

## **ECHINODERM FAUNA OF THE SOUTH CHINA SEA: AN INVENTORY AND ANALYSIS OF DISTRIBUTION PATTERNS**

**David J.W. Lane**

*Department of Biological Sciences, National University of Singapore, Lower Kent Ridge Road, Singapore 119260, Republic of Singapore. E-mail: dbslaned@nus.edu.sg*

**Loisette M. Marsh**

*Department of Aquatic Zoology, Museum of Natural Science, Western Australian Museum, Francis Street, Perth, Western Australia 6000, Australia*

**Didier VandenSpiegel**

*Musée Royal de l'Afrique Centrale, Invertébrés non insectes, B-3080 Tervuren, Belgium*

**Frank W.E. Rowe**

*Goldbrook Boarding Kennels, Nuttery Vale, Cross Street, Hoxne, Suffolk, IP21 5BB, U.K.*

**ABSTRACT.** - A comprehensive review and analysis of the literature on echinoderm records for the South China Sea (SCS) indicates close to a thousand (982) species in total (113 crinoids, 227 asteroids, 272 ophiuroids, 167 echinoids and 203 holothuroids). All known SCS species and their distributions are tabulated herein. A total of 178 echinoderms have their type locality in the South China Sea, with 63% of these (12% of the echinofauna overall) currently considered endemic. One possible reason for the prominence of endemics is that the South China Sea became relatively land-locked, repeatedly, during low sea level stands. Large areas of the South China Sea remain relatively unexplored biologically and it is likely that additional records and new taxa await discovery.

**KEY WORDS.** - Echinodermata, South China Sea, Indo-Pacific, biodiversity, biogeography

---

### **INTRODUCTION**

The fauna of the South China Sea has never been comprehensively studied and most expeditions have merely touched the fringes. The first major expedition to collect in the South China Sea was the renowned world-wide, deep-sea exploring expedition of HMS "Challenger" (1873-76). "Challenger" occupied many stations through the Philippines but only two in the South China Sea, one off the west coast of Luzon and one near Hong Kong.

Echinoderms from the voyage were described by Sladen, 1889 (asteroids), Lyman, 1882 (ophiuroids), Théel, 1882, 1886 (holothurians), Carpenter 1884, 1888 (crinoids) and A. Agassiz, 1881 (echinoids). Bedford (1900) listed echinoderms from Singapore and peninsular Malaysia and A.H. Clark (1934) described the crinoids in the Raffles Museum. Bell (1894) described the echinoderms collected from Macclesfield Bank by HMS "Penguin" and HMS "Egeria". By far the most significant contribution to the marine zoology of the area was made by the United States Fisheries steamer "Albatross" (1907-1910) which dredged through the Philippines and adjacent areas but again only touched the fringes of the South China Sea, from Balabac Strait, the north west coast of Palawan, the deep Palawan passage and a number of stations north west of Mindoro and off the west coast of Luzon. The echinoderms were described by Fisher, 1919 (asteroids), Koehler, 1922 (ophiuroids), A.H. Clark, 1911 (crinoids) and Mortensen, 1927, 1940b, 1948b (echinoids). Domantay (1933, 1934, 1936, 1962, 1972), Domantay & Domantay (1967) and Domantay & Roxas (1938) contributed to

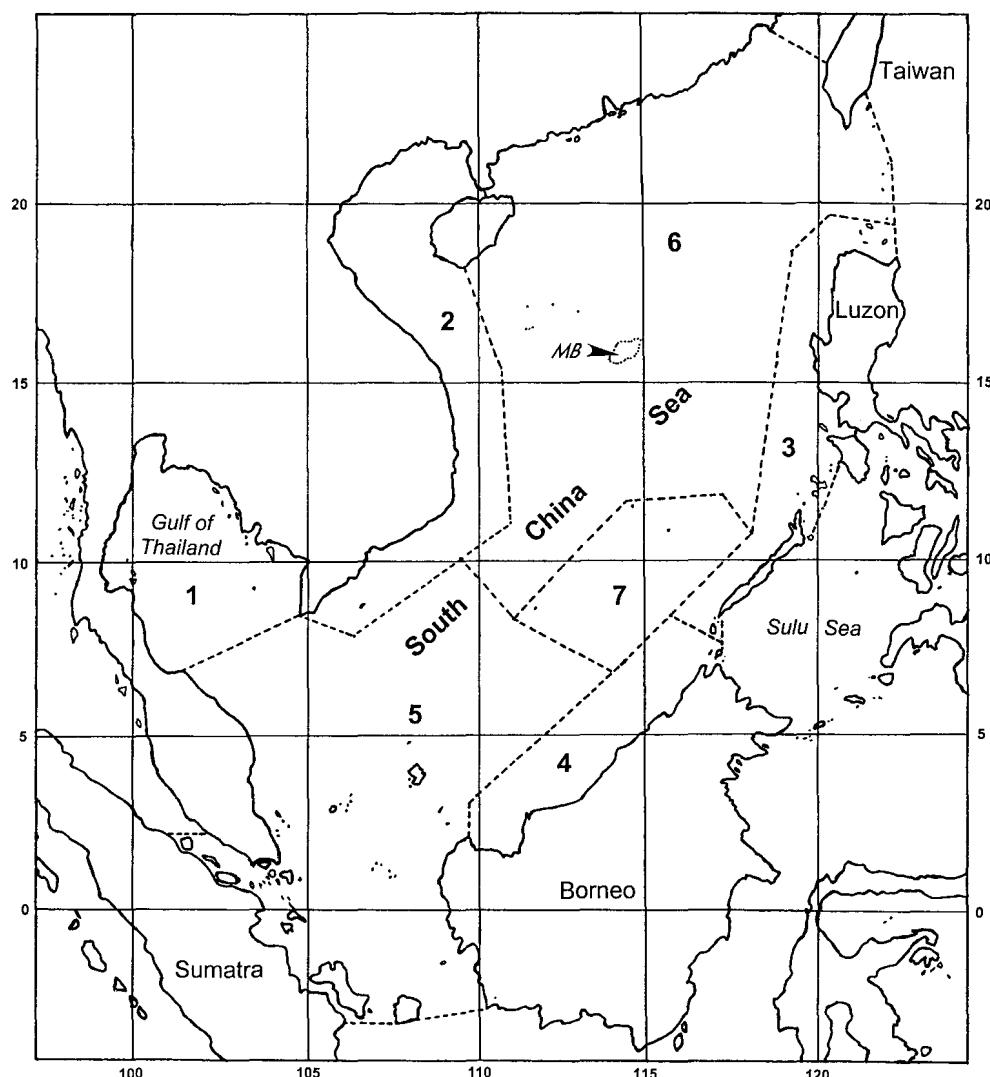


Fig. 1. Map of the South China Sea. SCS boundaries and demarcations between the seven zones (1-7) are indicated with dashed lines. MB = Macclesfield Bank.

knowledge of the echinoderms of the coasts of Mindoro and Luzon. More recently Liao has made extensive studies of the echinoderm fauna of China from both deep and shallow water including the Paracel (Xisha) Islands, culminating in Liao & Clark (1995) and Liao (1997). Chinese scientists have made a substantial contribution to knowledge of the Spratly (Nansha) islands and neighbouring waters, including deep water species. Their major report (Guozhen, 1989) lists 162 species, with a further 35 added in a supplementary list (Guozhen, 1991). Taiwan echinoderms have been studied principally by Chao & Chang (1989a, b, 1990) and Applegate (1984). Vietnam echinoderms are listed by Dao (1991a, b, c, 1994) and Cherbonnier (1960, 1961). The French MUSORSTOM Expeditions 1 and 2 (off the west coast of the Philippines) sampled echinoderms from the shelf and slope to 970 metres (Guille, 1981; Bourseau & Roux, 1989).

Comprehensive works by Mortensen (Monographs of the Echinoidea - 1928, 1935, 1940a, 1943, 1948a, 1950, 1951), A.H. Clark (Monograph of the existing crinoids 1931, 1941, 1947, 1950; A.H. Clark & A.M. Clark, 1967) and A.M. Clark & Rowe (1971) have brought together diverse records and have largely stabilised the taxonomy. Rowe & Gates (1995), who list all species known from Australia, have updated the taxonomy, including many species also found in the South China Sea.

The South China Sea (SCS) is largely enclosed by major land masses and island chains, with more open water in the Luzon Strait to the north and between Kalimantan and Sumatra to the south. For the purposes of this report the northern Luzon Strait boundary is designated, arbitrarily, from Escarpada point, N. Luzon, to S.E. Taiwan, including the Babuyan and Batan Islands. The southern boundary, at about 3° south of the equator, includes the islands of P. Bangka and P. Belitung between Sumatra and Kalimantan. Similarly, islands within the Balabac Strait, the Linapacan / Mindoro Straits and Verde Island Passage are considered included by the eastern Philippine boundary of the SCS. The islands at the southern end of the Straits of Malacca are also included (Fig. 1). For the purposes of the distribution tables in this report the area is subdivided into seven zones, 1 to 4 being coastal, 5 and 6 more central, and area 7 encompassing shallow and deep waters of the Nansha (Spratly) islands (Fig. 1). The echinoderm inventory includes all known records published in the literature. Also included are data from unpublished reports of the second author and from field observations / collections of the first author (the latter indicated by L in distribution table). Depth ranges for non-endemic taxa include records from outside as well as within the South China Sea. An asterisk instead of a plus sign in column 3 of the table indicates either an SCS taxon recorded for the adjacent central Philippine Archipelago/Sulu Sea (but not in area 3), or an unspecified locality in the Philippines. This is considered useful since past Philippines expeditions have largely concentrated on the central Philippines-Sulu region; representation in area 3 might be expected for species which range from central archipelagic waters to other SCS zones. South China Sea type species and their type zones, where known, are highlighted in bold in the distribution tables. Although the present lists are as comprehensive as possible, some records may have been overlooked, and further taxonomic work, needed for many taxa, may reveal synonymies or result in the recognition of additional species.

#### ZOOGEOGRAPHIC ANALYSIS

The present lists comprise 982 species of echinoderms (113 crinoids, 227 asteroids, 272 ophiuroids, 167 echinoids and 203 holothurians). For comparison Rowe & Gates (1995) list

1154 species for Australia waters, with about two thirds of these comprising non-endemic and endemic, tropical species (Rowe, 1985). To our knowledge no compilation has been made of the **total** echinoderm fauna (i.e. at all depths) of the species rich, core Indo-Malay Archipelago area, i.e. the remainder of the Philippines, including the Sulu Sea, the Indonesian Archipelago, New Guinea and islands to the north of New Guinea. This area probably has a richer fauna than the South China Sea but no comparisons, other than of shallow-water (<30m) species (c.f. Clark & Rowe, 1971), can be made at present; however it is known that the Sulu Sea, because of its historical isolation during successive Pleistocene glaciations, has a high level of faunal endemicity at species level.

As results from the MUSORSTOM expeditions show, viz. their recently described species from the eastern part of the South China Sea, there are probably still many species to be discovered in other deep water areas. In general, many deep water species are known only from a single collection, sometimes from a single specimen; these are considered to be endemic until shown to have a wider distribution. On the other hand some deep water species, living at low temperatures, have a very wide distribution through the Indo-Pacific and sometimes the Atlantic, at temperate as well as tropical latitudes.

The species distributions fall quite neatly into the following zoogeographical categories: (1) endemic to the South China Sea; (2) confined to all or part of Southern and South East Asia from India/Sri Lanka coastal waters to Japan, south to Indonesia and northern Australia; (3) those found in this area but extending either into the Indian or Pacific oceanic domains, (restricted IWP in Table 1) and (4) those found widely distributed in the Indo-West Pacific (IWP), sometimes from East Africa to Hawaii. A few cosmopolitan species are included in the IWP group (Table 1).

**Table 1. Distribution patterns of echinoderms from the South China Sea.**

Classes	Total species	Endemic SCS	S. Asia ± Australia	Restricted IWP	IWP
Crinoidea	113	7 (7%)	67 (63%)	24 (22%)	9 (8%)
Asteroidea	227	54 (24%)	80 (36%)	55 (24%)	36 (16%)
Ophiuroidea	272	13 (5%)	132 (49%)	68 (26%)	54 (20%)
Echinoidea	167	7 (5%)	68 (45%)	36 (24%)	42 (28%)
Holothuroidea	203	31 (16%)	51 (27%)	43 (23%)	64 (34%)
Totals	982	112 (12%)	398 (42%)	226 (24%)	205 (22%)

A total of 178 echinoderms (18% of the fauna) have their type locality in the South China Sea or on the coasts bordering it: 14 crinoids, 61 asteroids, 41 ophiuroids, 19 echinoids and 43 holothurians. About 63% of these are currently considered endemic species (see Table 1) based on the present state of knowledge of their geographic distribution and, for some, their taxonomy.

It should be noted that distribution data was not available for all species, hence the figures do not add up to the total number of species. Percentages were calculated from the number of species for which data was available; no distribution data was available for 6 crinoids, 5 ophiuroids, 15 echinoids and 14 holothurians (2 asteroids plus 2 additional holothurians, identified to genus only, were also excluded from the analysis). Nevertheless it is believed

that the data, overall, do give a fairly accurate picture of the patterns of distribution.

The rate of endemism in the South China Sea is quite high, comprising 12% of the echinofauna overall and 24% and 16% for asteroids and holothuroids respectively. Endemic South China Sea echinoderms account for 63% of those with type locality in the region. One possible reason for the prominence of endemics is that the South China Sea became relatively land-locked periodically during glacial low sea level stands. The highest proportion of species (42%) is widely distributed to parts of southern and eastern Asia, often including Northern Australia. Many fewer species (24 and 22% respectively) are more widely distributed to the Indian or Pacific oceans (restricted IWP), or to both (IWP). For comparison, re-working the data in Rowe (1985) and Rowe & Gates (1995) for the Australian tropical fauna gives the following approximate distribution pattern of species: Endemics - 27%; shared South East Asian ('East Indian' - includes N. Australian component) - 15%; 'East Indian' plus either Pacific or Indian Ocean (equivalent to restricted IWP) - 16%; Indo-Pacific (= IWP) - 21% (based on a tropical element of  $0.67 \times 1154$  species).

One area in the South China Sea which is conspicuously lacking in data for echinoderms (and probably other groups) is the Nansha (Spratly) islands reefal system. The present echinoderm count of 205 species for this area is relatively low, given the complexity and size of this shallow to deep tropical area. Further sampling in these waters will undoubtedly reveal additional taxa, some of which may boost the endemic component of the South China Sea. This is also likely to be the case for the deep echinoderm fauna generally.

It is not practical at present to comment on rare species since rarity may be only apparent because of lack of collecting, however records from a single locality in the species lists suggest possibly rare species.

#### **Need for further expeditions / surveys**

As can be seen from the historical account, most of the major expeditions visiting the South China Sea were undertaken during latter part of the 19<sup>th</sup> and early part of the 20<sup>th</sup> century. The survey coverage of this area was only partial and large areas of the South China Sea remain almost completely unknown biologically. In recent years Thai biologists have sampled echinoderms from the Gulf of Thailand but results are as yet unpublished; only echinoids are well represented in the literature for this area (Area 1). The small domains of Singapore and Hong Kong waters have been repeatedly sampled and their echinofauna is relatively well known, yet the extensive area of continental shelf (part of the Sunda shelf) between the Thailand-Malaysia peninsula and Borneo is, apart from the east coast islands of peninsular Malaysia and the Anambas islands, apparently unsampled, as is the deep water area (South China Basin) between Macclesfield Bank and the large area of shoals to the north of East Malaysia and Palawan. The coastal fauna of Sarawak and Brunei is little known, while that of Sabah is slightly better known. While the "Albatross" sampled deep water off Palawan they collected from few inshore stations on that island. There is also much to be known of the shoals which include the Spratly Islands (Nansha), Itu Aba (Taiping Island) and adjacent areas.

Thus it is apparent that much sampling of offshore reef systems (e.g. Nansha islands), non-reef coasts and deep waters (below 200m) remains to be done before the fauna of the South China Sea is as well known as that of the Philippines or Indonesia. As a first initiative, an international expedition to the Nansha islands would be expected to be particularly fruitful in terms of biodiversity / biogeographic discoveries.

## ACKNOWLEDGEMENTS

The authors thank D.L. Pawson for comments on an earlier version of this manuscript, and Cai Yixiong and Benito Tan for assistance translating Chinese publications.

## LITERATURE CITED

- Agassiz, A., 1881. Echinoidea. *Rep. scient. Results Voy. H.M.S. 'Challenger' (Zool.)*, **3**: 1-321, pls 1-45.
- Applegate, A.L., 1984. Echinoderms of Southern Taiwan. *Bull. Inst. Zool. Academia Sinica*, **23**(1): 93-118.
- Aziz, A., 1986. La faune d'astérides (Echinodermata) de la région indo-malaise: Taxonomie Zoogéographie et bathymétrie. Thesis, Université Libres de Bruxelles.
- Aziz, A. & M. Jangoux, 1984. Les asterides (Echinodermes) du plateau de la Sonde (Indonesia). *Indo-Malayan Zool.*, **1**(1): 127-140.
- Aziz, A. & M. Jangoux, 1985. Description de six asterides nouveaux (Echinodermata) de la region des Philippines. *Indo-Malayan Zool.*, **2**: 281-291.
- Bedford, F.P., 1900. On the echinoderms from Singapore and Malacca. *Proc. zool. Soc. Lond.*, **14**: 271-299.
- Bell, F.J., 1894. On the echinoderms collected during the voyage of HMS 'Penguin' and by HMS 'Egeria' when surveying the Macclesfield Bank. *Proc. zool. Soc. Lond.*, **1894**: 392-413, pls 23-27.
- Bourseau, J.-P. & M. Roux, 1989. Echinoderms: Crinoidea Pentacrinitidae (Musorstom 2 & Corindon 2) In: J. Forest (ed.) *Résultats des Campagnes MUSORSTOM*, v.4. *Mem. Mus. natn. Hist. nat.*, (A) **143**: 113-201. Paris.
- Carpenter, P.H., 1884. Report on the Crinoidea collected during the voyage of H.M.S. 'Challenger' during the years 1873-1876. Pt. 1. General morphology with descriptions of the stalked crinoids. *Rep. scient. Results Voy. H.M.S. 'Challenger' (Zool.)*, **11**(32): 1-442, 62 pls.
- Carpenter, P.H., 1888. Crinoidea II. The Comatulae. *Rep. scient. Results Voy. H.M.S. 'Challenger' (Zool.)*, **26**: ix + 339, 70 pls.
- Chao, S.-M. & K.-H. Chang, 1989a. The shallow water holothurians (Echinodermata: Holothurioidea) of southern Taiwan. *Bull. Inst. Zool. Academia Sinica*, **28**(2): 107-137.
- Chao, S.-M. & K.-H. Chang, 1989b. Some shallow-water asteroids (Echinodermata: Asteroidea) from Taiwan. *Bull. Inst. Zool. Academia Sinica*, **28**(3): 215-223.
- Chao, S.-M. & K.-H. Chang, 1990. First records of two holothurians (Echinodermata: Holothuroidea) from Taiwan. *Bull. Inst. Zool. Academia Sinica*, **29**(1): 65-69.
- Chao, S.-M. & P.S. Alexander, 1991. Two sea cucumbers (Echinodermata: Holothuroidea) newly recorded from Taiwan. *J. Taiwan Mus.*, **44**(1): 163-167.
- Chao, S.-M., F.W.E. Rowe & K.-H Chang, 1988. A new species in the synaptid genus *Patinapta* (Echinodermata: Holothurioidea), from Taiwan. *Micronesica*, **21**: 33-38.
- Cherbonnier, G., 1960. Holothuries récoltées par A. Gallardo dans la baie de Nha Trang (Sud Vietnam). *Bull. Mus. Hist. nat., Paris*, (2), **32**: 425-435.
- Cherbonnier, G., 1961. Holothuries récoltées par A. Gallardo dans la baie de Nha Trang (Sud Vietnam). *Bull. Mus. Hist. nat., Paris*, (2), **33**: 132-136.
- Cherbonnier, G. & J.-P. Feral, 1981. Echinoderms: Holothuries. In: *Résultats des Campagnes MUSORSTOM. 1. Philippines. (18-28 Mars 1976)*. *Mem. ORSTOM* No. **91**:357-412, 32 figs.
- Cherbonnier, G. & A. Guille, 1978. *Faune de Madagascar. 48. Echinoderms: Ophiurides*. Paris: ORSTOM. 272 pp., 17 pls.
- Clark, A.H., 1911. On a collection of unstalked crinoids made by the United States Fisheries steamer 'Albatross' in the vicinity of the Philippine Islands. *Proc. U.S. natn. Mus.*, **39**: 529-563.

