

AUSTRALIAN MUSEUM SCIENTIFIC PUBLICATIONS

Rowe, F. W. E., and D. L. Pawson, 1977. A catalogue of echinoderm type-specimens in the Australian Museum, Sydney. *Records of the Australian Museum* 30(14): 337–364. [6 April 1977].

doi:10.3853/j.0067-1975.30.1977.392

ISSN 0067-1975

Published by the Australian Museum, Sydney

nature culture **discover**

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6 College Street, Sydney NSW 2010, Australia



A CATALOGUE OF ECHINODERM TYPE-SPECIMENS IN THE AUSTRALIAN MUSEUM, SYDNEY

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SUMMARY

Over 1000 type-specimens representing 253 nominal species of echinoderms from all five classes are listed. The majority of species have been described by H. L. Clark (1909, 1916, 1938) and are from Australian waters. However, 61 species are from Antarctic waters, these having been described by Koehler (1920-1926). Two species of asteroid, *Ophidiaster propinquus* Livingstone and *O. watsoni* Livingstone are considered to be synonyms of *Linckia laevigata* (Linnaeus) and *Gomophia aegyptiaca* Gray, respectively. The ophiuroid subspecies *Ophiothrix stelligera atra* H. L. Clark, as represented by two paratypes in the present collection, is considered a synonym of *O. ciliaris rugosa* Koehler. *Ophiocoma alternans* Endean, a homonym, is given a new name.

INTRODUCTION

Late in 1971 D.L.P. compiled, in draft form, a catalogue of the type-specimens housed in The Australian Museum. Later (1974) the draft was handed over to F.W.E.R. for up-dating and completion. It was not until this time that the significance of a collection of echinoderms from Antarctic waters collected during the Australasian Antarctic Expedition (1911-1914), named by Koehler (1920, 1922 and 1926) and A. H. Clark (1937) and donated to the Museum in 1921 and 1931 respectively, was realised and the species added to this catalogue.

The echinoderm type-collection presently comprises about 1007 specimens, representing 253 nominal species. Of the species represented, 171 were collected around the coast of Australia or Lord Howe Island, 61 were collected in the Antarctic region and 21 were collected from various other Pacific localities. However, the collections include types of only about 17% of the known Australian fauna. This seemingly low figure reflects the fact that many of the Australian species are common to wide areas of the Indo-Pacific, and type-material of most of these species have a different area of origin.

It is unfortunate that about 170 Antarctic specimens were destroyed in July, 1939. A covering note in the Museum's Accessions Register at the time states that the "glass cell Records of The Australian Museum, 1977, **30**, 337-364.

container(s) (were) unknowingly cracked and the spems. found useless July 1939". The importance of these specimens as types was obviously not realised then. As a result the type-specimens of at least one species (*Anasterias* (= *Lysasterias*) *adeliae* Koehler) have now been lost. Of the remaining 168 or so missing specimens 140 apparently belong to the species *Ophioceres incipiens* Koehler, but it is impossible to account for the high number of specimens recorded for this species (see note on p. 352).

Many recent species of Australian echinoderms were described by Hubert Lyman Clark, who spent his professional career at the Museum of Comparative Zoology (M.C.Z.), Harvard University, U.S.A. He described the echinoderms collected by the "Thetis" and "Endeavour" (H. L. Clark, 1909, 1916 respectively), and paratypes and syntypes of some of these species are to be found in the M.C.Z. (Downey, 1968, 1969; Dr. D. Opresko, 1974, M.C.Z., pers. comm.) Later, following two expeditions to Australia in 1929 and 1932, H. L. Clark published his two great works (1938, 1946) on the Australian echinoderms; these remain the standard Australian reference works on this group of animals.

Entries in this catalogue are arranged alphabetically by original species name in each class. Where the genus- or species-name has changed subsequently, the new name is also given, together with a reference to the source of the change. A few type-specimens have been used in exchange with specimens of other species from other institutions. Where this has occurred and where some other specimens are unaccountably missing, the entry is italicized and the fact is noted in the text. Australian Museum catalogue numbers may be prefaced by the letters "E", "G" or "J".

LIST OF SPECIES

CRINOIDEA

- cratera*, *Comatula* H. L. Clark (1916, p. 12, pl. 2, fig. 1).
E6302, holotype, 8 miles east of Sandon Bluffs, New South Wales, 63-72 m.
E1631, 4 paratypes, locality same as E6302.
J2227-J2230, 4 paratypes, locality same as E6302. (4 paratypes in M.C.Z.)
Note: H. L. Clark (1916) records 14 specimens, one has not been found.
- cyaneus*, *Metacrinus* H. L. Clark (1916, p. 9, pl. 1).
E4689, holotype (part — stalk), eastern slope, Bass Strait, about 360 m.
E4690, holotype (part — calyx), locality same as E4689.
E2272, 2 paratypes, 20½ miles south, 19° east of Cape Everard, Victoria, 162 m. (broken and mixed with J2353, so specimens inseparable.)
J2353, paratype, south-east of Wilson's Promontory, Victoria (see E2272).
J2351, paratype, locality same as J2353. (3 paratypes in M.C.Z.)
- dasybrachia*, *Cosmiometra* H. L. Clark (1916, p. 24, pl. 4, fig. 2).
E4746, holotype, east of Flinders Island, Bass Strait, Tasmania, 126-180 m. (1 paratype in M.C.Z.)
- diadema*, *Colobometra* A. H. Clark (1910, p. 7).
J2770, holotype, Ugi, Solomon Islands.
- mawsoni*, *Florometra* A. H. Clark (1937, p. 10).
J5569, syntype, Adelie Land, 66°55'S, 145°21'E, 572 m, ooze, December 28, 1913.
Note: Clark (p. 13) notes "This species is described from one of the two specimens from Station 2; the other is similar to the one described." It is here assumed that Clark intended the two specimens to be regarded as syntypes. However, only one specimen, from Station 2 can be accounted for in this Museum's collections.

- nomima*, *Monilimetra* H. L. Clark (1938, p. 48, figs. 5 and 6).
J6274, paratype, False Cape Bossutt, near Broome, Western Australia, 1929.
=*Toxometra nomima* (Clark) — see A. H. Clark and A. M. Clark, 1967, p. 53.
- paedophora*, *Himerometra* H. L. Clark (1909, p. 524, pl. 47, figs. 4-10).
J840, holotype, off Manning River, New South Wales, 39 m, fine grey sand.
J831, 7 paratypes, locality same as J840.
=*Aporometra paedophora* (Clark) — see H. L. Clark, 1938, p. 42. (6 paratypes listed in the M.C.Z. catalogue cannot be found in the collection; Dr. D. Opresko, pers. comm.)
Note: Twenty-three specimens were recorded by H. L. Clark (1909) but only 14 can be accounted for, though of those the 6 in the M.C.Z. are apparently missing.
- pericalles*, *Oreometra* H. L. Clark (1916, p. 20, pl. 3, fig. 1).
E6300, holotype, 13 miles north by west of Double Island Point, Queensland, 45-47 m.
=*Reometra mariae* (A. H. Clark) — see A. H. Clark, 1947, p. 368.
- perplexum*, *Comanthus* H. L. Clark (1916, p. 14, pl. 3, fig. 2).
E6298, holotype, 11 miles south by east of Ballina, New South Wales, 48-51 m.
=*Comantheria perplexum* (Clark) — see A. H. Clark, 1931, p. 506 .
- plectrophorum*, *Comanthus* H. L. Clark (1916, p. 15, pl. 4, fig. 1).
E4702, holotype, east of Flinders Island, Bass Strait, 180-540 m.
=*C. (Cenolia) plectrophorum* (Clark) — see A. H. Clark 1931, p. 530. (1 paratype in M.C.Z.)
- spanoschistum*, *Comanthus* H. L. Clark (1916, p. 17, pl. 4, fig. 3).
E6299, holotype, east of Babel Island, Bass Strait, 108-126 m.
E4744, paratype, east of Flinders Island, Bass Strait, 126-180 m.
E4745, paratype, locality same as E4744.
E4751, 3 paratypes, east of Babel Island, Bass Strait, 90-144 m.
E5033, 4 paratypes, locality same as E4751.
E5106, paratype, north-east of Babel Island, Bass Strait, 180-306 m.
E5215, 2 paratypes, locality same as E4751.
E5216, paratype, locality same as E4751.
E5223, paratype, 20 miles east of Babel Island, Bass Strait, 117 m.
J2251, paratype, off Noosa Heads, Queensland, 28 m.
=*Comanthoides spanoschistum* (Clark) — see A. H. Clark, 1931, p. 241. (5 paratypes listed in the M.C.Z. catalogue cannot be found in the collection; Dr. D. Opresko, pers. comm.)
Note: H. L. Clark (1916) recorded 23 specimens. Although 21 are recorded in the M.C.Z. and The Australian Museum, with the 5 specimens missing from the M.C.Z. collections a total of seven specimens cannot now be found.
- thetidis*, *Oligometra* H. L. Clark (1909, p. 523, pl. 47, figs. 1-3).
J834, syntype, off Wollongong, New South Wales, 99-101 m, sand and mud to rock.
J819, 9 syntypes, locality same as J834.
=*Austrometra thetidis* (Clark) — see A. H. Clark, 1916, p. 115. (4 syntypes in the M.C.Z.)
Note: Fifteen specimens were recorded by H. L. Clark (1909), one has not been found.
- zebra*, *Oligometra* H. L. Clark (1916, p. 22, pl. 2, fig. 2).
E6301, holotype, 11 miles east south-east of mouth of Clarence River, New South Wales, 63-64 m.
=*Decametra zebra* (Clark) — see H. L. Clark, 1946, p. 52.

ASTEROIDEA

- acanthodes*, *Anthenea* H. L. Clark (1938, p. 124, pl. 18, fig. 2).
J5367, holotype, off Gatecombe Head, Port Curtis, Queensland, 16-21 m, July, 1929.
- acanthodes*, *Echinaster* H. L. Clark (1916, p. 61, pl. 19, figs. 1-2, text-fig. 7).
J2194, holotype, 25 miles south-east of Double Island Point, Queensland, 59 m.
J2080, paratype, 13 miles north-east of North Reef, Capricorn Group, off Port Curtis, Queensland, 126-133 m. (1 paratype in M.C.Z.)
- acanthodes*, *Goniodiscaster* H. L. Clark (1938, p. 84, pl. 5, fig. 2).
J6201, 3 paratypes, Broome, Western Australia, dredged, 12-15 m, firm sand, June 1932.
- accrescens*, *Leptoptychaster* Koehler (1920, p. 246, pl. LII, fig. 5; LIII, figs. 1-3; LIV, figs. 2-9; LV, fig. 1; LXXIV, fig. 1).
J3639, 2 syntypes (specimens K and L), 66°32'S, 141°39'E, 271 m, December 31, 1913.
J3640, 4 syntypes (specimens E, I, J and M) 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3679, syntype (specimen B) 66°32'S, 141°39'E, 271 m, December 31, 1913.
J3682, syntype (specimen C, D or H) 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3683, syntype (specimen C, D or H) 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3699, syntype (specimen A) 65°42'S, 92°19'E, 108 m, January 21, 1914.
J3712, syntype (specimen C, D or H) 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3713, syntype (specimen G) 66°55'S, 145°21'E, 572 m, December 28, 1913.
J3714, syntype (specimen F) 66°50'S, 142°6'E, 637 m, December 22, 1913.
=*Macroptychaster accrescens* (Koehler) — see H. E. S. Clark, 1963, p. 23.
Note: Specimens numbered J3679, J3682, J3683, J3699, J3712, J3713 and J3714 were not found in the collection, but were recorded as being destroyed in July, 1939, in the Museum Accessions Register. These records are included here to account for all type-specimens described in Koehler's (1920) report.
- aculeatus*, *Pteraster* Koehler (1920, p. 168, pl. XXXVIII, figs. 3-5; LXV, fig. 6).
J3521, holotype, 65°6'S, 96°13'E, 585 m, January 29, 1914.
=*Pteraster affinis aculeatus* (Koehler) — see A. M. Clark, 1962, p. 64.
- adeliae*, *Anasterias* Koehler (1920, p. 26, pl. I, figs. 1, 2, 5-10; LVI, fig. 1).
J3689, 2 syntypes, *Adeliae*, 21 m, September 3-4, 1912.
=*Lysasterias adeliae* (Koehler) — see A. M. Clark, 1962, p. 89.
Note: These specimens were destroyed in 1939, see note under *Leptoptychaster accrescens*.
- alba*, *Asterina* H. L. Clark (1938, p. 150, pl. 22, fig. 7).
J6170, 6 paratypes, Ned's Beach, Lord Howe Island, April, 1932.
- asperatus*, *Solaster* Koehler (1920, p. 157, pl. XXXIII, figs. 8-9; LXV, fig. 3).
J3600, holotype, 64°32'S, 97°20'E, 198 m, January 31, 1914.
=*Paralophaster godfroyi asperatus* (Koehler) — see A. M. Clark, 1962, p. 53.
- atypoida*, *Asterina* H. L. Clark (1916, p. 57, pl. 17, figs. 1-2).
E6303, holotype, 15 miles north-west of Cape Jervis, South Australia, 30 m.
E859, 2 paratypes, off Cape Marsden, Kangaroo Island, South Australia, 30 m. (1 paratype in M.C.Z.)
- aurorae*, *Cryaster* Koehler (1920, p. 120, pl. XXVII, figs. 1-3, 5-6; XXVIII, figs. 1-11; XXIX, figs. 2-6; XXX, figs. 2-5).
J3659, 1 syntype (specimen K), Adelie Land, 45 m, September 3-4, 1912.
J3658, 8 syntypes (specimens C, D, E, F, G, H, I, J), 65°42'S, 92°10'E, 108 m, January 21, 1914.

