paper, and a companion analytical paper (Williams et al. 2010), report results from one of those surveys.

Research on the benthic invertebrate fauna of continental margins (deep shelf and slope depths >100 m) has been conducted in relatively few areas of the world oceans, including the north-east Atlantic Ocean and Gulf of Mexico (Howell et al. 2002; Macpherson 2002, 2003; Wicksten and Packard 2005; Escobar-Briones et al. 2008; Rowe and Kennicutt 2008; Narayanaswamy et al. 2010); the northern European continental margin (Gray et al. 1997; Gage et al. 2005) and the north-west Atlantic (Georges Bank – Thouzeau et al. 1991); the north-east Pacific (Ruhl 2007) and off New Zealand to 3,000 m depth (Fell 1958; Clark and McKnight 2000).

In Australia, information on the slope fauna comes from sporadic collections that have provided numerous specimens catalogued in most Australian and some overseas museums, and has resulted in many taxonomic publications. In south-eastern Australia, the diversity of megabenthos has been documented on seamounts (Koslow et al. 2001; O'Hara 2007, 2008a), in submarine canyons (Schlacher et al. 2007) and for the temperate deep shelf (Whitelegge 1900; O'Hara and Poore 2000; Ward et al. 2006; O'Hara 2008b). An extensive survey of macrofauna and larger megabenthos was undertaken off south-eastern Australia by Museum Victoria (Poore et al. 1994). However, few syntheses of distributional patterns have been undertaken of slope invertebrate faunas over wide geographic ranges in Australian waters, and regional studies are lacking. Off south-west and central Western Australia, Williams et al. (2010) presented an analysis of the distribution patterns of the benthic invertebrate communities in relation to broad-scale environmental patterns, but details of the species and their distribution were not included. Such detail is the focus of the present paper.

The waters of the western continental margin of Australia contain geographical features such as canyons, seamounts, seeps, the largest western coastal fringing coral reef in the world and the unique southward flowing eastern boundary jet, the Leeuwin Current, from Ningaloo to Cape Leeuwin (22°S to 34°S) (Waite et al. 2007). In the Indo-Australian basin north-west of Australia, shallow, warm, less saline, tropical Indian and West Pacific Ocean waters mix with subtropical Indian Ocean water before joining the Leeuwin current's southward flow along the shelf break ~250 m (Domingues et al. 2007). Beneath this the more saline, Leeuwin Undercurrent flows northward along the upper continental slope (~250–400 m), sourced from subtropical water Indian Ocean water, South Indian Ocean Central Water, Subantarctic Mode Water and Antarctic Intermediate Water (Ridgeway and Condie 2004; Waite et al. 2007). Lateral exchange with the offshore ocean plays a large role in the coastal boundary system, with the western edge of the

Leeuwin Current and waters east of 100°E subjected to intense eddy activity, the strongest eddy kinetic field in all the eastern boundary currents globally (Domingues et al. 2007; Feng 2010). Once the Leeuwin Current reaches Cape Leeuwin the more dominant destination is offshore advection into the south-east Indian Subtropical Gyre (with the recognised subsequent loss of larvae). The second destination is rounding the south-west corner of Western Australian and combining with the South Indian Ocean Current (35–37°S) to form the boundary jet moving along the southern Australian continental slope and then down the west coast of Tasmania (Domingues et al. 2007).

Waters off Western Australia are recognised as globally significant biodiversity hotspots for coral reefs and endemism (Roberts et al. 2002). The north-western continental margin also seems to be characterised by relatively high numbers of species at deep shelf and upper slope depths (e.g. decapods – Ward and Rainer 1988). That the same might be true for the south-west continental slope was suggested for benthic fishes (Williams et al. 2001).

The shallow water invertebrate fauna off Western Australia has been studied only in areas adjacent to urban centres and key environmental features – where it is readily accessible. Taxonomic workshops have focused on the flora and fauna of shallow coastal waters at Albany, Rottnest Island, Abrolhos Islands, Dampier and Esperance (Wells et al. 1990, 1991, 1993, 2003, 2005; Wells 1997; Walker and Wells 1999). Shallow water surveys have been undertaken in the north-west, e.g. the Dampier Archipelago (Jones 2004), and the north-west atolls, e.g. Mermaid, Scott and Seringapatam Reefs (Bryce 2009).

Various publications on shallow Western Australian invertebrates include: crustaceans (Morgan and Jones 1991; Jones and Morgan 2002), molluscs (Wells and Bryce 1988, 1993; Norman and Reid 2000) and ascidians (Kott 1985, 1990, 1992, 2001, 2005a). Some more general works (Allen and Steene 1994; Edgar 1997; Gowlett-Holmes 2008) include descriptions of some species that extend into deeper waters; nevertheless, the benthic invertebrate fauna of Australia's western margin is little sampled and poorly known.

Australia's west coast was visited by scientific biological expeditions from as early as Dampier (1703). However, the sampling effort generally focused on land or waters (often considerably) shallower than 100 m, and hence the deep water fauna remained completely unknown. The Baudin expedition (1801–1803) (Péron and de Freycinet 1824) collected in very shallow waters along the coast. Two German expeditions led by Michaelsen and Hartmeyer on the *Meteor* in 1900 and the *Hamburg* in 1905 sampled mainly off Shark Bay, but also in south-west Western Australian waters, the relevant taxonomic papers are as follows. The Echinodermata type material from that voyage, described by Koehler (1907), Erwe (1913) and Döderlein, (1914) is lodged at the Western Australian Museum, Perth (WAM). Additional material is described by A.H. Clark (1911) and H.L. Clark (1923). Broch (1910) and Kükenthal (1910) described the Alcyonacea and Pennatulacea. A few of Kükenthal's 1910 types are lodged in the WAM although most are in the Museum of Natural History, Berlin. The Mollusca were later described by Thiele (1930) and the brachyuran crabs from the Hamburg Museum expedition were described by Balss (1935). The Ascidiacea, described by Hartmeyer and Michaelsen (1928) are lodged in the Hamburg Museum. Some of these voyages also resulted in species descriptions for sponges (Lamarck 1813–1814; Hentschel 1909, 1911; Weltner 1910) and subsequent revisions (Topsent 1930, 1932, 1933).

In 1908, dredge samples of molluscs were taken off southern Western Australia and in the Great Australian Bight (Verco and Cotton 1935). In 1910–1912 the federal Fisheries Investigation Ship (FIS) *Endeavour* conducted two trawling cruises off the mid-west coast of Western Australia, from which the echinoderms were described by H.L. Clark (1916). Octocorals from Dr E. Mjöberg's Swedish scientific expeditions to north-western Australia in 1910–1913 are described by Broch (1916) and are lodged in the Swedish Museum of Natural History, Stockholm. The Ascidians from the same voyage were described by Hartmeyer (1919).

In 1929 and 1932, the Carnegie Australian Harvard (CAH) Expeditions targeted echinoderms from shallow waters to ~100 m around Australia (H.L. Clark 1938). In the 1960s and 1970s other invertebrate collections were made offshore with the FV *Davena*, HMAS *Diamantina*, FRV *Umitaka Maru* and the MV *Sprightly*. The HMAS *Diamantina* sampled the west coast shelf systematically over five cruises from Cape Leeuwin to North West Cape. In 1979 and the 1980s, the RV *Soela* and more recently the RV *Lady Basten* sampled on the North West Shelf. Many specimens from these surveys are lodged at the WAM (Echinodermata – Marsh 1976; Marsh et al. 1999; Cnidaria – Griffith and Fromont 1998).

The more recent deep-water marine invertebrate surveys have mostly focused on studies contributing to the management of commercial species (rock lobster, crab, prawn and cephalopods) or areas of economic interest subject to exploration and Environmental Impact Studies for developments in the mining or oil and gas industries of the North West Shelf (George 1962, 1966; Ward and Rainer 1988; Wadley and Evans 1992; Smith et al. 2004; Melville-Smith et al. 2006, 2007; Davie et al. 2007).

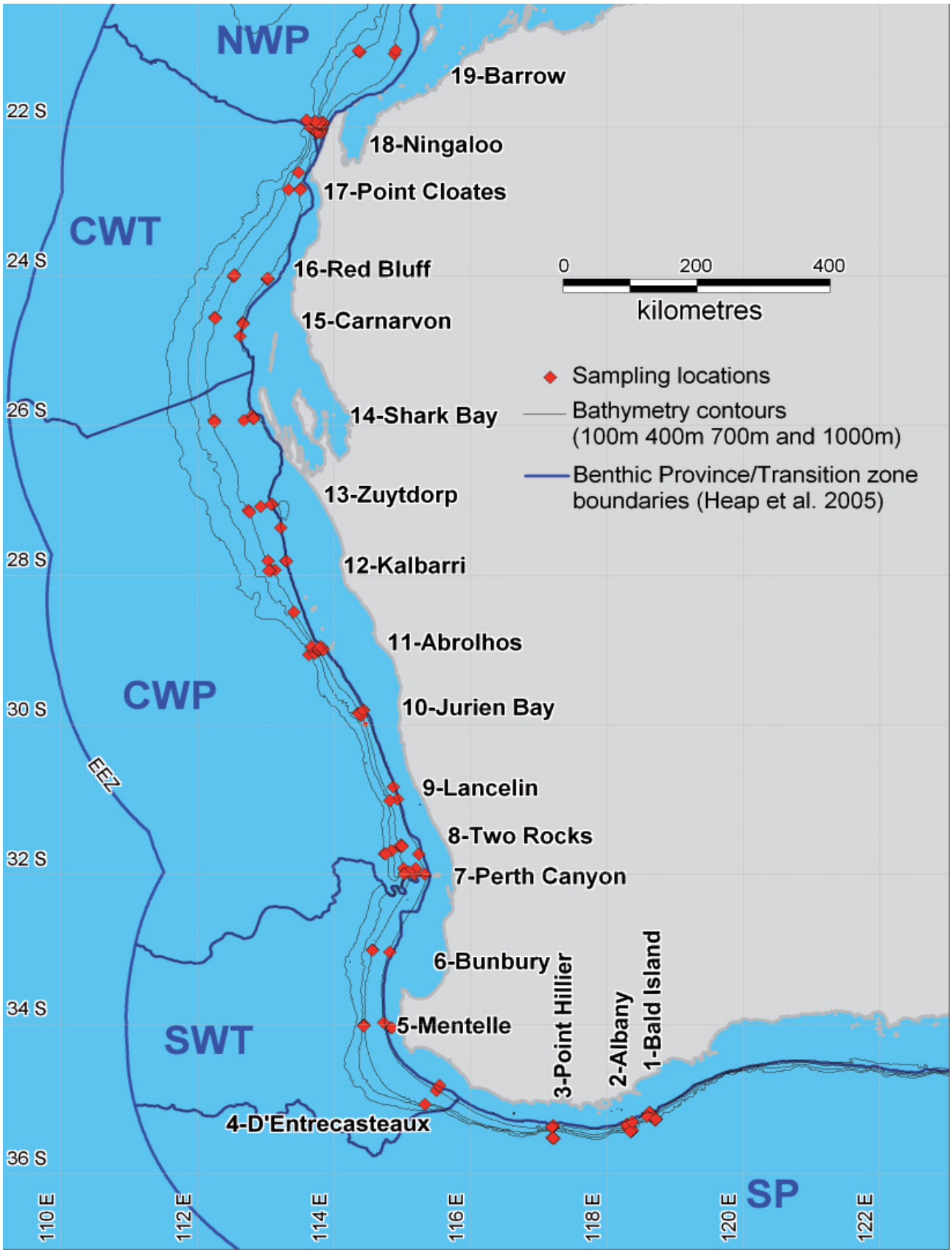

FIGURE 1 Location of the sampling stations (red diamonds) at 19 sampling sites along the western continental margin of Australia. Also shown are the 100, 200, 400, 700 and 1000 m depth contours, the 200 nM Exclusive Economic Zone (EEZ) boundary (thick blue line) and the province/transition zone boundaries of Australia's marine bioregionalisation: Southern Province (SP), Central Western Province (CWP), North Western Province (NWP), South Western Transition Zone (SWT) and Central Western Transition Zone (CWT).

TABLE 1 List of sites showing depths and number of stations sampled with each trawl gear type during a survey of the invertebrate megabenthos off the western continental margin of Australia. Sites designated as transect sites where sampling occurred across all the target depths are indicated by a 'T'. Targeted geological features and associated depth zone are listed for those relevant sites.

		NUMBER OF STATIONS SAMPLED BY GEAR TYPE					GEOGRAPHICAL EXTENT OF EACH SITE (ACROSS ALL DEPTHS SAMPLED)	
Site	Site name	Beam trawl	Sherman sled	Target depths (m)	Transect Site	Targeted geological feature (depth)	Latitude range (°S)	Longitude range (°E)
1	Bald Island	4	9	100 200 400 700 1000	T		35.288 – 35.178	118.587 – 118.723
2	Albany	6	8	100 200 400 1000		seamount (1000 m)	35.437 – 35.308	118.290 – 118.377
3	Point Hillier	3	6	100 200 400 1000			35.534 – 35.355	117.192 – 117.238
4	D'Entrecasteaux	1	1	100 400			35.071 – 34.884	115.336 – 115.553
5	Mentelle	3	1	100 400			33.038 – 33.008	114.57 – 114.820
6	Bunbury	2	1	100 400			34.046 – 33.984	114.439 – 114.849
7	Perth Canyon	3	4	200 400 1000 1200 1500		canyon (all depths)	32.004 – 31.923	115.013 – 115.202
8	Two Rocks	4	6	100 200 400 700 1000	T		31.736 – 31.610	114.745 – 115.244
9	Lancelin	1	1	100 400			31.013 – 30.830	114.823 – 114.933
10	Jurien Bay	1	3	100 400			29.876 – 29.804	114.362 – 114.439
11	Abrolhos	4	5	100 200 400 700 1000	T	anomaly (400 m)	29.078 – 28.501	113.419 – 113.847
12	Kalbarri	2	3	100 400		seep & canyon (400 m)	27.944 – 27.813	113.037 – 113.312
13	Zuytdorp	2	1	100 400			27.363 – 27.052	112.751 – 113.222
14	Shark Bay	3	2	100 400		seep (100 m)	25.951 – 25.900	112.243 – 112.831
15	Carnarvon	3	1	100 400			24.803 – 24.563	112.252 – 112.671
16	Red Bluff	4	1	100 400			24.047 – 23.993	112.525 – 113.038
17	Point Cloates	2	2	100 400			22.858 – 22.620	113.333 – 113.517
18	Ningaloo	18	7	100 200 400 700 1000 1200	T	canyon & ridge (1200 m)	22.094 – 21.920	113.651 – 113.845
19	Barrow Island	3	1	100 400			21.034 – 20.995	114.365 – 114.909

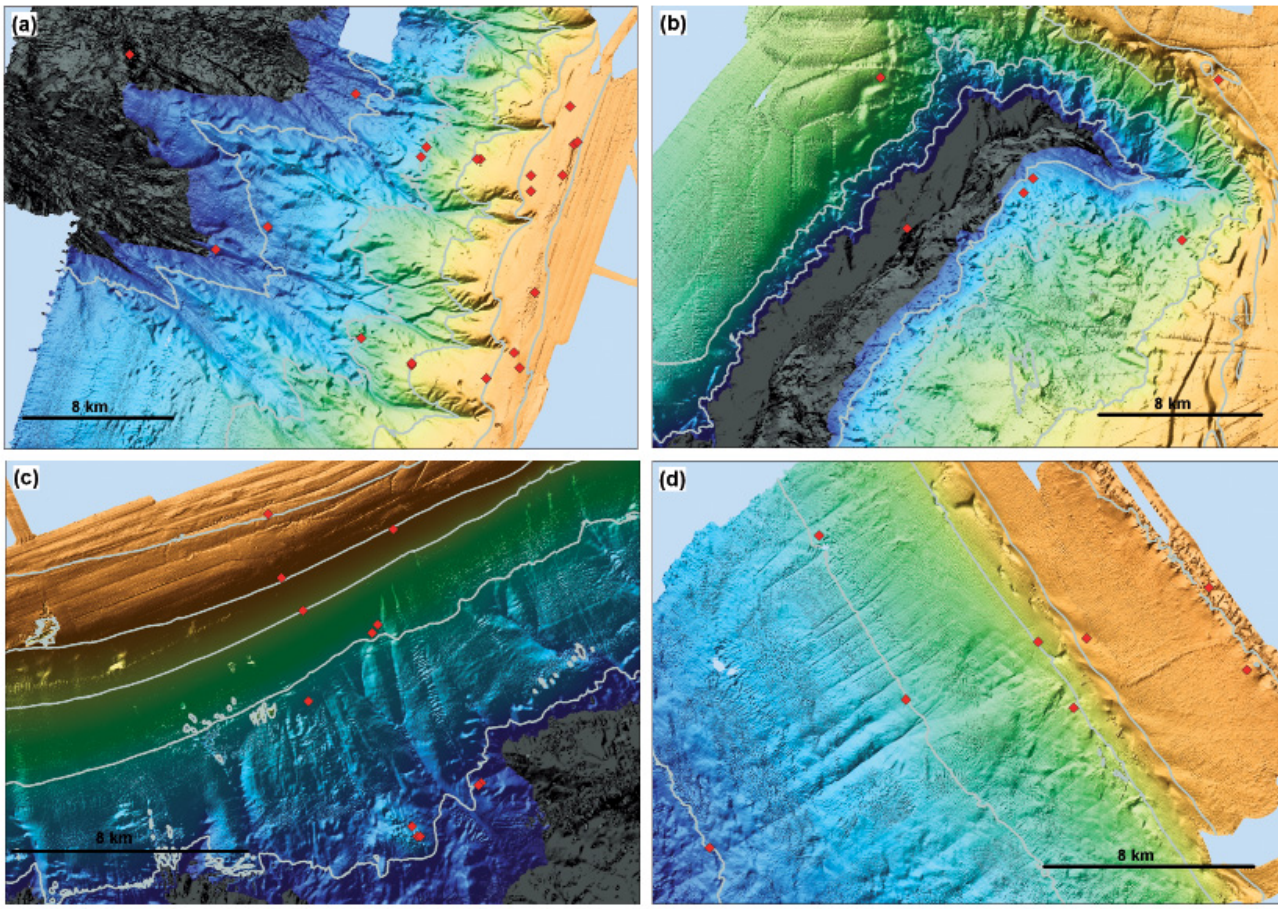

FIGURE 2 Examples of bottom topography and depths at four sites on the western continental margin of Australia mapped using multibeam acoustics: (a) site 18 – Ningaloo, (b) site 7 – Perth Canyon, (c) site 2 – Albany, (d) site 11 – Abrolhos. Colour shading shows depth from ~100 m (orange) depth to ~1000 m (dark blue) with depths >1100 m (black) Sampling stations (red diamonds); 100, 200, 400, 700 and 1000 m depth contours (grey lines); scale bar = 8 km.

As with material taken elsewhere along Australia's continental shelf and slope, identifying and resolving the taxonomy of marine species collected from deepwater off Australia's western margin is difficult in regard to the availability of relevant information about known species. Many type specimens, including the shallow water material collected on historical exploratory voyages to Australia, are lodged in European museums (London, Paris, Hamburg and Amsterdam) rather than in Australia. Although this historic and irreplaceable information has been carefully conserved and the specimens and associated data are readily accessible to scholars, overseas visits add appreciably to the cost of identification (as much of the material is deemed too precious to be loaned). Further, biological collections and associated data, including voucher specimens, and other data from the more recent environmental assessment surveys for industry, may be commercial-in-confidence, not retained and/or not lodged in a museum and thus not readily available for study.

STATEMENT OF CONTRIBUTION OF THIS PAPER

This paper is an annotated checklist of the megabenthic invertebrate species collected on a systematic regional-scale survey of the deep shelf and upper slope of the western continental margin of Australia, the first of its kind in Australia. Samples were taken from 100 m and 400 m depths at 19 locations from Barrow Island to Albany (~21ºS to 35ºS), and at additional depths (200 m, 700 m and 1000 m) at selected sites. Our checklist provides identifications along with biogeographical information and images of species from six target taxa – Demospongiae: Porifera, Octocorallia: Cnidaria, Mollusca, Echinodermata, Decapoda: Crustacea and Ascidiacea: Tunicata – and for the additional taxa – Scleractinia: Cnidaria and Antipatharia: Cnidaria and Pycnogonida. Many species are new to science or represent new distribution records for Western Australia and Australia.

METHODS

SURVEY DESIGN

In 2005, benthic marine invertebrates were collected systematically at sites located at one degree longitudinal intervals off Australia's continental margin between Bald Island and Cape Leeuwin, and one degree latitudinal intervals from Cape Leeuwin to Barrow Island, from the FRV *Southern Surveyor* (survey SS200510). The sites ranged in latitude from 21ºS to 35ºS and longitude from 112ºE to 118ºE (over 2050 km of coastline). The Perth Canyon site was added into the sampling design as a feature of special interest resulting in 19 sites (Table 1, Figure 1). This sampling approach was designed to position sampling stations within each of the three bigeographical provinces and the two transition zones of the western region designated in the national bioregionalisation by Heap et al. (2005) (boundaries are shown in Figure 1). At each site, sampling stations were targeted at the two major bathomes (depth zones) – the outer continental shelf (samples taken at ~100 m depth) and upper continental slope (samples taken at ~400 m). At selected sites within each province, the sampling design was extended into across-shelf transects to include additional sampling stations within the following bathomes – continental shelf break (at ~200 m), deep upper continental slope (at ~700 m) and mid-continental slope (at ~1000 m). Two very deep sample stations on the mid-continental slope at ~1200 m at Ningaloo and ~1500 m in the Perth Canyon also included (Table 1).

Determining the exact locations of the sample sites was supported by detailed maps of the seafloor topography obtained in a prior sister survey of the region by the National Facility Vessel FRV *Southern Surveyor* in July/August 2005 (SS200507). On that survey, each site was mapped using multibeam acoustics (Kloser et al. 2007) (see mapped examples in Figure 2), the stations surveyed with the towed, high-resolution video and still image system described by Shortis et al. (2008) (see habitat examples in Figure 3). Each station was also sampled with a Smith-McIntyre grab (for sediment analysis and identification of the macrofauna (benthic organisms retained on a 1 mm sieve when elutriated) (lodged with R. Wilson, Museum Victoria). Based on the SS200507 survey acoustic results, geomorphic features – primarily canyons and a seamount, but also other interesting features such as rocky banks and a seep site – were added to the sampling design for this survey as specific targets (Table 1). The multibeam backscatter data from SS200507 allowed specific targeting of separate soft and hard terrains; these stations were nested with bathomes and features if both terrain types were present for the SS200510 survey. Examples of the various habitats sampled are shown in Figure 3 (from the towed, high-resolution video and still image system imagery taken during the mapping survey SS200507). The surveys and associated environmental data are described in more detail in the National Facility survey reports (2005a, 2005b) and by Williams et al. (2010).

A total of 172 stations at 19 sites were sampled along 2050 km of the western continental margin between 85 m to 1584 m depths, covering both soft and hard terrains (when present).

INVERTEBRATE COLLECTION

Megabenthic invertebrates (megabenthos: benthic organisms large enough to be sorted without microscopy and easily caught in bottom trawls with 25 mm stretched-mesh net cod-ends (as opposed to macrofauna: benthic organisms retained on a 0.5–1 mm sieve) were collected with two epibenthic samplers – a 'Sherman' sled and a beam-trawl. The Sherman sled (Lewis 1999, 2009) is a robust heavy design for use on rocky (hard) terrains and steep gradients. Its mouth dimensions are 1.2 x 0.6 m. The beam-trawl was a CSIRO modified version of the French IRD design light beam-sled (Forest 1981; Lewis 2010) that was used on soft sediment terrains. Its mouth dimensions are 4.0 x 0.5 m. Images and basic descriptions of both gears can be found at: http://www.cmar.csiro.au/research/seamounts/epibenthic.htm. Tow distances along the seabed were measured using a USBL beacon attached to the sleds to determine the duration of bottom contact, and dynamic GIS mapping to plot the tow track. Tow direction and duration was dependent on the roughness and topography of the substrate. In general, tows were along depth contours and of about 20 minutes duration (but were less for stations when the sled was full of catch within 5–10 minutes).

The entire megabenthic invertebrate catch was sorted and identified at sea by taxonomists to the lowest taxonomic resolution possible; these nominal species are herein known as 'operational taxonomic units' (OTUs). Each OTU was counted, weighed (to the nearest gram) and representatives photographed prior to preservation to record live colours, and then included in a continually updated image reference catalogue for comparative purposes while at sea. Proof sheets of images of live specimens are shown in Appendix 2. Specimens were preserved in the standard medium for that phylum (e.g. 70% ethanol – Porifera, Echinodermata, Octocorallia, Scleractinia, Antipatharia, and some Mollusca; 10% formalin – Decapoda, some Mollusca, Ascidiacea and other minor groups). Additional material from various

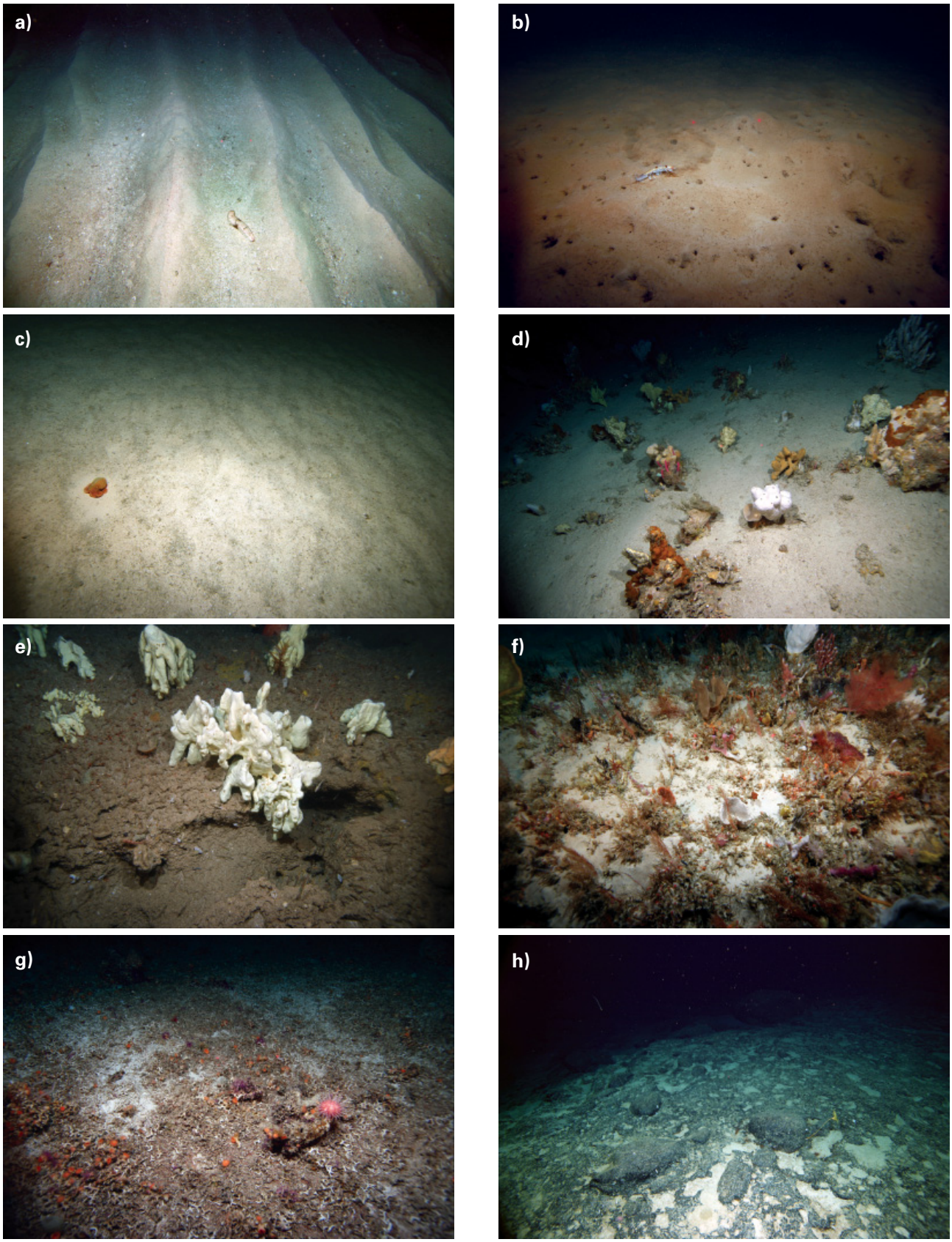

FIGURE 3 Example images of habitat types sampled along the western continental margin of Australia taken with the towed, high-resolution video and still image system on the SS200507 survey: (a) hard rippled sand (site 13 – Zuytdorp, 100 m depth); (b) Soft muddy sediments (site 18 – Ningaloo, 200 m depth); (c) sand (site 17 – Point Cloates, 400 m depth); (d) layer of sand over hard substrate (site 2 – Albany, 200 m depth); (e) reef (site 18 – Ningaloo, 100 m depth); (f) sandy reef (Site 13 – Zuytdorp, 100 m depth); (g) deep coral on seamount (site 2 – Albany, 1000 m); (h) deep bare rock (site 2 – Albany, 1000 m depth).

specimens was preserved in 95% analytical-grade ethanol for potential genetic analyses.

Species taxonomy is tracked using a computerised Code for Australasian Aquatic Biota (CAAB). These numbers consist of eight digits and are assigned to each described species in Australian waters. The first two digits define the major group, e.g. phylum; the next three digits define the family or other higher group; the last three digits are the species within that family or group, e.g. CAAB number 28821004 is for decapod crustacean, *Ibacus peronii* Leach, 1815. A code starting with '99' is an OTU that has not been described or distinguished further. The second two digits in a '99' code are equivalent to the first two digits in a permanent CAAB number; '99' codes are issued sequentially and the order of the remaining digits do not have taxonomic significance. '99' codes are used until a species is described, when it is replaced by a permanent CAAB number. '99' codes can be accessed through the public CAAB database by ticking the project specific codes box on the search screen, e.g. CAAB number 99100454 is for the uncertain sponge species, *Clathria* (*Thalysias*) cf. *juniperina*. Updates to species names can be obtained by checking the CAAB number in the online database at http://www.marine.csiro.au/caab. The following six major taxonomic groups were selected as target groups for identification to species-level: Porifera (Demospongiae), Cnidaria (Octocorallia), Mollusca, Echinodermata, Decapoda and Ascidiacea (Table 2a). Their selection was based on several factors including their prominence in field collection (80% of catch) and the availability of specialist taxonomists. The remaining non-target invertebrate taxa were also distributed to museums for lodgement and curation (Table 2b). Identifications have been undertaken on some of these groups i.e. Pycnogonida, Antipatharia and Scleractinia, and these are also included in this manuscript.

Once identifications were completed by the taxonomists, each species was allocated a permanent CAAB number and species recorded in Australian waters for the first time were added to the CAAB database. Published names of new species were upgraded for the associated images. Catch composition records were also upgraded as species taxonomy was reviewed; weights were adjusted for lots where the OTU has been split into multiple species.

This checklist uses the following terms to categorise the status of species identified. 'Described species' are those species whose description was in the published literature prior to this survey e.g. *Dermechinus horridus* (A. Agassiz, 1879). 'New species' are those species collected on this survey determined by the taxonomists to be undescribed e.g. *Oparinisis* n. sp. A or *Ophiura* sp. MoV2734 ('MoV number' is a unique code used by taxonomists at Museum Victoria). Some new species descriptions have been published subsequent to the survey e.g. *Oxypleurodon wilsoni* Richer de Forges and Poore, 2008. The remainder of the examined taxa are categorised as 'uncertain species'. These taxa were identified to the lowest OTU possible (in some cases only to genus or family level) but could not be confidently determined as previously described taxa, or recognised as new species either. The possibility exists that these species may belong to known species but taxonomic uncertainty precludes a definite identification. In addition, some species were identified as uncertain using the 'cf.' or '?' prefix. Examples of uncertain species include: *Raspailia (Raspaxilla)* sp. SS1, *?Hyotissa* sp. 1, *Bathycrinidae* sp. 1, cf. *Patagiaster* sp. 1 and *Dermomurex* cf. *antonius*.

Data presented here are based on quality assured data confirmed against the original field collection station data and images. Unsuccessful (aborted) sampling events and specimen lots with incomplete location data have been removed from the summary analyses. Information on the biogeographical distributions of the previously described species and whether they were new records for Australian or Western Australian waters, or Australian endemics was collated from the literature and the taxonomists' knowledge.

The checklist (Appendix 1) summarises the geographical and depth ranges for each species or OTU recorded on the survey. The data have not been corrected for varying sampling intensity among sites. This list, and all summaries and analyses presented here, represent the upgrades and species descriptions as of December 2010.

The checklist (Appendix 1) summarises the geographical and depth ranges for each species or OTU identified on the survey. The species names and OTU designations in this list, and presented in the summaries within this publication, reflect the taxonomic work published and/or received by CSIRO as of December 2010.

RESULTS

OVERVIEW OF FAUNAL COMPOSITION

Porifera dominated the collection by biomass, comprising 86% of the total catch (wet weight). The other target groups in decreasing order, each at least an order of magnitude less by weight, were: Echinodermata, Decapoda, Mollusca, Cnidaria (Octocorals, Antipatharia and Scleractinia) and

Ascidiacea. The largest specimen, belonging to the Demospongiae, was a single individual of *Biemna* sp. SS2 that weighed 37 kg. Additional large individuals in this genus weighed 17, 6 and 5 kg (see Appendix 2: image 10084810). Another 126 individual Demospongiae specimens were over 1 kg wet weight. The heaviest non-sponge invertebrate specimens were of the Holothuroidea and Echinoidea and these weighed less than 1 kg.

At sea, the sorting of the samples yielded 1,750 nominal 'species' (OTUs) across all the invertebrate taxa (see Table 2a, b), with the six major taxonomic groups accounting for 80% of these. Over 19,000 specimens comprising 2,001 species were subsequently identified in the laboratory by the taxonomists from the six major groups (a further 38 OTUs were only identified at higher taxonomic levels). Of the examined species, 876

TABLE 2 List of the lodgement locations and taxonomic experts working on specimens of the invertebrate megabenthos off the western continental margin of Australia. The number of lots of specimens from the field data are shown for each major taxon.

2A) Specimen lodgement details for the major taxa targeted for identification.
Note: holotypes of newly described species are lodged at Western Australian Museum

TAXONOMIC GROUP	TAXONOMIST AND TAXONOMIST AFFILIATION	SAMPLE LODGEMENT LOCATION	NUMBER OF SPECIMEN LOTS RECORDED IN FIELD DATA
Porifera: Demospongiae	Jane Fromont	Western Australian Museum	889
Cnidaria: Octocorallia	Phil Alderslade	Museum & Art Gallery of the Northern Territory	150
Mollusca: Bivalvia	Shirley Slack-Smith	Western Australian Museum	285
Mollusca: Scaphapoda	Shirley Slack-Smith	Western Australian Museum	32
Mollusca: Gastropoda	Shirley Slack-Smith	Western Australian Museum	357
Mollusca: Opisthobranchia	Richard Willan – Museum & Art Gallery of the Northern Territory	Western Australian Museum	50
Mollusca: Polyplacophora	Karen Gowlett-Holmes – CSIRO	Western Australian Museum	10
Mollusca: Cephalopoda	Mark Norman	Museum Victoria	71
Echinodermata: Asteroidea	Loisette Marsh	Western Australian Museum	187
Echinodermata: Crinoidea	Tim O'Hara	Museum Victoria	53
Echinodermata: Echinoidea	Ashley Miskelly	Australian Museum	103
Echinodermata: Holothuroidea	Mark O'Loughlin	Museum Victoria	108
Echinodermata: Ophiuroidea	Tim O'Hara	Museum Victoria	343
Crustacea: Decapoda	Gary Poore	Museum Victoria	1109
Tunicata: Ascidicea	Patricia Mather	Queensland Museum	80

2B) Specimen lodgement details for the remaining non-target taxa with names of taxonomists who have an interest in working up the samples.

TAXONOMIC GROUP	TAXONOMIST AND TAXONOMIST AFFILIATION	SAMPLE LODGEMENT LOCATION	NUMBER OF SPECIMEN LOTS RECORDED IN FIELD DATA
Cnidaria: Medusozoa & Ctenophora		Australian Museum	4
Cnidaria: Hydrozoa		Museum Victoria	97
Cnidaria: Antipatharia	Karen Miller – Institute of Marine and Antarctic Studies, University of Tasmania Tina Molodstova – P.P. Shirshov Institute of Oceanology, Russia	Australian Museum	13
Cnidaria: Actinaria	Carden Wallace – Museum Tropical Queensland	Western Australian Museum	108
Cnidaria: Scleractinia	Marcelo Kitahara – Museum Tropical Queensland Stephen Cairns – National Museum of Natural History, Smithsonian Institute, USA	Western Australian Museum	93
Annelida: Polychaeta		Australian Museum	187
Nemertea, Sipuncula and Echiura		Australian Museum	57
Brachiopoda		Australian Museum	33
Bryozoa	Phil Bock	Museum Victoria	105
Crustacea: Cumacea		Australian Museum	9
Crustacea: Mysidacea		Australian Museum	5
Crustacea: Ostacoda		Australian Museum	5
Crustacea: Copepoda		Australian Museum	5
Crustacea: Cirripedia	Di Jones	Western Australian Museum	40
Crustacea: Amphipoda		Australian Museum	32
Crustacea: Isopoda		Australian Museum	72
Crustacea: Stomatopoda	Shane Ahyong	Australian Museum	30
Pycnogonida	Claudia Arango – Queensland Museum	Australian Museum	19

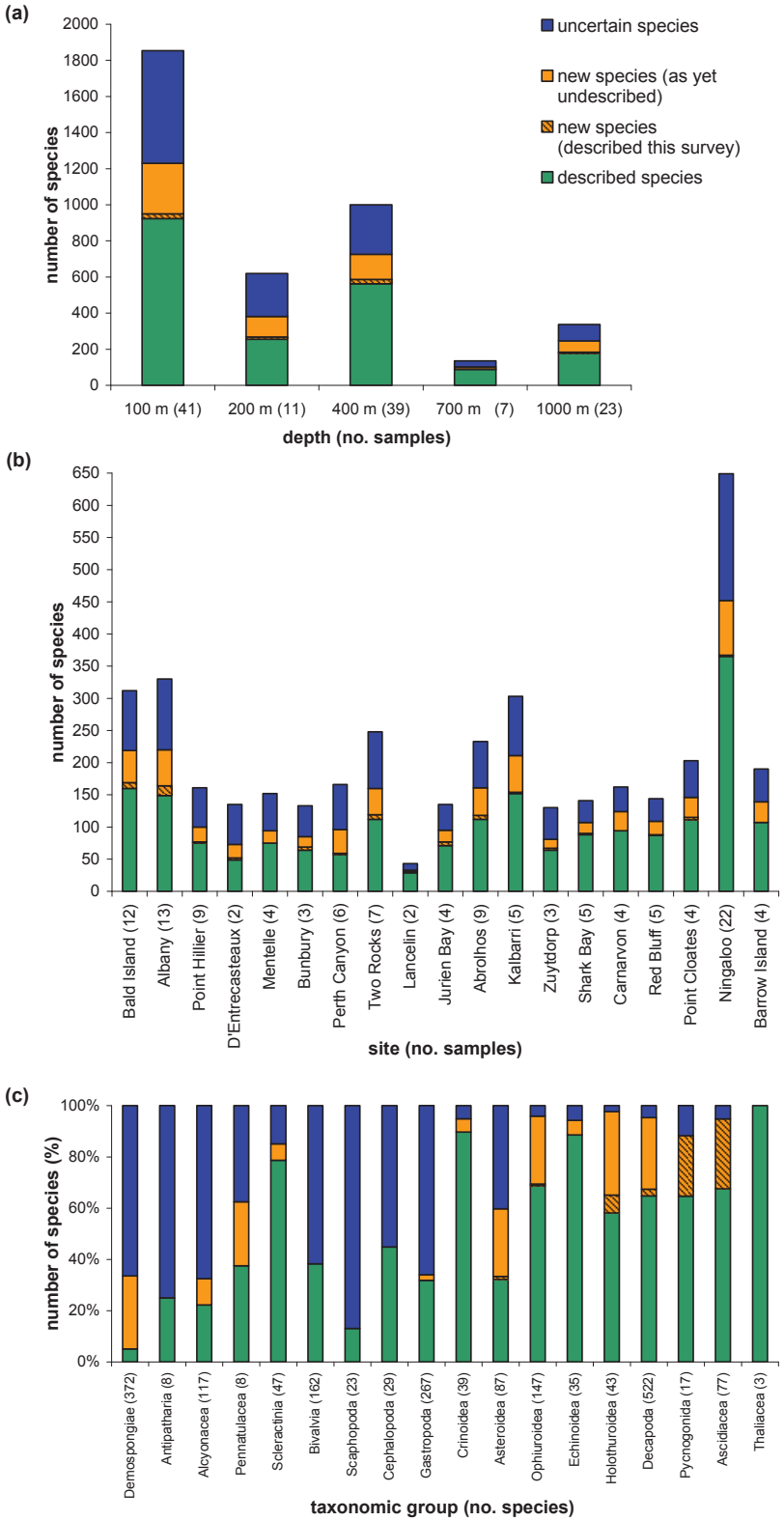

FIGURE 4 The numbers of described, 'unknown or uncertain' and new species of megabenthic invertebrates collected off the western continental margin of Australia: (a) by target depths, (b) by site and (c) by the major taxa identified (number of species shown in brackets after taxa name on x-axis). Note: species numbers are not standardised by sample size or swept area, and 1000 m also includes the two stations at 1200 m and 1500m.

TABLE 3 Summary of numbers of species (and higher-level taxa) of the invertebrate megabenthos identified off the western continental margin of Australia. Also shown are the numbers of new, 'uncertain' and described species.

Note: 'New species' is split into two categories to illustrate those species for which descriptions have already been published in the literature: a) O'Loughlin 2009; b) Franklin and O'Hara 2008; c) O'Loughlin et al. (2007) and O'Loughlin and Maric (2008); d) Bruce (2008), Richer de Forges and Poore (2008), Poore and Collins (2009), Taylor and Collins (2009), Ahyong (2010), McCallum and Poore (2010) and Taylor et al. (2010); e) Arango (2009); f) Kott (2008).

TAXONOMIC GROUP	ORDERS	FAMILIES	GENERA	SPECIES	NON-SPECIES LEVEL ID	NEW SPECIES: As yet undescribed (newly described)	PREVIOUSLY DESCRIBED SPECIES	UNCERTAIN SPECIES STATUS
Porifera: Demospongiae* summary	**12**	**51**	**110**	**372**	**2**	**106**	**19**	**246**
Cnidaria: Antipatharia	1	2	5	8			2	6
Cnidaria: Alcyonacea*	1	16	58	117	10	12	26	79
Cnidaria: Pennatulacea*	1	5	6	8	1	2	3	3
Cnidaria: Scleractinia	1	8	19	47		3	37	7
Cnidaria summary	**4**	**31**	**88**	**180**	**11**	**17**	**68**	**95**
Mollusca: Bivalvia*	10	39	83	162			62	106
Mollusca: Cephalopoda*	4	12	21	29	11		13	16
Mollusca: Gastropoda*	7	53	142	267	1	6	85	176
Mollusca: Scaphopoda*	2	5	7	23			3	20
Mollusca summary	**23**	**109**	**253**	**481**	**12**	**6**	**163**	**318**
Echinodermata: Asteroidea*	5	18	58	87	6	23 (1,a)	28	35
Echinodermata: Crinoidea*	2	13	29	39	5	2	35	2
Echinodermata: Echinoidea*	9	14	26	35		2	31	2
Echinodermata: Holothuroidea*	5	12	27	43		14 (3,b)	25	1
Echinodermata: Ophiuroidea*	2	14	66	146		38 (1,c)	101	6
Echinodermata summary	**23**	**71**	**206**	**350**	**11**	**79 (5)**	**220**	**46**
Arthropoda: Crustacea: Decapoda*	1	75	267	521	1	146 (12,d)	340	23
Arthropoda: Pycnogonida	1	5	11	17		0 (4,e)	11	2
Arthropoda summary	**2**	**80**	**278**	**538**	**1**	**146 (16)**	**351**	**25**
Tunicata: Ascidiacea*	2	11	25	77	1	0 (21,f)	52	4
Tunicata: Thaliacea	3	3	3	3			3	0
Tunicata summary	**5**	**14**	**28**	**80**	**1**	**0 (21)**	**55**	**4**
OVERALL TOTAL	**69**	**356**	**963**	**2001**	**38**	**354 (42)**	**876**	**734**

*MAJOR TAXA

TABLE 4 Biogeographic affinities of the 876 previously described invertebrate megabenthic taxa collected off the western continental margin of Australia, and the numbers of new records for Australian and Western Australian waters for these species.

TAXONOMIC GROUP	NEW DISTRIBUTION RECORD FOR AUSTRALIA (WESTERN AUSTRALIA)	AUSTRALIAN ENDEMIC (WESTERN AUSTRALIAN ENDEMIC)	INDO-WEST-PACIFIC	INDIAN OCEAN	WIDESPREAD SOUTHERN TEMPERATE	ATLANTIC OCEAN	COSMOPOLITAN
Porifera: Demospongiae*	0 (3)	7 (5)	6	1	5		
Cnidaria: Antipatharia	1 (1)	0	1				
Cnidaria: Alcyonacea*	6 (9)	13 (4)	12	1			
Cnidaria: Pennatulacea*	2 (2)	0	3			1&	
Cnidaria: Scleractinia	4 (8)	5 (0)	28			1	3
Mollusca: Bivalvia*	1 (15)	29 (2)	32	1			
Mollusca: Cephalopoda*	0	6	4				3
Mollusca: Gastropoda*	1 (7)	35 (12)	47		1		1
Mollusca: Scaphopoda*	0 (1)	2			1		
Echinodermata: Asteroidea*	3 (5)	6 (1)	20		1	1	
Echinodermata: Crinoidea*	5 (11)	5 (2)	20	2	4		1
Echinodermata: Echinoidea*	3 (15)	6 (1)	22	1	2		
Echinodermata: Holothuroidea*	11 (19)	0	20	1	2		2
Echinodermata: Ophiuroidea*	16 (48)	11 (0)	66	2	11	1	10
Arthropoda:Crustacea: Decapoda*	74 (154)	71 (13)	232	11	12	0	14
Arthropoda: Pycnogonida	0 (5)	5 (2)	5				1
Tunicata: Ascidiacea*	2 (5)	20 (4)	28	1	1	1	1
Tunicata: Thaliacea	0						3
TOTAL	129 (308)	221(46)	546	21	40	4	39

*MAJOR TAXA & ALSO OCCURS IN NORTH-EAST PACIFIC

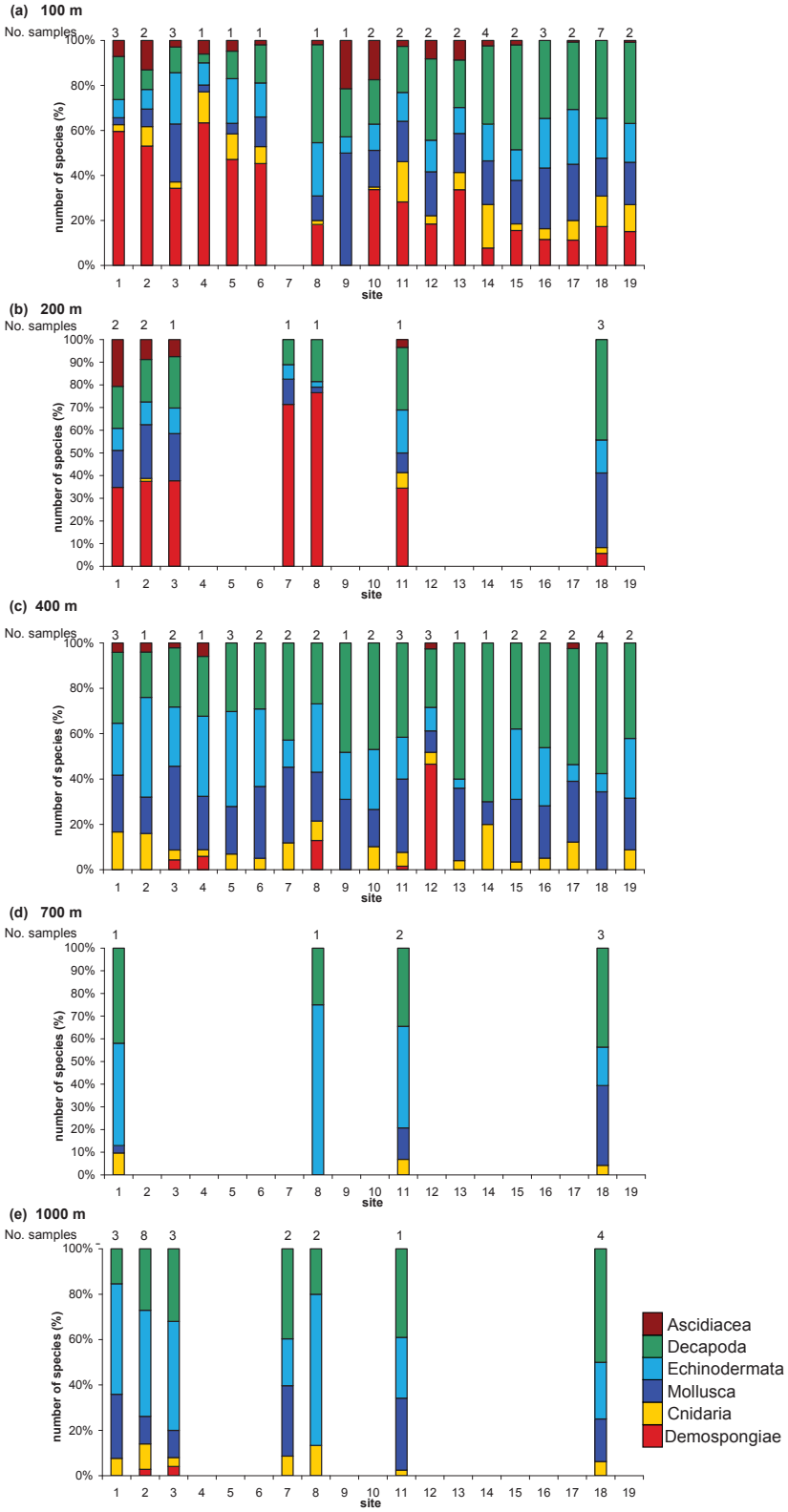

FIGURE 5 The proportions of the six major megabenthic invertebrate taxa off the western continental margin of Australia occurring at each site shown for five depth zones; (a) 100 m, (b) 200 m, (c) 400 m, (d) 700 m (e) 1000 m; site names are shown in Figure 1 and Table 1. Number of stations sampled at each depth is shown at top of columns. Note: species numbers are not standardised by sample size or swept area, and 1000 m also includes the two stations at 1200 m and 1500 m.

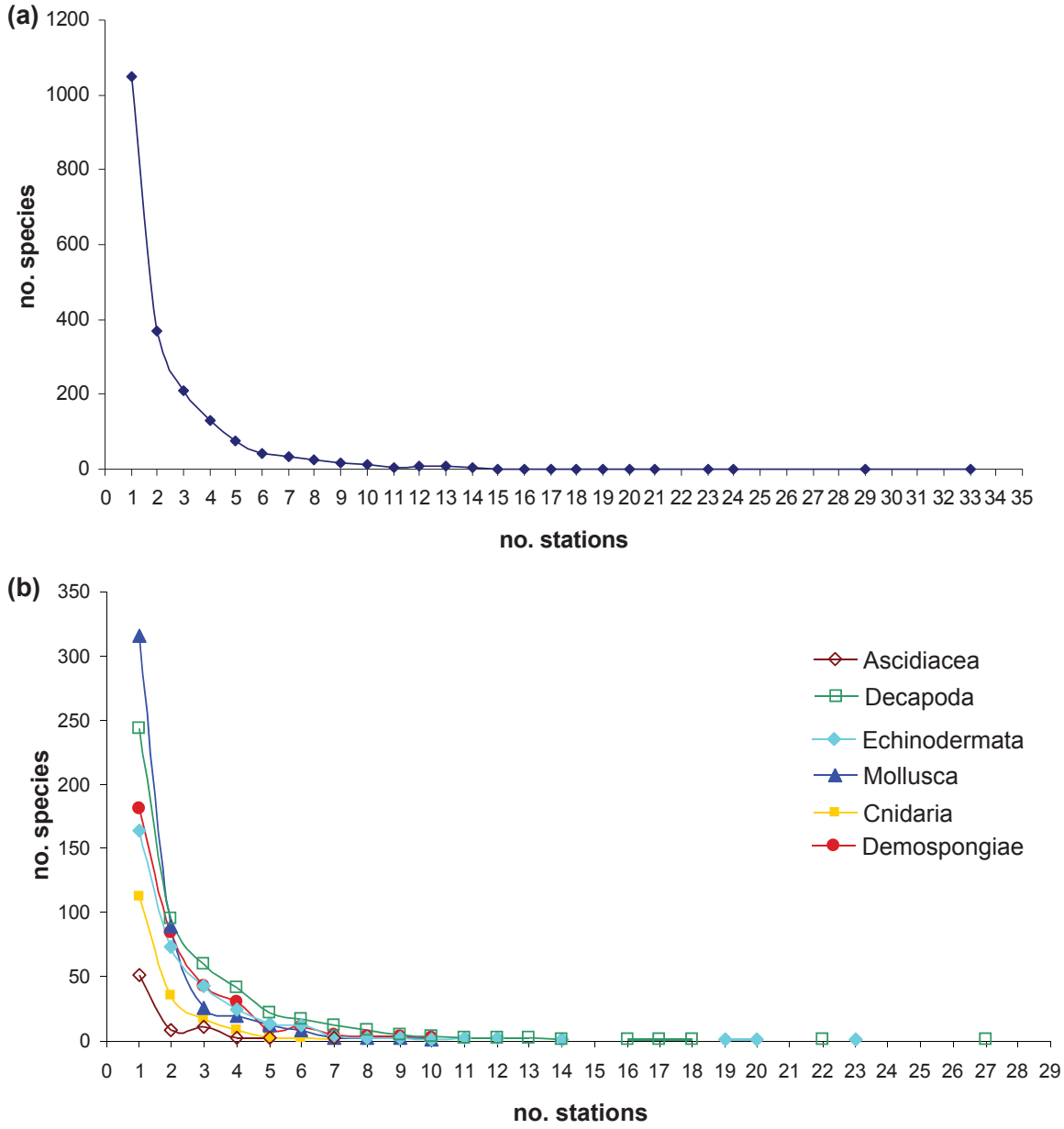

FIGURE 6 The [ranked] occurrence of the megabenthic invertebrate taxa off the western continental margin of Australia by the number of stations each species was present: (a) summary of all species, (b) by the six major megabenthic invertebrate taxa.

(44%) were identified as previously described species and 396 (20%) were determined to be new species. The remaining 727 species (36%) remain of uncertain identity. To date, 42 new species have been described from this collection. Some groups are better studied than others: 89% of the Echinoidea and 79% of the Scleractinia could be identified as described species, while only 5% of the demosponges and 22% of the Alcyonacea were recognised as described species (Table 3, Figure 4c).

Of the six major groups, the most speciose was the Decapoda with 521 species. The Mollusca with 481 species (excluding the Opisthobranchia and Polyplacophora) were the second most diverse group, followed by the Demospongiae (372), the Echinodermata (350), the Cnidaria (Octocorallia, Antipatharia and Scleractinia) (180) and the Ascidiacea (77). In addition, 17 species of Pycnogonida and 3 Thaliacea were recorded. Numerically the Echinodermata (6,829 specimens) and the Decapoda (6,206) dominated the collection, followed by the Mollusca (2,588) – excluding the

Opisthobranchia and Polyplacophora, the Cnidaria (Octocorallia, Antipatharia and Scleractinia) (1,916), the Demospongiae (1,288) and the Ascidiacea (458) (Table 3).