- Clark, A.H., 1915. A monograph of the existing crinoids. Vol. 1. The comatulids (Part 1). *Bull. U.S. natn. Mus.*, **82** (1): vi + 406, 17pls.
- Clark, A.H., 1918. The unstalked crinoids of the Siboga Expedition. *Siboga Expedition* **42**(b) viii + 300pp. + 28 pls.
- Clark, A.H., 1921. A monograph of the existing crinoids. Vol.1. The comatulids (Part 2). *Bull. U.S. natn. Mus.*, **82**(2): xxv + 795, 57pls.
- Clark, A.H., 1931. A monograph of the existing crinoids. Vol.1. The comatulids (Part 3), Superfamily Comasterida. *Bull. U.S. natn. Mus.*, **82**(3): vii + 816, 82 pls.
- Clark, A.H., 1934. On a collection of crinoids from the Raffles Museum, Singapore. *Proc. Biol. Soc. Wash.*, **47**: 9-14.
- Clark, A.H., 1941. A monograph of the existing crinoids. Vol. 1. The comatulids (Part 4a), Superfamily Mariametrida (except the family Colobometridae). *Bull. U.S. natn. Mus.*, **82**(4a): vii + 603, 61pls.
- Clark, A.H., 1947. A monograph of the existing crinoids. Vol. 1. The comatulids (Part 4b), Superfamily Mariametrida (concluded - the family Colobometridae) and Superfamily Tropiometrida (except the families Thalassometridae and Charitometridae). *Bull. U.S. natn. Mus.*, **82**(4b): vii + 473, 43 pls.
- Clark, A.H., 1950. A monograph of the existing crinoids. Vol. 1. The comatulids (Part 4c), Superfamily Tropiometrida (the families Thalassometridae and Charitometridae), *Bull. U.S. natn. Mus.*, **82**(4c): vii + 383, 32 pls.
- Clark, A.H. & A.M. Clark, 1967. A monograph of existing crinoids. Vol. 1. The comatulida (Part 5, Suborders Oligophreata (concluded) and Macrophreata. *Bull. U. S. natn. Mus.*, **82**(5): xiv + 860, 53 figs.
- Clark, A.M., 1967. Notes on asteroids in the British Museum (Nat. Hist.). 5. *Nardoa* and some other ophidiasterids. *Bull. Br. Mus. nat. Hist. (Zool.)*, **15**: 167-198.
- Clark, A.M., 1968. Notes on some tropical Indo-Pacific ophiotrichids and ophiodermatids (Ophiuroidea). *Bull. Br. Mus. Nat. Hist. (Zool.)*, **16**(7): 277-322.
- Clark, A.M., 1982. Echinoderms of Hong-Kong. pp. 485-501 In: *The Marine Flora and Fauna of Hong-Kong and Southern China*, Eds B.S. Morton & C.K. Tseng, Hong-Kong Univ. Press.
- Clark, A.M., 1989. An index of names of recent Asteroidea - Part 1: Paxillosida and Notomyotida. pp. 225-347 In: *Echinoderm Studies 3*, Eds M. Jangoux & J. M. Lawrence, A.A. Balkema/ Rotterdam.
- Clark, A.M., 1993. An index of names of recent Asteroidea - Part 2: Valvatida. pp.187-366 In: *Echinoderm Studies 4*, Eds M. Jangoux & J. M. Lawrence, A.A. Balkema/ Rotterdam.
- Clark, A.M., 1996. An index of names of recent Asteroidea - Part 3: Velatida and Spinulosida. pp. 183-250 In: *Echinoderm Studies 5*, Eds M. Jangoux & J. M. Lawrence, A.A. Balkema/ Rotterdam.
- Clark, A.M. & J. Courtman-Stock, 1976. *The echinoderms of southern Africa*. British Museum (Natural History 277pp.
- Clark, A.M. & F.W.E. Rowe, 1971. *Monograph of shallow-water Indo-West Pacific Echinoderms*. Publ. No. 690. British Museum (Nat. Hist.), London. 238 pp., 31 pls.
- Dao Tan Ho, 1991a. Preliminary study on the echinoderms of Truong Sa archipelago (Vietnam). *J. Biol., Hanoi National Centre for Research of Vietnam*: 44-47.
- Dao Tan Ho, 1991b. *Holothurian resources in the sea of South Vietnam*. Symposium of Marine Science in Vietnam (3<sup>rd</sup>), Hanoi: 112-118.
- Dao Tan Ho, 1991c. Preliminary study on the echinoderms Phu Quoc and Tho Chu Islands region (Vietnam). *J. Biol., Hanoi National Centre for Research of Vietnam*, **14**(2): 12-15.
- Dao Tan Ho, 1994. *Check list of echinoderms in Vietnam 1: Crinoidea and Echinoidea*. Science and Technics publishing house, Vietnam: 111pp.
- David, B. & C. de Ridder, 1989. Echinoderms: Echinides irreguliers. In: J. Forest (ed.), *Résultats des Campagnes MUSORSTOM*, v.4. *Mem. Mus. natn. Hist. nat. (A)*, 143:203-227. Paris.
- Devaney, D.M., 1978. A review of the genus *Ophiomastix* (Ophiuroidea: Ophiocomidae). *Micronesica* **14**(2): 273-359.

- Döderlein, L., 1907. Die Gesteilten Crinoiden der, Siboga-Expedition. *Siboga Expedition Monographs No. 42a*: 1-52, 23 pls.
- Domantay, J.S., 1933. Littoral holothuroidea of Port Galera Bay and adjacent waters. *Nat. appl. Sci. Bull. Univ. Philipp.*, **3**: 41-101, 4 pls.
- Domantay, J.S., 1934. Four additional species of littoral Holothuroidea of Port Galera Bay and adjacent waters. *Nat. appl. Sci. Bull. Univ. Philipp.*, **4**: 109-115, 1pl.
- Domantay, J.S., 1936. The ecological distribution of the echinoderm fauna of the Puerto Galera marine Biological Station. *Nat. appl. Sci. Bull. Univ. Philipp.*, **5**: 385-403, 7 pls.
- Domantay, J.S., 1960. Littoral holothurians of Hundred Islands and vicinity, Lingayen Gulf, Luzon Island, Philippines. *Philipp. J. Sci.*, **89** (1): 79-108, 24 figs.
- Domantay, J.S., 1972. Monographic studies and check list of Philippine littoral echinoderms. *Acta Manilana*, **9**(15): 36-160.
- Domantay, J.S. & P. Conlu, 1968. The echinoderm fauna of Manila Bay. *Philipp. J. Sci.*, **97**(2): 159-176.
- Domantay, J.S. & C.R. Domantay, 1967. Studies on the classification and distribution of Philippine littoral Ophiuroidea (brittle stars). *Philipp. J. Sci.*, **95**: 1-77, 7 figs., 2 pls.
- Domantay, J.S. & H.A. Roxas, 1938. The littoral Asteroidea of Port Galera Bay and adjacent waters. *Philipp. J. Sci.*, **65**: 203-237, 17pls.
- Fisher, W.K., 1919. Starfishes of the Philippine seas and adjacent waters. *Bull. U. S. natn. Mus.*, **100** (3): xi + 712 pp, 156pls.
- Ghiole, J., 1988/1989. Species distributions of irregular echinoids. *Biol. Oceanogr.*, **6**: 79-162.
- Gislén, T., 1936. Crinoids of French Indo-China and Macclesfield Bank. *Kung. Fysiografiska Sällskapets Lund Forhandlingar*, **7**(1): 1-21, 8 figs.
- Guille, A., 1981. Echinodermes: Ophiurides. In: *Résultats des Campagnes MUSORSTOM, 1 - Philippines (18-28 Mars 1976)*. Mem. ORSTOM, **91**: 413-456, 4 figs.
- Guille, A., Laboute, P. & J.L. Menou, 1986. Guide des étoiles de mer, oursins et autres échinodermes du lagon de Nouvelle Calédonie. *Coll. Faune Tropicale No. 25*. ORSTOM, Paris.
- Guozhen, L., 1989. *Reports of the Multidisciplinary Scientific Expedition to Nansha Islands*. Part 1(2), Section 5: Echinodermata. Pp. 766-774. Multidisciplinary Oceanographic Expedition Team of Academia Sinica.
- Guozhen, L., 1991. Additional report on the echinoderms from the region of Nansha Islands, p189-196 In: *Proceedings of studies on Marine Biology of the Nansha Islands and neighbouring waters*. Ocean Press, Beijing.
- Hansen, B., 1975. Systematics and biology of deep sea holothurians. Part 1. Elasipoda. *Galathea Rep.*, **13**: 1-262, figs 1-125, pls 1-14.
- Hayasaka I., 1949. On some starfishes from Taiwan. *Bull. Oceanogr. Inst. Taiwan*, **5**: 11-19.
- Hoggett, A.K., 1991. The genus *Macrophiothrix* (Ophiuroidea: Ophiotrichidae) in Australian waters. *Invertebr. Taxon.*, **4**: 1077-1146, 36 figs.
- Hoggett, A.K., 1992. Taxonomic and systematic position of the brittlestar genus *Macrophiothrix* H.L. Clark (Echinodermata: Ophiuroidea). Ph. D. Thesis, University of Queensland. xviii + 412pp.
- Hoggett, A.K. & F.W.E. Rowe, 1986. A reappraisal of the family Comasteridae A.H. Clark, 1908 (Echinodermata: Crinoidea), with the description of a new subfamily and a new genus. *Zool. J. Linn. Soc.*, **88**: 103-142.
- Jangoux, M., 1981. Echinodermes: Asteroides. *Résultats des Campagnes MUSORSTOM I. Philippines (18-28 Mars 1976)*. Mem. ORSTOM, **91**: 457-476, 3 figs.
- Jangoux, M., I. Eeckhaut, J.C. Grignard, T.J. Lam, D.J.W. Lane & D. VandenSpiegel, 1992. *The Echinodermata: A biological tool for the control and protection of marine benthic environments in Singapore waters*. Periodic report n°1 (unpublished) of research project CL1-CT91-0909 financed by the commission of the European Communities within the frame of the EC research action in international scientific cooperation. 27pp.

- Jeng, M.-S., 1998. Shallow-water Echinoderms of Taiping Island in the South China Sea. *Zoological Studies*, **37**(2) : 137-153.
- Koehler, R., 1895. Catalogue raisonné des échinodermes recueillis par M.Korotnev aux îles de la sonde. *Mem. Soc zool. Fr.*, **8**: 374-423.
- Koehler, R., 1904. Ophiures de l'expédition du Siboga 1. Ophiures de mer profonde. *Siboga Expedition Monographs*, No. **45a**: 1-176, 36 pls.
- Koehler, R., 1905. Ophiures de l'expédition du Siboga 2. Ophiures littorales. *Siboga Expedition Monographs*, No. **45b**: 1-142, 18pls.
- Koehler, R., 1922. Ophiurans of the Philippine seas and adjacent waters. *Bull. U.S. natn. Mus.*, **100** (5): x + 1-486, 103pls.
- Koehler, R., 1930. Ophiures recueillis par le docteur Th. Mortensen dans le mers d'Australie et dans l'Archipel Malais. *Vidensk. Meddr. dansk. naturh. Foren.*, **89**: 1-295, 22pls.
- Levin, V.S. & Dao Tan Ho, 1989. *Holothurians of the coastal zones of Phu Khanh province (Centre Vietnam). Biology of the coastal waters of Vietnam (Collection of papers)*. Academy of Sciences of the USSR.: 54-60.
- Liao, Y., 1980. The aspidochirote holothurians of China with erection of a new genus. pp. 115-120, In: *Echinoderms present and past*. (Ed. M. Jangoux). Proceedings of the European Colloquim on Echinoderms, Brussels / 3-8 September 1979. A.A. Balkema, Rotterdam.
- Liao, Y., 1997. *Fauna Sinica: Phylum Echinodermata: Class Holothuroidea*. Science Press, Beijing, 327pp.
- Liao, Y. & A.M. Clark, 1995. *The echinoderms of southern China*. Science Press, Beijing, New York, 614 pp., 23 pls.
- Liao, Y. & A.M. Clark, 1996. On a new species of *Ophidiaster* (Echinodermata: Asteroidea) from southern China. *Bull. nat. Hist. Mus. Lond. (Zool.)*, **62**(1): 37-39.
- Lim, G.S.I. & L.M. Chou, 1988. The echinoderm fauna of sediment stressed reefs in Singapore. *Proc. 6th int. Coral Reef Symp. (Australia 1988)*, vol. **2**: 245-250.
- Lyman, T., 1882. Ophiuroidea. *Rep. scient. Results Voy. H.M.S. 'Challenger'(Zool.)*, **5**: 1-386, 46 pls.
- Marsh, L.M., 1992. *Echinoderms of the Tunku Abdul Rahman Park, Reefs off Semporna and Pulau Sipadan*. pp. 55-59 + tables, In: *Proposed Semporna Marine Park: Environmental evaluation for expanded tourism development* (Ed. T.D. Meagher). Unpublished report prepared for Sabah Parks by CONBATA Pty. Ltd., Perth, Australia, 92pp. + appendices.
- Marsh, L.M., 1997. Zoological reference collection (dry specimens). University of Singapore. (unpublished).
- Meijere, J.C.H. de, 1904. Die Echinoidea der Siboga-Expedition. *Siboga Expedition Monographs*, No. **43**: 1-251, 23 pls.
- Messing, C.G., 1994. Comatulid crinoids (Echinodermata) of Madang, Papua New Guinea, and environs: diversity and ecology. pp. 237-243, In: *Echinoderms through Time* (Eds. B. David, A. Guille, J.-P. Feral & M. Roux). Proceedings of the Eighth International Echinoderm Conference Dijon/ France/ 6-10 September 1993. A.A. Balkema Rotterdam/ Brookfield.
- Mortensen, T., 1904. The Danish Expedition to Siam 1899-1900. II. Echinoidea (I). *K. danske Vidensk. Selsk. Skr.*, **7** (1): 1-124, 7 pls.
- Mortensen, T., 1927. Report on the Echinoidea collected by the United States Fisheries steamer 'Albatross' during the Philippine Expedition 1907-1910. Pt. 1. The Cidaridae. *Bull. U. S. natn. Mus.*, **100**, vol. **6**(4):239-312, 22 figs., 32 pls.
- Mortensen, T., 1928. *Monograph of the Echinoidea. I. Cidaroidea*. Copenhagen: 1-551, 173 figs, 88 pls.
- Mortensen, T., 1935. *Monograph of the Echinoidea. II. Bothriocidaroidea, Melonechinoidea, Lepidocentroidea and Stirodonta*. Copenhagen: 1-647, 377 figs., 89 pls.
- Mortensen, T., 1940a. *Monograph of the Echinoidea. III. I. Aulodonta*. Copenhagen: 1-370, 196 figs., 77 pls.

- Mortensen, T., 1940b. Report on the Echinoidea collected by the United States Fisheries steamer 'Albatross' during the Philippine Expedition, 1907-1910. Pt. 2. Echinothuriidae, Saleniidae, Arbaciidae, Aspidodiadematidae, Micropygidae, Diadematidae, Pedinidae, Temnopleuridae, Toxopneustidae and Echinometridae. *Bull. U. S. natn. Mus.*, **100**, vol.14(1): 1-52.
- Mortensen, T., 1943. *Monograph of the Echinoidea. III. (2 & 3). Camarodonta*. Copenhagen. (2): 1-533, 321 figs., 56 pls.; (3): 1-446, 215 figs., 66 pls.
- Mortensen, T., 1948a. *Monograph of the Echinoidea. IV (1 & 2). Holecypoida and Cassiduloida (1); Clypeastroida (2)*. Copenhagen. (1): 1-371, 326 figs., 14 pls.; (2): 1-471, 256 figs., 72 pls.
- Mortensen, T., 1948b. Report on the Echinoidea collected by the United States Fisheries steamer 'Albatross' during the Philippine Expedition, 1907-1910. Part 3 : the Echinoneidae, Echinolampadidae, Clypeasteridae, Arachnoididae, Laganidae, Fibularidae, Urechinidae, Echinocorythidae, Palaeostomatidae, Micrasteridae, Palaeopneustidae, Hemiasteridae and Spatangidae. *Bull. U. S. natn. Mus.*, **100** vol.14(3) : 93-140.
- Mortensen, T., 1950. *Monograph of the Echinoidea. V(1). Spatangoidea 1*. Copenhagen: 1-432, 315 figs., 25 pls.
- Mortensen, T., 1951. *Monograph of the Echinoidea. V(2). Spatangoidea 2*. Copenhagen: 1-593, 286 figs., 64 pls.
- O'Loughlin, P.M., 1998. A review of the holothurian family Gephyrothuriidae. pp. 493-498 In: *Echinoderms: San Francisco. Proceedings of the Ninth International Echinoderm Conference* (Eds. R. Mooi & M. Telford), A.A. Balkema, Rotterdam/ Brookfield.
- O'Loughlin, P.M., 1998. Elasipod holothurians from the continental slope of Australia. pp. 499-504 In: *Echinoderms: San Francisco. Proceedings of the Ninth International Echinoderm Conference* (Eds. R. Mooi & M. Telford), A.A. Balkema, Rotterdam/ Brookfield.
- Panning, A., 1949. Versuch einer neueordnung der familie Cucumariidae (Holothuroidea, Dendrochiota). *Zoologische Jahrbücher* **78**(4): 404-470.
- Lawson, D.L. & Y. Liao, 1992. Molpadid sea cucumbers of China with descriptions of five new species (Echinodermata: Holothuroidea). *Proc. Biol. Soc. Wash.*, **105**(2): 373-388.
- Price, A.R.G. & F.W.E. Rowe, 1996. Indian Ocean echinoderms collected during the *Sindbad Voyage* (1980-81): 3. Ophiuroidea and Echinoidea. *Bull. nat. Hist. Mus. Lond. (Zool.)*, **62**: 71-82.
- Reyes-Leonardo, L.D., 1984. A taxonomic report of shallow-water holothurians of Calatagan, Batangas. *Philipp. J. Sci.*, **113**(3-4): 137-172.
- Rowe, F.W.E., 1976. The occurrence of the genus *Heteronardoa* (Asteroidea: Ophidiasteridae) in the Indian Ocean, with the description of a new species. *Rec. West. Aust. Mus.*, **4**(1): 85-100.
- Rowe, F.W.E., 1985. Preliminary analysis of distribution patterns of Australia's non-endemic tropical echinoderms. pp. 91-98 In: *Echinodermata: Proceedings of the Fifth International Echinoderm Conference, Galway* (Eds. B.F. Keegan & B.D.S. O'Conner). A.A. Balkema/ Rotterdam/ Boston.
- Rowe, F.W.E. & J. Gates, 1995. Echinodermata. In: Wells, A (ed.) *Zoological Catalogue of Australia*. Vol **33**. Melbourne: CSIRO Australia, 510pp.
- Rowe, F.W.E. & A.K. Hoggett, 1986. The cidarid echinoids (Echinodermata) of New South Wales. *Proc. Linn. Soc. N.S.W.*, **108**(4): 225-261.
- Rowe, F.W.E., A.K. Hoggett, R.A. Birtles & L.L. Vail, 1986. Revision of some comasterid genera from Australia (Echinodermata: Crinoidea), with descriptions of two new genera and nine new species. *Zool. J. Linn. Soc.*, **86**: 197-277.
- Roxas, H.A., 1928. Philippine littoral echinoidea. *Philippine J. Science* **36**(2): 243-270 + 7 pls.
- Semper, C., 1868. Holothurien. Reisen in Archipel der Philippinen. 2. *Wissenschaftliche Resultate. Weisbaden*. x + 288 pp., 40 pls.
- Sladen, W.P., 1889. Report on the Asteroidea collected by H.M.S. 'Challenger' during the years 1873-1876. *Rep. scient. Results Voy. H.M.S. 'Challenger' (Zool.)*, **30**: xlvi + 893, 117 pls.
- Sluiter, C.P., 1901. Die Holothurien der Siboga-Expedition. *Siboga Expedition Monographs*, No. **44**: 1-141, 10 pls.
- Thandar, A.S., & F.W.E. Rowe, 1989. New species and records of apodous holothurians (Echinodermata, Holothuroidea) from southern Africa. *Zoologica Scripta*, **18**(1): 145-155.

