

## TWO NEW SCLERACTINIAN CORALS FROM AUSTRALIA

By

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Plates XVI-XVIII

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Several years ago two new species of the reef-building coral genus *Coscinaraea* were discovered nearly simultaneously in the extreme eastern and south-western parts of Australia. The writer is indebted to Mrs. Lois Marsh and Mr. E. P. Hodgkin, of the University of Western Australia, and Mr. R. W. George, of the Western Australian Museum, for a suite of specimens of *C. marshae*, and to Mr. K. E. W. Salter, of the University of Sydney, and Mr. F. A. McNeill, of the Australian Museum, for specimens, photographs, and other data on *C. mcneilli*, and to Dr. D. F. Squires, of the American Museum of Natural History, and Mr. E. de Villa, of Sydney, for photographs of the type of the latter species.

The two new species described below occur at the extreme southern limits of hermatypic corals in eastern and south-western Australia. The most southerly occurrence of *Coscinaraea* known to this time is at Rundle Island (23° 30' S.) on the Great Barrier Reefs (Wells, 1955, p. 25, and chart), about 600 miles north of Sydney and where the winter minimum temperatures are about 17° C. The genus has not been previously reported from north-western or western Australia.

In eastern Australia the writer (1955) has noted the occurrence of a few reef coral genera as far south as Sydney: *Montipora*, *Cyphastrea*, *Turbinaria*, *Stylocoeniella* and *Plesiastrea*. To this short list is now added *Coscinaraea mcneilli* n.sp., from Manly Cove and vicinity, in waters where the temperature range is from 12° C. in June to 24.5° C. in January.

From Western Australia comes *Coscinaraea marshae* n. sp., represented by a number of specimens from Rottneest Island off Fremantle (32° S.) southward to Cape Naturaliste and Geographe Bay (33° 30' S.). The winter minimum temperatures here are considerably higher and within the normal tropical range (about 18° C., according to E. P. Hodgkin) and the coral fauna is richer than that of approximately the same latitude at Sydney (34° S.). The following species, in addition to *C. marshae*, are found: *Favites abdita* (Ellis and Solander), *F. magnistellata* (Milne-Edwards and Haime), *Platygyra* sp. cf. *P. lamellina* (Ehrenberg), *Montipora* sp. cf. *M. multiformis* Bernard, *Turbinaria* sp. cf. *T. danae* Bernard, *Pocillopora damicornis* (Linnaeus), *Oulophyllia crispa* (Lamarck), *Goniastrea benhami* Vaughan, *Plesiastrea urvillei* Milne-Edwards and Haime, *Tubastrea aurea* (Quoy and Gaimard), *T. diaphana* (Dana), and *Homophyllia australis* Milne-Edwards and Haime. Notable is the absence here, as well as in the vicinity of Sydney, of species of the protean but more tropical genera *Acropora* and *Porites*. *Plesiastrea urvillei* and *Homophyllia australis* are exceptional in that their northern limit seems to be at or near Houtman's Abroghlos (29° 30' S.) in the west, but they extend down and around the southern coast of Australia (type locality of *H. australis* is Port Lincoln, South Australia), the northern coast of Tasmania, and north probably as far as Moreton Bay, Queensland (27° 30' S.). There is a specimen of *H. australis* in the Australian Museum (No. 12630) labelled as coming from Lord Howe Island. This record needs verification.

### Family SIDERASTREIDAE

#### Genus *Coscinaraea* Milne-Edwards and Haime, 1848

Crossland (1941) discussed the type species, *C. monile* (Forskål), and its synonyms, and figured Forskål's type specimen. The writer briefly considered most of the Recent species in 1954 (p. 446). *C. monile* and *C. labyrinthica* (Audouin) are confined to the Red Sea and Indian Ocean; *C. ostreaeformis* van der Horst (Wells, 1954, p. 446, pl. 155, f. 5, 6, and Matthai, 1948, pl. 8, figs. 30-36 (as *C. monile*)) is a deep-water form in the Indo-Pacific; and *C. columna* (Dana) and *C. fossata* (Dana) have been found only in the Pacific.

#### *Coscinaraea mcneilli* n. sp.

Plate xvi, figs. 1-3

Corallum a broad expanded thamnasterioid plate attached basally or laterally to the substratum in the mode of a bracket fungus, up to 10 mm. thick. Lower surface non-epithecate, common wall solid and imperforate, covered with relatively broad, rounded, granulated, equal costae with narrow interspaces; the fine costal granules or spinules are scattered over the costae rather than forming regular rows. Dimensions of holotype (a piece from a large colony): 9 x 16 cm. Colony-formation by circumoral budding, new centres grouped in roughly