

CATALOGUE OF ECHINODERM TYPES IN THE NATIONAL  
MUSEUM OF VICTORIA, AUSTRALIA

By BRIAN J. SMITH

Curator of Invertebrates

**Abstract**

Type specimens of twenty-four species of echinoderms from all five classes are listed. They include paratypes of species described by H. L. Clark (1938), syntypes of echinoid species described by Tenison-Woods, type series of species described by A. M. Clark (1966), holothurian types described by Joshua and the type of one holothurian from Macquarie Island described by Pawson.

**Introduction**

The echinoderm type material held in the National Museum of Victoria comes from five sources and contains mainly secondary type material. No major work on the phylum has been carried out at the Museum and no major collection of echinoderms from a leading worker in the field has been acquired by the Museum.

In March 1880 the Rev. J. E. Tenison-Woods donated a large collection of invertebrates to the Museum including syntypes of three species of echinoids he had described in the previous year. In the first 20 years of this century a local amateur naturalist, E. C. Joshua, carried out some collecting and taxonomic work on holothurians from southern Australia. By himself and in association with E. Creed from South Australia he described several new species. In 1938 H. L. Clark of the Museum of Comparative Zoology, Harvard University, U.S.A., donated paratypes of seven of the new species he described from his extensive collecting expedition to Australia.

Dr D. L. Pawson, Curator of Echinoderms at the Smithsonian Institution, U.S.A., lodged the type of a new holothurian collected by Miss J. H. Macpherson, a member of the Museum staff, from Macquarie Island in 1959. Finally Dr A. M. Clark of the British Museum described four new species collected on the Survey of Port Phillip Bay, Victoria, carried out between 1957 and 1963 jointly by the Museum and the Fisheries and Wildlife Department.

The 24 species are divided into classes with the original genera arranged alphabetically with the species so arranged. Where the species is represented by a secondary type, the location of the primary type is given. The abbreviations for States are as follows: Vict. = Victoria, W. Aust. = Western Australia, Qd. = Queensland, and for other museums are as follows: MCZ = Museum of Comparative Zoology, Harvard, U.S.A., AM = Australian Museum, SAM = South Australian Museum.

## Class CRINOIDEA

Genus *Aporometra* Clark, 1938*Aporometra occidentalis* Clark, 1938

*Mem. Mus. comp. Zool. Harv.* 55: 43, not figured.

PARATYPES: H117, two dry specimens (holotype in the MCZ).

LOCALITY: Koombana, Bay, Bunbury, W. Aust., 5-8 fm, collected October 1929.

## Class ASTEROIDEA

Genus *Asterina* Nardo, 1834*Asterina alba* Clark, 1938*Mem. Mus. comp. Zool. Harv.* 55: 150, pl. 22, fig. 7.

PARATYPE: H118, two dry specimens (holotype in the MCZ).

LOCALITY: Neds Beach, Lord Howe Island, collected April 1932.

*Asterina lutea* Clark, 1938*Mem. Mus. comp. Zool. Harv.* 55: 153, pl. 12, fig. 2.

PARATYPE: H119, one dry specimen (holotype in the MCZ).

LOCALITY: Entrance Point, Broome, W. Aust., under stones, collected August 1929.

Genus *Echinaster* Mueller & Troschel, 1840*Echinaster varicolor* Clark, 1938*Mem. Mus. comp. Zool. Harv.* 55: 184, pl. 11, fig. 1.

PARATYPE: H120, one dry specimen (holotype in the MCZ).

LOCALITY: SW. of Broome, W. Aust., in 5-8 fm, collected June 1932.

Genus *Nepanthia* Gray, 1840*Nepanthia hadracantha* Clark, 1966*Mem. nat. Mus. Vict.* 27: 320, pl. 3, figs. 4-6, text figs. 3a-b.

HOLOTYPE: H14, in spirit.

LOCALITY: Cape Shank, Viet., collected 8 June 1961.

OTHER SPECIMENS: H121, one specimen in spirit collected with the holotype at Cape Shank but not included as a type.