*THE RAFFLES BULLETIN OF ZOOLOGY* 2000 Supplement No. 8

- Théel, H., 1882. Report on the Holothurioidea, I. *Rep. scient. Results Voy. H.M.S. 'Challenger'* (Zool.), **4**(3): 1-176, 44 pls.
- Théel, H., 1886. Holothurioidea. Part 2. *Rep. scient. Results Voy. H.M.S. 'Challenger'* (Zool.), **39**: 1-290, 16 pls.
- Tran Ngo Loi & Ngo Van Sach, 1965. Les holothuries de la baie de Nhatrang. *Contr. Inst. Océan. Nhatrang*, **83**: 237-248.
- VandenSpiegel, D., D.J.W. Lane, S. Stampanato & M. Jangoux, 1998. The asteroid fauna (Echinodermata) of Singapore, with a distribution table and an illustrated identification to the species. *Raffles Bulletin of Zoology*, **46**(2): 1-40.
- Weinberg, S. & C. de Ridder, 1998. *Asthenosoma marisrubri* n. sp. (Echinodermata, Echinoidea) from the Red Sea. *Beaufortia*, **48**(3): 27-46.

**ECHINODERM SPECIES LISTS AND DISTRIBUTIONS**

Explanation of symbols: Columns 1-7 correspond to zones in Fig. 1; names of SCS type species are bolded; + = presence of species (bolded for type zones); \* = an SCS/Philippines taxon with status unknown for area 3; L = field observations/collections of the first author.

Taxa	Distribution							Depth range m.	
	1	2	3	4	5	6	7		
<b>ASTEROIDEA</b>									
<i>Order PAXILLOSIDA</i>									
<b>Luidiidae</b>									
<i>Luidia aspera</i> Sladen, 1889	.	+	*	.	.	+	.	4-274	
<i>Luidia avicularia</i> Fisher, 1913	.	.	+	.	.	+	.	9-275	
<i>Luidia hardwicki</i> (Gray, 1840)	.	+	+	.	+	+	+	6-220	
<i>Luidia longispina</i> Sladen, 1889	.	+	*	.	+	+	.	10-148	
<i>Luidia maculata</i> Müller & Troschel, 1842	.	+	+	.	+	+	.	0-150	
<i>Luidia magnifica</i> Fisher, 1906	.	.	*	.	.	.	.	18-133	
<i>Luidia orientalis</i> Fisher, 1913	.	.	.	.	.	+	.	200-380	
<i>Luidia penangensis</i> de Loriol, 1891	.	.	*	.	+	.	.	4-20	
<i>Luidia quinaria</i> von Martens, 1865	.	+	*	.	.	+	.	0-218	
<i>Luidia savignyi</i> (Audouin, 1826)	.	.	*	.	.	.	.	0-50	
<b>Astropectinidae</b>									
<i>Astromesites compactus</i> Fisher, 1913	.	.	+	.	.	.	.	314-384	
<i>Astropecten acanthifer</i> Sladen, 1883	.	.	+	.	.	.	.	27-256	
<i>Astropecten andersoni</i> Sladen, 1888	.	.	.	.	+	.	.	6-18	
<i>Astropecten bengalensis</i> Döderlein, 1917	.	.	.	.	+	.	.	9-122	
<i>Astropecten debilis</i> Kochler, 1910	.	.	.	.	+	.	.	676-765	
<i>Astropecten carcharicus formosanus</i> Döderlein, 1917 <sup>1</sup>	.	.	.	.	.	+	.	—	
<i>Astropecten eucnemis</i> Fisher, 1919	.	.	+	.	.	.	.	0-250	
<i>Astropecten fasciatus</i> Döderlein, 1926	+	.	.	.	.	.	.	—	
<i>Astropecten indicus</i> Döderlein, 1888	.	.	.	.	+	.	.	181-196	
<i>Astropecten kagoshimensis</i> de Loriol, 1899	.	.	.	.	.	+	.	39-119	
<i>Astropecten luzonicus</i> Fisher, 1913	.	.	+	.	.	.	.	324-430	
<i>Astropecten malayanus</i> Döderlein, 1917	.	.	.	.	+	.	.	216	
<i>Astropecten mindanensis</i> Döderlein, 1917	.	.	+	.	.	.	.	0-13	
<i>Astropecten monacanthus</i> Sladen, 1883	.	+	+	.	+	+	+	0-112	
<i>Astropecten novaeguineae</i> Döderlein, 1917	.	.	.	.	+	.	.	0-88	
<i>Astropecten polyacanthus phragmorus</i> Fisher, 1913	.	.	+	.	.	.	+	0-85	
<i>Astropecten polyacanthus polyacanthus</i> Müller & Troschel, 1842	.	+	+	.	.	+	+	0-144	
<i>Astropecten pusillus</i> Sluiter, 1889	.	.	.	.	+	.	.	15-22	
<i>Astropecten sarasinorum</i> Döderlein, 1917	.	.	.	.	+	.	.	0-20	
<i>Astropecten scoparius</i> , Müller & Troschel, 1842	.	.	*	.	.	+	.	14-64	
<i>Astropecten tamilicus</i> Döderlein, 1888	.	.	.	.	+	.	.	6-15	
<i>Astropecten umbrinus</i> Grube, 1866	.	.	.	.	.	+	.	—	
<i>Astropecten vappa vappa</i> Müller & Troschel, 1843	.	.	*	.	+	+	.	0-80	
<i>Astropecten velitaris</i> von Martens, 1865	.	+	+	.	.	+	+	5-183	
<i>Craspidaster hesperus</i> (Müller & Troschel, 1840)	.	+	.	.	+	+	+	2-195	
<i>Ctenophoraster diploctenius</i> Fisher, 1913	.	.	+	.	.	.	.	119-215	
<i>Ctenopleura astropectinides</i> Fisher, 1913	.	.	+	.	.	.	+	90-490	

1 possibly a synonym of *Astropecten vappa vappa* Müller & Troschel, 1842 (see Liao & Clark, 1995: 77) although *A. carcharicus* from type locality (Shark Bay, Western Australia) is apparently distinct from *A. vappa* from the same locality (L.M.M.).

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Ctenopleura ludwigi</i> (de Loriol, 1899)	.	.	.	.	.	+	.	10-36
<i>Ctenopleura sinica</i> (Döderlein, 1917)	.	+	.	.	.	+	.	77-134
<i>Dipsacaster imperialis</i> Fisher, 1917	.	.	+	.	.	.	.	40-866
<i>Dipsacaster pretiosus</i> (Döderlein, 1902)	.	.	.	.	.	+	.	20-200
<i>Koremaster evaulus evaulus</i> (Fisher, 1913)	.	.	+	.	.	+	+	750-1525
<i>Koremaster evaulus spiculatus</i> Fisher, 1919	.	.	+	.	.	.	.	1363
<i>Persephonaster cingulatus multicinctus</i> Fisher, 1913	.	.	+	.	.	.	.	685-1020
<i>Persephonaster habrogenys</i> Fisher, 1913	.	.	+	.	.	.	.	588-622
<i>Persephonaster tenuis</i> Fisher, 1913	.	.	.	.	.	+	.	134-595
<i>Proserpinaster anchistus</i> (Fisher, 1913)	.	.	+	.	.	+	.	336-432
<i>Proserpinaster euryactis</i> (Fisher, 1913)	.	.	+	.	.	.	.	265-362
<i>Proserpinaster euryactis brevispinus</i> (Fisher, 1919)	.	.	+	.	.	.	.	314-472
<i>Proserpinaster luzonicus</i> (Fisher, 1913)	.	.	+	.	.	.	.	420
<i>Tethyaster aulophora</i> (Fisher, 1911)	.	.	.	.	.	+	+	156-232
<b>Porcellanasteridae</b>								
<i>Abyssaster planus</i> (Sladen, 1883)	.	.	.	.	.	.	+	3500
<i>Eremicaster crassus</i> (Sladen, 1883)	.	.	.	.	.	.	+	1570-6330
<i>Thoracaster cylindratus</i> Sladen, 1883	.	.	.	.	.	.	+	2450-5990
<b>Gonipectinidae</b>								
<i>Ctenodiscus orientalis</i> Fisher, 1913	.	.	+	.	.	.	.	605-1360
<i>Gonipecten asiaticus</i> Fisher, 1913	.	.	+	.	.	.	.	170-200
<b>Order NOTOMYOTIDA</b>								
<b>Benthopectinidae</b>								
<i>Cheiraster capillatus</i> Jangoux, 1981	.	.	+	.	.	.	.	170-200
<i>Cheiraster gazellae</i> Studer, 1883	.	.	+	.	.	.	.	170-469
<i>Cheiraster inops</i> Fisher, 1906	.	.	+	.	.	.	.	430-1250
<i>Cheiraster niasicus</i> Ludwig, 1910	.	.	+	.	.	+	+	170-1080
<i>Cheiraster pilosus</i> (Alcock, 1893)	.	.	+	.	.	.	.	150-1310
<i>Cheiraster trullipes</i> (Sladen, 1889)	.	.	+	.	.	.	.	1920
<i>Nearchester musorstromi</i> Aziz & Jangoux, 1985	.	.	+	.	.	.	.	970
<i>Pectinaster mimicus palawanensis</i> Fisher, 1919	.	.	+	.	.	.	.	1281-2013
<b>Order VALVATIDA</b>								
<b>Sphaerasteridae</b>								
<i>Podosphaeraster polyplax</i>								
A.M. Clark & Wright, 1962	.	.	.	.	.	+	.	72-125
<b>Archasteridae</b>								
<i>Archaster angulatus</i> Müller & Troschel, 1842	.	.	+	.	+	+	.	0-90
<i>Archaster typicus</i> Müller & Troschel, 1840	.	+	+	.	+	+	.	0-91
<b>Goniasteridae</b>								
<i>Anthenoides cristatus</i> (Sladen, 1889)	.	.	+	.	.	.	+	90-511
<i>Anthenoides granulosus</i> Fisher, 1913	.	.	.	.	.	.	+	485-526
<i>Anthenoides laevigatus</i> Liao & A.M. Clark, 1989	.	.	*	.	.	+	.	107-170
<i>Anthenoides lithosorus</i> Fisher, 1913	.	.	.	.	.	+	.	380
<i>Anthenoides rugulosus</i> Fisher, 1913	.	.	+	.	.	.	.	194-472
<i>Anthenoides tenuis</i> Liao & A.M. Clark, 1989	.	.	.	.	.	+	.	180-270
<i>Astroceramus lionotus</i> Fisher, 1913	.	.	+	.	.	.	.	379-407
<i>Astrothauma euphyllacteum</i> Fisher, 1913	.	.	.	.	.	+	.	180-296
<i>Calliaster corynetes</i> Fisher, 1913	.	.	+	.	.	.	.	196-407
<i>Calliaster childreni</i> Gray, 1840	.	.	.	.	.	+	+	121-192
<i>Calliaster quadrispinus</i> Liao, 1989	.	.	.	.	+	+	.	88

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Calliderma emma</i> Gray, 1847	.	.	.	.	.	+	.	156-300
<i>Ceramaster smithi</i> Fisher, 1913	.	.	+	.	.	.	.	686-1010
<i>Iconaster elegans</i> Jangoux, 1981	.	.	+	.	.	.	.	170-222
<i>Iconaster longimanus</i> (Moebius, 1859)	.	.	+	.	+	+	.	5-230
<i>Lithosoma actinometra</i> Fisher, 1911	.	.	+	.	.	.	.	188-538
<i>Milteliphaster spinosus</i> H.L. Clark, 1916	.	.	+	.	.	.	.	144-823
<i>Nymphaster arthrocnemis</i> Fisher, 1913	.	.	+	.	.	.	.	610-1020
<i>Nymphaster meseres</i> Fisher, 1913	.	.	+	.	.	.	.	632
<i>Nymphaster mucronatus</i> Fisher, 1913	.	.	+	.	.	.	.	366
<i>Ogmaster capella</i> (Müller & Troschel, 1842)	.	.	+	.	.	+	+	shallow-450
<i>Paragonaster ctenipes</i> Sladen, 1889	.	.	+	.	.	.	+	134-450
<i>Paragonaster ctenipes hypacanthus</i> Fisher, 1913	.	.	+	.	.	.	.	115-398
<i>Paragonaster stenostichus</i> Fisher, 1913	.	.	+	.	.	.	.	172-363
<i>Peltaster cycloplax</i> Fisher, 1913	.	.	+	.	.	.	.	219
<i>Perissogaster insignis</i> Fisher, 1913	.	.	+	.	.	.	.	186-465
<i>Pontioceramus grandis</i> Fisher, 1911	.	.	+	.	.	.	.	170-396
<i>Pseudarchaster jordani</i> Fisher, 1906	.	.	+	.	+	.	.	592-1980
<i>Pseudarchaster mozaicus</i> Wood-Mason & Alcock, 1891	.	.	*	.	.	.	.	170-1800
<i>Pseudoceramaster regularis</i> Jangoux, 1981	.	.	+	.	.	.	.	174-204
<i>Rosaster bipunctus</i> (Sladen, 1889)	.	.	.	.	.	.	+	275
<i>Rosaster confinis</i> (Koehler, 1910)	.	.	+	.	.	.	.	120-250
<i>Rosaster mimicus</i> Fisher, 1913	.	.	+	.	.	.	.	180-920
<i>Rosaster symbolicus</i> (Sladen, 1889)	.	.	+	.	.	+	+	50-348
<i>Sphaeriodiscus scotocryptus</i> Fisher, 1913	.	.	+	.	.	.	.	40-906
<i>Stellaster convexus</i> Jangoux, 1981	.	.	+	.	.	.	.	143-178
<i>Stellaster childreni</i> Gray, 1840	.	+	+	.	+	+	+	0-260
<b>Oreasteridae</b>								
<i>Anthenea aspera</i> Döderlein, 1915	.	.	.	.	+	+	.	18
<i>Anthenea chinensis</i> Gray, 1840	.	+	.	.	.	+	.	0-60
<i>Anthenea difficilis</i> Liao, 1995	.	.	.	.	.	+	.	intertidal
<i>Anthenea flavescens</i> (Gray, 1840)	.	.	.	.	.	+	.	0-46
<i>Anthenea grayi</i> Perrier, 1875	.	.	*	.	.	.	.	0-20
<i>Anthenea regalis</i> Koehler, 1910 <sup>2</sup>	.	+	.	.	.	.	.	30-50
<i>Anthenea viguieri</i> Döderlein, 1915 <sup>2</sup>	.	.	.	.	.	+	.	—
<i>Choriaster granulatus</i> Lütken, 1869	.	+	+	+	+	+	+	0-40
<i>Culcita novaeguineae</i> Müller & Troschel, 1842	.	+	+	+	+	+	+	0-90
<i>Goniodiscaster forficulatus</i> (Perrier, 1875) <sup>3</sup>	.	.	+	.	.	+	+	25-123
<i>Goniodiscaster granuliferus</i> (Gray, 1847)	.	.	*	.	.	+	.	110-146
<i>Goniodiscaster pleyadella</i> (Lamarck, 1816)	.	+	.	.	.	.	.	0-37
<i>Goniodiscaster rugosus</i> (Perrier, 1875)	.	+	.	.	.	.	.	5-81
<i>Goniodiscaster scaber</i> (Moebius, 1859)	.	.	.	.	+	.	+	10-54
<i>Gymnanthenea globigera</i> (Döderlein, 1915)	.	.	.	.	+	.	.	0-36
<i>Gymnanthenea laevis</i> H.L. Clark, 1938	.	.	.	.	+	.	.	0-20
<i>Halityle regularis</i> Fisher, 1913	.	.	+	.	.	+	.	3-90
<i>Monachaster sanderi</i> (Meissner, 1892)	.	.	.	.	.	+	.	0-68
<i>Pentaceraster affinis</i> (Müller & Troschel, 1842)	.	.	.	.	+	.	.	—
<i>Pentaceraster alveolatus</i> (Perrier, 1875)	.	.	+	.	.	+	.	0-54
<i>Pentaceraster chinensis</i> (Gray, 1840)	.	.	*	.	.	+	+	40-60
<i>Pentaceraster decipiens</i> (Bell, 1884)	.	.	.	.	+	.	.	0-20
<i>Pentaceraster gracilis</i> (Lütken, 1871)	.	.	.	.	+	.	.	0-73
<i>Pentaceraster magnificus</i> (Goto, 1914)	.	.	*	.	.	+	.	10
<i>Pentaceraster multispinus</i> (von Martens, 1866)	.	.	.	.	+	.	.	0-27

2 possible synonyms of *Anthenea chinensis* Gray, 1840 according to Liao & Clark, 1995 :102-103.3 possible synonym of *Goniodiscaster scaber* (Moebius, 1859) according to A.M.C. in Clark & Rowe, 1971: 50.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Pentaceraster regulus</i> (Müller & Troschel, 1842)	.	.	+	.	+	.	+	0-60
<i>Pentaceraster sibogae</i> Döderlein, 1916	.	.	*	.	.	+	.	32-59
<i>Pentaster obtusatus</i> (Bory de St. Vincent, 1827)	.	.	+	.	.	+	.	0-25
<i>Poraster superbus</i> (Moebius, 1859)	.	+	.	.	.	.	+	18-63
<i>Protoreaster nodosus</i> (Linnaeus, 1758)	.	+	+	+	+	+	.	0-38
<b>Asterodiscididae</b>								
<i>Asterodiscides elegans</i> (Gray, 1847)	.	.	+	.	.	+	.	0-123
<i>Asterodiscides helonotus</i> (Fisher, 1913)	.	.	+	.	.	+	.	18-81
<b>Chaetasteridae</b>								
<i>Chaetaster moorei</i> Bell, 1894	.	.	.	.	.	‡	.	20-73
<b>Ophidiasteridae</b>								
<i>Andora wilsoni</i> Rowe, 1977	.	.	*	.	.	+	.	18
<i>Bunaster ritteri</i> Döderlein, 1896	.	.	+	.	+	+	+	40-54
<i>Celerina heffernani</i> (Livingstone, 1931)	.	.	*	.	.	+	L	0-55
<i>Dactylosaster cylindricus</i> (Lamarck, 1816)	.	.	.	.	.	+	+	0-11
<i>Fromia eusticha</i> Fisher, 1913	.	.	+	.	.	.	.	0-55
<i>Fromia hadracantha</i> H.L. Clark, 1921	.	+	*	.	.	+	.	0-20
<i>Fromia indica</i> (Perrier, 1869)	.	+	+	.	.	+	.	0-44
<i>Fromia milleporella</i> (Lamarck, 1816)	.	+	+	+	L	+	+	0-73
<i>Fromia monilis</i> Perrier, 1875	.	+	+	.	+	+	+	0-51
<i>Fromia pacifica</i> H.L. Clark, 1921	.	.	+	.	.	+	.	0-30
<i>Gomophia egyptiaca egeriae</i> A.M. Clark, 1967	.	.	.	.	.	‡	.	0-80
<i>Gomophia gomophia</i> (Perrier, 1875)	.	.	.	.	.	+	.	0-40
<i>Gomophia mamillifera</i> (Livingstone, 1930)	.	.	.	.	.	+	.	0-16
<i>Heteronardoa carinata</i> (Koehler, 1910)	.	.	*	.	.	.	.	34-230
<i>Heteronardoa diamantinae</i> Rowe, 1976	.	.	+	.	.	.	.	15-187
<i>Leiaster coriaceus</i> (Peters, 1852)	.	.	+	.	.	.	.	0-52
<i>Leiaster leachi</i> (Gray, 1840)	.	+	.	.	.	+	.	0-183
<i>Leiaster speciosus</i> von Martens, 1866	.	+	+	.	L	+	.	0-81
<i>Linckia guildingii</i> Gray, 1840	.	+	+	.	.	+	.	0-46
<i>Linckia laevigata</i> (Linnaeus, 1758)	.	+	+	+	+	+	+	0-60
<i>Linckia multifora</i> (Lamarck, 1816)	.	+	+	+	+	+	+	0-69
<i>Nardoa frianti</i> Koehler, 1910	.	+	+	.	.	.	.	0-51
<i>Nardoa galatheae</i> (Lütken, 1865)	.	.	+	.	.	.	.	0-25
<i>Nardoa novaecaledoniae</i> (Perrier, 1875)	.	.	+	.	.	.	.	0-5
<i>Nardoa tuberculata</i> Gray, 1840	.	+	‡	+	.	+	.	0-70
<i>Nardoa tumulosa</i> Fisher, 1917 <sup>4</sup>	.	.	*	.	.	+	.	0-62
<i>Neoferdina cumingi</i> (Gray, 1840)	.	.	+	.	+	+	+	0-30
<i>Neoferdina offreti</i> (Koehler, 1910)	.	.	*	.	.	.	.	0-62
<i>Ophidiaster armatus</i> Koehler, 1910	.	+	*	.	.	+	.	5-450
<i>Ophidiaster chinensis</i> Perrier, 1875 <sup>5</sup>	.	+	.	.	.	‡	.	—
<i>Ophidiaster cribarius</i> Lütken, 1871	.	+	*	.	.	.	.	0-31
<i>Ophidiaster duncani</i> de Loriol, 1885	.	+	*	.	.	.	.	0-20
<i>Ophidiaster granifer</i> Lütken, 1871	.	.	+	+	+	+	.	0-123
<i>Ophidiaster hemprichi</i> Müller & Troschel, 1842	.	+	+	.	.	+	+	0-45
<i>Ophidiaster multispinus</i> Liao & A.M. Clark, 1996	.	.	.	.	.	‡	.	15-55
<i>Tamaria dubiosa</i> (Koehler, 1910)	.	.	+	.	.	.	.	127-757
<i>Tamaria fusca</i> Gray, 1840	.	+	+	.	+	.	.	0-70
<i>Tamaria megaloplax</i> (Bell, 1884)	.	.	*	.	.	.	.	0-117
<i>Tamaria pusilla</i> (Müller & Troschel, 1844)	.	.	+	.	+	.	.	—

4 possibly misidentified ; some SCS records believed to represent a new, unpublished species of *Nardoa*.