J3690 and J3698, 3 specimens of which only 1 can be a syntype (specimen A), this not being determinable from labels with these specimens, 64°32'S, 97°20'E, 198 m, January 31, 1914.

J3668, J3670, J3684, J3685, J3686, J3687, J3701, 10 specimens (only 2 can be syntypes (specimens B and L), see J3690, J3698), 65°42'S, 92°10'E, 108 m, January 21, 1914.

J3728, 2 specimens of which only 1 can be a syntype (specimen M) (see J3690, J3698), 66°32'S, 141°39'E, 271 m, December 31, 1913.

=*Perknaster aurorae* (Koehler) — see A. M. Clark, 1962, p. 31.

Note: Specimens numbered J3690, J3698, J3668, J3670, J3684-7, J3701, J3728 were destroyed in 1939. See note under *Leptoptychaster accrescens*.

australiensis, *Mediaster* H. L. Clark (1916, p. 39, pl. 9, figs. 1-2, text figs. 1-3).

J1535, holotype, east coast of Flinders Island, Bass Strait, 72 m.

E5093, 2 paratypes, east of Babel Island, Bass Strait, 117-126 m.

J1537, paratype, Oyster Bay, Tasmania. (4 paratypes in M.C.Z.)

Note: One of the specimens in the M.C.Z. is an Australian Museum registered specimen "exchanged with Clark in 1911" according to the departmental Accessions Register. It is likely that this is not a type-specimen even though so labelled.

australis, *Odinia* H. L. Clark (1916, p. 75, pl. 27, figs. 1-2).

E4730, holotype, south-east of Cape Everard, Victoria, 360 m.

=*Novodinia australis* (Clark) — see Dartnall et al, 1969, p. 211. (1 paratype in M.C.Z.)

bicolor, *Goniodiscaster* H. L. Clark (1938, p. 87, pl. 5, fig. 1).

J6197, paratype, Broome, Western Australia, 1932.

boardmani, *Pseudarchaster* Livingstone (1934, p. 177, pl. 18, figs. 7-11).

J5633, holotype, off Cape Everard, New South Wales, 135 m.

J5035-7, 3 paratypes, 24 miles N.N.E. off Montagu Island, New South Wales, 144-162 m.

=*Mediaster boardmani* (Livingstone) — see H. L. Clark, 1946, p. 83.

brachiata, *Saliasterias* Koehler (1920, p. 54, pl. XI, figs. 1-4; XII, figs. 1-8; LVIII, fig. 3).

J3547, syntype (specimen A), 66°50'S, 142°6'E, 637 m, December 22, 1913.

J3548, syntype (specimen C), Adelie Land, 27-37 m, January 20, 1913.

J3703, syntype (specimen B), 66°50'S, 142°6'E, 637 m, December 22, 1913.

Note: Specimen numbered J3703 destroyed in 1939. See note under *Leptoptychaster accrescens*.

brevispina, *Patiriella* H. L. Clark (1938, p. 166, pl. 22, figs. 2-3).

J6181, 2 paratypes, Koombara Bay, Bunbury, Western Australia, 9-14 m, October 26, 1929.

confertus, *Ophidiaster* H. L. Clark (1916, p. 53, pl. 15, figs. 1-2).

J11, holotype, Lord Howe Island. (2 paratypes in M.C.Z.)

conspicuus, *Pseudontaster* Koehler (1920, p. 202, pl. XLII, figs. 1-7; XLIII, figs. 1-10; LXX, fig. 1).

J3610, syntype (specimen B), 66°50'S, 142°6'E, 637 m, December 22, 1913.

J3616, syntype (specimen A), 66°50'S, 142°6'E, 637 m, December 22, 1913.

J3611, syntype (specimen C), Adelie Land, 45 m, September 3-4, 1912.

J3615, syntype (specimen E), Adelie Land, 45 m, September 3-4, 1912.

J3612, syntype (specimen H), 64°32'S, 97°20'E, 198 m, January 31, 1914.

J3613, syntype (specimen G), 64°32'S, 97°20'E, 198 m, January 31, 1914.

J3614, syntype (specimen F), 66°32'S, 141°39'E, 271 m, December 31, 1913.

J3739, syntype (specimen D), 66°50'S, 142°6'E, 637 m, December 22, 1914.

=*Acodontaster conspicuus* (Koehler) — see A. M. Clark, 1962, p. 16, except J3611 = A.

waitei (Koehler) — see Bernasconi, 1970, p. 236.

Note: Specimen numbered J3739 destroyed 1939. See note for *Leptoptychaster accrescens*.

coriaceus, *Hymenaster* Koehler (1920, p. 173, pl. XXXIX, figs. 1-2).

J3671, holotype, 35°44'S, 135°58'E, 3240 m, February 25, 1914.

crassa, *Anthenea* H. L. Clark (1938, p. 124, pl. 18, fig. 1).

J5368, holotype, Rat Island, Port Curtis, Queensland, July, 1929.

J5365, paratype, off Gatecombe Head, Port Curtis, Queensland, 16-21 m, July, 1929.

J5366, paratype, locality same as J5365.

J5444, paratype, Port Curtis, Queensland, 21 m.

J5445, paratype, locality same as J5444.

G4980, paratype, Port Curtis, Queensland, 18 m.

directus, *Parastichaster* Koehler (1920, p. 97, pl. XX, figs. 8-11; XXI, figs. 8-12; XXII, figs. 1-2; LXII, fig. 2).

J3636, 2 syntypes (specimens A, B), Macquarie Island, south-west of New Zealand, low tide, October 10, 1913.

J3836, 2 syntypes (specimens C, D), Macquarie Island, low tide, October 10, 1913.

=*Anasterias directa* (Koehler) — see A. M. Clark, 1962, p. 97.

Note: Specimens numbered J3836 destroyed 1939. See note for *Leptoptychaster accrescens*.

dubia, *Coscinasterias* H. L. Clark (1909, p. 532, pl. 49, figs. 3-4, pl. 50).

J1024, syntype, of Botany Bay, New South Wales, 36-41 m, sand to rock.

J1033-4, 2 syntypes, locality same as J1024.

J1025, syntype, "Thetis" station unknown.

J1026, syntype, locality same as J1025.

J1027, syntype, locality same as J1025.

J1030, syntype, locality same as J1025.

G11432, syntype, locality same as J1025.

J932, syntype, off Coogee, New South Wales, 88-90 m, fine sand.

=*Australiaster dubia* (Clark) — see Fisher, 1923, p. 253. (6 syntypes in M.C.Z.)

Note: Of the 6 syntypes in the M.C.Z., 2 are listed from the coast of New South Wales and may be from the total of 10 from "Thetis" station? This would then leave 2 specimens unaccounted for from that station. Three specimens are listed from Oyster Bay, Tasmania, but H. L. Clark (1909) does not record specimens of this species from that location. Either the locality labels have been mixed or the specimens were identified after the "Thetis" report was published, in which case they do not qualify as type-specimens. One specimen from "Thetis" station 36 (Botany Bay) is listed in the M.C.Z. catalogue but not found in the collections. This may be because the 3 specimens recorded from that station can be accounted for in the Australian Museum collections. Although only 14 specimens were reported by H. L. Clark (1909), a total of 16 are represented by those recorded in the two institutions. The confusion of locality records may account for this discrepancy.

dubius, *Anthenooides* H. L. Clark (1938, p. 91, pl. 17, figs. 5-6).

J6113, paratype, Broome, Western Australia, 9-14 m, dredged June, 1932.

dyscrita, *Cosmasterias* H. L. Clark (1916, p. 71, pl. 29, figs. 1-2).

E4704, holotype, South of Gabo Island, Victoria, 360 m.

elegans, *Anthenea* H. L. Clark (1938, p. 126, pl. 18, fig. 4).

J6200, paratype, Broome, Western Australia, 9-14 m, June, 1932.

- emburyi*, *Tegulaster* Livingstone (1933, p. 12, pl. 1, figs. 1, 3; pl. 2, figs. 2-3, 6, 9).
J5606, holotype, Norwest Island, Capricorn Group, Queensland, under dead coral boulder.
- erucaradiatus*, *Calliaster* Livingstone (1936, p. 383, pl. 27).
J5996, holotype, Crowdy Head, New South Wales, bearing north by west, 11 miles, 90 m, September, 1935.
- flexuosus*, *Leptoptychaster* Koehler (1920, p. 252, pl. LI, figs. 1-4; LXXV, fig. 3).
J3662, holotype, 66°55'S, 145°21'E, 572 m, December 28, 1913.
=*Leptychaster flexuosus* (Koehler) — see A. M. Clark, 1962, p. 10.
- florifer*, *Pteraster* Koehler (1920, p. 170, pl. XXXVIII, fig. 1-2, 6-7; LXV, fig. 10).
J3519, holotype, 64°34'S, 127°17'E, 3060 m, January 6, 1914.
- fochi*, *Podasterias* Koehler (1920, p. 35, pl. XIV, figs. 1-2, 4-12; XV, figs. 1-3; XVI, figs. 2-3 and 7; LVIII, fig. 1).
J3663, 2 syntypes (specimens A and B), 65°42'S, 92°10'E, 108 m, January 21, 1914.
J3673, J3677 and J3681, 3 specimens of which only 2 can be syntypes (specimens D and E), this not being determinable in the absence of these specimens. Commonwealth Bay, Adelie Land, 630-720 m, September 3-4, 1912.
J3669, syntype (specimen C), 166°32'S, 141°39'E, 271 m, December 31, 1913.
=*Diplasterias brucei* (Koehler) — see A. M. Clark, 1962, p. 83.
Note: Specimens numbered J3673, J3677, J3681 and J3669 destroyed in 1939. See note for *Leptoptychaster accrescens*.
- formatus*, *Pedicellaster* Koehler (1920, p. 106, pl. XVI, figs. 1, 9-10; XVII, figs. 6-7; LVIII, fig. 4).
J3556, holotype, 66°8'S, 94°17'E, 216 m, January 21, 1914.
=*P. hypernotius formatus* (Koehler) — see A. M. Clark, 1962, p. 71.
- glomeratus*, *Echinaster* H. L. Clark (1916, p. 62, text-fig. 8, pls. 22-23).
J1624, holotype, off Cape Marsden, Kangaroo Island, South Australia, 30 m.
E6789, 2 paratypes, locality same as J1624. (2 paratypes in M.C.Z.)
Note: All 6 specimens recorded by H. L. Clark (1916) were from off Cape Marsden, however, one of the M.C.Z. specimens is from an unknown locality. Also, one specimen cannot be found.
- gracilis*, *Mimaster* H. L. Clark (1916, p. 33, pl. 7, figs. 1-2).
E4710, holotype, south of Gabo Island, Victoria, 360 m.
E4708, paratype, locality same as E4710.
E4709, paratype, locality same as E4710.
=*Radiaster gracilis* (Clark) — see H. L. Clark, 1946, p. 80. (2 paratypes in M.C.Z.)
Note: According to H. L. Clark (1916), only the holotype was collected from south of Gabo Island, Victoria, so it is difficult to account for two of the paratypes in the Australian Museum and one of the paratypes in the M.C.Z. which are recorded from that locality.
- hamiltoni*, *Asterina* Koehler (1920, p. 133, pl. XXXV, figs. 5-8; XXXVI, figs. 1-3; LXVI, fig. 5).
J3520, holotype, Macquarie Island, south-west of New Zealand.
- haswelli*, *Notasterias* Koehler (1920, p. 70, pl. 1, fig. 11; VI, fig. 4; VII, figs. 1-7; IX, fig. 7; LXII, fig. 1).
J3514, 3 syntypes (specimens A, B, C), 65°42'S, 92°10'E, 108 m, January 21, 1914.
J8446, syntype (specimen D), 66°50'S, 142°6'E, 637 m, December 22, 1913.
- heffernani*, *Ferdina* Livingstone (1931, p. 306, pl. 24, figs. 1-5).
J5089, holotype, south-east side of Santa Cruz Island, Santa Cruz Group, western Pacific,

August, 1926.

=*Celerina heffernani* (Livingstone) — see A. M. Clark, 1967, p. 193.

heteractis, *Henricia* H. L. Clark (1909, p. 530, pl. 49, figs. 1-2).

G11430, holotype, Lord Howe Island.

J830, 2 paratypes, locality same as G11430.

=*Nepanthia belcheri* (Perrier) — see H. L. Clark, 1938, p. 169. (2 paratypes in M.C.Z.)

hirsutus, *Echinaster* Koehler (1920, p. 113, pl. XII, fig. 9; XXIV, figs. 6-9; LXVI, fig. 2).

J3526, holotype, 66°32'S, 141°39'E, 271 m, December 31, 1913.

=*Rhopiella hirsuta hirsuta* (Koehler) — see A. M. Clark, 1962, p. 39.

hunteri, *Pteraster* Koehler (1920, p. 165, pl. XXXVII, figs. 4-10; XXXVIII, fig. 8; LXV, fig. 8).