*Nepanthia variabilis* Clark, 1938*Mem. Mus. comp. Zool. Harv.* 55: 176, pl. 10, figs. 4-5; pl. 20, figs. 4-5.

PARATYPE: H122, one dry specimen (holotype in the MCZ).

LOCALITY: Broome, W. Aust., collected August 1929.

## Class OPHUROIDEA

Genus *Amphiura* Forbes, 1843*Amphiura elandiformis* Clark, 1966*Mem. nat. Mus. Vict.* 27: 331, text figs. 6f-i.

HOLOTYPE: H40, disc and two arm fragments only, in spirit.

PARATYPE: H123, one complete specimen, except for the ends of three arms broken.

LOCALITY: Port Phillip Bay, Vict. (Area 32—sample site 277).

NOTES: The paratype was not designated as such in the materials section of the description but was mentioned in the paper as such. This specimen was located with the holotype in the collections but not mentioned in the museum register.

OTHER SPECIMENS: H124, one entire specimen in spirit from Port Phillip Bay, Vict. (Area 33). H125, one broken specimen in spirit from Port Phillip Bay, Vict. (Area 47). H126, one entire specimen in spirit from Port Phillip Bay, Vict. (Area 43). H127, one entire specimen in spirit from Port Phillip Bay, Vict. (Area 61). Fragments of several specimens from Port Phillip Bay, Vict. (Area 20), H128, and Areas 11, 12 and 13 (H129).

**Amphiura (Ophiopeltis) parviscutata** Clark, 1966

*Mem. nat. Mus. Vict.* 27: 337, text fig. 8.

HOLOTYPE: H17, in spirit with arms coiled.

LOCALITY: Port Phillip Bay, Vict., near Mornington (Area 55—sample site 147).

NOTES: Due to a printer's error the genus name in the original description was mis-spelt '*Amphuira*'.

OTHER SPECIMENS: H130, two entire specimens from Port Phillip Bay, Vict. (Area 27). H131, one entire specimen from Port Phillip Bay, Vict. (Area 25).

**Amphiura phrixa** Clark, 1938

*Mem. Mus. comp. Zool. Harv.* 55: 232, not figured.

PARATYPE: H132, one broken dry specimen (holotype in MCZ).

LOCALITY: Broome, W. Aust., in mud S. of the jetty, collected June 1932.

Genus **Ophiacantha** Mueller & Troschel, 1842**Ophiacantha alternata** Clark, 1966

*Mem. nat. Mus. Vict.* 27: 328, text fig. 4.

HOLOTYPE: H15, in spirit.

PARATYPE: H16, one specimen in spirit.

LOCALITY: Port Phillip Bay near Port Phillip Heads (Area 58—sample sites 150-4).

Genus **Ophiactis** Luetken, 1856**Ophiactis fuscolineata** Clark, 1938

*Mem. Mus. comp. Zool. Harv.* 55: 266, not figured.

PARATYPE: H133, one dry specimen with arm ends slightly broken (holotype in MCZ).

LOCALITY: Broome, W. Aust., 5-8 fm, collected June 1932.

## Class ECHINOIDEA

Genus **Echinus** Linnaeus, 1758**Echinus darnleyensis** Tenison-Woods, 1878

*Proc. Linn. Soc. N.S.W.* 2: 165, not figured.

= *Nudechinus darnleyensis* (Tenison-Woods) after Mortensen (1943).

SYNTYPE: H134, one dry specimen, with spines, attached to a wooden tablet (Old Reg. 44430). Other syntypes in AM.

LOCALITY: Darnley Island, Torres Strait, Qd., collected Chevert Expedition.

NOTES: Donated by Tenison-Woods March 1880 and noted 'Type' on the museum label.

Genus **Eupatagus** Agassiz, 1847**Eupatagus dyscritus** Clark, 1938

*Mem. Mus. comp. Zool. Harv.* 55: 436, pl. 28, figs. 10-11.

= *Lissospatangus dyscritus* (Clark) after Mortensen (1951).

HOLOTYPE: H135, broken test only (Old Reg. 68686).

LOCALITY: Unknown, but assumed to be Victoria, collected T. S. Hall on 19 May 1921.