FAUNAL DISTRIBUTIONS

One-quarter (522) of all the species collected on the survey are new records for Australian waters. Of these, 129 records are the first record in Australian waters for a species previously described from elsewhere in the world; the remaining records are confirmed as new species. Over one-third (726) of all the species collected are new records for Western Australian waters, of these 308 are species known from elsewhere in the world (including the range extension of 175 Australian endemic species into Western Australia) and the remainder are confirmed as new species (Table 4).

BIOGEOGRAPHY OF DESCRIBED SPECIES

For the 876 species previously described in the literature (and hence with known distributions) collected on this survey, the largest proportion (61%) had an Indo-West-Pacific biogeographic distribution, while only 4% were restricted to the Indian Ocean. Australian endemics accounted for 25% of species distributions, including 5% endemic to Western Australian waters. Southern Ocean or sub-Antarctic species represented 5%, species previously recorded only from the Atlantic Ocean 1%; and cosmopolitan species 4% of the biogeographic distributions. The biogeographic affinities of the identified megabenthos are shown in Table 4 along with the overall species totals for the taxonomic groups.

Depth appeared to strongly influence species diversity with many more species collected on the shallower outer shelf (100 m depth) than on the upper slope (400 m) where sampling coverage and intensities were similar (41 compared with 39 sample collections) (Figure 4a). The proportions of the six major megabenthic invertebrate taxa caught at each site are shown for each of the five depth zones (Figure 5). The Demospongiae and the Ascidiacea were collected mostly from the shallow 100 m and 200 m stations and were considerably more diverse (with more species) in the temperate sites south of Two Rocks (Figure 5a,b). These shallower temperate sites appeared to contain abundant hard substrate that provided suitable habitat and access to favourable nutrient flow in the currents for these fixed sessile filter feeding taxa (also see Kott 2008; Williams et al. 2010). Corals were not diverse but were found to be locally abundant. No clear depth or site related patterns were discernible for the Mollusca, Decapoda or Echinodermata at this high level of taxonomic resolution.

Overall, more species were collected where sampling effort was greatest – especially in the focus areas of Ningaloo, Albany and Bald Island, and lowest at sites where few collections were made (e.g. only two sample collections at Point D'Entrecasteaux and Lancelin) (Figure 4b). While unequal sample numbers made it difficult to compare site-level diversity across the entire data set, it is interesting to note that the total number of species collected was relatively consistent across all sites for which there were between two and six sampling stations with only Kalbarri (five stations) standing out as richer (Figure 4b).

The percentage of described species compared with the uncertain and new species per site was greater for sites north of Shark Bay; accounting for at least 55% of the species (Figure 4b).

For sites south of Shark Bay the opposite was found, driven by the large number of uncertain and new demosponge species recorded from the southernmost temperate sites at 100 m depth (Figures 4c, 5a,b).

The percentage of described species at each site ranged from 34–63%, lowest at Perth Canyon and highest at Lancelin. The percentage of new species per site was fairly steady between 11–24%, being lowest at Lancelin and highest at Abrolhos. Only two stations were sampled at the Lancelin site at 100 m and 400 m depths due to the narrowness of the shelf and lack of variation in the terrain (steep gradient, compressed habitat, soft substrate – no sponges were collected from these sites). The percentage of uncertain species per site ranged from 19–31%, being lowest at Carnarvon and adjacent tropical sites and highest at Point D'Entrecasteaux.

The collection is dominated by a high percentage (>50%) of singletons (occurring at one site only) (Figure 6a) and this pattern is consistent between the six major taxa (Figure 6b). For the six major taxa sampled, 1,075 of the 2,001 species were recorded at only one of the 172 stations sampled. The most frequently recorded species of the entire survey, the hermit crab *Paguristes aciculus*, occurred at 27 stations from Bald Island to Ningaloo in depths from 100–550 m.

DESCRIPTIVE SUMMARY AND OBSERVATIONS ON IDENTIFIED TAXA

The following summaries are ordered taxonomically; please use the numerical sequence of the CAAB numbers to facilitate comparison with the checklist of species in Appendix 1 and the species images in Appendix 2. The

summaries include: a) a numerical summary of each taxa at relevant levels of taxonomic hierarchy, i.e. species, genera and families including numbers of new species; b) a breakdown of the biogeographical distributions of each taxa for the previously described species to illustrate worldwide affinities; and c) any other relevant points and interesting features of that taxa. For the larger groups, analyses by several different taxonomists and an overall summary at the higher level taxa are included, e.g. molluscs.

1. PORIFERA: DEMOSPONGIAE (CAAB NUMBERS 1000#### & 99100###)

A) NUMERICAL SUMMARY

The Class Demospongiae dominated the Porifera collected numerically with 1,312 specimens; 372 species were identified from 110 genera, 51 families and 12 orders, two additional OTUs were only identified to a higher taxonomic level. A further 21 and 30 specimens not identified to species level were from the sponge Classes Hexactinellida and Calcarea, respectively. A conservative estimate of the number of Demospongiae species new to science resulting from this study is 106 species (28%), 246 species remain uncertain (67%) and only 19 species (5%) were determined to be described species (Table 3). Due to the large volume of the sponge collection, very small individuals and/or fragments <5 g in wet weight were not identified due to time constraints, but these specimens have been kept for future taxonomic study. Of the 372 Demospongiae species recorded, 185 occurred at one station only, while the two most common – *Sarcotragus* sp. WAM Ng1 (99100345) and *Luffariella* sp. WAM SS1 (99100343) (Order Dictyoceratida) occurred at 10 sampling stations. *Agelas* sp. WAM SS1 (99100448) (Order Agelasida) and *Geodia* sp. NG1 (99100423) (Order Astrophorida) occurred at nine sampling stations (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Since 67% of the demosponges are uncertain species and 28% are new species, the following biogeographical summary applies to the 5% (19 species) identified as previously described species (Table 4). Seven (37%) are Australian endemics of which five (26%) are Western Australian endemics. Of the remainder, six (32%) have an Indo-West Pacific affinity, one (5%) an Indian Ocean affinity and five (26%) a Southern Ocean or sub-Antarctic origin. At least 106 are new species records for Australia and 109 are new records for Western Australia, this includes range extensions of three Australian endemic species (Table 4).

It was beyond the scope of this study to research the historical literature and to undertake major redescriptions of the Demospongiae species, some of which may have been found in this study. However, digitised species identification sheets (mudmaps) were compiled for each of the 372 species (see example: Fromont and Gomez 2007; *Axinella* sp. SS1 in Appendix 3. These mudmaps of Australian sponge OTUs are a standardised format for capturing the characteristics of each designated sponge OTU. They are used by taxonomic experts throughout Australia and thus allow an overall assessment of the biogeography of the sponge fauna, even though many of the species still need to be formally described and named. The synthesised OTUs will form the basis for new species descriptions.

The order Poecilosclerida is known to be the most speciose of the all the Demospongiae (Hooper and van Soest 2002). The Poecilosclerida had the highest numbers of species (25%) followed by the Dictyoceratida (fibre sponges), Haplosclerida, Astrophorida and Halichondrida (18%, 17%, 13% and 11%, respectively). Two comparable Australian deepwater projects, one in the Great Australian Bight (GAB) and the other in the Tasmanian seamounts also found Poecilosclerida dominated (30% and 37%, respectively) but the order of dominance of the other orders differed. In the GAB the Halichondrida and Haplosclerida, Dictyoceratida, Hadromerida and Astrophorida represented 19%, 19%, 14%, 11% and 4% of species, respectively (Sorokin et al. 2007), and in the southern Tasmanian seamounts, Dictyoceratida, Hadromerida, Haplosclerida, Halichondrida and Astrophorida represented 15%, 14%, 12%, 10% and 9% of species, respectively (Schlacher-Hoenliger 2007).

This western continental margin study differs from the GAB and Tasmanian studies in recording sponges from the orders Agelasida, and the family Plakinidae. In addition, no species of the Order Verongida were found in the GAB and only one species was reported in the Tasmanian seamounts compared to eight species in the present study. This study included tropical locations and surveyed a larger area and a much greater latitudinal gradient compared with both the GAB and Tasmanian studies.

This is the first collection of sponges from depths greater than 100 m off the south-west coast of Australia. Recent shallow water collections in the region (Fromont et al. 2006; Fromont and Vanderklift 2009) have indicated a speciose shallow water fauna, and Hooper and Levi (1994) have suggested pockets of apparent endemism occur along the western continental margin of Australia.

2. CNIDARIA

Only the subclass Octocorallia (Alcyonacea and Pennatulacea) was targeted for identification. However, specimens from the other coral taxa (Antipatharia and Scleractinia) were also identified and are discussed here.

2.1. CNIDARIA: ALCYONACEA AND PENNATULACEA (CAAB NUMBERS 1117####, 99110### AND 112#####, 99110###, RESPECTIVELY)

A) NUMERICAL SUMMARY

Over 440 specimens within the Alcyonacea (soft corals, sea fans and sea whips) were identified from this survey. These comprised 117 species, 58 genera and 16 families. Of these, 26 species could be identified as described species, 12 recognised as new species and four as new genera (but as yet undescribed) and 79 species remain uncertain (Table 3). A further 10 OTUs were only identified at a higher taxonomic level and are not included in the following summary. The alcyonacean material was diverse, although the biomass was low for all but a few of the endemic species.

In addition, 29 specimens of the Order Pennatulacea (sea pens) were collected, including eight species, six genera and five families. Of these three could be identified as described species, two recognised as new and three remain uncertain (Table 3). A single OTU was too damaged to be identified to species level.

As in many other faunal groups, identifications are hindered by poor and inaccurate literature in a field where most genera need total revision using modern techniques. Given that there are virtually no comparative records of Octocorallia from the regions sampled, much of the material can be considered as new records. Of the 117 Alcyonacea and 9 Pennatulacea species recorded, 80 and 6 species, respectively, occurred at one station only. The most common Alcyonacea species, *Mopsea encrinula* (11188009) occurred at six stations at 100 m depths from Bald Island to Shark Bay. The most common Pennatulacea occurred at three stations, *Umbellula huxleyi* (11216003) was found at 1,000 m from Two Rocks to Abrolhos and *Pteroeides* sp. F (99110351) at 100 m at Ningaloo (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

This material included some surprising specimens; the biogeographic relationships of some of the species show unusual affinities and the data includes many new records for Australian waters. The data includes specimens previously known from both temperate and tropical regions and shows links to southern and northern Atlantic regions. It also provides more evidence for links with the Indonesian and northern Pacific (Japanese) fauna as well as containing some deep-water cosmopolitan species. Since 68% of the Alcyonacea are uncertain species and 10% are new species, the following biogeographical summary applies to the 22% (28 species) identified as previously described species (Table 4). Thirteen (50%) are Australian endemics of which four (15%) are Western Australian endemics. Of the remainder, 12 (46%) have an Indo-West Pacific affinity (46%) and a single species (4%) has an Indian Ocean only origin.

Since 38% of the Pennatulacea are uncertain species and 25% are new species, the following biogeographical summary applies to the 38% (three species) identified as previously described species (Table 4). These species all have an Indo-West Pacific affinity with *Umbellula huxleyi*, additionally recorded from the north-east Atlantic (as well as the north-west Pacific).

For the alcyonaceans, 25 are new records for Australia (six are described species), 27 are new records for Western Australia, three of which are range extensions of Australian endemics. *Oparinisis parkeri* and *O. viking* were previously recorded from South Australia and *Pseudoplumarella filicoides* (1197015) was previously recorded in New South Wales only. For the pennatulaceans, two are new records for both Western Australia and Australia: *Scytalium sarsii* (11224001) and *Umbellula huxleyi* (11216003) (Appendices 1, 2).

2.3. CNIDARIA: ANTIPATHARIA (CAAB NUMBERS 1115#### AND 99110###)

A) NUMERICAL SUMMARY

Only 12 specimens of Antipatharia were examined from this survey; these comprised eight species, five genera and two families, but other material remains to be examined (Table 3). Two described species were identified and six species remain uncertain and no new species were determined. Of the Antipatharia collected, six species occurred at one station only, while the most common, *Stichopathes sp.* A (99110615), occurred at three stations (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Due to the low number of species examined the biogeographical summary of the antipatharian data reveals one species is an Australian endemic but not a Western Australian endemic (Table 4). The other described species has an Indo-West Pacific affinity. *Myriopathes myriophylla* (11158002),

known from adjacent Indonesia is recorded for the first time in Australia from northern Ningaloo (Appendices 1, 2).

Preliminary determinations of the antipatharians from this cruise identified several species that are probably new records for Australian waters; however comparative material is required from the British Museum of Natural History for final identifications. *Cupressopathes albies* has a West Pacific distribution and the specimen *Cupressopathes* cf. *albies* examined from Point Cloates is possibly a new species. *Stichopathes* sp. A (recorded from Shark Bay and northern Ningaloo) may be *Stichopathes* cf. *ceylonensis* from the Indian Ocean.

All the black corals examined were collected from 100 m depth except for the endemic species, *Parantipathes helicostricha* (11161002), which was collected at 1,000 m off Albany (Appendices 1, 2). This species is previously known from deep water from the Great Australian Bight and southern Tasmania as well as New Zealand.

2.4. CNIDARIA: AZOOXANTHELLATE SCLERACTINIA (CAAB NUMBERS 113##### AND 99110###)

A) NUMERICAL SUMMARY

Prior to this survey, 116 species of azooxanthellate Scleractinia were known from western and southern Australian (Rehberg 1892; Folkeson 1919; Hoffmeister 1933; Veron 1986; Cairns and Parker 1992; Cairns 1995; Cairns and Zibrowius 1997; Cairns 1998; Cairns 2004), representing 16.5% all known species. Of these, 55 species are restricted to waters deeper than 200 m, and an additional six occur both shallower and deeper than the 200 m isobath. The vast majority were recorded from the tropical region (north of Houtman Abrolhos), including nine endemic species (Cairns 1998). Another 18 species are restricted to waters south of Houtman Abrolhos, and only eight are reported from both regions (Cairns 2004).

This survey collected the majority of species previously recorded from deeper Western Australian waters. The azooxanthellate Scleractinia collected included over 1,400 specimens from 47 species, 19 genera and eight families. Of these, 37 species could be identified as described species, three recognised as new species and seven species remain uncertain (Table 3). Of the 47 Scleractinia species recorded, 20 occurred at one station only, while the most common, *Stephanocyathus (Acinocyathus) spiniger* (11314019) occurred at seven stations at 350–500 m depth from Bald Island to Shark Bay (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Only 6% of the Scleractinia are uncertain species and 6% are new species, so the following biogeographical summary applies to the 79% (37 species) identified as previously described species (Table 4). Five species (14%) are Australian endemics but none are Western Australian endemics. The vast majority, 28 species (76%) have an Indo-West Pacific affinity, three (8%) are considered cosmopolitan and a single species (3%) is known from the Atlantic Ocean only. Eight species are new records for Australian waters and 14 new for Western Australia, while two are range extensions of Australian endemics (Table 4). *Dasmosmilia lymani, Phyllangia* cf. *papuensis, Trochocyathus cooperi, Notocyathus conicus* and *Truncatoflabellum candeanum* are examples of species reported for the first time from Australian waters.

Biogeographically, the Anthemiphylliidae (*Anthemiphyllia dentata* and *A.* n. sp.) were collected in south-western Australian waters. All *Caryophyllia* species, except *C. planilamellata* (new record to Western Australia) and *C. diomedeae*, were collected in the tropical region of the western margin, with the deepest record for the genus being represented by *C. scobinosa* (new record to Western Australia) from 983–1,010 m depth. *C. unicristata*, another tropical species, was the most abundant species (see Kitahara et al. 2010). The distribution of *Deltocyathus magnificus* is extended to southern Western Australia and *D. rotulus* is reported for the first time in Western Australia.

Within the Dendrophylliidae, the most common genus was *Balanophyllia* with six species, including two new records to Western Australian waters: *B.* cf. *dentata* and *B. desmophyllioides*. The description of one new species of *Balanophyllia* from this survey is being prepared by Kitahara and colleagues at Museum of Tropical Queensland (pers. comm.).

Historically, the colonial corals *Solenosmilia variabilis* and to a lesser degree *Madrepora oculata* appear to be the most important deep-sea reef builders in Western Australia (Kitahara, pers. comm.). *Solenosmilia variabilis* appears to be an important substrate for the solitary species *Caryophyllia diomedeae* (Kitahara et al. 2010). Although no live *Solenosmilia* was collected during this survey, live coral was viewed on video footage taken on the survey SS200507. The live *Solenosmilia* observed was very patchy and most of the reef formations consisted of long dead, possibly subfossil, coral matrix.

Many images of the deep-sea scleractinian species from this survey included in Appendix 2 are the first ever taken of freshly collected specimens (examples include *Anthemiphyllia* n. sp. A (99110618); *A. dentata* (11304001); *Fungiacyathus fragilis* (11301001); *Letepsammia formosissima* (10299002); *Caryophyllia planilamellata* (11314042);

Deltocyathus suluensis (11314021); *Stephanocyathus spiniger* (11314019); *Flabellum tuthilli* (11328010) and *Truncatoflabellum macroeschara* (11328015).

3. MOLLUSCA

Over 767 hard-shelled Mollusca species were identified. Of these, 425 species were live-taken and 342 represented only by dead-taken shells. Species from 109 families from the classes Gastropoda, Bivalvia, Scaphopoda and Polyplacophora have been identified to date.

Many specimens from this survey cannot be identified to species level at present. In some cases, specimens are recognised as belonging, or thought to belong, to undescribed species. In other cases, the lack of comparative material does not allow a definite identification to be made – this is not surprising as the molluscan fauna of Australia's western continental margin has been rarely accessed. In addition, many families of molluscs, particularly bivalves and especially those of the Indian Ocean are in urgent need of revision (some most-recently revised in the second half of the 19th century). Some groups, particularly those of interest to the shell-collecting fraternity, are reasonably well known and have enabled recognition of new and undescribed species previously not recorded in the Western Australian or Australian fauna, and records indicating an extension of the known latitudinal or longitudinal range of a species.

Dead-taken, as well as live-taken, Mollusca specimens were deliberately collected during the second half of the SS102005 survey, examined and lodged at the Western Australian Museum but their identifications are not included in the numerical summaries of this paper. However an example is given for the bivalves to illustrate the usefulness of such collections. The distinguishing of recently-dead from long-dead (or even sub-fossil) material can assist in forming a much more detailed record of a species distribution. During this survey, many species were either rarely or never collected as live specimens, even though their known geographic range was within the survey area. When the few instances in which dead-taken specimens have been included in the data set, they have reinforced or even extended the known geographic and depth distributional ranges.

3.1. MOLLUSCA: BIVALVIA (CAAB NUMBERS 232##### AND 99230###)

A) NUMERICAL SUMMARY

Over 700 specimens of the Bivalvia, identified as belonging to at least 162 species from 83 genera, 39 families and 10 orders, were collected. Of these, only 62 species could be identified as described species and 101 remain uncertain, reflecting the lack of knowledge on this deep-sea fauna (Table 3). Of the 162 Bivalvia recorded, 100 species occurred at one station only, while the most common species, *Venericardia rosulenta* (23325016), occurred at 10 stations from Bald Island to Ningaloo in 100–200 m depths (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

No new species were identified and 68% of the bivalves were uncertain species and, so the following biogeographical summary applies to the 32% (62 species) identified as previously described species (Table 4). Twenty-nine species (47%) are Australian endemics but only two (3%) are Western Australian endemics. Of the non-native species, 32 (52%) have an Indo-West Pacific affinity, and a single species (3%) is known from the Indian Ocean only.

One previously described species, *Amygdalum watsoni* (23220073), is a new record for Australian waters and 15 are new for Western Australia, two of which are range extensions of Australian endemics (Table 4). Of interest were the dead-taken shells of *Foramelina ?exempla,* collected at just one station off Point Cloates in 400 m depth. *Foramelina exempla* is the only living species of an otherwise extinct family and was previously known only off south-eastern Australia. The Western Australian specimens were all dead-taken, but not fossil shells, and show some differences to the south-eastern species. Further study is required to determine whether they may represent a new species.

3.2. MOLLUSCA: CEPHALOPODA (CAAB NUMBERS 236##### AND 99230###)

A) NUMERICAL SUMMARY

More than 120 specimens of the Cephalopoda were identified as belonging to 29 species from 21 genera, 12 families and four orders. Of these, only 13 could be identified as described species and 16 remain uncertain species (Table 3). Not all the specimens could be identified due to considerable damage to the soft tissues with 11 OTUs identified as higher level taxa, and no new species were discovered. The majority of specimens were collected by beam trawl over soft sediments with 42 lots collected at 400 m, six at 200 m and 12 at 100 m depths, with only nine lots collected at 700 m or deeper. Not all cephalopods collected were benthic species, with some pelagic species inadvertently caught in the dredges in transit to and from the benthos; these species are thus under-

represented in the areas surveyed but are included for information. Of the 40 Cephalopoda species recorded, 23 occurred at one station only, while the most common occurring at five stations each were indeterminate *Sepia* sp. (23607901) and *Heteroteuthis* spp. (23609902) (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Since 55% of the Cephalopoda are uncertain species, the following biogeographical summary applies to the 45% (13 species) identified as previously described species (Table 4). Six species (46%) are Australian endemics but none are Western Australian endemic species. Of the remainder 4 (31%) have an Indo-West Pacific affinity and 3 (23%) are cosmopolitan species. No new species were recorded for Australia. Ten Octopodidae species were collected, of which only one, *Eledone palari*, was previously described. One unidentifiable species of the meso- to bathy- pelagic Bolitaenidae was recorded from northern Ningaloo at a depth of 1,200 m. One unnamed species of *Benthoctopus* from the deepwater subfamily Bathypolypodinae was recorded from northern Ningaloo waters in the relatively shallow depth of 400 m. Included in the seven species of Sepiidae was the northern Australian endemic species, *Sepia opipara* (23607006). This species was found at Bald Island in the south-west, considerably extending its known distribution south of Fremantle. With the exception of one unidentifiable *Sepiadarium* species from deepwater near Bald Island in 1,000 m depth, the three remaining species of benthic Sepiadariidae were collected from 100 m or 400 m depths in both tropical and temperate waters. *Sepioloidea lineolata* (23608001), a southern Australian temperate species, was collected from Zuytdorp in 100 m, just within its known geographical range, although it is generally found in shallower water to depths of only 20 m (Norman and Reid 2000). At least nine species of Sepiolidae were collected. *Euprymna tasmanica* (23609001), known from southern Australia, was collected at two northern sites – Point Cloates and northern Ningaloo – in 400 m and 100 m, respectively (it is known to at least 80 m; Norman and Reid 2000). Many specimens of the pelagic or benthopelagic genus *Heteroteuthis* from depths of 400–1,000 m in the south-west were unfortunately unidentifiable. Of the seven squid species collected, only four are described species. Enoploteuthidae undergo extensive daily vertical migrations and unidentified specimens of this family were collected at 400 m. One unidentifiable species of *Chiroteuthis*, from the gelatinous, slow moving, deep-sea family Chiroteuthidae, was collected in 1,000 m off the Houtman Abrolhos.

3.3. MOLLUSCA: GASTROPODA (CAAB NUMBERS 24###### AND 99240###)

A) NUMERICAL SUMMARY

More than 1,600 specimens of Gastropoda were identified as belonging to 267 species from 142 genera, 53 families and seven orders. Currently 85 described species have been identified, six new species (as yet undescribed) were distinguished and 176 remain uncertain species, reflecting the lack of knowledge on this deep-sea fauna (Table 3). Of the 267 Gastropoda species recorded, 187 occurred at one station only, while the most common, *Comitas* cf. *galatheae* (99240266), occurred at nine stations from Point Hillier to Barrow Island (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Since 66% of the Gastropoda are uncertain species and 2% are new species, the following biogeographical summary applies to the 32% (85 species) identified as previously described species (Table 4).

Thirty-five (41%) are Australian endemics and of these 12 (14%) are Western Australian endemics. The majority of the species, 47 (55%) have an Indo-West Pacific affinity with the remainder of Southern Ocean or sub-Antarctic (1%) origin or cosmopolitan (1%).

At least one species is a new record for Australian waters and seven species are new records for Western Australia. Particularly interesting records for Australia include: *Manaria kuroharai* (24202215 – no image), previously known only from the Sea of Japan, and *Akibumia orientalis* (24173001 – no image), collected from 'soft' substrate off Houtman Abrolhos in 400 m depth. The only previous Australian record of *A. orientalis* is a single specimen taken in >1,000 m depth off Sydney in New South Wales.

Not all the Opisthobranchia have been identified; to date 25 species have been recognised of which only one, the temperate Australian endemic *Tylodina corticalis* (24391001), has been identified as a previously known species.

3.4. MOLLUSCA: SCAPHOPODA (CAAB NUMBERS 235##### AND 99230###)

A) NUMERICAL SUMMARY

The 130 specimens of the Scaphopoda were identified as belonging to 23 species from seven genera, five families and two orders (Table 3). Only three have been recognised as described species, the other 20 are uncertain species, reflecting the

lack of knowledge on the deep-water species of this group of molluscs. Of the 23 species of Scaphopoda recorded, 14 occurred at one station only, while the most common, *Fissidentalium* cf. *shirleyae* (99230208), occurred at six stations from Lancelin to Ningaloo (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Of the three (13%) described species identified, one is a widespread southern temperate species and the other two are endemic Australian species (Table 4). One of these species, *Dentalium potteri*, was previously thought to be endemic to waters off eastern Australia and is a new record for Western Australia.

3.5. OTHER MOLLUSCA (NOT EXAMINED)

Of the other Mollusca, at least six species of the Polyplacophora remain unidentified and one lot of the Aplacophora remains unexamined. A small amount of additional live-taken material remains unidentified but is lodged at the WAM awaiting further work.

4. ECHINODERMATA

4.1. ECHINODERMATA: ASTEROIDEA (CAAB NUMBERS 251##### AND 99250###)

A) NUMERICAL SUMMARY

The lack of knowledge of the taxonomy of the deep-water fauna of the western continental margin of Australian is reflected in the Asteroidea identifications. Of the (at least) 500 specimens from 87 species collected in 58 genera, 18 families and five orders, only 28 could be identified as described species (Table 3). An additional six OTUs could only be identified to higher taxa. Twenty-four new species are recorded while 35 remain uncertain. Some are tentatively identified or identified to genus only and probably include many more undescribed species. A new species in the Asterinidae, *Aquilonastra shirleyae* O'Loughlin, 2009, has already been described from 100 m at Point Cloates and Red Bluff (see Appendix 2: image 25140802). Many of the other new species are likely to remain undescribed for some time to come. Of the 87 Asteroidea species recorded, 54 occurred at one station only, while the most common species, occurring at six stations were *Sclerasterias* sp. 1 (99250364), *Diplopteraster* sp. 1 (99250292) and *Hoplaster* sp. 1 (99250343) (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

Since 40% of the Asteroidea are uncertain species and 28% are new species, the following biogeographical summary applies to the 32% (28 species) Six (21%) are Australian endemics, and only one (7%) is a Western Australian endemic species. The vast majority 21 species (71%) have an Indo-West Pacific affinity. One species (7%) has a Southern Ocean or sub-Antarctic origin and another species has only previously been recorded from the Atlantic Ocean (Table 4). Three of the described species are new records for Australian while five are new records for Western Australia, two of which are range extensions of Australian endemics. Eleven genera and six families (Odontasteridae, Labidiasteridae, Radiasteridae, Solasteridae, Porcellanasteridae and Ctenodiscidae) are newly recorded from Western Australia (the latter two families have previously been found off north-western Australia but the records are unpublished).

The Radiasteridae, Pterasteridae and Solasteridae are recognised as predominantly temperate cold water families, but were also collected in the cooler deep water in tropical areas on this survey. Of the 28 identified species, all but three are shelf species: *Sidonaster vaneyi* is known from the Indian Ocean and the Philippines, *Ctenodiscus orientalis* (see Appendix 2: image 25114001) is known from the Philippines, Indonesia and Tasmania, and *Cnemidaster wyvillii* known from the Philippines to the Arafura Sea. The affinities of the shelf species are predominantly with the tropical fauna to the north. There are close affinities with the asteroids of the Philippines (Fisher 1919) and Indonesia at the generic level and also with New Zealand (Clark and McKnight 2000, 2001; McKnight 2006).

Asterodiscides macroplax (see Appendix 2: image 25128004) was collected in 100 m off Carnarvon; this species is endemic to north-west Western Australia. Specimens lodged at the WAM have been collected from 30–40 m depth at the Houtman Abrolhos by museum staff and from trawls at 60–80 m depth off the Montebello Islands in 1979 on RV *Soela* (Marsh et al. 1999). *Heteronardoa diamantinae* (see Appendix 2: image 25125023), collected on this survey from a singe station in 100 m by beam trawl off Point Cloates, was described from a specimen from the 1964 HMAS *Diamantina* survey collected by beam trawl in 128 m off Point Cloates (Rowe 1976), suggesting a highly localised distribution of this species.

4.2. ECHINODERMATA: CRINOIDEA (CAAB NUMBERS

250##### AND 99250###)

A) NUMERICAL SUMMARY

Over 250 specimens of the Crinoidea from 39 species from 29 genera, 13 families and two orders were collected, and an additional 6 OTUs were only identified to higher level taxa. Thirty-five species could be identified as described species, two recognised as new (but as yet undescribed) and two remain unknown or uncertain (Table 3). Of the 39 Crinoidea species recorded, 30 occurred at one station only, while the two most common species occurred at six stations; *Phanogenia brevicirra* (25030043) from Kalbarri to Point Cloates and *Comatula pectinata* (25030030) from Jurien to Barrow (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 5% of the Crinoidea are uncertain species and 5% are new species, the following biogeographical summary applies to the majority of species, the 90% (35 species) identified as previously described species (Table 4). Five species (14%) are Australian endemics and two of these (6%) are Western Australian endemics. The remainder (61%) have an Indo-West Pacific affinity or Indian Ocean only (6%), Southern Ocean or sub-Antarctic (11%) affinity or are cosmopolitan (3%) (Table 4).

At least five are new species records for Australia, 11 are new records for Western Australia, and several others could only be identified to genus or family and may represent new species. The vast majority of specimens were comatulids (unstalked crinoids) with only one stalked crinoid (Bathycrinidae) collected. Crinoid identification was problematic, as many characters of the arm and cirri, traditionally used to separate species, are related to size of the animal and the ecological conditions prevailing at the collection site. Tissues from species collected by the SS200510 survey are being analysed by Eléaume and Hemery (Muséum National d'Histoire Naturelle de Paris; pers. comm.) using molecular methods to further understand their relationships. One species, provisionally identified as *Stiremetra breviradia*, was bioluminescent. Two species collected during this survey, *Neometra conaminis* and *N. gorgonia*, were originally described from this region by A.H. Clark (1914) from one of the few deep-water trawling collections on the FIS *Endeavour* off the mid-west coast of Western Australia (Fremantle to Geraldton in 146–219 m depths) in 1912.

4.3. ECHINODERMATA: ECHINOIDEA (CAAB NUMBERS 252#### AND 99250###)

A) NUMERICAL SUMMARY

Australia and the Indo-Pacific Ocean have a diverse number of well studied Echinoidea species that occur in a wide range of habitats where they are often a conspicuous component of the marine fauna, making them easily identifiable (Miskelly 2002). This is reflected in the results of this survey. More than 400 specimens of Echinoidea identified as only 35 species from 26 genera, 14 families and nine orders were collected. During the survey 31 described species were identified, only two new species were distinguished and two remain uncertain (Table 3). Of the 35 Echinoidea species recorded, 14 occurred at one station only, while the most common, *Prionocidaris baculosa* (25202017) occurred at eight stations from Kalbarri to Ningaloo (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 6% of the Echinoidea are uncertain species and 6% are new species, the following biogeographical summary applies to the majority of species, the 89% (31 species) identified as previously described species (Table 4).

The data reveals 6 (19%) are Australian endemics, and only one of these species (3%) is a Western Australian endemic. The remainder of the species have an Indo-West Pacific (71%), Southern Ocean or sub-Antarctic (6%) or Indian Ocean (3%) affinity.

Three are new species records for Australia, while 15 are new records for Western Australia. The high number of new records for Western Australia (50% of the echinoid species recorded from the survey) reflects the lack of knowledge of the deep-sea fauna of the western continental margin of Australia. Of these new records for Western Australia, five are extensions to the known distributions of Australian endemic species.

Over half of the urchin species were found only in the 100 m depth samples (with a few also recorded at the 200 m sites). Several Cidaridae species were only collected at 400 m depth from Mentelle and Bunbury (*Rhopalocidaris gracilis* and *R. hirsutispina* – no images) and at the Houtman Abrolhos Islands (*Stereocidaris sceptriferoides*) (25202023). The most widespread species was *Caenopedina mirabilis* (25220003), which was found at nine sites from Point Hillier to Ningaloo but all at 400 m depth except for the northernmost site where it occurred at 100 m (Appendices 1, 2).

The deep water southern temperate species, *Dermechinus horridus* and *Gracilechinus multidentatus*

(25246002), were only recorded from the 1,000 m sites on the south coast from Point Hillier, Albany and Bald Island. While the deep water species, *Phormosoma rigidum* (25206002), was recorded at 700 m and 1,000 m on the south coast, it was also found at 700 m at the Houtman Abrolhos Islands and southern Ningaloo reflecting its Indo-Pacific distribution. *Araeosoma owstoni* (25205002) was the only deep water tropical echinoid species found at 700 m at southern and northern Ningaloo stations and but it was also found at 1,000 m in Perth canyon (Appendices 1, 2).

4.4 ECHINODERMATA: HOLOTHUROIDEA (CAAB NUMBERS 254##### & 99250###)

A) NUMERICAL SUMMARY

Our knowledge of the deep water Holothuroidea in Australian waters is poor and is reflected by the large number of new species found in this survey. A progressive systematic revision of known material incorporating molecular phylogenetic data is underway and more new species will certainly emerge.

More than 1,300 specimens of Holothuroidea were collected on this survey representing 43 species and 27 genera in 12 families and 5 orders. During the survey 25 described species were identified, 17 new species were distinguished and one remains uncertain (Table 3). Two new species of the family Holothuriidae have been described from this survey, extending from subtropical to warm temperate locations. This is noteworthy since the vast majority of the 157 species in the family Holothuriidae are recorded from shallow tropical waters predominantly on coral reefs <50 m depth. The discovery of *Holothuria (Panningothuria) austrinabassa* O'Loughlin, 2007 (in O'Loughlin et al. 2007) represents the southern-most record for the family Holothuriidae in the world (25416062). Morphological and genetic analyses of the other new species, *Holothuria (Halodeima) nigralutea* O'Loughlin, 2007 (in O'Loughlin et al. 2007) found it to be a very recent offshoot of the wide-ranging Indo-West Pacific species *H. (Halodeima) edulis*. The etymology of this new species refers to the distinctive black and yellow colouring of the live individuals (25416063). Of the 43 Holothuroidea species recorded, 25 occurred at one station only, while the most common, *Pseudostichopus hyalegerus* (25418012) occurred at 20 stations from Bald Island to Abrolhos (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 2% of the Echinoidea are uncertain species and 40% are new species, the following biogeographical summary applies to the 58% (25 species) identified as previously described species (Table 4). The Holothuroidea data reveals none are Australian endemics. Twenty (80%) of the species have an Indo-West Pacific affinity, with the remainder with a widespread Southern Ocean or sub-Antarctic (8%) or cosmopolitan distribution (8%). A single species was previously recorded from the Indian Ocean only (4%) affinity (Table 4).

At least 11 species are new records for Australia, 19 are new records for Western Australia of which two species are range extensions of Australian endemics. The recent revision of the genus *Psolium* (O'Loughlin and Maric 2008) described six new Australian species, including *Psolium mccallumae* collected during this survey, and re-assigned *Psolus parmatus* to *Psolidium* (25404011). The range of the latter species, described from the *Siboga* Expedition and previously known only from the Banda Sea in Indonesia, now extends south to Ningaloo in north-western Australian waters. *Psolium mccallumae* is known only from the material collected at 100 m depth off Point Cloates (O'Loughlin and Maric 2008).

4.5. ECHINODERMATA: OPHIUROIDEA (CAAB NUMBERS 2516#### AND 99250###)

A) NUMERICAL SUMMARY

Over 4,300 specimens of the Ophiuroidea were collected by this survey including 146 species from 66 genera, 14 families and two orders. Of these 101 described species were identified and at least 39 are undescribed, and probably new to science, while six remain unknown or uncertain (Table 3). One new species, *Ophiomyxa crinita* Franklin and O'Hara, 2008, has been described from this material, to date (see Appendix 2: image 25166006). Of the 146 Ophiuroidea species recorded, 45 occurred at one station only, while the most common, *Ophiura ooplax* (25176039) occurred at 23 stations from Bald Island to Ningaloo. *Ophiomusium relictum* occurred at 19 stations in a more restricted temperate distribution from Bald Island to Jurien (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 4% of the Ophiuroidea are uncertain species and 27% are new species, the following biogeographical summary applies to the 69% (101 species) identified as previously described species (Table 4). The Ophiuroidea data reveals only 11% are Australian endemics, and none are Western Australian endemics. The remainder have fairly

widespread distributions with 66 species (65%) with an Indo-West Pacific affinity, (11%) a Southern Ocean or sub-Antarctic Indian Ocean (10%) and 10% are cosmopolitan. A single species has previously only been recorded from the Atlantic Ocean (1%) and two species from only the Indian Ocean (2%). Biogeographically, the western continental margin was found to be an overlap zone of tropical and temperate faunas with a few species being endemic to the area.

At least 16 are new species records for Australia, while 48 are new records for Western Australia, of which *Amphiura dolia* (25191025) collected at Kalbarri and Ningaloo, is a considerable range extension of an east coast Australian endemic previously found from Tweed Heads, NSW to Bass Strait. The collection extended the southern-most records of tropical species – e.g. *Amphilimna granulifera*, *A. transacta* (25185063) and *Sinophiura multispina* – and northernmost records of temperate species – e.g. *Ophionereis schayeri* (25179009), *Ophiothrix caespitose* (25192002). *Ophiactis brevis*, previously known only from the shallows at its type locality near Darwin at 5–10 m depth and the Dampier Archipelago in 13–20 m depth (Marsh and Morrison 2004) was collected from northern Ningaloo in 160 m depth (Appendices 1, 2).

Of particular interest was the fauna from the deep-water seamounts near Albany that supported a *Solenosmilia variabilis* coral cover. Many of the ophiuroid species found at this site were previously recorded from *Solenosmilia* reef on deep-water seamounts south of Tasmania and on the Chatham Rise, west of New Zealand (O'Hara et al. 2008b).

At least 30 species tested from the first half of the voyage (the temperate sites from Albany to Perth) were found to be bioluminescent (Mallefet and O'Hara, unpublished data; for techniques see: Mallefet et al. 2008).

5. CRUSTACEA: DECAPODA (CAAB NUMBERS 28###### & 99280###)

A) NUMERICAL SUMMARY

These data have been previously reported (Poore et al. 2008) but subsequent taxonomic changes and new species names are reported here. Over 6,200 specimens of the Decapoda, identified as 521 species and 267 genera from 75 families were collected. Of these species, 340 were recognised as previously described species, 158 new species were determined and for 23 OTUs the identifications were uncertain (Table 3). Within the described species, *Retropluma* cf. *quadrata*, doubtfully identified as the West Pacific species, is the first Australian record of the family Retroplumidae (Poore et al. 2008).

Twelve new species have been described since Poore et al.'s (2008) report, using material collected during this survey, a process that is continuing. Of the Brachyura, new species include *Oxypleurodon wilsoni* Richer de Forges and Poore, 2008 and *Rochinia annae* Richer de Forges and Poore, 2008. Of the Caridea, *Lebbeus clarehannah* McCallum and Poore, 2010 is described from 400 m off Bald Island; the holotype of this distinctly coloured species is shown in Appendix 2: see image 28767804. *Pseudoclimenes holthuisi* Bruce, 2008 is described from 100 m off Jurien. Also recently described is *Lissosabinea lynseyae* Taylor and Collins, 2009 (28781020) from 400 m off Bunbury.

In a recent review of the Axiidae, Poore and Collins (2009) described the following four new species from single locations from this survey: the new genus and species, *Australocaris pinjarup* from 400 m off Bunbury, *Acanthaxius gathaagudu* from 400 m off Shark Bay and *Acanthaxius ningaloo* from 200m off northern Ningaloo. Images of these holotypes are in Appendix 2: see 28801806, 28801803, and 28801804, respectively. One new species, *Calastacus myalup* Poore and Collins, 2009 is described from 400 m off Bunbury and is a new record for the genus in the Indian Ocean as well as Australia.

Of the Anomura, *Munidopsis comarge* Taylor, Ahyong and Andreakis, 2010 (28840170) has been described from 900 m off Albany. Specimens from this survey in southern Western Australia were included in Ahyong's (2010) review of the Lithodidae which resulted in the new species, *Lithodes rachelae* (28836014), collected from 850 m to 1,000 m between Albany and Perth Canyon and *Paralomis poorei* (28836010) recorded at 900 m off Albany (Appendices 1, 2). *Neopilumnoplax nieli* (28917007) is also newly recognised from recent deep water collections in south-east Australia and New Zealand (Ahyong 2008) and was collected from Albany to Two Rocks collected from 200–900 m depths.

Since Poore et al.'s (2008) report several species have been identified, redetermined or moved to other genera (Appendix 1). The following are replacement names: *Engystenopus palmipes*, *Philoceras incisus, Calaxius acutirostris*, *Bouvieraxius keiensis*, *Paraxiopsis pumilus*, *Planaxius brevifrons*, *Ciliopagurus shebae*, *Munida gordoae, Paragoneplax serenei*, *Neogoneplax renoculis*, *Stereomastis auriculatus* and *Stereomastis suhmi.* For example, *Philocheras* MoV5422 from Poore et al.'s (2008) has now been identified as *P. incisus* and is the first record of this species in Australian waters (Taylor 2010) (see Appendix 2: image 28781804).

Of the 521 Decapoda species recorded, 238 species occurred at only one station. The most frequently recorded species of the entire survey, the hermit

crab *Paguristes aciculus* (28827077) occurred at 27 stations. This species was found in depths of 95 m to 554 m at sites from Bald Island to Ningaloo (Appendices 1, 2).

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 5% of the Decapoda are uncertain species and 30% are new species, the following biogeographical summary applies to the 65% (340 species) identified as previously described species (Table 4).

The data reveals 21% (71 species) are Australian endemics, but only 4% (13 species) are Western Australian endemics. The majority of the species have widespread distributions, 68% (232 species) have an Indo-West Pacific affinity, 4% widespread Southern Ocean or sub-Antarctic affinity and 4% cosmopolitan in their distribution. The remaining 3% have previously only been recorded from the Indian Ocean. At least 74 are new species records for Australia, 154 are new records for Western Australia. Of these, 20 species represent range extensions of Australian endemics to the west. Poore et al. (2008) detailed and summarised all new Australian records, new records for Western Australia and new records for southern Western Australia.

Of the commercially fished species collected during the survey, *Ibacus alticrenatus*, the White-tail Bug (28821001) was the most common, occurring around 400 m. The commercial crab *Hypothalassia acerba* was collected only twice around 200 m while the other main large benthic crustaceans of commercial interest; *Panulirus cygnus, Jasus edwardsii, Pseudocarcinus gigas* and *Chaceon albus* (formerly confused with *C. bicolor* see Davie et al. 2007) were not collected at all, this is most likely an artefact of the types of sampling gear (no baits) used and terrain targeted. Only one commercial species of prawn, *Haliporoides sibogae* (28714005) was collected and this was numerous at 400 m. Several species of scampi (Nephropidae) were also collected at this depth (Appendices 1, 2).

6. PYCNOGONIDA (CAAB NUMBERS 33###### AND 99330###)

A) NUMERICAL SUMMARY

Forty specimens of the Pycnogonida from 17 species in 11 genera and five families were collected. Of these 11 could be identified as described species, four recognised as new species and two remain uncertain (Table 3). The new species, *Hedgpethia calva*, *Tanystylum zuytdorpi*, *Pseudopallene difficile* and *Paranymphon bifilarium* were described by Arango (2009). Photographs of the holotypes for the first two species can be viewed in Appendix 2: 33014024 and 33012054. Of the 17 species of Pycnogonida recorded, 14 occurred at one station only, while the most common, *Pallenopsis cidaribatus* (33020010), occurred at four stations in tropical waters from Shark Bay to Ningaloo (Appendices 1, 2)

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 12% of the Pycnogonida are uncertain species and 24% are new species, the following biogeographical summary applies to the 64% (11 species) identified as previously described species (Table 4).

The data reveals 45% (5 species) are Australian endemics and of these 12% (2 species) are Western Australian endemics. The remainder have an Indo-West Pacific affinity 45% or are cosmopolitan (6%) in their distributions. Five species are new records for Western Australia. Three of these new species records for Western Australia are range extensions of Australian endemics.

Three species were collected only in the deep waters off the south coast of Western Australia: *Cilunculus* sp. 1 from 700 m off Albany, *Colossendeis colossea* from 1,000 m off Port Hillier, and *Hedgpethia calva* from 1,000 m off Bald Island. The other 14 species were collected at only 100 m depths at a range of temperate and tropical sites (Appendix 1).

7. TUNICATA: ASCIDIACEA (CAAB NUMBERS 35###### AND 99350###)

Over 450 specimens of the Ascidiacea from 77 species, 25 genera, 11 families and two orders were collected (Table 3), from 34 of the shallower surveyed sites, with 21 100 m sites, seven 200 m sites and six 400 m depth sites recording specimens. During the survey, 52 described species were identified, 21 new species were described and four remain uncertain (Table 3). The majority of the new species were collected from the southern continental margin of Western Australia and the new species have been described by Kott (2008).

Prior to this survey there were 50 species known from the shallower coastal waters of Western Australia and adjacent areas (Hartmeyer 1919; Hartmeyer and Michaelsen 1928; Michaelsen 1930; Kott 1985, 1990, 1992, 2001, 2005a, 2005b). Only 21 of these previously known species were collected at more than one site on this survey of the deep shelf and slope. Of the 77 Ascidiacea species recorded, 49 occurred at one station only, while the most common species, *Sigillina australis* (35021011) occurred at seven stations from Albany to Carnarvon (Appendices 1, 2).

Solitary species were rare and the collection was dominated by colonial species of the families Didemnidae and Polyclinidae. Species with flexible stalks were not often collected suggesting some bias associated with the collection method.

B) BIOGEOGRAPHICAL DISTRIBUTIONS OF PREVIOUSLY DESCRIBED SPECIES

As only 5% of the Ascidacea are uncertain species and 27% are new species, the following biogeographical summary applies to the 68% (52 species) identified as previously described species (Table 4). The data reveals 38% (20 species) are Australian endemics but only 8% (2 species) are Western Australian endemics. The majority of the species, 54% (28 species) have an Indo-West Pacific affinity, while a single species recorded a Southern Ocean or sub-Antarctic (4%) or Indian Ocean (4%) or Atlantic Ocean (4%) affinity or cosmopolitan distribution (4%).

A total of two species are new records for Australia, five are new records for Western Australia including *Synoicum sphinctorum*, a range extension of an Australian endemic species. This previously unsampled diverse offshore ascidian fauna extends the known biogeographical limits of many species around the Australian coastline. Species known from the tropical north have their range extended to the south, either to the central west coast (*Pseudodistoma australe, Synoicum macroglossum, Aplidium caelestis, A. crateriferum, A. solidum, Polysyncraton millepore, Didemnum jedanense* and *Tridemnum sibogae*) or to the south-western corner (*Polysyncraton pavimentum, Didemnum ossium* and *D. perplexum*). The distributions of the South Australian species, *Pseudodiazona longigona* and *Leptoclinides fungiformis*, has been extended westward to the continental shelf off Albany in 100 m depth. Two new species records for south-west Western Australian include the tropical, *Herdmania momus*, known from the western Pacific and Red Sea (also new open sea-floor habitat record at depths to 400 m) and *Synoicum laboutei*, formerly restricted to Malagasy in the western Indian Ocean. Further details on this ascidian fauna can be found in the comprehensive paper by Kott (2008) and details on a subsequent deepwater survey of the north-western continental margin in Kott (2009).

DISCUSSION

Taxonomic study of the first regional scale collection of deepwater megabenthic invertebrates from Australia's western continental margin (100 m to 1,500 m depths and between ~21–35ºS latitude) reveals a previously undiscovered high level of species richness and novelty in the fauna. In the six major invertebrate groups targeted for this study – Demospongiae: Porifera, Octocorallia: Cnidaria, Mollusca, Echinodermata, Decapoda: Crustacea and Ascidiacea: Tunicata – 19,000 specimens yielded 2,021 species of which only 44% are described. One-quarter of all species identified are new records for Australian waters and over one-third are new records for Western Australian waters. From this survey material 42 new species have already been described: O'Loughlin (2009); Asteroidea, one species; Franklin and O'Hara (2008): Ophiuroidea, one species; O'Loughlin et al. (2007) and O'Loughlin and Maric (2008): Holothuroidea, three species; Bruce (2008), Richer de Forges and Poore (2008), Poore and Collins (2009), Taylor and Collins (2009), Ahyong (2010), McCallum and Poore (2010) and Taylor et al. (2010): Decapoda, 12 species; Arango (2009): Pycnogonida, 4 species; and Kott (2008): Ascidiacea, 21 species. The high numbers of new records clearly reflects the lack of previous deep-sea research in this region, but also highlights the paucity of taxonomic knowledge or the lack of clarity in the literature for some groups. More than 50% of the species of Octocorallia, Antipatharia, Bivalvia, Cephalopoda, Gastropoda, Scaphopoda and Demospongiae collected are uncertain identifications. Further taxonomic work would ideally include revisions of some of the less well studied deep-sea taxa within otherwise well-known groups such as the Bivalvia.

Demosponges dominated in terms of biomass, but only 5% of species collected were described species. This reflects the lack of knowledge and potentially higher rate of endemism of this sessile taxonomic group. In contrast, 89% of echinoids, a more motile group with widespread distributions, could be identified as described species.

Overall, distributional patterns of described invertebrate taxa show the western margin is an overlap zone of tropical and temperate faunas. Knowledge from relatively well-known taxa confirmed, firstly, that many south-eastern Australian species were also recorded from Western Australia for the first time, and secondly, that the geographic distributions of many tropical/sub-tropical species extend to temperate latitudes. This can be illustrated by the relatively well known southern Australian Decapoda (Poore 2004), for which this survey extended the known distributions of 62 documented species, and added 76 species to the temperate fauna – a 9.4% increase (Poore et al. 2008). Patterns in other groups indicated northwards extensions to their known distributions – an example being the penetration of several predominantly cold water asteroid families into deep waters of tropical latitudes.

The distributions of the 876 described species showed the strongest biogeographical pattern of the deep continental shelf fauna was an affinity with

the wider Indo-West-Pacific region (61% of species). Relatively few taxa appeared to be endemic to either the Indian Ocean (4%) or to Western Australia (5%) but 25% of species are endemic to Australia. This may be an underestimate given the high number (727) of uncertain species that could not be identified as known or new species until further taxonomic comparisons are undertaken, and the newly determined 396 species which as yet have not been found elsewhere in the world. Confirmation of this apparent endemism in such a poorly known region requires further taxonomic examination. This is epitomised by the Demospongiae of which the vast majority (95%) of the 372 species are uncertain or new. In one well-studied and species rich taxon, the Ophiuroidea, the western margin was found to be an overlap zone of tropical and temperate faunas with few endemic species confined to Western Australian waters.

Apparent rarity is high but typical of surveys of this kind, that is with few samples spread over a wide geographic range (e.g. fishes – Williams et al. 2001). More than half of the species were collected from only one location. However, this is due, in part, to undersampling of species that may be of limited distribution or at low densities or difficult to catch with the sampling gears used. In addition, while this survey targeted the megabenthos >25 mm, some smaller macrofaunal specimens and pelagic cephalopods were incidentally collected, identified and included in this checklist. These macrofaunal data are a valuable record of presence in the previously unstudied western continental margin of Australia but not an accurate representation of the population.

Large intervals (typically of about 60 nautical miles) separated the 19 sites along the ~2,000 km of continental margin surveyed, and there was insufficient replication at depths within sites to distinguish abundance from sampling efficiency or the degree of patchiness (Williams et al. 2010). The low density of samples, together with an unequal sampling intensity across sites, means that patterns of abundance must also be interpreted with care. While the sampling design aimed to systematically target soft and hard substrates at all of the sites on the 100 m and 400 m depth horizon, swath mapping of relatively large areas of seabed (10s to 100s km^2 per site) confirmed that both substrate types were not present at every site. On the other hand, mapping did identify special features at some sites enabling them to be sampled more intensively. For example, 13 collection stations at Ningaloo targeted a series of hard substratum types associated with drowned coral reefs and with rocky substratum within canyons.

As a result of the collections taken on the SS200510 survey and the continuing taxonomic work, we now have a substantially increased knowledge of the megabenthic invertebrate fauna from the deep western continental margin of Australia. All the invertebrate megabenthos collected during this survey are lodged in museums around Australia (including the ethanol-preserved material suitable for genetic analysis) and is available for further study. Together with a high quality data set on fishes collected in 1991 (Williams et al. 2001), these benthic invertebrate biodiversity data will make a large contribution to the Regional Marine Planning for the South West Region and inform the design of a representative system of marine protected areas.

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APPENDIX 1 Checklist of the species of invertebrate megabenthos identified from the western continental margin of Australia, showing species taxonomy, depth distribution and geographical extent. Also indicated is whether the species is a new species*, new record for Australia or Western Australia and if there is an image to view in Appendix 2.

Note: Species are ordered alphabetically within phylum, class and family. The CAAB number should be used to locate the associated species image in Appendix 2; *Species names in bold indicate newly described species from this survey.

Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Phylum PORIFERA											
Class DEMOSPONGIAE											
Order AGELASIDA											
Family Agelasidae											
Agelas sp. WAM SS1		99100448				9	85	379	Bald Island	Carnarvon	Y
Agelas sp. WAM SS2		99100449				3	85	100	D'Entrecasteaux	Kalbarri	Y
Agelas sp. WAM SS3		99100450	1	1	1	2	85	98	Jurien Bay	Kalbarri	Y
Order ASTROPHORIDA											
Family Ancorinidae											
?*Rhabdastrella* sp. WAM SS1		99100393				1	205	210	Two Rocks	Two Rocks	Y
Ancorina sp. WAM SS1		99100395				6	95	253	Bald Island	Zuytdorp	Y
Ancorina sp. WAM SS2		99100396	1	1	1	4	97	253	Bald Island	Zuytdorp	Y
Asteropus cf. *simplex*	(Carter, 1879)	99100422				1	106	106	Zuytdorp	Zuytdorp	Y
Asteropus simplex	(Carter, 1879)	10009010				3	96	183	Abrolhos	Shark Bay	Y
Asteropus sp. WAM SS1		99100354				3	96	106	Mentelle	Ningaloo	Y
Asteropus sp. WAM SS2		99100397				3	95	922	Albany	Bunbury	Y
Asteropus sp. WAM SS3		99100398				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Asteropus sp. WAM SS4		99100399	1	1	1	4	96	253	Mentelle	Kalbarri	Y

Asteropus sp. WAM SS5		99100400	1	1	1	3	180	253	Perth Canyon	Kalbarri	Y
Asteropus sp. WAM SS6		99100373				1	97	99	Bald Island	Bald Island	
Asteropus sp. WAM SS7		99100662				1	100	100	Carnarvon	Carnarvon	
Ecionemia sp. WAM Ng1		99100663				2	100	106	Zuytdorp	Carnarvon	Y
Ecionemia sp. WAM SS1		99100411				5	96	183	Abrolhos	Ningaloo	Y
Ecionemia sp. WAM SS2		99100392				5	85	253	Mentelle	Shark Bay	Y
Ecionemia sp. WAM SS3		99100412				6	97	183	Bald Island	Red Bluff	Y
Ecionemia sp. WAM SS4		99100418	1	1	1	1	416	431	Abrolhos	Abrolhos	
Ecionemia sp. WAM SS5		99100419	1	1	1	1	99	100	Albany	Albany	
Jaspis sp. WAM SS1		99100413				2	85	100	Abrolhos	Red Bluff	Y
Jaspis sp. WAM SS2		99100414				2	96	98	Kalbarri	Zuytdorp	Y
Jaspis sp. WAM SS3		99100415				1	252	253	Kalbarri	Kalbarri	
Jaspis sp. WAM SS4		99100416	1	1	1	1	106	106	Zuytdorp	Zuytdorp	Y
Jaspis sp. WAM SS5		99100417	1	1	1	2	96	169	Bald Island	Mentelle	Y
Penares sp. WAM SS1		99100410				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Psammastra sp. WAM SS1		99100394				2	97	210	Bald Island	Two Rocks	Y
Psammastra sp. WAM SS2		99100286				3	97	253	Bald Island	Zuytdorp	Y
Rhabdastrella sp. WAM SS2		99100420				1	104	114	Ningaloo	Ningaloo	
Rhabdastrella sp. WAM SS3		99100390	1	1	1	2	205	253	Two Rocks	Kalbarri	Y
Rhabdastrella sp. WAM SS4		99100421	1	1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Stelletta cf. *clavosa*	Ridley, 1884	99100408				3	97	253	Bald Island	Kalbarri	
Stelletta clavosa	Ridley, 1884	10009023				3	96	210	Albany	Two Rocks	Y
Stelletta sp. WAM SS1		99100391				5	100	253	Two Rocks	Ningaloo	Y
Stelletta sp. WAM SS2		99100401				4	85	232	Perth Canyon	Point Cloates	Y

Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Stelletta sp. WAM SS3		99100402				5	85	253	Bald Island	Zuytdorp	Y
Stelletta sp. WAM SS4		99100403				4	97	253	Bald Island	Zuytdorp	Y
Stelletta sp. WAM SS5		99100404	1	1	1	1	97	99	Bald Island	Bald Island	
Stelletta sp. WAM SS6		99100405	1	1	1	1	97	99	Bald Island	Bald Island	
Stelletta sp. WAM SS7		99100406	1	1	1	1	194	232	Perth Canyon	Perth Canyon	
Stelletta sp. WAM SS8		99100407	1	1	1	2	97	100	Albany	Zuytdorp	Y
Stelletta sp. WAM SS9		99100292	1	1	1	2	100	100	Shark Bay	Red Bluff	Y
Tethyopsis sp. WAM SS1		99100409				1	205	210	Two Rocks	Two Rocks	Y
Tribrachium sp. WAM SS1		99100288				1	100	101	Barrow	Barrow	
Family Geodiidae											
Erylus cf. *lendenfeldi*	Sollas, 1888	99100429				1	101	106	Ningaloo	Ningaloo	
Erylus sp. WAM SS1		99100263				2	101	925	Albany	Ningaloo	Y
Erylus sp. WAM SS2		99100241				3	97	106	Zuytdorp	Barrow	Y
Geodia sp. WAM Ng1		99100423				9	97	404	Perth Canyon	Ningaloo	Y
Geodia sp. WAM SS1		99100424				3	180	232	Perth Canyon	Abrolhos	Y
Geodia sp. WAM SS2		99100425	1	1	1	4	95	232	Albany	Perth Canyon	Y
Isops sp. WAM SS1		99100426				1	205	210	Two Rocks	Two Rocks	Y
Isops sp. WAM SS2		99100427				4	95	253	D'Entrecasteaux	Zuytdorp	Y
Isops sp. WAM SS3		99100428	1	1	1	4	100	253	Perth Canyon	Ningaloo	Y
Astrophorida undifferentiated		10008000				1	96	97	Mentelle	Mentelle	
Order DENDROCERATIDA											
Family Darwinellidae											

Dendrilla sp. WAM SS1	99100649				1	102	102	Two Rocks	Two Rocks	
Family Dictyodendrillidae										
Dictyodendrilla sp. WAM SS1	99100650				1	329	370	Two Rocks	Two Rocks	
Order DICTYOCERATIDA										
Family Irciniidae										
Psammocinia sp. WAM SS1	99100598				1	205	210	Two Rocks	Two Rocks	Y
Psammocinia sp. WAM SS2	99100599				3	97	210	Bald Island	Two Rocks	Y
Psammocinia sp. WAM SS3	99100600				2	205	253	Two Rocks	Kalbarri	Y
Psammocinia sp. WAM SS4	99100601				1	93	93	Barrow	Barrow	
Psammocinia sp. WAM SS5	99100602	1	1	1	1	99	100	Albany	Albany	Y
Psammocinia sp. WAM SS6	99100603	1	1	1	4	97	210	Bald Island	Two Rocks	Y
Psammocinia sp. WAM SS7	99100604	1	1	1	3	97	253	Bald Island	Kalbarri	Y
Sarcotragus sp. WAM Ng1	99100345				10	93	253	Bald Island	Barrow	Y
Sarcotragus sp. WAM Ng2	99100659				1	96	97	Mentelle	Mentelle	Y
Sarcotragus sp. WAM SS1	99100257				4	100	253	Kalbarri	Barrow	Y
Sarcotragus sp. WAM SS10	99100611	1	1	1	1	194	232	Perth Canyon	Perth Canyon	
Sarcotragus sp. WAM SS2	99100321				1	329	370	Two Rocks	Two Rocks	
Sarcotragus sp. WAM SS3	99100605				3	95	232	Albany	Perth Canyon	Y
Sarcotragus sp. WAM SS4	99100606				3	93	100	Albany	Barrow	Y
Sarcotragus sp. WAM SS5	99100607				2	85	97	Mentelle	Abrolhos	Y
Sarcotragus sp. WAM SS6	99100608	1	1	1	1	97	99	Bald Island	Bald Island	
Sarcotragus sp. WAM SS7	99100279	1	1	1	3	95	179	Albany	Bunbury	
Sarcotragus sp. WAM SS8	99100609	1	1	1	1	85	86	Abrolhos	Abrolhos	Y

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Sarcotragus sp. WAM SS9		99100610	1	1	1	1	252	253	Kalbarri	Kalbarri	Y
Family Spongiidae											
Hippospongia sp. WAM SS1		99100280				1	165	166	Ningaloo	Ningaloo	Y
Hippospongia sp. WAM SS2		99100639				4	120	253	Two Rocks	Ningaloo	Y
Hippospongia sp. WAM SS3		99100640				3	96	253	Albany	Kalbarri	Y
Hippospongia sp. WAM SS4		99100249	1	1	1	2	93	100	Albany	Barrow	Y
Hippospongia sp. WAM SS5		99100641	1	1	1	1	100	100	Carnarvon	Carnarvon	Y
Hyatella sp. WAM SS1		99100647				1	93	93	Barrow	Barrow	
Hyatella sp. WAM SS2		99100648	1	1	1	6	97	253	Bald Island	Kalbarri	Y
Leiosella sp. WAM SS1		99100644				3	147	370	Bald Island	Kalbarri	Y
Leiosella sp. WAM SS2		99100645				3	147	232	Bald Island	Perth Canyon	
Leiosella sp. WAM SS3		99100646	1	1	1	1	252	253	Kalbarri	Kalbarri	Y
Spongia (Heterofibria) sp. WAM SS1		99100360				3	99	253	Albany	Red Bluff	Y
Spongia (Heterofibria) sp. WAM SS2		99100642				2	96	210	Mentelle	Two Rocks	Y
Spongia (Heterofibria) sp. WAM SS3		99100643	1	1	1	2	147	253	Bald Island	Kalbarri	Y
Family Suberitidae											
Caulospongia amplexa	Fromont, 1998	10028002				1	95	99	Bunbury	Bunbury	
Caulospongia biflabellata	Fromont, 1998	10028003				1	99	100	Albany	Albany	Y
Caulospongia plicata	Saville Kent, 1871	10028007				2	93	106	Ningaloo	Barrow	Y
Family Thorectidae											
Aplysinopsis sp. WAM SS1		99100638				3	113	253	Perth Canyon	Kalbarri	Y

Aplysinopsis sp. WAM SS2	99100661				1	100	100	Point Cloates	Point Cloates	
Cacospongia sp. WAM SS1	99100612				2	113	232	Perth Canyon	Jurien Bay	
Cacospongia sp. WAM SS2	99100364				3	93	232	Albany	Barrow	
Cacospongia sp. WAM SS3	99100613				6	85	196	Bald Island	Abrolhos	Y
Cacospongia sp. WAM SS4	99100333	1	1	1	1	93	93	Barrow	Barrow	
Carteriospongia sp. WAM SS1	99100636				2	95	232	D'Entrecasteaux	Perth Canyon	Y
Dactylospongia sp. WAM SS1	99100614				2	95	232	D'Entrecasteaux	Perth Canyon	Y
Dactylospongia sp. WAM SS2	99100615				7	96	253	Bald Island	Kalbarri	Y
Fascaplysinopsis sp. WAM SS1	99100634				4	96	210	Albany	Kalbarri	Y
Fasciospongia sp. WAM SS1	99100635				2	106	379	D'Entrecasteaux	Zuytdorp	Y
Hyrtios sp. WAM SS1	99100616				1	194	232	Perth Canyon	Perth Canyon	
Hyrtios sp. WAM SS2	99100284				2	97	210	Bald Island	Two Rocks	Y
Hyrtios sp. WAM SS3	99100617				1	95	99	Bunbury	Bunbury	Y
Hyrtios sp. WAM SS4	99100618	1	1	1	4	93	183	Bald Island	Barrow	Y
Hyrtios sp. WAM SS5	99100619	1	1	1	1	194	232	Perth Canyon	Perth Canyon	
Hyrtios sp. WAM SS6	99100620				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Luffariella sp. WAM SS1	99100343				10	85	253	Bald Island	Ningaloo	Y
Luffariella sp. WAM SS2	99100621				3	95	210	Bald Island	Two Rocks	Y
Luffariella sp. WAM SS3	99100622				2	179	253	Albany	Kalbarri	Y
Luffariella sp. WAM SS4	99100328				3	99	253	Albany	Kalbarri	Y
Luffariella sp. WAM SS5	99100623	1	1	1	2	194	253	Perth Canyon	Kalbarri	Y
Luffariella sp. WAM SS6	99100624	1	1	1	3	194	253	Perth Canyon	Kalbarri	Y
Luffariella sp. WAM SS7	99100273	1	1	1	6	85	210	Bald Island	Jurien Bay	Y
Taonura sp. WAM SS1	99100625				2	96	210	Mentelle	Two Rocks	Y
Taonura sp. WAM SS2	99100335				2	97	106	Zuytdorp	Zuytdorp	Y

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Taonura sp. WAM SS3		99100358	1	1	1	1	96	97	Mentelle	Mentelle	Y
Thorecta sp. WAM Ng1		99100633				1	96	97	Mentelle	Mentelle	Y
Thorecta sp. WAM SS1		99100626				4	97	114	Bald Island	Ningaloo	Y
Thorecta sp. WAM SS3		99100628				2	89	196	Point Hillier	Point Hillier	Y
Thorecta sp. WAM SS4		99100629	1	1	1	5	147	253	Bald Island	Kalbarri	Y
Thorecta sp. WAM SS5		99100630				2	95	232	D'Entrecasteaux	Perth Canyon	Y
Thorecta sp. WAM SS6		99100631	1	1	1	6	96	179	Bald Island	Zuytdorp	Y
Thorecta sp. WAM SS7		99100256	1	1	1	1	96	97	Mentelle	Mentelle	Y
Thorecta sp. WAM SS8		99100632	1	1	1	1	147	157	Bald Island	Bald Island	
Thorectandra sp. WAM SS1		99100637				2	96	99	Bald Island	Mentelle	Y
Order HADROMERIDA											
Family Clionaidae											
Spheciospongia cf. *papillosa*	(Ridley & Dendy, 1886)	99100430				8	95	196	Bald Island	Red Bluff	Y
Spheciospongia papillosa	(Ridley & Dendy, 1886)	10021023			1	3	96	100	Bald Island	Mentelle	Y
Spheciospongia purpurea	(Lamarck, 1815)	10021022			1	4	85	100	D'Entrecasteaux	Abrolhos	Y
Spheciospongia sp. WAM MF1		99100431				3	95	100	Albany	Bunbury	Y
Family Hemiasterellidae											
Hemiasterella sp. WAM SS1		99100432				3	95	100	D'Entrecasteaux	Shark Bay	
Hemiasterella sp. WAM SS2		99100433				4	95	102	Bald Island	Two Rocks	Y
Family Polymastiidae											
Polymastia sp. WAM SS1		99100327				2	104	183	Abrolhos	Ningaloo	Y

Polymastia sp. WAM SS2		99100438				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Polymastia sp. WAM SS3		99100319				1	99	100	Albany	Albany	Y
Polymastia sp. WAM SS4		99100262				2	100	100	Shark Bay	Shark Bay	Y
Polymastia sp. WAM SS5		99100285	1	1	1	2	96	100	Kalbarri	Shark Bay	Y
Polymastia sp. WAM SS6		99100439	1	1	1	1	100	100	Point Cloates	Point Cloates	
Family Spirastrellidae											
Diplastrella sp. WAM SS1		99100440				6	95	196	Bald Island	Bunbury	Y
Diplastrella sp. WAM SS2		99100441	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Family Stylocordylidae											
Stylocordyla sp. WAM SS1		99100442				1	539	539	Point Hillier	Point Hillier	
Family Tethyidae											
Stellitethya sp. WAM SS1		99100445				1	106	106	Zuytdorp	Zuytdorp	Y
Tethya cf. *ingalli*	(Bowerbank, 1858)	99100287				2	100	157	Bald Island	Barrow	Y
Tethya ingalli	(Bowerbank, 1858)	10029007				3	97	179	Bald Island	Albany	
Tethyastra sp. WAM SS1		99100443				5	96	196	Bald Island	Mentelle	Y
Tethyastra sp. WAM SS2		99100444	1	1	1	1	99	100	Albany	Albany	Y
Family Timeidae											
?*Timea* sp. WAM SS1		99100446				2	101	114	Ningaloo	Ningaloo	
Family Trachycladidae											
Trachycladus laevispirulifer	Carter, 1879	10031001				3	85	102	D'Entrecasteaux	Jurien Bay	Y
Order HALICONDRIDA											
Family Axinellidae											
Axinella sp. WAM Ng1		99100347				1	97	97	Zuytdorp	Zuytdorp	Y
Axinella sp. WAM Ng2		99100252				1	85	92	Jurien Bay	Jurien Bay	Y
Axinella sp. WAM Ng3		99100305				7	85	123	D'Entrecasteaux	Zuytdorp	Y

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Axinella sp. WAM SS1		99100523				1	0	102	Two Rocks	Two Rocks	Y
Axinella sp. WAM SS2		99100524				4	96	114	Albany	Ningaloo	Y
Axinella sp. WAM SS3		99100353				3	95	179	Albany	Kalbarri	Y
Axinella sp. WAM SS4		99100525				1	95	100	D'Entrecasteaux	D'Entrecasteaux	
Axinella sp. WAM SS5		99100526	1	1	1	2	95	100	Albany	D'Entrecasteaux	Y
Axinella sp. WAM SS6		99100527	1	1	1	2	96	99	Bald Island	Mentelle	Y
Axinella sp. WAM SS7		99100528	1	1	1	1	179	179	Albany	Albany	
Axinella sp. WAM SS8		99100529	1	1	1	1	97	99	Bald Island	Bald Island	
Axinella sp. WAM SS9		99100365	1	1	1	3	85	100	D'Entrecasteaux	Kalbarri	Y
Pararhaphoxya sp. WAM SS1		99100521				6	85	102	Bald Island	Shark Bay	Y
Pararhaphoxya sp. WAM SS2		99100265				1	101	106	Ningaloo	Ningaloo	
Pararhaphoxya sp. WAM SS3		99100522	1	1	1	2	101	106	Ningaloo	Ningaloo	Y
Phakellia sp. WAM Ng2		99100253				3	97	100	Bald Island	Point Cloates	Y
Phakellia sp. WAM Ng3		99100366				5	89	196	Point Hillier	Kalbarri	Y
Phakellia sp. WAM SS1		99100530				7	85	183	D'Entrecasteaux	Ningaloo	Y
Family Desmoxyidae											
Didiscus sp. WAM SS1		99100234				1	104	114	Ningaloo	Ningaloo	
Didiscus sp. WAM SS2		99100531				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Didiscus sp. WAM SS3		99100532	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Myrmekioderma sp. WAM SS1		99100533				2	95	100	D'Entrecasteaux	Bunbury	Y
Myrmekioderma sp. WAM SS2		99100534				1	85	92	Jurien Bay	Jurien Bay	Y

Family Dictyonellidae										
Acanthella sp. WAM Ng2	99100536				2	100	114	Point Cloates	Ningaloo	Y
Acanthella sp. WAM Ng3	99100254				2	100	106	Point Cloates	Ningaloo	Y
Acanthella sp. WAM SS1	99100250				2	96	114	Mentelle	Ningaloo	Y
Acanthella sp. WAM SS2	99100348	1	1	1	1	99	100	Albany	Albany	Y
Acanthella sp. WAM SS3	99100535	1	1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Family Halichondriidae										
Ciocalypta sp. WAM SS1	99100540				2	89	196	Point Hillier	Point Hillier	Y
Ciocalypta sp. WAM SS2	99100541				1	89	96	Point Hillier	Point Hillier	Y
Ciocalypta sp. WAM SS3	99100542				1	89	96	Point Hillier	Point Hillier	Y
Ciocalypta sp. WAM SS4	99100543	1	1	1	1	89	96	Point Hillier	Point Hillier	Y
Ciocalypta sp. WAM SS5	99100544	1	1	1	1	100	101	Barrow	Barrow	
Halichondria (Halichondria) sp. WAM SS1	99100537				1	195	196	Point Hillier	Point Hillier	
Halichondria (Halichondria) sp. WAM SS2	99100346				1	1075	1110	Point Hillier	Point Hillier	
Halichondria (Halichondria) sp. WAM SS3	99100538				4	95	232	Albany	Perth Canyon	Y
Halichondria (Halichondria) sp. WAM SS4	99100283				1	97	99	Bald Island	Bald Island	
Halichondria (Halichondria) sp. WAM SS5	99100539	1	1	1	1	96	98	Kalbarri	Kalbarri	Y
Hymeniacidon sp. WAM SS1	99100545				2	89	100	Albany	Point Hillier	Y
Hymeniacidon sp. WAM SS2	99100546				3	99	196	Bald Island	Point Hillier	Y
Hymeniacidon sp. WAM SS3	99100261	1	1	1	1	194	232	Perth Canyon	Perth Canyon	

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Order HAPLOSCLERIDA											
Family Callyspongiidae											
Callyspongia (Callyspongia) bilamellata	(Lamarck, 1814)	10098010				8	85	695	Bald Island	Kalbarri	Y
Callyspongia (Callyspongia) sp. WAM Ng1		99100547	1	1	1	7	85	157	Bald Island	Red Bluff	Y
Callyspongia (Callyspongia) sp. WAM SS1		99100548				8	85	196	Bald Island	Zuytdorp	Y
Callyspongia (Callyspongia) sp. WAM SS2		99100549				4	95	157	Bald Island	D'Entrecasteaux	Y
Callyspongia (Callyspongia) sp. WAM SS3		99100550	1	1	1	2	97	179	Bald Island	Albany	
Callyspongia (Callyspongia) sp. WAM SS4		99100551	1	1	1	1	212	213	Albany	Albany	Y
Family Chalinidae											
Haliclona (Gellius) sp. WAM SS1		99100558				2	99	196	Albany	Point Hillier	
Haliclona (Gellius) sp. WAM SS2		99100559				4	97	253	Bald Island	Kalbarri	Y
Haliclona (Gellius) sp. WAM SS3		99100560	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Haliclona (Haliclona) sp. WAM Ng1		99100552				2	85	100	Abrolhos	Point Cloates	Y
Haliclona (Haliclona) sp. WAM SS1		99100553				2	97	157	Bald Island	Bald Island	Y
Haliclona (Haliclona) sp. WAM SS2		99100554				1	104	114	Ningaloo	Ningaloo	
Haliclona (Haliclona) sp. WAM SS3		99100555				1	96	98	Kalbarri	Kalbarri	Y
Haliclona (Haliclona) sp. WAM SS4		99100556	1	1	1	1	96	98	Kalbarri	Kalbarri	
Haliclona (Haliclona) sp. WAM SS5		99100557	1	1	1	1	252	253	Kalbarri	Kalbarri	Y
Haliclona (Reniera) sp. WAM SS1		99100561				2	194	232	Perth Canyon	Two Rocks	Y
Haliclona (Reniera) sp. WAM SS2		99100562				1	205	210	Two Rocks	Two Rocks	Y

Haliclona (Reniera) sp. WAM SS3	99100563				1	205	210	Two Rocks	Two Rocks	Y
Haliclona (Reniera) sp. WAM SS4	99100564				2	85	100	D'Entrecasteaux	Abrolhos	Y
Haliclona (Reniera) sp. WAM SS5	99100565	1	1	1	2	96	98	Mentelle	Kalbarri	Y
Haliclona (Reniera) sp. WAM SS6	99100566	1	1	1	1	89	96	Point Hillier	Point Hillier	Y
Haliclona (Reniera) sp. WAM SS7	99100567	1	1	1	2	106	232	Perth Canyon	Zuytdorp	
Family Niphatidae										
Amphimedon sp. WAM SS1	99100568				2	95	100	D'Entrecasteaux	Mentelle	Y
Amphimedon sp. WAM SS2	99100569				1	147	157	Bald Island	Bald Island	
Amphimedon sp. WAM SS3	99100570				1	179	179	Albany	Albany	
Amphimedon sp. WAM SS4	99100313	1	1	1	2	89	100	Point Hillier	D'Entrecasteaux	Y
Amphimedon sp. WAM SS5	99100571	1	1	1	2	95	100	Albany	D'Entrecasteaux	Y
Niphates sp. WAM SS2	99100572				1	194	232	Perth Canyon	Perth Canyon	
Family Petrosiidae										
Petrosia (Petrosia) sp. WAM Ng1	99100592				6	97	210	Bald Island	Ningaloo	Y
Petrosia (Petrosia) sp. WAM SS1	99100591				1	165	166	Ningaloo	Ningaloo	Y
Petrosia (Petrosia) sp. WAM SS2	99100356				7	85	253	Mentelle	Ningaloo	Y
Petrosia (Petrosia) sp. WAM SS3	99100268	1	1	1	2	194	232	Perth Canyon	Two Rocks	Y
Petrosia (Petrosia) sp. WAM SS4	99100340	1	1	1	1	93	93	Barrow	Barrow	
Xestospongia sp. WAM Ng2	99100593				1	104	114	Ningaloo	Ningaloo	Y
Xestospongia sp. WAM SS1	99100594				5	104	404	Bald Island	Ningaloo	Y
Xestospongia sp. WAM SS2	99100595				2	104	114	Zuytdorp	Ningaloo	
Xestospongia sp. WAM SS3	99100596	1	1	1	2	96	100	Kalbarri	Red Bluff	Y
Xestospongia sp. WAM SS4	99100597	1	1	1	1	252	253	Kalbarri	Kalbarri	

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Xestospongia sp. WAM SS8		99100666				1	99	100	Albany	Albany	Y
Family Phloeodictyidae											
Aka sp. WAM SS1		99100573				1	104	114	Ningaloo	Ningaloo	Y
Aka sp. WAM SS10		99100580				1	97	99	Bald Island	Bald Island	
Aka sp. WAM SS2		99100574				5	95	232	Albany	Two Rocks	Y
Aka sp. WAM SS3		99100331				1	205	210	Two Rocks	Two Rocks	Y
Aka sp. WAM SS4		99100575				1	96	97	Mentelle	Mentelle	Y
Aka sp. WAM SS5		99100576	1	1	1	1	96	97	Mentelle	Mentelle	Y
Aka sp. WAM SS6		99100577				1	99	100	Albany	Albany	
Aka sp. WAM SS7		99100578	1	1	1	3	100	232	Albany	Barrow	
Aka sp. WAM SS8		99100579	1	1	1	2	179	196	Albany	Point Hillier	
Aka sp. WAM SS9		99100306	1	1	1	2	179	183	Albany	Abrolhos	Y
Oceanapia cf. *macrotoxa*	(Hooper, 1984)	99100590				1	85	92	Jurien Bay	Jurien Bay	Y
Oceanapia cf. ramsayi	(Lendenfeld, 1888)	99100589				2	147	253	Bald Island	Kalbarri	Y
Oceanapia ramsayi	(Lendenfeld, 1888)	10101022			1	1	252	253	Kalbarri	Kalbarri	Y
Oceanapia sp. WAM Ng1		99100355				3	93	183	Abrolhos	Barrow	Y
Oceanapia sp. WAM Ng2		99100581				3	97	232	Bald Island	Perth Canyon	
Oceanapia sp. WAM SS1		99100582				1	165	166	Ningaloo	Ningaloo	
Oceanapia sp. WAM SS10		99100334				2	180	253	Abrolhos	Kalbarri	Y
Oceanapia sp. WAM SS11		99100588				2	96	253	Kalbarri	Kalbarri	
Oceanapia sp. WAM SS2		99100277				7	104	232	Bald Island	Ningaloo	Y
Oceanapia sp. WAM SS3		99100583				2	99	370	Albany	Two Rocks	

Oceanapia sp. WAM SS4	99100330				3	194	232	Point Hillier	Two Rocks	Y
Oceanapia sp. WAM SS5	99100336				6	95	210	Bald Island	Two Rocks	Y
Oceanapia sp. WAM SS6	99100584	1	1	1	2	95	100	Bald Island	D'Entrecasteaux	Y
Oceanapia sp. WAM SS7	99100585	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Oceanapia sp. WAM SS8	99100586	1	1	1	2	194	253	Perth Canyon	Kalbarri	Y
Oceanapia sp. WAM SS9	99100587	1	1	1	3	97	183	Albany	Zuytdorp	Y
Order HOMOSCLERO-PHORIDA										
Family Plakinidae										
Plakina sp. WAM SS1	99100339				1	252	253	Kalbarri	Kalbarri	
Plakinastrella sp. WAM SS1	99100383				6	85	210	Two Rocks	Ningaloo	Y
Plakinastrella sp. WAM SS2	99100382				1	205	210	Two Rocks	Two Rocks	Y
Order LITHISTIDA										
Family Corallistidae										
Herengeria sp. A	99100668				1	97	97	Zuytdorp	Zuytdorp	Y
Family Theonellidae										
Manihinea n.sp. A	99100667	1	1	1	1	194	232	Perth Canyon	Perth Canyon	Y
Theonella sp. WAM SS1	99100447				1	100	100	Point Cloates	Point Cloates	Y
Lithistida undifferentiated	10033000				3	161	460	Bald Island	Red Bluff	
Order POECILOSCLERIDA										
Family Acarnidae										
Acarnus sp. WAM SS1	99100451				1	99	100	Albany	Albany	
Zyzzya sp. WAM SS1	99100452				1	180	183	Abrolhos	Abrolhos	Y
Family Chondropsidae										
Chondropsis sp. WAM Ng1	99100495				1	112	123	Kalbarri	Kalbarri	Y

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Chondropsis sp. WAM SS1		99100496				4	96	179	Bald Island	Mentelle	Y
Phoriospongia sp. WAM SS1		99100338				1	93	93	Barrow	Barrow	
Strongylacidon sp. WAM SS1		99100493				1	0	102	Two Rocks	Two Rocks	
Strongylacidon sp. WAM SS2		99100494				1	100	100	Carnarvon	Carnarvon	Y
Family Coelosphaeridae											
Coelosphaera (Coelosphaera) sp. WAM SS1		99100476				4	85	100	D'Entrecasteaux	Zuytdorp	Y
Coelosphaera (Coelosphaera) sp. WAM SS2		99100477				1	205	210	Two Rocks	Two Rocks	Y
Coelosphaera (Coelosphaera) sp. WAM SS3		99100300				4	97	253	Bald Island	Kalbarri	Y
Coelosphaera (Coelosphaera) sp. WAM SS4		99100478				1	96	97	Mentelle	Mentelle	Y
Coelosphaera (Coelosphaera) sp. WAM SS5		99100479				2	194	232	Perth Canyon	Two Rocks	Y
Coelosphaera (Coelosphaera) sp. WAM SS6		99100480	1	1	1	1	195	196	Point Hillier	Point Hillier	
Coelosphaera (Coelosphaera) sp. WAM SS7		99100481	1	1	1	1	97	99	Bald Island	Bald Island	
Coelosphaera (Coelosphaera) sp. WAM SS8		99100482	1	1	1	1	180	183	Abrolhos	Abrolhos	Y
Family Crambeidae											
Monanchora sp. WAM Ng1		99100483				1	95	99	Bunbury	Bunbury	Y
Monanchora sp. WAM SS1		99100484				2	95	99	Mentelle	Bunbury	Y
Monanchora sp. WAM SS3		99100664				1	100	100	Carnarvon	Carnarvon	
Family Crellidae											
Crella (Crella) sp. WAM SS1		99100486				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Crella (Crella) sp. WAM SS2		99100487				4	95	100	Bald Island	Kalbarri	Y

Crella (Crella) sp. WAM SS3		99100488	1	1	1	1	97	99	Bald Island	Bald Island	
Crella (Pytheas) sp. WAM SS1		99100485				1	205	210	Two Rocks	Two Rocks	Y
Crella (Yvesia) sp. WAM SS1		99100489				1	106	106	Zuytdorp	Zuytdorp	Y
Crella (Yvesia) sp. WAM SS2		99100490	1	1	1	1	99	100	Albany	Albany	Y
Family Dendoricellidae											
Fibulia sp. WAM SS1		99100474				4	95	179	Albany	Mentelle	Y
Fibulia sp. WAM SS2		99100475	1	1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Biemna sp. WAM SS1		99100325				2	100	106	Zuytdorp	Point Cloates	Y
Biemna sp. WAM SS2		99100512				2	95	100	Bald Island	D'Entrecasteaux	Y
Biemna sp. WAM SS3		99100513	1	1	1	1	97	99	Bald Island	Bald Island	Y
Biemna sp. WAM SS4		99100514	1	1	1	1	99	100	Albany	Albany	Y
Desmacella sp. WAM SS1		99100511				1	85	92	Jurien Bay	Jurien Bay	Y
Sigmaxinella cf. *soelae*	Hooper, 1984	99100510				1	100	100	Point Cloates	Point Cloates	Y
Sigmaxinella sp. WAM SS1		99100505				1	100	100	Red Bluff	Red Bluff	Y
Sigmaxinella sp. WAM SS2		99100506				2	89	96	Point Hillier	Barrow	Y
Sigmaxinella sp. WAM SS3		99100507				2	95	100	Bald Island	D'Entrecasteaux	Y
Sigmaxinella sp. WAM SS4		99100508	1	1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Sigmaxinella sp. WAM SS5		99100344	1	1	1	1	85	86	Abrolhos	Abrolhos	Y
Sigmaxinella sp. WAM SS6		99100509	1	1	1	1	195	196	Point Hillier	Point Hillier	
Desmacidon sp. WAM SS1		99100473				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Family Hymedesmiidae											
Phorbas sp. WAM Ng1		99100491				1	99	100	Albany	Albany	Y
Phorbas sp. WAM SS1		99100363				1	100	100	Red Bluff	Red Bluff	Y
Family Isodictyidae											
Coelocarteria sp. WAM SS1		99100660				2	85	97	Mentelle	Abrolhos	

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Family Latrunculiidae											
Latrunculia sp. WAM SS1		99100332				1	100	100	Point Cloates	Point Cloates	Y
Sceptrella sp. WAM SS1		99100434				2	205	253	Two Rocks	Kalbarri	Y
Sceptrella sp. WAM SS2		99100435				3	194	253	Perth Canyon	Kalbarri	Y
Sceptrella sp. WAM SS3		99100436				1	194	232	Perth Canyon	Perth Canyon	
Sceptrella sp. WAM SS4		99100437	1	1	1	1	252	253	Kalbarri	Kalbarri	
Family Microcionidae											
Clathria (Clathria) sp. WAM SS1		99100458				2	113	157	Bald Island	Jurien Bay	
Clathria (Clathria) sp. WAM SS2		99100459				1	97	99	Bald Island	Bald Island	
Clathria (Clathria) sp. WAM SS3		99100460	1	1	1	1	99	100	Albany	Albany	Y
Clathria (Isociella) selachia	Hooper, 1996	10066059				2	102	404	Two Rocks	Two Rocks	Y
Clathria (Thalysias) abietina	(Lamarck, 1814)	10066066				1	112	123	Kalbarri	Kalbarri	Y
Clathria (Thalysias) cf. *juniperina*	(Lamarck, 1814)	99100454				2	95	100	Albany	D'Entrecasteaux	Y
Clathria (Thalysias) cf. *procera*	(Ridley, 1884)	99100456				1	100	100	Carnarvon	Carnarvon	Y
Clathria (Thalysias) sp. WAM SS1		99100457				2	99	213	Albany	Albany	Y
Echinoclathria leporina	(Lamarck, 1814)	10066131				1	95	99	Bunbury	Bunbury	Y
Holopsamma arborea	(Lendenfeld, 1888)	10066138				3	96	157	Bald Island	Kalbarri	Y
Holopsamma sp. WAM SS1		99100453				3	96	157	Bald Island	Kalbarri	Y
Holopsamma sp. WAM SS2		99100455				1	99	100	Albany	Albany	Y
Family Mycalidae											
Mycale (?Carmia) sp. WAM SS4		99100518				1	212	213	Albany	Albany	

Mycale (Aegogropila) sp. WAM SS1		99100519				2	95	100	Albany	D'Entrecasteaux	Y
Mycale (Carmia) sp. WAM SS1		99100515				1	147	157	Bald Island	Bald Island	
Mycale (Carmia) sp. WAM SS2		99100516	1	1	1	2	97	157	Bald Island	Bald Island	
Mycale (Carmia) sp. WAM SS3		99100517				1	96	98	Kalbarri	Kalbarri	Y
Phlyctaenopora (Phlyctaenopora) sp. WAM SS1		99100520				2	85	97	Jurien Bay	Zuytdorp	Y
Family Myxillidae											
Iotrochota baculifera	Ridley, 1884	10077037				1	85	92	Jurien Bay	Jurien Bay	Y
Iotrochota cf. *baculifera*	Ridley, 1884	99100492				1	95	99	Bunbury	Bunbury	Y
Family Raspailiidae											
Aulospongus sp. WAM SS1		99100467				1	329	370	Two Rocks	Two Rocks	
Aulospongus sp. WAM SS2		99100468				1	252	253	Kalbarri	Kalbarri	Y
Ceratopsion cf. *dichotoma*	(Whitelegge, 1907)	99100470				1	89	96	Point Hillier	Point Hillier	Y
Ceratopsion sp. WAM SS1		99100469				1	95	99	Bunbury	Bunbury	
Echinodictyum cf. *cancellatum*	(Lamarck, 1814)	99100243				1	95	99	Bunbury	Bunbury	Y
Lithoplocamia sp. WAM SS1		99100471				1	252	253	Kalbarri	Kalbarri	Y
Raspailia (Clathriodendron) desmoxyiformis	Hooper, 1991	10067040				6	100	166	Shark Bay	Ningaloo	Y
Raspailia (Clathriodendron) sp. WAM SS1		99100466				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Raspailia (Parasyringella) sp. WAM SS1		99100315				2	329	539	Point Hillier	Two Rocks	
Raspailia (Parasyringella) sp. WAM SS2		99100461				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Raspailia (Parasyringella) sp. WAM SS3		99100462	1	1	1	1	95	99	Bunbury	Bunbury	Y
Raspailia (Parasyringella) sp. WAM SS4		99100665				1	100	100	Carnarvon	Carnarvon	
Raspailia (Raspailia) vestigifera	Dendy, 1896	10067055				1	95	99	Bunbury	Bunbury	Y

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Raspailia (Raspaxilla) sp. WAM Ng1		99100465				4	95	106	Bald Island	Zuytdorp	Y
Raspailia (Raspaxilla) sp. WAM SS1		99100463				1	329	370	Two Rocks	Two Rocks	
Raspailia (Raspaxilla) sp. WAM SS2		99100361				1	329	370	Two Rocks	Two Rocks	
Raspailia (Raspaxilla) sp. WAM SS3		99100464	1	1	1	1	89	96	Point Hillier	Point Hillier	Y
Thrinacophora cf. cervicornis	Ridley & Dendy, 1886	99100298				1	329	370	Two Rocks	Two Rocks	
Trikentrion flabelliforme	Carter, 1882	10067059				1	100	100	Red Bluff	Red Bluff	Y
Family Rhabderemiidae											
Rhabderemia sp. WAM SS1		99100472				1	252	253	Kalbarri	Kalbarri	Y
Family Tedaniidae											
Hemitedania sp. WAM SS1		99100504				2	106	232	Perth Canyon	Zuytdorp	Y
Strongylamma sp. WAM SS1		99100503				1	99	100	Albany	Albany	Y
Tedania (Tedania) sp. WAM SS1		99100502				1	99	100	Albany	Albany	Y
Tedania (Tedaniopsis) sp. WAM SS1		99100499				1	205	210	Two Rocks	Two Rocks	Y
Tedania (Tedaniopsis) sp. WAM SS2		99100500	1	1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Tedania (Tedaniopsis) sp. WAM SS3		99100501	1	1	1	1	194	232	Perth Canyon	Perth Canyon	
Tedania (Trachytedania) sp. WAM SS1		99100497				2	96	106	Mentelle	Zuytdorp	Y
Tedania (Trachytedania) sp. WAM SS2		99100498	1	1	1	1	97	99	Bald Island	Bald Island	
Order SPIROPHORIDA											
Family Tetillidae											
?*Craniella* sp. WAM SS2		99100389				1	97	97	Zuytdorp	Zuytdorp	Y

Cinachyrella cf. *australiensis*	(Carter, 1886)	99100259				1	96	98	Kalbarri	Kalbarri	Y
Cinachyrella sp. WAM SS1		99100387				2	95	106	Bunbury	Ningaloo	Y
Cinachyrella sp. WAM SS2		99100384				2	194	232	Perth Canyon	Two Rocks	Y
Cinachyrella sp. WAM SS3		99100385	1	1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Cinachyrella sp. WAM SS4		99100386	1	1	1	1	252	253	Kalbarri	Kalbarri	Y
Craniella sp. WAM SS1		99100258	1	1	1	5	100	210	Point Hillier	Barrow	Y
Tetilla sp. WAM SS1		99100388				1	252	253	Kalbarri	Kalbarri	Y
Order VERONGIDA											
Family Aplysinellidae											
Suberea sp. WAM SS1		99100657				2	195	210	Point Hillier	Two Rocks	Y
Family Aplysinidae											
Aplysina sp. WAM SS1		99100653	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Aplysinidae sp. WAM SS1		99100651				2	101	166	Ningaloo	Ningaloo	Y
Aplysinidae sp. WAM SS2		99100652				2	95	114	D'Entrecasteaux	Ningaloo	Y
Aplysinidae sp. WAM SS3		99100369				1	104	114	Ningaloo	Ningaloo	
Family Pseudoceratinidae											
Pseudoceratina sp. WAM SS1		99100654				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Pseudoceratina sp. WAM SS2		99100655				1	205	210	Two Rocks	Two Rocks	Y
Pseudoceratina sp. WAM SS3		99100656	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Phylum CNIDARIA											
Class ANTHOZOA											
Order ANTIPATHARIA											
Family Antipathidae											
Antipathidae sp. A		99110614				1	100	100	Point Cloates	Point Cloates	

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Parantipathes helicosticha	Opresko, 1999	11161002				1	900	915	Albany	Albany	Y
Stichopathes sp. A		99110615				3	104	134	Shark Bay	Ningaloo	Y
Stichopathes sp. B		99110616				1	104	114	Ningaloo	Ningaloo	
Family Myriopathidae											
Cupressopathes cf. *abies*	(Linnaeus, 1758)	99110613				1	100	100	Point Cloates	Point Cloates	
Myriopathes cf. *japonica*	(Brook, 1889)	99110612				1	96	97	Mentelle	Mentelle	Y
Myriopathes myriophylla	(Pallas, 1766)	11158002		1	1	1	104	114	Ningaloo	Ningaloo	Y
Myriopathes sp. A		99110611				2	95	100	Bunbury	Point Cloates	Y
Subclass OCTOCORALLIA											
Order ALCYONACEA											
Family Acanthogorgiidae											
Acanthogorgia sp. I		99110290				1	93	93	Barrow	Barrow	
Acanthogorgia sp. indet.		11175000				4	95	688	Two Rocks	Shark Bay	Y
Acanthogorgia sp. J		99110291				1	976	980	Bald Island	Bald Island	
Acanthogorgia sp. K		99110293				1	401	414	Jurien Bay	Jurien Bay	
Acanthogorgia sp. L		99110292				3	102	134	Two Rocks	Ningaloo	Y
Acanthogorgia sp. M		99110294				2	100	120	Shark Bay	Point Cloates	
Acanthogorgia sp. N		99110295				1	93	93	Barrow	Barrow	
Acanthogorgia sp. O		99110353				1	105	105	Ningaloo	Ningaloo	
Acanthogorgiidae n.gen. A, n.sp. A		99110425	1	genus	1	1	101	106	Ningaloo	Ningaloo	
Muricella sp. A		99110424				2	120	134	Shark Bay	Shark Bay	Y

Versluysia ramosa	(Thomson & Henderson, 1906)	11175001		1	1	1	132	134	Ningaloo	Ningaloo	
Family Alcyoniidae											
Alcyoniidae n.gen. A, n.sp. B		99110429	1	genus	1	1	85	86	Abrolhos	Abrolhos	
Anthomastus sp. E		99110296				2	900	922	Albany	Albany	Y
Eleutherobia n.sp. A		99110426	1	1	1	1	401	414	Jurien Bay	Jurien Bay	Y
Eleutherobia n.sp. B		99110427	1	1	1	1	355	382	Point Cloates	Point Cloates	
Inflatocalyx n.sp. A		99110428	1	genus	1	1	419	439	Abrolhos	Abrolhos	Y
Family Anthothelidae											
Alertigorgia mjoebergi	(Broch, 1916)	11177003				3	95	101	Albany	Barrow	
Anthothela sp. K		99110298				2	848	1170	Perth Canyon	Perth Canyon	
Anthothela sp. M		99110299				2	180	1170	Perth Canyon	Abrolhos	
Anthothela sp. N		99110297				1	900	1170	Albany	Perth Canyon	Y
Solenocaulon ramosa	Hickson, 1903	11177004				1	104	114	Ningaloo	Ningaloo	
Family Chrysogorgiidae											
Chrysogorgia sp. indet.		11180901				1	913	925	Albany	Albany	
Chrysogorgia sp. O		99110300				1	398	728	Bald Island	Perth Canyon	Y
Chrysogorgia sp. Q		99110301				1	408	431	Bald Island	Bald Island	
Metallogorgia sp. A		99110302				1	986	988	Two Rocks	Two Rocks	Y
Family Clavulariidae											
Carijoa sp. A		99110430				1	100	100	Point Cloates	Point Cloates	
Stereotelesto sp. A		99110431		genus	1	2	95	120	Shark Bay	Shark Bay	Y
Stereotelesto sp. B		99110432		genus	1	1	101	106	Ningaloo	Ningaloo	
Family Coralliidae											
Corallidae sp. indet.		11183000		1	1	1	900	915	Albany	Albany	Y
Family Ellisellidae											

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Dichotella gemmacea	(Milne Edwards & Haime, 1857)	11185005				1	100	100	Shark Bay	Shark Bay	
Ellisella ceylonensis	(Nutting, 1910)	11185008		1	1	1	100	100	Red Bluff	Red Bluff	
Ellisellidae n.gen. A, n.sp. A		99110303	1	genus	1	1	252	253	Kalbarri	Kalbarri	
Ellisellidae n.gen. A, n.sp. D		99110304	1	genus	1	1	100	100	Red Bluff	Red Bluff	
Ellisellidae sp. indet.		11185000				1	100	100	Red Bluff	Red Bluff	Y
Heliania racemosa	(Wright & Stüder, 1889)	11185006		1	1	2	100	114	Point Cloates	Ningaloo	
Junceella juncea	(Pallas, 1766)	11185003				1	100	100	Red Bluff	Red Bluff	Y
Verrucella miniacea	(Stüder, 1878)	11185007				1	101	106	Ningaloo	Ningaloo	
Verrucella sp. F		99110306				1	106	106	Zuytdorp	Zuytdorp	
Verrucella sp. G		99110305				1	104	114	Ningaloo	Ningaloo	Y
Viminella sp. F		99110309				1	100	100	Red Bluff	Red Bluff	
Viminella sp. H		99110308				2	329	404	Two Rocks	Two Rocks	Y
Viminella sp. J		99110307				1	101	106	Ningaloo	Ningaloo	
Family Isididae											
Acanella sp. C		99110310				4	378	508	D'Entrecasteaux	Perth Canyon	Y
Annisis sprightly	Alderslade, 1998	11188001				4	95	100	Albany	Bunbury	Y
Lepidisis sp. N		99110311				1	401	414	Jurien Bay	Jurien Bay	Y
Minuisis n.sp. B		99110312	1	1	1	1	329	370	Two Rocks	Two Rocks	
Mopsea encrinula	(Lamarck, 1815)	11188009				6	95	120	Bald Island	Shark Bay	Y
Oparinisis cf. *flexilis*	Alderslade, 1999	99110435				1	95	100	D'Entrecasteaux	D'Entrecasteaux	
Oparinisis flexilis	Alderslade, 1998	11188011				2	95	100	D'Entrecasteaux	Mentelle	
Oparinisis n.sp. A		99110436	1	1	1	2	99	213	Albany	Albany	

Oparinisis parkeri	Alderslade, 1998	11188003			1	1	96	97	Mentelle	Mentelle	
Oparinisis sp. indet.		11188902				1	96	97	Mentelle	Mentelle	
Oparinisis viking	Alderslade, 1998	11188012			1	2	95	100	D'Entrecasteaux	Mentelle	
Tethrisis suzannae	Alderslade, 1998	11188013				1	120	120	Shark Bay	Shark Bay	Y
Zignisis alternata	(Utinomi, 1975)	11188034				1	96	97	Mentelle	Mentelle	
Zignisis bifoliata	Alderslade, 1998	11188037				2	95	120	Bunbury	Shark Bay	Y
Zignisis lornae	Alderslade, 1998	11188036				4	95	106	Albany	Zuytdorp	
Zignisis n.sp. B		99110437	1	1	1	2	99	100	Albany	Shark Bay	
Zignisis repens	(Briggs, 1915)	11188008				4	95	106	Albany	Zuytdorp	
Zignisis sp. indet.		11188903				1	96	97	Mentelle	Mentelle	
Family Keroeididae											
Keroeides cf. *erythraea*	(Kükenthal, 1904)	99110438		1	1	1	132	134	Ningaloo	Ningaloo	
Family Melithaeidae											
Acabaria sp. C		99110313				3	85	100	D'Entrecasteaux	Abrolhos	
Acabaria sp. D		99110316				1	85	86	Abrolhos	Abrolhos	
Acabaria sp. E		99110317				2	95	100	D'Entrecasteaux	Mentelle	Y
Acabaria sp. F		99110314				1	91	92	Point Hillier	Point Hillier	
Acabaria sp. G		99110315				1	85	86	Abrolhos	Abrolhos	
Clathraria sp. A		99110439				1	100	101	Barrow	Barrow	
Clathraria sp. B		99110440				1	99	100	Albany	Albany	
Mopsella klunzingeri	Kükenthal, 1908	11190002				3	95	100	Bald Island	D'Entrecasteaux	Y
Wrightella n.sp. A		99110441	1	genus	1	2	95	100	D'Entrecasteaux	Mentelle	Y
Family Nephtheidae											
Chromonephthea spp.		11191902				2	95	100	D'Entrecasteaux	Mentelle	
Dendronephthya cf. sp. R		99110321				1	120	120	Shark Bay	Shark Bay	

Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Dendronephthya sp. AA		99110326				1	1077	1085	Ningaloo	Ningaloo	
Dendronephthya sp. BB		99110327				1	100	101	Barrow	Barrow	Y
Dendronephthya sp. CC		99110328				2	101	166	Ningaloo	Ningaloo	
Dendronephthya sp. DD		99110329				1	112	123	Kalbarri	Kalbarri	
Dendronephthya sp. EE		99110330				1	100	100	Point Cloates	Point Cloates	
Dendronephthya sp. FF		99110331				1	112	123	Kalbarri	Kalbarri	
Dendronephthya sp. GG		99110322				1	120	120	Shark Bay	Shark Bay	
Dendronephthya sp. HH		99110332				1	99	100	Albany	Albany	Y
Dendronephthya sp. T		99110323				1	170	177	Ningaloo	Ningaloo	
Dendronephthya sp. U		99110352				1	201	206	Ningaloo	Ningaloo	
Dendronephthya sp. V		99110318				3	100	183	Abrolhos	Carnarvon	Y
Dendronephthya sp. W		99110319				2	101	107	Ningaloo	Ningaloo	
Dendronephthya sp. X		99110320				1	120	120	Shark Bay	Shark Bay	Y
Dendronephthya sp. Y		99110324				1	329	370	Two Rocks	Two Rocks	
Dendronephthya sp. Z		99110609				1	100	101	Barrow	Barrow	
Dendronephthya spp.		11191901				2	97	114	Zuytdorp	Ningaloo	
Drifa n.sp. B		99110550	1	1	1	4	85	100	Albany	Zuytdorp	
Scleronephthya cf. *gracillima*	(Kuekenthal, 1906)	99110442		1	1	1	100	100	Carnarvon	Carnarvon	
Scleronephthya indica	(Thomson & Henderson, 1906)	11191003				1	85	86	Abrolhos	Abrolhos	
Scleronephthya spp.		11191903				7	85	232	D'Entrecasteaux	Ningaloo	Y
Stereonephthya sp. A		99110551				1	85	86	Abrolhos	Abrolhos	
Umbellulifera sp. A		99110443				3	100	411	Jurien Bay	Barrow	Y

Family Nidaliidae										
Chironephthya cf. sp. D		99110333			1	104	114	Ningaloo	Ningaloo	
Chironephthya dipsacea	Wright & Stüder, 1889	11192001	1	1	1	101	106	Ningaloo	Ningaloo	
Chironephthya sp. S		99110336			1	252	253	Kalbarri	Kalbarri	
Chironephthya sp. T		99110335			1	355	382	Point Cloates	Point Cloates	
Chironephthya sp. U		99110334			1	100	100	Carnarvon	Carnarvon	
Chironephthya sp. V		99110337			1	252	253	Kalbarri	Kalbarri	
Chironephthya sp. W		99110338			1	329	370	Two Rocks	Two Rocks	
Chironephthya spp.		11192901			1	104	114	Ningaloo	Ningaloo	
Family Paralcyoniidae										
Studeriotes sp. A		99110444			1	100	101	Barrow	Barrow	Y
Family Plexauridae										
Astrogorgia sp. D		99110339			1	120	120	Shark Bay	Shark Bay	Y
Astrogorgia sp. F		99110340			1	106	106	Zuytdorp	Zuytdorp	
Bebryce sp. A		99110341			1	93	93	Barrow	Barrow	
Bebryce sp. B		99110342			1	93	93	Barrow Island	Barrow Island	
Bebryce sp. C		99110343			2	416	439	Abrolhos	Abrolhos	Y
Discogorgia sp. A		99110344			2	93	134	Barrow	Barrow	
Echinogorgia sp. A		99110445			3	93	100	Red Bluff	Barrow	
Muriceides sp. A		99110345			1	469	480	Kalbarri	Kalbarri	
Paramuricea cf. *grandis*	(Verrill, 1883)	99110446	1	1	2	1074	1110	Point Hillier	Point Hillier	Y
Paramuricea sp. H		99110347			1	900	915	Albany	Albany	
Paramuricea sp. I		99110346			1	913	925	Albany	Albany	
Placogorgia sp. B		99110348			1	100	100	Shark Bay	Shark Bay	
Pseudothesea flexilis	(Nutting, 1910)	11196001	1	1	1	120	120	Shark Bay	Shark Bay	

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Pseudothesea simplex	(Nutting, 1910)	11196002		1	1	1	120	120	Shark Bay	Shark Bay	Y
Swiftia sp. B		99110447				2	401	439	Jurien Bay	Abrolhos	Y
Thesea sp. A		99110448		1	1	2	93	134	Barrow	Barrow	
Villogorgia sp. A		99110449				1	100	100	Point Cloates	Point Cloates	
Villogorgia sp. B		99110450				4	101	134	Shark Bay	Ningaloo	Y
Family Primnoidae											
Narella sp. B		99110350				1	976	980	Bald Island	Bald Island	
Narella sp. F		99110349				1	900	915	Albany	Albany	Y
Pseudoplumarella filicoides	(Thomson & McKinnon, 1911)	11197015			1	3	95	100	Bald Island	Mentelle	Y
Family Subergorgiidae											
Annella reticulata	(Ellis & Solander, 1786)	11199002				1	95	100	Shark Bay	Shark Bay	
Subergorgia kollikeri	Wright & Stüder, 1889	11199003				1	105	106	Ningaloo	Ningaloo	
Subergorgia sp. A		99110452				1	93	93	Barrow	Barrow	
Order PENNATULACEA											
Family Echinoptilidae											
Echinoptilum cf. *macintoshi*	Hubrecht, 1885	99110433		1	1	1	420	430	Point Cloates	Point Cloates	Y
Family Funiculinidae											
Funiculina quadrangularis	(Pallas, 1766)	11213001				1	398	407	Albany	Albany	
Family Pteroeididae											
Pteroeides cf. *dofleini*	(Balss, 1909)	99110451		1	1	1	105	106	Ningaloo	Ningaloo	
Pteroeides sp. F		99110351				3	101	107	Ningaloo	Ningaloo	Y
Family Umbellulidae											
Umbellula huxleyi	Koelliker, 1880	11216003		1	1	3	986	1037	Two Rocks	Abrolhos	Y

