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A NEW *MEDIASTER* FROM QUEENSLAND.

By

ARTHUR A. LIVINGSTONE.

(Assistant Zoologist, the Australian Museum, Sydney.)

(Plate vi.)

The genus *Mediaster* was first recorded from Australian waters by Dr. H. L. Clark[1] when the species *australiensis* and *monacanthus* were described. Fisher[2] believes *monacanthus* to be referable to the genus *Nectria*. No other species of *Mediaster* has been recorded from Australia since 1916.

Mediaster praestans sp. nov.

Description.—Rays five; R. = 29.5 mm., r. = 11.5 mm. R. = 2.5 r. Disc comparatively small, depressed interradially and slightly raised radially. Rays regular, comparatively narrow at base, each tapering rapidly towards a small rounded extremity. Interbrachial arcs fairly narrow and rounded. Abactinal paxillae on plates of disc, the first half of the median radial series, and on the three series lying on either side of this latter widely spaced. Those paxillae placed interradially are crowded, squarish in outline, and separated by shallow channels. The plates near the ends of the rays are not tabulate but simply covered by a coarse granulation. The paxillae on the centre of the disc and radial regions are the largest on the abactinal surface. Each paxilla is stellate; two to six nodular granules form a central group on the upper surface, while from six to seventeen slightly flattened granules form a peripheral series. Interradially, the paxillae are crowded; no peripheral series of granules is present, the granulation being more or less even and uniform, and merging into that covering the superomarginal plates. The median radial plates, which lose their specialized tabulate character before half the length of the ray is reached, terminate at the fourth last superomarginal plate. The series lying next to the median radials end at a point between the ninth and tenth last superomarginals.

The papulae are confined to the disc and radial regions where the paxillae are widely spaced. They occur in sixes around each plate and lie between the internal connecting ossicles. These ossicles are short and very regular; six radiate outwards from each plate, each ossicle being common to two plates. No ossicles occur in the inter-radial areas where papulae are absent.

The superomarginal plates are fifteen in number counting from the middle of the interbrachial arc to the terminal plate. They are noticeably wider than high on the rays, almost wafer-like, while in the interbrachial arcs they are almost as high as broad. This is the reverse of what is seen in *M. ornatus* Fisher. The superomarginals are fairly conspicuous and encroach somewhat noticeably upon the paxillar area. They are covered by small, well-spaced roundish granules of varying sizes. These granules, when rubbed off, leave stout bases in the form of shiny, glass-like bosses.

The inferomarginal plates are also fifteen in number, and correspond both in size and position to the superomarginals. They are covered by a granulation similar in character to that on the superomarginals. The terminal plate is not prominent; it is similar in character to the superomarginals.

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[1] Clark.—Biol. Results, F.I.S. "Endeavour," 4, i, 1916, pp. 39-43, figs. 1-4.
[2] Fisher.—Ann. Mag. Nat. Hist. (8), xx, 1917, p. 167.

The adambulacral plates are squarish in outline and run uninterruptedly to the terminal plate. The furrow spines are in the form of combs, each comb being made up of seven fairly long, delicate, untapered, laterally compressed spinelets. The tips of the spinelets in each comb conform to a slightly curved line. On the actinal face of each adambulacral plate, and immediately behind the furrow series, a second row of four spines occurs. These are short, flat-sided, and stout, the central spine, or central pair, being noticeably larger than the remainder. Behind the second series is a third, made up of a single row of four granules which resemble the general granulation of the actinal surface.

The actinal intermediate plates are paved with well-defined, flat, polygonal plates, which run in regular series parallel to the furrow. The series lying next to the adambulacral plates reaches to the third inferomarginal (counting from the centre of the interbrachial arc). The actinal intermediate plates are provided with about twenty widely and evenly spaced thimble-shaped granules.

The oral plates are of moderate size without a clearly defined median suture. The marginal spines are from eight to nine in number, conspicuously flattened, the innermost spine being very large and prominent. Behind the marginal spines and on the actinal face of each oral plate, there are four spines arranged in a row. These spines are fairly long and only slightly flattened, being more rounded than the marginal spines. The remainder of the actinal face of each oral plate is occupied by a granulation similar to that covering the actinal intermediate plates.

The madreporite is small and circular, raised dome-like above the surrounding paxillae, and situated at a point about one-third the distance from the centre of the disc to the marginal plates. Centrally the madreporite is perforated by a few minute pores, while the sides are deeply channelled by coarse, wavy striations.

Locality.—Great Barrier Reef off Cairns, Queensland; dredged (Australian Museum Reg. No. J. 5618). Holotype.

Remarks.—*Mediaster praestans* is closely allied to *Mediaster ornatus* Fisher. The two species can be separated upon the following characters.

In *M. ornatus* the abactinal plates situated mid-way from centre of disc to terminal plate are arranged in seven radial series, whereas in *M. praestans* only three series of radial plates occur at that point. In *M. praestans* the median radial series of plates do not reach to the terminal plate. In the same species the rays are more acute and the marginal plates more prominent than in *M. ornatus*. Pedicellariae are entirely absent in *M. praestans*. In the same species fifteen superomarginal plates occur on each side of each ray, whereas in *ornatus* twenty-three are found. In *M. praestans* the inferomarginals are opposite the superomarginals which is not the case in *M. ornatus*. In *M. praestans* the actinal intermediate plates terminate at the third inferomarginal, whereas in *M. ornatus* they extend to the fifteenth inferomarginal plate. The oral plates also offer distinguishing characters.