J3571, syntype (specimen D), 65°6'S, 96°13'E, 585 m, January 29, 1914.

J3570, syntype (specimen A), 65°6'S, 96°13'E, 585 m, January 29, 1914.

J3569, syntype (specimen B), 64°44'S, 97°28'E, 644 m, January 31, 1914.

J3568, 2 syntypes (specimens C and E), 64°32'S, 97°20'E, 198 m, January 31, 1914.

=*P. (Apterodon) stellifer hunteri* Koehler — see A. M. Clark, 1962, p. 66.

incurvatus, *Kampylaster* Koehler (1920, p. 138, pl. XXXVI, figs. 4, 5, 6, 7, 11; XXXVII, figs. 1-3; LXVI, fig. 8).

J3581, 2 syntypes (specimens A and B), 166°32'S, 141°39'E, 271 m, December 31, 1913.

inopinata, *Asterina* Livingstone (1933, p. 3, pl. 5, figs. 1-8, 14).

J3077, holotype and 12 paratypes, Long Reef, Collaroy, near Sydney, New South Wales.

inornata, *Patiriella* Livingstone (1933, p. 17, pl. 1, figs. 2, 4, pl. 2, figs. 1, 4, 7).

J3198, holotype, Western Australia.

insolita, *Neoferdina* Livingstone (1936, p. 384, pl. 28, figs. 2, 4, 6).

J5775, holotype, reef at Samarai, Papua.

in-spinosus, *Stellaster* H. L. Clark (1916, p. 48, pl. 13, figs. 1-7).

E2503, holotype, between Cape Naturaliste and Geraldton, Western Australia. (1 paratype in M.C.Z.)

integer, *Goniodiscaster* Livingstone (1931, p. 135, pls. 17-19).

J5499, holotype, Port Curtis, Moreton Bay, Queensland, dredged 21 m, December, 1929.

J5500, paratype, locality same as J5499.

J5501, paratype, locality same as J5499.

G11502, 2 paratypes, near Peel Island, Moreton Bay, Queensland.

joffrei, *Podasterias* Koehler (1920, p. 30, pl. 1, figs. 3, 4, 9; II, figs. 7-9; LVI, fig. 2).

J3642, holotype, 66°50'S, 142°6'E, 637 m, December 22, 1913.

=*Lysasterias joffrei* (Koehler) — see A. M. Clark, 1962, p. 93.

laevis, *Archaster* H. L. Clark (1938, p. 75, pl. 17, fig. 2).

J6116, 3 paratypes, vicinity of Roebuck Bay and Southward, Broome, Western Australia, 9-14 m, June 1932.

laseroni, *Tridontaster* Koehler (1920, p. 214, pl. XLVII, figs. 7-10; XLVIII, figs. 1, 7; LXIX, fig. 5).

J3618 (part), holotype (specimen B), 64°32'S, 97°20'E, 198 m, January 31, 1914.

J3618 (part), paratype (specimen C), locality same as J3618.

J8447, paratype (specimen A), 65°42'S, 92°10'E, 108 m, January 21, 1914.

J3675, paratype, *Adelie Land, Antarctica*, 45 m, September 3-4, 1912.

=*Acondontaster hodgsoni* (Bell) — see A. M. Clark, 1962, p. 20.

Note: Specimen numbered J3675 destroyed in 1939. See note for *Leptoptychaster accrescens*.

- leptalacantha*, *Asterina* H. L. Clark (1916, p. 57, pl. 18, figs. 3-4).
J3082, holotype, Masthead Island, Capricorn Group, Queensland, December, 1913.
=*Disasterina leptalacantha* (Clark) — see Livingstone, 1933, p. 8.
- littoralis*, *Marginaster* Dartnall (1970, p. 207, pl. 13, figs. 1-2).
J7733, 4 paratypes, Powder Jetty, near Hobart, Derwent Estuary, S.E. Tasmania, May 2, 1969.
J7734, 7 paratypes, Cornelian Bay, S.E. Tasmania, May 2, 1969.
- longispinus*, *Ripaster* Koehler (1920, p. 260, pl. LI, figs. 5-8; LII, figs. 3-4; LXXII, fig. 2).
J3661, syntype (specimen D), 65°42'S, 92°10'E, 108 m, January 21, 1914.
J3665, syntype (specimen E, F, or G), 65°6'S, 96°13'E, 585 m, January 29, 1914.
J3666, syntype (specimen B), 66°32'S, 141°19'E, 271 m, December 31, 1913.
J3711, syntype (specimen A), 66°55'S, 145°21'E, 572 m, December 28, 1913.
J3710, 2 syntypes (specimens E, F, or G), 65°6'S, 96°13'E, 585 m, January 29, 1914.
=*Psilaster charcoti* (Koehler) — see A. M. Clark, 1962, p. 13.
Note: Specimens numbered J3665, J3666, J3711, J3710 destroyed 1939. See note for *Leptoptychaster accrescens*.
- lutea*, *Asterina* H. L. Clark (1938, p. 153, pl. 12, fig. 2).
J6167, 4 paratypes, Broome, Western Australia, August-September 1929.
- macleani*, *Peribolaster* Koehler (1920, p. 161, pl. XXXI, figs. 4-6; XXXIII, figs. 1-2; LXVIII, fig. 4).
J3609, paratype (specimen D), 66°55'S, 145°21'E, 572 m, December 28, 1913.
J3525 (part), holotype (specimen A), 66°32'S, 141°39'E, 271 m, December 31, 1913.
J3523 (part), paratype (specimen B), locality as for J3523.
J8448, paratype (specimen C), 64°32'S, 97°20'E, 198 m, January 31, 1914.
- macquariensis*, *Cycethra* Koehler (1920, p. 139, pl. XXXIV, figs. 1-4, 6-7; LXVI, fig. 5 a, b).
J3605, holotype, Macquarie Island, south-west of New Zealand, October 10, 1913.
- macracantha*, *Zoroaster* H. L. Clark (1916, p. 68, pl. 28, figs. 1-1).
E3705, holotype, Great Australian Bight, 129°28'E, south from Eucla, 450-810 m.
J3068, paratype, locality same as E3705. (1 paratype in M.C.Z.)
- magnificus*, *Lonchotaster* H. L. Clark (1916, p. 30, pl. 6, figs. 1-2).
E3650, holotype, Great Australian Bight, 32-36 m, March-April 1913.
=*Dipsacaster magnificus* (Clark) — see Fisher, 1919, p. 150.
- mamillifera*, *Nardoa* Livingstone (1930, p. 20, pl. 7, figs. 1-5).
J1197, holotype, Mer, Murray Islands, Torres Strait.
- mawsoni*, *Parastichaster* Koehler (1920, p. 91, pl. XIX, figs. 1-8; XX, fig. 1; XXI, figs. 1-6; fig. 4; XXIV, fig. 5; XXVIII, fig. 3; LXIII, fig. 2).
J3638, 4 syntypes (specimens A, C, E, F), Macquarie Island, south-west of New Zealand, October 10, 1913.
J3797, syntype (specimen B), Macquarie Island, October 10, 1913.
J3721, syntype (specimen D), Macquarie Island, October 10, 1913.
=*Anasterias mawsoni* (Koehler) — see A. M. Clark, 1962, p. 96.
- mimica*, *Patiriella* Livingstone (1933, p. 16, pl. 1, figs. 6-7, pl. 2, figs. 8, 10-11).
J1696, holotype, Newcastle Bight, New South Wales, 28-35 m.
- monacanthus*, *Mediaster* H. L. Clark (1916, p. 41, text-figs. 4, pl. 10, figs. 1-2).
J2098, holotype, 6 miles east of Cape Hawke, New South Wales, 84-90 m.
J2095, paratype, locality same as J2098.
J2082, paratype, locality same as J2098.

E1621, 4 paratypes, locality same as J2098.

=*Nectriaster monacanthus* (H. L. Clark) — see H. L. Clark, 1946, p. 84. (Of 3 paratypes listed in the M.C.Z. catalogue 2 cannot be found in the collections; Dr. D. Opresko, pers. comm.)

multispinus, *Crossaster* H. L. Clark (1916, p. 66, pl. 18, figs. 5-6).

E5293, holotype, off south-east Australia, between Gabo Island, Victoria and Disaster Bay, New South Wales, 90-180 m.

E5078, 2 paratypes, 35 miles south-east of Bruni Island, Tasmania, 270-314 m. (1 paratype in M.C.Z.)

nigra, *Patiriella* H. L. Clark (1938, p. 167, pl. 21, figs. 3-4).

J4439, paratype, Lord Howe Island.

obscura, *Patiriella* Dartnall (1971, p. 45, pl. IV(b)).

J7791, 6 paratypes, Rose Bay, Bowen, Queensland, April 13, 1970.

occidentalis, *Parasterina* H. L. Clark (1938, p. 180, pl. 21, fig. 5).

J6178, paratype, near Fremantle, Western Australia.

pentagonalis, *Epidontaster* Koehler (1920, p. 235, pl. XXXVIII, figs. 3, 4, 8; XLI, figs. 3, 10, 11; LXXI, fig. 3).

J3542, holotype, 66°8'S, 4°17'E, 216 m, January 21, 1914.

=*Odontaster meridionalis* (Smith) — see A. M. Clark, 1962, p. 15.

pentagonus, *Nymphaster* H. L. Clark (1916, p. 36, pl. 7, figs. 1-2).

E3707, holotype, Great Australian Bight, 129°28'E, 450-810 m.

polygnatha, *Anthenea* H. L. Clark (1938, p. 128, pl. 18, fig. 3, pl. 19, figs. 2-3).

J6118, paratype, south and south-west of Roebuck Bay, Broome, Western Australia, 9-14 m, June 1932.

polypora, *Fromia* H. L. Clark (1916, p. 51, pl. 14, figs. 1-2).

E5018, holotype, east of Maria Island, Tasmania, 140 m.

=*Austrofromia polypora* (Clark) — see H. L. Clark, 1921, p. 48. (1 paratype in the M.C.Z.)

Note: Three specimens were recorded by H. L. Clark (1916), one has not been found.

praesignis, *Disasterina* Livingstone (1933, p. 10, pl. 1, figs. 5-8, pl. 2, fig. 5).

J5059, holotype, North Channel, off Curtis Island, Port Curtis, Queensland, 5-7 m, July, 1929.

praestans, *Mediaster* Livingstone (1933, p. 21, pl. 6).

J5618, holotype, off Cairns, Queensland, dredged.

praetermissa, *Asterinopsis* Livingstone (1933, p. 14, pl. 3, figs. 1-2, pl. 4, figs. 2-3).

J4793, holotype, Little Bay, south of Port Jackson, New South Wales, under stones in pools between tidemarks.

J1911, paratype, Port Jackson, New South Wales.

J1913, paratype, locality same as J1911.

J3196, paratype, locality same as J1911.

=*Paranèpanthia praetermissa* (Livingstone) — see H. L. Clark, 1938, p. 161.

propinquus, *Ophidiaster* Livingstone (1932, p. 255, pl. 13, figs. 5, 11, 16, 18).

J5533, holotype, Ribbon Reef, Great Barrier Reef, Queensland, seaward sloping zone, June 4, 1929.

=*Linckia laevigata* (Linnaeus) — herein assigned after correspondence with Mrs. L. Marsh, The Western Australian Museum, Perth.