Family Virgulariidae											
Acanthoptilum n.sp. A		99110453	1	1	1	1	180	183	Abrolhos	Abrolhos	Y
Acanthoptilum n.sp. B		99110454	1	1	1	1	676	680	Albany	Albany	Y
Acanthoptilum sp. indet.		11224901				1	399	408	Barrow	Barrow	
Scytalium sarsii	Herklots, 1858	11224001		1	1	1	252	253	Kalbarri	Kalbarri	Y
Order SCLERACTINIA											
Family Anthemiphylliidae											
Anthemiphyllia dentata	(Alcock, 1902)	11304001				2	329	404	Two Rocks	Two Rocks	Y
Anthemiphyllia n.sp. A		99110618	1	1	1	1	710	728	Bald Island	Bald Island	Y
Family Caryophylliidae											
Caryophyllia diomedeae	Marenzeller, 1904	11314039				1	900	915	Albany	Albany	
Caryophyllia grandis	Gardiner & Waugh, 1938	11314005				3	93	431	Abrolhos	Barrow	
Caryophyllia grayi	(Milne Edwards & Haime, 1848)	11314011				3	100	166	Shark Bay	Ningaloo	
Caryophyllia planilamellata	Dennant, 1906	11314042			1	3	398	728	Bald Island	Point Hillier	Y
Caryophyllia scobinosa	Alcock, 1902	11314044			1	1	983	1010	Ningaloo	Ningaloo	
Caryophyllia unicristata	Cairns & Zibrowius, 1997	11314012				4	399	414	Zuytdorp	Barrow	
Dasmosmilia lymani	(De Pourtalés, 1871)	11314077		1	1	1	658	754	Ningaloo	Ningaloo	
Deltocyathus magnificus	Moseley, 1876	11314002				6	397	528	Mentelle	Red Bluff	
Deltocyathus rotulus	(Alcock, 1898)	11314053			1	2	690	704	Abrolhos	Ningaloo	
Deltocyathus sarsi	(Gardiner & Waugh, 1938)	11314020				1	700	704	Abrolhos	Abrolhos	
Deltocyathus suluensis	Alcock, 1902	11314021				2	399	411	Barrow	Barrow	Y
Desmophyllum dianthus	(Esper, 1794)	11314027				2	329	915	Albany	Two Rocks	
Heterocyathus sulcatus	(Verrill, 1866)	11314024				1	101	102	Ningaloo	Ningaloo	
Phyllangia cf. *papuensis*	Studer, 1878	99110620		1	1	3	97	183	Abrolhos	Zuytdorp	

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Stephanocyathus (Acinocyathus) explanans	(Marenzeller, 1904)	11314018				1	479	484	Perth Canyon	Perth Canyon	
Stephanocyathus (Acinocyathus) spiniger	(Marenzeller, 1888)	11314019				7	364	508	Bald Island	Shark Bay	Y
Stephanocyathus (Odontocyathus) weberianus	(Alcock, 1902)	11314062				1	408	427	Jurien Bay	Jurien Bay	Y
Stephanocyathus cf. coronatus	(Pourtalès, 1867)	99110619				2	467	680	Albany	Mentelle	Y
Trochocyathus cooperi	(Gardiner, 1905)	11314076		1	1	2	100	123	Kalbarri	Point Cloates	
Trochocyathus sp. A		99110621				1	100	100	Point Cloates	Point Cloates	
Family Dendrophylliidae											
Balanophyllia carinata	(Semper, 1872)	11320016				1	100	100	Shark Bay	Shark Bay	
Balanophyllia cf. *dentata*	Tenison Woods, 1879	99110624				1	100	100	Point Cloates	Point Cloates	
Balanophyllia cornu	Moseley, 1881	11320057				1	355	382	Point Cloates	Point Cloates	
Balanophyllia desmophyllioides	Vaughan, 1907	11320033			1	1	355	382	Point Cloates	Point Cloates	
Balanophyllia n.sp. B		99110623	1	1	1	1	120	120	Shark Bay	Shark Bay	
Balanophyllia sp. A		99110622				3	100	123	Kalbarri	Shark Bay	Y
Heteropsammia cochlea	(Spengler, 1781)	11320004				2	101	106	Ningaloo	Ningaloo	
Family Flabellidae											
Flabellum deludens	Marenzeller, 1904	11328007				1	408	431	Bald Island	Bald Island	
Flabellum hoffmeisteri	Cairns & Parker, 1992	11328008				1	973	999	Bald Island	Bald Island	
Flabellum lamellulosum	Alcock, 1902	11328003				5	396	460	Albany	Barrow	Y
Flabellum patens	Moseley, 1881	11328005				3	397	423	Bunbury	Red Bluff	
Flabellum tuthilli	Hoffmeister, 1933	11328010				3	386	494	Bald Island	Kalbarri	Y
Rhizotrochus tuberculatus	(Tenison Woods, 1879)	11328021				1	100	100	Shark Bay	Shark Bay	

Truncatoflabellum australiensis	Cairns, 1998	11328013				1	100	101	Barrow	Barrow	
Truncatoflabellum candeanum	(Milne Edwards & Haime, 1848)	11328047		1	1	6	100	206	Kalbarri	Ningaloo	
Truncatoflabellum macroeschara	Cairns, 1998	11328015				1	101	102	Ningaloo	Ningaloo	Y
Truncatoflabellum n.sp. A		99110625	1	1	1	1	408	431	Bald Island	Bald Island	
Truncatoflabellum sp. B		99110626				1	100	100	Shark Bay	Shark Bay	
Family Fungiacyathidae											
Fungiacyathus fragilis	Sars, 1872	11301001				2	368	680	Albany	Carnarvon	Y
Fungiacyathus sp. A		99110617				2	848	1050	Albany	Perth Canyon	
Fungiacyathus stephanus	(Alcock, 1893)	11301004				2	658	754	Ningaloo	Ningaloo	
Family Micrabaciidae											
Letepsammia formosissima	(Moseley, 1876)	11299002				5	329	494	Bald Island	Two Rocks	Y
Rhombopsammia niphada	Owens, 1986	11299003				2	983	1050	Ningaloo	Ningaloo	
Family Oculinidae											
Madrepora oculata	Linnaeus, 1758	11330009				1	928	1170	Perth Canyon	Perth Canyon	
Family Turbinolidae											
Notocyathus conicus	(Alcock, 1902)	11317034		1	1	1	101	102	Ningaloo	Ningaloo	
Phylum MOLLUSCA											
Class BIVALVIA											
Order ARCOIDA											
Family Arcidae											
Arca navicularis	Bruguière, 1789	23226002				3	97	106	Zuytdorp	Point Cloates	Y
Arca ventricosa	Lamarck, 1819	23226015				1	113	114	Jurien Bay	Jurien Bay	
Barbatia (Acar) sp. 1		99230114				2	329	414	Two Rocks	Jurien Bay	Y

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Barbatia (Destacar) sp. 1		99230115				2	469	1037	Abrolhos	Kalbarri	
Barbatia cf. *saviolum*	(Iredale, 1939)	99230121				2	96	102	Two Rocks	Kalbarri	Y
Barbatia plicata	(Dillwyn, 1817)	23226027				3	100	382	Shark Bay	Point Cloates	Y
Barbatia reticulata	(Gmelin, 1791)	23226009				1	89	96	Point Hillier	Point Hillier	Y
Barbatia sp. 1		99230116				1	97	97	Zuytdorp	Zuytdorp	
Barbatia sp. 2		99230117				2	100	114	Shark Bay	Ningaloo	Y
Barbatia sp. 3		99230118				2	132	166	Ningaloo	Ningaloo	
Barbatia sp. 5		99230119				1	100	100	Point Cloates	Point Cloates	
Barbatia sp. 6		99230120				2	100	100	Shark Bay	Carnarvon	
Bathyarca sp. 1		99230113				2	113	177	Jurien Bay	Ningaloo	
Bentharca cf. *rubrotincta*	Kuroda & Habe in Habe, 1958	99230112				3	85	114	Jurien Bay	Kalbarri	Y
Family Glycymerididae											
Glycymeris hedleyi	(Lamy, 1912)	23231014			1	1	100	100	Carnarvon	Carnarvon	Y
Glycymeris striatularis	(Lamarck, 1819)	23231001				2	95	196	Albany	Point Hillier	Y
Tucetona gealei	(Angas, 1873)	23231003			1	1	96	98	Kalbarri	Kalbarri	Y
Tucetona hoylei	(Melvill & Standen, 1899)	23231018			1	5	100	206	Kalbarri	Ningaloo	Y
Tucetona scalarisculpta	Lamprell & Whitehead, 1990	23231022				3	100	102	Two Rocks	Shark Bay	Y
Tucetona sordida	(Tate, 1891)	23231020				1	113	114	Jurien Bay	Jurien Bay	
Family Limopsidae											
Limopsis cf. *tenuiradiata*	Cotton, 1930	99230123				3	194	232	Albany	Perth Canyon	
Limopsis soboles	(Iredale, 1931)	23230002			1	5	397	925	Bald Island	Perth Canyon	Y
Limopsis sp. 1		99230124				1	419	460	Point Hillier	Point Hillier	Y

Limopsis sp. 2		99230125			1	411	411	Red Bluff	Red Bluff	
Limopsis sp. 3		99230126			1	419	460	Point Hillier	Point Hillier	
Limopsis sp. 4		99230127			2	89	96	Albany	Point Hillier	Y
Limopsis sp. 5		99230128			1	100	100	Lancelin	Lancelin	
Limopsis sp. 6		99230129			1	416	431	Abrolhos	Abrolhos	
Limopsis sp. 7		99230130			1	112	123	Kalbarri	Kalbarri	
Family Noetiidae										
?*Arcopsis* sp. 1		99230122			1	104	114	Ningaloo	Ningaloo	
Order LIMOIDA										
Family Limidae										
Ctenoides cf. *annulata*	(Lamarck, 1819)	99230132			4	93	206	Point Cloates	Barrow	Y
Lima nimbifer	Iredale, 1924	23250005			4	96	253	Jurien Bay	Zuytdorp	Y
Lima vulgaris	(Link, 1807)	23250020			3	104	166	Ningaloo	Ningaloo	
Limaria fragilis	(Gmelin, 1791)	23250001			1	373	382	Ningaloo	Ningaloo	
Order MYOIDA										
Family Corbulidae										
Corbula macgillivrayi	Smith, 1885	23387004		1	1	100	101	Barrow	Barrow	
Notocorbula cf. *hydropica*	Iredale, 1930	99230183			2	165	177	Ningaloo	Ningaloo	
Notocorbula cf. *smithiana*	(Brazier, 1879)	99230184			1	95	99	Bunbury	Bunbury	
Notocorbula fortisulcata	(Smith, 1878)	23387009			1	100	100	Red Bluff	Red Bluff	
Notocorbula stolata	(Iredale, 1930)	23387002		1	1	95	95	Albany	Albany	Y
Order MYTILOIDA										
Family Mytilidae										
Amygdalum beddomei	Iredale, 1924	23220010			1	97	97	Zuytdorp	Zuytdorp	Y
Amygdalum watsoni	Smith, 1895	23220073	1	1	8	165	1295	Ningaloo	Ningaloo	Y

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Lithophaga malaccana	(Reeve, 1858)	23220022				1	85	92	Jurien Bay	Jurien Bay	Y
Lithophaga teres	(Philippi, 1846)	23220021				5	85	123	Two Rocks	Shark Bay	Y
Modiolus areolatus	Gould, 1850	23220008				3	161	196	Bald Island	Point Hillier	Y
Modiolus flavida	Dunker, 1856	23220041				1	96	98	Kalbarri	Kalbarri	
Modiolus proclivis	Iredale, 1939	23220025			1	1	93	93	Barrow	Barrow	Y
Modiolus sp. 1		99230108				1	96	98	Kalbarri	Kalbarri	Y
Mytilidae sp. 1		99230109				1	100	100	Point Cloates	Point Cloates	
Mytilidae sp. 2		99230110				1	201	206	Ningaloo	Ningaloo	
Mytilidae sp. 3		99230111				1	91	92	Point Hillier	Point Hillier	Y
Septifer sp. 1		99230107				5	85	114	Jurien Bay	Point Cloates	Y
Order NUCULOIDA											
Family Malletiidae											
Malletia (Malletiella) sp. 1		99230104				3	726	1085	Ningaloo	Ningaloo	
Family Nuculanidae											
Nuculana sp. 2		99230106				1	100	101	Barrow	Barrow	
Nuculana verconis	(Tate, 1891)	23207019				1	1577	1584	Perth Canyon	Perth Canyon	Y
Yoldia sp. 1		99230105				1	1019	1031	Albany	Albany	Y
Family Nuculidae											
Nucula sp. 1		99230100				2	419	999	Bald Island	Point Hillier	Y
Nuculoma sp. 1		99230101				1	726	732	Ningaloo	Ningaloo	
Nuculoma sp. 4		99230102				1	373	382	Ningaloo	Ningaloo	
Nuculoma sp. 5		99230103				1	100	101	Barrow	Barrow	

Order OSTREOIDA									
Family Dimyidae									
Dimya corrugata	Hedley, 1902	23265001	1	5	100	183	Jurien Bay	Carnarvon	Y
Dimya sp. 1		99230135		1	100	100	Point Cloates	Point Cloates	
Dimya sp. 2		99230136		1	165	166	Ningaloo	Ningaloo	
Family Gryphaeidae									
?*Hyotissa* sp. 1		99230134		1	112	123	Kalbarri	Kalbarri	
?*Neopycnodonte* sp. 1		99230133		1	97	97	Zuytdorp	Zuytdorp	Y
Hyotissa hyotis	(Linnaeus, 1758)	23256001		2	85	102	Two Rocks	Abrolhos	
Family Pectinidae									
Chlamys challengeri	(Smith, 1891)	23270029	1	1	408	431	Bald Island	Bald Island	Y
Cryptopecten cf. *bullatus*	(Dautzenberg & Bavay, 1912)	99230137		1	329	370	Two Rocks	Two Rocks	Y
Delectopecten cf. *alcocki*	(Smith, 1904)	99230141		1	976	980	Bald Island	Bald Island	Y
Mesopeplum fenestratum	(Hedley, 1901)	23270021		1	195	196	Point Hillier	Point Hillier	Y
Mimachlamys asperrima	(Lamarck, 1819)	23270006		1	212	213	Albany	Albany	Y
Pecten fumatus	Reeve, 1852	23270007		1	100	100	Red Bluff	Red Bluff	Y
Pectinidae sp. 1		99230144		1	96	98	Kalbarri	Kalbarri	Y
Scaeochlamys cf. *squamea*	(Gmelin, 1791)	99230139		1	100	100	Red Bluff	Red Bluff	
Semipallium aktinos	(Petterd, 1886)	23270008		1	329	370	Two Rocks	Two Rocks	Y
Semipallium sp. 1		99230142		1	212	213	Albany	Albany	Y
Serratovola cf. *pallula*	Dijkstra, 1998	99230140		1	100	101	Barrow	Barrow	
Talochlamys cf. *pulleineana*	(Tate, 1887)	99230138		3	100	404	Two Rocks	Red Bluff	Y
Talochlamys pulleineana	(Tate, 1887)	23270058		1	179	179	Albany	Albany	
Veprichlamys sp. 1		99230143		1	416	431	Abrolhos	Abrolhos	
Family Plicatulidae									
Plicatula chinensis	Mörch, 1853	23260002		9	100	183	Lancelin	Point Cloates	

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Family Propeamussiidae											
Parvamussium cf. *cristellatum*	(Dautzenberg & Bavay, 1912)	99230147				1	120	120	Shark Bay	Shark Bay	
Parvamussium sp. 1		99230148				1	408	431	Bald Island	Bald Island	
Parvamussium sp. 2		99230149				1	398	407	Albany	Albany	Y
Parvamussium sp. 3		99230150				2	399	430	Point Cloates	Barrow	
Parvamussium sp. 4		99230151				2	467	529	Mentelle	Mentelle	
Parvamussium sp. 5		99230152				2	467	490	Mentelle	Perth Canyon	
Parvamussium sp. 6		99230153				1	408	431	Bald Island	Bald Island	
Parvamussium sp. 7		99230154				1	848	1050	Perth Canyon	Perth Canyon	
Parvamussium sp. 9		99230155				1	132	134	Ningaloo	Ningaloo	
Propeamussium cf. *watsoni*	(Smith, 1885)	99230146				2	658	754	Ningaloo	Ningaloo	
Propeamussium sibogai	(Dautzenberg & Bavay, 1912)	23271002				1	368	388	Carnarvon	Carnarvon	
Propeamussium sp. 2		99230145				1	479	484	Perth Canyon	Perth Canyon	Y
Family Spondylidae											
Spondylus cf. *anacanthus*	Mawe, 1823	99230158				1	104	114	Ningaloo	Ningaloo	
Spondylus cf. *victoriae*	Sowerby, 1843	99230157				4	100	106	Zuytdorp	Point Cloates	Y
Spondylus sp. 1		99230156				1	165	166	Ningaloo	Ningaloo	
Order PHOLADOMYOIDA											
Family Cuspidariidae											
Cardiomya pinna	(Verco, 1908)	23435021				1	848	1050	Perth Canyon	Perth Canyon	Y
Cardiomya sp. 1		99230197				1	658	754	Ningaloo	Ningaloo	Y
Cuspidaria cf. *kyushuensis*	Okutani, 1962	99230196				1	1000	1037	Abrolhos	Abrolhos	

Cuspidaria cf. *morrisae*	Poultiers & Bernard, 1995	99230194		3	726	1050	Ningaloo	Ningaloo	
Cuspidaria cf. *prolatissima*	Poultiers, 1981	99230195		1	165	166	Ningaloo	Ningaloo	
Cuspidaria latesulcata	Tension Woods, 1878	23435009		1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Cuspidaria sp. 1		99230189		1	408	427	Jurien Bay	Jurien Bay	
Cuspidaria sp. 2		99230190		3	386	1050	Bald Island	Perth Canyon	Y
Cuspidaria sp. 3		99230191		1	414	421	Bunbury	Bunbury	
Cuspidaria sp. 5		99230192		2	113	196	Point Hillier	Jurien Bay	
Cuspidaria sp. 7		99230193		2	983	1085	Ningaloo	Ningaloo	
Myonera sp. 1		99230199		1	1000	1037	Abrolhos	Abrolhos	
Pseudoneaera sp. 4		99230198		1	479	484	Perth Canyon	Perth Canyon	Y
Pseudoneaera trigonalis	Tate, 1897	23435003		1	928	1170	Perth Canyon	Perth Canyon	Y
Family Euciroidae									
Euciroa cf. *millegemmata*	(Kuroda & Habe in Kuroda, 1952)	99230187		2	165	177	Ningaloo	Ningaloo	Y
Family Laternulidae									
Laternula sp. 1		99230182		2	726	1295	Ningaloo	Ningaloo	
Family Lyonsiellidae									
Lyonsiella formosa	(Jeffreys, 1881)	23426001	1	1	848	1050	Perth Canyon	Perth Canyon	Y
Family Poromyidae									
Cetoconcha gloriosa	(Prashad, 1932)	23430007	1	1	194	232	Perth Canyon	Perth Canyon	
Poromya cf. *illevis*	Hedley, 1913	99230188		1	106	107	Ningaloo	Ningaloo	
Poromya laevis	Smith, 1885	23430002	1	1	373	382	Ningaloo	Ningaloo	
Family Verticordiidae									
?*Policordia* sp. 1		99230185		1	848	1050	Perth Canyon	Perth Canyon	Y
Policordia cf. *diomedea*	Dall, Bartsch & Rehder, 1938	99230186		1	848	1050	Perth Canyon	Perth Canyon	Y

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Order PTERIOIDA											
Family Malleidae											
Malleus albus	Lamarck, 1819	23237002				2	96	157	Bald Island	Kalbarri	Y
Malleus regula	(Forsskål, 1775)	23237006				1	100	100	Red Bluff	Red Bluff	
Family Pteriidae											
Pteria cf. *falcata*	(Lamarck, 1819)	99230131				1	96	97	Mentelle	Mentelle	Y
Order TRIGONIOIDA											
Family Trigoniidae											
Neotrigonia kaiyomaruae	Habe & Nomoto, 1976	23280006				1	95	99	Bunbury	Bunbury	Y
Neotrigonia sp. 1		99230159				1	100	100	Lancelin	Lancelin	
Order Veneroida											
Family Cardiidae											
Acrosterigma marielae	Wilson & Stevenson, 1977	23335035				5	96	102	Two Rocks	Point Cloates	Y
Frigidocardium eos	(Kuroda, 1929)	23335053				2	93	100	Point Cloates	Barrow	
Nemocardium (Pratulum) thetidis	(Hedley, 1902)	23335002				7	100	232	Albany	Point Cloates	Y
Family Carditidae											
Cardita excavata	Deshayes, 1854	23325003				2	85	92	Jurien Bay	Abrolhos	Y
Cardita incrassata	Sowerby, 1825	23325010				2	100	100	Lancelin	Shark Bay	Y
Glans sp. 1		99230170				6	96	166	Kalbarri	Ningaloo	
Venericardia cf. *cardioides*	(Reeve, 1843)	99230171				1	96	98	Kalbarri	Kalbarri	
Venericardia rosulenta	(Tate, 1887)	23325016				10	85	206	Bald Island	Ningaloo	Y

Family Chamidae									
Chama (Pseudochama) sp. 1		99230161		2	100	134	Point Cloates	Point Cloates	
Chama asperella	Lamarck, 1819	23301003		2	100	100	Shark Bay	Red Bluff	
Chama cf. *brassica*	Reeve, 1847	99230162		2	100	106	Point Cloates	Ningaloo	
Chama sp. 1		99230160		2	100	120	Shark Bay	Red Bluff	
Family Crassatellidae									
Crassatina sp. 1		99230172		1	396	404	Carnarvon	Carnarvon	
Crassatina sp. 2		99230173		1	329	370	Two Rocks	Two Rocks	Y
Crassatina suduirauti	Lamprell, 2003	23330019		6	95	196	Bald Island	Red Bluff	Y
Family Galeommatidae									
Galeommatidae sp. 1		99230166		1	419	439	Abrolhos	Abrolhos	
Galeommatidae sp. 2		99230167		1	96	98	Kalbarri	Kalbarri	Y
Marikellia sp. 1		99230165		1	112	123	Kalbarri	Kalbarri	
Scintilla sp. 1		99230164		1	100	100	Shark Bay	Shark Bay	Y
Family Glossidae									
Glossus (Meiocardia) moltkiana	(Spengler, 1783)	23370003		1	100	101	Barrow	Barrow	
Family Lucinidae									
Cardiolucina crassilirata	(Tate, 1887)	23305014	1	1	329	370	Two Rocks	Two Rocks	Y
Monitilora sp. 1		99230163		1	329	370	Two Rocks	Two Rocks	Y
Family Mactridae									
Mactra iridescens	Kuroda & Habe, 1958	23345042		3	100	408	Red Bluff	Barrow	
Mactra sp. 1		99230174		1	106	106	Zuytdorp	Zuytdorp	Y
Family Pharidae									
Ensiculus cultellus	(Linnaeus, 1758)	23351001		1	100	101	Barrow	Barrow	

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Family Psammobiidae											
Gari pallida	(Deshayes, 1855)	23357004				1	100	101	Barrow	Barrow	
Gari pulcherrima	(Deshayes, 1855)	23357017				2	100	123	Kalbarri	Point Cloates	
Family Semelidae											
Leptomya gravida	Hanley, 1879	23356020			1	7	373	480	Bunbury	Ningaloo	Y
Leptomya sp. 1		99230176				6	170	1050	Ningaloo	Ningaloo	
Family Tellinidae											
Tellinides cf. *cockburnensis*	(Kendrick & Brearley, 1984)	99230175				1	170	177	Ningaloo	Ningaloo	
Family Ungulinidae											
Felaniella sp. 1		99230168				1	100	101	Barrow	Barrow	
Felaniella sp. 2		99230169				1	96	98	Kalbarri	Kalbarri	Y
Family Veneridae											
Callista sp. 1		99230179				1	95	95	Albany	Albany	Y
Dosinia sp. 2		99230180				1	100	101	Red Bluff	Red Bluff	
Globivenus toreuma	(Gould, 1850)	23380050				4	96	157	Bald Island	Point Cloates	Y
Granicorium indutum	Hedley, 1906	23380112				2	95	100	Bunbury	Lancelin	Y
Paphia cf. *semirugata*	(Phillipi, 1847)	99230181				1	100	101	Barrow	Barrow	
Pitar nancyae	Lamprell & Whitehead, 1990	23380095				2	96	106	Kalbarri	Zuytdorp	Y
Timoclea cf. *scabra*	(Hanley, 1844)	99230178				1	420	430	Point Cloates	Point Cloates	
Timoclea sp. 1		99230177				1	106	106	Zuytdorp	Zuytdorp	Y
Class CEPHALOPODA											
Order OCTOPODA											
Family Argonautidae											

Argonauta hians	Lightfoot, 1786	23662003	1	728	737	Abrolhos	Abrolhos	Y
Family Bolitaenidae								
Bolitaenidae sp. indet.		23655000	1	1260	1295	Ningaloo	Ningaloo	
Family Octopodidae								
Benthoctopus sp. 1		99230231	1	373	382	Ningaloo	Ningaloo	
Callistoctopus sp. 1		99230232	2	399	414	Zuytdorp	Barrow	Y
Callistoctopus sp. 2		99230233	1	100	101	Red Bluff	Red Bluff	Y
Eledone palari	Lu & Stranks, 1991	23659009	4	170	382	Kalbarri	Ningaloo	Y
Octopodidae sp. indet.		23659000	4	368	754	Point Hillier	Ningaloo	Y
Octopus sp. 2		99230228	1	99	100	Albany	Albany	Y
Octopus sp. 3		99230229	2	99	179	Albany	Albany	Y
Octopus sp. 4		99230230	1	147	157	Bald Island	Bald Island	Y
Pteroctopus sp. 1		99230234	1	389	407	Abrolhos	Abrolhos	Y
Scaegurus sp. 1		99230235	1	396	404	Carnarvon	Carnarvon	
Order SEPIIDA								
Family Sepiadariidae								
Sepiadarium sp. 1		99230222	3	100	421	Bunbury	Red Bluff	Y
Sepiadarium spp.		23608901	1	978	980	Bald Island	Bald Island	
Sepioloidea lineolata	(Quoy & Gaimard, 1832)	23608001	1	106	106	Zuytdorp	Zuytdorp	Y
Sepioloidea sp. 1		99230223	2	324	399	Ningaloo	Ningaloo	
Family Sepiidae								
Sepia apama	Gray, 1849	23607001	1	378	379	D'Entrecasteaux	D'Entrecasteaux	
Sepia cf. *chirotrema*	Berry, 1918	99230221	1	100	100	Shark Bay	Shark Bay	Y
Sepia cf. *cottoni*	Adam, 1979	99230220	1	106	106	Zuytdorp	Zuytdorp	Y
Sepia cultrata	Hoyle, 1885	23607002	4	389	508	Bunbury	Abrolhos	Y

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Sepia opipara	(Iredale, 1926)	23607006				1	161	169	Bald Island	Bald Island	Y
Sepia rhoda	(Iredale, 1954)	23607029				1	100	100	Carnarvon	Carnarvon	
Sepia sp. indet.		23607901				5	112	528	Albany	Kalbarri	Y
Order SEPIOLIDA											
Family Sepiolidae											
Austrorossia cf. *australis*	(Berry, 1918)	99230224				3	389	728	Bald Island	Abrolhos	Y
Austrorossia spp.		23609901				1	414	421	Bunbury	Bunbury	Y
Euprymna tasmanica	(Pfeffer, 1884)	23609001				2	106	382	Point Cloates	Ningaloo	Y
Heteroteuthis sp. 1		99230225				2	100	399	Point Cloates	Ningaloo	
Heteroteuthis spp.		23609902				5	106	1080	Bald Island	Ningaloo	Y
Rondeletiola spp.		23609904				2	393	408	Lancelin	Barrow	
Sepiolidae undifferentiated		23609000				1	373	382	Ningaloo	Ningaloo	Y
Sepiolina nipponensis	(Berry, 1911)	23609007				2	100	407	Albany	Barrow	Y
Sepiolina spp.		23609903				1	514	528	Mentelle	Mentelle	Y
Order Teuthida											
Family Chiroteuthidae											
Chiroteuthis spp.		23638901				1	1000	1037	Abrolhos	Abrolhos	
Family Cranchiidae											
Cranchia scabra	Leach, 1817	23643002				1	419	439	Abrolhos	Abrolhos	Y
Liocranchia sp. 1		99230226				1	389	407	Abrolhos	Abrolhos	Y
Liocranchia sp. 2		99230227				1	405	414	Zuytdorp	Zuytdorp	Y

Family Enoploteuthidae									
Enoploteuthis spp.		23621904		2	364	408	Two Rocks	Barrow	Y
Family Histioteuthidae									
Histioteuthis celetaria pacifica	(G.L. Voss, 1962)	23630003		2	324	382	Ningaloo	Ningaloo	Y
Family Mastigoteuthidae									
Mastigoteuthis cordiformis	Chun, 1908	23639002		1	373	382	Ningaloo	Ningaloo	Y
Family Ommastrephidae									
Todaropsis eblanae	(Ball, 1841)	23636013		2	387	414	Zuytdorp	Ningaloo	Y
Class GASTROPODA									
Order ARCHAEO-GASTROPODA									
Family Fissurellidae									
Cosmetalepas concatenata	(Crosse & Fischer, 1864)	24040009		1	147	157	Bald Island	Bald Island	
Cranopsis corolla	(Verco, 1908)	24040049	1	5	378	539	Bald Island	Mentelle	Y
Diodora sp. 1		99240161		2	104	114	Ningaloo	Ningaloo	
Emarginula patula	Cotton, 1930	24040004		1	212	213	Albany	Albany	Y
Emarginula sp. 1		99240158		1	212	213	Albany	Albany	Y
Emarginula sp. 4		99240159		1	252	253	Kalbarri	Kalbarri	Y
Emarginula sp. 6		99240160		1	100	100	Carnarvon	Carnarvon	
Puncturella sp. 1		99240162		1	913	925	Albany	Albany	Y
Family Trochidae									
?*Lischkeia* sp. 1		99240177		1	726	732	Ningaloo	Ningaloo	
?*Margarites* sp. 1		99240178		1	416	431	Abrolhos	Abrolhos	
?*Periaulax* sp. 1		99240171		1	973	999	Bald Island	Bald Island	

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?*Periaulax* sp. 2		99240172				1	416	431	Abrolhos	Abrolhos	Y
?*Periaulax* sp. 3		99240173				4	419	1080	Albany	Perth Canyon	Y
Calliotropis sp. 1		99240164				4	848	1080	Bald Island	Perth Canyon	Y
Calliotropis sp. 2		99240165				1	1000	1037	Abrolhos	Abrolhos	
Clanculus sp. 1		99240166				2	100	114	Point Cloates	Ningaloo	
Clanculus sp. 2		99240167				1	100	100	Point Cloates	Point Cloates	
Clanculus sp. 3		99240168				1	100	100	Point Cloates	Point Cloates	
Talopena vernicosa	(Gould, 1861)	24046157				1	100	101	Red Bluff	Red Bluff	
Trochidae: Minoleini sp. 2		99240174				1	324	356	Ningaloo	Ningaloo	
Trochidae: Minoleini sp. 3		99240175				1	194	232	Perth Canyon	Perth Canyon	Y
Trochidae: Minoleini sp. 4		99240176				1	101	102	Ningaloo	Ningaloo	
Trochidae: Sequenziinae sp. 2		99240169				1	467	529	Mentelle	Mentelle	
Trochidae: Sequenziinae sp. 4		99240170				2	378	431	Bald Island	D'Entrecasteaux	Y
Family Turbinidae											
Bolma guttata millegranosa	(Kuroda & Habe, 1958)	24045058				1	165	166	Ningaloo	Ningaloo	
Bolma sp. 1		99240163				1	194	232	Perth Canyon	Perth Canyon	Y
Order CEPHALASPIDEA											
Family Haminoeidae											
Atys sp. 1		99240319				1	848	1050	Perth Canyon	Perth Canyon	Y
Atys sp. 2		99240320				1	1000	1037	Abrolhos	Abrolhos	
Liloa cf. *curta*	(A. Adams, 1850)	99240321				1	419	460	Point Hillier	Point Hillier	Y

Family Philinidae									
Philine sp. 1		99240314		2	414	539	Point Hillier	Bunbury	Y
Philine sp. 2		99240315		3	100	402	Red Bluff	Ningaloo	Y
Philine sp. 3		99240316		1	91	92	Point Hillier	Point Hillier	
Philine sp. 4		99240317		1	411	411	Red Bluff	Red Bluff	
Philine sp. 5		99240318		1	408	431	Bald Island	Bald Island	
Order HETEROSTROPHA									
Family Acteonidae									
Acteonidae sp. 1		99240313		2	324	382	Ningaloo	Ningaloo	
Family Pyramidellidae									
Pyramidellidae sp. 1		99240312		1	112	123	Kalbarri	Kalbarri	Y
Order NEOGASTROPODA									
Family Buccinidae									
Cantharus iostomus	(Gray in Griffith & Pidgeon, 1834)	24202185		1	100	100	Carnarvon	Carnarvon	Y
Colubraria cf. *castanea*	Kuroda & Habe, 1952	99240247		2	100	166	Point Cloates	Ningaloo	
Cyllene rubrolineata	Sowerby, 1870	24202216	1	1	100	100	Shark Bay	Shark Bay	Y
Dolicholatirus sp. 1		99240243		1	397	423	Bunbury	Bunbury	
Fusinus sp. 1		99240242		5	89	196	Bald Island	Bunbury	Y
Fusinus westralis	Hadorn & Fraussen, 2003	24202214		1	397	423	Bunbury	Bunbury	Y
Fusus cf. *brazieri*	(Angas, 1869)	99240241		1	180	183	Abrolhos	Abrolhos	
Granulifusus kiranus	Shuto, 1958	24202089		8	364	430	Bunbury	Point Cloates	Y
Latirus cf. *recurvirostris*	(Schubert & Wagner, 1829)	99240245		1	165	166	Ningaloo	Ningaloo	
Latirus craticulatus	(Linnaeus, 1758)	24202094		2	96	100	Kalbarri	Point Cloates	Y

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Latirus sp. 1		99240244				1	1077	1085	Ningaloo	Ningaloo	
Manaria kuroharai	Azuma, 1960	24202215		1	1	1	1000	1037	Abrolhos	Abrolhos	
Nassaria cf. *acuminata*	(Reeve, 1844)	99240237				1	165	166	Ningaloo	Ningaloo	
Nassaria cf. *problematica*	(Iredale, 1936)	99240236				1	355	382	Point Cloates	Point Cloates	
Nassaria solida	Kuroda & Habe, 1961	24202065				2	329	382	Two Rocks	Point Cloates	Y
Nassaria sp. 1		99240235				1	324	356	Ningaloo	Ningaloo	
Nassarius bicallosus	(Smith, 1876)	24202164				2	100	177	Ningaloo	Barrow	
Nassarius crebricostatus	(Schepman, 1911)	24202169				5	329	999	Bald Island	Abrolhos	Y
Nassarius ephamillus	(Watson, 1882)	24202128				2	748	980	Bald Island	Albany	Y
Nassarius particeps	(Hedley, 1915)	24202006				1	100	101	Red Bluff	Red Bluff	
Phos cf. *roseatus*	(Hinds, 1844)	99240240				2	105	120	Shark Bay	Ningaloo	Y
Phos cf. *sculptilis*	Watson, 1886	99240239				2	106	166	Zuytdorp	Ningaloo	Y
Phos senticosus	(Linnaeus, 1758)	24202021				1	368	388	Carnarvon	Carnarvon	
Phos sp. 1		99240238				3	100	166	Shark Bay	Ningaloo	Y
Pseudolatirus cf. *pallidus*	Kuroda & Habe, 1961	99240246				2	396	431	Abrolhos	Carnarvon	Y
Family Columbellidae											
Mitrella cf. *puella*	(Sowerby, 1844)	99240249				2	368	404	Carnarvon	Carnarvon	
Mitrella sp. 1		99240248				2	165	404	Carnarvon	Ningaloo	
Pyrene flava	(Bruguière, 1789)	24203047				1	96	98	Kalbarri	Kalbarri	Y
Family Conidae											
Conidae sp. indet.		24222000				1	212	213	Albany	Albany	
Conus anemone	Lamarck, 1810	24222010				1	96	97	Mentelle	Mentelle	Y

Conus boholensis	Petuch, 1749	24222025				4	170	404	Carnarvon	Ningaloo	Y
Conus cf. *recluzianus*	Bernardi, 1853	99240309				1	165	166	Ningaloo	Ningaloo	
Conus gabelishi	da Motta & Ninomiya, 1982	24222056				1	147	157	Bald Island	Bald Island	Y
Conus planorbis	Born, 1778	24222098				1	96	98	Kalbarri	Kalbarri	Y
Conus sp. 2		99240310				1	106	106	Zuytdorp	Zuytdorp	Y
Conus sp. 4		99240311				1	147	157	Bald Island	Bald Island	Y
Family Costellariidae											
Vexillum cf. *obeliscus*	(Reeve, 1844)	99240258				4	201	388	Two Rocks	Ningaloo	Y
Vexillum cf. *radius*	(Reeve, 1845)	99240259				1	393	394	Lancelin	Lancelin	Y
Vexillum hansenae	Cernohorsky, 1973	24213054				1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Vexillum sp. 3		99240257				1	726	732	Ningaloo	Ningaloo	
Family Harpidae											
Austroharpa wilsoni	Rehder, 1973	24209008				1	96	97	Mentelle	Mentelle	Y
Morum sp. 1		99240252	1	1	1	1	120	120	Shark Bay	Shark Bay	Y
Family Marginellidae											
Gibberula cf. *pulchella*	(Kiener, 1830)	99240254				1	96	98	Kalbarri	Kalbarri	
Mesoginella sp. 2		99240253				1	419	460	Point Hillier	Point Hillier	Y
Family Mitridae											
Cancilla sp. 1		99240255				1	368	388	Carnarvon	Carnarvon	Y
Cancilla sp. 2		99240256				1	416	431	Abrolhos	Abrolhos	Y
Pterygia sinensis	(Reeve, 1844)	24211070				1	165	166	Ningaloo	Ningaloo	
Ziba interlirata	(Reeve, 1844)	24211003				1	165	166	Ningaloo	Ningaloo	
Family Muricidae											
?*Cronia* sp. 1		99240231				1	165	166	Ningaloo	Ningaloo	
?*Cronia* sp. 2		99240232				1	100	100	Carnarvon	Carnarvon	

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Babelomurex kawamurai	(Kira, 1959)	24200071				3	399	431	Abrolhos	Barrow	Y
Babelomurex sp. 1		99240224				2	100	101	Shark Bay	Red Bluff	
Babelomurex sp. 2		99240225				1	113	114	Jurien Bay	Jurien Bay	
Chicoreus cervicornis	(Lamarck, 1822)	24200020				2	100	100	Carnarvon	Point Cloates	Y
Coralliophila cf. *inflata*	(Dunker in Philippi, 1847)	99240223				1	97	97	Zuytdorp	Zuytdorp	Y
Coralliophila sp. 1		99240221				1	1000	1037	Abrolhos	Abrolhos	
Coralliophila sp. 4		99240222				1	89	96	Point Hillier	Point Hillier	Y
Dermomurex cf. *antonius*	Vokes, 1974	99240229				1	100	101	Red Bluff	Red Bluff	
Haustellum cf. *multiplicatus*	(Sowerby, 1895)	99240227				1	147	157	Bald Island	Bald Island	Y
Haustellum multiplicatus	(Sowerby, 1895)	24200018				4	100	206	Red Bluff	Ningaloo	
Haustellum n.sp. 1		99240226	1	1	1	1	195	196	Point Hillier	Point Hillier	
Murex sp. 1		99240228				1	100	101	Barrow	Barrow	
Muricopsis sp. 1		99240230				1	100	100	Shark Bay	Shark Bay	Y
Pagodula cf. *carduelis*	(Watson, 1886)	99240219				6	479	1080	Bald Island	Perth Canyon	Y
Pagodula sp. 1		99240220				1	478	508	Perth Canyon	Perth Canyon	
Pterynotus acanthopterus	(Lamarck, 1816)	24200013				2	100	101	Point Cloates	Barrow	
Pterynotus undosus	Vokes, 1993	24200032				1	96	98	Kalbarri	Kalbarri	Y
Family Olividae											
Amalda coccinata	Kilburn, 1980	24208023				1	205	210	Two Rocks	Two Rocks	Y
Ancillista cingulata	(Sowerby, 1830)	24208003				3	100	101	Carnarvon	Point Cloates	Y
Family Terebridae											
Duplicaria australis	(Smith, 1873)	24221007				1	165	166	Ningaloo	Ningaloo	

Terebra cf. *fenestrata*	Hinds, 1844	99240303				1	201	206	Ningaloo	Ningaloo	
Terebra cf. fortunei	Deshayes, 1857	99240304				1	165	166	Ningaloo	Ningaloo	
Terebra cf. *pertusa*	(Born, 1778)	99240305				1	100	100	Carnarvon	Carnarvon	Y
Terebra commaculata	(Gmelin, 1791)	24221001				1	100	100	Carnarvon	Carnarvon	Y
Terebra sp. 2		99240306				1	100	100	Carnarvon	Carnarvon	
Terebra sp. 3		99240307				2	411	430	Red Bluff	Point Cloates	
Terebra sp. 7		99240308				1	398	402	Red Bluff	Red Bluff	Y
Family Turbinellidae											
Coluzea icarus	Harasewych, 1986	24201011				1	419	460	Point Hillier	Point Hillier	
Coluzea sp. 1		99240234				1	405	414	Zuytdorp	Zuytdorp	Y
Syrinx aruanus	(Linnaeus, 1758)	24201002				1	120	120	Shark Bay	Shark Bay	Y
Tudivasum inermis	(Angas, 1878)	24201014				1	100	100	Point Cloates	Point Cloates	
Tudivasum n.sp. 1		99240233	1	1	1	2	106	166	Ningaloo	Ningaloo	
Tudivasum spinosa	(H. & A. Adams, 1863)	24201001				3	100	206	Point Cloates	Ningaloo	
Family Turridae											
?*Buccinaria* sp. 1		99240261				1	416	431	Abrolhos	Abrolhos	Y
?*Cochlespira* sp. 1		99240262				1	398	402	Red Bluff	Red Bluff	Y
?*Cochlespira* sp. 2		99240263				1	397	423	Bunbury	Bunbury	
?*Cochlespira* sp. 3		99240264				1	397	423	Bunbury	Bunbury	Y
?*Inquisitor* cf. *sterrhus*	(Watson, 1881)	99240283				1	165	166	Ningaloo	Ningaloo	
?*Inquisitor* sp. 3		99240284				1	100	100	Lancelin	Lancelin	Y
?*Inquisitor* sp. 4		99240285				1	170	177	Ningaloo	Ningaloo	Y
?*Leucosyrinx* sp. 1		99240286				1	726	732	Ningaloo	Ningaloo	
?*Spergo* sp. 2		99240290				1	1000	1037	Abrolhos	Abrolhos	
Bathytoma cf. *atractoides*	(Watson, 1881)	99240260				3	364	508	Bunbury	Two Rocks	Y

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Comitas cf. *chuni*	(von Martens, 1902)	99240265				1	726	732	Ningaloo	Ningaloo	
Comitas cf. *galatheae*	Powell, 1969	99240266				9	170	508	Point Hillier	Barrow	Y
Etrema cf. *gainessi*	(Pilsbry, 1895)	99240267				1	100	100	Point Cloates	Point Cloates	
Gemmula cf. *diomedea*	Powell, 1964	99240268				3	170	396	Ningaloo	Ningaloo	
Gemmula cf. *sibogae*	(Schepman, 1913)	99240269				4	170	414	Zuytdorp	Barrow	Y
Gemmula cf. *unedo*	(Kiener, 1839)	99240270				2	165	206	Ningaloo	Ningaloo	Y
Gemmula congener	(Smith, 1894)	24220096				5	170	430	Lancelin	Ningaloo	Y
Gemmula dampierana	Powell, 1964	24220097				2	165	206	Ningaloo	Ningaloo	
Gemmula diomedea	Powell, 1964	24220098				1	373	382	Ningaloo	Ningaloo	
Gemmula sp. 1		99240271				1	324	356	Ningaloo	Ningaloo	Y
Gemmula sp. 12		99240276				1	848	1050	Perth Canyon	Perth Canyon	Y
Gemmula sp. 13		99240277				1	399	411	Barrow	Barrow	
Gemmula sp. 14		99240278				1	373	382	Ningaloo	Ningaloo	
Gemmula sp. 16		99240279				1	397	423	Bunbury	Bunbury	
Gemmula sp. 19		99240280				1	397	423	Bunbury	Bunbury	Y
Gemmula sp. 22		99240281				1	324	356	Ningaloo	Ningaloo	
Gemmula sp. 3		99240272				6	170	1295	Ningaloo	Ningaloo	Y
Gemmula sp. 4		99240273				6	678	1295	Perth Canyon	Ningaloo	Y
Gemmula sp. 5		99240274				3	201	423	Bunbury	Ningaloo	Y
Gemmula sp. 6		99240275				4	170	423	Bunbury	Ningaloo	Y
Gemmula westaustralis	Kosuge, 1990	24220125				7	100	396	Two Rocks	Barrow	Y
Glyphostoma sp. 1		99240282				1	324	356	Ningaloo	Ningaloo	

Marshallena cf. *gracilispira*	Powell, 1969	99240287	1	397	423	Bunbury	Bunbury	Y
Pinguigemmula philippinensis	Powell, 1964	24220107	1	405	414	Zuytdorp	Zuytdorp	Y
Pinguigemmula thielei	(Finlay, 1930)	24220108	2	658	754	Abrolhos	Ningaloo	
Ptychobela cf. *flavidula*	(Lamarck, 1822)	99240288	1	201	206	Ningaloo	Ningaloo	Y
Ptychosyrinx cf. *bisinuata*	(Martens, 1901)	99240289	1	848	1050	Perth Canyon	Perth Canyon	Y
Turridae sp. 10		99240299	1	690	702	Ningaloo	Ningaloo	
Turridae sp. 2		99240292	1	368	423	Bunbury	Carnarvon	Y
Turridae sp. 21		99240300	1	848	1050	Perth Canyon	Perth Canyon	
Turridae sp. 29		99240301	2	983	1050	Ningaloo	Ningaloo	
Turridae sp. 3		99240293	1	397	423	Bunbury	Bunbury	Y
Turridae sp. 34		99240302	1	1000	1037	Abrolhos	Abrolhos	
Turridae sp. 5		99240294	1	393	394	Lancelin	Lancelin	
Turridae sp. 6		99240295	1	398	402	Red Bluff	Red Bluff	Y
Turridae sp. 7		99240296	1	419	460	Point Hillier	Point Hillier	Y
Turridae sp. 8		99240297	1	419	460	Point Hillier	Point Hillier	Y
Turridae sp. 9		99240298	1	748	776	Albany	Albany	Y
Turris cf. *crispa*	(Lamarck, 1816)	99240291	1	105	105	Ningaloo	Ningaloo	
Family Volutidae								
Amoria diamantina	Wilson, 1972	24207023	2	104	114	Ningaloo	Ningaloo	Y
Amoria grayi	Ludbrook, 1953	24207026	2	101	382	Point Cloates	Ningaloo	
Melo amphora	(Lightfoot, 1786)	24207002	1	165	166	Ningaloo	Ningaloo	Y
Notovoluta cf. *gerondiosi*	Bail & Limpus, 2005	99240250	1	100	100	Point Cloates	Point Cloates	
Teramachia dalli	(Bartsch, 1942)	24207057	2	658	754	Ningaloo	Ningaloo	Y
Teramachia johnsoni	(Bartsch, 1942)	24207058	2	389	407	Lancelin	Abrolhos	Y
Volutidae sp. 1		99240251	1	1019	1031	Albany	Albany	Y

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Volutoconus hargreavesi hargreavesi	(Angas, 1872)	24207011				2	104	114	Ningaloo	Ningaloo	
Family Volutomitridae											
Perculator verconis	Iredale, 1924	24212009			1	1	100	101	Red Bluff	Red Bluff	
Order NEOTAENIGLOSSA											
Family Bursidae											
Bufonaria cf. *crumena*	(Lamarck, 1816)	99240202				1	170	177	Ningaloo	Ningaloo	
Bufonaria rana	(Linnaeus, 1758)	24170002				1	165	166	Ningaloo	Ningaloo	
Bursa humilis	Beu, 1981	24170011				6	147	370	Bald Island	Kalbarri	Y
Tutufa bufo	(Röding, 1798)	24170018				4	96	100	Mentelle	Point Cloates	Y
Family Capulidae											
Capulus sp. 1		99240186				4	396	484	Perth Canyon	Barrow	Y
Family Cassidae											
?*Cassis* sp. 2		99240203				1	324	356	Ningaloo	Ningaloo	
?*Galeodea* sp. 1		99240205				1	848	1050	Perth Canyon	Perth Canyon	Y
Galeodea cf. *leucodoma*	Dall, 1907	99240204				2	658	754	Ningaloo	Ningaloo	Y
Oocorys n.sp. 1		99240206	1	1	1	1	978	980	Bald Island	Bald Island	Y
Semicassis bisulcata	(Schubert & Wagner, 1829)	24171001				1	100	101	Barrow	Barrow	
Semicassis sp. 1		99240207				1	478	508	Perth Canyon	Perth Canyon	Y
Semicassis whitworthi	(Abbott, 1968)	24171025				1	100	100	Carnarvon	Carnarvon	Y
Family Cerithiidae											
Bittium sp. 1		99240179				1	396	404	Carnarvon	Carnarvon	

Cerithium sp. 2		99240180	1	1019	1031	Albany	Albany	Y
Family Cypraeidae								
Cypraea carneola	Linnaeus, 1758	24155019	2	100	134	Red Bluff	Red Bluff	
Cypraea cf. *cernica*	Sowerby, 1870	99240189	1	96	98	Kalbarri	Kalbarri	
Notocypraea pulicaria	(Reeve, 1846)	24155030	3	99	179	Bald Island	Albany	Y
Zoila friendii jeaniana	(Cate, 1968)	24155036	1	100	100	Point Cloates	Point Cloates	Y
Zoila friendii vercoi	Schilder, 1930	24155034	1	95	99	Bunbury	Bunbury	Y
Family Epitoniidae								
Epitonium imperialis	(Sowerby, 1844)	24191001	1	399	408	Barrow	Barrow	
Epitonium sp. 1		99240210	1	514	528	Mentelle	Mentelle	Y
Epitonium sp. 3		99240211	1	973	999	Bald Island	Bald Island	Y
Epitonium sp. 4		99240212	2	170	382	Ningaloo	Ningaloo	
Opalia australis	(Lamarck, 1822)	24191048	1	973	999	Bald Island	Bald Island	Y
Family Eulimidae								
Alora sp. 1		99240213	1	399	408	Barrow	Barrow	
Alora sp. 2		99240214	1	912	922	Albany	Albany	Y
Eulimidae sp. 1		99240215	1	408	427	Jurien Bay	Jurien Bay	
Eulimidae sp. 2		99240216	1	91	92	Point Hillier	Point Hillier	Y
Eulimidae sp. 3		99240217	1	1577	1584	Perth Canyon	Perth Canyon	Y
Eulimidae sp. 4		99240218	2	100	431	Abrolhos	Point Cloates	Y
Family Ficidae								
Ficus filosa	(Sowerby, 1892)	24172003	1	100	100	Point Cloates	Point Cloates	
Family Hipponicidae								
Antisabia foliacea	(Quoy & Gaimard, 1835)	24130002	1	100	100	Point Cloates	Point Cloates	
Family Janthinidae								
Janthina exigua	Lamarck, 1816	24190001	1	728	737	Abrolhos	Abrolhos	Y

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Family Laubierinidae											
Akibumia orientalis	(Schepman, 1909)	24173001			1	1	1000	1037	Abrolhos	Abrolhos	
Family Naticidae											
Euspira cf. *plicispira*	(Kuroda, 1961)	99240199				2	726	1010	Ningaloo	Ningaloo	
Euspira sp. 1		99240200				1	373	382	Ningaloo	Ningaloo	
Natica cf. *phytelephas*	Reeve, 1855	99240195				2	414	925	Albany	Bunbury	Y
Natica sp. 1		99240196				1	104	114	Ningaloo	Ningaloo	
Notocochlis sp. 1		99240197				1	91	92	Point Hillier	Point Hillier	Y
Notocochlis sp. 2		99240198				1	726	732	Ningaloo	Ningaloo	
Polinices peselephanti	(Link, 1807)	24165052				1	96	98	Kalbarri	Kalbarri	Y
Polinices sp. 1		99240201				3	478	1050	Perth Canyon	Abrolhos	Y
Family Ovulidae											
Phenacovolva haynesi	(Sowerby, 1889)	24156024				1	100	101	Barrow	Barrow	
Xandraovula cf. *pagoda*	Cate, 1973	99240190				1	364	404	Two Rocks	Two Rocks	Y
Family Personidae											
Distorsio habei	Lewis, 1972	24174005				4	100	206	Point Cloates	Ningaloo	
Distorsio reticulata	(Linnaeus, 1758)	24174001				2	100	100	Shark Bay	Carnarvon	
Family Ranellidae											
Biplex pulchrum	(Gray in Sowerby, 1836)	24176022				3	170	382	Point Cloates	Ningaloo	Y
Cymatium cf. *caudatum*	(Gmelin, 1791)	99240208				1	100	101	Barrow	Barrow	
Cymatium mundum	(Gould, 1849)	24176033				1	329	370	Two Rocks	Two Rocks	
Cymatium vespaceum	(Lamarck, 1822)	24176044				5	95	169	Bald Island	Zuytdorp	Y

Gyrineum lacunatum	(Mighels, 1845)	24176010				1	112	123	Kalbarri	Kalbarri	Y
Sassia apenninica	Iredale, 1936	24176046			1	6	195	423	Point Hillier	Carnarvon	Y
Sassia kampyla	(Watson, 1885)	24176012			1	9	378	695	Bald Island	Abrolhos	Y
Rissoidae sp. 1		99240185				1	973	999	Bald Island	Bald Island	Y
Family Siliquariidae											
Tenagodus australis	(Quoy & Gaimard, 1834)	24080002				1	147	157	Bald Island	Bald Island	
Tenagodus cf. *anguinus*	(Linnaeus, 1758)	99240184	1	1	1	1	180	183	Abrolhos	Abrolhos	
Family Tonnidae											
Eudolium pyriforme	(Sowerby, 1914)	24177003				1	170	177	Ningaloo	Ningaloo	
Tonna sp. 1		99240209				1	165	166	Ningaloo	Ningaloo	
Tonna variegata	(Lamarck, 1822)	24177001				2	100	177	Point Cloates	Ningaloo	Y
Family Triviidae											
Ellatrivia n.sp. 1		99240191	1	1	1	1	96	98	Kalbarri	Kalbarri	
Family Turritellidae											
Archimediella cf. *dirkhartogensis*	Garrard, 1972	99240181				2	100	114	Jurien Bay	Red Bluff	
Turritella sp. 1		99240182				2	848	1050	Perth Canyon	Abrolhos	Y
Turritellidae sp. 3		99240183				1	324	356	Ningaloo	Ningaloo	
Family Velutinidae											
Lamellaria sp. 1		99240192				8	212	695	Bald Island	Mentelle	Y
Lamellaria sp. 2		99240193				4	378	539	Albany	Mentelle	
Lamellaria sp. 3		99240194				1	378	379	D'Entrecasteaux	D'Entrecasteaux	
Family Xenophoridae											
Xenophora cf. cerea	(Reeve, 1845)	99240187				1	100	101	Red Bluff	Red Bluff	Y
Xenophora cf. *pallidula*	(Reeve, 1842)	99240188				1	368	388	Carnarvon	Carnarvon	
Xenophora exuta	(Reeve, 1842)	24145003				5	100	206	Red Bluff	Barrow	
Xenophora gigantea	Schepman, 1909	24145010				2	399	480	Kalbarri	Barrow	Y