Genus *Hemiaster* Desor, 1847*Hemiaster (Rhynobrissus) apicatus* Tenison-Woods, 1879

*Proc. Linn. Soc. N.S.W.* 4, 283, pl. 13, figs. 1-5.

= *Rhynobrissus hemiasteroides* Agassiz after Mortensen (1951).

SYNTYPE: H136, one dry test (no spines) (Old Reg. 44397).

LOCALITY: Moreton Bay, Qd.

NOTES: Donated Tenison-Woods March 1880 and noted 'Type' on the museum label; also on the label is 'No others as perfect known to me'.

Genus *Phyllacanthus* Brandt, 1835*Phyllacanthus parvispina* Tenison-Woods, 1879

*Proc. Linn. Soc. N.S.W.* 4: 286, pl. 14, figs. A-B.

SYNTYPE: H137, one complete dry specimen (Old Reg. 44419). Other syntypes in AM.

LOCALITY: E. Coast of Australia. Localities given in the description are Botany Bay, Port Jackson and along the E. coast as far as Moreton Bay.

NOTES: Donated Tenison-Woods March 1880 and noted 'Type' on the museum label.

## Class HOLOTHUROIDEA

Genus *Cucumaria* Blainville, 1830*Cucumaria mutans* Joshua, 1914

*Proc. Roy. Soc. Vict.* 27: 4, pl. 1, figs. 1a-d.

= *Cucumella mutans* (Joshua) after Hickman (1962).

SYNTYPES: H138, two entire specimens in spirit (Old Reg. 60636-6). H139, one large dissected specimen and two small entire specimens (Old Reg. 60637-8). H140, one slide of ossicles from one of the syntypes.

LOCALITY: Western Port Bay (H138), also Port Phillip Bay and Victorian coastline. H139 has no locality.

NOTES: H138 is noted 'Type' on the label and H139 has the note 'in MSS'.

*Cucumaria striata* Joshua & Creed, 1915

*Trans. R. Soc. S. Aust.* 39: 18, pl. 3, figs. 2a-d.

SYNTYPES: H141, one dissected specimen in spirit (Old Reg. 60675). H142, one slide of ossicles from one of the syntypes.

LOCALITY: Great Australian Bight, W. Aust., collected J. W. Howard, August 1888.

NOTES: Obtained on exchange from SAM 1919. The other syntype was returned to SAM, but a recent search failed to locate it.

Genus *Phyllophorus* Grube, 1840*Phyllophorus ventripes* Joshua & Creed, 1915

*Trans. R. Soc. S. Aust.* 39: 19, pl. 2, fig. 1; pl. 3, fig. 5.

= *Lipotrapeza ventripes* (Joshua and Creed) after Clark 1966.

SYNTYPES: H143, three specimens (none dissected) in spirit (Old Reg. 60676-8).

LOCALITY: South Coast of South Australia.

NOTES: Obtained on exchange from SAM 1919. Other syntypes were returned to SAM, but a recent search failed to locate them.

**Phyllophorus vestiens** Joshua, 1914

*Proc. Roy. Soc. Vict.* 27: 5, pl. 1, figs. 2a-d.  
= *Lipotrabeza vestiens* (Joshua) after Clark 1966.

**HOLOTYPE:** H144, dissected specimen in spirit with the label 'Type' tied to it (Old Reg. 60639).

**PARATYPE:** H145, one entire specimen in spirit (Old Reg. 60640).

**LOCALITY:** Label with the types records Torquay, Vict. The description gives: Port Phillip Bay, Westernport Bay and Victorian coastline.

**NOTES:** H146 is a slide of a large section of 'skin' and is labelled 'MSS' (Old Reg. 62782). From the register this appears to have been used in the description and should be included as a paratype. However, neither of the existing types have any skin missing.

**Genus Taeniogyrus** Semper, 1868**Taeniogyrus allani** Joshua, 1912

*Proc. Roy. Soc. Vict.* 25: 79, pl. 3-4, figs. 1-11.  
= *Trochodota allani* (Joshua) after Clark 1966.