- pseudoexigua*, *Patiriella* Dartnall (1971, p. 43, pl. IV(a)).
J7761, 2 paratypes, Airlie Beach, Proserpine, Queensland, intertidal, under rocks, September and October, 1968.
- pterasteroides*, *Echinaster* Koehler (1920, p. 115, pl. XVI, figs. 4, 5, 8; XXV, figs. 3-5).
J3510, holotype, 64°44'S, 97°28'E, 644 m, January 31, 1914.
=*Rhopiella hirsuta hirsuta* (Koehler) — see A. M. Clark, 1962, p. 39.
- pudicus*, *Hymenaster* Koehler (1920, p. 175, pl. XXXVI, figs. 8-10).
J3567, 2 syntypes (specimens A and B), 35°44'S, 135°58'E, 3240 m, February 25, 1914.
- queenslandensis*, *Tosia* Livingstone (1932, p. 243, pl. 5, figs. 1-2, 7).
J5534, holotype, Pixie Reef, Great Barrier Reef, Queensland, June 6, 1929.
- reticulatus*, *Pedicellaster* H. L. Clark (1916, p. 69, pl. 27, figs. 3-4).
E5021, holotype, east of Maria Island, Tasmania, 140 m.
- rhyus*, *Pseudophidiaster* H. L. Clark (1916, p. 55, pl. 16, figs. 1-2).
E3656, holotype, Great Australian Bight, 144-216 m.
E607, paratype, Oyster Bay, Tasmania, 108 m.
E3653, paratype, locality same as E3656.
E3654, paratype, locality same as E3656.
E4715, paratype, south of Gabo Island, Victoria, 360 m. (2 paratypes in M.C.Z.)
- rosea*, *Paranepanthia* H. L. Clark (1938, p. 161, pl. 22, fig. 8).
J6171, 3 paratypes, Rottnest Island, Western Australia.
- scobinata*, *Asterina* Livingstone (1933, p. 1, pl. 5, figs. 9-12 and 15).
J1241, holotype, Tasmania
G11522, 2 paratypes, locality same as J1241.
- smilax*, *Echinaster* Koehler (1920, p. 111, pl. XII, fig. 10; XXV, figs. 1, 2, 6, 7; LXVI, fig. 1).
J8449, syntype (specimen C), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3816, 2 syntypes (specimens D and E), 66°55'S, 145°21'E, 572 m, December 28, 1913.
J3555, 2 syntypes (specimens A and B), 66°8'S, 94°17'E, 216 m, January 21, 1914.
=*Henricia smilax* (Koehler) — see A. M. Clark, 1962, p. 43.
- sphoerulatus* *Parastichaster* Koehler (1920, p. 101, pl. XXI, fig. 7; XXIII, figs. 5-10; XXIV, figs. 1-4; LXIII, fig. 3; LXIV, figs. 1-2).
J3637, 2 syntypes (specimens A and B), Macquarie Island, south-west of New Zealand, October, 1913.
=*Anasterias sphoerulatus* (Koehler) — see A. M. Clark, 1962, p. 96.
- spinosus*, *Calliaster* H. L. Clark (1916, p. 44, pl. 11, figs. 1-2).
E4682, holotype, eastern slope, Bass Strait, 144-360 m.
- stellatus*, *Pseudontaster* Koehler (1920, p. 210, pl. L, figs. 1-7; LXX, fig. 2).
J3515, holotype, 64°32'S, 97°20'E, 151 m, January 31, 1914.
=*Acodontaster hodgsoni stellatus* (Koehler) — see A. M. Clark, 1962, p. 21.
- superbus*, *Echinaster* H. L. Clark (1916, p. 64, text-figs. 9-10, pl. 24-25).
J2030, holotype, Broome, Western Australia.
- tenuis*, *Lophaster* Koehler (1920, p. 151, pl. XXXII, figs. 1-7; LXVIII, fig. 5).
J3533, holotype, 64°32'S, 97°20'E, 151 m, January 31, 1914.
- tenuis*, *Nepanthia* H. L. Clark (1938, p. 175, pl. 20, fig. 3).
J6176, paratype, Broome, Western Australia, June 1932.

- tesselatus*, *Pergmaster* Koehler (1920, p. 238, pl. XLIV, figs. 2, 3, 5-17).
J3459, 2 syntypes (specimens A and B), 64°34'S, 127°17'E, 3060 m, January 6, 1914.
= *P. incertus* (Bell) — see A. M. Clark, 1962, p. 23.
- tetracanthus*, *Pteraster* H. L. Clark (1916, p. 67, pl. 18, fig. 1-2).
E5295, holotype, south-east of Cape Everard to south of Gabo Island, Victoria, 162-270 m.
- troughtoni*, *Parasterina* Livingstone (1934, p. 179, pl. 18, figs. 1-6).
J3978, holotype, shore at Albany, King George's Sound, Western Australia.
- truncatus*, *Asterodiscus* Coleman (1911, p. 699).
J1053, syntype, coast of New South Wales.
J2047, syntype, off east coast of Victoria.
- variabilis*, *Nepanthia* H. L. Clark (1938, p. 176, pl. 10, figs. 4-5, pl. 20, figs. 4-5).
J6107, 4 paratypes, Broome, Western Australia, August 26, 1929.
- varicolor*, *Echinaster* H. L. Clark (1938, p. 184, pl. 11, fig. 1).
J6184, 3 paratypes, vicinity of Broome, Western Australia, 9-14 m, sandy bottom, June, 1932.
- variegatus*, *Bunaster* H. L. Clark (1938, p. 134, pl. 22, fig. 1).
J6177, paratype, Bathurst Point, Rottnest Island, Western Australia.
- victoriae*, *Anasterias* Koehler (1920, p. 17, pl. II, fig. 5; III, figs. 1-6; IV, figs. 1-4; V, figs. 1-10; VI, figs. 1-4; LVII, fig. 1).
J3635, 6 syntypes, 65°42'S, 92°10'E, 108 m, January 21, 1914.
J8444, syntype (specimen C), 66°50'S, 142°6'E, 637 m, December 22, 1913.
J8445, syntype (specimen K), 66°55'S, 145°21'E, 572 m, December 28, 1913.
J3629, syntype (specimen G), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3841, syntype (specimen I), locality as for J3635.
J3826, 2 syntypes (specimens A and B), locality as for J3635.
= *Lysasterias perrieri* (Studer) — see A. M. Clark, 1962, p. 89.
Note: Specimens numbered J3841 and J3826 destroyed in 1939. See note for *Leptoptychaster accrescens*.
- waitei*, *Metadontaster* Koehler (1920, p. 219, pl. XLV, figs. 1-6; XLVII, figs. 5-6; XLVIII, fig. 8; LXIV, figs. 1-3; LXXI, figs. 1-2).
J8453, paratype (specimen C), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3664, holotype (specimen B), 66°50'S, 142°6'E, 637 m, December 22, 1913.
J3680, paratype (specimen A), *Adelie Land, Antarctica, 45 m, September 3-4, 1912.*
= *Acodontaster waitei* (Koehler) — see A. M. Clark, 1962, p. 21.
Note: Specimen numbered J3680 destroyed 1939. See note for *Leptoptychaster accrescens*.
- wardi*, *Pseudogoniodiscaster* Livingstone (1930, p. 16, pl. 4, figs. 1-2, pl. 5, figs. 1-3).
J5320, holotype, among weed, Rat Island, Port Curtis, Queensland, July 1929.
- watsoni*, *Ophidiaster* Livingstone (1936, p. 386, pl. 28, figs. 1, 3, 5, 7).
J5997, holotype, Bushy Island, off Mackay, Queensland, July 1933.
= *Gomophia aegyptiaca* Gray — herein assigned.

OPHIUROIDEA

- accomodata*, *Ophiurolepis* Koehler (1922, p. 67, pl. LXXXIV, figs. 7-11 and 17).
J3601, 3 syntypes (specimens A, B, and C), Maria Island, Tasmania, 2340 m, December 13, 1912.

- acestra*, *Ophiothrix* H. L. Clark (1909, p. 544, pl. 53, figs. 4-5).
J869, syntype, Shoalhaven Bight, sand to mud, 34-36 m. (1 syntype in M.C.Z.)
- acosmeta*, *Ophiactis* H. L. Clark (1938, p. 262).
J6369, 2 paratypes, Port Curtis, Queensland.
J6241, 4 paratypes, Broome, Western Australia, 9-14 m, June, 1932.
- alternans*, *Ophiocoma* Endean (1964, p. 295, pl. 1, fig. 1).
J7344, holotype, Hastings Point, northern New South Wales, rock pool L.W.N., April 16, 1961.
J7345, 23 paratypes, same locality as J7344.
= *O. endeani* nom. nov. pro. *O. alternans* Endean non *O. alternans* v. Martens, 1870, p. 251 = *O. scolopendrina* (Lamarck), according to Lyman, 1874, p. 225.
- amator*, *Ophiactis* Koehler (1922, p. 34, pl. LXXXI, figs. 1-6).
J3563, syntype, 60°32'S, 141°39'E, 282 m, December 31, 1913.
J3562, 3 syntypes, Maria Island, 540 m, December 13, 1912.
- amblyconus*, *Conocladus* H. L. Clark (1909, p. 549, pl. 55).
G11434, holotype, Off Cape Three Points, New South Wales, 41-44 m, sand.
J835, paratype, off Port Kembla, New South Wales, 113-135 m.
J931, paratype, off Crookhaven River, New South Wales, 41 m.
J1044, paratype, locality same as J931, 19-27 m.
J1045-6, 2 paratypes, off Coogee, New South Wales, 89-90 m.
J1054-5, 1057-8, 4 paratypes, within Jervis Bay, New South Wales, 18-19 m. (5 paratypes in M.C.Z.)
Note: Of the 19 specimens recorded by H. L. Clark (1909), 15 appear to be accounted for, although the number of specimens listed from off Coogee, in the M.C.Z. and The Australian Museum collections, is 7 instead of the 6 reported by Clark. Also, 2 specimens from off Jervis Bay and 3 from an unknown "Thetis" station have not been found.
- amphilogus*, *Ophiodesmus* Ziesenhenné (1940, p. 33, pl. 9, figs. 4-6).
J7400, paratype, south of Cerros Island, Lower California, Mexico, 18-27 m, March 10, 1934 ("Velero" stn. 278-34).
- applicatus*, *Ophiocamax* Koehler (1922, p. 17, pl. LXXVIII, figs. 1-3 and 13).
J3518, syntype, off Maria Island, Tasmania, 2340 m, December 13, 1912.
J3732, syntype, off Maria Island, Tasmania, 2340 m, December 13, 1912.
Note: Specimen numbered J3732 destroyed in 1939. See note for *Leptoptychaster accrescens*.
- atra*, *Ophiothrix stelligera* H. L. Clark (1938, p. 274).
J6301, 2 paratypes, La Grange Bay, near Broome, Western Australia, September, 1929.
= *Ophiothrix ciliaris rugosa* Koehler — herein assigned.
- atrolineata*, *Ophiothrix stelligera* H. L. Clark (1938, p. 274).
J6237, 2 paratypes, Broome, Western Australia, June 1932.
= *Ophiothrix ciliaris melanogramma* (Bell) — see A. M. Clark and F. W. E. Rowe, 1971, p. 109.
- australiana*, *Amphipholis* H. L. Clark (1909, p. 540, pl. 52, figs. 1-3).
J857, syntype, off Wata Mooli, New South Wales, 97-106 m, mud.
J839, 4 syntypes, locality same as J857.
= *Amphipholis squamata* (Delle Chiaje) — see H. L. Clark, 1946, p. 202. (2 syntypes in M.C.Z.)

- australiensis*, *Astroporpa* H. L. Clark (1909, p. 547, pl. 54, fig. 2).
G11433, holotype, off Wollongong, New South Wales, 99-100 m, sand and mud to rock.
=*Astroporpa australiensis* Clark — see H. L. Clark, 1916, p. 80.
- axiologus*, *Ophiopristis* H. L. Clark (1909, p. 543, pl. 53, figs. 1-3).
J920, holotype, off Wata Mooli, New South Wales, 97-106 m.
=*Ophioprium axiologus* (Clark) — see H. L. Clark, 1915, p. 216.
- bidentata*, *Amphiura* H. L. Clark (1938, p. 218, fig. 13).
J6242, 2 paratypes, Broome, Western Australia, 1932.
J6346, 2 paratypes, Port Curtis, Queensland.
- bispinosa*, *Astrodia* Koehler (1922, p. 11, pl. LXXVI, figs. 12-15).
J3855, 6 syntypes, 35°44'S, 135°58'E, 3240 m, February 25, 1914.
J3553, syntype, 35°44'S, 135°58'E, 3240 m, February 25, 1914.
- californica*, *Ophiocnida* Ziesenhenné (1940, p. 25, pl. 5, figs. 4-6).
J7395, paratype, Outer Gorda Bank, Lower California, Mexico, dredged, 108 m, April 7, 1937 ("Velero" stn. 750-37).
- callista*, *Cryptopelta* H. L. Clark (1938, p. 354, pl. 14, fig. 2).
J6306, paratype, Broome, Western Australia, June 1932.
- colleta*, *Amphiophiura* H. L. Clark (1916, p. 93, pl. 37, figs. 1-2).
E5100, holotype, east of Babel Island, Bass Strait, 108-144 m.
- conferta*, *Ophioripa* Koehler (1922, p. 19, pl. LXXXV, figs. 9-13).
J3579, 7 syntypes, Maria Island, Tasmania, 2340 m, December 13, 1912.
- ctenophora*, *Ophiura* H. L. Clark (1909, p. 537, pl. 51, figs. 4-6).
J865, syntype, in Shoalhaven Bight, New South Wales, 35-36 m.
J854, 2 syntypes, off Newcastle, New South Wales, 75-86 m.
J861, 3 syntypes, off Manning River, New South Wales, 39 m.
=*Dictenophiura ctenophora* (Clark) — see H. L. Clark, 1946, p. 268. (2 syntypes in M.C.Z.)
- debitor*, *Ophiosteira* Koehler (1922, p. 41, pl. LXXXII, figs. 1-4).
J3796, syntype, 60°32'S, 141°39'E, 282 m, December 31, 1913.
J3511, syntype, 66°32'S, 141°39'E, 271 m, December 31, 1913.
- deficiens*, *Amphiura* Koehler (1922, p. 28, pl. LXXX, figs. 1-4).
J3578, holotype, 60°32'S, 141°39'E, 282 m, December 31, 1913.
J8450, 2 paratypes, Adelie and 65°42'S, 92°10'E, 108 m, January 21, 1914.
- delicata*, *Lissophiothrix* H. L. Clark (1938, p. 276).
J6246, 2 paratypes, Broome, Western Australia, 9-14 m, 1932.
J6254, paratype, near Shell Islands, Port Darwin, Northern Territory, 5-10 m, July 24, 1929.
- destinata*, *Amphiodia* Koehler (1922, p. 32, pl. LXXIX, figs. 4-7).
J3546, 2 syntypes, 64°44'S, 97°28'E, 644 m, January 31, 1914.
- diacritica*, *Amphiura* H. L. Clark (1938, p. 222).
J5077, holotype, fringing reef, Black Island, Whitsunday Passage, Queensland.
- dictyota*, *Ophionereis* Ziesenhenné (1940, p. 29, pl. 6, fig. 1-5).
J7355, paratype, Secas Islands, Panama, in coral. February 4, 1935 ("Velero" stn. 447-35).