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Xenophora indica	(Gmelin, 1791)	24145002				1	100	100	Carnarvon	Carnarvon	
Xenophora pallidula	(Reeve, 1842)	24145007				1	368	388	Carnarvon	Carnarvon	
Order NOTASPIDEA											
Family Pleurobranchidae											
Pleurobranchaea sp. 1		99240324				1	399	408	Barrow	Barrow	Y
Pleurobranchidae sp. 1		99240325				2	100	408	Red Bluff	Barrow	Y
Pleurobranchus sp. 1		99240322				1	212	213	Albany	Albany	
Pleurobranchus sp. 2		99240323				1	324	356	Ningaloo	Ningaloo	Y
Family Tylodinidae											
Tylodina corticalis	(Tate, 1889)	24391001				2	104	213	Albany	Ningaloo	Y
Order NUDIBRANCHIA											
Family Arminidae											
Armina sp. 1		99240339				1	170	177	Ningaloo	Ningaloo	Y
Family Chromodorididae											
Glossodoris sp. 1		99240337				1	378	379	D'Entrecasteaux	D'Entrecasteaux	Y
Family Doridiidae											
?*Aldisa* sp. 1		99240330				1	101	102	Ningaloo	Ningaloo	Y
Aphelodoris sp. 1		99240331				1	161	169	Bald Island	Bald Island	Y
Doridiidae sp. 1		99240336				1	99	100	Albany	Albany	Y
Doris sp. 1		99240332				1	100	101	Barrow	Barrow	Y
Halgerda sp. 1		99240333				1	101	106	Ningaloo	Ningaloo	Y
Halgerda sp. 2		99240334				1	132	134	Ningaloo	Ningaloo	Y

Platydoris sp. 1		99240335		1	100	101	Barrow	Barrow	Y
Family Eudoridoidea									
Eudoridoidea sp. 1		99240326		1	212	213	Albany	Albany	Y
Family Goniodorididae									
Alliodoris sp. 1		99240328		3	408	1170	Bald Island	Perth Canyon	Y
Family Gymnodorididae									
Gymnodoris cf. *rubropapulosa*	(Bergh, 1905)	99240329		1	101	102	Ningaloo	Ningaloo	Y
Nudibranchia sp. 2		99240327		1	165	166	Ningaloo	Ningaloo	
Family Tritoniidae									
Marionia sp. 1		99240338		1	100	101	Barrow	Barrow	Y
Class SCAPHAPODA									
Order DENTALIDA									
Family Dentaliidae									
Dentalium collinsae	Lamprell & Healy, 1998	23501009			1	419	460	Point Hillier	Point Hillier	
Dentalium hexagonum	Gould, 1859	23501030			1	329	370	Two Rocks	Two Rocks	
Dentalium potteri	Lamprell & Healy, 1998	23501028		1	1	690	702	Ningaloo	Ningaloo	
Dentalium sp. 1		99230200			1	678	686	Abrolhos	Abrolhos	
Dentalium sp. 2		99230201			4	397	1295	Point Hillier	Ningaloo	
Dentalium sp. 3		99230202			2	393	427	Lancelin	Jurien Bay	
Dentalium sp. 4		99230203			1	201	206	Ningaloo	Ningaloo	
Dentalium sp. 5		99230204			1	105	106	Ningaloo	Ningaloo	
Fissidentalium cf. *shirleyae*	Lamprell & Healy, 1998	99230208			6	324	1037	Lancelin	Ningaloo	Y
Fissidentalium sp. 1		99230205			1	478	508	Perth Canyon	Perth Canyon	Y
Fissidentalium sp. 2		99230206			2	848	1170	Perth Canyon	Perth Canyon	

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Fissidentalium sp. 3		99230207				2	397	423	Bunbury	Bunbury	Y
Family Fustiariidae											
Fustiaria sp. 1		99230209				2	194	232	Albany	Perth Canyon	
Family Laevidentaliidae											
Laevidentalium cf. *arnoldi*	Lamprell & Healy, 1998	99230215				4	100	702	Ningaloo	Barrow	
Laevidentalium cf. *longitrorsum*	(Reeve, 1842)	99230216				1	690	702	Ningaloo	Ningaloo	
Laevidentalium sp. 1		99230210				2	329	394	Two Rocks	Lancelin	Y
Laevidentalium sp. 2		99230211				2	194	494	Bald Island	Perth Canyon	Y
Laevidentalium sp. 4		99230212				1	95	99	Bunbury	Bunbury	
Laevidentalium sp. 5		99230213				1	89	96	Point Hillier	Point Hillier	
Laevidentalium sp. 6		99230214				1	324	356	Ningaloo	Ningaloo	
Order GADILIDA											
Family Entalinidae											
Bathoxiphus cf. *colmani*	(Palmer, 1974)	99230217				1	678	686	Abrolhos	Abrolhos	
Dischides sp. 1		99230219				1	419	460	Point Hillier	Point Hillier	Y
Gadila sp. 1		99230218				1	690	702	Ningaloo	Ningaloo	
Phylum ECHINODERMATA											
Class ASTEROIDEA											
Order FORCIPULATIDA											
Family Asteriidae											
?*Anasterias* n.sp. 1		99250363	1	1	1	1	900	915	Albany	Albany	Y

Allostichaster n.sp. 1		99250361	1	1	1	2	364	404	Two Rocks	Carnarvon	Y
Allostichaster n.sp. 2		99250362	1	1	1	1	100	100	Point Cloates	Point Cloates	Y
Coscinasterias muricata	Verrill, 1867	25154011				1	0	102	Two Rocks	Two Rocks	Y
Sclerasterias n.sp. 1		99250364	1	1	1	6	100	428	Two Rocks	Carnarvon	Y
Family Labidiasteridae											
Coronaster cf. *halicepus*	Fisher, 1917	99250359				1	100	100	Point Cloates	Point Cloates	Y
Coronaster cf. *volsellatus*	(Sladen, 1889)	99250360				2	102	411	Two Rocks	Red Bluff	Y
Family Zoroasteridae											
Cnemidaster wyvillii	Sladen, 1889	25152005		1	1	1	1260	1295	Ningaloo	Ningaloo	Y
Philodaster n.sp. 1		99250357	1	1	1	1	120	120	Shark Bay	Shark Bay	Y
Zoroaster n.sp. 1		99250358	1	1	1	4	368	411	Carnarvon	Barrow	Y
Order NOTOMYOTIDA											
Family Benthopectinidae											
Cheiraster sp. 1		99250330				1	399	408	Barrow	Barrow	
Order PAXILLOSIDA											
Family Astropectinidae											
Astromesites sp. 1		99250317				3	91	431	Point Hillier	Kalbarri	Y
Astromesites sp. 2		99250318				1	700	704	Abrolhos	Abrolhos	
Astropecten cf. *eremicus*	Fisher, 1913	99250304		1	1	4	389	539	Point Hillier	Abrolhos	Y
Astropecten cf. *eucnemis*	Fisher, 1919	99250290	1	1	1	1	408	427	Jurien Bay	Jurien Bay	
Astropecten phragmorus	Fisher, 1913	25111008				1	100	100	Red Bluff	Red Bluff	Y
Astropecten polyacanthus	Muller & Troschel, 1842	25111009				2	100	123	Kalbarri	Point Cloates	Y
Astropecten spp.		25111901				9	100	680	Albany	Ningaloo	Y
Astropecten velitaris	Von Martens, 1865	25111015				1	165	166	Ningaloo	Ningaloo	Y
Astropectinidae sp. indet.		25111000				3	100	1010	Point Cloates	Ningaloo	Y

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Ctenopleura sp. 1		99250301				1	201	206	Ningaloo	Ningaloo	
Dipsacaster sp. 1		99250319				1	467	490	Mentelle	Mentelle	Y
Dipsacaster sp. 2		99250320				1	1075	1110	Point Hillier	Point Hillier	
Dipsacaster sp. 3		99250321				1	165	166	Ningaloo	Ningaloo	Y
Patagiaster sp. 1		99250323				1	194	232	Perth Canyon	Perth Canyon	Y
Plutonaster sp. 1		99250326		1	1	1	748	776	Albany	Albany	
Plutonaster sp. 2		99250327				3	983	1295	Ningaloo	Ningaloo	Y
Proserpinaster cf. *euryactis*	(Fisher, 1913)	99250322		1	1	4	397	508	Point Hillier	Perth Canyon	Y
Psilaster cf. *gotoi*	Fisher, 1913	99250325		1	1	1	983	1010	Ningaloo	Ningaloo	
Psilaster sp. 1		99250324				2	417	686	Abrolhos	Kalbarri	
Family Ctenodiscidae											
Ctenodiscus cf. *orientalis*	Fisher, 1913	99250329				2	397	423	Bunbury	Bunbury	Y
Ctenodiscus orientalis	Fisher, 1913	25114001				4	324	1010	Ningaloo	Ningaloo	Y
Family Luidiidae											
Luidia avicularia	Fisher, 1913	25105002				3	100	102	Point Cloates	Barrow	Y
Luidia cf. avicularia	Fisher, 1913	99250315	1	1	1	3	100	107	Carnarvon	Ningaloo	
Luidia cf. *hardwicki*	(Gray, 1840)	99250316	1	1	1	2	364	404	Two Rocks	Red Bluff	Y
Luidia hardwicki	(Gray, 1840)	25105003				3	100	423	Albany	Red Bluff	Y
Luidia sp. 1		99250313				1	95	99	Bunbury	Bunbury	Y
Luidia sp. 2		99250314				1	393	394	Lancelin	Lancelin	Y
Family Porcellanasteridae											
Sidonaster vaneyi	Koehler, 1909	25113002		1	1	1	690	702	Ningaloo	Ningaloo	

Styracaster n.sp. 1		99250328	1	1	1	1	1577	1584	Perth Canyon	Perth Canyon	Y
Family Radiasteridae											
Radiasteridae n.sp. 1		99250348	1	1	1	1	85	86	Abrolhos	Abrolhos	
Order SPINULOSIDA											
Family Asterinidae											
?*Parvulastra* n.sp. 1		99250354	1	1	1	1	678	686	Abrolhos	Abrolhos	Y
Anseropoda macropora	Fisher, 1913	25140002				2	100	106	Point Cloates	Ningaloo	Y
Aquilonastra shirleyae	O'Loughlin, 2009	25140047	1	1	1	1	100	100	Red Bluff	Red Bluff	Y
Paranepanthia sp. 1		99250353				2	96	776	Albany	Mentelle	
Pseudonepanthia n.sp. 1		99250355	1	1	1	1	100	100	Carnarvon	Carnarvon	Y
Family Echinasteridae											
Echinaster stereosomus	Fisher, 1913	25143008				3	100	101	Shark Bay	Point Cloates	Y
Henricia cf. *compacta*	(Sladen, 1889)	99250356				4	398	922	Bald Island	Albany	Y
Henricia sp. indet.		25143901				2	378	431	Bald Island	D'Entrecasteaux	
Metrodira subulata	Gray, 1840	25143013				4	95	106	Bunbury	Barrow	Y
Family Pterasteridae											
Diplopteraster sp. 1		99250292		1	1	6	378	528	Bald Island	Bunbury	Y
Hymenaster sp. 1		99250350		1	1	5	396	980	Bald Island	Carnarvon	Y
Pteraster (Pteraster) sp. 1		99250293				2	100	210	Two Rocks	Point Cloates	Y
Pteraster (Retaster) cf. *corynetes*	Fisher, 1913	99250352		1	1	2	364	411	Two Rocks	Red Bluff	Y
Pteraster (Retaster) n.sp. 1		99250351	1	1	1	1	467	490	Mentelle	Mentelle	Y
Pterasteridae sp. indet.		25139000				1	417	428	Kalbarri	Kalbarri	
Family Solasteridae											
Crossaster multispinus	H.L. Clark, 1916	25136001				1	900	915	Albany	Albany	Y
Lophaster n.sp. 1		99250349	1	1	1	1	1000	1037	Abrolhos	Abrolhos	

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Order VALVATIDA											
Family Asterodiscididae											
Asterodiscides cf. *tessellatus*	Rowe, 1977	99250347		1	1	1	100	100	Carnarvon	Carnarvon	Y
Asterodiscides macroplax	Rowe, 1985	25128004				1	100	100	Carnarvon	Carnarvon	Y
Family Goniasteridae											
Anthenoides cf. *granulosus*	Fisher, 1913	99250331				1	399	408	Barrow	Barrow	
Ceramaster cf. *patagonicus*	(Sladen, 1889)	99250332				1	928	1170	Perth Canyon	Perth Canyon	Y
Ceramaster sp. 1		99250306				1	900	915	Albany	Albany	Y
Cladaster sp. 1		99250335		genus	1	2	912	988	Albany	Two Rocks	Y
Goniasteridae sp. 1		99250340				1	0	102	Two Rocks	Two Rocks	Y
Goniasteridae sp. 2		99250341				1	0	102	Two Rocks	Two Rocks	Y
Goniasteridae sp. indet.		25122000				2	398	411	Red Bluff	Red Bluff	
Lithosoma cf. *penichra*	Fisher, 1917	99250333	1	1	1	1	414	421	Bunbury	Bunbury	Y
Lithosoma sp. 1		99250334	1	1	1	1	397	423	Bunbury	Bunbury	
Mediaster australiensis	H.L. Clark, 1916	25122012			1	1	378	379	D'Entrecasteaux	D'Entrecasteaux	
Milteliphaster regenerator	(Doderlein, 1922)	25122014				1	120	120	Shark Bay	Shark Bay	Y
Nymphaster cf. *moluccanus*	Fisher, 1913	99250337	1	1	1	1	478	508	Perth Canyon	Perth Canyon	
Nymphaster moebii	Studer, 1884	25122017				2	397	423	Bunbury	Bunbury	Y
Nymphaster n.sp. 1		99250336	1	1	1	3	398	686	Abrolhos	Red Bluff	
Ogmaster capella	(Muller & Troschel, 1842)	25122018				4	100	206	Point Cloates	Ningaloo	Y
Paragonaster n.sp. 1		99250342	1	1	1	1	399	408	Barrow	Barrow	
Pentagonaster duebeni	Gray, 1847	25122001				2	85	97	Mentelle	Abrolhos	
Pseudarchaster boardmani	Livingstone, 1934	25122021				1	401	414	Jurien Bay	Jurien Bay	

Rosaster n.sp. 1		99250339	1	1	1	1	1036	1050	Ningaloo	Ningaloo	Y
Rosaster sp. 1		99250338				3	96	183	Jurien Bay	Kalbarri	
Rosaster spp.		25122905				1	180	183	Abrolhos	Abrolhos	
Stellaster equestris	(Retzius, 1805)	25122026				4	100	107	Shark Bay	Barrow	Y
Stellaster squamulosus	Studer, 1885	25122029				1	100	100	Carnarvon	Carnarvon	
Family Odontasteridae											
Hoplaster sp. 1		99250343	1	1	1	6	96	253	Bald Island	Zuytdorp	Y
Heteronardoa carinata	(Koehler, 1910)	25125022				1	100	100	Point Cloates	Point Cloates	
Heteronardoa diamantinae	Rowe, 1976	25125023				1	100	100	Point Cloates	Point Cloates	Y
Leiaster glaber	Peters, 1852	25125050		1	1	1	100	100	Point Cloates	Point Cloates	
Leiaster leachii	(Gray, 1840)	25125025				2	100	106	Point Cloates	Ningaloo	Y
Linckia guildingi	Gray, 1840	25125027				3	100	114	Point Cloates	Ningaloo	Y
Ophidiaster n.sp. 1		99250344	1	1	1	1	180	183	Abrolhos	Abrolhos	Y
Pseudophidiaster rhysus	H.L. Clark, 1916	25125043			1	1	161	169	Bald Island	Bald Island	Y
Family Oreasteridae											
Anthenea sp. 1		99250345				1	100	101	Red Bluff	Red Bluff	Y
Goniodiscaster sp. 1		99250346				1	100	100	Point Cloates	Point Cloates	Y
Class CRINOIDEA											
Order BOURGUETCRINIDA											
Family Bathycrinidae											
Bathycrinidae sp. 1		99250309				1	467	490	Mentelle	Mentelle	Y
Order COMATULIDA											
Family Antedonidae											
Antedon incommoda	Bell, 1888	25060003				1	99	100	Albany	Albany	

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Antedon spp.		25060903				1	106	106	Zuytdorp	Zuytdorp	
Antedonidae sp. indet.		25060000				2	195	213	Albany	Point Hillier	
Bathymetra carpenteri	A.H. Clark, 1908	25060007			1	1	710	728	Bald Island	Bald Island	
Dorometra clymene	A.H. Clark, 1917	25060020		1	1	1	106	107	Ningaloo	Ningaloo	
Family Asterometridae											
Asterometra anthus	(A.H. Clark, 1907)	25048001			1	1	99	100	Albany	Albany	
Pterometra trichopoda	(A.H. Clark, 1908)	25048004				1	100	100	Shark Bay	Shark Bay	Y
Family Calometridae											
Neometra conaminis	A.H. Clark, 1914	25046001				3	96	114	Jurien Bay	Zuytdorp	
Neometra gorgonia	A.H. Clark, 1915	25046003				1	97	97	Zuytdorp	Zuytdorp	
Family Colobometridae											
Iconometra anisa	(H.L. Clark, 1915)	25039009				1	96	98	Kalbarri	Kalbarri	
Oligometra carpenteri	(Bell F J, 1884)	25039010				1	93	93	Barrow	Barrow	
Family Comasteridae											
Capillaster multiradiata	(Linnaeus, 1758)	25030002				3	96	183	Jurien Bay	Kalbarri	
Capillaster sentosa	(Carpenter, 1888)	25030003				1	100	100	Point Cloates	Point Cloates	
Cenolia sp. indet.		25030903				3	96	183	Abrolhos	Ningaloo	Y
Cenolia trichoptera	(Müller, 1846)	25030008				1	252	253	Kalbarri	Kalbarri	
Clarkcomanthus littoralis	(Carpenter, 1888)	25030010				1	96	98	Kalbarri	Kalbarri	
Clarkcomanthus luteofuscum	(H.L. Clark, 1915)	25030011				1	96	97	Mentelle	Mentelle	Y
Comanthus gisleni	Rowe, Hoggett, Birtles & Vail, 1986	25030019				1	100	100	Red Bluff	Red Bluff	
Comanthus parvicirrus	(Müller, 1841)	25030021				1	95	100	Shark Bay	Shark Bay	Y
Comanthus wahlbergii	(Müller, 1843)	25030023				1	180	183	Abrolhos	Abrolhos	

Comasteridae sp. 1		99250311				1	95	100	D'Entrecasteaux	D'Entrecasteaux	
Comatella stelligera	(Carpenter, 1888)	25030044				1	97	97	Zuytdorp	Zuytdorp	
Comatula pectinata	(Linnaeus, 1758)	25030030				6	85	166	Jurien Bay	Barrow	Y
Comatula solaris	Lamarck, 1816	25030032				1	399	411	Barrow	Barrow	
Comatula tenuicirra	A.H. Clark, 1912	25030046				2	100	102	Ningaloo	Barrow	
Nemaster spp.		25030904				1	100	101	Barrow	Barrow	
Oxycomanthus plectrophorum	(H.L. Clark, 1916)	25030042			1	1	96	98	Kalbarri	Kalbarri	
Phanogenia brevicirra	(Bell, 1894)	25030043				6	96	123	Kalbarri	Point Cloates	Y
Phanogenia cf. *schoenovi*	(A.H. Clark, 1909)	99250310	1	1	1	1	97	97	Zuytdorp	Zuytdorp	
Phanogenia gracilis	(Hartlaub, 1893)	25030025			1	1	100	100	Red Bluff	Red Bluff	
Family Himerometridae											
Heterometra crenulata	(Carpenter, 1882)	25038003				1	100	100	Carnarvon	Carnarvon	
Homalometra denticulata	(Carpenter, 1888)	25038010			1	1	100	101	Barrow	Barrow	
Family Mariametridae											
Mariametra cf. *vicaria*	(Bell, 1894)	99250312	1	1	1	1	180	183	Abrolhos	Abrolhos	
Family Pentametrocrinidae											
Pentametrocrinus semperi	(Carpenter, 1882)	25061001				2	685	728	Bald Island	Albany	
Pentametrocrinus varians	(Carpenter, 1882)	25061002		1	1	2	676	728	Bald Island	Albany	
Family Ptilometridae											
Ptilometra macronema	(Müller, 1846)	25047001				3	85	106	Albany	Zuytdorp	Y
Family Thalassometridae											
Daidalometra eurymedon	Clark, 1950	25049009		1	1	2	514	686	Mentelle	Abrolhos	
Thalassometra gracilis	(Carpenter, 1888)	25049008			1	4	389	1037	Abrolhos	Abrolhos	
Family Zenometridae											
Psathyrometra fragilis	(A.H. Clark, 1907)	25059001		1	1	1	976	980	Bald Island	Bald Island	

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Sarametra triserialis	(A.H. Clark, 1908)	25059002		1	1	1	658	754	Ningaloo	Ningaloo	
Zygometra andromeda	A.H. Clark, 1912	25036001				4	100	1085	Shark Bay	Barrow	Y
Zygometra elegans	(Bell, 1882)	25036003				2	96	100	Kalbarri	Carnarvon	
Crinoidea sp. indet.		25001000				1	408	431	Bald Island	Bald Island	
Class ECHINOIDEA											
Order ARBACOIA											
Family Arbaciidae											
Coelopleurus maculatus	A. Agassiz & H.L. Clark, 1907	25235002			1	2	100	206	Point Cloates	Ningaloo	Y
Order CIDAROIDA											
Family Cidaridae											
Acanthocidaris curvatispinis	(Bell, 1892)	25202002				2	96	114	Abrolhos	Kalbarri	
Goniocidaris tubaria	(Lamarck, 1816)	25202007				3	99	106	Bald Island	Two Rocks	Y
Phyllacanthus magnificus	H.L Clark, 1914	25202014				1	96	98	Kalbarri	Kalbarri	
Phyllacanthus sp. 1		99250373				2	95	100	D'Entrecasteaux	Mentelle	Y
Prionocidaris baculosa	(Lamarck, 1816)	25202017				8	96	404	Kalbarri	Ningaloo	Y
Rhopalocidaris gracilis	Döderlein, 1885	25202021			1	1	467	490	Mentelle	Mentelle	
Rhopalocidaris hirsutispina	(de Meijere, 1904)	25202038		1	1	2	397	490	Mentelle	Bunbury	
Rhopalocidaris sp. 1		99250374				1	414	421	Bunbury	Bunbury	Y
Stereocidaris sceptriferoides	(Döderlein, 1887)	25202023			1	2	416	439	Abrolhos	Abrolhos	Y
Stylocidaris bracteata	(A. Agassiz, 1879)	25202024				6	96	166	Kalbarri	Ningaloo	Y

Order CLYPEASTEROIDA											
Family Clypeasteridae											
Clypeaster n.sp. 1		99250375	1	1	1	1	161	169	Bald Island	Bald Island	
Clypeaster virescens	Döderlein, 1885	25262007			1	3	100	100	Carnarvon	Point Cloates	Y
Family Fibulariidae											
Echinocyamus platytatus	H.L. Clark, 1914	25265004				1	91	94	Point Hillier	Point Hillier	
Order DIADEMATOIDA											
Family Diadematidae											
Chaetodiadema tuberculatum	H.L. Clark, 1909	25211006			1	3	100	177	Ningaloo	Barrow	
Eremopyga denudata	(de Meijere, 1904)	25211012				3	165	206	Ningaloo	Ningaloo	Y
Order ECHINOIDA											
Family Echinidae											
Dermechinus horridus	(A. Agassiz, 1879)	25246001				1	976	980	Bald Island	Bald Island	
Gracilechinus multidentatus	(H.L. Clark, 1925)	25246002			1	5	913	1110	Bald Island	Point Hillier	Y
Order ECHINOTHURIODA											
Family Echinothuriidae											
Araeosoma owstoni	Mortensen, 1904	25205002				3	658	1170	Perth Canyon	Ningaloo	Y
Asthenosoma varium	Grube, 1868	25205007				1	106	107	Ningaloo	Ningaloo	Y
Family Phormosomatidae											
Phormosoma rigidum	A. Agassiz, 1881	25206002			1	8	658	1110	Bald Island	Ningaloo	Y
Order PEDINOIDA											
Family Pedinidae											
Caenopedina mirabilis	(Döderlein, 1885)	25220003			1	9	105	539	Point Hillier	Ningaloo	Y

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Order SPARANGOIDA											
Family Brissidae											
Anametalia regularis	(H.L. Clark, 1925)	25306001			1	2	100	177	Red Bluff	Ningaloo	Y
Brissopsis luzonicus	(Gray, 1851)	25306003				4	112	702	Kalbarri	Ningaloo	
Brissus agassizii	Döderlein, 1885	25306006				1	96	98	Kalbarri	Kalbarri	
Family Loveniidae											
Lovenia elongata	(Gray, 1845)	25308005			1	3	101	120	Shark Bay	Ningaloo	
Lovenia gregalis	Alcock, 1893	25308006				2	658	754	Ningaloo	Ningaloo	
Lovenia n.sp. 1		99250376	1	1	1	2	848	1050	Perth Canyon	Two Rocks	Y
Family Schizasteridae											
Proraster jukesii	(Gray, 1851)	25304003				1	165	166	Ningaloo	Ningaloo	
Order TEMNOPLEUROIDA											
Family Temnopleuridae											
Microcyphus annulatus	Mortensen, 1904	25241014			1	5	99	157	Bald Island	Two Rocks	Y
Microcyphus keiensis	Mortensen, 1942	25241035		1	1	1	104	114	Ningaloo	Ningaloo	Y
Temnotrema maculatum	(Mortensen, 1904)	25241030			1	1	106	107	Ningaloo	Ningaloo	Y
Temnotrema scillae	(Mazzetti, 1894)	25241034		1	1	1	401	414	Jurien Bay	Jurien Bay	
Temnotrema siamense	(Mortensen, 1904)	25241032				1	106	106	Zuytdorp	Zuytdorp	Y
Family Toxopneustidae											
Pseudoboletia indiana	(Michelin H, 1862)	25242008				1	106	106	Zuytdorp	Zuytdorp	Y

Class HOLOTHUROIDEA											
Order APODIDA											
Family Synaptidae											
Dactylapta dubiosa	Koehler & Vaney, 1905	25431023		1	1	1	416	431	Abrolhos	Abrolhos	
Order ASPIDOCHIROTIDA											
Family Holothuriidae											
Holothuria austrinabassa	O'Loughlin, 2007	25416062	1	1	1	6	97	728	Bald Island	Abrolhos	Y
Holothuria hilla	Lesson, 1830	25416054				1	100	100	Point Cloates	Point Cloates	Y
Holothuria nigralutea	O'Loughlin, 2007	25416063	1	1	1	1	100	100	Point Cloates	Point Cloates	Y
Family Synallactidae											
Mesothuria n.sp. 1		99250384	1	1	1	1	986	988	Two Rocks	Two Rocks	
Mesothuria n.sp. 2		99250285	1	1	1	2	989	1037	Two Rocks	Abrolhos	Y
Mesothuria marginata	Sluiter, 1901	25418023			1	6	373	1010	Ningaloo	Ningaloo	Y
Mesothuria n.sp. 3		99250385	1	1	1	1	396	404	Carnarvon	Carnarvon	
Paelopatides quadridens	Heding, 1940	25418027			1	2	983	1037	Abrolhos	Ningaloo	
Pseudostichopus hyalegerus	(Sluiter, 1901)	25418012			1	20	212	1050	Bald Island	Abrolhos	Y
Pseudostichopus n.sp. 1		99250386	1	1	1	5	408	695	Bald Island	Mentelle	Y
Order DENDROCHIROTIDA											
Family Cucumariidae											
Neocucumella n.sp. 1		99250381	1	1	1	1	105	106	Ningaloo	Ningaloo	
Neocucumis n.sp. 1		99250382	1	1	1	1	132	134	Ningaloo	Ningaloo	
Plesiocolochirus australis	(Ludwig, 1875)	25408025				5	100	114	Jurien Bay	Point Cloates	Y
Family Phyllophoridae											
Havelockia fastigata	(Sluiter, 1901)	25406026		1	1	3	100	428	Kalbarri	Barrow	

Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Neothyonidium inflatum	(Sluiter, 1901)	25406027		1	1	1	165	166	Ningaloo	Ningaloo	Y
Neothyonidium n.sp. 1		99250378	1	1	1	1	105	106	Ningaloo	Ningaloo	
Neothyonidium n.sp. 2		99250379	1	1	1	1	100	100	Red Bluff	Red Bluff	
Phyllophorus brocki	Ludwig, 1888	25406010				1	85	86	Abrolhos	Abrolhos	
Semperiella sp. 1		99250380			1	1	100	100	Point Cloates	Point Cloates	
Stolus n.sp. 1		99250289	1	1	1	1	112	123	Kalbarri	Kalbarri	
Stolus n.sp. 2		99250377	1	1	1	1	100	100	Point Cloates	Point Cloates	
Family Psolidae											
Psolidium mccallumae	O'Loughlin & Maric, 2008	25404017	1	1	1	1	100	100	Point Cloates	Point Cloates	
Psolus parmatus	(Sluiter, 1901)	25404011		1	1	1	132	134	Ningaloo	Ningaloo	Y
Family Ypsilothuridae											
Echinocucumis n.sp. 1		99250383	1	1	1	1	1019	1031	Albany	Albany	Y
Echinocucumis n.sp. 2		99250286	1	1	1	1	399	411	Barrow	Barrow	
Ypsilothuria bitentaculata	(Ludwig H, 1893)	25411003		1	1	1	690	702	Ningaloo	Ningaloo	
Order ELASIPODIDA											
Family Elpidiidae											
Peniagone cf. *diaphana*	Théel, 1882	99250388	1	1	1	2	676	980	Bald Island	Albany	
Family Laetmogonidae											
Benthogone abstrusa	(Sluiter, 1901)	25422006		1	1	1	1077	1085	Ningaloo	Ningaloo	Y
Laetmogone cf. *theeli*	Ludwig, 1894	99250387	1	1	1	1	986	988	Two Rocks	Two Rocks	
Laetmogone fimbriata	(Sluiter, 1901)	25422001			1	4	398	539	Bald Island	Mentelle	Y
Laetmogone maculata	(Théel, 1879)	25422002			1	12	212	999	Bald Island	Bunbury	Y

Laetmogone violacea	Théel, 1879	25422003			1	2	676	728	Bald Island	Albany	
Pannychia moseleyi	Théel, 1882	25422004			1	1	976	980	Bald Island	Bald Island	
Enypniastes eximia	Théel, 1882	25425001			1	2	848	1170	Perth Canyon	Perth Canyon	Y
Order MOLPADIIDA											
Family Caudinidae											
Acaudina leucoprocta	(H.L. Clark, 1938)	25437001				1	165	166	Ningaloo	Ningaloo	
Aphelodactyla bacilla	(Cherbonnier & Féral, 1981)	25437008		1	1	2	329	404	Two Rocks	Two Rocks	Y
Aphelodactyla molpadioides	(Semper, 1868)	25437002				2	329	732	Two Rocks	Ningaloo	Y
Aphelodactyla suspecta	(Cherbonnier & Féral, 1981)	25437009		1	1	1	329	370	Two Rocks	Two Rocks	Y
Family Molpadiidae											
Heteromolpadia tridens	(Sluiter, 1901)	25436006		1	1	1	387	399	Ningaloo	Ningaloo	
Molpadia andamanensis	(Walsh, 1891)	25436001				1	324	356	Ningaloo	Ningaloo	
Molpadia musculus	Risso, 1826	25436004		1	1	9	324	1170	Perth Canyon	Ningaloo	Y
Trochostoma parvulum	Cherbonnier & Féral, 1981	25436005		1	1	2	329	427	Two Rocks	Jurien Bay	Y
Class OPHIUROIDEA											
Order OPHIURIDA											
Family Amphiuridae											
Amphioplus depressa	(Ljungman, 1867)	25191011				5	100	166	Red Bluff	Barrow	
Amphioplus lucidus	Koehler, 1922	25191006				4	201	408	Ningaloo	Barrow	
Amphioplus ochroleuca	(Brock, 1888)	25191010				3	93	166	Ningaloo	Barrow	
Amphioplus sp. MoV 5509		25191075	1	1	1	2	165	177	Ningaloo	Ningaloo	Y
Amphioplus sp. MoV 5510		25191076	1	1	1	1	95	99	Bunbury	Bunbury	Y
Amphioplus sp. MoV 5522		25191077	1	1	1	1	1260	1295	Ningaloo	Ningaloo	
Amphioplus sp. MoV 5524		25191078	1	1	1	1	900	915	Albany	Albany	Y

Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Amphioplus sp. MoV 5525		25191079	1	1	1	1	105	106	Ningaloo	Ningaloo	
Amphipholis squamata	(Delle-Chiaje, 1828)	25191015				6	96	411	Bald Island	Barrow	
Amphiura dolia	H.L. Clark, 1938	25191025			1	2	112	166	Kalbarri	Ningaloo	
Amphiura leptotata	H.L. Clark, 1915	25191028			1	1	132	134	Ningaloo	Ningaloo	
Amphiura octacantha	(H.L. Clark, 1915)	25191046				4	91	388	Point Hillier	Red Bluff	Y
Amphiura sp. MoV 3579		25191062	1		1	4	364	423	Bunbury	Lancelin	Y
Amphiura sp. MoV 5508		25191068	1	1	1	2	397	423	Bunbury	Barrow	Y
Amphiura sp. MoV 5511		25191069	1	1	1	2	91	196	Point Hillier	Point Hillier	
Amphiura sp. MoV 5512		25191064	1	1	1	5	93	106	Red Bluff	Barrow	
Amphiura sp. MoV 5514		25191070	1	1	1	2	748	1080	Albany	Point Hillier	
Amphiura sp. MoV 5515		25191071	1	1	1	1	120	120	Shark Bay	Shark Bay	
Amphiura sp. MoV 5516		25191065	1	1	1	7	95	404	D'Entrecasteaux	Barrow	
Amphiura sp. MoV 5517		25191072	1	1	1	1	912	922	Albany	Albany	
Amphiura sp. MoV 5519		25191073	1	1	1	2	329	421	Bunbury	Two Rocks	Y
Amphiura sp. MoV 5520		25191074	1	1	1	3	132	404	Carnarvon	Point Cloates	
Ophiocentrus aspera	(Koehler, 1905)	25191050			1	2	95	101	Bunbury	Red Bluff	Y
Ophiocentrus inaequalis	(H.L. Clark, 1915)	25191053			1	1	100	100	Shark Bay	Shark Bay	
Ophiodaphne formatus	(Koehler, 1905)	25190017				2	165	206	Ningaloo	Ningaloo	Y
Family Hemieuryalidae											
Ophiomoeris obstricta	(Lyman, 1878)	25186002			1	2	252	382	Kalbarri	Point Cloates	
Family Ophiacanthidae											
Amphilimna granulosa	Liao, 1989	25185067		1	1	1	100	100	Point Cloates	Point Cloates	

Amphilimna transacta	(Koehler, 1930)	25185063		1	1	4	364	423	Bunbury	Jurien Bay	Y
Ophiacantha sp. MoV 2731		25185056	1		1	1	1075	1110	Point Hillier	Point Hillier	Y
Ophiacantha alternata	Koehler, 1907	25185011				4	96	107	Bald Island	Shark Bay	Y
Ophiacantha brachygnatha	H.L. Clark, 1928	25185012				6	106	728	Bald Island	Ningaloo	Y
Ophiacantha clavigera	A.M. Clark, 1966	25185013				5	95	102	Bald Island	Two Rocks	Y
Ophiacantha dallasi	(Duncan, 1879)	25185018				2	100	123	Kalbarri	Shark Bay	
Ophiacantha indica	Ljungman, 1867	25185016			1	3	96	100	Kalbarri	Carnarvon	
Ophiacantha pacata	Koehler, 1922	25185065		1	1	2	976	980	Bald Island	Bald Island	Y
Ophiacantha rosea	Lyman, 1878	25185001			1	1	912	922	Albany	Albany	
Ophiacantha sp. MoV 4533		25185081	1		1	1	1000	1037	Abrolhos	Abrolhos	
Ophiacantha sp. MoV 4537		25185082	1		1	4	900	980	Bald Island	Albany	Y
Ophiacantha spectabilis	Sars, 1871	25185004			1	2	913	980	Bald Island	Albany	Y
Ophiocamax vitrea	Lyman, 1878	25185038				2	399	411	Barrow	Barrow	
Ophiocymbium sp. 1		99250370				1	397	423	Bunbury	Bunbury	Y
Ophiolebes sp. MoV 3581		25185080	1		1	1	900	915	Albany	Albany	Y
Ophiolimna cf. *bairdi*	(Lyman, 1883)	99250371	1		1	2	900	925	Albany	Albany	Y
Ophiomyces delata	Koehler, 1904	25185027			1	4	100	423	Bunbury	Carnarvon	Y
Ophiophthalmus relictus	(Koehler, 1904)	25185029			1	2	1000	1080	Point Hillier	Abrolhos	Y
Ophioplinthaca plicata	(Lyman, 1878)	25185007			1	1	900	915	Albany	Albany	Y
Ophioplinthaca rudis	(Koehler, 1897)	25185031				4	700	1170	Perth Canyon	Abrolhos	Y
Ophiopristis sp. 1		99250369				1	329	370	Two Rocks	Two Rocks	
Ophiopristis sp. MoV 5490		25185079	1	1	1	4	900	1080	Bald Island	Point Hillier	Y
Ophiothamnus biocal	O'Hara & Stöhr, 2006	25185064		1	1	1	748	776	Albany	Albany	Y
Ophiotoma sp. MoV 5504		25185071	1	1	1	1	397	423	Bunbury	Bunbury	Y
Ophiotrema sp. MoV 5492		25185083	1		1	1	848	1050	Perth Canyon	Perth Canyon	

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Ophiotreta eximia	(Koehler, 1904)	25185058			1	1	1260	1295	Ningaloo	Ningaloo	
Ophiotreta stimulea	(Lyman, 1878)	25185057			1	2	396	404	Carnarvon	Red Bluff	
Ophiotreta valenciennesi	(Lyman, 1879)	25185044			1	1	180	183	Abrolhos	Abrolhos	
Ophiurothamnus clausa	(Lyman, 1878)	25185045			1	3	913	1050	Albany	Ningaloo	Y
Sinophiura multispina	(Koehler, 1922)	25185066		1	1	2	201	253	Kalbarri	Ningaloo	
Family Ophiactidae											
Histampica duplicata	(Lyman, 1874)	25190021		1	1	1	396	404	Carnarvon	Carnarvon	
Ophiactis brevis	H.L. Clark, 1938	25190005				1	165	166	Ningaloo	Ningaloo	
Ophiactis hirta	Lyman, 1879	25190003			1	2	685	915	Albany	Albany	Y
Ophiactis macrolepidota	Marktanner-Turneretscher, 1887	25190009				8	96	196	Point Hillier	Barrow	
Ophiactis modesta	Brock, 1888	25190010				2	97	100	Bald Island	Red Bluff	Y
Ophiactis profundi	Lütken & Mortensen, 1899	25190012			1	7	132	925	Albany	Carnarvon	Y
Ophiactis savignyi	(Müller & Troschell, 1842)	25190014				2	96	106	Kalbarri	Ningaloo	
Ophiactis sp. 1		99250372				1	96	97	Mentelle	Mentelle	
Ophiactis sp. MoV 5496		25190022	1	1	1	4	416	688	Two Rocks	Kalbarri	Y
Family Ophiodermatidae											
Ophiochasma stellata	(Ljungman, 1867)	25180018				1	100	101	Red Bluff	Red Bluff	
Ophioconis opacum	(H.L. Clark, 1928)	25180021				2	96	157	Bald Island	Mentelle	
Ophiopeza cylindrica	(Hutton, 1872)	25180024				3	95	102	Albany	Two Rocks	Y
Ophiopeza spinosa	(Ljungman, 1867)	25180025				1	100	100	Point Cloates	Point Cloates	
Ophiopsammus assimilis	(Bell, 1888)	25180028				3	102	490	D'Entrecasteaux	Two Rocks	Y

Family Ophioleucidae											
Ophiernus adspersus	Lyman, 1883	25177006			1	2	1077	1295	Ningaloo	Ningaloo	
Ophiernus vallincola	Lyman, 1878	25177001			1	5	710	1170	Bald Island	Perth Canyon	Y
Ophioleuce seminudum	Koehler, 1904	25177003			1	3	180	253	Perth Canyon	Kalbarri	Y
Family Ophionereididae											
Ophiochiton sp. MoV 5498		25179021	1	1	1	2	96	157	Bald Island	Mentelle	Y
Ophiodoris malignus	Koehler, 1904	25179020		1	1	3	329	431	Two Rocks	Abrolhos	Y
Ophionereis hexactis	H.L. Clark, 1938	25179005			1	1	113	114	Jurien Bay	Jurien Bay	
Ophionereis schayeri	(Müller & Troschell, 1844)	25179009				3	95	102	Bunbury	Lancelin	Y
Ophionereis semoni	(Döderlein, 1896)	25179010				2	96	100	Albany	Mentelle	Y
Ophionereis sp. MoV 5507		25179022	1	1	1	1	165	166	Ningaloo	Ningaloo	
Ophioplax lamellosa	Matsumoto, 1915	25179016			1	4	685	925	Albany	Two Rocks	Y
Ophioplax sp. A		99250367				1	685	695	Albany	Albany	
Family Ophiotrichidae											
Macrophiothrix koehleri	A.M. Clark, 1968	25192009				2	100	114	Point Cloates	Ningaloo	
Macrophiothrix variabilis	(Duncan, 1887)	25192022				2	100	100	Shark Bay	Red Bluff	
Ophiogymna elegans	Ljungman, 1866	25192024				1	100	101	Barrow	Barrow	
Ophiogymna pulchella	(Koehler, 1905)	25192027				3	100	1085	Ningaloo	Barrow	Y
Ophiomaza cacaotica	Lyman, 1871	25192028				2	100	100	Carnarvon	Point Cloates	Y
Ophiopteron elegans	Ludwig, 1888	25192032				3	100	101	Red Bluff	Barrow	
Ophiothela danae	Verrill, 1869	25192033				3	93	101	Mentelle	Barrow	
Ophiothrix aristulata	Lyman, 1879	25192001			1	3	329	431	Two Rocks	Abrolhos	Y
Ophiothrix caespitosa	Lyman, 1879	25192002				11	91	213	Bald Island	Kalbarri	Y
Ophiothrix ciliaris	(Lamarck, 1816)	25192036				11	85	123	Jurien Bay	Barrow	Y
Ophiothrix foveolata	Marktanner-Turneretscher, 1887	25192041				2	100	101	Red Bluff	Barrow	

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Ophiothrix sp. MoV 5502		25192071	1	1	1	2	132	166	Ningaloo	Ningaloo	Y
Ophiothrix spongicola	Stimpson, 1855	25192063				7	89	196	Bald Island	Jurien Bay	Y
Ophiothrix viridialba	von Martens, 1867	25192053				1	100	101	Barrow	Barrow	
Family Ophiuridae											
Amphiophiura distincta	(Koehler, 1904)	25176061		1	1	2	212	370	Albany	Two Rocks	Y
Amphiophiura insolita	(Koehler, 1904)	25176008			1	2	396	404	Carnarvon	Red Bluff	
Amphiophiura sordida	(Koehler, 1897)	25176063		1	1	4	387	1010	Ningaloo	Barrow	
Amphiophiura urbana	(Koehler, 1904)	25176010				10	364	539	Bald Island	Two Rocks	Y
Dictenophiura sp. MoV 5499		25176086	1	1	1	3	368	404	Carnarvon	Red Bluff	
Ophiocrossota multispina	(Ljungman, 1867)	25176016				5	89	102	Point Hillier	Two Rocks	Y
Ophiomastus sp. MoV 5503		25176087	1	1	1	1	104	114	Ningaloo	Ningaloo	
Ophiomastus tegulitius	Lyman, 1878	25176022			1	3	414	1031	Albany	Bunbury	Y
Ophiomisidium irene	Fell, 1952	25176005			1	3	748	1031	Bald Island	Albany	Y
Ophiomusium anisacanthum	H.L. Clark, 1928	25176024				9	329	508	Bald Island	Two Rocks	
Ophiomusium australe	H.L. Clark, 1928	25176025				1	329	370	Two Rocks	Two Rocks	Y
Ophiomusium facundum	Koehler, 1922	25176065				2	399	411	Barrow	Barrow	
Ophiomusium lymani	Thomson, 1873	25176007				3	848	1050	Perth Canyon	Abrolhos	Y
Ophiomusium relictum	Koehler, 1904	25176044			1	19	212	980	Bald Island	Jurien Bay	Y
Ophiopyrgus trispinosus	Koehler, 1904	25176062		1	1	5	700	1080	Bald Island	Abrolhos	Y
Ophiozonella sp. MoV 5505		25176071	1	1	1	1	396	404	Carnarvon	Carnarvon	
Ophiozonoida picta	H.L. Clark, 1915	25176045		1	1	1	252	253	Kalbarri	Kalbarri	
Ophiozonoida sp. 1		99250366	1	1	1	1	180	183	Abrolhos	Abrolhos	

Ophiura aequalis	(Lyman, 1878)	25176064		1	1	1	1260	1295	Ningaloo	Ningaloo	
Ophiura irrorata	Lyman, 1878	25176003				3	685	925	Albany	Two Rocks	Y
Ophiura jejuna	(Lyman, 1878)	25176002			1	7	676	1170	Bald Island	Abrolhos	Y
Ophiura kinbergi	(Ljungman, 1866)	25176037				5	89	213	Albany	Point Hillier	Y
Ophiura micracantha	H.L. Clark, 1911	25176038			1	3	399	754	Ningaloo	Barrow	
Ophiura ooplax	(H.L. Clark, 1911)	25176039			1	23	101	1170	Bald Island	Ningaloo	Y
Ophiura palliata	(Lyman, 1878)	25176040				6	467	728	Bald Island	Mentelle	Y
Ophiura rugosa	(Lyman, 1878)	25176041		1	1	6	976	1110	Bald Island	Two Rocks	Y
Ophiura sp. MoV 2734		25176084	1		1	5	329	776	Bald Island	Two Rocks	Y
Ophiura sp. MoV 5513		25176072	1	1	1	2	93	100	Point Cloates	Barrow	
Ophiurolepis accomodata	Koehler, 1922	25176006			1	1	1074	1080	Point Hillier	Point Hillier	
Opiuridae sp. MoV 5506		25176085	1	1	1	3	112	388	Kalbarri	Carnarvon	
Order PHYRNOPHIUIRIDA											
Family Asteronychidae											
Asteronyx loveni	Müller & Troschell, 1842	25173001				3	900	925	Albany	Albany	Y
Family Asteroschematidae											
Astrobrachion adhaerens	(Studer, 1884)	25172004				3	95	100	Albany	Bunbury	Y
Ophiocreas oedipus	Lyman, 1879	25172006				3	700	1037	Two Rocks	Abrolhos	
Ophiocreas sibogae	Koehler, 1904	25172001			1	2	1074	1110	Point Hillier	Point Hillier	Y
Family Euryalidae											
Asteromorpha koehleri	(Döderlein, 1898)	25170007		1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Astroceras pergamena	Lyman, 1879	25170008		1	1	2	120	414	Jurien Bay	Shark Bay	Y
Euryale asperum	Lamarck, 1816	25170004				1	0	102	Two Rocks	Two Rocks	
Sthenocephalus indicus	Koehler, 1898	25170010		1	1	1	399	408	Barrow	Barrow	
Trichaster flagellifer	von Martens, 1877	25170009				1	165	166	Ningaloo	Ningaloo	Y

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Family Gorgonocephalidae											
Astroboa nigrofurcata	Döderlein, 1927	25171009				1	132	134	Ningaloo	Ningaloo	Y
Astroboa sp. 1		99250365				1	180	183	Abrolhos	Abrolhos	Y
Astrocladus exiguus	(Lamarck, 1816)	25171013				3	104	183	Abrolhos	Ningaloo	Y
Astrosierra microconus	(H.L. Clark, 1914)	25171019				1	96	97	Mentelle	Mentelle	Y
Family Ophiomyxidae											
Ophiomyxa australis	Lütken, 1869	25166001				14	95	695	Bald Island	Point Cloates	Y
Ophiomyxa crinita	Franklin & O'Hara, 2008	25166006	1	1	1	12	329	508	Albany	Zuytdorp	Y
Ophiomyxa sp. MoV 5486		25166007	1		1	4	900	1080	Albany	Point Hillier	Y
Ophiomyxa sp. MoV 5501		25166009	1	1	1	1	170	177	Ningaloo	Ningaloo	Y
Ophioscolex sp. MoV 2721		25166005	1		1	5	378	980	Bald Island	Bunbury	
Ophiurothamnus sp. 1		99250368				2	900	925	Albany	Albany	Y
Ophiurothamnus sp. MoV 5489		25185078	1	1	1	2	329	404	Two Rocks	Two Rocks	Y
Phylum ARTHROPODA											
Subphylum CRUSTACEA											
Class MALACOSTRACA											
Order DECAPODA											
Infraorder Dendobranchiata											
Family Aristeidae											
Aristeus cf. *pallicauda*	Komai, 1993	99280435				2	170	399	Ningaloo	Ningaloo	

Aristeus semidentatus	Bate, 1881	28712011			1	3	928	1170	Point Hillier	Abrolhos	Y
Aristeus virilis	(Bate, 1881)	28712003				4	658	1021	Bald Island	Ningaloo	Y
Pseudaristeus sibogae	(de Man, 1911)	28712010				2	726	1010	Ningaloo	Ningaloo	
Family Benthesicymidae											
Benthesicymus investigatoris	Alcock & Anderson, 1899	28713001				2	983	1037	Abrolhos	Ningaloo	Y
Family Penaeidae											
Melicertus marginatus	(Randall, 1840)	28711049				1	165	166	Ningaloo	Ningaloo	
Metapenaeopsis aff. *difficilis*	Crosnier, 1991	99280432			1	1	106	107	Ningaloo	Ningaloo	
Metapenaeopsis aff. *vaillanti*	(Nobili, 1904)	99280434			1	1	100	100	Carnarvon	Carnarvon	
Metapenaeopsis crassissima	Racek & Dall, 1965	28711012				1	100	100	Carnarvon	Carnarvon	
Metapenaeopsis rosea	Racek & Dall, 1965	28711019			1	6	100	177	Carnarvon	Barrow	
Metapenaeopsis sp. MoV 5458		28711091				7	100	431	Bald Island	Point Cloates	Y
Metapenaeopsis sp. MoV 5459		28711085				3	112	206	Kalbarri	Ningaloo	
Metapenaeopsis velutina	(Dana, 1852)	28711073				7	95	106	Zuytdorp	Point Cloates	Y
Parapenaeus australiensis	Dall, 1957	28711035			1	1	368	388	Carnarvon	Carnarvon	
Parapenaeus fissuroides fissuroides	Crosnier, 1985	28711083		1	1	2	170	206	Ningaloo	Ningaloo	
Parapenaeus fissurus	(Bate, 1881)	28711080		1	1	2	106	253	Kalbarri	Ningaloo	
Parapenaeus longipes	Alcock, 1905	28711082		1	1	1	201	206	Ningaloo	Ningaloo	
Parapenaeus murrayi	Ramandan, 1938	28711081		1	1	6	324	411	Abrolhos	Barrow	
Parapenaeus sextuberculatus	Kubo, 1949	28711039			1	1	387	399	Ningaloo	Ningaloo	
Penaeopsis sp. MoV 5466		28711092	1		1	1	324	356	Ningaloo	Ningaloo	
Penaeopsis sp. MoV 5471		28711088	1		1	2	373	408	Ningaloo	Barrow	
Trachypenaeus curvirostris	(Stimpson, 1860)	28711055				2	101	123	Kalbarri	Ningaloo	
Family Sergestidae											
Sergestes sp. MoV 5453		28720028				1	678	686	Abrolhos	Abrolhos	

Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Sergestes sp. MoV 5454		28720029				1	1075	1110	Point Hillier	Point Hillier	
Sergia fulgens	(Hansen, 1919)	28720024		1	1	2	373	732	Ningaloo	Ningaloo	
Sergia prehensilis	(Bate, 1881)	28720021				1	1000	1037	Abrolhos	Abrolhos	
Family Sicyoniidae											
Sicyonia inflexa	(Kubo, 1949)	28715002				2	252	686	Abrolhos	Kalbarri	Y
Sicyonia japonica	Balss, 1914	28715010		1	1	1	106	107	Ningaloo	Ningaloo	Y
Sicyonia sp. MoV 5455		28715011	1	1	1	1	212	213	Albany	Albany	
Sicyonia vitulans	(Kubo, 1949)	28715004		1	1	1	100	100	Carnarvon	Carnarvon	Y
Family Solenoceridae											
Hadropenaeus lucasii	(Bate, 1881)	28714003				17	95	528	Bald Island	Barrow	Y
Haliporoides sibogae	(de Man, 1907)	28714005				6	324	414	Zuytdorp	Barrow	Y
Haliporus taprobanensis	Alcock & Anderson, 1899	28714006				2	690	732	Ningaloo	Ningaloo	
Hymenopenaeus halli	Bruce, 1966	28714007			1	6	373	1085	Jurien Bay	Ningaloo	
Hymenopenaeus propinquus	(de Man, 1907)	28714032				2	658	754	Ningaloo	Ningaloo	
Solenocera annectens	(Wood Mason, 1891)	28714010				1	690	702	Ningaloo	Ningaloo	
Solenocera choprai	Nataraj, 1945	28714012				1	101	102	Ningaloo	Ningaloo	
Solenocera comata	Stebbing, 1915	28714023				2	368	404	Carnarvon	Carnarvon	
Solenocera koebeli	de Man, 1911	28714025				1	170	177	Ningaloo	Ningaloo	
Solenocera melantho	de Man, 1907	28714013				2	170	206	Ningaloo	Ningaloo	
Solenocera pectinata	(Bate, 1888)	28714027			1	1	100	101	Barrow	Barrow	
Solenocera pectinulata	Kubo, 1949	28714028				9	101	1010	Ningaloo	Ningaloo	
Solenocera rathbuni	Ramadan, 1938	28714029				3	100	166	Carnarvon	Ningaloo	Y

Infraorder Achelata											
Family Palinuridae											
Panulirus cygnus	George, 1962	28820005				1	389	407	Abrolhos	Abrolhos	
Puerulus angulatus	(Bate, 1888)	28820007				3	324	430	Point Cloates	Ningaloo	Y
Family Scyllaridae											
Crenarctus crenatus	(Whitelegge, 1900)	28821021				1	97	99	Bald Island	Bald Island	Y
Ibacus alticrenatus	Bate, 1888	28821001				18	324	490	Bald Island	Ningaloo	Y
Ibacus peronii	Leach, 1815	28821004				1	100	101	Red Bluff	Red Bluff	
Remiarctus bertholdii	(Paulson, 1875)	28821012				5	100	177	Ningaloo	Barrow	Y
Infraorder Anomura											
Family Chirostylidae											
Uroptychus australis	(Henderson, 1885)	28842002			1	3	658	988	Albany	Ningaloo	Y
Uroptychus flindersi	Ahyong & Poore, 2004	28842020				1	408	431	Bald Island	Bald Island	Y
Uroptychus gracilimanus	(Henderson, 1885	28842008			1	2	397	423	Bunbury	Bunbury	Y
Uroptychus hesperius	Ahyong & Poore, 2004	28842021				1	900	915	Albany	Albany	
Uroptychus sp. MoV 5181		28842054	1	1	1	2	401	431	Jurien Bay	Abrolhos	Y
Family Galatheidae											
Agononida eminens	(Baba, 1988)	28840005			1	2	658	754	Ningaloo	Ningaloo	Y
Agononida incerta	(Henderson, 1888)	28840006				10	324	754	Perth Canyon	Barrow	Y
Agononida pilosimanus	(Baba, 1969)	28840007			1	4	405	508	Perth Canyon	Zuytdorp	
Agononida rubrizonata	Macpherson & Baba, 2009	28840123			1	2	387	430	Point Cloates	Ningaloo	Y
Agononida similis	(Baba, 1988)	28840096		1	1	2	324	382	Ningaloo	Ningaloo	
Agononida sp. MoV 5207		28840150	1	1	1	3	387	430	Point Cloates	Barrow	
Agononida sp. MoV 5218		28840158	1	1	1	2	364	508	Perth Canyon	Two Rocks	Y
Allogalathea elegans	(A. Adams & White, 1848)	28840004				2	100	102	Carnarvon	Ningaloo	Y