EXPLANATION TO PLATE VI.

Fig. 1.—*Mediaster praestans* sp. nov. Enlarged portion of abactinal surface of ray with the granules removed to show the glass-like bosses beneath. The radial plates and the points where the various series end is also shown. x 5.

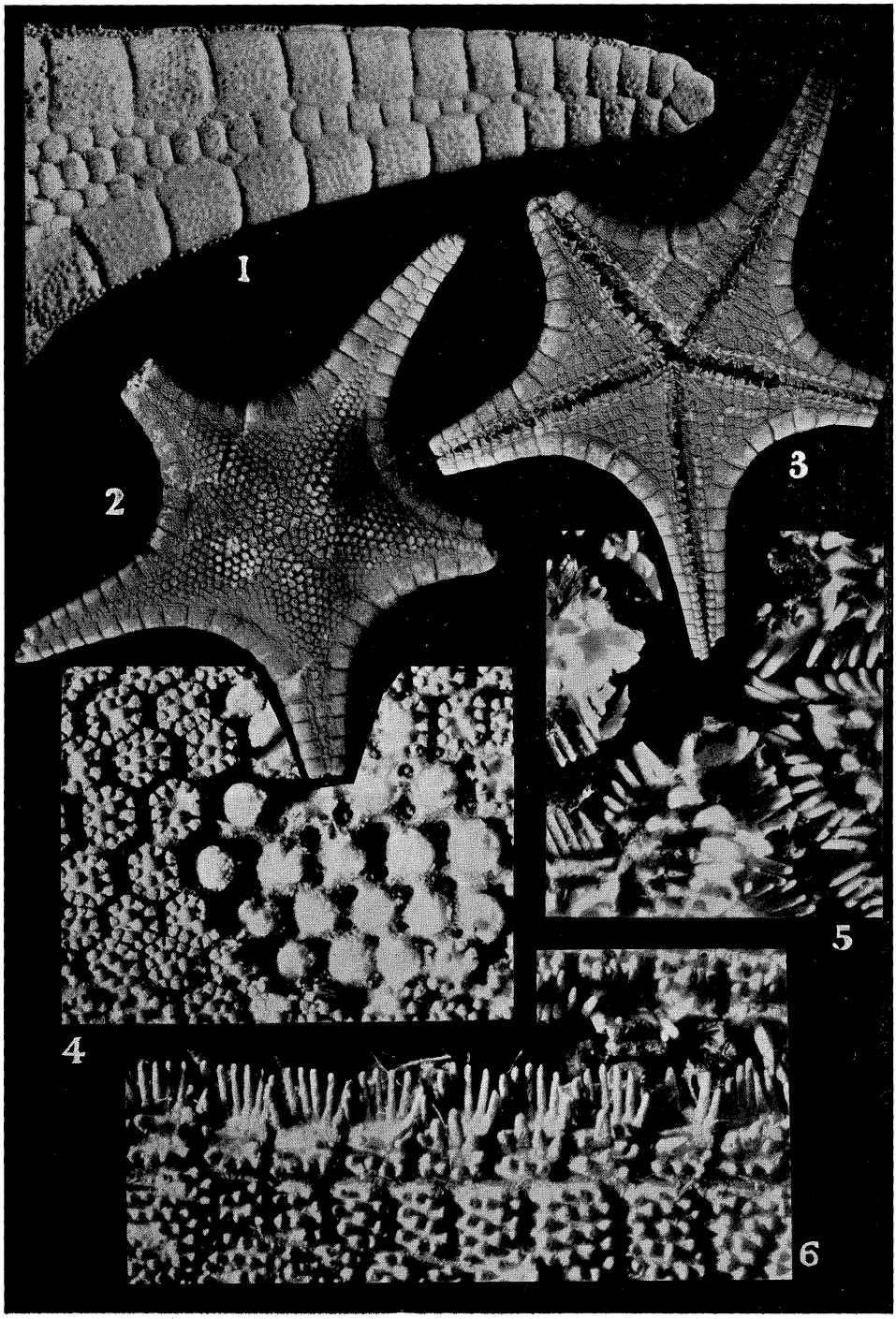
Fig. 2.—*Mediaster praestans.* Abactinal surface of holotype. x 1.5.

Fig. 3.—*Mediaster praestans.* Actinal surface of holotype. Approx. 1.5.

Fig. 4.—*Mediaster praestans.* Portion of radial area with some paxillae removed to show the underlying plates and the connect-ossicles. The papulae are seen to be arranged in sixes around each plate. x 9.

Fig. 5.—*Mediaster praestans.* Oral plates and associated spinulation. x 9.

Fig. 6.—*Mediaster praestans.* Adambalacral armature. Approx. x 9.



G. C. CLUTTON, photo.