- dolia*, *Amphiura* H. L. Clark (1938, p. 224, fig. 14).
 J6037, holotype, Port Jackson, New South Wales.
 J6326, paratype, Port Jackson, New South Wales (a second paratype is apparently lost).
- dyscrita*, *Pectinura* H. L. Clark (1909, p. 534, pl. 49, fig. 5-7).
 J849, syntype, off Wata Mooli, New South Wales, 126-140 m, coarse sand. (1 syntype in M.C.Z.)
- echinulata*, *Ophiosteira* Koehler (1922, p. 38, pl. LXXXII, figs. 5-10; LXXXIII, figs. 1-7).
 J3719, 5 syntypes, 65°42'S, 92°10'E, 108 m, January 21, 1914.
 J3507, 3 syntypes, 65°42'S, 92°10'E, 108 m, January 21, 1914.
 J3508, 2 syntypes, Adelie Land, Commonwealth Bay, 81-90 m, December 14, 1913.
 J3554, syntype, 65°42'S, 92°10'E, 108 m, January 21, 1914.
 J3857, 4 syntypes, 66°8'S, 94°17'E, 216 m, January 27, 1914.
 Note: One specimen included in J3719 is from Adelie Land, this being concluded from the original label in Koehler's hand. The total number of specimens from stn. 7 (65°42'S, 92°10'E) in Koehler's report is 6, however, we have found 8 specimens from that station. It is impossible to separate the two non-type specimens. It could be suggested that the number of specimens reported by Koehler might have been incorrect.
- fragilis*, *Ophiocentrus* H. L. Clark (1938, p. 238).
 J6040, holotype, 22 miles east of Port Jackson Heads, New South Wales, 216 m.
- fuscolineata*, *Ophiactis* H. L. Clark (1938, p. 266).
 J6233, 4 paratypes, Broome, Western Australia, 9-14 m, June 1932.
 J6239, 2 paratypes, West Point, Port Darwin, Northern Territory, 5-14 m, October 26, 1929.
- gigas*, *Ophiosparte* Koehler (1922, p. 21, pl. LXXVII, figs. 1-8).
 J3543, syntype, 65°42'S, 92°10'E, 108 m, January 21, 1914.
 J3795, syntype, 64°32'S, 97°20'E, 198 m, January 13, 1914.
 J3794, syntype, 65°42'S, 92°10'E, 108 m, January 21, 1914.
 Note: Specimens numbered J3794 and J3795 destroyed 1939. See note for *Leptoptychaster accrescens*.
- gymnopora*, *Ophiozona* H. L. Clark (1909, p. 535, pl. 51, figs. 1-3).
 J836, 78 syntypes, off Cape Three Points, New South Wales, 73-90 m.
 J855, syntype, locality same as J836.
 J822, 66 syntypes, Newcastle Bight, New South Wales, 46-72 m.
 J824, 7 syntypes, off Port Hacking, New South Wales, 39-50 m.
 J827, 7 syntypes, off Wata Mooli, New South Wales, 97-106 m.
 J829, 7 syntypes, off Jibbon, New South Wales, 82-99 m.
 =*Haplophiura gymnopora* (Clark) — see Matsumoto, 1915, p. 76. (72 syntypes in M.C.Z.)
 Note: There are 34 specimens and 47 specimens missing from "Thetis" stations off Cape Three Points and Wata Mooli respectively.
- hancocki*, *Ophioplocus* Ziesenhenné (1935, p. 1, pl. 1, figs. 1-2).
 J7360, paratype, Black Beach, Charles Island, Galapagos Islands, January 30, 1934, shore collection ("Velero" stn. 199-34).
- heterotylota*, *Ophiacantha* H. L. Clark (1909, p. 542, pl. 52, figs. 4-6).
 J856, syntype, off Wata Mooli, New South Wales, 97-106 m, mud.
 J859, 2 syntypes, off Port Hacking, New South Wales, 39-50 m, sandy. (8 syntypes in M.C.Z.)
 Note: Ten specimens (J838) from off Crookhaven and 20 specimens (J821) from off Wata Mooli have not been found.

- hexactis*, *Ophionereis* H. L. Clark (1938, p. 324).
J6238, 2 paratypes, shore of East Point, Port Darwin, Northern Australia, June, 1929.
- inanis*, *Ophiodaces* Koehler (1922, p. 24, pl. LXXVIII, figs. 6-8, LXXXIII, fig. 7).
J3588, 2 syntypes, 66°8'S, 94°17'E, 216 m, January 27, 1914.
- incipiens*, *Ophioceres* Koehler (1922, p. 48, pl. LXXXIV, figs. 1-6, 13-14).
J3509, 11 syntypes, 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3838, 61 syntypes, 65°42'S, 92°10'E, 108 m, January 21, 1914.
J3839, 76 syntypes, 64°32'S, 97°20'E, 198 m, January 31, 1914.
J3840, 3 syntypes, 60°32'S, 141°39'E, 271 m, December 31, 1913.
Note: The number of specimens recorded under J3509, J3838 and J3839 vastly exceeds the number recorded by Koehler (1922, p. 48). The discrepancy cannot be explained since the majority of these specimens have been destroyed. It appears, however, that not all the specimens recorded here can be considered as syntypes. Specimens numbered J3838, J3839 and J3840 destroyed in 1939. See note for *Leptoptychaster accrescens*.
- irregularis*, *Amphiopiura* Ziesenhenné (1940, p. 36, pl. 7, figs. 4-6).
J7401, paratype, off Minor Island, Galapagos Islands, dredged 126-144 m, January 20, 1938 ("Velero" stn. 792-38).
- irregularis*, *Ophiotrichoides* H. L. Clark (1938, p. 308, fig. 25).
J6042, holotype, Port Curtis, Queensland.
=*Ophiotrix* (*Keystonea*) *irregularis* (Clark) — see A. M. Clark and F. W. E. Rowe, 1971, p. 106.
- laevis*, *Amphichondrius* Ziesenhenné (1940, p. 22, pl. 4, figs. 7-9).
J7402, paratype, Tenacatita Bay, Mexico, dredged, 3-14 m, May 8, 1939 ("Velero" stn. 964-39).
- laevis*, *Ophiactis* H. L. Clark (1938, p. 268).
J6229, 3 paratypes, Koombana Bay, Bunbury, Western Australia, 9-14 m, October 26, 1929.
- lampra*, *Macrophiothrix* H. L. Clark (1938, p. 296, fig. 21).
J6221, paratype, Long Reef, Collaroy, New South Wales, November 28, 1929.
- leucaspis*, *Amphiura* H. L. Clark (1938, p. 226).
J6249, paratype, Broome, Western Australia, June, 1932.
- lineata*, *Ophiogymna* H. L. Clark (1938, p. 320).
J6045, holotype, west of Low Isles, Great Barrier Reef, Queensland, 10-14 m, mud and alcyonarians, November 15, 1928.
J6324, 2 paratypes, same locality data as J6045.
- lutea*, *Ophiactis savignyi* H. L. Clark (1938, p. 262).
J6236, paratype, Quail Island, near Darwin, Northern Territory, tidal pool, July 9, 1929.
- magnisquama*, *Amphiura* H. L. Clark (1938, p. 227).
J3504, holotype, 2.5-4 miles off Botany Bay, New South Wales, 59-100 m, trawled.
J6333, 2 paratypes, same locality data as J3504.
J6347, 2 paratypes, off Botany Bay, New South Wales, 90-92 m.
- megacantha*, *Ophiarachna* H. L. Clark, (1938, p. 341, figs. 28-30).
J6043, holotype, 25 miles south-east of Double Island Point, Queensland, 41 m.
J6379, paratype, same locality data as J6043.
- microphylax*, *Ophiomitra* H. L. Clark (1911, p. 184, fig. 84).
J2735, paratype, Kagoshima Gulf, Japan.

- minuta*, *Amphistigma* H. L. Clark (1938, p. 245, fig. 16).
J6282, 3 paratypes, Lord Howe Island, lagoon, 5-7 m.
= *Ophiostigma minuta* (Clark) — see Fell, 1960, p. 22.
- monolepis*, *Ophiocoma scolopendrina* H. L. Clark (1926, p. 187).
J4618, holotype, south-western coast of Ysabel Island, British Solomon Islands, August, 1924.
- mordax*, *Ophiurolepis* Koehler (1922, p. 71, pl. LXXXVIII, figs. 11-17).
J3606, syntype, 66°8'S, 94°17'E, 216 m, January 27, 1914.
J3608, syntype, 65°6'S, 96°13'E, 585 m, January 29, 1914.
J3607, syntype, 63°13½'S, 101°42'E, 1566 m, January 14, 1914.
- multiremula*, *Amphiura* H. L. Clark (1938, p. 228).
J6337, paratype, Long Reef, Collaroy, New South Wales, November 28, 1929.
- nannodes*, *Amphiura* H. L. Clark (1938, p. 230).
J6287, 2 paratypes, Bathurst Point, Rottneest Island, Western Australia, 1931.
- occidentalis*, *Ophiocoma* H. L. Clark (1938, p. 334, pl. 25, fig. 1).
J6216, 3 paratypes, Point Peron, Western Australia, 1929.
- ophiactoides*, *Ophiophragmus* Ziesenheim (1940, p. 18, pl. 3, figs. 5-7).
J7350, 2 paratypes, Salinas Bay, Costa Rica, shore collection, February 10, 1935 ("Velero" stn. 474-35).
- paucigranula*, *Ophiarachnella* H. L. Clark (1938, p. 351, figs. 31a-31b).
J6044, holotype, north of North Direction Island, Queensland, 34 m (Great Barrier Reef Exped. "Magnet" stn. 17).
- perplexa*, *Ophionereis* Ziesenheim (1940, p. 30, pl. 7, figs. 7-9).
J7353, paratype, Black Beach, Charles Island, Galapagos Islands, shore collection, December 14, 1934 ("Velero" stn. 351-35).
- phanerum*, *Ophiocreas* H. L. Clark (1916, p. 79, pl. 33, figs. 1-2).
E6297, holotype, 20 miles off Cape Barren, Cape Barren Island, Tasmania, 126 m.
E2267, 3 paratypes, locality same as E6297.
J2727, paratype, locality same as E6297.
E4726, paratype, Eastern Slope, Bass Strait, 126-180 m.
J2358, 2 paratypes, 8 miles east of Sandon Bluffs, New South Wales, 63-72 m.
E4692, paratype, east of Flinder's Island, Bass Strait, 144-540 m. (4 paratypes in M.C.Z.)
Note: Fourteen specimens were recorded by H. L. Clark (1916), one has not been found.
- phragma*, *Ophiacantha* Ziesenheim (1940, p. 11, pl. 2, figs. 4-6).
J7397, paratype, north-east of Anacapa Island, California, U.S.A., dredged, 90 m, August 1, 1938 ("Velero" stn. 875-38).
- phrixa*, *Amphiura* H. L. Clark (1938, p. 323).
J6234, 4 paratypes, Roebuck Bay, Broome, Western Australia, sandy mud, August, 1929.
- plateia*, *Ophiulepis* Ziesenheim (1940, p. 41, pl. 8, figs. 4-6).
J7348, 2 paratypes, Tenacatita Bay, Mexico, February 15, 1935, dredged in 10 m ("Velero" stn. 483-35).
- proposita*, *Amphiura* Koehler (1922, p. 27, pl. LXXXIX, figs. 8-12).
J3589 (part), 5 syntypes, 66°32'S, 141°39'E, 271 m, December 31, 1913.
J3589 (part), 1 syntype, 66°8'S, 94°17'E, 216 m, January 27, 1914.