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Enriquea leviantennata	(Baba, 1988)	28840031			1	3	373	399	Ningaloo	Ningaloo	Y
Galathea amboinensis	de Man, 1888	28840012			1	2	96	101	Kalbarri	Red Bluff	Y
Galathea balssi	Miyake & Baba, 1964	28840013			1	2	100	382	Point Cloates	Barrow	
Galathea consobrina	De Man, 1902	28840097		1	1	1	95	100	D'Entrecasteaux	D'Entrecasteaux	Y
Galathea sp. MoV 5179		28840144	1	1	1	1	100	101	Barrow	Barrow	
Galathea sp. MoV 5182		28840159	1	1	1	5	100	106	Zuytdorp	Point Cloates	
Galathea sp. MoV 5209		28840140	1	1	1	1	100	101	Red Bluff	Red Bluff	
Galathea sp. MoV 5244		28840151	1	1	1	1	100	100	Point Cloates	Point Cloates	
Lauriea gardineri	(Laurie, 1926)	28840024				3	100	382	Zuytdorp	Point Cloates	Y
Munida andamanica	Alcock, 1894	28840026			1	1	399	408	Barrow	Barrow	Y
Munida aprosoma	Ahyong & Poore, 2004	28840047			1	3	700	1170	Perth Canyon	Abrolhos	
Munida babai	Tirmizi & Javed, 1976	28840099		1	1	3	100	177	Ningaloo	Barrow	
Munida disgrega	Baba, 2005	28840089			1	4	408	695	Bald Island	Point Hillier	
Munida gordoae	Macpherson, 2004	28840125		1	1	4	180	253	Perth Canyon	Kalbarri	Y
Munida haswelli	Henderson, 1885	28840003				8	132	728	Bald Island	Ningaloo	Y
Munida heteracantha	Ortmann, 1892	28840029			1	1	170	177	Ningaloo	Ningaloo	
Munida keiensis	Baba, 2005	28840104				2	201	754	Ningaloo	Ningaloo	
Munida roshanei	Tirmizi, 1966	28840100		1	1	4	93	123	Kalbarri	Barrow	
Munida rubridigitalis	Baba, 1994	28840034			1	7	373	430	Carnarvon	Barrow	Y
Munida sp. MoV 5176		28840135	1	1	1	1	100	101	Barrow	Barrow	
Munida sp. MoV 5183		28840160	1	1	1	4	329	704	Two Rocks	Kalbarri	Y
Munida sp. MoV 5199		28840152	1	1	1	1	912	922	Albany	Albany	Y

Munida sp. MoV 5200		28840153	1	1	1	1	414	421	Bunbury	Bunbury	Y
Munida sp. MoV 5203		28840161	1	1	1	1	416	431	Abrolhos	Abrolhos	Y
Munida sp. MoV 5215		28840154	1	1	1	1	324	356	Ningaloo	Ningaloo	
Munida sp. MoV 5217		28840155	1	1	1	1	387	399	Ningaloo	Ningaloo	
Munida sp. MoV 5245		28840156	1	1	1	1	106	106	Zuytdorp	Zuytdorp	
Munidopsis andamanica	MacGilchrist, 1905	28840076		1	1	1	726	732	Ningaloo	Ningaloo	Y
Munidopsis comarge	Taylor, Ahyong & Andreakis, 2010	28840170	1	1	1	1	900	915	Albany	Albany	
Munidopsis crenatirostris	Baba, 1988	28840102		1	1	5	387	754	Bald Island	Barrow	Y
Munidopsis cylindrophthalma	(Alcock, 1894)	28840086		1	1	1	726	732	Ningaloo	Ningaloo	
Munidopsis dasypus	Alcock, 1894	28840056				1	1000	1037	Abrolhos	Abrolhos	Y
Munidopsis kensleyi	Ahyong & Poore, 2004	28840057				1	1260	1295	Ningaloo	Ningaloo	
Munidopsis levis	(Alcock & Anderson, 1894)	28840101		1	1	1	726	732	Ningaloo	Ningaloo	
Paramunida stichas	Macpherson, 1993	28840098		1	1	3	368	404	Carnarvon	Red Bluff	Y
Phylladiorhynchus pusillus	(Henderson, 1885)	28840042				9	85	439	Bald Island	Red Bluff	Y
Raymunida sp. MoV 5198		28840157	1	1	1	2	104	114	Jurien Bay	Ningaloo	Y
Family Porcellanidae											
Lissoporcellana sp. MoV 5226		28843050	1	1	1	1	100	101	Barrow	Barrow	
Petrolisthes militaris	(Heller, 1862)	28843028				10	100	183	Abrolhos	Ningaloo	Y
Petrolisthes scabriculus	(Dana, 1852)	28843031				1	96	98	Kalbarri	Kalbarri	
Platycheles sculptus	(H. Milne Edwards, 1837)	28843017				3	100	101	Carnarvon	Red Bluff	Y
Polyonyx biunguiculatus	(Dana, 1852)	28843038				5	95	166	Bunbury	Ningaloo	Y
Porcellanella triloba	White, 1851	28843047				1	105	106	Ningaloo	Ningaloo	
Family Albuneidae											
Albunea occultus	Boyko, 2002	28845010				1	100	100	Shark Bay	Shark Bay	Y
Stemonopa insignis	Efford & Haig, 1968	28845009				3	100	101	Shark Bay	Red Bluff	Y

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Family Diogenidae											
Calcinus sp. MoV 5268		28827110	1	1	1	1	100	100	Carnarvon	Carnarvon	
Calcinus sp. MoV 5389		28827109	1	1	1	3	95	102	D'Entrecasteaux	Carnarvon	Y
Calcinus sp. MoV 5393		28827111	1	1	1	1	96	98	Kalbarri	Kalbarri	
Calcinus sp. MoV 5396		28827112	1	1	1	1	101	102	Ningaloo	Ningaloo	
Ciliopagurus shebae	(Lewinsohn, 1969)	28827117		1	1	2	85	100	Jurien Bay	Point Cloates	Y
Dardanus sp. MoV 5262		28827104	1	1	1	2	91	382	Point Hillier	Point Cloates	
Dardanus sp. MoV 5264		28827114	1	1	1	1	101	106	Ningaloo	Ningaloo	
Dardanus sp. MoV 5265		28827115	1	1	1	1	165	166	Ningaloo	Ningaloo	
Dardanus sp. MoV 5266		28827113	1	1	1	4	96	123	Mentelle	Shark Bay	Y
Dardanus sp. MoV 5267		28827102	1	1	1	3	100	166	Carnarvon	Ningaloo	
Diogenes sp. MoV 5401		28827116	1	1	1	1	100	100	Carnarvon	Carnarvon	
Paguristes aciculus	Grant, 1905	28827077			1	27	95	554	Bald Island	Ningaloo	Y
Paguristes longisetosus	Morgan, 1987	28827083				1	355	382	Point Cloates	Point Cloates	
Paguristes purpureantennatus	Morgan, 1987	28827017				2	97	210	Bald Island	Two Rocks	Y
Paguristes sp. MoV 5263		28827107	1	1	1	4	101	114	Ningaloo	Ningaloo	
Paguristes sp. MoV 5277		28827118	1	1	1	6	165	411	Ningaloo	Barrow	
Paguristes sp. MoV 5278		28827103	1	1	1	1	165	166	Ningaloo	Ningaloo	
Paguristes sp. MoV 5394		28827119	1	1	1	2	112	388	Kalbarri	Carnarvon	
Strigopagurus elongatus	Forest, 1995	28827089				6	95	210	Bald Island	Two Rocks	Y
Family Lithodidae											
Lithodes rachelae	Ahyong, 2010	28836014	1	1	1	2	848	1050	Albany	Perth Canyon	Y
Paralomis poorei	Ahyong, 2010	28836010	1	1	1	1	900	915	Albany	Albany	Y

Family Paguridae

Anapagrides sp. MoV 5399		28835068	1	genus	1	2	101	102	Two Rocks	Ningaloo	
Bathypaguropsis yaldwyni	McLaughlin, 1994	28835049			1	1	479	484	Perth Canyon	Perth Canyon	Y
Cestopagurus sp. MoV 5269		28835069	1	genus	1	1	479	484	Perth Canyon	Perth Canyon	Y
Hemipagurus sp. MoV 5281		28835070	1	genus	1	1	100	100	Point Cloates	Point Cloates	
Lophopagurus nanus	(Henderson, 1888)	28835011			1	3	97	213	Bald Island	Two Rocks	Y
Lophopagurus triserratus	(Ortmann, 1892)	28835010			1	2	97	123	Kalbarri	Zuytdorp	Y
Michelopagurus sp. MoV 5280		28835071	1	genus	1	1	928	1170	Perth Canyon	Perth Canyon	Y
Nematopagurus sp. MoV 5380		28835072	1	1	1	1	100	100	Point Cloates	Point Cloates	
Nematopagurus sp. MoV 5383		28835073	1	1	1	2	194	232	Point Hillier	Perth Canyon	
Nematopagurus sp. MoV 5384		28835067	1	1	1	1	165	166	Ningaloo	Ningaloo	
Paguridae sp. MoV 5261		28835062	1	1	1	3	100	106	Point Cloates	Ningaloo	Y
Paguridae sp. MoV 5270		28835075	1	1	1	1	1000	1037	Abrolhos	Abrolhos	Y
Paguridae sp. MoV 5271		28835076	1	1	1	1	1000	1037	Abrolhos	Abrolhos	Y
Paguridae sp. MoV 5274		28835077	1	1	1	1	913	925	Albany	Albany	Y
Paguridae sp. MoV 5283		28835066	1	1	1	2	1000	1050	Abrolhos	Ningaloo	
Paguridae sp. MoV 5285		28835078	1	1	1	1	900	915	Albany	Albany	
Paguridae sp. MoV 5286		28835079	1	1	1	1	100	101	Barrow	Barrow	
Paguridae sp. MoV 5381		28835080	1	1	1	2	170	183	Abrolhos	Ningaloo	
Paguridae sp. MoV 5385		28835081	1	1	1	1	398	402	Red Bluff	Red Bluff	
Paguridae sp. MoV 5386		28835082	1	1	1	1	1077	1085	Ningaloo	Ningaloo	
Paguridae sp. MoV 5387		28835083	1	1	1	2	848	1170	Perth Canyon	Perth Canyon	
Paguridae sp. MoV 5388		28835084	1	1	1	1	848	1050	Perth Canyon	Perth Canyon	
Paguridae sp. MoV 5390		28835085	1	1	1	1	100	100	Point Cloates	Point Cloates	

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Paguridae sp. MoV 5391		28835086	1	1	1	1	106	107	Ningaloo	Ningaloo	
Paguridae sp. MoV 5392		28835087	1	1	1	2	100	107	Red Bluff	Ningaloo	
Paguridae sp. MoV 5402		28835088	1	1	1	1	726	732	Ningaloo	Ningaloo	
Porcellanopagurus filholi	de Saint Laurent & McLaughlin, 2000	28835050		1	1	1	401	414	Jurien Bay	Jurien Bay	Y
Propagurus haigae	(McLaughlin, 1997)	28835032			1	6	393	539	Point Hillier	Kalbarri	Y
Pylopaguropsis sp. MoV 5276		28835074	1	1	1	1	95	100	Shark Bay	Shark Bay	
Pylopaguropsis zebra	(Henderson, 1893)	28835034				4	100	166	Carnarvon	Ningaloo	
Spiropagurus fimbriatus	Lewinsohn, 1982	28835035			1	3	101	166	Ningaloo	Ningaloo	
Turleana albatrossae	(McLaughlin & Haig, 1996)	28835051		1	1	6	96	107	Kalbarri	Barrow	
Turleana multispina	McLaughlin, 1997	28835052		1	1	1	411	411	Red Bluff	Red Bluff	
Family Parapaguridae											
Oncopagurus indicus	(Alcock, 1905)	28837009				12	373	1037	Bald Island	Ningaloo	Y
Oncopagurus minutus	(Henderson, 1896)	28837011			1	2	726	1050	Perth Canyon	Ningaloo	
Oncopagurus monstrosus	(Alcock, 1894)	28837010				12	329	1050	Albany	Ningaloo	Y
Paragiopagurus boletifer	(de Saint Laurent, 1972)	28837017		1	1	1	355	382	Point Cloates	Point Cloates	Y
Paragiopagurus diogenes	(Whitelegge, 1900)	28837013				11	95	407	Perth Canyon	Red Bluff	Y
Paragiopagurus sp. MoV 5272		28837029	1	1	1	11	355	1010	Bunbury	Barrow	Y
Paragiopagurus sp. MoV 5397		28837030	1	1	1	1	368	388	Carnarvon	Carnarvon	
Parapagurus latimanus	Henderson, 1888	28837021			1	8	479	1110	Bald Island	Ningaloo	Y
Strobopagurus sp. MoV 5282		28837031	1	1	1	5	364	1037	Two Rocks	Ningaloo	
Sympagurus brevipes	(de Saint Laurent, 1972)	28837005				1	726	732	Ningaloo	Ningaloo	

Sympagurus dimorphus	(Studer, 1883)	28837002			1	4	478	680	Albany	Perth Canyon	Y
Sympagurus planimanus	(de Saint Laurent, 1972)	28837006				1	726	732	Ningaloo	Ningaloo	
Sympagurus villosus	Lemaitre, 1996	28837003			1	2	324	1010	Ningaloo	Ningaloo	
Family Pylochelidae											
Pylocheles mortensenii	Boas, 1926	28830001			1	1	364	404	Two Rocks	Two Rocks	Y
Pylocheles sp. MoV 5395		28830003	1	1	1	1	368	388	Carnarvon	Carnarvon	
Infraorder Astacidea											
Family Nephropidae											
Metanephrops boschmai	(Holthuis, 1964)	28786002				7	324	423	Bunbury	Ningaloo	Y
Metanephrops velutinus	Chan & Yu, 1991	28786005				7	387	508	Bald Island	Ningaloo	Y
Nephropsis acanthura	Macpherson, 1990	28786006				1	1260	1295	Ningaloo	Ningaloo	Y
Nephropsis stewarti	Wood-Mason, 1872	28786008				1	848	1050	Perth Canyon	Perth Canyon	Y
Infraorder Brachyura											
Family Cyclodorippidae											
Krangalangia spinosa	(Zarenkov, 1970)	28855003				1	848	1050	Perth Canyon	Perth Canyon	Y
Tymolus brucei	Tavares, 1991	28855001				4	378	508	D'Entrecasteaux	Barrow	
Tymolus similis	(Grant, 1905)	28855002			1	14	364	539	Bald Island	Ningaloo	Y
Family Cymonomidae											
Cymonomus andamanicus	Alcock, 1905	28854004		1	1	1	408	427	Jurien Bay	Jurien Bay	
Cymonomus sp. MoV 5001		28854008	1	1	1	3	401	1050	Point Hillier	Jurien Bay	Y
Family Dromiidae											
Austrodromidia insignis	(Rathbun, 1923)	28852003				3	96	179	Bald Island	Kalbarri	Y
Epigodromia sp. MoV 5473		28852034	1	1	1	1	212	213	Albany	Albany	Y
Fultodromia nodipes	(Guérin-Méneville, 1832)	28852026				2	97	100	Bald Island	Carnarvon	Y

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Fultodromia sp. MoV 5137		28852035	1	1	1	1	112	123	Kalbarri	Kalbarri	
Metadromia wilsoni	(Fulton & Grant, 1902)	28852004				7	95	253	Bald Island	Kalbarri	Y
Takedromia sp. MoV 5003		28852036	1	genus	1	3	100	100	Carnarvon	Point Cloates	Y
Family Dynomenidae											
Hirsutodynomene spinosa	(Rathbun, 1911)	28853004				1	106	106	Zuytdorp	Zuytdorp	Y
Family Homolidae											
Dagnaudus petterdi	(Grant, 1905)	28860001			1	7	364	490	Albany	Carnarvon	Y
Homola orientalis	Henderson, 1888	28860002				2	165	253	Kalbarri	Ningaloo	Y
Homologenus braueri	Doflein, 1904	28860013				3	986	1295	Two Rocks	Ningaloo	Y
Homologenus malayensis	Ihle, 1912	28860012		1	1	2	848	1050	Perth Canyon	Abrolhos	Y
Latreillopsis tetraspinosa	Dai & Chen, 1980	28860011				1	112	123	Kalbarri	Kalbarri	Y
Paromolopsis boasi	Wood-Mason, 1891	28860006				2	387	408	Ningaloo	Barrow	
Yaldwynopsis sp. MoV 5004		28860014	1	1	1	1	205	210	Two Rocks	Two Rocks	Y
Family Latreilliidae											
Eplumula australiensis	(Henderson, 1888)	28861001				6	100	253	Two Rocks	Shark Bay	Y
Latreillia pennifera	Alcock, 1900	28861002		1	1	4	100	408	Ningaloo	Barrow	Y
Family Raninidae											
Cosmonotus grayi	Adams & White, 1848	28865006				2	100	123	Kalbarri	Barrow	Y
Lyreidus stenops	Wood-Mason, 1887	28865009		1	1	3	101	177	Ningaloo	Ningaloo	Y
Lyreidus tridentatus	De Haan, 1841	28865002				9	194	414	Perth Canyon	Barrow	Y
Notosceles serratifrons	(Henderson, 1893)	28865008				4	106	166	Kalbarri	Ningaloo	Y

Umalia trirufomaculata	(Davie & Short, 1989)	28865005				4	100	123	Kalbarri	Red Bluff	Y
Family Aethridae											
Actaeomorpha erosa	Miers, 1877	28893001				1	96	98	Kalbarri	Kalbarri	
Drachiella sculpta	(Haswell, 1879)	28893003				2	100	166	Ningaloo	Barrow	
Family Calappidae											
Calappa depressa	Miers, 1886	28875015				4	95	114	Jurien Bay	Point Cloates	Y
Calappa lophos	(Herbst, 1785)	28875005				3	100	107	Ningaloo	Barrow	Y
Calappa pustulosa	Alcock, 1896	28875018		1	1	5	100	177	Ningaloo	Barrow	Y
Mursia australiensis	Campbell, 1971	28875002			1	1	329	370	Two Rocks	Two Rocks	Y
Mursia microspina	Davie & Short, 1989	28875004			1	3	100	120	Shark Bay	Carnarvon	Y
Mursia sp. MoV 4988		28875019	1	1	1	6	368	428	Bunbury	Barrow	Y
Family Carpiliidae											
Carpilius convexus	(Forskål, 1775)	28924001				1	132	134	Ningaloo	Ningaloo	Y
Family Corystidae											
Gomeza bicornis	Gray, 1831	28900001				1	100	100	Shark Bay	Shark Bay	
Jonas sp. MoV 5021		28900004				2	112	123	Kalbarri	Shark Bay	Y
Family Dorippidae											
Dorippe quadridens	(Fabricius, 1793)	28870001				1	101	102	Ningaloo	Ningaloo	
Neodorippe callida	(Fabricius, 1798)	28870005		1	1	1	100	100	Shark Bay	Shark Bay	
Paradorippe australiensis	(Miers, 1884)	28870002				3	100	120	Shark Bay	Carnarvon	Y
Family Ethusidae											
Ethusa sp. MoV 5007		28870012	1	1	1	4	102	1050	Perth Canyon	Ningaloo	
Ethusa sp. MoV 5008		28870013	1	1	1	1	726	732	Ningaloo	Ningaloo	
Ethusina sp. MoV 5005		28870014	1	1	1	1	848	1050	Perth Canyon	Perth Canyon	Y
Family Hypothalassiidae											
Hypothalassia acerba	Koh & Ng, 2000	28925009				2	195	210	Point Hillier	Two Rocks	Y

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Family Trichopeltariidae											
Trichopeltarion sp. MoV 5135		28901006	1	1	1	8	364	494	Bald Island	Abrolhos	Y
Trichopeltarion sp. MoV 5138		28901007	1	1	1	2	378	407	D'Entrecasteaux	Abrolhos	
Family Chasmocarcinidae											
Camatopsis rubida	Alcock & Anderson, 1899	28919002		1	1	4	170	399	Ningaloo	Ningaloo	
Camatopsis sp. MoV 5086		28919006	1	1	1	1	373	382	Ningaloo	Ningaloo	
Megaesthedius sagedae	Rathbun, 1909	28919003		1	1	1	201	206	Ningaloo	Ningaloo	
Family Goneplacidae											
Carcinoplax sp. MoV 4992		28922031	1	1	1	5	848	1295	Perth Canyon	Ningaloo	Y
Carcinoplax sp. MoV 4996		28922032	1	1	1	1	165	166	Ningaloo	Ningaloo	
Carcinoplax sp. MoV 4998		28922033	1	1	1	3	416	695	Albany	Kalbarri	
Goneplacidae sp. MoV 4997		28917008	1	1	1	1	848	1050	Perth Canyon	Perth Canyon	Y
Neogoneplax renoculis	(Rathbun, 1914)	28922036			1	2	201	253	Kalbarri	Ningaloo	
Notonyx nitidus	Milne Edwards, 1873	28922022		1	1	2	100	106	Point Cloates	Ningaloo	Y
Paragoneplax serenei	(Zarenkov, 1972)	28922035		1	1	4	105	206	Ningaloo	Ningaloo	Y
Platypilumnus soelae	Garth, 1987	28917004				1	324	356	Ningaloo	Ningaloo	
Psopheticus stridulans	Wood-Mason, 1892	28922001		1	1	4	324	414	Zuytdorp	Ningaloo	Y
Pycnoplax bispinosa	(Rathbun, 1914)	28922021		1	1	2	170	206	Ningaloo	Ningaloo	Y
Pycnoplax meridionalis	(Rathbun, 1923)	28922002				5	147	776	Bald Island	Two Rocks	Y
Pycnoplax sp. MoV5124		28922034	1	1	1	1	165	166	Ningaloo	Ningaloo	
Pycnoplax victoriensis	Rathbun, 1923	28922011				4	389	704	Albany	Abrolhos	

Family Mathildellidae											
Mathildella serrata	(Sakai, 1974)	28917001			1	2	205	253	Two Rocks	Kalbarri	Y
Neopilumnoplax nieli	Ahyong, 2008	28917007			1	4	205	915	Albany	Two Rocks	Y
Family Hexapodidae											
Hexaplax megalops	Dolflein, 1904	28923003		1	1	2	387	408	Ningaloo	Barrow	Y
Family Iphiculidae											
Iphiculus spongiosus	Adams & White, 1848	28876017		1	1	3	100	206	Ningaloo	Barrow	Y
Family Leucosiidae											
Arcania cornuta	(MacGilchrist, 1905)	28876015			1	3	120	177	Shark Bay	Ningaloo	Y
Arcania elongata	Yokoya, 1933	28876061			1	3	100	166	Lancelin	Ningaloo	Y
Arcania gracilis	(Henderson, 1898)	28876086				2	100	166	Ningaloo	Barrow	
Arcania muricata	Galil, 2002	28876083				4	100	177	Ningaloo	Barrow	
Arcania novemspinosa	(Adams & White, 1849)	28876011				1	120	120	Shark Bay	Shark Bay	
Arcania septemspinosa	(Fabricius, 1787)	28876012			1	5	100	177	Ningaloo	Barrow	Y
Arcania sp. MoV 4980		28876096	1	1	1	2	96	114	Jurien Bay	Kalbarri	Y
Arcania sp. MoV 4987		28876098	1	1	1	2	100	100	Carnarvon	Point Cloates	Y
Ebalia sp. MoV 4981		28876101	1	1	1	3	100	101	Red Bluff	Point Cloates	
Ebalia sp. MoV 4989		28876102	1	1	1	2	100	107	Ningaloo	Barrow	
Ebalia sp. MoV 4990		28876103	1	1	1	1	180	183	Abrolhos	Abrolhos	Y
Ebalia tuberculosa	(A. Milne Edwards, 1873)	28876046				22	147	539	Bald Island	Ningaloo	Y
Leucosia haematosticta	Adams & White, 1848	28876010				1	100	100	Shark Bay	Shark Bay	Y
Leucosia ocellata	Bell, 1855	28876022				1	170	177	Ningaloo	Ningaloo	
Leucosia sp. MoV 4985		28876104	1	1	1	1	101	102	Ningaloo	Ningaloo	Y
Leucosia whitei	Bell, 1855	28876021				1	100	101	Barrow	Barrow	

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Merocryptus lambriformis	A. Milne Edwards, 1873	28876001				4	161	213	Bald Island	Point Hillier	Y
Myra curtimana	Galil, 2001	28876082				8	100	166	Kalbarri	Ningaloo	Y
Myra sp. MoV 4982		28876105	1	1	1	1	112	123	Kalbarri	Kalbarri	Y
Myra sp. MoV 4983		28876106	1	1	1	1	100	101	Barrow	Barrow	
Myrine kessleri	(Paul'son, 1875)	28876070				2	100	114	Ningaloo	Barrow	
Oreophorus reticulatus	Adams & White, 1849	28876048		1	1	2	100	123	Kalbarri	Barrow	
Parilia major	Sakai, 1962	28876085		1	1	1	391	396	Ningaloo	Ningaloo	Y
Philyra sp. MoV 4984		28876107	1	1	1	1	100	101	Red Bluff	Red Bluff	Y
Randallia eburnea	Alcock, 1896	28876080				7	100	166	Lancelin	Ningaloo	Y
Randallia pustuloides	Sakai, 1961	28876084		1	1	1	373	382	Ningaloo	Ningaloo	Y
Randallia sp. MoV 4977		28876108	1	1	1	1	355	382	Point Cloates	Point Cloates	Y
Randallia sp. MoV 4978		28876095	1	1	1	5	100	166	Kalbarri	Barrow	Y
Randallia sp. MoV 4979		28876099	1	1	1	1	106	107	Ningaloo	Ningaloo	
Randallia sp. MoV 4986		28876109	1	1	1	1	165	166	Ningaloo	Ningaloo	
Family Epialtidae											
Austrolibinia gracilipes	(Miers, 1879)	28880124				1	100	101	Barrow	Barrow	
Epialtidae sp. MoV 5134		28880193	1	1	1	1	96	97	Mentelle	Mentelle	
Griffinia lappacea	(Rathbun, 1918)	28880047				1	467	490	Mentelle	Mentelle	Y
Hyastenus convexus	Miers, 1884	28880131				11	85	120	Abrolhos	Barrow	
Lahaina agassizii	(Rathbun, 1902)	28880138				4	96	100	Mentelle	Point Cloates	
Naxoides robillardi	(Miers, 1882)	28880143			1	1	170	177	Ningaloo	Ningaloo	
Naxoides taurus	(Pocock, 1890)	28880144			1	1	93	93	Barrow	Barrow	

Naxoides tenuirostris	(Haswell, 1880)	28880145			1	1	252	253	Kalbarri	Kalbarri	
Oxypleurodon wilsoni	Richer de Forges & Poore, 2008	28880172	1	1	1	3	329	439	Two Rocks	Abrolhos	Y
Phalangipus filiformis	Rathbun, 1916	28880147				2	100	102	Ningaloo	Barrow	
Phalangipus hystrix	(Miers, 1886)	28880148				6	100	166	Kalbarri	Ningaloo	Y
Rochinia annae	Richer de Forges & Poore, 2008	28880173	1	1	1	6	329	421	D'Entrecasteaux	Jurien Bay	Y
Rochinia carinata	Griffin & Tranter, 1986	28880174		1	1	3	324	411	Red Bluff	Barrow	Y
Rochinia strangeri	Serène & Lohavanijaya, 1973	28880171		1	1	2	252	1037	Abrolhos	Kalbarri	
Family Hymenosomatidae											
Halicarcinus sp. MoV 5002		28885031	1	1	1	3	85	107	Bald Island	Abrolhos	Y
Trigonoplax longirostris	McCulloch, 1908	28885014				1	0	102	Two Rocks	Two Rocks	Y
Family Inachidae											
Achaeus brevirostris	(Haswell, 1879)	28880062				3	100	123	Kalbarri	Ningaloo	
Achaeus curvirostris	(A. Milne-Edwards, 1873)	28880022				4	95	123	Bunbury	Kalbarri	Y
Achaeus lacertosus	Stimpson, 1858	28880063				3	100	123	Kalbarri	Ningaloo	
Achaeus sp. MoV 5122		28880194	1	1	1	2	100	123	Kalbarri	Point Cloates	
Achaeus sp. MoV 5123		28880195	1	1	1	1	112	123	Kalbarri	Kalbarri	
Camposcia retusa	Latreille, 1829	28880032				1	0	102	Two Rocks	Two Rocks	Y
Cyrtomaia maccullochi	Rathbun, 1918	28880068				13	378	728	Bald Island	Zuytdorp	Y
Cyrtomaia murrayi	Miers, 1886	28880069				2	252	404	Two Rocks	Kalbarri	
Dorhynchus ramusculus	(Baker, 1906)	28880013				5	212	490	Albany	Jurien Bay	Y
Dumea latipes	(Haswell, 1880)	28880071				1	0	102	Two Rocks	Two Rocks	
Ephippias endeavouri	Rathbun, 1918	28880072				2	102	196	Point Hillier	Two Rocks	
Grypachaeus hyalinus	(Alcock & Anderson, 1894)	28880166		1	1	2	100	101	Red Bluff	Barrow	
Inachidae undifferentiated		28880913				1	401	414	Jurien Bay	Jurien Bay	

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Oncinopus aranea	De Haan, 1839	28880074				1	100	100	Point Cloates	Point Cloates	
Oncinopus cf. angustifrons	Takeda & Miyake, 1969	28880161		1	1	3	100	183	Two Rocks	Red Bluff	Y
Oncinopus neptunus	Adams & White, 1848	28880075				4	95	102	Two Rocks	Carnarvon	
Physachaeus ctenurus	Alcock, 1895	28880164		1	1	10	364	528	Albany	Jurien Bay	Y
Platymaia fimbriata	Rathbun, 1916	28880015				1	726	732	Ningaloo	Ningaloo	
Platymaia wyvillethomsoni	Miers, 1886	28880001				10	364	554	Bald Island	Red Bluff	Y
Pleistacantha maxima	Ahyong & Lee, 2006	28880027			1	1	252	253	Kalbarri	Kalbarri	
Sunipea indicus	(Alcock, 1895)	28880079		1	1	4	85	123	Jurien Bay	Point Cloates	Y
Family Majidae											
Entomonyx depressus	Sakai, 1974	28880167		1	1	1	100	100	Point Cloates	Point Cloates	
Entomonyx spinosus	Miers, 1884	28880085				3	100	123	Kalbarri	Point Cloates	
Leptomithrax globifer	Rathbun, 1918	28880086				6	97	196	Bald Island	Point Hillier	Y
Leptomithrax sp. MoV 5121		28880190	1	1	1	3	112	232	Perth Canyon	Kalbarri	
Leptomithrax sp. MoV 5133		28880191	1	1	1	1	112	123	Kalbarri	Kalbarri	
Leptomithrax sternocostulatus	(H. Milne Edwards, 1851)	28880005				4	85	106	Bald Island	Abrolhos	Y
Maja confragosa	Griffin & Tranter, 1986	28880165		1	1	1	355	382	Point Cloates	Point Cloates	Y
Maja gibba	Alcock, 1895	28880169		1	1	1	355	382	Point Cloates	Point Cloates	
Maja suluensis	Rathbun, 1916	28880168		1	1	1	100	100	Red Bluff	Red Bluff	
Planotergum mirabile	Balss, 1935	28880155				1	85	86	Abrolhos	Abrolhos	Y
Prismatopus brevispinosus	(Yokoya, 1933)	28880163		1	1	1	329	370	Two Rocks	Two Rocks	Y
Prismatopus occidentalis	(Griffin, 1970)	28880097				4	179	253	Albany	Kalbarri	Y

Prismatopus sp. MoV 5125		28880192	1	1	1	1	100	100	Carnarvon	Carnarvon	
Family Palicidae											
Micropalicus vietnamensis	(Zarenkov, 1968)	28962014				3	170	754	Ningaloo	Ningaloo	Y
Neopalicus jukesi	(White, 1847)	28962004				1	112	123	Kalbarri	Kalbarri	
Paliculus kyusyuensis	(Yokoya, 1933)	28962011			1	2	368	411	Carnarvon	Red Bluff	
Parapalicus sp. MoV 4999		28962016	1		1	5	100	206	Ningaloo	Barrow	
Pseudopalicus macromeles	Castro, 2000	28962007				3	194	253	Albany	Kalbarri	Y
Family Parthenopidae											
Aulacolambrus sp. MoV 5014		28895037	1	1	1	1	100	101	Barrow	Barrow	
Garthambrus sp. MoV 5011		28895038				1	329	370	Two Rocks	Two Rocks	Y
Garthambrus sp. MoV 5063		28895039				1	355	382	Point Cloates	Point Cloates	Y
Parthenope chondrodes	Davie & Turner, 1994	28895018				5	100	120	Shark Bay	Barrow	Y
Parthenopidae sp. MoV 5015		28895040	1	1	1	1	147	157	Bald Island	Bald Island	
Platylambrus validus	De Haan, 1837	28895020			1	2	165	232	Perth Canyon	Ningaloo	
Pseudolambrus sp. MoV 5009		28895036	1	1	1	4	100	123	Kalbarri	Point Cloates	
Rhinolambrus sp. MoV 5012		28895034	1	1	1	1	112	123	Kalbarri	Kalbarri	
Thyrolambrus excavatus	Baker, 1905	28895014			1	7	85	169	Bald Island	Kalbarri	Y
Family Pilumnidae											
Bathypilumnus pugilator	(A. Milne Edwards, 1873)	28926040			1	2	100	101	Carnarvon	Red Bluff	
Caecopilumnus piroculatus	(Rathbun, 1911)	28926098		1	1	1	96	98	Kalbarri	Kalbarri	Y
Cryptolutea arafurensis	Davie & Humpherys, 1997	28926013				1	201	206	Ningaloo	Ningaloo	
Eumedonus niger	H. Milne Edwards, 1834	28926020				2	106	123	Kalbarri	Zuytdorp	Y
Heteropilumnus sp. MoV 5101		28926114	1	1	1	3	100	196	Point Hillier	Shark Bay	
Lophoplax sp. MoV 5105		28926107	1		1	1	93	93	Barrow	Barrow	

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Mertonia lanka	Laurie, 1906	28926100		1	1	1	100	100	Red Bluff	Red Bluff	Y
Paraselwynia sp. MoV 5089		28926115	1	1	1	1	96	97	Mentelle	Mentelle	Y
Pilumnidae sp. MoV 4995		28926126	1	1	1	1	848	1050	Perth Canyon	Perth Canyon	Y
Pilumnopeus sp. MoV 5106		28926116	1	1	1	1	105	106	Ningaloo	Ningaloo	
Pilumnus cf. *spinicarpus*	Grant & McCulloch, 1906	99280440				8	85	183	Jurien Bay	Ningaloo	Y
Pilumnus kingstoni	(Rathbun, 1923)	28926061			1	3	105	253	Bald Island	Kalbarri	Y
Pilumnus sp. MoV 5094		28926117	1	1	1	1	165	166	Ningaloo	Ningaloo	
Pilumnus sp. MoV 5098		28926118				3	100	106	Zuytdorp	Barrow	
Pilumnus sp. MoV 5099		28926119	1	1	1	3	100	183	Abrolhos	Barrow	Y
Pilumnus sp. MoV 5100		28926120				1	165	166	Ningaloo	Ningaloo	
Pilumnus sp. MoV 5103		28926121	1	1	1	1	165	166	Ningaloo	Ningaloo	
Pilumnus sp. MoV 5104		28926122				1	93	93	Barrow	Barrow	
Pilumnus sp. MoV 5297		28926123				1	100	100	Shark Bay	Shark Bay	
Pilumnus sp. MoV 5474		28926124	1	1	1	1	100	100	Carnarvon	Carnarvon	
Pilumnus sp. MoV 5475		28926125	1	1	1	1	112	123	Kalbarri	Kalbarri	
Family Portunidae											
Charybdis hongkongensis	Shen, 1934	28911105		1	1	1	100	100	Carnarvon	Carnarvon	Y
Charybdis miles	(De Haan, 1835)	28911019			1	2	165	177	Ningaloo	Ningaloo	Y
Echinolatus poorei	Davie & Crosnier, 2006	28911109			1	12	89	484	Bald Island	Two Rocks	Y
Libystes paucidentatus	Stephenson & Campbell, 1960	28911054			1	1	170	177	Ningaloo	Ningaloo	
Liocarcinus corrugatus	(Pennant, 1777)	28911016				6	96	123	Kalbarri	Red Bluff	Y
Lissocarcinus orbicularis	Dana, 1852	28911036				1	100	100	Point Cloates	Point Cloates	

Lupocyclus philippinensis	Semper, 1880	28911061			1	4	100	107	Carnarvon	Barrow	Y
Lupocyclus quinquedentatus	Rathbun, 1906	28911103		1	1	1	100	100	Shark Bay	Shark Bay	Y
Lupocyclus sp. MoV 5185		28911115	1	1	1	6	100	166	Kalbarri	Ningaloo	Y
Nectocarcinus spinifrons	Stephenson, 1961	28911051				6	95	102	Mentelle	Red Bluff	Y
Ovalipes elongatus	Stephenson & Rees, 1968	28911057			1	1	91	92	Point Hillier	Point Hillier	
Ovalipes iridescens	(Miers, 1886)	28911059			1	6	355	431	Abrolhos	Point Cloates	Y
Parathranites orientalis	(Miers, 1886)	28911021			1	13	85	253	Abrolhos	Ningaloo	Y
Parathranites sp. MoV 5290		28911116	1	1	1	1	100	100	Point Cloates	Point Cloates	
Portunidae sp. MoV 5289		28911119	1	genus	1	1	91	92	Point Hillier	Point Hillier	
Portunus haanii	(Stimpson, 1858)	28911033				5	100	1085	Shark Bay	Ningaloo	Y
Portunus hastatoides	(Fabricius, 1798)	28911030				1	165	166	Ningaloo	Ningaloo	
Portunus longispinosus	(Dana, 1852)	28911106			1	2	100	101	Red Bluff	Point Cloates	Y
Portunus nipponensis	(Sakai, 1938)	28911107			1	1	100	100	Point Cloates	Point Cloates	Y
Portunus pulchricristatus	(Gordon, 1931)	28911108			1	3	100	166	Ningaloo	Barrow	
Portunus sp. MoV 5287		28911117	1	1	1	3	101	107	Ningaloo	Ningaloo	
Portunus sp. MoV 5288		28911118	1	1	1	1	106	107	Ningaloo	Ningaloo	
Thalamita macropus	Montgomery, 1931	28911094				9	85	210	Mentelle	Barrow	Y
Thalamita sexlobata	Miers, 1886	28911023			1	1	112	123	Kalbarri	Kalbarri	Y
Thalamita spinifera	Borradaile, 1902	28911025				2	100	123	Kalbarri	Barrow	Y
Family Retroplumidae											
Retropluma sp. MoV 5093		28961002		family & genus	1	1	373	382	Ningaloo	Ningaloo	
Family Trapeziidae											
Quadrella reticulata	Alcock, 1898	28927022			1	4	96	107	Kalbarri	Ningaloo	Y
Family Panopeidae											
Homoioplax haswelli	(Miers, 1884)	28918001				1	170	177	Ningaloo	Ningaloo	

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Family Xanthidae											
Actaea calculosa	(H. Milne Edwards, 1834)	28920002				1	96	97	Mentelle	Mentelle	
Actaea peronii peronii	(H. Milne Edwards, 1834)	28920001				4	95	100	Bald Island	Bunbury	Y
Atergatopsis sp. MoV 5117		28920187				1	165	166	Ningaloo	Ningaloo	
Calvactaea tumida	Ward, 1933	28920026				1	101	106	Ningaloo	Ningaloo	Y
Chlorodiella laevissima	(Dana, 1852)	28920055				1	97	97	Zuytdorp	Zuytdorp	
Demania wardi	Garth & Ng, 1985	28920004			1	1	165	166	Ningaloo	Ningaloo	
Medaeus sp. MoV 5081		28920188	1	1	1	1	165	166	Ningaloo	Ningaloo	
Monodaeus tuberculidens	(Rathbun, 1911)	28920178		1	1	2	132	166	Ningaloo	Ningaloo	
Nanocassiope sp. MoV 5087		28920189	1	1	1	1	0	102	Two Rocks	Two Rocks	Y
Nanocassiope sp. MoV 5299		28920190	1	1	1	16	85	123	Two Rocks	Barrow	Y
Novactaea sp. MoV 5074		28920191				7	96	157	Bald Island	Carnarvon	
Palapedia pelsartensis	(Serène, 1972)	28920102				1	100	101	Red Bluff	Red Bluff	Y
Palapedia valentini	Ng, 2003	28920176		1	1	1	112	123	Kalbarri	Kalbarri	Y
Paractaea rufopunctata	(H. Milne Edwards, 1834)	28920049				1	165	166	Ningaloo	Ningaloo	
Paractaea sp. MoV 5109		28920192	1	1	1	1	113	114	Jurien Bay	Jurien Bay	
Paraxanthodes sp. MoV 5072		28920193				1	180	183	Abrolhos	Abrolhos	Y
Platypodia sp. MoV 5082		28920194				1	96	98	Kalbarri	Kalbarri	
Xanthias sp. MoV 5076		28920195	1	1	1	1	252	253	Kalbarri	Kalbarri	Y
Infraorder Caridea											
Family Alpheidae											
Alpheopsis cf. *trispinosa*	(Stimpson, 1861)	99280437				2	96	100	Albany	Mentelle	Y

Alpheopsis sp. MoV 5407		28765170	1	1	1	1	165	166	Ningaloo	Ningaloo	
Alpheopsis sp. MoV 5408		28765171	1	1	1	2	100	210	Two Rocks	Point Cloates	
Alpheus alcyone	de Man, 1902	28765015				1	100	100	Point Cloates	Point Cloates	
Alpheus hailstonei	Coutière, 1905	28765048				8	95	210	Bald Island	Kalbarri	Y
Alpheus paralcyone	Coutière, 1905	28765068				2	100	101	Shark Bay	Barrow	
Alpheus parasocialis	Banner & Banner, 1982	28765069				1	710	728	Bald Island	Bald Island	
Alpheus sp. MoV 5403		28765166	1	1	1	2	100	100	Shark Bay	Point Cloates	Y
Alpheus sp. MoV 5405		28765167	1	1	1	1	97	99	Bald Island	Bald Island	
Alpheus sp. MoV 5406		28765168	1	1	1	2	373	414	Zuytdorp	Ningaloo	
Alpheus sp. MoV 5409		28765169	1	1	1	3	99	179	Bald Island	Albany	Y
Synalpheus comatularum	(Haswell, 1882)	28765126				2	96	100	Kalbarri	Point Cloates	Y
Synalpheus lophodactylus	Coutière, 1908	28765138				1	85	86	Abrolhos	Abrolhos	
Synalpheus neomeris	(de Man, 1897)	28765139				1	112	123	Kalbarri	Kalbarri	
Synalpheus neptunus germanus	Banner & Banner, 1975	28765140				3	96	166	Mentelle	Ningaloo	Y
Synalpheus nilandensis	Coutière, 1905	28765141				4	100	382	Shark Bay	Point Cloates	
Synalpheus streptodactylus	Coutière, 1905	28765150				5	96	123	Kalbarri	Ningaloo	
Synalpheus theano	de Man, 1910	28765151				1	106	106	Zuytdorp	Zuytdorp	
Family Anchistioididae											
Anchistioides willeyi	(Borradaile, 1899)	28753003			1	1	100	101	Barrow	Barrow	
Family Bathypalaemonellidae											
Bathypalaemonella pilosipes	Bruce, 1986	28754002				1	1000	1037	Abrolhos	Abrolhos	
Family Bresiliidae											
Discias brownae	Kensley, 1983	28750004			1	1	147	157	Bald Island	Bald Island	
Family Campylonotidae											
Campylonotus rathbunae	Schmitt, 1926	28755001				3	676	728	Bald Island	Albany	Y

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Family Crangonidae											
Aegaeon lacazei	(Gourret, 1887)	28781004			1	7	105	414	Bald Island	Red Bluff	Y
Lissosabinea lynseyae	Taylor & Collins, 2009	28781020	1	1	1	1	414	421	Bunbury	Bunbury	Y
Metacrangon sp. MoV 5423		28781038	1	1	1	4	408	728	Bald Island	Perth Canyon	Y
Parapontocaris aspera	F.A. Chace, 1984	28781023		1	1	2	373	399	Ningaloo	Ningaloo	
Parapontocaris levigata	Chace, 1984	28781001		1	1	2	324	399	Ningaloo	Ningaloo	Y
Parapontophilus junceus	(Bate, 1888)	28781025		1	1	9	479	1085	Bald Island	Ningaloo	Y
Parapontophilus sp. MoV 5439		28781039	1	1	1	1	411	411	Red Bluff	Red Bluff	
Philoceras incisus	(Kemp, 1916)	28781032		1	1	3	101	120	Shark Bay	Ningaloo	Y
Pontocaris pennata	Bate, 1888	28781024		1	1	2	100	102	Ningaloo	Barrow	Y
Pontocaris propensalata	Bate, 1888	28781017			1	1	165	166	Ningaloo	Ningaloo	
Family Eugonatonotidae											
Eugonatonotus chacei	Chan & Yu, 1991	28751001				1	387	399	Ningaloo	Ningaloo	Y
Family Glyphocrangonidae											
Glyphocrangon cf. *perplexa*	Komai, 2004	99280439				1	726	732	Ningaloo	Ningaloo	
Glyphocrangon confusa	Komai, 2004	28780010				1	700	704	Abrolhos	Abrolhos	Y
Glyphocrangon lineata	Komai, 2004	28780011				2	658	754	Ningaloo	Ningaloo	Y
Glyphocrangon sibogae	De Man, 1918	28780016		1	1	1	1260	1295	Ningaloo	Ningaloo	Y
Family Hippolytidae											
Eualus sp. MoV 2681		28767040	1		1	3	900	980	Bald Island	Albany	Y
Lebbeus clarehannah	McCallum & Poore, 2010	28767048	1	1	1	1	408	431	Bald Island	Bald Island	Y
Lysmata amboinensis	(de Man, 1888)	28767026				1	100	100	Point Cloates	Point Cloates	Y

Merhippolyte chacei	Kensley, Tranter & Griffin, 1987	28767004			1	3	676	728	Bald Island	Albany	Y
Tozeuma tomentosum	(Baker, 1904)	28767039			1	4	95	101	Zuytdorp	Barrow	Y
Family Nematocarcinidae											
Nematocarcinus productus	Bate, 1888	28737002				2	1073	1110	Point Hillier	Point Hillier	
Nematocarcinus sp. MoV 5456		28737013	1	1	1	2	978	1110	Bald Island	Point Hillier	
Nematocarcinus tenuirostris	Bate, 1888	28737003				1	1260	1295	Ningaloo	Ningaloo	
Nematocarcinus undulatipes	Bate, 1888	28737004			1	1	1260	1295	Ningaloo	Ningaloo	
Family Oplophoridae											
Acanthephyra armata	A. Milne Edwards, 1881	28735002				3	658	1010	Ningaloo	Ningaloo	Y
Acanthephyra faxoni	Calman, 1939	28735029		1	1	2	1051	1085	Ningaloo	Ningaloo	
Acanthephyra quadrispinosa	Kemp, 1939	28735007				5	848	1295	Point Hillier	Ningaloo	Y
Janicella spinicauda	(A. Milne Edwards, 1883)	28735015				1	658	754	Ningaloo	Ningaloo	
Oplophorus gracilirostris	A. Milne Edwards, 1881	28735030				3	324	430	Point Cloates	Barrow	Y
Oplophorus novaezelandiae	(de Man, 1931)	28735014				1	978	980	Bald Island	Bald Island	Y
Systellaspis debilis	(A. Milne Edwards, 1881)	28735018				2	983	1085	Ningaloo	Ningaloo	
Family Palaemonidae											
Periclimenes aleator	A.J. Bruce, 1991	28756233		1	1	1	399	408	Barrow	Barrow	
Pseudoclimenes holthuisi	A.J. Bruce, 2008	28756234	1	genus	1	1	113	114	Jurien Bay	Jurien Bay	
Family Pandalidae											
Chlorotocella spinicaudus	(H. Milne Edwards, 1837)	28770025				1	105	106	Bald Island	Bald Island	
Chlorotocus sp. MoV 5443		28770053	1	1	1	1	324	356	Ningaloo	Ningaloo	
Heterocarpus dorsalis	Bate, 1888	28770002				7	726	1295	Perth Canyon	Ningaloo	Y
Heterocarpus hayashii	Crosnier, 1988	28770004			1	5	368	431	Abrolhos	Ningaloo	Y
Heterocarpus sp. MoV 5540		28770048	1	1	1	3	387	411	Ningaloo	Barrow	

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Heterocarpus tricarinatus	Alcock & Anderson, 1894	28770006				1	1260	1295	Ningaloo	Ningaloo	Y
Heterocarpus woodmasoni	Alcock, 1901	28770007				3	373	430	Point Cloates	Barrow	Y
Plesionika bifurca	Alcock & Anderson, 1894	28770019				1	983	1010	Ningaloo	Ningaloo	
Plesionika binoculus	(Bate, 1888)	28770032				1	165	166	Ningaloo	Ningaloo	
Plesionika cf. *kensleyi*	Chace, 1985	99280438				5	387	1050	Bald Island	Ningaloo	Y
Plesionika edwardsi	(Brandt, 1851)	28770020			1	3	252	404	Two Rocks	Carnarvon	
Plesionika orientalis	Chace, 1985	28770015				10	324	728	Bald Island	Ningaloo	Y
Plesionika philippinensis	Chace, 1985	28770049		1	1	1	104	114	Ningaloo	Ningaloo	
Plesionika reflexa	Chace, 1985	28770022				1	399	408	Barrow	Barrow	
Plesionika semilaevis	Bate, 1888	28770017				2	387	680	Albany	Ningaloo	
Plesionika serratifrons	(Borradaile, 1899)	28770050		1	1	4	100	253	Kalbarri	Ningaloo	Y
Plesionika sp. MoV 5457		28770054	1	1	1	2	368	980	Bald Island	Carnarvon	
Plesionika spinidorsalis	(Rathbun, 1906)	28770038				5	324	754	Ningaloo	Barrow	
Plesionika spinipes	Bate, 1888	28770023			1	1	101	106	Ningaloo	Ningaloo	
Procletes levicarina	(Bate, 1888)	28770040				4	101	206	Ningaloo	Ningaloo	
Family Pasiphaeidae											
Alainopasiphaea australis	(Hanamura, 1989)	28745019				1	676	680	Albany	Albany	Y
Eupasiphae sp. MoV 5427		28745030	1	1	1	2	726	1050	Ningaloo	Ningaloo	Y
Leptochela sydniensis	Dakin & Colefax, 1940	28745016			1	5	95	370	Albany	Ningaloo	Y
Pasiphaea kapala	Kensley, Tranter & Griffin, 1987	28745005				1	685	695	Albany	Albany	Y
Pasiphaea longitaenia	Kesley, Tranter & Griffin, 1987	28745006			1	1	983	1010	Ningaloo	Ningaloo	Y
Pasiphaea tarda	Krøyer, 1845	28745009				1	1074	1080	Point Hillier	Point Hillier	

Family Processidae										
Hayashidonus japonica	(De Haan, 1844)	28768001		1	1	2	101	166	Ningaloo	Ningaloo	
Processa gracilis	Baker, 1907	28768010			1	1	96	97	Mentelle	Mentelle	Y
Processa longirostris	Hayashi, 1975	28768012		1	1	3	100	107	Carnarvon	Ningaloo	
Family Rhynchocinetidae										
Rhynchocinetes brucei	Okuno, 1994	28752002			1	5	100	183	Abrolhos	Ningaloo	Y
Rhynchocinetes enigma	Okuno, 1997	28752011			1	5	97	210	Bald Island	Two Rocks	Y
Family Thalassocarididae										
Thalassocaris crinita	(Dana, 1852)	28771001		1	1	4	97	100	Zuytdorp	Point Cloates	
Infraorder Polychelata										
Family Polychelidae										
Pentacheles laevis	Bate, 1878	28815005				4	928	1170	Albany	Perth Canyon	Y
Polycheles auriculatus	(Bate, 1878)	28815014				8	658	1170	Bald Island	Ningaloo	Y
Polycheles coccifer	Galil, 2000	28815019		1	1	2	324	382	Ningaloo	Ningaloo	Y
Polycheles suhmi	(Bate, 1878)	28815010			1	2	676	728	Bald Island	Albany	Y
Polycheles typhlops	Heller, 1862	28815001				2	373	399	Ningaloo	Ningaloo	
Infraorder Stenopodidea										
Family Stenopodidae										
Engystenopus palmipes	Alcock & Anderson, 1894	28724004			1	1	387	399	Ningaloo	Ningaloo	
Odontozona sculpticaudata	Holthuis, 1946	28725002				1	100	100	Point Cloates	Point Cloates	
Infraorder Axiidea										
Family Axiidae										
Acanthaxius gathaagudu	Poore & Collins, 2009	28801024	1	1	1	1	404	407	Shark Bay	Shark Bay	Y
Acanthaxius ningaloo	Poore & Collins, 2009	28801025	1	1	1	1	165	166	Ningaloo	Ningaloo	Y

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Australocaris pinjarup	Poore & Collins, 2009	28801027	1	1	1	1	397	423	Bunbury	Bunbury	Y
Axiopsis tsushimaensis	Sakai, 1992	28801021		1	1	2	113	157	Bald Island	Jurien Bay	
Bouvieraxius keiensis	Sakai, 1992	28801013		1	1	2	96	100	Kalbarri	Shark Bay	Y
Calastacus myalup	Poore & Collins, 2009	28801029	1	1	1	1	397	423	Bunbury	Bunbury	
Calaxius acutirostris	Sakai & de Saint Laurent, 1989	28801014				1	405	414	Zuytdorp	Zuytdorp	Y
Paraxiopsis pumilus	(Sakai, 1994)	28801017				1	100	101	Barrow	Barrow	
Planaxius brevifrons	Komai & Tachikawa, 2008	28801033		1	1	1	113	114	Jurien Bay	Jurien Bay	
Family Callianassidae											
Callianassa sahul	Poore, 2008	28803029			1	1	100	100	Point Cloates	Point Cloates	
Callianassa sp. MoV 4961		28803031	1	1	1	1	201	206	Ningaloo	Ningaloo	
Callianassa sp. MoV 4962		28803032	1	1	1	1	201	206	Ningaloo	Ningaloo	
Callianassa sp. MoV 4963		28803033	1	1	1	1	113	114	Jurien Bay	Jurien Bay	
Callianassa sp. MoV 4966		28803034	1	1	1	1	106	107	Ningaloo	Ningaloo	
Corallianassa sp. MoV 4965		28803035	1	1	1	2	102	169	Bald Island	Two Rocks	Y
Lipkecallianassa sp. MoV 4960		28803036	1	1	1	3	100	206	Point Cloates	Ningaloo	
Family Micheleidae											
Michelea sp. MoV 4969		28804009	1	1	1	1	112	123	Kalbarri	Kalbarri	
Tethisea sp. MoV 5472		28804010	1	1	1	1	419	460	Point Hillier	Point Hillier	Y
Infraorder Gebiidea											
Family Upogebiidae											
Upogebia ancylodactyla	de Man, 1905	28805021				1	0	102	Two Rocks	Two Rocks	Y