5 validity uncertain -see Liao & Clark, 1995: 121.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<b>Mithrodiidae</b>								
<i>Mithrodia clavigera</i> (Lamarck, 1816)	.	.	.	.	+	+	.	0-81
<i>Thromidia catalai</i> , Pope & Rowe, 1977 <sup>6</sup>	.	.	.	.	.	.	?	10-105
<b>Asteropseidae</b>								
<i>Asteropsis carinifera</i> (Lamarck, 1816)	.	+	+	+	L	+	.	0-55
<i>Valvaster striatus</i> (Lamarck, 1816)	.	.	.	+	.	.	.	0-25
<b>Acanthasteridae</b>								
<i>Acanthaster planci</i> (Linnaeus, 1758)	.	+	+	+	+	+	+	0-54
<b>Poraniidae</b>								
<i>Marginaster paucispinus</i> Fisher, 1913	.	.	.	.	.	+	.	183
<b>Asterinidae</b>								
<i>Anseropoda diaphana</i> (Sladen, 1889)	.	.	.	.	+	.	.	275
<i>Anseropoda fisheri</i> Aziz & Jangoux, 1985	.	.	+	.	.	.	.	99-137
<i>Anseropoda rosacea</i> (Lamarck, 1816)	.	+	*	.	+	+	+	0-300
<i>Asterina anomala</i> H.L. Clark, 1921	.	.	.	.	+	.	.	—
<i>Asterina cepheus</i> (Müller & Troschel, 1842)	.	+	.	+	.	+	.	1-20
<i>Asterina coronata</i> von Martens, 1866	.	.	+	.	+	+	.	0-18
<i>Asterina limboonkengi</i> Smith, 1927	.	.	.	.	+	+	.	—
<i>Asterina orthodon</i> Fisher, 1922 <sup>7</sup>	.	.	.	.	.	+	.	—
<i>Asterina sarasini</i> (de Loriol, 1897)	.	.	.	.	+	.	.	0-2
<i>Disasterina odontacantha</i> Liao, 1980	.	.	.	.	.	+	.	0-1
<i>Nepanthia belcheri</i> (Perrier, 1875)	.	+	.	.	+	+	+	0-128
<i>Nepanthia briareus</i> (Bell, 1894)	.	.	.	.	.	+	.	27-83
<i>Nepanthia fisheri</i> Rowe & Marsh, 1982	.	.	+	+	.	.	.	29-198
<i>Nepanthia maculata</i> Gray, 1840	.	.	+	.	+	.	.	0-731
<i>Paranepanthia pedicellaris</i> (Fisher, 1913)	.	.	.	+	.	.	.	123
<i>Patiriella pseudoexigua</i> Dartnall, 1971	.	.	+	+	+	+	.	0-45
<i>Pseudasterina delicata</i> Aziz & Jangoux, 1985	.	+	+	.	.	.	.	192-275
<i>Pseudasterina granulosa</i> Aziz & Jangoux, 1985	.	+	+	.	.	.	.	130-137
<i>Tegulaster ceylanica</i> (Döderlein, 1889)	.	.	.	.	+	.	.	20
<b>Leilasteridae</b>								
<i>Leilaster spinulosus</i> Aziz & Jangoux, 1985	.	.	+	.	.	.	.	130-220
<i>Order VELATIDA</i>								
<b>Solasteridae</b>								
<i>Seriaster regularis</i> Jangoux, 1984	.	.	.	.	.	+	.	20-65
<i>Crossaster</i> sp.	.	.	.	.	.	.	+	—
<b>Pterasteridae</b>								
<i>Euretaster insignis</i> (Sladen, 1882)	.	+	+	+	+	+	+	0-132
<i>Order SPINULOSIDA</i>								
<b>Echinasteridae</b>								
<i>Echinaster callosus</i> von Marenzeller, 1895	.	.	+	.	+	+	.	0-62
<i>Echinaster luzonicus</i> (Gray, 1840)	.	+	+	+	+	+	+	0-73
<i>Echinaster stereosomus</i> Fisher, 1913	+	+	+	.	+	+	+	14-757
<i>Metrodira subulata</i> Gray, 1840	.	+	.	.	+	+	+	0-150

6 verbal report (to D.J.W.L.) of this unmistakable species at Layang Layang, 7°25'N;113°50'E.

7 possible synonym of *Asterina sarasini* (de Loriol, 1897) - see Clark & Rowe, 1971: 68; Liao & Clark, 1995: 131.

Taxa	Distribution							Depth range m.	
	1	2	3	4	5	6	7		
<i>Order FORCIPULATIDA</i>									
<b>Zoroasteridae</b>									
<i>Pholidaster squamatus</i> Sladen, 1889	.	+	+	.	.	.	.	100-399	
<i>Zoroaster carinatus</i> Alcock, 1893	.	+	+	.	.	+	+	170-1105	
<i>Zoroaster ophiactis</i> Fisher, 1916	.	+	+	.	.	.	.	959-1628	
<b>Asteriidae</b>									
<i>Asterias versicolor</i> Sladen, 1889	.	.	.	.	.	+	.	0-92	
<i>Coronaster halicepus</i> Fisher, 1917	.	+	+	.	.	.	.	190-545	
<i>Coronaster sakuranus</i> Döderlein, 1902	.	+	.	.	.	.	.	192-595	
<i>Coronaster volsellatus</i> (Sladen, 1889)	.	+	+	.	.	+	.	59-630	
<i>Sclerasterias mazophorus</i> Wood-Mason & Alcock, 1891	.	+	.	.	.	.	.	150-4596	
<i>Stolasterias acutispina</i> (Stimpson, 1862)	.	.	.	.	.	+	.	—	
<i>Tarsaster stoichodes</i> Sladen, 1889	.	.	.	.	+	.	.	85-1224	
<i>Order BRISINGIDA</i>									
<b>Brisingidae</b>									
<i>Astrostephane acanthogenys</i> (Fisher, 1916)	.	.	+	.	.	+	.	315	
<i>Brisinga</i> sp.	.	.	.	.	.	.	+	—	
<i>Craterobrisinga analoga</i> Fisher, 1919	.	.	+	.	.	.	.	40-659	
<i>Craterobrisinga eucoryne</i> Fisher, 1916	.	.	+	.	.	.	.	686-1358	
<i>Novodinia penichra</i> (Fisher, 1916)	.	.	+	.	.	.	.	168-188	
<i>Novodinia radiata</i> Aziz & Jangoux, 1985	.	.	+	.	.	.	.	215-216	
<i>Stegnobrisinga placoderma</i> (Fisher, 1916)	.	.	+	.	.	.	.	960-1022	
<b>Freyellidae</b>									
<i>Freyella echinata</i> Sladen, 1889	.	.	+	.	.	.	.	1920	
<b>CRINOIDEA</b>									
<i>Order BOURGUETICRINIDA</i>									
<b>Bathyocrinidae</b>									
<i>Democrinus japonicus</i> Gislén, 1927	.	+	*	.	.	+	.	156-210	
<i>Order ISOCRINIDA</i>									
<b>Isocrinidae</b>									
<i>Diplocrinus alternicirrus</i> Carpenter, 1884	.	.	+	.	.	.	.	914-1097	
<i>Hypalocrinus naresianus</i> (Carpenter, 1884)	.	.	+	.	.	.	.	686-1264	
<i>Metacrinus interruptus</i> Carpenter, 1884	.	.	+	.	.	.	+	126-210	
<i>Metacrinus multisegmentatus</i> Chang & Liao, 1963	.	+	+	.	.	+	.	104-230	
<i>Metacrinus musorstomae</i> Roux, 1981	.	.	+	.	.	.	.	170-216	
<i>Metacrinus nodosus</i> Carpenter, 1884	.	.	+	.	.	.	.	570-1152	
<i>Metacrinus rotundus</i> Carpenter, 1884	.	+	+	.	.	+	.	100-500	
<i>Metacrinus serratus</i> Döderlein, 1907	.	.	+	.	.	.	.	326-550	
<i>Saracrinus angulatus</i> (Carpenter, 1884)	.	.	+	.	.	.	.	192-230	
<i>Saracrinus superbus</i> (Carpenter, 1884)	+	+	+	.	+	.	.	188-310	
<i>Order COMATULIDA</i>									
<b>Comasteridae</b>									
<i>Capillaster asterias</i> A.H. Clark, 1931	+	+	.	.	.	.	.	35-56	
<i>Capillaster macrobrachius</i> (Hartlaub, 1890)	.	+	.	.	.	+	.	0-59	
<i>Capillaster multiradiatus</i> (Linnaeus, 1758)	.	+	+	.	+	+	+	0-0.300	
<i>Capillaster sentosus</i> (Carpenter, 1888)	.	+	+	.	+	+	+	0-135	
<i>Comanthina audax</i> Rowe et al., 1986	.	.	.	+	.	+	.	<20	
<i>Comanthina nobilis</i> (Carpenter, 1888)	.	.	*	+	.	.	.	8-92	

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Comanthina schlegelii</i> (Carpenter, 1881)	.	+	+	+	+	+	+	0-278
<i>Comanthus alternans</i> (Carpenter, 1881)	.	+	+	+	+	+	.	0-90
<i>Comanthus briareus</i> (Bell, 1882)	.	+	+	+	+	+	.	1-120
<i>Comanthus delicata</i> (A. H. Clark, 1909)	.	+	*	.	.	+	+	10-257
<i>Comanthus gisleni</i> Rowe et al., 1986	.	.	.	+	.	.	.	0-32
<i>Comanthus parvicirrus</i> (Müller, 1841)	.	+	+	+	+	+	+	1-110
<i>Comanthus wahlbergii</i> (Müller, 1843)	.	.	*	.	+	.	.	1-103
<i>Comaster brevicirrus</i> (Bell, 1894)	.	+	.	.	.	+	.	0-52
<i>Comaster distinctus</i> (Carpenter, 1888)	.	+	+	.	.	+	.	15-290
<i>Comaster gracilis</i> (Hartlaub, 1890)	.	+	*	.	+	+	.	4-50
<i>Comaster minima</i> (A.H. Clark, 1909)	.	.	+	.	.	.	.	9-216
<i>Comaster multibrachiatus</i> (Carpenter, 1888)	.	+	*	.	.	+	.	20-83
<i>Comaster multifidus</i> (Müller, 1841)	.	.	+	+	+	+	.	0-91
<i>Comaster tenellus</i> A.H. Clark, 1931	.	.	.	.	+	+	.	0-90
<i>Comatella maculata</i> (Carpenter, 1888)	+	*	.	.	+	+	.	0-15
<i>Comatella nigra</i> (Carpenter, 1888)	.	+	+	.	.	+	.	0-160
<i>Comatella stelligera</i> (Carpenter, 1888)	.	+	+	.	+	+	+	0-210
<i>Comatula micraster</i> A.H. Clark, 1909	+	.	.	.	.	.	.	22-109
<i>Comatula pectinata</i> (Linnaeus, 1758)	+	+	.	.	.	+	+	0-73
<i>Comatula purpurea</i> (Müller, 1843) <sup>8</sup>	+	+	.	+	+	+	.	0-120
<i>Comatula solaris</i> Lamarck, 1816	+	.	.	+	+	+	.	0-109
<i>Comissia littoralis</i> (A.H. Clark, 1912)	.	+	.	.	.	.	.	<20
<i>Comissia peregrina</i> (Bell, 1894)	+	.	.	.	.	+	.	100-110
<i>Oxycomanthus bennetti</i> (Müller, 1841)	.	+	+	+	+	+	+	0-50
<i>Oxycomanthus comanthipinna</i> (Gislén, 1922)	.	.	+	.	.	.	.	1-20
<i>Oxycomanthus grandicalyx</i> (Carpenter, 1882)	+	.	.	.	+	+	.	—
<i>Oxycomanthus intermedia</i> (A.H. Clark, 1916)	.	.	.	.	.	+	.	0-150
<i>Oxycomanthus japonicus</i> (Müller, 1841)	.	.	*	+	.	+	.	0-256
<b>Zygometridae</b>								
<i>Catoptometra hartlaubi</i> (A.H. Clark, 1907)	.	.	.	.	.	+	.	137-278
<i>Catoptometra magnifica</i> A.H. Clark, 1908	+	+	*	.	.	+	+	36-914
<i>Catoptometra rubroflava</i> (A.H. Clark, 1907)	.	.	.	.	.	+	.	25-183
<i>Zygometra comata</i> A.H. Clark, 1911	.	+	*	.	+	+	+	0-150
<b>Eudocrinidae</b>								
<i>Eudocrinus indivisus</i> (Semper, 1868)	.	+	+	.	.	+	+	36-183
<i>Eudocrinus tenuissimus</i> Gislén, 1940	.	+	.	.	.	+	.	<20
<i>Eudocrinus venustulus</i> A.H. Clark, 1912	.	.	+	.	.	+	+	73-174
<b>Himerometridae</b>								
<i>Amphimetra laevipinna</i> (Carpenter, 1882)	+	+	*	+	+	+	+	0-60
<i>Amphimetra tessellata</i> (Müller, 1841)	.	+	*	.	+	+	.	0-109
<i>Craspedometra acuticirra</i> (Carpenter, 1882)	.	+	*	.	+	+	.	—
<i>Heterometra africana</i> (A.H. Clark, 1911)	.	.	*	.	.	.	.	0-88
<i>Heterometra bengalensis</i> (Hartlaub, 1890)	.	.	.	.	+	.	.	0-44
<i>Heterometra crenulata</i> (Carpenter, 1882)	+	+	*	.	+	+	.	0-111
<i>Heterometra propinqua</i> (A.H. Clark, 1912)	+	+	.	.	.	.	.	82-88
<i>Heterometra pulchra</i> A.H. Clark, 1912	.	.	*	.	.	.	.	27-73(?)
<i>Heterometra savignii</i> (Müller, 1841)	.	.	.	.	+	.	.	0-18
<i>Heterometra variipinna</i> (Carpenter, 1882)	.	.	+	.	+	+	.	0-20
<i>Himerometra magnipinna</i> A.H. Clark, 1908	.	+	+	+	+	+	+	0-38
<i>Himerometra martensi</i> (Hartlaub, 1890)	.	.	.	.	+	.	.	2
<i>Himerometra robustipinna</i> (Carpenter, 1881)	.	+	*	.	+	+	.	0-57

8 considered a synonym of *Comatula pectinata* (Linnaeus, 1758) by F.W.E.R. in Rowe & Gates, 1995: 148, but readily distinguishable from *pectinata* on West Australia coast according to L.M.M.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<b>Mariametridae</b>								
<i>Dichrometra bimaculata</i> (Carpenter, 1881)	.	.	+	.	.	.	.	0-1
<i>Dichrometra doederleini</i> (de Loriol, 1900)	+	+	.	.	.	+	.	0-150
<i>Dichrometra flagellata</i> (Müller, 1841)	+	+	.	.	.	+	.	0-45
<i>Lamprometra palmata</i> (Müller, 1841)	.	+	+	.	+	+	.	0-50
<i>Liparometra articulata</i> (Müller, 1849)	.	+	.	.	.	.	.	0-69
<i>Liparometra regalis</i> (Carpenter, 1888)	.	+	.	.	+	.	.	3-31
<i>Mariametra subcarinata</i> (A.H. Clark, 1908)	.	.	.	.	.	+	.	40-108
<i>Mariametra vicaria</i> (Bell, 1894)	.	+	.	.	.	+	.	53-100
<i>Oxymetra erinaceus</i> (Hartlaub, 1890)	.	.	*	.	.	.	.	0-50
<i>Oxymetra finschi</i> (Hartlaub, 1890)	.	.	*	.	+	.	.	0-77
<i>Stephanometra echinus</i> (A.H. Clark, 1908) <sup>9</sup>	.	+	+	.	+	+	.	0-38
<i>Stephanometra indica</i> (Smith, 1876)	.	+	*	.	+	+	.	0-73
<i>Stephanometra oxyacantha</i> (Hartlaub, 1850)	.	.	+	+	+	.	.	0-27
<i>Stephanometra spinipinna</i> (Hartlaub, 1890)	.	.	.	.	+	.	.	0-245
<i>Stephanometra tenuipinna</i> (Hartlaub, 1890)	.	.	*	.	+	.	.	0-48
<b>Colobometridae</b>								
<i>Basilometra boschmai</i> A.H. Clark, 1936	+	+	.	.	.	+	.	0-103
<i>Cenometra bella</i> (Hartlaub, 1890)	+	+	+	+	.	+	+	0-55
<i>Colobometra discolor</i> A.H. Clark, 1909	.	+	+	.	.	.	.	42-106
<i>Colobometra perspinosa</i> (Carpenter, 1881)	.	.	*	+	+	+	.	0-122
<i>Cyllometra manca</i> (Carpenter, 1888)	.	.	+	.	.	+	.	22-329
<i>Decametra laevipinna</i> (A.H. Clark, 1912)	.	.	*	+	.	+	.	0-3
<i>Decametra mylitta</i> A.H. Clark, 1912	.	+	*	.	+	+	.	25-85
<i>Decametra parva</i> (A.H. Clark, 1912)	.	.	+	+	.	.	.	1-90
<i>Iconometra bellona</i> (A.H. Clark, 1920)	.	.	+	.	.	.	.	16-73
<i>Iconometra speciosa</i> A.H. Clark, 1929	.	+	.	.	.	+	.	146
<i>Oligometra chinensis</i> (A.H. Clark, 1918)	.	.	.	.	.	+	.	0-2
<i>Oligometra serripinna</i> (Carpenter, 1881)	.	+	*	.	+	+	.	0-90
<i>Pontiometra andersoni</i> (Carpenter, 1888)	+	+	*	.	+	+	.	0-73
<b>Tropiometridae</b>								
<i>Tropiometra afra afra</i> (Hartlaub, 1890)	.	+	+	+	.	+	.	0-110
<i>Tropiometra afra macrodiscus</i> (Hara, 1895)	.	+	.	+	+	+	.	0-66
<b>Calometridae</b>								
<i>Gephyrometra versicolor</i> (A.H. Clark, 1907)	.	+	.	.	.	+	.	5-174
<i>Neometra alecto</i> (A.H. Clark, 1911)	.	.	+	.	.	+	.	77-208
<i>Neometra multicolor</i> (A.H. Clark, 1907)	.	.	.	.	.	.	+	20-600
<b>Asterometridae</b>								
<i>Asterometra anthus</i> (A.H. Clark, 1907)	.	.	.	.	.	+	.	64-210
<i>Asterometra cristata</i> A.H. Clark, 1911	.	+	+	.	.	+	.	80-146
<i>Asterometra mirifica</i> A.H. Clark, 1909	.	.	.	.	.	+	.	73-183
<i>Pterometra pulcherrima</i> (A.H. Clark, 1909)	.	.	*	.	.	+	.	36-174
<i>Pterometra trichopoda</i> (A.H. Clark, 1908)	.	.	+	.	.	+	+	68-140
<i>Pterometra venusta</i> A.H. Clark, 1912	.	+	.	.	.	+	.	5-80
<b>Thalassometridae</b>								
<i>Parametra orion</i> (A.H. Clark, 1907)	.	.	.	.	.	+	+	128-306
<b>Antedonidae</b>								
<i>Antedon parviflora</i> (A.H. Clark, 1912)	.	.	*	.	+	+	.	0-275
<i>Antedon serrata</i> A.H. Clark, 1908	.	.	.	.	.	+	.	0-180
<i>Dorometra aphrodite</i> (A.H. Clark, 1912) <sup>10</sup>	.	+	.	.	.	+	+	48-174
<i>Dorometra parvicirra</i> (Carpenter, 1888)	.	+	*	.	.	+	.	0-164

9 a probable synonym of *Stephanometra tenuipinna* (Hartlaub, 1890) (see Clark & Rowe, 1971: 24), but genus *Stephanometra* is in need of revision.