- ptena*, *Amphiura* H. L. Clark (1938, p. 233, fig. 15).
J6283, paratype, Bunkers Bay, Western Australia, January 1930.
- pulchellum*, *Pectinura cinctum* H. L. Clark (1938, p. 339).
J6250, paratype, Broome, Western Australia, 1932.
=*Ophioconis cincta pulchella* (Clark) — see A. M. Clark and F. W. E. Rowe, 1971, p. 127.
- pustulatum*, *Astrodendrum* H. L. Clark (1916, p. 84, pl. 34, figs. 1-2).
E4700, holotype, east of Flinder's Island, Tasmania, 180-540 m.
=*Gorgonocephalus pustulatum* (Clark) — see Baker, 1974, p. 252.
- relegata*, *Ophiura* Koehler (1922, p. 57, pl. LXXXVIII, figs. 1-7).
J3505, 6 syntypes, 66°8'S, 94°17'E, 216 m, January 27, 1914.
J3817, 5 syntypes, 65°42'S, 92°10'E, 108 m, January 21, 1914.
J3506, 5 syntypes, 65°42'S, 92°10'E, 108 m, January 21, 1914.
=*Theodorina relegata* (Koehler) — see Fell, 1961, p. 56.
Note: Seven specimens were originally registered under J3505, but one was sent to Dr. Mortensen. This leaves 6, but the report says 4. Also, Koehler records 12 specimens from Stn. 7 but the total for J3506 and J3817 is only 10.
- rotundata*, *Ophiosteira* Koehler (1922, p. 44, pl. LXXXIII, figs. 9-13).
J3566, holotype, 65°20'S, 95°27'E, 432 m, January 28, 1914.
J3856, paratype, 65°20'S, 95°27'E, 432 m, January 28, 1914.
- rugosa*, *Ophiarachnella* H. L. Clark (1938, p. 352, figs. 32-34).
J6210, paratype, Broome, Western Australia, June 1932.
=*Ophiarachnella sphenisci* (Bell) — see A. M. Clark and F. W. E. Rowe, 1971, p. 175.
- rugosus*, *Astrothamnus* H. L. Clark (1916, p. 85, pl. 35, figs. 1-2).
E4965, holotype, east of Flinders Island, Tasmania, 144-540 m.
E4733, paratype, south-east of Cape Everard, Victoria, 360 m.
E4732, paratype, locality same as E4733. (3 paratypes in M.C.Z.)
Note: Both of the specimens E4965 and E4733 are accompanied by hand-written labels of H. L. Clark, designating them as "Holotype" and "Paratype" respectively. The third specimen, E4732, is without original label but assigned "Paratype" in the departmental Accessions Register. Of the 3 specimens, from Flinders Island, reported in the M.C.Z. collections (Downey, 1968) only 1 can be found according to Dr. D. Opresko (pers. comm.) and this has an original "Paratype" label with it. Clark (1916) referred to only 4 specimens in his report, of which he refers to "The specimens from off Cape Everard . . .", indicating that at least 2, if not 3 of the 4 specimens were from that locality. Even if Clark described more than the 4 specimens recorded in his report (1916), it is difficult to equate as paratypes all 3 specimens in the M.C.Z. from the holotype locality, i.e. Flinders Island. It could be, however, that the M.C.Z. only ever possessed 1 paratype, and providing that The Australian Museum specimen E4732 is considered a valid paratype, then 2 specimens could have been collected from each of the two localities listed by Clark and the 4 specimens reported by him accounted for.
- rugosus*, *Astrothrombus* H. L. Clark (1909, p. 548, pl. 44, fig. 3).
J871, holotype, off Wollongong, New South Wales, 99-100 m, sand and mud to rock.
- scotia*, *Macrophiothrix* H. L. Clark (1938, p. 3000, pl. 24, fig. 2).
J6226, 3 paratypes, Entrance and Gauthaume Points, Broome, Western Australia, 1929.
- sculptilis*, *Amphiodia* Ziesenhenné (1940, p. 24, pl. 5, figs. 1-3).
J7396, paratype, Chacahua Bay, Mexico, dredged 7-21 m, March 22, 1939 ("Velero" stn. 927-39).

- semperi*, *Ophiopsammium* Lyman (1874, p. 232, pl. 4, figs. 11-17).
J2742, paratype, Philippine Islands, 18 m.
- sollicita*, *Ophiacantha* Koehler (1922, p. 14, pl. LXXIX, figs. 1-3).
J3557, 2 syntypes, Maria Island, Tasmania, 2340 m, December, 1912.
- spinifera*, *Macrophiothrix* H. L. Clark (1938, p. 302, pl. 24, fig. 3).
J6222, 3 paratypes, Broome, Western Australia, 1929, 1932.
- stellatus*, *Ophiophragmus* Ziesenhenné (1940, p. 21, pl. 6, figs. 6-9).
J7398, paratype, San Juan Bay, Peru, dredged, 54-72 m, February 7, 1938 ("Velero" stn. 823-38).
- stenaspis*, *Amphioplus* H. L. Clark (1938, p. 254, figs. 18-19).
J6245, 2 paratypes, little below low water mark, 3½ Mile Reef, Port Darwin, Northern Territory, June 24, 1929.
- stictantha*, *Amphiura* H. L. Clark (1938, p. 234).
J6252, 2 paratypes, Broome, Western Australia, 9-12 m, 1932.
- stigma*, *Ophionereis* H. L. Clark (1938, p. 234).
J6230, 3 paratypes, Broome, Western Australia, August and September, 1929.
- sympiota*, *Ophiactis* H. L. Clark (1916, p. 88, pl. 36).
E6296, holotype, east of Flinders Island, Bass Strait, 180-540 m, commensal on disc of *Comanthus plectrophorum* (crinoidea), February 18, 1916.
- tenuis*, *Ophionephthys* H. L. Clark (1938, p. 241).
J6231, 3 paratypes, on mud flats near jetty at Broome, Western Australia, muddy sand, August-September, 1929.
=*Amphiura (Ophiopeltis) tenuis* (Clark) — see A. M. Clark and F. W. E. Rowe, 1971, p. 175.
- tenuispina*, *Ophiacantha* H. L. Clark (1938, p. 210).
J6049, holotype, off Gatecombe Head, Port Curtis, Queensland, 16-21 m, 1929.
- tigris*, *Ophionereis* H. L. Clark (1938, p. 327, pl. 25, fig. 6).
J6050, holotype, Norwest Island, Capricorn Group, Queensland, 1930.
- tumescens*, *Ophiurolepis* Koehler (1922, p. 64, pl. LXXXVII, figs. 6-8, 10-14).
J3580, 2 syntypes (specimens C and D), 65°6'S, 96°13'E, 585 m, January 29, 1914.
J8452, 2 syntypes (specimens A and B), 66°32'S, 141°39'E, 271 m; 65°20'S, 95°27'E, 432 m, December-January, 1913-14.
- tylota*, *Ophiolebes* H. L. Clark (1911, p. 243, fig. 117).
J2748, paratype, Bering Sea.
- unicolor*, *Ophiolepis* H. L. Clark (1938, p. 364, pl. 25, fig. 2).
J6312, paratype, Entrance and Gautheaume Points, Broome, Western Australia, 1929.

ECHINOIDEA

- apicatus*, *Hemiaster (Rhinobrissus)* Tenison-Woods (1880, p. 282, pl. 13).
G10939, 4 syntypes, Port Jackson, New South Wales.
=*Rhinobrissus hemiasteroides* (A. Agassiz) — see Mortensen, 1951, p. 490.
- atropurpurea*, *Stomopneustes* Tenison-Woods (1881, p. 198).
J535, holotype, north-east Australia.
=*Stomopneustes variolaris* (Lamarck) — see Mortensen, 1935, p. 512.

- aurorae*, *Pourtalesia* Koehler (1926, p. 43, pls. CV, figs. 1-8; CXXI, fig. 3).
 J4913, syntype (specimen B, C or D), 65°20'S, 95°27'E, 432 m, January 28, 1914 or 65°6'S, 96°13'E, 585 m, January 29, 1914.
 J4912, syntype (specimen B, C or D), 63°13'S, 101°42'E, 1566 m, January 14, 1914.
 J4843, syntype (specimen A), 65°20'S, 95°27'E, 432 m, January 28, 1914.
- australe*, *Echinostoma* Koehler (1926, p. 38, pls. CVII, figs. 1-2; CVIII, figs. 1-2; CIX, figs. 9-10; CXXI, fig. 2).
 J4834, holotype, 35°44'S, 135°58'E, 3240 m, February 25, 1914.
 =*Tromikosoma australe* (Koehler) — see Mortensen, 1935, p. 177.
- australiae*, *Evechinus* Tenison-Woods (1878, p. 167).
 J1099, 3 syntypes, Port Jackson, New South Wales.
 =*Tripneustes gratilla* (Linnaeus) — see Mortensen, 1943, p. 298.
- australis*, *Coelopleurus* H. L. Clark (1916, p. 107, pl. 43, figs. 1-2).
 E5296, holotype, Eastern Slope, Bass Strait, 108-201 m.
- australis*, *Phyllacanthus* Ramsay (1885, p. 44, pl. 1).
 J193, syntype, Port Jackson, New South Wales, dredged near South Reef, 10 m.
 =*Prionocidaris australis* (Ramsay) — see H. L. Clark, 1916, p. 97.
- bajulus*, *Pachycentrotus* Dartnall (1972, p. 30, figs. 1-3).
 J7801, 3 paratypes, Eaglehawk Neck, Tasmania, February, 1948, collected V. V. Hickman.
 J6393, paratype, locality same as J7801, January 27, 1928.
- brevisternalis*, *Antipneustes* Koehler (1926, p. 83, pls. CXII, figs. 2-6; CXXIV, fig. 3).
 J4819, holotype, 65°48'S, 137°32'E, 414 m, January 2, 1914.
 =*Amphipneustes brevisternalis* (Koehler) — see Mortensen, 1951, p. 269.
- cavernosa*, *Temnopleurus* Tenison-Woods (1880a, p. 493, pl. 15, figs. 3-4).
 G7101, holotype, Port Denison, Queensland.
 =*Temnotrema bothryoides* (L. Agassiz) — see Mortensen, 1943, p. 254.
- conferta*, *Cidaris* H. L. Clark (1916, p. 100, pl. 38, figs. 1-4).
 E4685, holotype, Eastern Slope, Bass Strait, 144-360 m.
 E4740, paratype, south of Gabo Island, Victoria, about 360 m.
 E4741, paratype, same locality data as E4740.
 =*Stylocidaris conferta* (Clark) — see Mortensen, 1928, p. 351. (2 paratypes in M.C.Z.)
 M.C.Z.)
- contracta*, *Notocidaris platyacantha* Koehler (1926, p. 13, pls. XCIV, fig. 5; XCVI, figs. 1-6; CXIX, fig. 5).
 J4835, syntype (specimen A), 66°55'S, 145°21'E, 572 m, December 28, 1913.
 J4837, syntype (specimen B), locality same as J4835.
 J4839, syntype (specimen C), 64°32'S, 97°20'E, 198 m, January 31, 1914.
 J4836, syntype (specimen D), locality same as J4839.
 J4838, syntype (specimen E), locality same as J4839.
 J4867, Mounted spines, locality uncertain. Figured in Koehler's Report, 1926, pl. XCVI, figs. 5-6.
- darnleyensis*, *Echinus* Tenison-Woods (1878, p. 165).
 J1297, 5 syntypes, Cape Grenville and Darnley Island, Torres Strait, North Queensland, sand mud, 18-36 m.
 =*Nudechinus darnleyensis* (Tenison-Woods) — see H. L. Clark, 1912, p. 277.
- debilis*, *Pourtalesia* Koehler (1926, p. 49, pls. CV, fig. 9; CVI, fig. 1-10; CXXII, fig. 1).

- J4810, syntype, 64°44'S, 97°28'E, 644 m, January 31, 1914.
J4905, 2 syntypes, 64°44'S, 97°28'E, 644 m, January 31, 1914.
- dentifer*, *Sterechinus* Koehler (1926, p. 34, pls. CIV, figs. 1-4; CXX, fig. 1).
J4898, holotype, 63°13'S, 101°42'E, 1566 m, January 14, 1914.
- dolosus*, *Hypselaster* H. L. Clark (1938, p. 430, pl. 28, figs. 4-7).
J6162, paratype, Broome, Western Australia, flat near jetty, September 1929.
- flemingi*, *Pseudechinus* Fell (1958, p. 36, pl. 3, fig. A, pl. 5, fig. A).
J7113, paratype, off Chatham Islands, New Zealand, 725 m.
- impressa*, *Goniocidaris* Koehler (1926, p. 24, pl. XCI, figs. 1-8, XCII, figs. 1-5, 8-14; CXIX, fig. 1).
J4849, holotype (fig'd specimen), off Maria Island, 117 m, December 12, 1912.
J4907, 9 paratypes, off Maria Island, 117 m, December 12, 1912.
J4908, 5 paratypes, off Maria Island, 117 m, December 12, 1912.
- ingens*, *Abatus* Koehler (1926, p. 58, pl. CXI, fig. 9; CXIII, fig. 7; CXVII, figs. 3-5, 7-8; CXVIII, figs. 1-7; CXXIII, figs. a-k).
J4874, syntype (specimen C), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J4869, syntype (specimen A), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J4870, syntype (specimen B), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J4868, syntype (specimen D), 64°32'S, 97°20'E, 198 m, January 31, 1914.
J4872, syntype (specimen F), 64°32'S, 97°20'E, 198 m, January 31, 1914.
Note: Specimen J4872 sent as exchange to Mortensen.
- isolatus*, *Clypeaster* Serafy (1971, p. 166, figs. 1A-E, 2, 3, table 1).
J7793, 4 paratypes, off San Felix Island, Chile, 75 m.
- maculosa*, *Stylocidaris* Mortensen (1928a, p. 72).
J5156, paratype, Sagami Sea, Japan, 100-200 m, June, 1914.
- marsupialis*, *Antipneustes* Koehler (1926, p. 79, pls. CXV, figs. 2, 5, 7-9; CXXIV, fig. 2).
J4816, holotype (specimen A), 66°55'S, 145°21'E, 572 m, December 28, 1913.
J4818, paratype (specimen B), 66°55'S, 145°21'E, 572 m, December 28, 1913.
=*Amphipneustes marsupialis* (Koehler) — see Mortensen 1951, p. 268.
- notium*, *Temnotrema* H. L. Clark (1938, p. 387, pl. 26, fig. 5).
J3977, holotype, King George's Sound, Albany, Western Australia, collected E. le G. Troughton.
=*Temnopleurus (Toreumatica) michaelsoni* (Döderlein) — see Mortensen, 1943, p. 105.
- notius*, *Parechinus* H. L. Clark (1916, p. 111, pl. 41, figs. 1-3).
E5289, holotype, south of Gabo Island to the south-east of Victoria, 125-144 m.
=*Pseudechinus notius* (Clark) — see Mortensen, 1921, p. 167.
- nutriens*, *Fibularia* H. L. Clark (1909, p. 557, pl. 58, figs. 1-11).
J843, 2 syntypes, off Cape Three Points, New South Wales, 73-90 m, sticky mud and shell (no longer recognisable as specimens).
J844, 40 syntypes, same locality data as J843.
J842, 2 syntypes, off Wata Mooli, New South Wales, 97-106 m (missing from container, June, 1974). (22 syntypes in M.C.Z.)
Note: Of the 87 specimens recorded by Clark, 22 from off Cape Three Points are housed as syntypes in the Museum of Comparative Zoology, Harvard, U.S.A. (Downey, 1968). Of the remaining 63 specimens recorded from Cape Three Points, only 40 are now recorded under number J844 in the Australian Museum collection. The Departmental register records 62 specimens under J844, of which 6 were sent to the Smithsonian

Museum in 1965 and 6 to Stockholm in 1921. It is not possible to account for the difference of 11 specimens.

oligopora, *Salmacis* H. L. Clark (1916, p. 113, pl. 42, figs. 1-1, pl. 43, fig. 2).