Upogebia bowerbankii	(Miers, 1884)	28805002				1	104	114	Ningaloo	Ningaloo	Y
Upogebia holthuisi	Sakai, 1982	28805024		1	1	1	100	100	Shark Bay	Shark Bay	
Phylum ARTHROPODA											
Subphylum CHELICERATA											
Class PYCNOGONIDA											
Order PANTOPODA											
Family Ammotheidae											
Cilunculus sp. 1		99330009				1	748	776	Albany	Albany	
Paranymphon bifilarium	Arango, 2009	33012053	1	genus	1	1	101	102	Ningaloo	Ningaloo	
Tanystylum zuytdorpi	Arango, 2009	33012054	1	1	1	1	97	97	Zuytdorp	Zuytdorp	Y
Family Callipallenidae											
Callipallene novaezealandiae	(Thompson, 1884)	33011009			1	1	101	102	Ningaloo	Ningaloo	
Callipallene sp. 1		99330008				1	96	97	Mentelle	Mentelle	
Parapallene australiensis	(Hoek, 1881)	33011016				1	95	99	Bunbury	Bunbury	Y
Parapallene challengeri	Calman, 1937	33011018			1	1	99	100	Albany	Albany	
Parapallene haddoni	Carpenter, 1892	33011020				3	89	99	Bald Island	Kalbarri	Y
Pseudopallene chevron	Staples, 2007	33011042			1	1	99	100	Albany	Albany	
Pseudopallene difficile	Arango, 2009	33011044	1	1	1	1	85	86	Abrolhos	Abrolhos	
Pseudopallene watsonae	Staples, 2005	33011040			1	1	96	97	Mentelle	Mentelle	
Family Colossendeidae											
Colossendeis colossea	Wilson, 1881	33014019				1	1074	1080	Point Hillier	Point Hillier	Y
Hedgpethia calva	Arango, 2009	33014024	1	1	1	1	976	980	Bald Island	Bald Island	Y
Rhopalorhynchus sibogae	Stock, 1959	33014017				2	100	123	Kalbarri	Carnarvon	Y

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Family Nymphonidae											
Nymphon rottnesti	Child, 1975	33010017				1	96	97	Mentelle	Mentelle	
Family Pallenopsidae											
Pallenopsis cidaribatus	Child, 1975	33020010				4	101	120	Shark Bay	Ningaloo	Y
Pallenopsis temperans	Stock, 1953	33020015		1	1	1	100	100	Point Cloates	Point Cloates	Y
Phylum TUNICATA											
Class ASCIDIACEA											
Order ENTEROGONA											
Family Clavelinidae											
Clavelina meridionalis	(Herdman, 1891)	35011007				1	100	100	Point Cloates	Point Cloates	
Family Diazonidae											
Rhopalaea crassa	(Herdman, 1880)	35012002				3	113	431	Bald Island	Jurien Bay	Y
Family Didemnidae											
Atriolum bucinum	Kott, 2001	35013211				1	96	97	Mentelle	Mentelle	Y
Atriolum tubiporum	Kott, 2001	35013215				4	97	213	Bald Island	Albany	
Didemnidae sp. indet.		35013000				1	147	157	Bald Island	Bald Island	
Didemnum candidum	Savigny, 1816	35013003				1	97	97	Zuytdorp	Zuytdorp	
Didemnum cygnuus	Kott, 2001	35013126				1	100	100	Lancelin	Lancelin	
Didemnum dolium	Kott, 2008	35013277	1	1	1	1	147	157	Bald Island	Bald Island	
Didemnum jedanense	Sluiter, 1909	35013141				1	147	157	Bald Island	Bald Island	
Didemnum moseleyi	(Herdman, 1886)	35013010				1	97	97	Zuytdorp	Zuytdorp	

Didemnum multiampullae	Kott, 2008	35013282	1	1	1	1	96	98	Kalbarri	Kalbarri	
Didemnum ossium	Kott, 2001	35013157				1	85	92	Jurien Bay	Jurien Bay	Y
Didemnum perplexum	Kott, 2001	35013162				3	96	157	Bald Island	Kalbarri	Y
Didemnum plebeium	Kott, 2005	35013272				1	419	460	Point Hillier	Point Hillier	
Didemnum sp. 1		99350091				1	113	114	Jurien Bay	Jurien Bay	
Didemnum sp. 2		99350092				1	252	253	Kalbarri	Kalbarri	
Didemnum tapetum	Kott, 2008	35013279	1	1	1	1	97	99	Bald Island	Bald Island	
Didemnum velum	Kott, 2008	35013280	1	1	1	1	179	179	Albany	Albany	
Leptoclinides durus	Kott, 2001	35013071				1	95	99	Bunbury	Bunbury	Y
Leptoclinides fungiformis	Kott, 1972	35013025				2	95	100	Albany	D'Entrecasteaux	
Leptoclinides multilobatus	Kott, 1954	35013029				1	147	157	Bald Island	Bald Island	
Leptoclinides vesica	Kott, 2008	35013285	1	1	1	1	97	97	Zuytdorp	Zuytdorp	
Lissoclinum maculatum	Kott, 2001	35013202				1	147	157	Bald Island	Bald Island	
Polysyncraton calculum	Kott, 2008	35013278	1	1	1	1	147	157	Bald Island	Bald Island	
Polysyncraton dealbatum	Kott, 2008	35013283	1	1	1	1	100	100	Shark Bay	Shark Bay	
Polysyncraton fistulum	Kott, 2008	35013275	1	1	1	1	0	102	Two Rocks	Two Rocks	Y
Polysyncraton millepore	Vasseur, 1969	35013094				5	85	114	Albany	Kalbarri	Y
Polysyncraton palliolum	Kott, 2001	35013098				1	113	114	Jurien Bay	Jurien Bay	
Polysyncraton pavimentum	Monniot, 1993	35013281		1	1	3	96	253	Kalbarri	Zuytdorp	Y
Tridemnum grandistellatum	Kott, 2008	35013276	1	1	1	1	147	157	Bald Island	Bald Island	
Tridemnum sibogae	(Hartmeyer, 1910)	35013058				2	113	157	Bald Island	Jurien Bay	
Family Holozoidae											
Sycozoa seiziwadai	Tokioka, 1952	35015035				1	96	98	Kalbarri	Kalbarri	Y
Family Polycitoridae											

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Cystodytes dellachiajei	(Della Valle, 1877)	35018002				4	85	157	Bald Island	Zuytdorp	
Eucoelium coronarium	(Monniot, 1988)	35018004				1	96	98	Kalbarri	Kalbarri	Y
Eudistoma convocatum	Kott, 2008	35018047	1	1	1	1	99	100	Albany	Albany	
Eudistoma eboreum	Kott, 1990	35018013				1	96	98	Kalbarri	Kalbarri	
Family Polyclinidae											
Aplidium caelestis	Monniot, 1987	35019010				3	96	157	Bald Island	Kalbarri	Y
Aplidium clivosum	Kott, 1992	35019011				3	113	196	Bald Island	Jurien Bay	
Aplidium crateriferum	(Sluiter, 1909)	35019015				3	95	114	Albany	Jurien Bay	
Aplidium crustum	Kott, 2008	35019100	1	1	1	2	95	100	Albany	D'Entrecasteaux	
Aplidium eudistomum	Kott, 2008	35019101	1	1	1	3	96	213	Albany	Kalbarri	
Aplidium hyacinthum	Kott, 2008	35019095	1	1	1	1	99	100	Albany	Albany	
Aplidium magnilarvum	Kott, 1992	35019034				3	96	213	Bald Island	Mentelle	Y
Aplidium panis	Kott, 2008	35019097	1	1	1	1	99	100	Albany	Albany	
Aplidium solidum	(Herdman, 1891)	35019047				3	96	157	Bald Island	Kalbarri	Y
Aplidium sp. 1		99350093				1	95	100	D'Entrecasteaux	D'Entrecasteaux	
Aplidium sp. 2		99350094				1	147	157	Bald Island	Bald Island	
Aplidium tuberosum	Kott, 2008	35019096	1	1	1	2	99	114	Albany	Jurien Bay	
Synoicum chrysanthemum	Kott, 1992	35019072				7	85	213	Bald Island	Kalbarri	Y
Synoicum implicatum	Kott, 2008	35019102	1	1	1	1	195	196	Point Hillier	Point Hillier	
Synoicum laboutei	Monniot & Monniot, 2006	35019094		1	1	1	96	97	Mentelle	Mentelle	
Synoicum macroglossum	(Hartmeyer, 1919)	35019079				1	97	99	Bald Island	Bald Island	
Synoicum obscurum	Kott, 1992	35019080				1	147	157	Bald Island	Bald Island	

Synoicum pseudogrisiatum	Kott, 2008	35019098	1	1	1	2	99	114	Albany	Jurien Bay	
Synoicum rapum	Kott, 2008	35019099	1	1	1	1	99	100	Albany	Albany	
Synoicum sphinctorum	Kott, 2006	35019093			1	1	99	100	Albany	Albany	
Synoicum vesica	Kott, 2008	35019103	1	1	1	1	195	196	Point Hillier	Point Hillier	
Family Protopolyclinidae											
Condominium areolatum	(Kott, 1963)	35020001				1	95	100	D'Entrecasteaux	D'Entrecasteaux	
Condominium floreum	Kott, 2008	35020005	1	1	1	1	99	100	Albany	Albany	
Pseudodiazona longigona	(Tokioka, 1959)	35020004			1	1	99	100	Albany	Albany	
Family Pseudodistomidae											
Pseudodistoma australe	Kott, 1957	35021004				2	97	157	Bald Island	Bald Island	
Sigillina australis	Savigny, 1816	35021011				7	95	213	Albany	Carnarvon	Y
Sigillina cyanea	(Herdman, 1899)	35021012				3	112	169	Bald Island	Kalbarri	
Sigillina grandissima	Kott, 1990	35021014				1	106	106	Zuytdorp	Zuytdorp	
Order PLEUROGONA											
Family Molgulidae											
Mogula elva	Kott, 2008	35031018	1	1	1	1	180	183	Abrolhos	Abrolhos	
Family Pyuridae											
Herdmania grandis	(Heller, 1878)	35032046				2	100	114	Lancelin	Jurien Bay	Y
Herdmania momus	(Savigny, 1816)	35032008			1	3	378	431	Bald Island	D'Entrecasteaux	Y
Pyura scortea	Kott, 1985	35032038				1	355	382	Point Cloates	Point Cloates	
Family Styelidae											
Cnemidocarpa completa	Kott, 1985	35033048				1	106	106	Zuytdorp	Zuytdorp	Y
Cnemidocarpa radicosa	(Herdman, 1882)	35033059				1	97	99	Bald Island	Bald Island	
Polycarpa argentata	(Sluiter, 1890)	35033063				1	89	96	Point Hillier	Point Hillier	
Polycarpa aurita	(Sluiter, 1890)	35033065				1	106	106	Zuytdorp	Zuytdorp	Y
Polycarpa chinensis	(Tokioka, 1967)	35033067				4	100	213	Bald Island	Carnarvon	

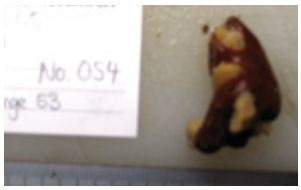
Species name	Authority	CAAB number	New species*	New record for Australia	New record for Western Australia	Number of stations	Min. depth (m)	Max. depth (m)	Southern-most site	Northern-most site	Image in app. 2
Polycarpa decipiens	Herdman, 1906	35033070				2	100	123	Lancelin	Kalbarri	
Polycarpa viridis	Herdman, 1881	35033098				5	96	253	Jurien Bay	Zuytdorp	Y
Stolonica aluta	Kott, 1985	35033032				1	147	157	Bald Island	Bald Island	
Styela clava	Herdman, 1881	35033100				1	100	100	Shark Bay	Shark Bay	
Styela plicata	(Lesueur, 1823)	35033101				1	93	93	Barrow	Barrow	Y
Class THALIACEA											
Order DOLIOLODA											
Family Doliolidae											
Dolioletta gegenbauri	(Uljanin, 1884)	35102001				1	404	407	Shark Bay	Shark Bay	Y
Order PYROSOMIDA											
Family Pyrosomatidae											
Pyrosoma atlanticum	Péron, 1804	35101001				1	978	980	Bald Island	Bald Island	
Order SALPIDA											
Family Salpidae											
Salpa maxima	Forskål, 1775	35103015				2	100	411	Red Bluff	Point Cloates	

*New species includes those species from the survey as yet undescribed and also those which have subsequently been described – species name shown in bold italics

APPENDIX 2

Gallery of live colour images of over half the species of invertebrate megabenthos identified from the western continental margin of Australia.

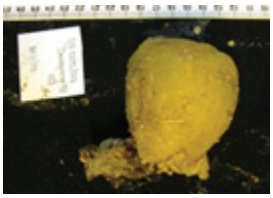
Note: Image names show the CAAB number plus the species name – this can be matched to Appendix 1 for further information each the species. Note not all species are photographed due to the level of rough sorting permissible at sea.



99100382-*Plakinastrella*-sp.WAMSS2

99100383-*Plakinastrella*-sp.WAMSS1

99100384-*Cinachyrella*-sp.WAMSS2



99100387-*Cinachyrella*-sp.WAMSS1

99100258-*Craniella*-sp.WAMSS1

99100385-*Cinachyrella*-sp.WAMSS3

99100386-*Cinachyrella*-sp.WAMSS4

99100388-*Tetilla*-sp.WAMSS1

99100259-*Cinachyrella*-cf.-*australiensis*

99100389-*Craniella*-sp.WAMSS2

10009010-*Asteropus-simplex*

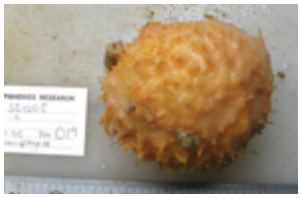
10009023-*Stelletta-clavosa*

99100390-*Rhabdastrella*-sp.WAMSS3

99100391-*Stelletta*-sp.WAMSS1

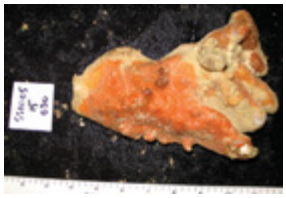
99100392-*Ecionemia*-sp.WAMSS2

99100393-*Rhabdastrella*-sp.WAMSS1



99100394-*Psammastra*-sp.WAMSS1

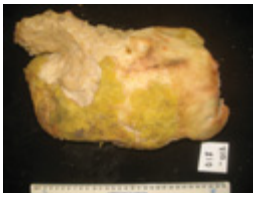
99100395-*Ancorina*-sp.WAMSS1



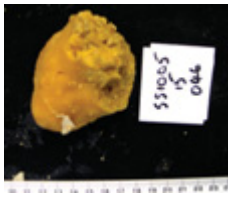
99100399-*Asteropus*-sp.WAMSS4

99100401-*Stelletta*-sp.WAMSS2

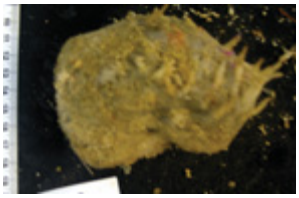
99100409-*Tethyopsis*-sp.WAMSS1



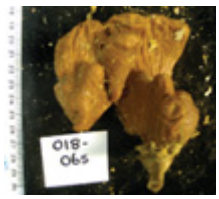
99100397-*Asteropus*-sp.WAMSS2



99100354-*Asteropus*-sp.WAMSS1



99100398-*Asteropus*-sp.WAMSS3



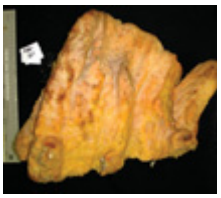
99100410-*Penares*-sp.WAMSS1

99100403-*Stelletta*-sp.WAMSS4

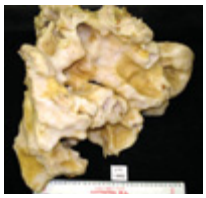
99100402-*Stelletta*-sp.WAMSS3

99100412-*Ecionemia*-sp.WAMSS3

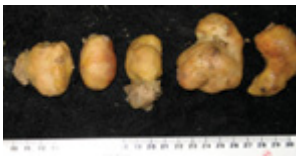
99100286-*Psammastra*-sp.WAMSS2



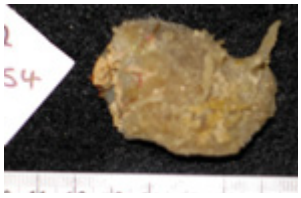
99100396-*Ancorina*-sp.WAMSS2



99100400-*Asteropus*-sp.WAMSS5

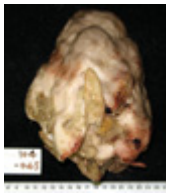


99100411-*Ecionemia*-sp.WAMSS1



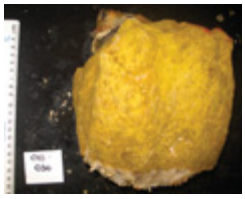
99100413-*Jaspis*-sp.WAMSS1

99100414-*Jaspis*-sp.WAMSS2

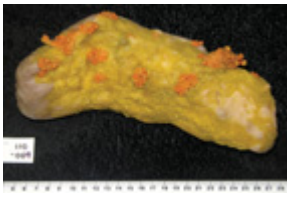


99100407-*Stelletta*-sp.WAMSS8

99100417-*Jaspis*-sp.WAMSS5



99100421-*Rhabdastrella*-sp.WAMSS4



99100416-*Jaspis*-sp.WAMSS4

99100422-*Asteropus*-cf.-*simplex*

99100292-*Stelletta*-sp.WAMSS9

99100423-*Geodia*-sp.WAMNG1

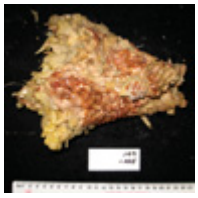
99100426-*Isops*-sp.WAMSS1

99100424-*Geodia*-sp.WAMSS1

99100427-*Isops*-sp.WAMSS2

99100425-*Geodia*-sp.WAMSS2

99100263-*Erylus*-sp.WAMSS1

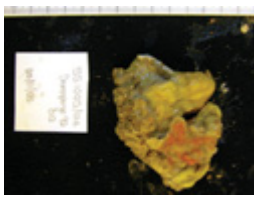


99100428-*Isops*-sp.WAMSS3

99100241-*Erylus*-sp.WAMSS2

10021022-*Spheciospongia-purpurea*

10021023-*Spheciospongia-papillosa*



99100430-*Spheciospongia-*cf.*-papillosa*

99100431-*Spheciospongia-*sp.WAMMF1

99100433-*Hemiasterella-*sp.WAMSS2

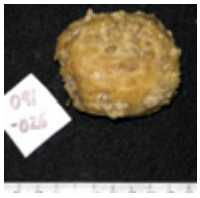
99100434-*Sceptrella-*sp.WAMSS1

99100435-*Sceptrella-*sp.WAMSS2

99100332-*Latrunculia-*sp.WAMSS1

99100438-*Polymastia-*sp.WAMSS2

99100319-*Polymastia-*sp.WAMSS3

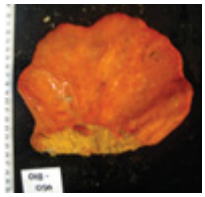


99100327-*Polymastia-*sp.WAMSS1

99100285-*Polymastia-*sp.WAMSS5

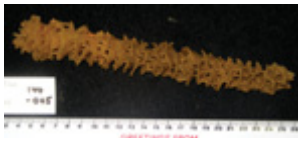
99100262-*Polymastia-*sp.WAMSS4

99100441-*Diplastrella-*sp.WAMSS2



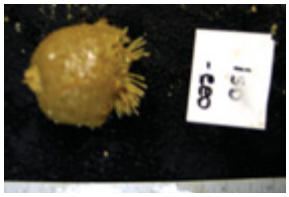
99100440-*Diplastrella-*sp.WAMSS1

10028003-*Caulospongia-biflabellata*

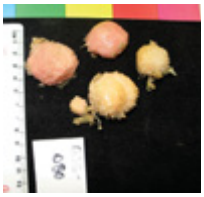


10028007-*Caulospongia-plicata*

99100443-*Tethyastra-*sp.WAMSS1



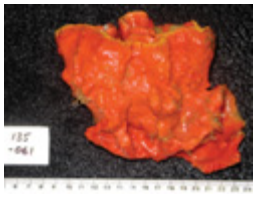
99100444-*Tethyastra-*sp.WAMSS2



99100287-*Tethya-*cf.*-ingalli*

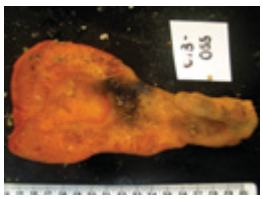
99100445-*Stellitethya-*sp.WAMSS1

10031001-*Trachycladus-laevispirulifer*



99100447-*Theonella-*sp.WAMSS1

99100448-*Agelas-*sp.WAMSS1



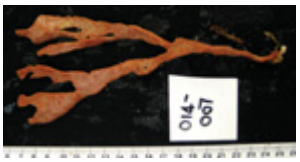
99100449-*Agelas*-sp.WAMSS2

99100450-*Agelas*-sp.WAMSS3

99100452-*Zyzzya*-sp.WAMSS1

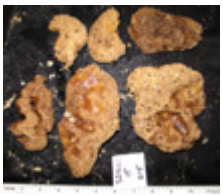
10066059-*Clathria-selachia*

10066066-*Clathria*-(Thalysias)-*abietina*

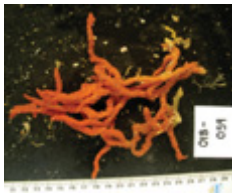


10066131-*Echinoclathria-leporina*

10066138-*Holopsamma-arborea*



99100453-*Holopsamma*-sp.WAMSS1



99100454-*Clathria*-(Thalysias) cf.-*juniperina*

99100460-*Clathria-(Clathria)*-sp.WAMSS3

99100455-*Holopsamma*-sp.WAMSS2

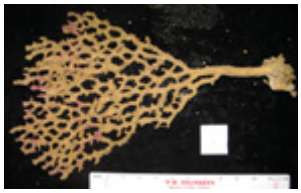
99100457-*Clathria-(Thalysias)*-sp.WAMSS1

99100456-*Clathria*-(Thalysias) cf.-*procera*

10067040-*Raspailia*-(Clathriodendron) *desmoxyiformis*

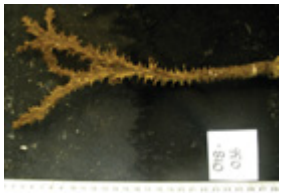
10067055-*Raspailia*-(Raspailia)-*vestigifera*

10067059-*Trikentrion-flabelliforme*

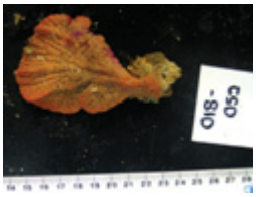


99100243-*Echinodictyum*-cf. *cancellatum*

99100462-*Raspailia-(Parasyringella)* sp.WAMSS3

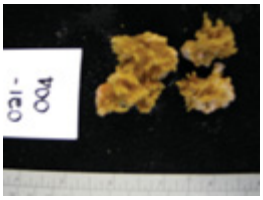


99100466-*Raspailia-(Clathriodendron)* sp.WAMSS1



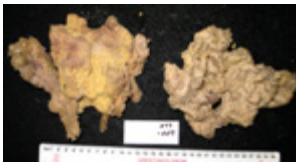
99100465-*Raspailia-(Raspaxilla)* sp.WAMNG1

99100461-*Raspailia-(Parasyringella)* sp.WAMSS2



99100464-*Raspailia-(Raspaxilla)* sp.WAMSS3

99100470-*Ceratopsion*-cf.-*dichotoma*



99100471-*Lithoplocamia*-sp.WAMSS1

99100468-*Aulospongus*-sp.WAMSS2

99100472-*Rhabderemia*-sp.WAMSS1

99100473-*Desmacidon*-sp.WAMSS1

99100474-*Fibulia*-sp.WAMSS1

99100475-*Fibulia*-sp.WAMSS2

99100300-*Coelosphaera-(Coelosphaera)* sp.WAMSS3

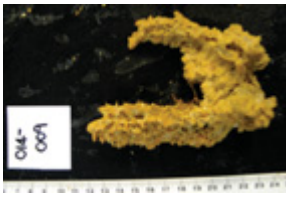
99100479-*Coelosphaera-(Coelosphaera)* sp.WAMSS5

99100478-*Coelosphaera-(Coelosphaera)* sp.WAMSS4

99100477-*Coelosphaera-(Coelosphaera)* sp.WAMSS2

99100476-*Coelosphaera-(Coelosphaera)* sp.WAMSS1

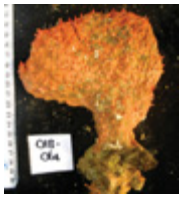
99100482-*Coelosphaera-(Coelosphaera)* sp.WAMSS8



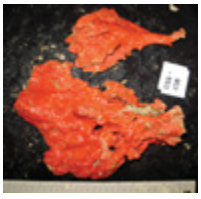
99100483-*Monanchora*-sp.WAMNG1

99100484-*Monanchora*-sp.WAMSS1

99100485-*Crella-(Pytheas)*-sp.WAMSS1

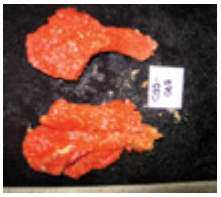


99100486-*Crella-(Crella)*-sp.WAMSS1

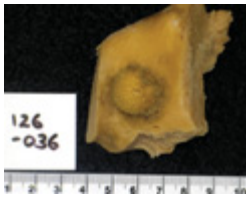


99100490-*Crella-(Yvesia)*-sp.WAMSS2

99100489-*Crella-(Yvesia)*-sp.WAMSS1

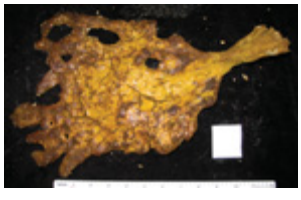


99100491-*Phorbas*-sp.WAMNG1

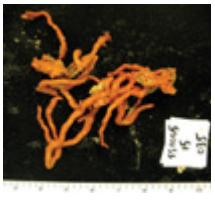


99100363-*Phorbas*-sp.WAMSS1

10077037-*Iotrochota-baculifera*



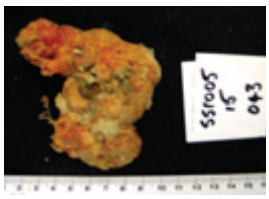
99100492-*Iotrochota*-cf.-*baculifera*



99100496-*Chondropsis*-sp.WAMSS1

99100495-*Chondropsis*-sp.WAMNG1

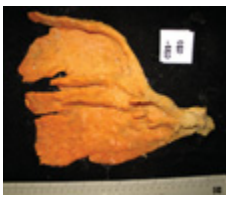
99100494-*Strongylacidon*-sp.WAMSS2



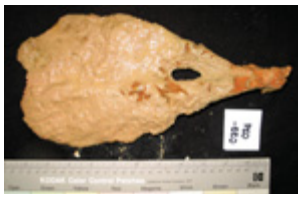
99100497-*Tedania-(Trachytedania)* sp.WAMSS1

99100499-*Tedania-(Tedaniopsis)* sp.WAMSS1

99100500-*Tedania-(Tedaniopsis)* sp.WAMSS2

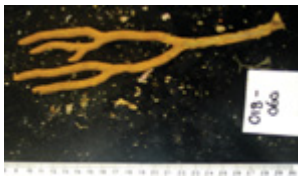


99100502-*Tedania-(Tedania)* sp.WAMSS1



99100503-*Strongylamma*-sp.WAMSS1

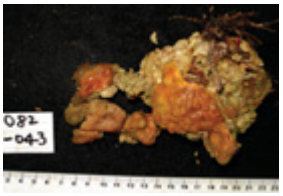
99100504-*Hemitedania*-sp.WAMSS1



99100508-*Sigmaxinella*-sp.WAMSS4

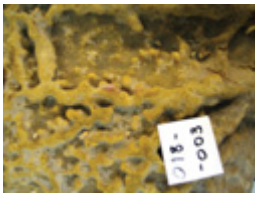
99100507-*Sigmaxinella* sp.WAMSS3

99100506-*Sigmaxinella*-sp.WAMSS2

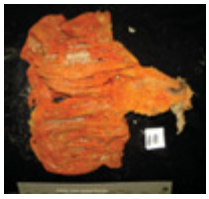


99100511-*Desmacella*-sp.WAMSS1

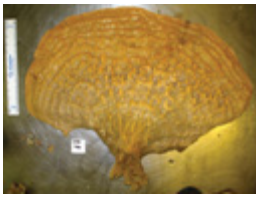
99100344-*Sigmaxinella*-sp.WAMSS5



99100512-*Biemna*-sp.WAMSS2



99100514-*Biemna*-sp.WAMSS4

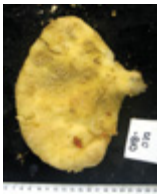


99100513-*Biemna*-sp.WAMSS3

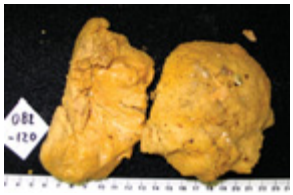
99100325-*Biemna*-sp.WAMSS1

99100505-*Sigmaxinella*-sp.WAMSS1

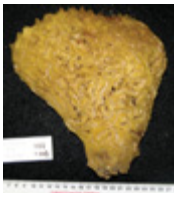
99100510-*Sigmaxinella*-cf.-soelae



99100519-*Mycale-(Aegogropila)* sp.WAMSS1



99100520-*Phlyctaenopora-(Phlyctaenopora)* sp.WAMSS1

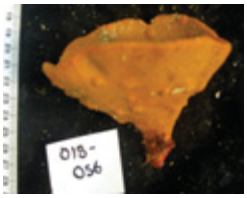


99100517-*Mycale-(Carmia)* sp.WAMSS3

99100521-*Pararhaphoxya*-sp.WAMSS1

99100523-*Axinella*-sp.WAMSS1

99100366-*Phakellia*-sp.WAMNG3

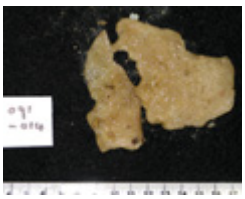


99100305-*Axinella*-sp.WAMNG3

99100524-*Axinella*-sp.WAMSS2

99100527-*Axinella*-sp.WAMSS6

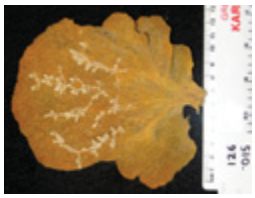
99100353-part-*Axinella*-sp.WAMSS3



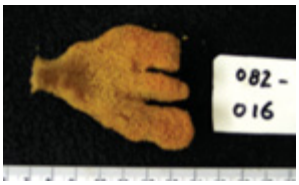
99100530-*Phakellia*-sp.WAMSS1

99100526-*Axinella*-sp.WAMSS5

99100365-*Axinella*-sp.WAMSS9



99100253-*Phakellia*-sp.WAMNG2

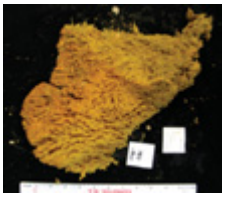


99100252-*Axinella*-sp.WAMNG2

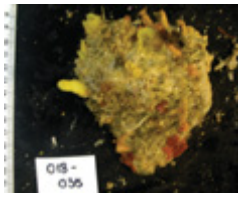
99100347-*Axinella*-sp.WAMNG1

99100522-*Pararhaphoxya*-sp.WAMSS3

99100532-*Didiscus*-sp.WAMSS3



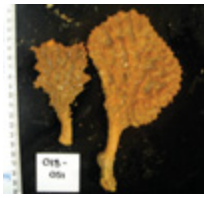
99100533-*Myrmekioderma* sp.WAMSS1



99100531-*Didiscus*-sp.WAMSS2

99100534-*Myrmekioderma*-sp.WAMSS2

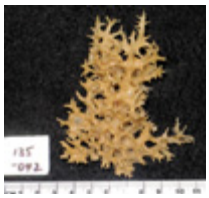
99100250-*Acanthella*-sp.WAMSS1



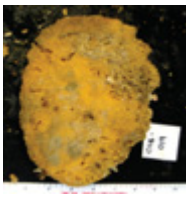
99100535-*Acanthella*-sp.WAMSS3

99100348-*Acanthella*-sp.WAMSS2

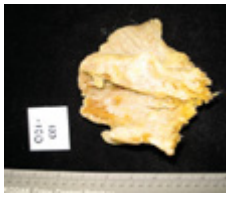
99100254-*Acanthella*-sp.WAMNG3



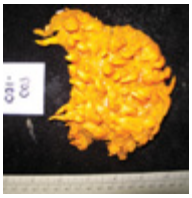
99100536-*Acanthella*-sp.WAMNG2



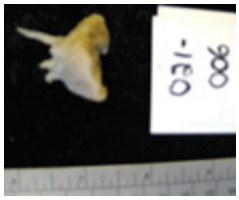
99100538-*Halichondria-(Halichondria)* sp.WAMSS3



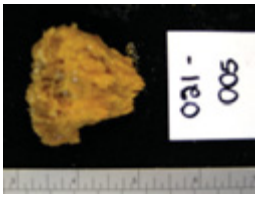
99100545-*Hymeniacidon*-sp.WAMSS1



99100540-*Ciocalypta*-sp.WAMSS1



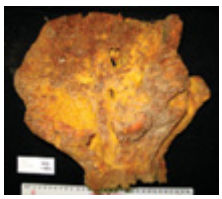
99100542-*Ciocalypta*-sp.WAMSS3



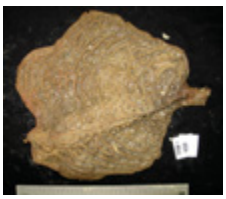
99100543-*Ciocalypta*-sp.WAMSS4

99100541-*Ciocalypta*-sp.WAMSS2

99100546-*Hymeniacidon* sp.WAMSS2

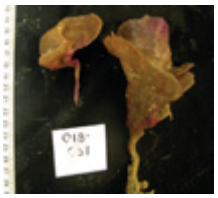


99100539-*Halichondria-(Halichondria)* sp.WAMSS5



10098010-*Callyspongia-(Callyspongia) bilamellata*

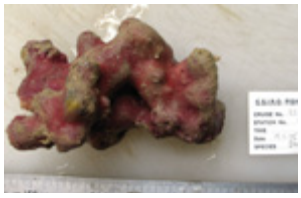
99100548-*Callyspongia-(Callyspongia)* sp.WAMSS1



99100547-*Callyspongia-(Callyspongia)* sp.WAMNG1

99100549-*Callyspongia-(Callyspongia)* sp.WAMSS2

99100551-*Callyspongia-(Callyspongia)* sp.WAMSS4

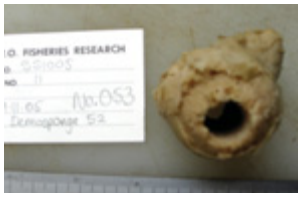


99100559-*Haliclona-(Gellius)*-sp.WAMSS2

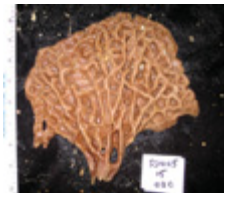
99100562-*Haliclona-(Reniera)* sp.WAMSS2

99100561-*Haliclona-(Reniera)* sp.WAMSS1

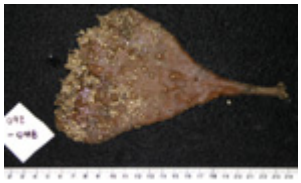
99100563-*Haliclona-(Reniera)* sp.WAMSS3



99100560-*Haliclona-(Gellius)* sp.WAMSS3



99100565-*Haliclona-(Reniera)* sp.WAMSS5



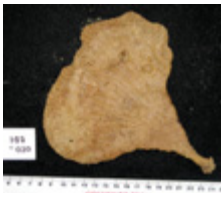
99100564-*Haliclona-(Reniera)* sp.WAMSS4

99100566-*Haliclona-(Reniera)* sp.WAMSS6

99100553-*Haliclona-(Haliclona)* sp.WAMSS1

99100552-*Haliclona-(Haliclona)* sp.WAMNG1

99100557-*Haliclona-(Haliclona)* sp.WAMSS5



99100555-*Haliclona-(Haliclona)* sp.WAMSS3

99100568-*Amphimedon*-sp.WAMSS1

99100313-*Amphimedon*-sp.WAMSS4

99100571-*Amphimedon*-sp.WAMSS5

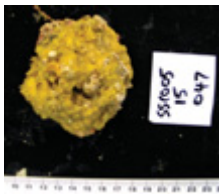
10101022-*Oceanapia-ramsayi*

99100336-*Oceanapia*-sp.WAMSS5

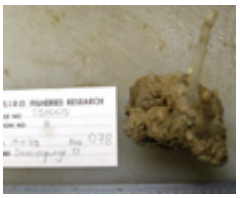
99100330-*Oceanapia*-sp.WAMSS4

99100574-*Aka*-sp.WAMSS2

99100576-*Aka*-sp.WAMSS5



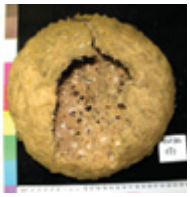
99100575-*Aka*-sp.WAMSS4



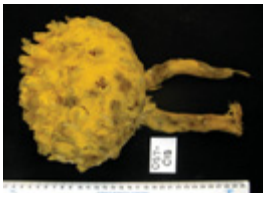
99100331-*Aka*-sp.WAMSS3

99100585-*Oceanapia*-sp.WAMSS7

99100584-*Oceanapia*-sp.WAMSS6



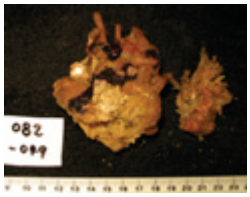
99100589-*Oceanapia*-cf.-ramsayi



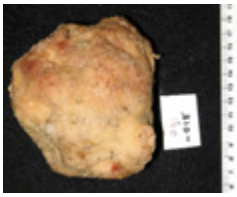
99100277-*Oceanapia* sp.WAMSS2

99100306-*Aka*-sp.WAMSS9

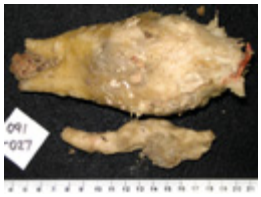
99100586-*Oceanapia*-sp.WAMSS8



99100590-*Oceanapia*-cf. macrotoxa



99100334-*Oceanapia*-sp.WAMSS10



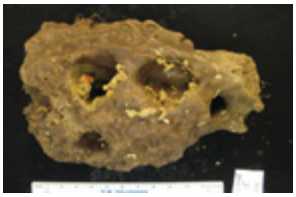
99100355-*Oceanapia*-sp.WAMNG1

99100587-*Oceanapia*-sp.WAMSS9

99100573-*Aka*-sp.WAMSS1

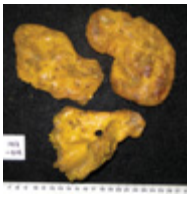
99100592-*Petrosia-(Petrosia)*-sp.WAMNG1

99100268-*Petrosia-(Petrosia)*-sp.WAMSS3



99100356-*Petrosia-(Petrosia)*-sp.WAMSS2

99100594-*Xestospongia*-sp.WAMSS1



99100596-*Xestospongia*-sp.WAMSS3

99100593-*Xestospongia*-sp.WAMNG2

99100591-*Petrosia-(Petrosia)*-sp.WAMSS1

99100345-*Sarcotragus*-sp.WAMNG1

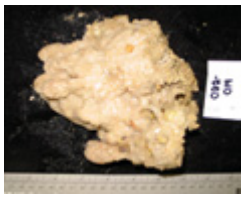
99100600-*Psammocinia*-sp.WAMSS3

99100599-*Psammocinia*-sp.WAMSS2

99100598-*Psammocinia*-sp.WAMSS1

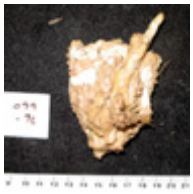
99100605-*Sarcotragus*-sp.WAMSS3

99100606-*Sarcotragus*-sp.WAMSS4

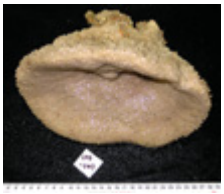


99100602-*Psammocinia*-sp.WAMSS5

99100603-*Psammocinia*-sp.WAMSS6



99100604-*Psammocinia*-sp.WAMSS7



99100607-*Sarcotragus*-sp.WAMSS5

99100609-*Sarcotragus*-sp.WAMSS8

99100610-*Sarcotragus*-sp.WAMSS9

99100257-*Sarcotragus*-sp.WAMSS1

99100625-*Taonura*-sp.WAMSS1

99100629-*Thorecta*-sp.WAMSS4

99100615-*Dactylospongia*-sp.WAMSS2

99100343-*Luffariella*-sp.WAMSS1

99100621-*Luffariella*-sp.WAMSS2

99100633-*Thorecta*-sp.WAMNG1

99100634-*Fascaplysinopsis*-sp.WAMSS1

99100635-*Fasciospongia*-sp.WAMSS1

99100614-*Dactylospongia*-sp.WAMSS1

99100636-*Carteriospongia*-sp.WAMSS1

99100628-*Thorecta*-sp.WAMSS3

99100273-*Luffariella*-sp.WAMSS7

99100624-*Luffariella*-sp.WAMSS6

99100284-*Hyrtios*-sp.WAMSS2

99100617-*Hyrtios*-sp.WAMSS3

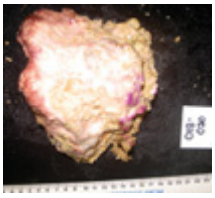
99100613-*Cacospongia*-sp.WAMSS3

99100358-*Taonura*-sp.WAMSS3

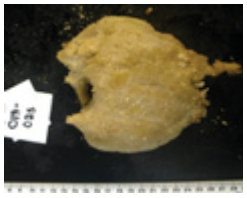
99100637-*Thorectandra*-sp.WAMSS1

99100256-*Thorecta*-sp.WAMSS7

99100620-*Hyrtios*-sp.WAMSS6

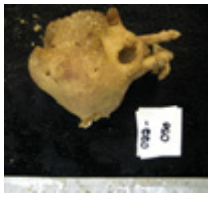


99100618-*Hyrtios*-sp.WAMSS4



99100630-*Thorecta*-sp.WAMSS5

99100328-*Luffariella*-sp.WAMSS4



99100631-*Thorecta*-sp.WAMSS6

99100626-*Thorecta*-sp.WAMSS1

99100622-*Luffariella*-sp.WAMSS3

99100623-*Luffariella*-sp.WAMSS5

99100638-*Aplysinopsis*-sp.WAMSS1

99100335-*Taonura*-sp.WAMSS2

99100644-*Leiosella*-sp.WAMSS1

99100648-*Hyatella*-sp.WAMSS2

99100639-*Hippospongia*-sp.WAMSS2

99100640-*Hippospongia*-sp.WAMSS3

99100642-*Spongia-(Heterofibria)* sp.WAMSS2

99100643-*Spongia-(Heterofibria)* sp.WAMSS3

99100646-*Leiosella*-sp.WAMSS3

99100360-*Spongia-(Heterofibria)* sp.WAMSS1

99100249-*Hippospongia*-sp.WAMSS4

99100641-*Hippospongia*-sp.WAMSS5

99100280-*Hippospongia*-sp.WAMSS1

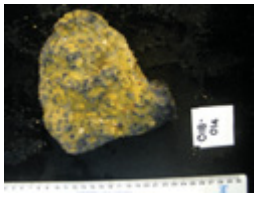
99100653-*Aplysina*-sp.WAMSS1

99100652-Aplysinidae-sp.WAMSS2

99100651-Aplysinidae-sp.WAMSS1

99100656-*Pseudoceratina*-sp.WAMSS3

99100655-*Pseudoceratina*-sp.WAMSS2



99100654-*Pseudoceratina*-sp.WAMSS1

11158002-*Myriopathes-myriophylla*

99110611-*Myriopathes*-sp.A

99110612-*Myriopathes*-cf.-*japonica*

11161002-*Parantipathes-helicosticha*

99110615-*Stichopathes*-sp.A

99110292-*Acanthogorgia*-sp.D

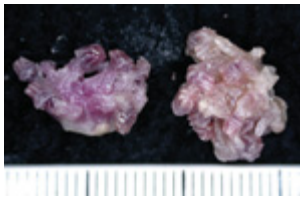
99110424-*Muricella*-sp.A

11175000-*Acanthogorgia*-sp.-indet.

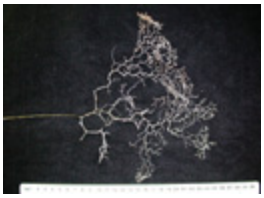
99110296-*Anthomastus*-sp.A

99110426-*Eleutherobia*-n.sp.A

99110428-*Inflatocalyx*-n.sp.A



99110297-*Anthothela*-sp.N



99110302-*Metallogorgia*-sp.A

99110300-*Chrysogorgia*-sp.O

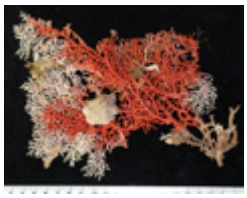
99110431-*Stereotelesto*-sp.A

11183000-Corallidae-sp.-indet.

11185003-*Junceella-juncea*

99110308-*Viminella*-sp.H

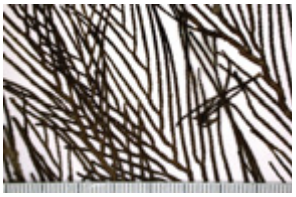
11185000-Ellisellidae-sp.-indet.



99110305-*Verrucella*-sp.G

11188001-*Annisis-sprightly*

11188009-*Mopsea-encrinula*

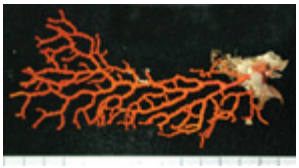


11188013-*Tethrisis-suzannae*

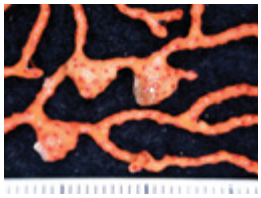
11188037-*Zignisis-bifoliata*

99110310-*Acanella*-sp.C

99110311-*Lepidisis*-sp.N



11190002-*Mopsella-klunzingeri*



99110441-*Wrightella*-n.sp.A

99110317-*Acabaria*-sp.E

11191903-*Scleronephthya*-spp.

99110318-*Dendronephthya*-sp.V

99110320-*Dendronephthya*-sp.X

99110443-*Umbellulifera*-sp.A

99110327-*Dendronephthya*-sp.H

99110332-*Dendronephthya*-sp.HH

99110444-*Studeriotes*-sp.A

11196002-*Pseudothesea-simplex*

99110446-*Paramuricea*-cf.-*grandis*

99110447-*Swiftia*-sp.B

99110343-*Bebryce*-sp.C

99110450-*Villogorgia*-sp.B

99110339-*Astrogorgia*-sp.D

11197015-*Pseudoplumarella-filicoides*

99110349-*Narella*-sp.F

99110433-*Echinoptilum*-cf.-*macintoshi*

11216003-*Umbellula-huxleyi*

99110351-*Pteroeides*-sp.F

11224001-*Scytalium*-sarsii

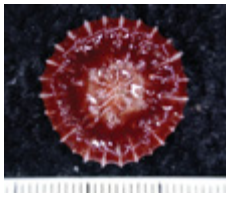
99110454-*Acanthoptilum*-n.sp.B

99110453-*Acanthoptilum*-n.sp.A

11299002-*Letepsammia-formosissima*

11301001-*Fungiacyathus-fragilis*

11304001-*Anthemiphyllia-dentata*



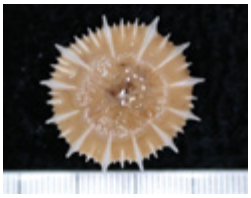
99110618-*Anthemiphyllia*-n.sp.A

11314019-*Stephanocyathus-spiniger*

11314021-*Deltocyathus-suluensis*

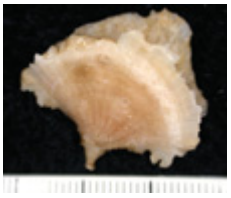
11314042-*Caryophyllia-planilamellata*

11314062-*Stephanocyathus-weberianus*



99110619-*Stephanocyathus*-cf.-*coronatus*

99110622-*Balanophyllia*-sp.A



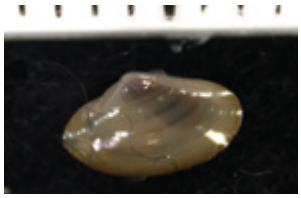
11328003-*Flabellum-lamellulosum*

11328010-*Flabellum-tuthilli*

11328015-*Truncatoflabellum-macroeschara*

99230100-*Nucula*-sp.1

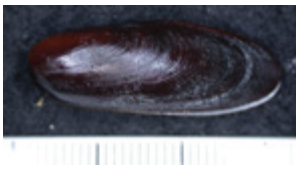
23207019-*Nuculana-verconis*



99230105-*Yoldia*-sp.1

23220008-*Modiolus-areolatus*

23220010-*Amygdalum-beddomei*

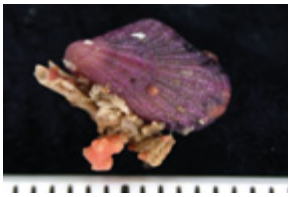


23220021-*Lithophaga-teres*

23220022-*Lithophaga-malaccana*

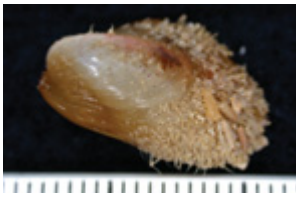
23220025-*Modiolus-proclivis*

23220073-*Amygdalum-watsoni*

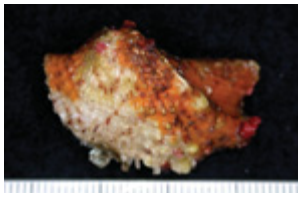


99230107-*Septifer*-sp.1

99230111-*Mytilidae*-sp.3

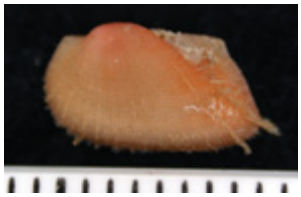


99230108-*Modiolus*-sp.1

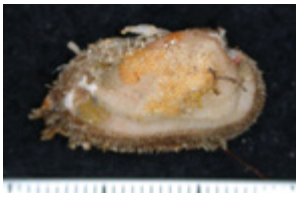


23226002-*Arca-navicularis*

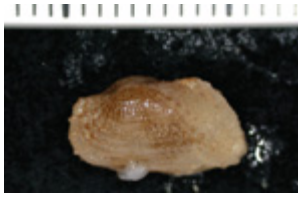
23226027-*Barbatia-plicata*



99230112-*Bentharca*-cf.-*rubrotincta*

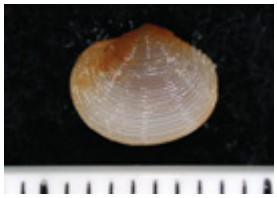


99230121-*Barbatia*-cf.-*saviolum*



992301l4-*Barbatia-(Acar)*-sp.1

23230002-*Limopsis-soboles*



99230124-*Limopsis*-sp.1

99230127-*Limopsis*-sp.4

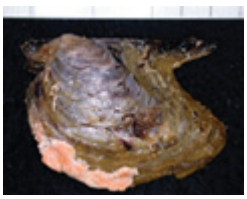
23231001-*Glycymeris-striatularis*

23231003-*Tucetona-gealei*

23231014-*Glycymeris-hedleyi*

23231018-*Tucetona-hoylei*

23231022-*Tucetona-scalarisculpta*



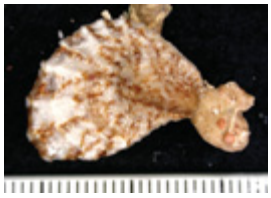
99230131-*Pteria*-cf.-*falcata*

23237002-*Malleus-albus*

23250005-*Lima-nimbifer*

99230132-*Ctenoides*-cf.-*annulata*

99230133-*Neopycnodonte*-sp.1



23265001-*Dimya-corrugata*

23270006-*Mimachlamys-asperrima*

23270007-*Pecten-fumatus*

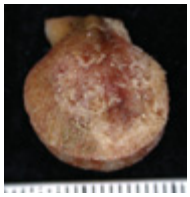
23270008-*Semipallium-aktinos*

23270021-*Mesopeplum-fenestratum*

23270029-*Chlamys-challengeri*

99230137-*Cryptopecten*-cf.-*bullatus*

99230142-*Semipallium*-sp.1



99230144-Pectinidae-sp.1

99230138-*Talochlamys*-cf.-*pulleineana*

99230141-*Delectopecten*-cf.-*alcocki*

99230145-*Propeamussium*-sp.2

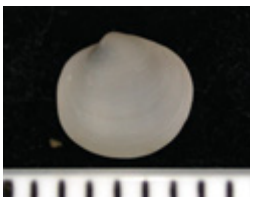
99230149-*Parvamussium*-sp.2

99230157-*Spondylus*-cf.-*victoriae*

23280006-*Neotrigonia-kaiyomaruae*

23305014-*Cardiolucina-crassilirata*

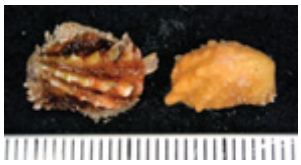
99230163-*Monitilora*-sp.1



99230169-*Felaniella*-sp.2

99230167-Galeommatidae-sp.2

99230164-*Scintilla*-n.sp.1

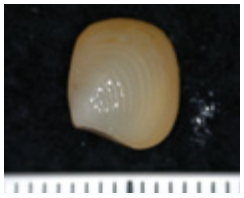


23325003-*Cardita-excavata*

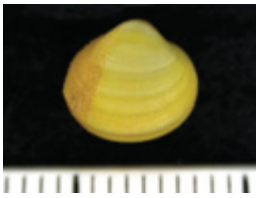
23325010-*Cardita-incrassata*

23325016-*Venericardia-rosulenta*

23330019-*Crassatina-suduirauti*



99230173-*Crassatina*-sp.2



23335002-*Nemocardium-thetidis*

23335035-*Acrosterigma-marielae*

99230174-*Mactra*-sp.1

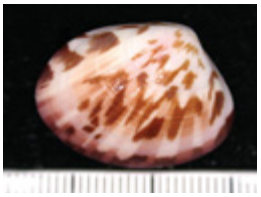
23356020-*Leptomya-gravida*

23380050-*Globivenus-toreuma*

23380095-*Pitar-nancyae*

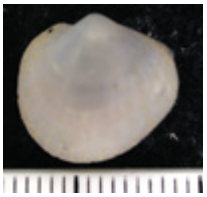
23380112-*Granicorium-indutum*

99230177-*Timoclea*-sp.1



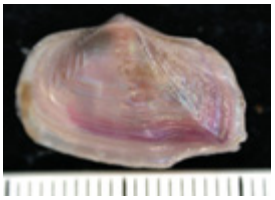
99230179-*Callista*-sp.1

23387002-*Notocorbula-stolata*



99230185-*Policordia*-sp.1

99230186-*Policordia*-cf.-*diomedea*



23426001-*Lyonsiella-formosa*

99230187-*Euciroa*-cf.-*millegemmata*

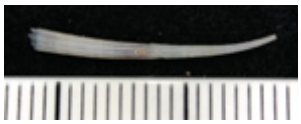
23435003-*Pseudoneaera-trigonalis*

23435009-*Cuspidaria-latesulcata*

23435021-*Cardiomya-pinna*

99230198-*Pseudoneaera*-sp.4

99230197-*Cardiomya*-sp.1



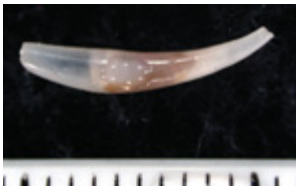
99230208-*Fissidentalium*-cf.-*shirleyae*

99230207-*Fissidentalium*-sp.3

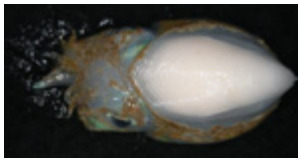
99230205-*Fissidentalium*-sp.1

99230210-*Laevidentalium*-sp.1

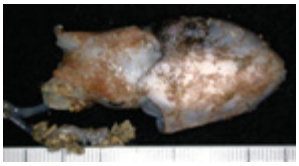
99230211-*Laevidentalium*-sp.2



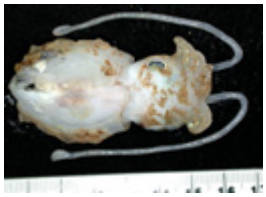
99230219-*Dischides*-sp.1



23607002-*Sepia-cultrata*



23607006-*Sepia-opipara*

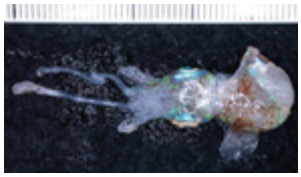


23607901-*Sepia*-sp-indet.