10 close to, possibly synonymous with, *Dorometra parvicirra* (Carpenter, 1888) – see Liao & Clark, 1995 : 62.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Dorometra nana</i> (Hartlaub, 1890)	.	+	*	.	.	+	.	0-60
<i>Euatedon sinensis</i> A.H. Clark, 1912	.	.	.	.	.	+	.	deep
<i>Mastigometra pacifica</i> A.H. Clark, 1918	.	.	.	.	+	.	.	littoral
<i>Toxometra paupera</i> A.H. Clark, 1911	.	.	*	.	.	+	.	0-510
<b>OPHIUROIDEA</b>								
<i>Order PHRYNOPHIURIDA</i>								
<b>Ophiomyxidae</b>								
<i>Astrogymnotes catastica</i> H.L. Clark, 1914	.	+	*	.	.	+	.	40-205
<i>Neoplax crassipes</i> Koehler, 1922	.	.	+	.	.	.	.	24
<i>Ophiobrysella intorta</i> Koehler, 1922	.	+	*	.	.	.	.	1346
<i>Ophiodera neglecta</i> Koehler, 1904	.	+	*	.	.	+	.	65-744
<i>Ophiomysa australis</i> Lütken, 1869	.	+	.	.	+	+	.	0-1006
<i>Ophiomysa bengalensis</i> Koehler, 1897	.	.	+	.	.	.	.	296-1962
<i>Ophiomysa longipedata</i> Brock, 1888	.	+	.	.	.	.	.	—
<i>Ophiophrixus confinis</i> Koehler, 1922	.	.	+	.	.	.	.	448-558
<b>Euryalidae</b>								
<i>Astroceras mammosus</i> Koehler, 1930	.	.	+	.	.	.	.	90-195
<i>Astroceras pergamenta</i> Lyman, 1879	.	+	+	.	.	+	.	65-1033
<i>Euryale aspera</i> Lamarck, 1816	+	+	*	.	+	+	+	0-290
<i>Euryale purpurea</i> Mortensen, 1934	.	+	.	.	+	+	.	—
<i>Sthenocephalus indicus</i> Koehler, 1898	.	+	.	.	.	+	.	36-487
<i>Trichaster acanthifer</i> Döderlein, 1927	.	+	.	.	.	+	.	18-39
<i>Trichaster palmiferus</i> (Lamarck, 1816)	.	+	*	.	+	+	+	33-159
<b>Asteronychidae</b>								
<i>Asteronyx loveni</i> Müller & Troschel, 1842	.	+	.	.	.	+	+	109-2963
<i>Astrodia tenuispina</i> (Verrill, 1885)	+	+	*	+	+	+	.	510-3720
<b>Gorgonocephalidae</b>								
<i>Asteropora hadracantha</i> H.L. Clark, 1911	.	+	.	.	.	+	.	62-194
<i>Astroboa nuda</i> (Lyman, 1874)	.	+	*	.	.	+	.	1-113
<i>Astrocladus dofleini</i> Döderlein, 1911	.	.	+	.	.	.	.	27-278
<i>Astrocladus exiguus</i> (Lamarck, 1816)	.	+	*	.	.	+	.	18-494
<i>Astrocladus tonganus</i> Döderlein, 1911	.	+	.	.	.	+	.	2-10
<i>Astroclon propugnatoris</i> Lyman, 1879	.	.	+	.	.	.	.	170-236
<i>Astroglymna sculptum</i> (Döderlein, 1896)	.	+	.	.	.	+	.	54-300
<i>Astrotoma drachi</i> Guille, 1981	.	.	+	.	.	.	.	975-1125
<i>Astrotoma manilense</i> Döderlein, 1927	.	.	+	.	.	.	.	720
<i>Gorgonocephalus dolichodactylus</i> Döderlein, 1911	.	+	.	.	.	+	.	146-1134
<b>Astroschematidae</b>								
<i>Astroschema ferox</i> Koehler, 1904	.	.	+	.	.	.	.	170-204
<b>Hemieuryalidae</b>								
<i>Ophioglyptis nodosa</i> Koehler, 1905	.	.	+	.	.	.	.	35-308
<i>Order OPHIURIDA</i>								
<b>Ophiacanthidae</b>								
<i>Amphilimna granulosa</i> Liao, 1989	.	+	.	.	.	+	.	280
<i>Amphilimna multispinosa</i> Koehler, 1922	.	+	*	.	.	.	.	91-357
<i>Amphilimna polyacantha</i> Liao, 1983	.	+	.	.	.	+	.	72-200
<i>Amphilimna sinica</i> Liao, 1989	.	+	.	.	.	+	.	280
<i>Amphilimna tanyodes</i> Devaney, 1974	.	.	+	.	.	.	.	189
<i>Ophiacantha composita</i> Koehler, 1896	.	.	+	.	.	.	.	685-757
<i>Ophiacantha duplex</i> Koehler, 1897	.	.	+	.	.	.	.	686-1234
<i>Ophiacantha gracilis</i> (Studer, 1882)	.	+	*	.	.	+	.	0-400

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Ophiacantha indica</i> Ljungman, 1867	.	.	*	.	+	.	.	<20-290
<i>Ophiacantha longidens</i> Lyman, 1874	.	+	*	.	.	.	.	90-183
<i>Ophiacantha pentagona</i> Koehler, 1897	.	+	+	.	.	+	+	78-1724
<i>Ophialcoea congesta</i> (Koehler, 1904)	.	.	+	.	.	.	.	450-1000
<i>Ophiocamax rugosa</i> Koehler, 1904	.	+	+	.	.	+	+	82-520
<i>Ophiocopa singularis</i> Koehler, 1922	.	.	+	.	.	.	.	340-686
<i>Ophiolimna perfida</i> (Koehler, 1904)	.	.	+	.	.	.	.	592-1125
<i>Ophiomitra plicata</i> Lyman, 1874	.	.	.	.	.	+	+	1920
<i>Ophiomitrella subjecta</i> Koehler, 1922	.	.	+	.	.	.	.	353-485
<i>Ophiophthalmus honestus</i> Koehler, 1930	.	.	+	.	.	.	.	183-385
<i>Ophioplinthaca globata</i> Koehler, 1922	.	.	+	.	.	.	.	686-969
<i>Ophioplinthaca hastata</i> Koehler, 1922	.	.	+	.	.	.	.	353-368
<i>Ophioplinthaca manillae</i> Guille, 1981	.	.	+	.	.	.	.	170-200
<i>Ophioplinthaca pulchra</i> Koehler, 1904	.	.	+	.	.	+	.	204-171
<i>Ophioplinthaca rufa</i> (Koehler, 1897)	.	.	+	.	.	.	.	650-3124
<i>Ophiotrema tertium</i> Koehler, 1922	.	.	+	.	.	.	.	1335
<i>Ophiotrema gratiosa</i> (Koehler, 1897)	.	.	+	.	.	+	+	50-925
<i>Ophiotrema matura</i> (Koehler, 1904)	.	.	+	.	.	+	+	239-4161
<i>Ophiotrema speciosa</i> Guille, 1981	.	.	+	.	.	.	.	194-200
<i>Ophiotrema valenciennesi</i> (Lyman, 1874)	.	.	.	.	.	+	.	245-385
<i>Ophiurothamnus musorstomae</i> Guille, 1981	.	.	+	.	.	.	.	975-1125
<b>Amphiuridae</b>								
<i>Amphilucus scripta</i> (Koehler, 1904)	.	+	.	.	.	+	.	<20
<i>Amphiodia minuta</i> H.L. Clark, 1939	.	+	.	.	.	.	.	36-37
<i>Amphiodia</i> ( <i>Amphispira</i> ) <i>crassa</i> (Koehler, 1904)	.	.	+	.	.	.	.	453-2291
<i>Amphiodia</i> ( <i>Amphispira</i> ) <i>microplax</i> Burfield, 1924	.	+	.	.	.	+	.	5-69
<i>Amphiodia</i> ( <i>Ophiophragmus</i> ) <i>olivacea</i> (Brock, 1888)	.	+	.	.	.	.	.	—
<i>Amphioplus</i> ( <i>Amphichilus</i> ) <i>impressus</i> (Ljungman, 1867)	.	+	+	.	+	+	+	16-194
<i>Amphioplus</i> ( <i>Amphichilus</i> ) <i>intermedius</i> (Koehler, 1905)	.	+	+	+	.	+	.	8-220
<i>Amphioplus</i> ( <i>Amphioplus</i> ) <i>cyrtacanthus</i> H.L. Clark, 1915	.	+	+	*	.	+	.	10-105
<i>Amphioplus</i> ( <i>Amphioplus</i> ) <i>exsecratus</i> (Koehler, 1905)	.	.	*	.	.	.	.	<20
<i>Amphioplus</i> ( <i>Amphioplus</i> ) <i>iuxthus</i> Murakami, 1943	.	.	.	.	+	.	.	<20
<i>Amphioplus</i> ( <i>Amphioplus</i> ) <i>legatus</i> Koehler, 1922	.	.	+	.	.	.	.	721
<i>Amphioplus</i> ( <i>Amphioplus</i> ) <i>lucidus</i> Koehler, 1922	.	+	+	.	.	+	+	3-152
<i>Amphioplus</i> ( <i>Amphioplus</i> ) <i>rhadinobrachius</i> H.L. Clark, 1911	.	.	+	.	.	.	.	291
<i>Amphioplus</i> ( <i>Lymanella</i> ) <i>andreae</i> (Lütken, 1872)	.	.	.	.	+	.	.	—
<i>Amphioplus</i> ( <i>Lymanella</i> ) <i>depressus</i> (Ljungman, 1867)	.	+	+	.	+	+	+	6-160
<i>Amphioplus</i> ( <i>Lymanella</i> ) <i>laevis</i> (Lyman, 1874)	.	+	*	.	+	+	+	7-100
<i>Amphipholis loripes</i> Koehler, 1922	.	+	*	.	.	+	+	78-196
<i>Amphipholis misera</i> (Koehler, 1899)	+	+	+	.	.	+	.	18-348
<i>Amphipholis sobrina</i> Matsumoto, 1917	.	+	.	.	.	+	+	137-550
<i>Amphipholis squamata</i> (Delle Chiaje, 1829)	+	+	*	.	.	+	.	0-500
<i>Amphiura diomedea</i> Lütken & Mortensen, 1899	.	.	+	.	.	+	.	368-1125
<i>Amphiura grandisquama</i> Lyman, 1909	.	.	+	.	.	.	.	10-686
<i>Amphiura</i> ( <i>Amphiura</i> ) <i>abbreviata</i> Koehler, 1905	+	.	*	.	.	.	.	13-40
<i>Amphiura</i> ( <i>Amphiura</i> ) <i>aestuarii</i> Matsumoto, 1915	.	+	.	.	.	.	.	125-230
<i>Amphiura</i> ( <i>Amphiura</i> ) <i>ambigua</i> Koehler, 1905	.	+	*	.	.	.	.	0-34
<i>Amphiura</i> ( <i>Amphiura</i> ) <i>bidentata</i> H.L. Clark, 1938	.	+	.	.	.	.	.	0-37
<i>Amphiura</i> ( <i>Amphiura</i> ) <i>crossota</i> Murakami, 1943	.	.	.	.	+	.	.	—

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Amphiura (Amphiura) divaricata</i> Ljungman, 1867	.	+	.	.	+	+	.	7-78
<i>Amphiura (Amphiura) duncani</i> Lyman, 1882	.	.	.	.	+	+	.	3-400
<i>Amphiura (Fellaria) economiata</i> H.L. Clark, 1911	.	+	.	.	.	+	.	58-290
<i>Amphiura (Fellaria) vadicola</i> Matsumoto, 1915	.	.	*	.	.	+	.	0-c.30
<i>Amphiura (Ophioptelis) phalerata</i> (Lyman, 1874)	.	.	*	.	.	.	.	<20
<i>Amphiura (Ophioptelis) tenuis</i> (H.L. Clark, 1938)	.	+	.	.	.	+	.	0-12
<i>Dougaloplus acanthinus</i> (H.L. Clark, 1911)	+	+	*	.	+	+	.	10-85
<i>Dougaloplus echinatus</i> (Ljungman, 1867)	+	+	*	.	+	+	.	16-118
<i>Ophiocentrus anomalus</i> Liao, 1983	.	+	.	.	.	+	+	19-62
<i>Ophiocentrus aspera</i> (Koehler, 1905)	.	.	*	.	.	.	.	0-36
<i>Ophiocentrus dilatatus</i> (Koehler, 1905)	.	.	*	.	+	.	.	216
<i>Ophiocentrus inaequalis</i> (H.L. Clark, 1915)	.	.	*	.	.	+	.	18-36
<i>Ophiocentrus koehleri</i> Gislén, 1926	.	+	.	.	.	+	.	30-84
<i>Ophiocentrus putnami</i> (Lyman, 1871)	.	.	.	.	.	+	.	<20-90
<i>Ophionephthys difficilis</i> (Duncan, 1887)	.	+	.	.	.	+	.	1-50
<i>Ophiotigma rugosum</i> H.L. Clark, 1918	.	.	+	.	.	+	.	—
<i>Paracrocnida sinensis</i> (A.H. Clark, 1917)	.	.	.	.	.	+	.	—
<i>Paramphichondrius tetradontus</i> Guille & Wolff, 1984	.	+	.	.	.	+	.	35-164
<b>Ophiactidae</b>								
<i>Histampica duplicita</i> (Lyman, 1875)	.	.	+	.	.	.	.	685-1125
<i>Ophiactis affinis</i> Duncan, 1879	+	+	*	.	.	+	+	0-90
<i>Ophiactis definita</i> Koehler, 1922	.	.	+	.	.	.	.	250-1280
<i>Ophiactis fuscolineata</i> H.L. Clark, 1938	.	+	.	.	.	+	.	0-15
<i>Ophiactis hexacantha</i> H.L. Clark, 1939	.	.	.	.	.	+	+	0-183
<i>Ophiactis macrolepidota</i> Marktanner-Turneretscher, 1887	.	+	.	.	.	+	.	1-177
<i>Ophiactis maculosa</i> von Martens, 1870 <sup>11</sup>	.	.	*	+	+	+	.	<20
<i>Ophiactis modesta</i> Brock, 1888 <sup>11</sup>	.	+	+	+	+	+	+	0-180
<i>Ophiactis picteti</i> (de Loriol, 1893)	.	.	+	+	.	+	.	1-50
<i>Ophiactis profundi</i> Lütken & Mortensen, 1899	.	.	+	.	.	+	.	46-410
<i>Ophiactis quadrispina</i> H.L. Clark, 1915 <sup>11</sup>	.	.	*	.	.	+	.	—
<i>Ophiactis savignyi</i> (Müller & Troschel, 1842)	+	+	+	+	+	+	+	0-1000
<i>Ophiactis versicolor</i> H.L. Clark, 1939 <sup>11</sup>	.	.	.	.	+	.	.	<20-29
<i>Ophiodaphne formatus</i> (Koehler, 1905)	.	+	.	.	.	+	.	5-274
<i>Ophiodaphne materna</i> Koehler, 1930	.	+	.	.	.	.	+	9-249
<i>Ophiosphaera insignis</i> Brock, 1888	+	.	*	.	+	.	.	18-245
<b>Ophiotrichidae</b>								
<i>Gymnophorus obscura</i> (Ljungman, 1867)	.	+	+	.	+	.	.	0-52
<i>Macrophiothrix coerulea</i> (Djakonov, 1930)	.	.	*	+	.	+	.	1-20
<i>Macrophiothrix demessa</i> (Lyman, 1861)	.	.	*	.	+	+	+	0-128
<i>Macrophiothrix expedita</i> (Koehler, 1905)	.	.	*	.	+	.	.	0-73
<i>Macrophiothrix fumaria</i> (Müller & Troschel, 1842) <sup>12</sup>	.	.	*	+	.	+	.	<20
<i>Macrophiothrix galateae</i> (Lütken, 1872)	+	.	+	.	+	+	.	30-50
<i>Macrophiothrix hirsuta</i> (Müller & Troschel, 1842)	.	+	+	.	+	.	.	0-90
<i>Macrophiothrix hybrida</i> (H.L. Clark, 1915) <sup>12</sup>	.	.	+	.	+	+	+	47
<i>Macrophiothrix koehleri</i> A.M. Clark, 1968	.	.	*	.	+	+	.	0-102
<i>Macrophiothrix lineocauerula</i> (H.L. Clark, 1928) <sup>12</sup>	.	.	.	.	+	+	.	littoral-100
<i>Macrophiothrix longipedata</i> (Lamarck, 1816)	.	+	+	.	+	+	+	0-290
<i>Macrophiothrix lorioli</i> A.M. Clark, 1968	.	.	*	+	+	+	+	0-24
<i>Macrophiothrix martensi</i> (Lyman, 1874) <sup>13</sup>	.	+	+	.	+	+	.	0-73

11 these 4 spp. considered to be synonymous with *Ophiactis savignyi* (Müller & Troschel, 1842) by Cherbonnier & Guille (1978) but not according to Liao & Clark, 1995:218.

12 transferred from subgenus *Ophiothrix* (*Placophiothrix*) - see Hoggett, 1992; Price & Rowe, 1996: 75-76.