E641, holotype, Oyster Bay, Tasmania, 36-72.

E1622, 2 paratypes, 6 miles east of Cape Hawke, New South Wales, 84-90 m (a label with these specimens, in H. L. Clark's handwriting, notes "8 paratypes" but only 2 specimens are noted in the Departmental register).

E1652, 4 paratypes, 8 miles east of Sandon Bluff, New South Wales, 63-72 m (a label with these specimens, in H. L. Clark's handwriting, notes "4 paratypes, alc.", suggesting that these specimens were originally preserved in alcohol. The Departmental register notes 7 specimens for this number, but this has been altered to 4).

=*Salmaciella oligopora* (Clark) — see Mortensen, 1943, p. 146. (4 paratypes in M.C.Z.) M.C.Z.)

Note: H. L. Clark (1916) records only 8 specimens, though his text indicates that he examined 9 specimens (including 2 atypical ones). The total number of specimens collected by "Endeavour" and examined by Clark is therefore uncertain, particularly in view of his labels which accompany The Australian Museum specimens. The specimen E641 is clearly documented as the holotype. The paratype specimens E1652 and E1622 bear Clark's labels and can be presumed to be such. A further 5 specimens (numbers J2121-2125 and J2155) do not have Clark labels with them though 2 of them (J2121 and J2122) are referred to by Clark (1916) as being atypical or deformed. Of the 4 specimens in the M.C.Z., one has an Australian Museum Accessions number, J2156, one is accompanied by two numbers, J2120 and J2126, and the other two do not have Australian Museum numbers with them. Each specimen, however, is accompanied by an H. L. Clark label notating as a "Co-type". It is impossible to determine the value of the status of each of the type-specimens with the exception of the holotype.

parvispina, *Phyllacanthus* Tenison-Woods (1880, p. 286, pl. 14).

J186, syntype, Port Jackson, New South Wales.

peloria, *Maretia* H. L. Clark (1916, p. 121, pl. 44, figs. 1-3).

E6304, holotype, 26 miles SW of Cape Everard, Victoria (fragmented).

E2271, paratype, locality same as E6304 (fragmented).

=*Paramaretia peloria* (Clark) — see Mortensen, 1951, p. 46. (1 paratype in M.C.Z.)

phoenissa, *Temnotrema* H. L. Clark (1926, p. 188, fig. 1).

J4644, holotype, Ellison Reef, Great Barrier Reef, Queensland, 14 m.

planissimus, *Echinocyamus* H. L. Clark (1938, p. 422, pl. 27, figs. 5-8).

J6160, paratype, Pearl Shoal, Broome, Western Australia, 9-12 m, broken shell, September 26, 1929.

regalis, *Cyclaster* Baker (1969, p. 266, text-figs. 1-8, pl. 1).

J7800, 3 paratypes, between Mayor Island and Cuvier Island, New Zealand, 207-468 m.

rostratus, *Antipneustes* Koehler (1926, p. 70, pl. CXIV, figs. 1-6; CXV, figs. 1, 3, 4, 6; CXVI, figs. 1-6; CXVII, figs. 1, 2, 6, 9; CXXIV, fig. 1).

J4832, syntype (specimen H), 60°32'S, 141°39'E, 282 m, December 31, 1913, or 64°44'S, 97°28'E, 644 m, January 31, 1914.

J4830, syntype (specimen E), locality data same as J4832.

J4831, syntype (specimen F), locality data same as J4832.

J4833, syntype (specimen G), locality same as J4832.

J4821-4, 4 syntypes (specimens A, B, C and D), locality data same as J4832.

=*Amphipneustes rostratus* (Koehler) — see Mortensen 1951, p. 268.

Note: Specimens numbered J4831 and J4833 sent as exchange to Mortensen in 1927.

rugosa, *Eurocidaris* Koehler (1926, p. 17, pl. XCIX, figs. 4-9; C, figs. 1-6; CI, figs. 1-7; CII, figs. 1-7; CXIX, fig. 2).

J4863, syntype (specimen G), 65°6'S, 96°13'E, 585 m, January 29, 1914.

J4887, syntype (specimen A), 65°6'S, 96°13'E, 585 m, January 29, 1914, or 65°20'S, 95°27'E, 240 fathoms, January 28, 1914.

J4886, syntype (specimen D), locality same as J4863.

J4897, syntype (specimen J), 65°6'S, 96°13'E, 585 m, January 29, 1914.

J4884, syntype (specimen E), 65°20'S, 95°27'E, 432 m, January 28, 1914.

J4861, syntype (specimen B), locality same as J4863.

J4859, syntype (specimen C), locality same as J4863.

J4848, syntype (specimen F), locality same as J4863.

J4844, syntype (specimen H), locality same as J4863.

J4847, syntype (specimen I), locality same as J4863.

J4866, Mounted arm spines, locality uncertain. Figured in Koehler's Report, 1926, pl. XCIX, fig. 9.

=*Ctenocidaris rugosa* (Koehler) — see Mortensen 1928, p. 126.

Note: Specimens J4859, J4848 and J4844, were sent as an exchange to Mortensen in 1927.

spinosa, *Notocidaris* Koehler (1926, p. 14, pl. XCVIII, figs. 1-6; XCVIII, figs. 1-7; XCIX, figs. 1-3; CXII, fig. 7; CXIV, fig. 7; CXIX, fig. 6).

J4891, syntype (specimen E), 64°32'S, 97°20'E, 198 m, January 31, 1914.

J4890, syntype (specimen D), locality data same as J4891.

J4846, syntype (specimen A), locality same as J4891.

J4862, syntype (specimen B), locality same as J4891.

J4860, syntype (specimen C), locality same as J4891.

J4893, syntype (specimen F), locality same as J4891.

J4894, syntype (specimen G), locality same as J4891.

J4864, Mounted spines, locality same as J4891. Figured in Koehler's Report, 1926, pl. XCVII, figs. 5 and 6.

=*Ctenocidaris spinosa* (Koehler) — see Mortensen 1928, p. 124.

tuberculatum, *Chaetodiadema* H. L. Clark (1909, p. 554, pls. 61, 67).

G11429, syntype, off Wata Mooli, New South Wales, 93-127 m, soft mud. (1 syntype in M.C.Z.)

tumescens, *Antipneustes* Koehler (1926, p. 76, pl. CXIII, figs. 1-6).

J4820, holotype, 66°55'S, 145°21'E, 572 m, December 28, 1913.

=*Amphipneustes tumescens* (Koehler) — see Mortensen 1951, p. 267.

tumidus, *Echinanthus* Tenison-Woods (1878, p. 169).

J1348, holotype, New South Wales.

=*Clypeaster tumidus* (Tenison-Woods) — see Mortensen, 1948, p. 55.

woodsii, *Salmacis* Ramsay (1885, p. 47, pl. 2, figs. 1-3).

J879, holotype, off Port Jackson, New South Wales, 63 m.

=*Salmacis virgulata* (L. Agassiz) (deformed specimen) — see H. L. Clark, 1946, p. 311.

HOLOTHURIOIDEA

adhaerens, *Psolidiella* Hickman (1962, p. 50, text figs. 1-16, pl. 1, fig. 1).

J7227, microslide, anal teeth of syntype, Pirate's Bay, Eaglehawk Neck, Tasmania.

J7229, microslide, tentacles and calcareous ring of syntype, locality same as J7227, date unknown.

J7230, microslide, part of sole of syntype, locality same as J7227, May 13, 1954.

J7231, microslide, part of dorsum of syntype, locality same as J7227, May 13, 1954.

- bisperforata*, *Protankyra* H. L. Clark (1938, p. 553, fig. 62).
J6441, 2 paratypes, "Jetty Flat", Broome, Western Australia, low tide mark, 1929.
=*Rynkatorpa bisperforata* (Clark) — see Rowe and Pawson, 1967, p. 31.
- delicata*, *Aphelodactyla* H. L. Clark (1938, p. 542, fig. 59).
J4690, paratype, between Cape Jaubert and Wallal, Western Australia, muddy sand, 9-14 m, September, 1929.
=*Acaudina delicata* (Clark) — see H. L. Clark, 1946, p. 446.
- dissimilis*, *Molpadia* H. L. Clark (1909, p. 561, pl. 58, figs. 12-21).
J1013, syntype, "Thetis" Station 46, off Jibbon, New South Wales, 90-118 m, mud and abattoir refuse, 1898.
J1014, syntype, locality same as J1013. (1 syntype listed in the M.C.Z. catalogue cannot be found in the collection; Dr. D. Opresko, pers. comm.)
- dyscrita*, *Leptosynapta* H. L. Clark (1938, p. 551, fig. 61).
J6465, 2 paratypes, Roebuck Bay, Broome, Western Australia, sandy mud, low tide, 1929.
- grisea*, *Thyone* H. L. Clark (1938, p. 467, fig. 40).
J6461, 2 paratypes, False Cape Bossut, near Broome, Western Australia, 1929.
- hickmani*, *Rynkatorpa* Rowe and Pawson (1967, p. 32, figs. 1-15).
J7544, holotype, Derwent River Estuary, Hobart, Tasmania, dredged April 18, 1963.
J7545A, microslide, anterior skin of holotype.
J7545B, microslide, posterior skin of holotype.
J7546, microslide, radial muscle and tentacle of holotype.
- lividus*, *Neoamphicyclus* Hickman (1962, p. 58, pl. 1, fig. 5, text figs. 53-63).
J7217, microslide, peristomium of syntype, Pirate's Bay, Eaglehawk Neck, Tasmania, under stones at low tide.
J7218, microslide, outer tentacles of syntype, locality same as J7217.
J7220, microslide, skin of middle one-third of syntype, locality same as J7217.
J7221, microslide, skin of posterior one-third of syntype, locality same as J7217.
J7225, microslide, outer and inner tentacle of syntype, locality same as J7217.
J7196, 11 syntypes, locality same as J7217, March 7, 1960.
- longipedes*, *Actinocucumis* H. L. Clark (1938, p. 480, fig. 45).
J6452, 2 paratypes, False Cape Bossutt, near Broome, Western Australia, dredged, 1929.
=*Actinocucumis typicus* Ludwig — see Hedding and Panning, 1954, p. 72.
- luticola*, *Paracaudina* Hickman (1962, p. 65, text figs. 131-139).
J7222, microslide, spicules from tail of syntype, Ralph's Bay, Derwent Estuary, Tasmania, 12 m, June 30, 1959.
J7223, microslide, anal papilla of syntype, locality same as J7222.
J7224, microslide, "Tail" of syntype, locality same as J7222.
J7205, 2 syntypes, "Tails" locality same as J7222.
- macroperona*, *Holothuria* H. L. Clark (1938, p. 535, fig. 57).
J6434, paratype, cove at north-west corner of Rottneest Island, Western Australia, October 19, 1929.
=*H. (Thymiosycia) macroperona* Clark — Rowe, 1969, p. 147.
- magna*, *Chirodota* H. L. Clark (1938, p. 556, fig. 63).
J5985, holotype, off Sow and Pigs Reef, Port Jackson, New South Wales, 10 m, dredged.
- minuta*, *Thyone* H. L. Clark (1938, p. 470, fig. 42).
J6466, 10 paratypes, Pearl Shoal, Broome, Western Australia, 1932.
=*Stolus minutus* (Clark) — see Panning, 1949, p. 462.