99230220-*Sepia*-cf.-*cottoni*

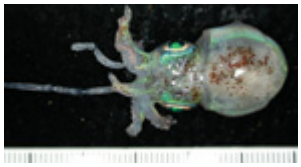
99230221-*Sepia*-cf.-*chirotrema*

23608001-*Sepioloidea-lineolata*

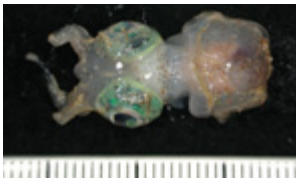


99230222-*Sepiadarium*-sp.1

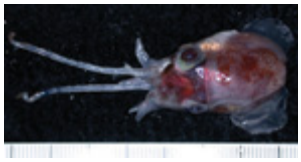
23609001-*Euprymna-tasmanica*



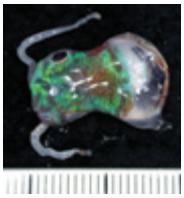
23609007-*Sepiolina-nipponensis*



23609901-*Austrorossia*-spp.



23609902-*Heteroteuthis*-spp.



23609903-*Sepiolina*-spp.

99230224-*Austrorossia*-cf.-*australis*

23609000-Sepiolidae-undifferentiated

23621904-*Enoploteuthis*-spp.

23630003-*Histioteuthis-celetaria-pacifica*

23636013-*Todaropsis-eblanae*

23639002-*Mastigoteuthis-cordiformis*

23643002-*Cranchia-scabra*

99230226-*Liocranchia*-sp.1

99230227-*Liocranchia*-sp.2

23659009-*Eledone-palari*

23659000-Octopodidae-undifferentiated

99230228-*Octopus*-sp.2

99230229-*Octopus*-sp.3

99230230-*Octopus*-sp.4

99230234-*Pteroctopus*-sp.1

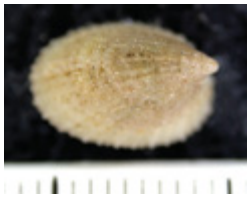
99230232-*Callistoctopus*-sp.1

99230233-*Callistoctopus*-sp.2

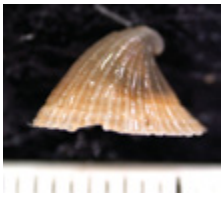
23662003-*Argonauta-hians*

24040004-*Emarginula-patula*

24040049-*Cranopsis-corolla*

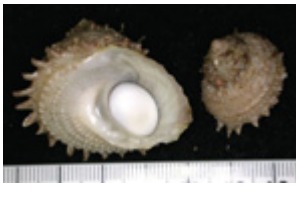


99240158-*Emarginula*-sp.1



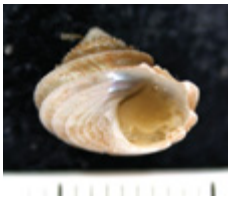
99240162-*Puncturella*-sp.1

99240159-*Emarginula*-sp.4



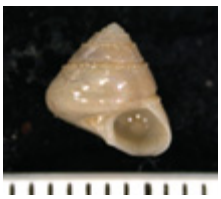
99240163-*Bolma*-sp.1

99240173-*Periaulax*-sp.3



99240164-*Calliotropis*-sp.1

99240175-Minoleini-sp.3

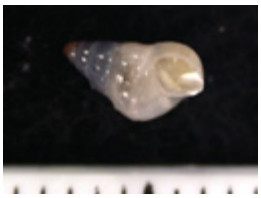


99240172-*Periaulax*-sp.2

99240170-Sequenziinae-sp.4

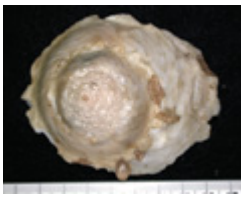
99240180-*Cerithium*-sp.2

99240182-*Turritella*-sp.1



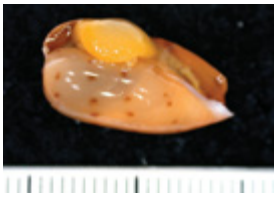
99240185-Rissoidae-sp.1

99240186-*Capulus*-sp.1

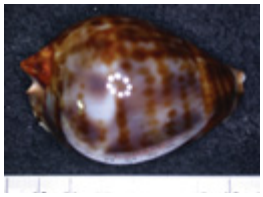


24145010-*Xenophora-gigantea*

99240187-*Xenophora*-cf.-cerea



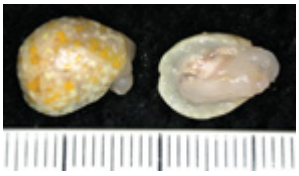
24155030-*Notocypraea-pulicaria*



24155034-*Zoila-friendii-vercoi*

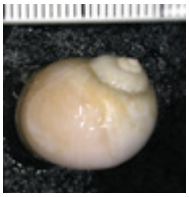
24155036-*Zoila-friendii-jeaniana*

99240190-*Xandraovula*-cf.-*pagoda*

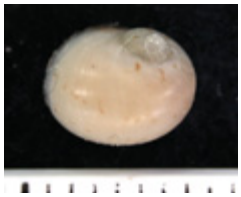


99240192-Lamellaria-sp.1

24165052-*Polinices-peselephanti*

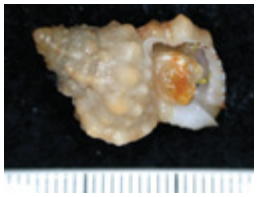


99240195-*Natica*-cf.-*phytelephas*



99240197-*Notocochlis*-sp.1

99240201-*Polinices*-sp.1



24170011-*Bursa-humilis*

24170018-*Tutufa-bufo*

24171025-*Semicassis-whitworthi*

99240207-*Semicassis*-sp.1

99240204-*Galeodea*-cf.-*leucodoma*

99240206-*Oocorys*-n-sp.1

99240205-*Galeodea*-sp.1

24176010-*Gyrineum-lacunatum*

24176012-*Sassia-kampyla*

24176022-*Biplex-pulchrum*

24176044-*Cymatium-vespaceum*

24176046-*Sassia-apenninica*

24177001-*Tonna-variegata*

24190001-*Janthina-exigua*

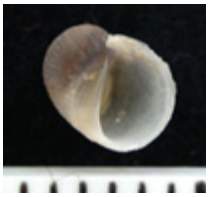
24191048-*Opalia-australis*

99240211-*Epitonium*-sp.3

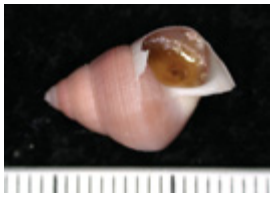
99240210-*Epitonium*-sp.1

99240216-Eulimidae-sp.2

99240217-Eulimidae-sp.3



99240218-Eulimidae-sp.4



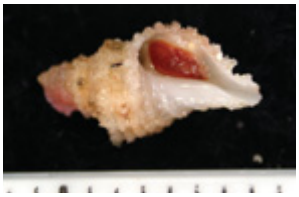
99240214-*Alora*-sp.2

24200020-*Chicoreus-cervicornis*

24200032-*Pterynotus-undosus*

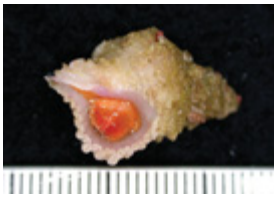
24200071-*Babelomurex-kawamurai*

99240219-*Pagodula*-cf.-*carduelis*



99240222-*Coralliophila*-sp.4

99240227-*Haustellum*-cf.-*multiplicatus*



99240223-*Coralliophila*-cf.-*inflata*

99240230-*Muricopsis*-sp.1

24201002-*Syrinx-aruanus*

99240234-*Coluzea*-sp.1

24202065-*Nassaria-solida*

24202089-*Granulifusus-kiranus*

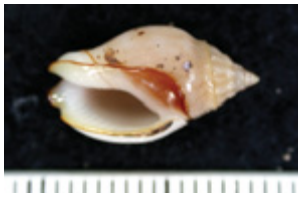
24202094-*Latirus-craticulatus*

24202128-*Nassarius-ephamillus*

24202169-*Nassarius-crebricostatus*

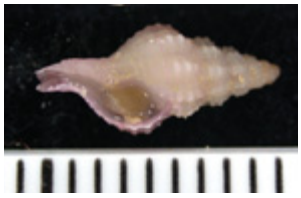
24202185-*Cantharus-iostomus*

24202214-*Fusinus-westralis*



24202216-*Cyllene-rubrolineata*

99240242-*Fusinus*-sp.1



99240246-*Pseudolatirus*-cf.-*pallidus*

99240239-*Phos*-cf.-*sculptilis*

99240238-*Phos*-sp.1

99240240-*Phos*-cf.-*roseatus*

24203047-*Pyrene-flava*

24207002-*Melo-amphora*

24207023-*Amoria-diamantina*

24207057-*Teramachia-dalli*

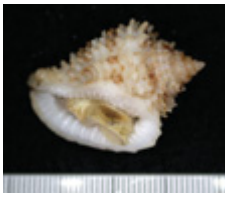
24207058-*Teramachia-johnsoni*

99240251-Volutidae-sp.1

24208003-*Ancillista-cingulata*

24208023-*Amalda-coccinata*

24209008-*Austroharpa-wilsoni*



99240252-*Morum*-sp.1

99240253-*Mesoginella*-sp.2

99240256-*Cancilla*-sp.2

99240255-*Cancilla*-sp.1

24213054-*Vexillum-hansenae*

99240258-*Vexillum*-cf.-*obeliscus*

99240259-*Vexillum*-cf.-*radius*

24220096-*Gemmula-congener*

24220107-*Pinguigemmula-philippinensis*

24220125-*Gemmula-westaustralis*

99240260-*Bathytoma*-cf.-*atractoides*

99240275-*Gemmula*-sp.6

99240296-Turridae-sp.7

99240297-Turridae-sp.8

99240298-Turridae-sp.9

99240266-*Comitas*-cf.-*galatheae*

99240292-Turridae-sp.2

99240293-Turridae-sp.3

99240264-*Cochlespira*-sp.3

99240280-*Gemmula*-sp.19

99240274-*Gemmula*-sp.5

99240287-*Marshallena*-cf.-*gracilispira*

99240289-*Ptychosyrinx*-cf.-*bisinuata*

99240276-*Gemmula*-sp.12

99240284-*Inquisitor*-sp.3

99240273-*Gemmula*-sp.4

99240269-*Gemmula*-cf.-*sibogae*

99240292-Turridae-sp.2

99240295-Turridae-sp.6

99240262-*Cochlespira*-sp.1

99240272-*Gemmula*-sp.3

99240288-*Ptychobela*-cf.-*flavidula*

99240270-*Gemmula*-cf.-*unedo*

99240285-*Inquisitor*-sp.4

99240261-*Buccinaria*-sp.1

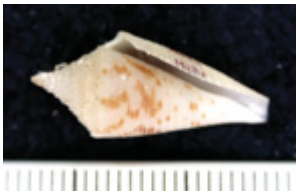
99240271-*Gemmula*-sp.1

24221001-*Terebra-commaculata*

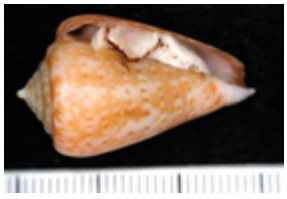
99240305-*Terebra*-cf.-*pertusa*

99240308-*Terebra*-sp.7

24222010-*Conus-anemone*

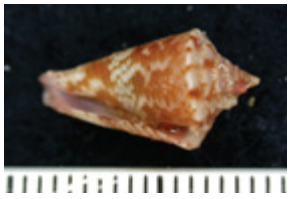


24222025-*Conus-boholensis*



24222056-*Conus-gabelishi*

24222098-*Conus-planorbis*



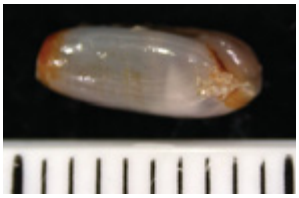
99240310-*Conus*-sp.2

9924031 1-*Conus*-sp.4

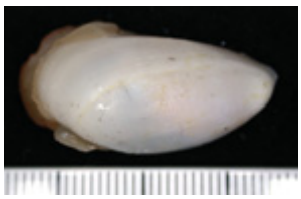
99240312-Pyramidellidae-sp.1

99240314-*Philine*-sp.1

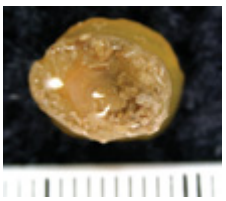
99240315-*Philine*-n.sp.2



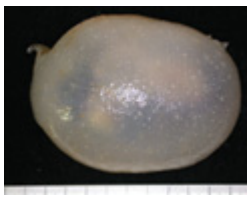
99240321-*Liloa*-cf.-*curta*



99240319-*Atys*-sp.1

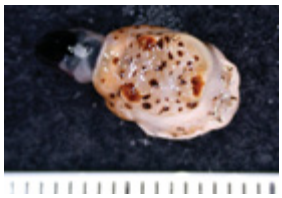


24391001-*Tylodina-corticalis*

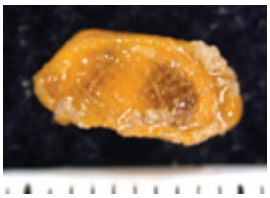


99240323-*Pleurobranchus*-sp.2

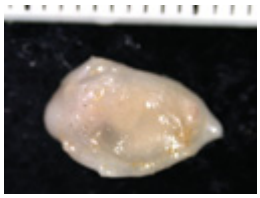
99240324-*Pleurobranchaea*-sp.1



99240325-Pleurobranchidae-sp.1



99240326-Eudoridoidea-sp.1

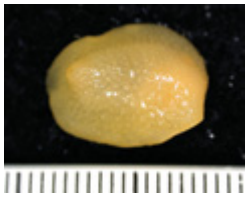


99240328-*Alliodoris*-sp.1

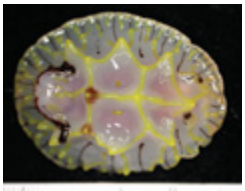
99240329-*Gymnodoris*-cf.-*rubropapulosa*

99240336-Doridae-n.sp.1

99240331-*Aphelodoris*-sp.1



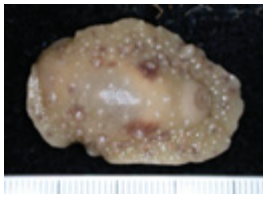
99240330-*Aldisa*-sp.1



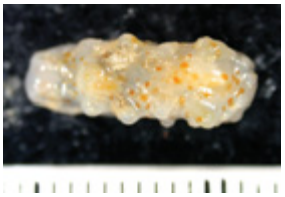
99240333-*Halgerda*-sp.1

99240334-*Halgerda*-sp.2

99240335-*Platydoris*-n.sp.1



99240332-*Doris*-sp.1



99240337-*Glossodoris*-sp.1

99240338-*Marionia*-sp.1

99240339-*Armina*-sp.1

99250309-Bathycrinidae-sp.1

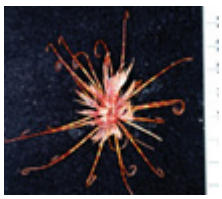
25030011-*Clarkcomanthus*-*luteofuscum*

25030021-*Comanthus-parvicirrus*

25030030-*Comatula-pectinata*

25030043-*Phanogenia-brevicirra*

25030903-*Cenolia*-sp-*indet.*



25047001-*Ptilometra-macronema*

25048004-*Pterometra-trichopoda*

25105002-*Luidia-avicularia*

25105003-*Luidia-hardwicki*

99250313-*Luidia*-sp.1

99250316-*Luidia*-cf.-*harwicki*

99250314-*Luidia*-sp.2

25111008-*Astropecten-phragmorus*

25111009-*Astropecten-polyacanthus*

25111015-*Astropecten-velitaris*

99250304-*Astropecten*-cf.-*eremicus*

99250319-*Dipsacaster*-sp.1

25111901-*Astropecten*-spp.

99250322-*Proserpinaster*-cf.-*euryactis*

99250323-*Patagiaster*-sp.1

99250317-cf.-*Astromesites*-sp.1

25111000-Astropectinidae undifferentiated

99250327-*Plutonaster*-sp.2

99250321-*Dipsacaster*-sp.3

99250328-*Styracaster*-n.sp.1

25114001-*Ctenodiscus-orientalis*

99250329-*Ctenodiscus*-cf.-*orientalis*

25122014-*Milteliphaster-regenerator*

25122017-*Nymphaster-moebii*

25122018-*Ogmaster-capella*

25122026-*Stellaster-equestris*

99250340-Goniasteridae-sp.1

99250341-Goniasteridae-sp.2

99250335-cf.-*Cladaster*-sp.1

99250333-*Lithosoma*-cf.-*penichra*

99250306-*Ceramaster*-sp.1

99250332-*Ceramaster*-cf.-*patagonicus*

99250339-*Rosaster*-n.sp.1

99250343-*Hoplaster*-sp.1

25125023-*Heteronardoa-diamantinae*

25125025-*Leiaster-leachii*

25125027-*Linckia-guildingi*

25125043-*Pseudophidiaster-rhysus*

99250344-*Ophidiaster*-n.sp.1

99250345-*Anthenea*-sp.1

99250346-*Goniodiscaster*-sp.1

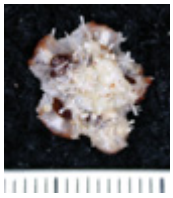
25128004-*Asterodiscides-macroplax*

99250347-*Asterodiscides*-cf.-*tessellatus*

25136001-*Crossaster-multispinus*

99250352-*Pteraster-(Retaster)* cf. *corynetes*

99250293-*Pteraster-(Pteraster)-sp.1*

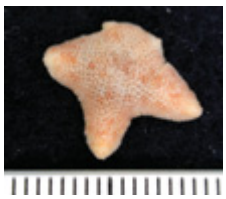


99250292-*Diplopteraster*-sp.1

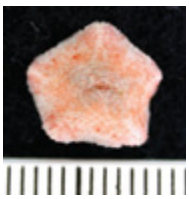
99250351-*Pteraster-(Retaster)-n.sp.1*

99250350-*Hymenaster*-sp.1

25140002-*Anseropoda-macropora*



25140047-*Aquilonastra-shirleyae*



99250354-*Parvulastra*-n.sp.1

99250355-*Pseudonepanthia*-n.sp.1

25143008-*Echinaster-stereosomus*

25143013-*Metrodira-subulata*

99250356-*Henricia*-cf.-*compacta*

99250357-*Pholidaster*-n.sp.1

99250358-*Zoroaster*-n.sp.1

99250360-*Coronaster*-cf.-*volsellatus*

99250359-*Coronaster*-cf.-*halicepus*

25154011-*Coscinasterias-muricata*

99250364-*Sclerasterias*-n.sp.1

99250362-*Allostichaster*-n.sp.2

99250361-*Allostichaster*-n.sp.1

99250363-*Anasterias*-n.sp.1

25166001-*Ophiomyxa-australis*

25166006-*Ophiomyxa-crinita*

99250368-*Ophiurothamnus*-sp.1

25166007-*Ophiomyxa*-sp.MOV5486

25185078-*Ophiurothamnus*-sp.MOV5489

25166009-*Ophiomyxa*-MoV5501

25170007-*Asteromorpha-koehleri*

25170008-*Astroceras-pergamena*

25170009-*Trichaster-flagellifer*

25171009-*Astroboa-nigrofurcata*

25171013-*Astrocladus-exiguus*

25171019-*Astrosierra-microconus*

99250365-*Astroboa*-sp.1

25172001-*Ophiocreas-sibogae*

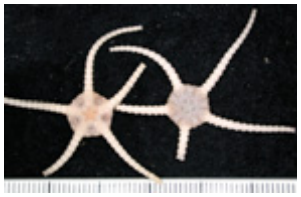
25172004-*Astrobrachion-adhaerens*

25173001-*Asteronyx-loveni*

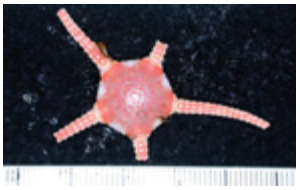
25176002-*Ophiura-jejuna*

25176003-*Ophiura-irrorata*

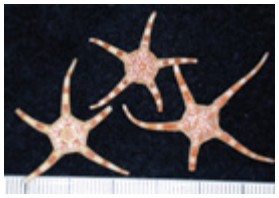
25176005-*Ophiomisidium-irene*



25176007-*Ophiomusium-lymani*



25176010-*Amphiophiura-urbana*



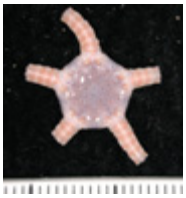
25176016-*Ophiocrossota-multispina*

25176022-*Ophiomastus-tegulitius*

25176025-*Ophiomusium-australe*

25176037-*Ophiura-kinbergi*

25176039-*Ophiura-ooplax*



25176040-*Ophiura-palliata*

25176041-*Ophiura-rugosa*

25176044-*Ophiomusium-relictum*

25176061-*Amphiophiura-distincta*

25176062-*Ophiopyrgus-trispinosus*

25176084-*Ophiura*-sp.MOV2734

25177001-*Ophiernus-vallincola*

25177003-*Ophioleuce-seminudum*

25178001-*Clarkcoma-bollonsi*

25179009-*Ophionereis-schayeri*

25179010-*Ophionereis-semoni*

25179016-*Ophioplax-lamellosa*

25179020-*Ophiodoris-malignus*

25179021-*Ophiochiton*-sp.MOV5498

25180024-*Ophiopeza-cylindrica*

25180028-*Ophiopsammus-assimilis*

25185004-*Ophiacantha-spectabilis*

25185007-*Ophioplinthaca-plicata*

25185011-*Ophiacantha-alternata*

25185012-*Ophiacantha-brachygnatha*

25185013-*Ophiacantha-clavigera*

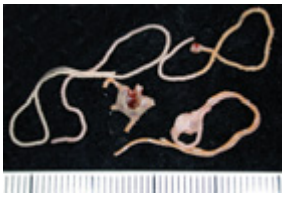
25185027-*Ophiomyces-delata*

25185029-*Ophiophthalmus-relictus*

25185031-*Ophioplinthaca-rudis*

25185045-*Ophiurothamnus-clausa*

25185056-*Ophiacantha*-sp.MOV2731



25185063-*Amphlimna-transacta*

25185064-*Ophiothamnus-biocal*

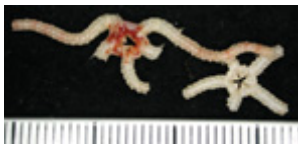
25185065-*Ophiacantha-pacata*

25185079-*Ophiopristis*-sp.MOV5490

25185080-*Ophiolebes*-sp.MOV3581

25185082-*Ophiacantha*-sp.MOV4537

99250370-*Ophiocymbium*-sp.1

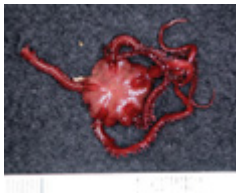


25185071-*Ophiotoma*-sp.MOV5504

25190003-O*phiactis-hirta*

25190010-*Ophiactis-modesta*

25190012-*Ophiactis-profundi*



25190017-*Ophiodaphne-formatus*

25190022-*Ophiactis*-sp.MOV5496

25191046-*Amphiura-octacantha*

25191050-*Ophiocentrus-aspera*

25191062-*Amphiura*-sp.MOV3579

25191073-*Amphiura*-sp.MOV5519

25191076-*Amphioplus*-sp.MOV5510

25191078-*Amphioplus*-sp.MOV5524

25191068-*Amphiura*-sp.MOV5508

25191075-*Amphioplus*-sp.MOV5509

25192001-*Ophiothrix-aristulata*

25192002-*Ophiothrix-caespitosa*

25192027-*Ophiogymna-pulchella*

25192028-*Ophiomaza-cacaotica*

25192036-*Ophiothrix-ciliaris*

25192063-*Ophiothrix-spongicola*

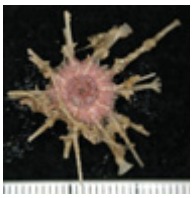
25192071-*Ophiothrix*-sp.MOV5502

25202007-*Goniocidaris-tubaria*

25202017-*Prionocidaris-baculosa*

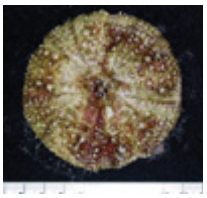
25202023-*Stereocidaris-sceptriferoides*

25202024-*Stylocidaris-bracteata*



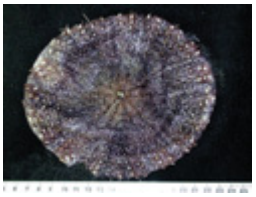
99250374-*Rhopalocidaris*-sp.1

99250373-*Phyllacanthus*-sp.1



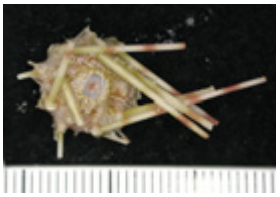
25205002-*Araeosoma-owstoni*

25205007-*Asthenosoma-varium*



25206002-*Phormosoma-rigidum*

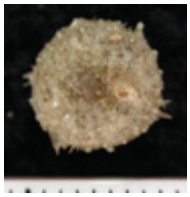
25211012-*Eremopyga-denudata*



25220003-*Caenopedina-mirabilis*

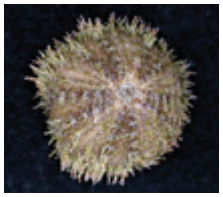
25235002-*Coelopleurus-maculatus*

25241014-*Microcyphus-annulatus*



25241030-*Temnotrema-maculatum*

25241032-*Temnotrema-siamense*



25241035-*Microcyphus-keiensis*

25242008-*Pseudoboletia-indiana*

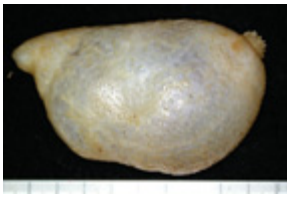
25246002-*Gracilechinus-multidentatus*

25262007-*Clypeaster-virescens*

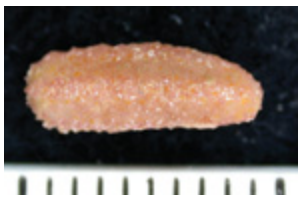
25306001-*Anametalia-regularis*

99250376-*Lovenia*-n.sp.1

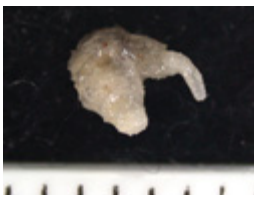
25404011-*Psolus-parmatus*



25406027-*Neothyonidium-inflatum*



25408025-*Plesiocolochirus-australis*

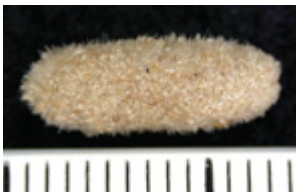


99250383-*Echinocucumis*-n.sp.1

25416054-*Holothuria-hilla*

25416062-*Holothuria-austrinabassa*

25416063-*Holothuria-nigralutea*

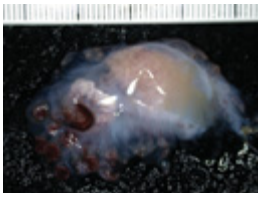


25418012-*Pseudostichopus-hyalegerus*

25418023-*Mesothuria-marginata*

99250285-*Mesothuria*-n.sp.2

99250386-*Pseudostichopus*-n.sp.1



25422001-*Laetmogone-fimbriata*

25422002-*Laetmogone-maculata*

25422006-*Benthogone-abstrusa*

25425001-*Enypniastes-eximia*

25436004-*Molpadia-musculus*

25436005-*Trochostoma-parvulum*

25437002-*Aphelodactyla-molpadioides*

25437008-*Aphelodactyla-bacilla*

25437009-*Aphelodactyla-suspecta*

28711073-*Metapenaeopsis-velutina*

28711091-*Metapenaeopsis*-sp.MOV5458

28712003-*Aristeus-virilis*

28712011-*Aristeus-semidentata*

28713001-*Benthesicymus-investigatoris*

28714003-*Hadropenaeus-lucasii*

28714005-*Haliporoides-sibogae*

28714029-*Solenocera-rathbuni*

28715002-*Sicyonia-inflexa*

28715004-*Sicyonia-vitulans*

28715010-*Sicyonia-japonica*

28735002-*Acanthephyra-armata*

28735007-*Acanthephyra-quadrispinosa*

28735014-*Oplophorus-novaezelandiae*

28735030-*Oplophorus-gracilirostris*

28745005-Pasi*phaea-kapala*

28745006-*Pasiphaea-longitaenia*

28745016-*Leptochela-sydniensis*

28745019-*Alainopasiphaea-australis*

28745030-*Eupasiphae*-sp.MOV5427

28751001-*Eugonatonotus-chacei*

28752002-*Rhynchocinetes-brucei*

28752011-*Rhynchocinetes-enigma*

28755001-*Campylonotus-rathbunae*

28765048-*Alpheus-hailstonei*

28765126-*Synalpheus-comatularum*

28765140-*Synalpheus-neptunus*

99280437-*Alpheopsis*-cf.-*trispinosa*

28765169-*Alpheus*-sp.MOV5409

28765166-*Alpheus*-sp.MOV5403

28767004-*Merhippolyte-chacei*

28767026-*Lysmata-amboinensis*

28767039-*Tozeuma-tomentosum*

28767040-*Eualus*-sp.MOV2681

28767048-*Lebbeus-clarehannah*

28768010-*Processa-gracilis*

28770002-*Heterocarpus-dorsalis*

28770006-*Heterocarpus-tricarinatus*

28770007-*Heterocarpus-woodmasoni*

28770015-*Plesionika-orientalis*

28770050-*Plesionika-serratifrons*

99280438-*Plesionika*-cf.-*kensleyi*

28780010-*Glyphocrangon-confusa*

28780011-*Glyphocrangon-lineata*

28780016-*Glyphocrangon-sibogae*

28781001-*Parapontocaris-laevigata*

28781004-*Aegaeon-lacazei*

28781020-*Lissosabinea-lynseyae*

28781024-*Pontocaris-pennata*

28781025-*Parapontophilus-junceus*

28781032-*Philoceras-incisus*

28781038-*Metacrangon*-sp.MOV5423

28786002-*Metanephrops-boschmai*

28786005-*Metanephrops-velutinus*

28786006-*Nephropsis-acanthura*

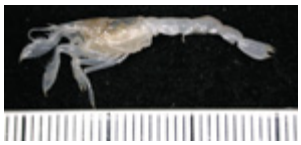
28786008-*Nephropsis-stewarti*

28801014-*Calaxius-acutirostris*

28801013-*Bouvieraxius-keiensis*

28801024-*Acanthaxius-gathaagudu*

28801025-*Acanthaxius-ningaloo*



28801027-*Australocaris-pinjarup*

28803035-*Corallianassa*-sp.MOV4965

28804010-*Tethisea*-sp.MOV5472

28805002-*Upogebia-bowerbanki*

28805021-*Upogebia-ancylodactyla*

28815005-*Pentacheles-laevis*

28815010-*Polycheles-suhmi*

28815014-*Polycheles-auriculatus*

28815019-*Polycheles-coccifer*

28820007-*Puerulus-angulatus*

28821001-*Ibacus-alticrenatus*

28821012-*Remiarctus-bertholdii*

28821021-*Crenarctus-crenatus*

28827017-*Paguristes-purpureantennatus*

28827077-*Paguristes-aciculus*

28827089-*Strigopagurus-elongatus*

28827109-*Calcinus*-sp.MOV5389

28827113-*Dardanus*-sp.MOV5266

28827117-*Ciliopagurus-shebae*

28830001-*Pylocheles-mortensenii*

28835010-*Lophopagurus-triserratus*

28835011-*Lophopagurus-nanus*

28835032-*Propagurus-haigae*

28835049-*Bathypaguropsis-yaldwyni*

28835050-*Porcellanopagurus-filholi*

28835069-*Cestopagurus*-sp.MOV5269

28835062-*Paguridae*-sp.MOV5261

28835071-*Michelopagurus*-sp.MOV5280

28835075-Paguridae-sp.MOV5270

28835076-Paguridae-sp.MOV5271

28836014-*Lithodes-rachelae*

28836010-*Paralomis-poorei*

28837002-*Sympagurus-dimorphus*

28837009-*Oncopagurus-indicus*

28837010-*Oncopagurus-monstrosus*

28837013-*Paragiopagurus-diogenes*

28837017-*Paragiopagurus-boletifer*

28837021-*Parapagurus-latimanus*

28837029-*Paragiopagurus*-sp.MOV5272

28840003-*Munida-haswelli*

28840004-*Allogalathea-elegans*

28840005-*Agononida-eminens*

28840006-*Agononida-incerta*

28840012-*Galathea-amboinensis*

28840024-*Lauriea-gardineri*

28840026-*Munida-andamanica*

28840031-*Enriquea-leviantennata*

28840034-*Munida-rubridigitalis*

28840042-*Phylladiorhynchus-pusillus*

28840056-*Munidopsis-dasypus*

28840097-*Galathea-consobrina*

28840098-*Paramunida-stichas*

28840102-*Munidopsis-crenatorostris*

28840076-*Munidopsis-andamanica*

28840125-*Munida-gordoae*

28840158-*Agononida*-sp.MOV5218

28840160-*Munida*-sp.MOV5183

28840153-*Munida*-sp.MOV5200

28840152-*Munida*-sp.MOV5199

28840157-*Raymunida*-sp.MOV5198

28840161-*Munida*-sp.MOV5203

28842002-*Uroptychus-australis*

28842008-*Uroptychus-gracilimanus*

28842020-*Uroptychus-flindersi*

28842054-*Uroptychus*-sp.MOV5181

28843017-*Platycheles-sculptus*

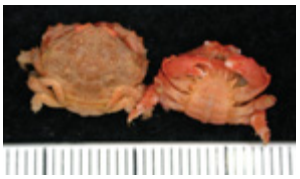
28843028-*Petrolisthes-militaris*

28843038-*Polyonyx-biunguiculatus*

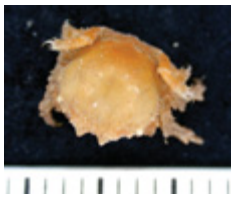
28845009-*Stemonopa-insignis*

28845010-*Albunea-occultus*

28852003-*Austrodromidia-insignis*



28852004-*Metadromia-wilsoni*



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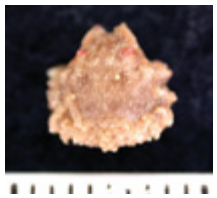


28852036-*Takedromia*-sp.MOV5003

28853004-*Hirsutodynomene-spinosa*

28854008-*Cymonomus*-sp.MOV5001

28855002-*Tymolus-similis*

28855003-*Krangalangia-spinosa*

28860001-*Dagnaudus-petterdi*

28860011-*Latreillopsis-tetraspinosa*

28860012-*Homologenus-malayensis*

28860013-*Homologenus-braueri*

28860014-*Yaldwynopsis*-sp.MOV5004

28861001-*Eplumula-australiensis*

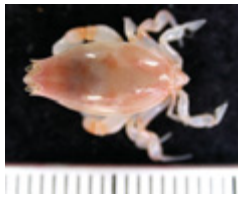
28861002-*Latreillia-pennifera*

28865002-*Lyreidus-tridentatus*

28865005-*Umalia-trirufomaculata*

28865006-*Cosmonotus-grayi*

28865008-*Notosceles-serratifrons*



28865009-*Lyreidus-stenops*

28870002-*Paradorippe-australiensis*

28870014-*Ethusina*-sp.MOV5005

28870011-*Ethusa-sp.MOV5006*

28875002-*Mursia-australiensis*

28875004-*Mursia-microspina*

28875005-*Calappa-lophos*

28875015-*Calappa-depressa*

28875018-*Calappa-pustulosa*

28875019-*Mursia*-sp.MOV4988

28876001-*Merocryptus-lambriformis*

28876010-*Leucosia-haematosticta*

28876012-*Arcania-septemspinosa*

28876015-*Arcania-cornuta*

28876017-*Iphiculus-spongiosus*

28876046-*Ebalia-tuberculosa*

28876061-*Arcania-elongata*

28876080-*Randallia-eburnea*

28876082-*Myra-curtimana*

28876084-*Randallia-pustuloides*

28876085-*Parilia-major*

28876096-*Arcania*-sp.MOV4980

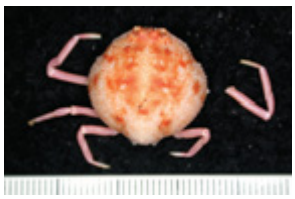
28876103-*Ebalia*-sp.MOV4990

28876095-*Randallia*-sp.MOV4978

28876105-*Myra*-sp.MOV4982

28876098-*Arcania*-sp.MOV4987

28876107-*Philyra*-sp.MOV4984

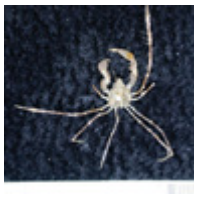


28876108-*Randallia*-sp.MOV4977

28876104-*Leucosia*-sp.MOV4985

28880001-*Platymaia-wyvillethomsoni*

28880005-*Leptomithrax-sternocostulatus*



28880013-*Dorhynchus-ramusculus*

28880022-*Achaeus-curvirostris*

28880032-*Camposcia-retusa*

28880047-*Griffinia-lappacea*

28880068-*Cyrtomaia-maccullochi*

28880079-*Sunipea-indicus*

28880086-*Leptomithrax-globifer*

28880097-*Prismatopus-occidentalis*

28880148-*Phalangipus-hystrix*

28880155-*Planotergum-mirabile*

28880161-*Oncinopus-cf.-angustifrons*

28880163-*Prismatopus-brevispinosus*

28880164-*Physachaeus-ctenurus*

28880165-*Maja-confragosa*

28880172-*Oxypleurodon-wilsoni*

28880173-*Rochinia-annae*

28880174-*Rochinia-carinata*

28885014-*Trigonoplax-longirostris*

28885031-*Halicarcinus*-sp.MOV5002

28895014-*Daldorfia-excavata*

28895018-*Parthenope-chondrodes*

28895038-*Garthambrus*-sp.MOV5011

28895039-*Garthambrus*-sp.MOV5063

28900004-*Jonas*-sp.MOV5021

28901006-*Trichopeltarion*-sp.MOV5135

28911016-*Liocarcinus-corrugatus*

28911019-*Charybdis-miles*

28911021-*Parathranites-orientalis*

28911023-*Thalamita-sexlobata*

28911025-*Thalamita-spinifera*

28911033-*Portunus-haanii*

28911051-*Nectocarcinus-spinifrons*

28911059-*Ovalipes-iridescens*

28911061-*Lupocyclus-philippinensis*

28911094-*Thalamita-macropus*

28911103-*Lupocyclus-quinquedentatus*

28911105-*Charybdis-hongkongensis*

28911106-*Portunus-longispinosus*

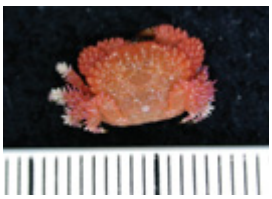
28911107-*Portunus-nipponensis*

28911109-*Echinolatus-poorei*

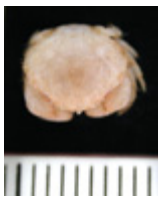
28911115-*Lupocyclus*-sp.MOV5185

28917001-*Mathildella-serrata*

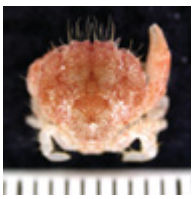
28917007-*Neopilumnoplax-nieli*



28920001-*Actaea-peronii-peronii*



28920026-*Calvactaea-tumida*



28920102-*Palapedia-pelsartensis*

28920176-*Palapedia-valentini*

28920189-*Nanocassiope*-sp.MOV5087

28920190-*Nanocassiope*-sp.MOV5299

28920193-*Paraxanthodes*-sp.MOV5072

28920195-*Xanthias*-sp.MOV5076

28922001-*Psopheticus-stridulans*

28922002-*Pycnoplax-meridionalis*

28922021-*Pycnoplax-bispinosa*

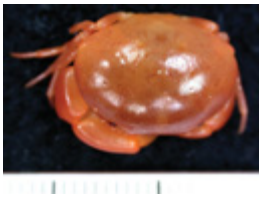
28922022-*Notonyx-nitidus*

28917008-Goneplacidae-sp.MOV4997

28922031-*Carcinoplax*-sp.MOV4992

28922035-*Paragoneplax-serenei*

28923003-*Hexaplax-megalops*



28924001-*Carpilius-convexus*

28925009-*Hypothalassia-acerba*

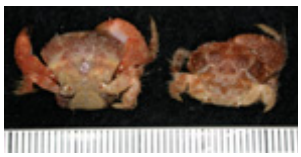
28926020-*Eumedonus-niger*

28926098-*Caecopilumnus-piroculatus*

28926100-*Mertonia-lanka*

28926115-*Paraselwynia*-sp.MOV5089

99280440-*Pilumnus*-cf.-*spinicarpus*



28926119-*Pilumnus*-sp.MOV5099

28926126-*Pilumnidae*-sp.MOV4995

28927022-*Quadrella-reticulata*

28962007-*Pseudopalicus-macromeles*

28962014-*Micropalicus-vietnamensis*

33011016-*Parapallene-australiensis*

33011020-*Parapallene-haddoni*

33012054-*Tanystylum-zuytdorpi*

33014017-*Rhopalorhynchus-sibogae*

33014019-*Colossendeis-colossea*

33014024-*Hedgpethia-calva*

33020010-*Pallenopsis-cribaribatus*

33020015-*Pallenopsis-temperans*

35012002-*Rhopalaea-crassa*

35013071-*Leptoclinides-durus*

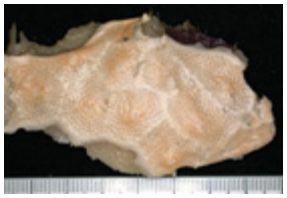
35013094-*Polysyncraton-millepore*

35013157-*Didemnum-ossium*

35013162-*Didemnum-perplexum*

35013211-*Atriolum-bucinum*

35013275-*Polysyncraton-fistulum*



35013281-*Polysyncraton-pavimentum*

35015035-*Sycozoa-seiziwadai*

35018004-*Eucoelium-coronaria*

35019010-*Aplidium-caelestis*

35019034-*Aplidium-magnilarvum*

35019047-*Aplidium-solidum*

35019072-*Synoicum-chrysanthemum*

35021011-*Sigillina-australis*

35032008-*Herdmania-momus*

35032046-*Herdmania-grandis*

35033048-*Cnemidocarpa-completa*

35033065-*Polycarpa-aurita*

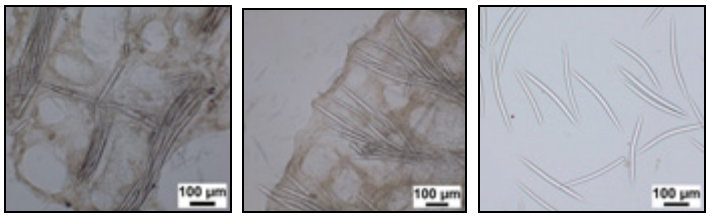
35033098-*Polycarpa-viridis*

35033101-*Styela-plicata*

35102001-*Dolioletta-gegenbauri*

APPENDIX 3 Example of sponge mudmaps used for identification purposes, for the species *Axinella* sp. SS1 (Fromont and Gomez 2007).

Western Australian Sponges



FIELD No: SS1005/002-027, 038
RVS4545/D084-070

REG. No: WAM Z35012, Z45169

ORDER: Halichondrida
FAMILY: Axinellidae
GENUS: *Axinella*
SPECIES: sp. SS1
AUTHORITY:

Growth Form: Erect branching lobes with basal stem. Dimensions: 16cm (H) x 18cm (W) x 0.5cm (T).

Colour: Fawn throughout, pale maroon colouration on parts of surface. Fawn in ethanol.

Oscules: On one side of lobes. Approximately 1mm wide and slightly raised.

Texture: Firm, compressible, springy.

Surface Ornamentation: Fine adherent surface membrane, finely porous.

Ectosomal Skeleton: Spicules brushes at right angles to surface, extending slightly beyond. Slightly thickened mesohyl at surface.

Choanosomal Skeleton: Axial condensation in the stem with fibres around spicules. Spicule tracts radiate to surface. Width of primary fibres: 82µm with 4-6 spicules across. Width of secondary fibres: 35µm with 1-2 spicules across.

Fromont & Gomez, 2007

Western Australian Sponges

Megascleres: Oxeas with sharp pencil points, usually centrally bent, some thin forms occur. Occasional styles present. Oxea length: 281-**337**-378µm. Width: 14-**17**-20µm. Specimen SS1005/002-038 (Lot 100-3): Oxea length: 312-**352**-378µm. Width: 11-**14**-17µm.

Microscleres: None.

Symbionts: None observed.

Associated Fauna: None observed.

Remarks: WAM Z35012 and specimen SS1005/002-038 (Lot 100-3) have oocytes.

Specimens: WAM Z35012 (S1005/002-027 (Lot 100-2)), **WAM Z45169** (RVS4545/D084-070, not processed).

Other Material: SS1005/002-038 (Fragment).

Fromont & Gomez, 2007

Guide to Authors

Subject Matter

Original research, reviews and observations in all branches of natural science and human studies will be considered for publication. However, emphasis is placed on studies pertaining to Western Australia and neighboring regions. Longer papers will be considered for publication as Supplements to the *Records of the Western Australian Museum*. Such publications may attract charges to the authors to offset the costs of printing – authors should consult the editors before submitting large manuscripts. Short communications should not normally exceed three typed pages and this category of paper is intended to accommodate observations, results or new records of *significance*. All material must be original and not have been published elsewhere. All type specimens must be lodged in a public institution and no type material may be kept in a private collection.

Presentation

Authors are advised to follow the layout and style in the most recent issue of the *Records of the Western Australian Museum* including headings, tables, illustrations and references. When in doubt, use a simple format that is easily edited. Please provide line numbers throughout the MS (e.g., in Word go to File → Page Setup → Layout (tab) → Line Numbers (button), add line numbers and click on 'continuous' numbering).

The title should be concise, informative and contain key words necessary for retrieval by modern searching techniques. An abridged title (not exceeding 50 character spaces) should be included for use as a running head.

An abstract must be given in full length papers but not short communications, summarizing the scope of the work and principal findings. It should normally not exceed 2% of the paper and be suitable for reprinting in reference periodicals. At the end of the abstract, provide several keywords not already included in the title.

The International System of units should be used. Spelling should follow the *Concise Oxford Dictionary*. Numbers should be spelled out from one to nine in descriptive text; figures used for 10 or more. For associated groups, figures should be used consistently (e.g., '5 to 10', not 'five to 10').

Systematic papers must conform with the International Codes of Botanical and Zoological Nomenclature and, as far as possible, with their recommendations.

Synonymies should be given in the short form (taxon, author, date, page) and the full reference cited at the end of the paper. All citations, including those associated with scientific names in taxonomic works, must be included in the references.

Manuscripts

Manuscripts should be submitted electronically as PDFs or Word files to the editors (listed below). For manuscripts with large image files, submission of a CD is acceptable. Manuscripts must be 1.5 or double-spaced throughout. All margins should be at least 25 mm wide. Tables plus headings, and Figure legends should be on separate pages. Tables should be numbered consecutively, have headings which make them understandable without reference to the text, spell out generic names and be referred to in the text.

Figures

Lower resolution images can be inserted into a PDF or Word document for review. Upon acceptance, high resolution (6-10 Mb) images in TIFF or JPEG format can be emailed or burned to CD and posted to the editors. We prefer TIFF files for figures. For Adobe Illustrator and Sigmaplot, save in .eps (encapsulated postscript) format; for PowerPoint, save in .wmf (windows metafile format); for Excel, save as Excel 97 worksheet (must contain spreadsheet and embedded chart); and for CorelDraw, save as an .eps file that may be opened by Adobe Illustrator.

Scanned photographs should be saved as TIFF files. All TIFF files should be compatible with Adobe Photoshop. If figures are prepared in a paint program, for black-and-white line art save at 600 dpi as a black-and-white bitmap (not greyscale or colour), and greyscale and colour line art at 300 dpi. The maximum page reproduction area for figures and tables is 235 x 170 mm.

Scale must be indicated on illustrations. Use arrows or other aids to indicate specific features mentioned in the text. All maps, line drawings, photographs and graphs should be numbered in sequence and referred to as 'Figure' (no abbreviation) in the text and captions. Each figure should have a brief, fully explanatory caption.

The cost of colour printing has to be met by the author/s, normally $60 to $85 per page depending on the number of colour pages within an issue.

References

In the body of the text, references should be cited as follows:

> McKenzie and colleagues (McKenzie 1999, 2000; McKenzie et al. 2000) found that bat frequencies were highest on full moons, contra previous workers (Smith and Jones 1982; Berman 1988; Zucker et al. 1992).

For citing taxonomic groups and the author, a comma occurs between them:

> The family Carphodactylidae consists of *Carphodactylus* Smith, 1999, *Nephrurus* Jones, 1999, *Orroya* Couper, Covacevich and Hoskin, 2001, *Phyllurus* Sprong, 1888 and *Saltuarius* Hammond, 1901.

All references must be cited in the text by author and date and all must be listed alphabetically at the end of the paper. The names of journals are to be given in full. Consult a recent edition of the *Records* for style. For taxonomic papers, include full references for all taxonomic groups mentioned in the text. In manuscripts dealing with historical subjects references may be cited as footnotes.

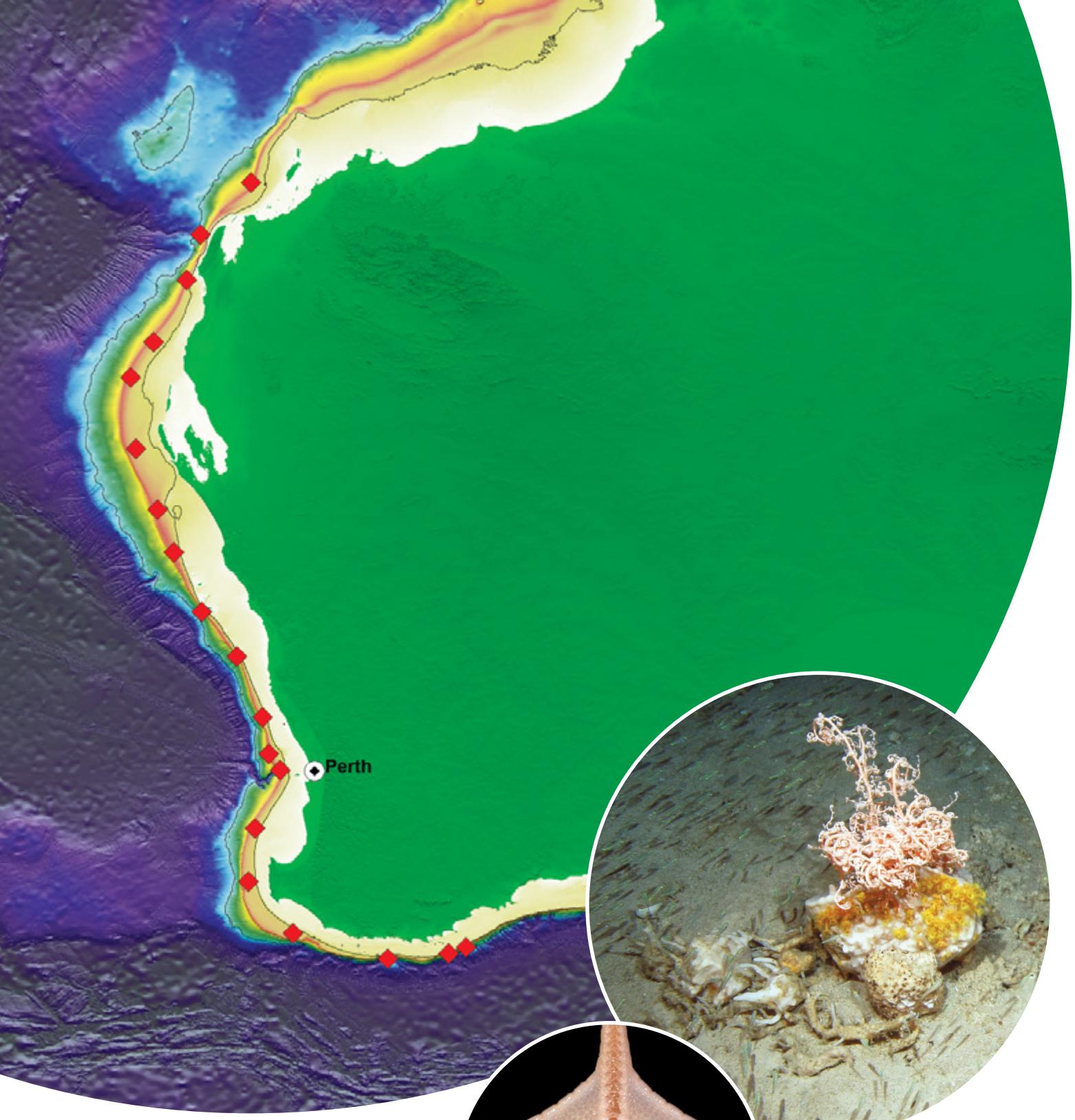
Processing

All manuscripts are reviewed by at least two referees whose reports assist the editors in making their decision whether to accept the paper. The review process usually takes from two to three months, although the review process for longer manuscripts and supplements can take longer.

The corresponding author is sent one set of page proofs electronically which must be returned within one week of receipt. Upon completion, all authors receive a PDF of their paper and a print copy of the entire issue.

Editors

Manuscripts can be submitted by email to Paul Doughty (paul.doughty@museum.wa.gov.au) for human studies (anthropology, archaeology or history) and terrestrial vertebrate animals, to Mark Harvey (mark.harvey@museum.wa.gov.au) for terrestrial invertebrate animals, or to Jane Fromont (jane.fromont@museum.wa.gov.au) for aquatic animals.



BACK COVER (clockwise from top):

Map of the sampling sites on the outer shelf and upper slope off Australia's western margin. *(Geoscience Australia).*

Basket star and yellow zooanthids on a large sponge at 96 m depth. *(CSIRO).*

Styracaster n. sp. collected from the Perth Canyon site. *(CSIRO).*

FRONT COVER (clockwise from top):

Lebbeus clarehannah collected from the Bald Island site. *(CSIRO).*

Sponges, bryozoans and ascidians on a rocky outcrop at 174 m depth. *(CSIRO).*

Ophiactis sp. collected from the Abrolhos site. *(CSIRO).*

WESTERN AUSTRALIAN museum

CSIRO