13 transferred from subgenus *Ophiothrix* (*Keystonea*) - see Hoggett, 1992; Price & Rowe, 1996: 75-76.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Macrophiothrix melanosticta</i> (Grube, 1868) <sup>12</sup>	.	+	*	.	+	+	.	0-82
<i>Macrophiothrix nereidina</i> (Lamarck, 1816) <sup>13</sup>	.	+	+	+	+	+	.	0-73
<i>Macrophiothrix propinqua</i> (Lyman, 1861)	.	+	+	.	+	+	+	0-80
<i>Macrophiothrix robillardii</i> (de Loriol, 1893)	.	+	*	.	.	+	+	.5
<i>Macrophiothrix striolata</i> (Grube, 1868) <sup>12</sup>	+	+	+	.	+	+	+	0-89
<i>Macrophiothrix variabilis</i> (Duncan, 1887)	.	+	*	.	+	+	.	0-139
<i>Macrophiothrix vicina</i> (Koehler, 1930) <sup>13</sup>	.	.	.	.	.	+	.	—
<i>Macrophiothrix virgata</i> (Lyman, 1861) <sup>12</sup>	.	+	.	.	+	.	.	10
<i>Ophiocnemis marmorata</i> (Lamarck, 1816)	+	+	*	.	+	+	.	0-100
<i>Ophiogymna elegans</i> Ljungman, 1867	+	+	*	.	+	+	.	1-348
<i>Ophiogymna funesta</i> Koehler, 1922	.	.	*	.	.	+	.	80-300
<i>Ophiogymna pellicula</i> (Duncan, 1876)	+	.	*	.	.	.	.	10-116
<i>Ophiogymna pulchella</i> (Koehler, 1905)	.	+	*	.	.	+	.	73-247
<i>Ophiomaza cacaotica</i> Lyman, 1871	.	+	*	+	+	+	+	0-80
<i>Ophiopsammium semperi</i> Lyman, 1874	+	+	*	.	.	.	.	0-50
<i>Ophioterpon elegans</i> Ludwig, 1888	.	+	+	+	.	+	+	0-189
<i>Ophioterpon vitiense</i> Koehler, 1927	+	.	*	.	+	.	.	25-50
<i>Ophiothela danae</i> Verrill, 1869	+	+	*	+	+	+	+	0-120
<i>Ophiothela venusta</i> (de Loriol, 1900)	.	.	.	+	+	.	.	0-40
<i>Ophiothrix capillaris</i> Lyman, 1879	.	.	+	.	.	+	+	22-750
<i>Ophiothrix contenta</i> Koehler, 1930	.	.	+	.	.	.	.	—
<i>Ophiothrix eurycolpodes</i> H.L. Clark, 1918	.	.	*	.	.	.	.	—
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>deceptor</i> Koehler, 1922	.	.	*	.	.	.	.	—
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>leucotrigona</i> H.L. Clark, 1918	.	.	+	.	+	.	.	96-107
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>proteus</i> Koehler, 1905	.	+	*	.	.	+	.	0-125
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>purpurea</i> von Martens, 1867	.	+	+	+	.	+	+	0-1046
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>scotiosa</i> Murakami, 1943	.	.	.	.	+	+	.	—
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>signata</i> Koehler, 1922	.	.	+	.	.	.	.	129-139
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>spinossissima</i> Koehler, 1905	.	+	+	+	+	.	.	2-36
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>vetusta</i> Koehler, 1930	.	.	+	.	.	.	.	191-245
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>vigelandi</i> A.M. Clark, 1968	.	.	+	.	+	.	.	0-618
<i>Ophiothrix</i> ( <i>Acanthophiothrix</i> ) <i>viridialba</i> von Martens, 1867	.	.	.	.	.	+	.	11-170
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>ciliaris</i> (Lamarck, 1816)	+	+	+	.	+	+	+	0-308
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>crassispina</i> Koehler, 1904	.	.	+	.	.	.	.	186-274
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>elegans</i> Lütken, 1869	.	+	*	+	.	+	.	0-67
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>exigua</i> Lyman, 1874	+	+	*	+	+	+	+	0-140
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>foveolata</i> Marktanner-Turneretscher, 1887	.	.	*	.	.	.	.	0-141
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>infirma</i> Koehler, 1905	.	.	+	.	.	.	+	54-200
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>koreana</i> Duncan, 1879	.	.	+	.	.	.	.	3-400
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>marenzelleri</i> Koehler, 1904	.	.	.	.	.	+	.	0-128
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>miles</i> Koehler, 1905	.	+	.	.	+	.	.	0-14
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>plana</i> Lyman, 1874	+	+	+	+	+	+	+	0-70
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>prostata</i> Koehler, 1922	+	.	+	.	.	.	.	2-46
<i>Ophiothrix</i> ( <i>Ophiothrix</i> ) <i>rotata</i> von Martens, 1870	.	+	.	.	.	+	.	9

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Ophiothrix (Ophiothrix) savignyi</i> (Müller & Troschel, 1842)	.	.	+	.	+	+	.	—
<i>Ophiothrix (Ophiothrix) trilineata</i> Lütken, 1869	.	+	+	.	.	+	+	0-54
<i>Ophiothrix (Ophiothrix) vitrea</i> Döderlein, 1896	.	.	+	.	.	.	.	3-300
<i>Ophiothrix (Theophrix) pusilla</i> Lyman, 1874	.	.	*	.	.	+	.	5-54
<b>Ophiocomidae</b>								
<i>Ophiarthrum elegans</i> Peters, 1851	.	+	*	+	+	+	.	0-36
<i>Ophiarthrum pictum</i> (Müller & Troschel, 1842)	.	.	+	+	.	+	.	0-20
<i>Ophiocoma anaglyptica</i> Ely, 1944	.	.	.	.	.	+	.	0-20
<i>Ophiocoma brevipes</i> Peters, 1851	.	+	+	+	.	+	.	0-54
<i>Ophiocoma dentata</i> Müller & Troschel, 1842	.	+	.	+	.	+	+	0-35
<i>Ophiocoma erinaceus</i> Müller & Troschel, 1842	.	+	+	+	.	+	+	0-27
<i>Ophiocoma pica</i> Müller & Troschel, 1842	.	+	+	.	.	+	+	0-24
<i>Ophiocoma pusilla</i> (Brock, 1888)	.	.	.	.	.	+	+	0-20
<i>Ophiocoma schoenleinii</i> Müller & Troschel, 1842	.	.	.	+	+	.	+	0-20
<i>Ophiocoma scolopendrina</i> (Lamarck, 1816)	.	+	+	+	.	+	+	0-13
<i>Ophiocomella sexradia</i> (Duncan, 1887)	+	+	+	+	.	+	+	0-15
<i>Ophiomastix annulosa</i> (Lamarck, 1816)	.	+	+	.	.	+	+	0-57
<i>Ophiomastix asperula</i> Lütken, 1869	.	+	*	.	.	+	.	0-20
<i>Ophiomastix caryophyllata</i> Lütken, 1869	.	+	.	.	.	+	.	0-54
<i>Ophiomastix corallicola</i> H. L. Clark, 1915	.	.	.	.	.	+	.	0-20
<i>Ophiomastix flaccida</i> Lyman, 1874	.	.	+	+	.	+	.	0-82
<i>Ophiomastix janualis</i> Lyman, 1871	.	.	+	+	.	+	.	0-22
<i>Ophiomastix mixta</i> Lütken, 1869	.	+	+	+	.	+	.	0-54
<i>Ophiomastix variabilis</i> Koehler, 1905	.	.	*	+	.	+	.	0-60
<i>Ophiomastix venosa</i> Peters, 1851	.	.	+	+	.	.	.	—
<i>Ophiopsila abscissa</i> Liao, 1982	+	.	.	.	+	+	+	30-120
<i>Ophiopsila pantherina</i> Koehler, 1898	.	+	.	.	+	+	.	0-100
<b>Ophionereididae</b>								
<i>Ophiochiton fastigatus</i> Lyman, 1878	.	.	+	.	.	+	.	128-1628
<i>Ophionereis dubia amoensis</i> A.M. Clark, 1953	+	.	.	.	+	+	.	0-34
<i>Ophionereis dubia dubia</i> (Müller & Troschel, 1842)	+	*	.	+	+	+	+	0-230
<i>Ophionereis fusca</i> Brock, 1888	.	+	.	.	.	.	.	0-45
<i>Ophionereis porrecta</i> Lyman, 1860	.	.	.	.	+	+	+	0-60
<i>Ophionereis variegata</i> Duncan, 1879	.	+	.	.	.	+	.	0-60
<b>Ophiodermatidae</b>								
<i>Bathpectinura heros</i> (Lyman, 1879)	.	+	+	.	.	+	.	240-2960
<i>Cryptopelta longibrachialis</i> Koehler, 1930 <sup>14</sup>	.	.	*	.	+	+	.	13-243
<i>Ophiarachna affinis</i> Lütken, 1869	.	+	*	.	.	.	.	0-25
<i>Ophiarachna incrassata</i> (Lamarck, 1816)	.	+	+	+	.	+	+	0-97
<i>Ophiarachna ohshimae</i> Murakami, 1943	.	.	.	.	.	+	.	—
<i>Ophiarachnella elegans</i> (Bell, 1894)	.	.	.	.	.	+	.	24-64
<i>Ophiarachnella gorgonia</i> (Müller & Troschel, 1842)	+	+	+	+	+	+	+	0-50
<i>Ophiarachnella infernalis</i> (Müller & Troschel, 1842)	+	+	*	.	+	+	+	0-233
<i>Ophiarachnella macracantha</i> H.L. Clark, 1909	.	.	*	.	+	.	.	30
<i>Ophiarachnella paucispina</i> (Koehler, 1905)	.	.	.	.	.	+	.	34-83
<i>Ophiarachnella septemspinosa</i> (Müller & Troschel, 1842)	.	.	+	+	.	+	.	0-55
<i>Ophiarachnella similis</i> (Koehler, 1905)	.	+	*	.	+	.	.	0-59
<i>Ophiarachnella stabilis</i> (Koehler, 1905)	.	.	.	.	.	+	.	12-83
<i>Ophiochaeta hirsuta</i> Lütken, 1869	.	.	.	.	+	.	.	0-26
<i>Ophiochasma stellatum</i> (Ljungman, 1867)	+	.	*	+	+	+	+	0-110
<i>Ophioconis cincta</i> Brock, 1888	.	+	+	.	.	+	.	0-111

14 possible synonym of *Cryptopelta granulifera* H.L. Clark, 1909 ; see Rowe & Gates, 1995: 395.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Ophioconis cupida</i> Koehler, 1905	.	.	*	.	+	+	.	10-600
<i>Ophioderma tonganum</i> Lütken, 1872 <sup>15</sup>	.	.	.	.	+	.	.	—
<i>Ophiodyscrita acosmeta</i> H. L. Clark, 1938	.	.	.	+	.	.	.	0-20
<i>Ophiopeza fallax</i> Peters, 1851	.	.	*	+	.	.	.	25
<i>Ophiopeza spinosa</i> (Ljungman, 1867)	.	.	*	.	+	+	+	0-74
<i>Ophiopsammus aequalis</i> (Lyman, 1880)	.	.	+	.	.	.	.	161-401
<i>Ophiopsammus yoldii</i> (Lütken, 1856)	.	.	*	.	.	.	+	0-215
<b>Ophioleucidae</b>								
<i>Ophiocirce inutilis</i> Koehler, 1904	.	.	+	.	.	.	.	112-209
<i>Ophioleuce seminudum</i> Koehler, 1904	.	+	.	.	.	+	+	50-1635
<i>Ophiopallas paradoxa</i> Kochler, 1904	.	+	+	.	.	+	.	112-500
<b>Ophiuridae</b>								
<i>Amphiophiura canaliculata</i> Kochler, 1922	.	.	+	.	.	.	.	106
<i>Amphiophiura insolita</i> (Koehler, 1904)	.	.	+	.	.	+	.	204-1236
<i>Amphiophiura paupera</i> (Koehler, 1896)	.	.	+	.	.	.	+	743-1289
<i>Amphiophiura pertusa</i> Koehler, 1930	.	.	+	.	.	.	.	179-300
<i>Amphiophiura spatulifera</i> Koehler, 1922	.	.	+	.	.	.	.	959
<i>Amphiophiura sculptilis</i> (Lyman, 1878)	.	.	.	.	.	+	+	457-3429
<i>Amphiophiura sordida</i> (Koehler, 1897)	.	.	+	.	.	+	+	250-1280
<i>Ophiolepis cardioplax</i> Murakami, 1943	.	+	.	.	+	+	+	littoral
<i>Ophiolepis cincta</i> Müller & Troschel, 1842	.	+	+	.	+	+	+	0-45
<i>Ophiolepis rugosa</i> Koehler, 1898	.	.	*	.	+	.	.	5-73
<i>Ophiolepis superba</i> H.L. Clark, 1915	.	+	+	+	+	+	.	0-30
<i>Ophiolipus granulatus</i> Koehler, 1897	.	+	*	.	.	+	.	205-470
<i>Ophiomastus tegulitius</i> Lyman, 1878	.	.	.	.	.	+	+	510-4840
<i>Ophiomusium corticosum</i> Lyman, 1878	.	+	.	.	.	+	+	3383
<i>Ophiomusium facetum</i> Koehler, 1922	.	.	+	.	.	.	.	513-1752
<i>Ophiomusium facundum</i> Koehler, 1922	.	+	+	.	.	+	.	454-1400
<i>Ophiomusium lymani</i> Thomson, 1873	.	.	+	.	.	+	+	130-4000
<i>Ophiomusium luetkeni</i> Lyman, 1878	.	.	+	.	.	.	.	196-1125
<i>Ophiomusium scalare</i> Lyman, 1878	.	+	*	.	.	+	.	124-1224
<i>Ophiomusium simplex</i> Lyman, 1878	.	.	+	.	.	+	+	100-300
<i>Ophioplocus declinans</i> (Koehler, 1904)	.	.	+	.	.	.	.	183-187
<i>Ophioplocus imbricatus</i> (Müller & Troschel, 1842)	+	+	.	.	.	+	.	0-30
<i>Ophioplocus japonicus</i> H. L. Clark, 1911	.	.	.	.	.	+	.	0-2
<i>Ophiotylus brevipes</i> Liao, 1978	.	.	.	.	.	+	.	0-5
<i>Ophiotylus leucus</i> Murakami, 1943	.	.	.	.	+	.	.	—
<i>Ophiozonella bispinosa</i> (Koehler, 1897)	.	.	+	.	.	.	.	150-382
<i>Ophiozonella molesta</i> (Koehler, 1904)	.	.	+	.	.	+	.	68-1270
<i>Ophiozonella subtilis</i> Koehler, 1922	.	+	+	.	.	+	+	149-929
<i>Ophiura aequalis</i> Lyman, 1878	.	.	+	.	.	.	.	694-2194
<i>Ophiura clemens</i> (Koehler, 1904)	.	.	+	.	.	.	.	686-1264
<i>Ophiura flagellata</i> (Lyman, 1878)	.	+	+	.	.	+	+	96-2330
<i>Ophiura kinbergi</i> (Ljungman, 1867)	+	+	+	.	+	+	.	0-500
<i>Ophiura lanceolata</i> H.L. Clark, 1939	.	.	.	.	.	+	.	122-293
<i>Ophiura micracantha</i> H.L. Clark, 1911	.	+	*	.	.	+	+	144-472
<i>Ophiura pteracantha</i> Liao, 1983	.	+	.	.	.	+	+	3-93
<i>Sinophiura multispina</i> (Koehler, 1922)	.	.	*	.	.	+	+	51-357
<i>Stegophiura hainanensis</i> Liao, 1995	.	.	.	.	.	+	.	158
<i>Stegophiura sterilis</i> Koehler, 1922	.	.	.	.	.	+	.	380

15 presence of genus *Ophioderma* in Indo-west Pacific questionable - see comments by A.M.C. in Clark & Rowe, 1971: 126.

Taxa	Distribution							Depth range m.	
	1	2	3	4	5	6	7		
ECHINOIDEA									
<i>Order CIDAROIDA</i>									
<b>Cidaridae</b>									
<i>Chondrocidaris brevispina</i> H.L. Clark, 1925	.	.	.	.	+	.	.	0-15	
<i>Eucidaris metularia</i> (Lamarck, 1816)	.	+	+	.	.	+	+	0-570	
<i>Goniocidaris tenuispina</i> Mortensen, 1927	.	.	+	.	.	.	.	570-1411	
<i>Phyllacanthus imperialis</i> (Lamarck, 1816)	.	+	*	.	+	+	.	0-73	
<i>Prionocidaris australis</i> (Ramsay, 1885)	.	.	+	.	.	+	.	10-145	
<i>Prionocidaris baculosa</i> (Lamarck, 1816)	+	+	+	.	+	+	+	0-250	
<i>Prionocidaris bispinosa</i> (Lamarck, 1816)	.	+	.	.	+	+	.	4-125	
<i>Prionocidaris verticillata</i> (Lamarck, 1816)	.	+	+	.	.	+	.	0-54	
<i>Stereocidaris grandis</i> Döderlein, 1887	.	.	+	.	.	.	.	204-716	
<i>Stereocidaris indica</i> Döderlein, 1901	.	.	+	.	.	+	.	400-1298	
<i>Stylocidaris annulosa</i> Mortensen, 1927	.	+	+	.	.	+	+	125-300	
<i>Stylocidaris reini</i> (Döderlein, 1887)	.	+	*	.	.	+	+	100-841	
<i>Order ECHINOTHURIOIDA</i>									
<b>Echinothuriidae</b>									
<i>Araeosoma owstoni</i> Mortensen, 1904	.	+	*	.	.	+	+	70-540	
<i>Araeosoma tessellatum</i> var. <i>carinatum</i> Mortensen, 1934	.	.	+	.	.	.	.	385	
<i>Asthenosoma heteractis</i> Bedford, 1900	+	+	+	.	.	+	.	9	
<i>Asthenosoma ijimai</i> Yoshiwara, 1897 <sup>16</sup>	.	.	*	.	.	+	.	7-300	
<i>Asthenosoma varium</i> Grube, 1868	+	+	*	.	L	+	+	0-167	
<i>Calveriosoma gracile</i> (A. Agassiz, 1881)	.	.	*	.	.	+	+	145-950	
<i>Hygrosoma hoplacaantha</i> (Thomson, 1877)	.	.	+	.	.	+	.	360-2068	
<b>Phormosomatidae</b>									
<i>Phormosoma bursarium</i> A. Agassiz, 1881	.	.	+	+	.	.	.	170-2340	
<i>Order DIADEMATOIDA</i>									
<b>Aspidodiadematidae</b>									
<i>Aspidodiadema tonsum</i> A. Agassiz, 1879	.	.	*	.	.	.	.	180-1135	
<i>Plesiadiadema indicum</i> (Döderlein, 1900)	.	.	+	.	.	.	.	240-1150	
<b>Diadematidae</b>									
<i>Astropyga radiata</i> (Leske, 1778)	+	+	+	.	+	+	+	0-70	
<i>Chaetodiadema granulatum</i> Mortensen, 1903	+	+	*	.	.	+	+	15-216	
<i>Chaetodiadema japonicum</i> Mortensen, 1904	.	.	+	.	.	.	.	50-135	
<i>Diadema paucispinum</i> A. Agassiz, 1863	.	.	.	.	+	.	.	0-40	
<i>Diadema savignyi</i> Michelin, 1845	+	+	*	+	+	+	.	0-70	
<i>Diadema setosum</i> (Leske, 1778)	+	+	+	+	+	+	+	0-70	
<i>Echinothrix calamaris</i> (Pallas, 1774)	+	+	+	+	+	+	+	0-90	
<i>Echinothrix diadema</i> (Linnaeus, 1758)	+	+	*	+	+	+	.	3-10	
<i>Eremopyga debilis</i> Mortensen, 1940	.	+	*	.	.	.	.	200-400	
<i>Eremopyga denudata</i> (de Meijere, 1904)	.	+	+	.	.	+	.	70-275	
<i>Order PHYMOSOMATOIDA</i>									
<b>Arbaciidae</b>									
<i>Arbacia incisa</i> (A. Agassiz, 1863)	.	.	*	.	.	.	.	0-29	
<i>Coelopleurus mailliardi</i> (Michelin, 1862)	.	.	+	.	.	.	.	23-250	
<i>Coelopleurus maculatus</i> A. Agassiz & H.L. Clark, 1907	.	.	*	.	.	+	.	60-360	
<b>Stomopneustidae</b>									
<i>Stomopneustes variolaris</i> (Lamarck, 1816)	.	+	.	.	.	+	+	0-10	