**SYNTYPES:** H29, one dissected specimen in spirit (Old Reg. 60646). H30, sixteen specimens in spirit (Old Reg. 60673) (see notes below). H147, one slide of a piece of 'skin' (Old Reg. 62784).

**LOCALITY:** Port Phillip Bay, Vict., 5-10 fm in mud banks, collected November 1910. H29 and H30 both bear the locality Victoria. H147 bears the locality Altona Bay, November 1910.

**NOTES:** H30 must be considered questionable syntypes for, although they bear the label 'co-types', the old register indicates one specimen under 60673. Also the label is possibly not in Joshua's handwriting.

**Genus Thyone** Oken, 1815**Thyone nigra** Joshua & Creed, 1915

*Trans. R. Soc. S. Aust.* 39: 20, pl. 3, figs. 3a-e, 4.

**SCHIZOHOLOTYPE:** H148, a slide of ossicles from the holotype (holotype in SAM).

**LOCALITY:** Between 33°-37°S. and 132°-140°E., S. Aust., collected Verco.

**Thyone vercoi** Joshua & Creed, 1915

*Trans. R. Soc. S. Aust.* 39: 19, pl. 2, figs. 2-4; pl. 3, figs. 1a-g; pl. 4.  
= *Staurothyone vercoi* (Joshua and Creed) after Clark 1966.

**SCHIZOHOLOTYPE:** H149, one slide of ossicles from the holotype (holotype in SAM).

**LOCALITY:** Between 33°-37°E. and 132°-140°E., S. Aust., collected Verco.

**Genus Trachythyone** Studer, 1876**Trachythyone macphersonae** Pawson, 1962

*Trans. R. Soc. N.Z.* 2: 47, pl. 1, figs. 1-5.

**HOLOTYPE:** H1, in spirit.

**LOCALITY:** Garden Cove, Macquarie Island, at low tide level among sea anemones, collected J. H. Macpherson on 12 Dec. 1959.

Genus *Trochodota* Ludwig, 1891*Trochodota roebucki* Joshua, 1914*Proc. Roy. Soc. Vict.* 27: 9, pl. 1, figs. 4a-c.

HOLOTYPE: H34, dissected specimen in spirit, with the label 'Type' tied to it.

PARATYPES: H35, two small entire specimens in spirit.

LOCALITY: Torquay, Vict.

NOTES: H150, one slide of 'skin with tentacles' labelled 'MSS' Torquay, 23 Mar. 1913 (Old Reg. 62783). However, this could not have come from any of the type specimens described above.

## References

- CLARK, A. M., 1966. Port Phillip Survey 1957-1963. Echinodermata. *Mem. nat. Mus. Vict.* 27: 289-355.
- CLARK, H. L., 1938. Echinoderms from Australia, an account of collections made in 1929 and 1932. *Mem. Mus. comp. Zool. Harv.* 55: 1-596.
- HICKMAN, V. V., 1962. Tasmanian sea-cucumbers (Holothuroidea). *Pap. Proc. R. Soc. Tasm.* 96: 49-72.
- JOSHUA, E. C., 1912. On a new holothurian of the genus *Taeniogyrus* found in Port Phillip Bay. *Proc. Roy. Soc. Vict.* 25: 79-81.
- , 1914. Victorian Holothuroidea, with descriptions of new species. *Proc. Roy. Soc. Vict.* 27: 1-11.
- , and CREED, E., 1915. South Australian Holothuroidea, with descriptions of new species. *Trans. R. Soc. S. Aust.* 39: 16-24.
- MORTENSEN, T., 1943. A monograph of the Echinoidea. 3 (2): 1-553.
- , 1951. A monograph of the Echinoidea. 5 (2): 1-593.
- PAWSON, D. L., 1962. A new sea-cucumber from Macquarie Island. *Trans. R. Soc. N.Z.* 2: 47-48.
- TENISON-WOODS, J. E., 1878. The Echini of Australia (including those of the Chevert Expedition). *Proc. Linn. Soc. N.S.W.* 2: 145-176.
- , 1879. On some new Australian Echini. *Proc. Linn. Soc. N.S.W.* 4: 282-291.