- minutus*, *Psolus* H. L. Clark (1938, p. 507, figs. 51, 52).
J6450, 3 paratypes, Neds Beach, Lord Howe Island, under surface of rock fragment near low water mark, April, 1932.
- parvipedes*, *Phyllophorus* H. L. Clark (1938, p. 489, fig. 47).
J6041, holotype, Broome, Western Australia, 1930.
= *P. (Phyllophorella) parvipedes* Clark — see Heding and Panning, 1954, p. 160.
- productamensis*, *Molpadia* H. L. Clark (1909, p. 562, pl. 58, figs. 22-30).
J1011, syntype, "Thetis" Station 46, off Jibbon, New South Wales, 90-118 m, mud and abattoir refuse, 1898. (3 syntypes in M.C.Z.)
Note: H. L. Clark (1909) records only 3 specimens. It could be that one of the M.C.Z. specimens represents the closely allied species *M. dissimilis* which has been placed with 2 specimens of *M. productimensis*. This would account for the specimen of *M. dissimilis* missing from the M.C.Z. collections (see also p. 360).
- ravum*, *Psolidum* Hickman (1962, p. 60, text figs. 75-86, pl. 2, fig. 7).
J7232, microslide, tentacles of syntype, Blackman's Bay, Derwent Estuary, Tasmania, under stone at low tide, January 27, 1956, coll. V. V. Hickman.
J7233, microslide, introvert of syntype, locality same as J7232.
J7234, microslide, part of dorsum of syntype, locality same as J7232.
J7235, microslide, part of wole of syntype, locality same as J7232.
J7202, syntype, Ralph's Bay, Derwent Estuary, Tasmania, August 28, 1959, about 12 m

ACKNOWLEDGMENTS

We should like to thank Mr. Murray Fletcher for his help in compiling the first draft of this catalogue; Miss Elizabeth Pope, the previous Curator of echinoderms at The Australian Museum, for her assistance during the initial preparation of the catalogue; Mrs. Christine Cannon for rechecking the type collection and helping with the final draft; Dr. D. Opresko, Museum of Comparative Zoology, Harvard, U.S.A., for information concerning "Thetis" and "Endeavour" type-specimens in the echinoderm collections of that Institution.

REFERENCES

- Baker, A. N., 1969. Two new heart-urchins, including a new species of *Cyclaster*, from New Zealand waters (Echinoidea: Spatangoida). *Rec. Dom. Mus., Wellington*. 6 (16): 267-273, 22 figs., 2 pls.
- 1974. New species of brittle-stars from New Zealand (Echinodermata: Ophiuroidea). *Rec. Dom. Mus., Wellington*. 8 (15): 247-266, 9 figs.
- Bernasconi, I., 1970. Equinodermos Antarticos. II. Asteroideos. 3. Asteroideos de la extremidad norte de la Peninsular Antartica *Revta Mus. argent. Cienc. nat. Bernardino Rivadavia Inst. nac. Invest. Cienc. nat. Zool.* 9 (10): 211-281, 20 pls.
- Clark, A. H., 1910. A new Australian crinoid. *Proc. U.S. natn Mus.* 38: 275-276.
- 1931. A monograph of Existing Crinoids. 1 (3). Superfamily Comasterida. *Bull. U.S. natn Mus.* 82 (3): Pp. vii, 816, 82 pls.
- 1937. Echinodermata. Crinoidea. *Scient. Rep. Australas. Antarct. Exped.* C 8 (4): 5-18.
- 1947. A monograph of Existing Crinoids. 1 (4b). Superfamily Mariametrida (concluded — the family Colobometridae) and Superfamily Tropiometridae (except the families Thalassometridae and Charitometridae). *Bull. U.S. natn Mus.* 82 (4b): Pp. vii, 473, 43 pls.
- and A. M. Clark, 1967. A monograph of Existing Crinoids. 1 (5). Suborders Oligophreata (concluded) and Macrophreata. *Bull. U.S. natn Mus.* 82 (5): Pp. xiv, 860, 53 figs.

- Clark, A. M., 1962. Asteroidea. *Rep. B.A.N.Z. antarct. Res. Exped. ser. B* 9: 1-104, 18 figs., 5 pls.
- 1967. Notes on Asteroids in the British Museum (Natural History). V. *Nardoa* and some other Ophiasterids. *Bull. Br. Mus. nat. Hist. (Zool)*. 15: 169-198, 6 pls.
- 1970. Notes on the family Amphiuroidae (Ophiuroidea). *Bull. Br. Mus. nat. Hist. (Zool)*. 19: 1-81, 11 figs.
- and F. W. E. Rowe, 1971. Monograph of shallow-water Indo-west Pacific Echinoderms. London. Pp. 238, 100 figs., 31 pls.
- Clark, H. E. S., 1963. The fauna of the Ross Sea. Part 3. Asteroidea. *Mem. N.Z. oceanog. Inst.* 21: 7-84, 20 figs., 15 pls.
- Clark, H. L., 1909. Echinodermata. *Mem. Aust. Mus.* 4: 519-564, 12 pls.
- 1911. North Pacific ophiurans in the collection of the United States Museum. *Bull. U.S. natn Mus.* 75: 1-302, 144 figs.
- 1912. Hawaiian and other Pacific Echini. Pedinidae, Phymosomatidae, Stomopneustidae, Echinidae, Temnopleuridae, Stroglyocentrotidae and Echinometridae. *Mem. Mus. comp. Zool. Harv.* 34: 209-283, pls. 90-121.
- 1915. Catalogue of recent ophiurans. *Mem. Mus. comp. Zool. Harv.* 25: 165-376, 20 pls.
- 1916. Report on the sea-lillies, starfishes, brittle-stars and sea-urchins obtained by the F.I.S. "Endeavour" on the coasts of Queensland, New South Wales, Tasmania, Victoria, South Australia and Western Australia. *Endeavour Res.* 4 (1): 1-123, 44 pls.
- 1921. The Echinoderm fauna of Torres Straits. *Pap. Dep. mar. Biol. Carnegie Instn Wash.* 10: Pp. vi, 223, 38 pls.
- 1926. Notes on a collection of echinoderms from The Australian Museum. *Rec. Aust. Mus.* 15 (2): 183-292, 1 fig.
- 1938. Echinoderms from Australia. *Mem. Mus. comp. Zool. Harv.* 55: 1-597, 28 pls.
- 1946. The echinoderm fauna of Australia. *Publs Carnegie Instn.* No. 566: 1-567.
- Coleman, H. L., 1911. Supplement to Echinodermata. *Mem. Aust. Mus.* 4: 699-701, 1 pl.
- Dartnall, A. J., D. L. Pawson, E. C. Pope, and B. J. Smith, 1969. Replacement name for the preoccupied genus name *Odinia* Perrier, 1884 (Echinodermata: Astroidea). *Proc. Linn. Soc. N.S.W.* 93 (2): 211.
- Dartnall, A. J., 1970. A new species of *Marginaster* (Asteroidea: Poraniidae) from Tasmania. *Proc. Linn. Soc. N.S.W.* 94 (3): 207-211, figs. 1-2, pl. 13.
- Dartnall, A. J., 1971. Australian sea-stars of the genus *Patiriella* (Asteroidea: Asterinidae). *Proc. Linn. Soc. N.S.W.* 96 (1): 39-49, 1 fig., 2 pls.
- 1972. A brooding echinoid from Tasmania. *Proc. Linn. Soc. N.S.W.* 97 (1): 30-34, 3 figs.
- Downey, M. E., 1968. Catalogue of recent echinoid type-specimens in the U.S. National Museum, Smithsonian Institution and the Museum of Comparative Zoology, Harvard University. *Bull. U.S. Natn Mus.* No. 264: Pp. 99.
- 1969. Catalogue of recent ophiuroid type-specimens in major collections in the United States. *Bull. U.S. natn Mus.* No. 293: Pp. 239.
- Endean, R. H., 1964. A new species of brittle-star (Echinodermata: Ophiuroidea) from northern New South Wales. *Proc. Linn. Soc. N.S.W.* 88: 295-297, 1 fig., 1 pl.
- Fell, H. B., 1958. Deep-sea echinoderms of New Zealand. *Zool. Publs Vict. Univ. Wellington.* 24: 1-40, 5 pls.
- 1961. The fauna of the Ross Sea. 1. Ophiuroidea. *Mem. N.Z. oceanog. Inst.* 18: 1-79, 9 figs., 19 pls.

- Fisher, W. K., 1919. Starfishes of the Philippines seas and adjacent waters. *Bull. U.S. natn Mus.* 100 (3): Pp. xii, 711, 156 pls.
- 1923. A preliminary synopsis of the Asteroidea. *Ann. Mag. nat. Hist.* (9) 12: 247-258, 596-607.
- Heding, S. G., and A. Panning, 1954. Phylloporidae. Eine Bearbeitung der polytentaculaten dendrochiroten Holothurien des zoologischen Museums in Kopenhagen. *Spolia zool. Mus. haun.* 13: 7-209, 102 figs.
- Hickman, V. V., 1962. Tasmanian sea-cucumbers (Holothuroidea). *Pap. Proc. R. Soc. Tasm.* 96: 49-72, 186 figs., 2 pls.
- Koehler, R., 1920. Echinodermata. Asteroidea. *Scient. Rep. Australas. Antarct. Exped.* C 8 (1): 1-308, 75 pls.
- 1922. Echinodermata. Ophiuroidea. *Scient. Rep. Australas. Antarct. Exped.* C 8 (2): 1-98, 15 pls.
- 1926. Echinodermata. Echinoidea. *Scient. Rep. Australas. Antarct. Exped.* C 8 (3): 1-134, 34 pls.
- Livingstone, A. A., 1930. On some new and little known Australian asteroids. *Rec. Aust. Mus.* 18 (1): 15-24, 5 pls.
- 1931. On the restriction of the genus *Ferdina* Gray (Asteroidea). *Aust. Zool.* 6 (4): 305-309, 4 pls.
- 1932. Asteroidea. *Scient. Rep. Gt. Barrier Reef Exped.* 4: 241-265, 2 figs., 12 pls.
- 1933. Some genera and species of the Asterinidae. *Rec. Aust. Mus.* 19: 1-20.
- 1934. Two new asteroids from Australia. *Rec. Aust. Mus.* 19: 177-180, 1 pl.
- 1936. Descriptions of new Asteroidea from the Pacific. *Rec. Aust. Mus.* 19: 383-387, 2 pls.
- Lyman, T., 1874. Ophiuridae and Astrophytidae, old and new. *Bull. Mus. comp. Zool. Harv.* 3: 221-272, 7 pls.
- Martens, E. von, 1870. Die Ophiuriden des indischen Oceans. *Arch. Naturgesch.* 36: 245-262.
- Matsumoto, H., 1915. A new classification of the Ophiuroidea. *Proc. Acad. nat. Sci. Philad.* 67: 43-92.
- Mortensen, T., 1921. Echinoderms of New Zealand and the Auckland-Campbell Islands. 1. Echinoidea. *Vidensk. Meddr dansk natur. Foren.* 73: 139-198, 3 pls.
- 1928. Monograph of the Echinoidea. I. Cidaroida. Copenhagen. Pp. 551, 173 figs., 88 pls.
- 1928a. Papers from Dr. Th. Mortensen's Pacific Expedition, 1914-1916. 44. New Cidariidae. Preliminary notice. *Vidensk. Meddr dansk natur. Foren.* 85: 65-74.
- 1935. Monograph of the Echinoidea. II. Bothriocidaroida, Melonechinoida, Lepidocentroida and Stirodonta. Copenhagen. Pp. 647, 377 figs., 89 pls.
- 1943. Monograph of the Echinoidea. III (2). Camarodonta. Copenhagen. Pp. 1-533, 321 figs., 56 pls.
- 1948. Monograph of the Echinoidea. IV (2). Clypeastroida. Copenhagen. Pp. 471, 256 figs., 72 pls.
- 1951. Monograph of the Echinoidea. V (2). Spatangoida 2. Copenhagen. Pp. 593, 286 figs., 64 pls.
- Panning, A., 1949. Versuch einer Neuordnung der Familie Cucumariidae. *Zool. Jb.* 78: 404-470, 62 figs.
- Ramsay, E. P., 1885. Catalogue of the Echinodermata of The Australian Museum. Part 1. Echini. Australian Museum, Sydney. Pp. 54, 3 pls.
- Rowe, F. W. E., and D. L. Pawson, 1967. A new genus of holothurian, family Synaptidae, with a new species from Tasmania. *Pap. Proc. R. Soc. Tasm.* 101: 31-35, 15 figs.
- Rowe, F. W. E., 1969. A review of the family Holothuriidae (Holothuroidea: Aspidochirota). *Bull. Br. Mus. nat. Hist. (Zool.)* 18 (4): 119-170, 21 figs.

- Serafy, D. K., 1971. A new species of *Clypeaster* (Echinodermata: Echinoidea) from San Felix Island, with a key to the recent species of the Eastern Pacific Ocean. *Pacif. Sci.* 25 (2): 165-170, 4 figs., 1 table.
- Tenison-Woods, J. E., 1878. The Echini of Australia. *Proc. Linn. Soc. N.S.W.* 2: 145-176, 342-344.
- 1880. On some new Australian Echini. *Proc. Linn. Soc. N.S.W.* 4: 282-291, 2 pls.
- 1880a. On a young specimen of *Temnopleurus*. *Proc. Linn. Soc. N.S.W.* 5: 493-494, 2 figs., 1 pl.
- 1881. On the habits of some Australian Echini. *Proc. Linn. Soc. N.S.W.* 5: 193-204.
- Ziesenhenné, F. C., 1935. A new brittle-star from the Galapagos Islands. *Allan Hancock Pacif. Exped.* 2: 1-4, 1 pl.
- 1940. New ophiurans of the Allan Hancock Pacific Expedition. *Allan Hancock Pacif. Exped.* 8 (2): 1-58, 9 pls.