16 status of *Asthenosoma ijimae* Yoshiwara, 1897 uncertain - see Weinberg & de Ridder, 1998: 44.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Order MICROPYGOIDA</i>								
<b>Micopygidae</b>								
<i>Micopyga tuberculata</i> A. Agassiz, 1879	.	.	+	.	.	.	.	150-1340
<i>Micopyga violacea</i> de Meijere, 1904	.	.	+	.	.	.	.	625-925
<i>Order PEDINOIDA</i>								
<b>Pedinidae</b>								
<i>Caenopeda indica</i> (de Meijere, 1904)	.	.	+	.	.	.	.	c.245-985
<i>Order TEMNOPLEUROOIDA</i>								
<b>Temnopleuridae</b>								
<i>Desmechinus anomalus</i> H.L. Clark, 1923	.	+	.	.	.	+	.	—
<i>Desmechinus rufus</i> (Bell, 1894)	+	+	*	.	.	+	.	20-80
<i>Desmechinus versicolor</i> (Mortensen, 1904)	.	.	+	.	.	+	.	70-100
<i>Mesphilia globulus</i> (Linnaeus, 1758)	.	+	+	+	.	+	.	0-c.60
<i>Microcyphus ceylanicus</i> Mortensen, 1942	.	+	.	.	+	.	.	<20
<i>Paratrema doederleini</i> (Mortensen, 1904)	+	+	*	.	.	+	.	10-20
<i>Prionechinus forbesianus</i> (A. Agassiz, 1881)	.	.	+	.	.	.	.	139-1370
<i>Salmaciella dussumieri</i> (L. Agassiz, 1846)	+	+	*	.	+	+	+	7-180
<i>Salmacis belli</i> Döderlein, 1902	+	+	*	.	.	.	.	10-125
<i>Salmacis bicolor</i> L. Agassiz, 1846	+	+	*	.	+	+	+	0-122
<i>Salmacis sphaerooides</i> (Linnaeus, 1758)	+	+	*	.	+	+	.	0-c.90
<i>Salmacis virgulata</i> L. Agassiz, 1846	+	+	*	.	+	+	.	10-55
<i>Temnopleurus alexandri</i> (Bell, 1884)	.	.	.	.	+	.	.	9-73
<i>Temnopleurus apodus</i> (A. Agassiz & H. L. Clark, 1907)	.	+	.	.	+	.	.	18-500
<i>Temnopleurus decipiens</i> (de Meijere, 1904)	.	.	*	.	+	.	.	18-40
<i>Temnopleurus hardwicki</i> (Gray, 1855)	.	.	*	.	+	.	.	c.5-65
<i>Temnopleurus reevesi</i> (Gray, 1855)	+	+	*	.	+	+	+	c.5-565
<i>Temnopleurus toreumaticus</i> (Leske, 1778)	+	+	*	.	+	+	.	0-82
<i>Temnotrema bothryoides</i> (L. Agassiz, 1846)	+	+	.	.	+	.	.	73-80
<i>Temnotrema maculatum</i> (Mortensen, 1904)	.	+	.	.	+	.	.	10-112
<i>Temnotrema reticulatum</i> (Mortensen, 1904)	+	+	*	.	+	+	.	c.25-290
<i>Temnotrema sculptum</i> A. Agassiz, 1863	.	.	+	+	.	+	.	0-c.500
<i>Temnotrema siamense</i> (Mortensen, 1904)	+	+	*	.	+	+	.	c.5-350
<i>Temnotrema xishaensis</i> Liao, 1978	.	.	.	.	+	.	.	—
<i>Order ECHINOVIDA</i>								
<b>Toxopneustidae</b>								
<i>Cyrtoclinus verruculatus</i> (Lütken, 1864)	.	+	*	.	.	+	.	0-c.130
<i>Gymnechinus epistichus</i> H.L. Clark, 1912	.	.	*	.	+	.	.	0-63
<i>Goniopneustes pentagonus</i> (A. Agassiz, 1872)	.	.	.	.	+	+	.	c.50-90
<i>Nudechinus amboinensis</i> Mortensen, 1942	.	.	.	.	+	.	.	0-c.50
<i>Nudechinus inconspectus</i> (Mortensen, 1904)	.	.	.	.	+	.	.	0-20
<i>Nudechinus multicolor</i> (Yoshiwara, 1898)	.	.	*	.	.	+	.	0-10
<i>Nudechinus stictus</i> H.L. Clark, 1912	.	.	*	.	.	+	.	13-20
<i>Pseudoboletia indiana</i> (Michelin, 1862)	.	+	*	.	.	+	.	0-100
<i>Pseudoboletia maculata</i> Troschel, 1869	.	+	*	.	.	+	.	10-82
<i>Toxopneustes pileolus</i> (Lamarck, 1816)	+	+	+	.	+	+	.	0-90
<i>Tripneustes gratilla</i> (Linnaeus, 1758)	.	+	+	.	.	+	+	0-c.75
<b>Parasaleniidae</b>								
<i>Parasalenia graticosa</i> A. Agassiz, 1863	+	+	+	+	.	+	.	0-70
<i>Parasalenia poehli</i> Pfeffer, 1887	.	.	*	.	+	+	+	0-70

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<b>Echinometridae</b>								
<i>Anthocidaris crassispina</i> (A. Agassiz, 1863)	.	+	.	.	.	+	.	0-70
<i>Colobocentrotus mertensi</i> Brandt, 1835	.	.	.	.	+	+	.	littoral
<i>Colobocentrotus pedifer</i> (de Blainville, 1825)	.	.	.	.	+	.	.	—
<i>Echinometra mathaei</i> (de Blainville, 1825)	.	+	+	.	+	+	+	0-139
<i>Echinometra oblonga</i> (de Blainville, 1825)	.	.	+	.	.	.	.	0-?
<i>Echinostrephus aciculatus</i> A. Agassiz, 1863	.	.	*	.	+	+	.	0-c.50
<i>Echinostrephus molaris</i> (de Blainville, 1825)	.	+	.	+	.	+	+	0-c.50
<i>Heterocentrotus mammillatus</i> (Linnaeus, 1758)	.	+	+	+	.	+	+	0-30
<i>Heterocentrotus trigonarius</i> (Lamarck, 1816)	.	.	*	.	+	+	.	0-36
<b>Strongylocentrotidae</b>								
<i>Hemicentrotus pulcherrimus</i> (A. Agassiz, 1863)	.	+	.	.	.	+	.	0-c.45
<i>Order CASSIDULOIDA</i>								
<b>Echinolampadidae</b>								
<i>Conolampas diomedae</i> Mortensen, 1948	.	.	+	.	.	.	.	181-265
<i>Echinolampas alexandri</i> de Loriol, 1876	.	+	+	+	+	.	.	c. 8-365
<i>Echinolampas ovata</i> (Leske, 1778)	+	.	.	.	+	.	.	c. 9-75
<i>Order HOLECTYPOIDA</i>								
<b>Echinoneidae</b>								
<i>Echinoneus abnormalis</i> de Loriol, 1883	.	.	.	+	.	+	.	0-85
<i>Echinoneus cyclostomus</i> Leske, 1778	+	+	+	+	+	+	+	0-120
<i>Micropetalon purpureum</i> A. Agassiz & H. L. Clark, 1907	.	.	.	.	.	+	.	c.45-70
<i>Order CLYPEASTEROIDA</i>								
<b>Clypeasteridae</b>								
<i>Clypeaster (Coronanthus) latissimus</i> (Lamarck, 1816)	+	+	.	+	+	+	.	25-56
<i>Clypeaster (Leptoclypus) annandalei</i> Koehler, 1922	.	.	+	+	.	.	.	160-475
<i>Clypeaster (Leptoclypus) rarispinus</i> de Meijere, 1902	.	.	.	.	+	.	.	7-91
<i>Clypeaster (Raphidoclypus) fervens</i> Koehler, 1922	.	+	+	+	+	+	.	0-216
<i>Clypeaster (Raphidoclypus) reticulatus</i> (Linnaeus, 1758)	+	+	+	+	+	+	+	0-125
<i>Clypeaster (Stolonoclypus) humilis</i> (Leske, 1778)	.	+	+	.	+	+	.	0-216
<i>Clypeaster (Stolonoclypus) miniaceus</i> H.L.Clark, 1925	.	.	.	.	+	+	.	c.70-230
<i>Clypeaster (Stolonoclypus) virescens</i> Döderlein, 1885	+	+	+	+	+	+	.	27-630
<b>Arachnoididae</b>								
<i>Arachnoides placenta</i> (Linnaeus, 1758)	+	+	+	+	+	+	.	0-57
<b>Fibulariidae</b>								
<i>Echinocyamus crispus</i> Mazzetti, 1894	.	+	+	+	+	+	+	13-564
<i>Echinocyamus provectus</i> de Meijere, 1904	.	.	+	+	.	+	.	75-390
<i>Echinocyamus scaber</i> de Meijere, 1904	.	.	.	+	+	.	.	c.200-1886
<i>Fibularia acuta</i> Yoshiwara, 1898	+	+	+	+	+	+	.	0-90
<i>Fibularia angulipora</i> Mortensen, 1948	+	+	+	.	+	+	.	0-c.15
<i>Fibularia cribellum</i> de Meijere, 1904	.	.	+	+	+	+	.	14-522
<i>Fibularia oblonga</i> Gray, 1851	+	+	.	.	+	+	.	24
<i>Fibularia ovulum</i> Lamarck, 1816	+	+	+	+	+	+	.	0-385
<i>Fibularia volva</i> L. Agassiz, 1847	+	+	.	.	+	+	.	0-94

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<b>Laganidae</b>								
<i>Laganum decagonale</i> (de Blainville, 1827)	+	+	+	.	+	+	+	c.5-300
<i>Laganum depressum</i> Lesson, 1841	.	+	+	+	+	+	+	0-c.85
<i>Laganum laganum</i> (Leske, 1778)	+	+	+	+	+	+	.	0-34
<i>Laganum fudsiyama</i> Döderlein, 1885	.	.	+	+	+	+	+	c.50-654
<i>Peronella lesueuri</i> (Valenciennes, 1841)	+	+	+	+	+	+	+	0-c.70
<i>Peronella macroproctes</i> Koehler, 1922	.	.	+	+	+	.	.	5-106
<i>Peronella minuta</i> (de Meijere, 1904)	.	+	+	.	.	+	.	c.13-72
<i>Peronella orbicularis</i> (Leske, 1778)	+	+	+	+	+	+	.	0-70
<i>Peronella pellucida</i> Döderlein, 1885	.	.	+	.	.	.	.	c.75-550
<i>Peronella rubra</i> (Döderlein, 1885)	+	.	.	.	+	+	.	5-60
<b>Astriclypeidae</b>								
<i>Astriclypeus manni</i> Verrill, 1867	.	+	.	.	.	+	.	0-40
<i>Echinodiscus auritus</i> Leske, 1778	+	+	+	+	+	+	.	0-57
<i>Echinodiscus bisperforatus</i> Leske, 1778	+	+	.	+	+	+	.	<20
<i>Echinodiscus tenuissimus</i> (L. Agassiz, 1847)	+	+	+	+	+	+	.	0-c.20
<b>Dendrasteridae</b>								
<i>Sinaechinocymus mai</i> (Wang, 1984)	.	.	*	.	.	+	.	lower shore
<i>Order SPATANGOIDA</i>								
<b>Spatangiidae</b>								
<i>Gymnopatagus magnus</i>								
A. Agassiz & H.L. Clark, 1907	.	.	*	.	.	.	.	c.780-1730
<i>Mareta cordata</i> Mortensen, 1948	.	.	+	+	.	+	.	c.50-150
<i>Mareta planulata</i> (Lamarck, 1816)	+	+	+	+	L	+	.	0-c.60
<i>Nacospatangus alta</i> (A. Agassiz, 1863)	+	+	*	+	+	+	.	2-204
<b>Palaeostomatidae</b>								
<i>Palaeostoma mirabile</i> (Gray, 1851)	+	+	+	+	+	+	.	c.20-110
<b>Asterostomatidae</b>								
<i>Argopatagus vitreus</i> A. Agassiz, 1879	.	.	+	+	+	.	.	c.460-2250
<i>Heterobrissus nasicus</i> (Döderlein, 1901)	.	.	+	.	+	.	.	125-475
<i>Linopneustes excentricus</i> de Meijere, 1902	.	.	+	.	.	.	.	694-1788
<i>Linopneustes fragilis</i> (de Meijere, 1902)	.	.	+	.	.	.	.	c.560-1170
<i>Linopneustes murrayi</i> (A. Agassiz, 1879)	.	.	+	+	+	+	+	620-1615
<i>Platybrissus roemeri</i> Grube, 1866	.	.	.	.	.	+	.	0-100
<i>Platybrissus ovalis</i> (Mortensen, 1948)	.	.	+	.	.	+	.	192
<i>Plesiozonus diomedae</i> Mortensen, 1948	.	.	+	.	.	+	+	c.180-345
<i>Plesiozonus tenuis</i> David & de Ridder, 1989	.	.	+	.	.	.	.	181-190
<b>Loveniidae</b>								
<i>Echinocardium cordatum</i> (Pennant, 1777)	.	+	+	+	+	+	.	0-c.230
<i>Homolampas lovenioides</i> Mortensen, 1948	.	.	+	.	.	.	.	987
<i>Lovenia doederleini</i> Mortensen, 1950	.	.	+	+	+	+	.	10-35
<i>Lovenia elongata</i> (Gray, 1845)	+	+	+	+	+	+	+	0-94
<i>Lovenia gregalis</i> Alcock, 1893	+	+	.	.	+	+	.	c.274-930
<i>Lovenia subcarinata</i> (Gray, 1845)	+	+	+	+	+	+	.	c.10-49
<i>Lovenia triforis</i> Koehler, 1914	+	+	.	+	+	+	.	43-270
<b>Pericosmidae</b>								
<i>Pericosmus melanostomus</i> Mortensen, 1948	+	+	.	+	+	+	.	18-70
<i>Pericosmus porphyrocardius</i> McNamara, 1984	+	+	.	+	+	+	+	217-420
<b>Schizasteridae</b>								
<i>Faorina chinensis</i> Gray, 1851	+	+	+	+	+	+	+	41-220
<i>Moira lachesinella</i> Mortensen, 1930	+	+	.	.	+	.	.	<50
<i>Moira stygia</i> A. Agassiz, 1872	+	+	.	.	+	.	.	6-15

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Proraster affinis</i> (Mortensen, 1948)	.	.	+	+	+	.	.	915-1630
<i>Prymnaster rostratus</i> (Smith, 1878)	.	.	.	.	.	+	.	0
<i>Schizaster (Paraster) compactus</i> (Koehler, 1914)	.	+	.	.	.	+	.	30-900
<i>Schizaster (Schizaster) lacunosus</i> (Linnaeus, 1758)	.	+	*	.	.	+	.	4-c.90
<b>Brissidae</b>								
<i>Anametalia sternaloides</i> (Bolau, 1874)	+	+	*	.	+	+	.	16-88
<i>Brissopsis luzonica</i> (Gray, 1851)	+	+	+	.	+	+	+	10-1788
<i>Brissopsis oldhami</i> Alcock, 1893	.	.	+	+	.	.	.	c.1040-2140
<i>Brissopsis similis</i> Mortensen, 1948	.	.	+	.	.	.	.	129-1420
<i>Brissus latecarinatus</i> (Leske, 1778)	+	+	+	+	+	+	.	0-c.45
<i>Eupatagus magnus</i> (A. Agassiz & H. L. Clark, 1907)	+	+	+	+	+	+	.	c.780-1730
<i>Metalia dicrana</i> H.L. Clark, 1917	.	+	+	.	+	+	.	0-21
<i>Metalia spatagus</i> (Linnaeus, 1758)	+	+	*	+	+	+	.	0-c.130
<i>Metalia sternalis</i> (Lamarck, 1816)	+	+	+	+	+	+	+	0-c.90
<i>Rhynobrissus pyramidalis</i> A. Agassiz, 1872	+	+	.	.	+	+	.	0-18
<b>Order HOLASTEROIDA</b>								
<b>Pourtalesiidae</b>								
<i>Stereopneustes relictus</i> de Meijere, 1902	.	.	+	+	+	.	+	250-907
<b>Urechinidae</b>								
<i>Sternopatagus sinensis</i> Bather, 1934	+	+	.	.	+	.	.	—
<b>HOLOTHUROIDEA</b>								
<b>Order ASPIDOCHIROTIDA</b>								
<b>Holothuriidae</b>								
<i>Actinopyga echinata</i> (Jaeger, 1833)	.	+	+	+	.	+	.	0-5
<i>Actinopyga flammea</i> Cherbonnier, 1979	.	.	.	+	+	.	.	35-60
<i>Actinopyga lecanora</i> (Jaeger, 1833)	.	+	+	.	+	+	+	0-23
<i>Actinopyga mauritiana</i> (Quoy & Gaimard, 1833)	.	+	+	+	.	+	+	0-12
<i>Actinopyga miliaris</i> (Quoy & Gaimard, 1833)	.	.	+	.	+	+	.	0-20
<i>Actinopyga obesa</i> (Selenka, 1867)	.	.	+	.	+	+	.	0-25
<i>Bohadschia argus</i> (Jaeger, 1833)	.	+	+	+	+	+	+	0-40
<i>Bohadschia marmorata</i> (Jaeger, 1833)	.	+	+	+	+	+	+	0-36
<i>Bohadschia paradoxa</i> (Selenka, 1867) <sup>17</sup>	.	.	+	.	.	+	.	0-41
<i>Bohadschia similis</i> (Semper, 1868) <sup>18</sup>	.	+	+	.	+	+	.	1-16
<i>Bohadschia tenuissima</i> (Semper, 1868) <sup>18</sup>	.	+	+	.	+	+	.	8-25
<i>Bohadschia vitiensis</i> (Semper, 1868) <sup>18</sup>	.	.	+	+	+	+	.	1-15
<b>Holothuria</b>								
( <i>Acanthotrapeza</i> ) <i>coluber</i> Semper, 1868	.	+	+	+	+	.	.	0-25
( <i>Acanthotrapeza</i> ) <i>kubaryi</i> Ludwig, 1875	.	.	.	.	+	.	.	<20
( <i>Cystipus</i> ) <i>inhabilis</i> Selenka, 1867	.	.	.	.	+	+	.	0-200
( <i>Cystipus</i> ) <i>dura</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	100-210
( <i>Cystipus</i> ) <i>rigida</i> (Selenka, 1867)	.	+	+	.	.	+	.	0-20
( <i>Halodeima</i> ) <i>atra</i> Jaeger, 1833	.	+	+	+	+	+	+	0-30
( <i>Halodeima</i> ) <i>edulis</i> Lesson, 1830	.	+	+	+	+	+	.	0-45
( <i>Halodeima</i> ) <i>pulla</i> Selenka, 1867	.	.	+	.	+	.	.	<20
( <i>Lessonothuria</i> ) <i>lineata</i> Ludwig, 1875 <sup>19</sup>	.	+	+	+	+	+	.	0-10

17 occurrence beyond Hawaiian islands requires confirmation according to Rowe &amp; Gates, 1995: 289.

18 validity of these spp. debatable; possible synonymy with *Bohadschia marmorata* (Jaeger, 1833) requires re-examination - see Rowe & Gates, 1995: 289.19 The identifications in Liao & Clark, 1995 and Liao, 1997 of *Holothuria (Lessonothuria) pardalis* Selenka, 1867 and *Holothuria (Lessonothuria) insignis* Ludwig, 1875 are confused; *Holothuria (L.) insignis* is a junior synonym of *Holothuria (L.) pardalis*, while *Holothuria (L.) pardalis* in Liao & Clark, 1995:438 and Liao, 1997:105 is referable to *Holothuria (Lessonothuria) lineata* Ludwig, 1875 (F.W.E.R.).

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
( <i>Lessonothuria</i> ) <i>multipilula</i> Liao, 1975	.	.	.	.	.	+	.	—
( <i>Lessonothuria</i> ) <i>pardalis</i> Selenka, 1867 <sup>19</sup>	.	.	+	.	.	.	.	0-210
( <i>Lessonothuria</i> ) <i>verrucosa</i> Selenka, 1867	.	.	*	.	+	+	.	0-30
( <i>Mertensiothuria</i> ) <i>leucospilota</i> (Brandt, 1835)	.	+	*	+	+	+	+	0-10
( <i>Metriatyla</i> ) <i>albiventer</i> Semper, 1868	.	.	+	.	.	+	.	0-36
( <i>Metriatyla</i> ) <i>martensi</i> Semper, 1868	.	+	*	.	.	+	+	0-100
( <i>Metriatyla</i> ) <i>scabra</i> Jaeger, 1833	+	+	+	.	+	+	.	1-25
( <i>Microthele</i> ) <i>fuscopunctata</i> Jaeger, 1833	.	.	.	.	.	+	.	3-12
( <i>Microthele</i> ) <i>nobilis</i> (Selenka, 1867) <sup>20</sup>	.	.	+	.	.	+	+	shallow water
( <i>Microthele</i> ) <i>whitmaei</i> Bell, 1887 <sup>20</sup>	.	+	+	+	.	+	.	0-40
( <i>Platyperona</i> ) <i>difficilis</i> Semper, 1868	.	+	*	.	.	+	+	0-20
( <i>Platyperona</i> ) <i>samoana</i> Ludwig, 1875	.	.	+	.	+	.	.	0-25
( <i>Selenkothuria</i> ) <i>erinacea</i> Semper, 1868	.	.	*	.	+	.	.	0-5
( <i>Selenkothuria</i> ) <i>moebii</i> Ludwig, 1883	.	+	*	.	+	+	.	shallow water
( <i>Selenkothuria</i> ) <i>sinica</i> Liao, 1980	.	+	.	.	.	+	.	—
( <i>Semperothuria</i> ) <i>cinerascens</i> (Brandt, 1835)	.	+	*	.	+	+	.	0-1.5
( <i>Semperothuria</i> ) <i>flavomaculata</i> Semper, 1868	.	+	*	.	.	+	.	0-40
( <i>Semperothuria</i> ) <i>imitans</i> Ludwig, 1875	.	.	.	.	+	.	.	—
( <i>Stauropora</i> ) <i>discrepans</i> Semper, 1868	.	.	.	.	.	+	.	—
( <i>Stauropora</i> ) <i>fuscocinerea</i> Jaeger, 1833	.	+	+	.	+	+	.	0-40
( <i>Stauropora</i> ) <i>olivacea</i> Ludwig, 1888	.	+	.	.	.	+	.	0-10
( <i>Stauropora</i> ) <i>pervicax</i> Selenka, 1867 <sup>21</sup>	.	+	+	.	.	+	.	0-20
( <i>Theelothuria</i> ) <i>asperita</i>	Cherbonnier & Feral, 1981	.	.	+	.	.	.	174-223
( <i>Theelothuria</i> ) <i>foresti</i>	Cherbonnier & Feral, 1981	.	.	+	.	.	.	122-185
( <i>Theelothuria</i> ) <i>kunzingeri</i> Lampert, 1885	.	.	+	.	.	.	.	intertidal
( <i>Theelothuria</i> ) <i>notabilis</i> Ludwig, 1875	.	.	+	.	.	.	.	0-5
( <i>Theelothuria</i> ) <i>ocellata</i> (Jaeger, 1833)	+	+	+	.	.	+	+	9-78
( <i>Theelothuria</i> ) <i>spinifera</i> Théel, 1886	+	+	*	.	.	+	.	0-60
( <i>Theelothuria</i> ) <i>squamifera</i> Semper, 1868	.	+	*	.	+	.	.	10-102
( <i>Thymioscygia</i> ) <i>arenicola</i> Semper, 1868	.	+	*	.	.	+	.	0-30
( <i>Thymioscygia</i> ) <i>gracilis</i> Semper, 1868	.	+	*	.	.	+	.	shallow water
( <i>Thymioscygia</i> ) <i>hilla</i> Lesson, 1830	.	+	+	+	+	+	+	0-220
( <i>Thymioscygia</i> ) <i>impatiens</i> (Forskål, 1775)	.	+	+	+	+	+	+	0-30
( <i>Vaneyothuria</i> ) <i>integra</i> Koehler & Vaney, 1908	.	+	.	.	.	.	.	217-230
<i>Labidodemas pertinax</i> (Ludwig, 1875)	.	.	.	.	.	+	.	inshore
<i>Labidodemas rugosum</i> (Ludwig, 1875)	.	.	+	.	+	.	.	<20
<i>Labidodemas semperianum</i> Selenka, 1867	.	+	+	.	+	+	+	<30
<i>Pearsonothuria graeffei</i> (Semper, 1868)	.	+	+	+	+	+	+	5-30
<b>Stichopodidae</b>								
<i>Stichopus chloronotus</i> Brandt, 1835	.	+	+	+	+	+	+	0-15
<i>Stichopus flaccus</i> Liao, 1980	.	+	.	.	.	+	.	28-48
<i>Stichopus hermanni</i> Semper, 1868 <sup>22</sup>	.	+	+	+	+	+	.	0-20
<i>Stichopus horrens</i> Selenka, 1867	.	+	+	.	+	+	+	0-10
<i>Stichopus naso</i> Semper, 1868 <sup>22</sup>	.	+	+	+	+	+	.	0-25
<i>Stichopus pseudohorrens</i> Cherbonnier, 1967	.	.	.	.	+	+	.	8-60
<i>Thelenota ananas</i> (Jaeger, 1833)	.	+	+	+	+	+	+	0-50
<i>Thelenota anax</i> H.L. Clark, 1921	.	.	*	+	+	+	+	1-30
<i>Thelenota rubralineata</i> Massin & Lane, 1991	.	.	.	.	.	.	+	14-40

20 the previously confused taxonomy of these two bêche de mer species has been sorted out by Rowe & Gates, 1995: 295-296.

21 Liao & Clark's record (1995: 443) may represent *Holothuria (Stauropoda) dofleinii* Augustin, 1908 (F.W.E.R.).

22 Rowe & Gates, 1995: 324-326 recognise the validity of these spp. previously included under the synonymy of *Stichopus variegatus*.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<b>Synallactidae</b>								
<i>Bathyplotes imperfectus</i>	.	.	+	.	.	.	.	415-510
<i>Bathyplotes punctatus</i> (Sluiter, 1901)	.	.	+	.	.	.	.	310-614
<i>Bathyplotes sulcatus</i> Sluiter, 1901	.	.	+	.	.	.	.	90-1800
<i>Bathyplotes</i> sp.	.	.	.	.	.	.	+	deep water
<i>Meseres peripatus</i> Sluiter, 1901	.	.	.	.	.	+	.	794-1850
<i>Meseres trachus</i> (Sluiter, 1901)	.	.	+	.	.	.	.	180-1420
<i>Mesothuria crebrapedes</i>								
Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	415-510
<i>Mesothuria parva</i> (Théel, 1886)	.	.	+	.	.	.	.	270-774
<i>Mesothuria regularia</i> Heding, 1940	.	.	+	.	.	.	.	448-818
<i>Mesothuria verrilli</i> (Théel, 1886)	.	.	+	.	.	.	.	173-2520
<i>Paelopatides quadridentis</i> Heding, 1940	.	.	+	.	.	.	.	750-925
<i>Synallactes angustus</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	415-510
<i>Synallactes crebrapapilla</i>								
Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	415-510
<i>Order DENDROCHIROTIDA</i>								
<b>Psolidae</b>								
<i>Psolus boholensis</i> Semper, 1868	.	.	*	.	.	.	.	—
<i>Psolus complanatus</i> Semper, 1868	.	.	*	.	.	.	.	—
<b>Cucumariidae</b>								
<i>Actinocumis typicus</i> Ludwig, 1875	.	+	.	.	.	+	.	0-50
<i>Cercodemas anceps</i> (Selenka, 1867)	.	+	.	.	+	+	+	0-50
<i>Colochirus crassus</i> Ekman, 1918	.	+	.	.	.	.	.	0-58
<i>Colochirus quadrangularis</i> Troschel, 1846	+	+	*	.	+	+	+	0-115
<i>Colochirus robustus</i> Oestergren, 1898	.	+	.	.	.	.	.	7-112
<i>Cucumaria japonica</i> Semper, 1868	.	+	.	.	.	.	.	—
<i>Leptopentacta imbricata</i> (Semper, 1868)	.	+	*	.	+	+	+	6-54
<i>Leptopentacta punctabipeda</i> Cherbonnier, 1960	.	+	.	.	.	+	.	<20
<i>Leptopentacta pygmaea</i> (Semper, 1868)	.	.	*	.	.	.	.	<20
<i>Mensamaria intercedens</i> (Lampert, 1885)	.	+	.	.	.	+	.	0-183
<i>Plesiocolochirus armatus</i> (von Maranzeller, 1881) <sup>23</sup>	.	+	.	.	.	+	.	0-37
<i>Plesiocolochirus inornatus</i> (von Maranzeller, 1881)	.	.	*	.	.	+	.	86-315
<i>Pseudocnus echinatus</i> (von Marenzeller, 1881)	.	.	.	.	.	+	.	0-385
<i>Pseudocolochirus violaceus</i> (Théel, 1886)	.	+	*	.	+	+	.	0-67
<b>Sclerodactylidae</b>								
<i>Afrocumis africana</i> (Semper, 1868)	.	+	.	.	+	+	.	intertidal
<i>Cladolabes aciculus</i> (Semper, 1868)	.	.	+	.	+	+	.	3-8
<i>Cladolabes crassus</i> (H.L. Clark, 1938)	.	.	.	.	+	+	.	<20
<i>Cladolabes schmeltzi</i> (Ludwig, 1875)	.	+	*	.	.	+	.	0-23
<i>Euthyonidiella tungshaniensis</i> (Yang, 1937)	.	.	.	.	.	+	.	0-80
<i>Ohshima ehrenbergi</i> (Selenka, 1867)	.	.	.	.	.	+	.	3-5
<i>Ohshima nhatrangensis</i>								
Levin & Dao Tan Ho, 1989	.	+	.	.	.	.	.	—
<i>Sclerodactyla multipes</i> (Théel, 1886)	.	+	.	.	.	.	.	50
<b>Phyllophoridae</b>								
<i>Havelockia novacorona</i> (Cherbonnier, 1960)	.	+	.	.	.	.	.	—
<i>Havelockia versicolor</i> (Semper, 1868)	.	+	*	.	.	+	.	0-60
<i>Havelockia</i> sp. <sup>24</sup>	.	+	.	.	.	+	.	—
<i>Hemithyone semperi</i> (Bell, 1884)	.	+	.	.	.	.	.	0-13
<i>Neothyonium inflatum</i> (Sluiter, 1901)	.	.	.	.	.	+	.	37-85

23 considered by F.W.E.R. to include the taxon *Pentacta* [= *Plesiocolochirus*] *nipponensis* (H.L. Clark, 1938).

24 represents a number of nominal species - see Liao &amp; Clark, 1995: 486-487.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Neothyonidium magnum</i> (Ludwig, 1882)	.	.	+	.	.	+	.	0-30
<i>Phyllophorus roseus</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	70-76
<i>Phyllophorus (Phyllophorella) dubius</i> Cherbonnier, 1960	.	+	.	.	.	+	.	<20
<i>Phyllophorus (Phyllophorella) kohkutiensis</i> Heding & Panning, 1954	+	+	*	.	.	+	.	19-150
<i>Phyllophorus (Phyllophorella) liuwutiensis</i> Yang, 1937	.	.	.	.	.	+	.	intertidal
<i>Phyllophorus (Phyllophorella) spiculata</i> Chang, 1935	.	+	.	.	+	+	.	0-30
<i>Phyllophorus (Phyllothuria) cebuensis</i> (Semper, 1868)	.	+	*	.	.	.	.	7-125
<i>Phyllophorus (Phyllothuria) hypsipyrga</i> (von Marenzeller, 1881)	.	.	.	.	.	+	.	<20-100
<i>Phyllophorus (Phyllothuria) ordinata</i> Chang, 1935	.	.	.	.	.	+	.	<20
<i>Phyrella fragilis</i> (Ohshima, 1912)	.	+	.	.	.	+	.	<20
<i>Semperiella tenera</i> (Ludwig, 1875)	.	.	.	.	.	+	.	<20
<i>Stolus albescens</i> Liao, 1995	.	.	.	.	.	+	.	16-109
<i>Stolus buccalis</i> (Stimpson, 1855)	.	.	*	.	+	+	.	0-54
<i>Stolus canescens</i> (Semper, 1868)	.	.	*	.	.	+	.	21-89
<i>Stolus conjugens</i> (Semper, 1868)	.	.	+	.	.	.	.	2-147
<i>Thorsonia adversaria</i> (Semper, 1868)	.	+	*	.	.	+	.	16-50
<i>Thyone anomala</i> Oestergren, 1898	.	+	.	.	.	+	.	0-103
<i>Thyone bicornis</i> Ohshima, 1915	.	+	.	.	.	+	+	23-61
<i>Thyone fusus chinensis</i> Yang, 1937 <sup>25</sup>	.	.	.	.	.	+	.	—
<i>Thyone papuensis</i> Théel, 1886	.	.	.	.	.	+	.	0-60
<i>Thyone pedata</i> Semper, 1868	.	+	.	.	.	+	.	c.55
<i>Thyone profusus</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	592-610
<i>Thyone spinifera</i> Liao, 1995	.	+	.	.	.	+	.	15-115
<i>Thyone cf. villosa</i> Semper, 1868	.	+	*	.	.	+	.	43-73
<b>Placothuriidae</b>								
<i>Placothuria molpadoides</i> (Semper, 1868) <sup>26</sup>	.	+	.	.	.	+	.	14-57
<b>Order DACTYLOCHIROTIDA</b>								
<b>Ypsilothuriidae</b>								
<i>Staurocucumis nocturna</i> (Sluiter, 1901)	.	.	+	.	.	.	.	685-757
<i>Ypsilothuria bitentaculata</i> (Ludwig, 1893)	.	.	+	.	.	.	+	135-4000
<b>Vaneyellidae</b>								
<i>Mitsukuriella squamulosa</i> (Mitsukuri, 1912) <sup>27</sup>	.	.	+	.	.	.	.	65-190
<b>Order MOLPADIIDA</b>								
<b>Caudinidae</b>								
<i>Acaudina bacilla</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	186-187
<i>Acaudina leucoprocta</i> (H.L. Clark, 1938)	.	+	.	.	.	+	+	0-122
<i>Acaudina molpadoides</i> (Semper, 1868)	.	+	+	.	.	+	+	0-330
<i>Acaudina suspecta</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	165-287
<i>Caudina atacta</i> Pawson & Liao, 1992	.	+	.	.	.	+	.	63-91
<i>Caudina intermedia</i> Liao & Pawson, 1993	.	.	.	.	.	+	.	107
<i>Paracaudina chilensis</i> (Müller, 1850)	.	+	.	.	.	+	.	0-990
<i>Paracaudina delicata</i> Pawson & Liao, 1992	.	+	.	.	.	+	.	10-21

25 validity of this taxon awaits re-examination of type material -see Liao &amp; Clark, 1995: 504.

26 moved to genus *Placothuria* [Placothuriidae] by Liao, 1997: 224.

27 transferred from Phyllophoridae to Vaneyellidae - see Liao, 1997: 229.

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<b>Molpadiidae</b>								
<i>Molpadia changi</i> Pawson & Liao, 1992	.	+	*	.	.	+	.	35-90
<i>Molpadia guangdongensis</i> Pawson & Liao, 1992	.	+	.	.	.	+	.	89-200
<i>Molpadia lenticulum</i> (Cherbonnier & Feral, 1981)	.	.	+	.	.	.	.	750-925
<i>Molpadia musculus</i> Risso, 1826	.	.	+	.	.	.	.	592-2340
<i>Molpadia parvulum</i> (Cherbonnier & Feral, 1981)	.	.	+	.	.	.	.	182-510
<i>Molpadia roretzi</i> (von Marenzeller, 1877)	.	+	*	.	.	+	+	44-620
<i>Order APODIDA</i>								
<b>Synaptidae</b>								
<i>Anapta gracilis</i> Semper, 1868	.	+	+	.	.	+	.	1-12
<i>Euapta godeffroyi</i> (Semper, 1868)	.	+	+	.	+	+	.	0-77
<i>Oestergrenia dubia</i> Semper, 1868	.	.	*	.	.	.	.	<20
<i>Oestergrenia incerta</i> (Ludwig, 1875)	.	+	.	.	.	+	.	20-100
<i>Oestergrenia variabilis</i> Théel, 1886	.	+	.	.	.	.	.	17-26
<i>Opheodesoma australiensis</i> Heding, 1931	+	.	.	.	.	+	.	15-30
<i>Opheodesoma clarki</i> Heding, 1928	.	+	*	.	.	.	.	<20
<i>Opheodesoma glabra</i> (Semper, 1868)	.	.	+	.	+	.	.	0-20
<i>Opheodesoma grisea</i> (Semper, 1868)	.	+	+	.	.	+	+	0-36
<i>Opheodesoma lineata</i> Heding, 1928	+	.	.	.	.	.	.	10-35
<i>Opheodesoma spectabilis</i> Fisher, 1907	.	+	+	.	.	.	.	<20
<i>Patinapta laevis</i> (Bedford, 1899)	.	.	.	.	+	.	.	<20
<i>Patinapta ooplax</i> (von Marenzeller, 1881)	.	.	*	.	.	+	.	<20
<i>Patinapta taiwanensis</i> Chao, Rowe & Chang, 1988	.	.	.	.	.	+	.	0-7
<i>Polyplectana galathea</i> Heding, 1928 <sup>28</sup>	.	.	.	.	+	.	.	<20
<i>Polyplectana grisea</i> (Heding, 1931)	.	.	.	.	+	.	.	<20
<i>Polyplectana kefersteini</i> (Selenka, 1867)	.	.	+	.	+	+	+	0-77
<i>Polyplectana nigra</i> (Semper, 1868)	.	.	+	.	+	+	.	0-36
<i>Polyplectana samoae</i> Heding, 1931 <sup>28</sup>	.	.	+	.	.	.	.	<20
<i>Polyplectana unispicula</i> Heding, 1931 <sup>28</sup>	.	.	+	.	.	.	.	<20
<i>Polyplectana zamboangae</i> Heding, 1928 <sup>28</sup>	.	.	*	.	.	+	.	<20
<i>Protankyra asymmetrica</i> (Ludwig, 1875)	.	+	.	.	.	+	+	5-80
<i>Protankyra bidendata</i> (Woodward & Barrett, 1858)	.	+	+	.	.	+	.	0-45
<i>Protankyra magnihamula</i> Heding, 1928	.	+	.	.	.	+	.	0-50
<i>Protankyra pseudodigitata</i> (Semper, 1868)	.	+	*	.	.	+	.	12-32
<i>Protankyra rodea</i> (Sluiter, 1888)	.	.	+	.	.	+	.	18-330
<i>Protankyra similis</i> (Semper, 1868)	.	+	*	.	.	.	.	<20
<i>Protankyra suensoni</i> Heding, 1928	.	+	+	.	.	+	.	28-90
<i>Protankyra verrilli</i> (Théel, 1886)	.	.	*	.	+	+	.	0-14
<i>Synapta maculata</i> (Chamisso & Eysenhardt, 1821)	.	+	+	.	.	+	+	0-25
<i>Synapta indivisa</i> (Semper, 1868)	.	.	*	.	.	.	.	<20
<i>Synapta lactea</i> (Sluiter, 1888)	.	.	.	.	+	+	.	9-40
<i>Synapta lamperti</i> Heding, 1928	.	.	.	.	.	+	+	0-35
<i>Synapta madreporicola</i> Heding, 1928	.	.	*	.	.	.	.	<20
<i>Synapta media</i> Cherbonnier & Feral, 1984	.	.	.	.	+	.	.	8-20
<i>Synapta recta</i> (Semper, 1868)	.	.	*	.	+	+	.	0-20
<i>Synapta reticulata</i> (Semper, 1868)	.	+	*	.	.	+	.	9-15
<i>Synapta virgata</i> (Sluiter, 1901)	.	.	.	.	+	.	.	18
<b>Chiridotidae</b>								
<i>Chiridota intermedia</i> Bedford, 1898 <sup>29</sup>	.	.	.	.	+	.	.	<20
<i>Chiridota liberata</i> Sluiter, 1887	.	.	.	.	+	.	.	<20
<i>Chiridota rigida</i> Semper, 1868	.	+	+	.	.	+	.	0-10
<i>Chiridota stuhlmanni</i> Lampert, 1896	.	+	.	.	.	+	.	0-5
<i>Myriotrochus</i> sp.	.	.	.	.	.	.	+	—

28 the identification / validity of these spp. is questionable (F.W.E.R.).

29 possible synonym of *Chiridota rigida* Semper, 1868 - see Thandar & Rowe, 1989: 154

Taxa	Distribution							Depth range m.
	1	2	3	4	5	6	7	
<i>Polycheira fusca</i> (Quoy & Gaimard, 1833)	.	+	+	.	.	+	.	<20
<i>Order ELASIPODIDA</i>								
<b>Deimatidae</b>								
<i>Deima validum validum</i> Théel, 1879	.	.	+	.	.	.	.	724-4820
<i>Orphnurgus bacillus</i> Cherbonnier & Feral, 1981	.	.	+	.	.	.	.	174-223
<i>Orphnurgus insignis</i> Fisher, 1907	.	.	+	.	.	.	.	309-858
<i>Orphnurgus protectus</i> Hansen, 1975	.	.	.	.	.	+	.	1100-1301
<b>Laetmogonidae</b>								
<i>Laetmogone violacea</i> Théel, 1879	.	.	+	.	.	.	.	225-1804
<i>Pannychia moseleyi</i> Théel, 1882	.	.	+	.	.	.	.	212-2598
<b>Psychropotidae</b>								
<i>Psychropotes longicauda</i> Théel, 1882	.	.	.	.	.	+	.	1100-5173