

Chorological Synopsis of the Species.

	Ocean.	Range in Fathoms.	Nature of the Sea-bottom.
<i>Benthaster penicillatus</i> . . .	Pacific.	1070	Blue mud.
<i>Benthaster wyville-thomsoni</i> . . .	Pacific.	2900	Red clay.

1. *Benthaster wyville-thomsoni*, Sladen (Pl. XCIV. figs. 1-5).

Benthaster Wyville-Thomsoni, Sladen, 1882, Journ. Linn. Soc. Lond. (Zool.), vol. xvi. p. 242.

Marginal contour substellate. Rays broad at the base and tapering to a very fine extremity. Interbrachial arcs well indented, not rounded; the minor radius in the proportion of 50 per cent. $R = 18$ mm.; $r = 9$ mm. General body-profile much depressed, slightly elevated in the centre of the disk.

The abactinal aspect is very remarkable, recalling at first sight the appearance of *Korethraster*. This resemblance, however, is merely illusory, and arises from the presence of prominent tufts of long spinelets that project free beyond the supradorsal membrane. The pedicles of the paxillæ are comparatively short, reduced almost to tubercles on the outer part of the rays, bearing about eight to ten spinelets, which are of great length, and expand very slightly apart from one another. The paxillæ stand on cruciform ossicula, the prolongations of which are very long and thin, and the central portion where they cross little, if at all, widened.

The supradorsal membrane is represented by a loose irregular spongiform tissue, which fills up the paxillæ-crowns near their bases, and extends over the whole abactinal area. This spongy mass is not uniform in thickness or density, and nowhere forms a definite membrane. The paxillæ-spinelets protrude a great portion of their length through this tissue, and have the appearance of being entangled amongst it,—a conventional definition of their character expressing more than any rigid description of this part of the structure. No muscular fibrous bands, and no spiracula are present. The spinelets, which are transparent and vitreous in appearance, are regularly trilaminate (as may be distinctly seen in every broken section) and taper to a fine sharp point. No trace is apparent of any true membranous envelope to the paxillæ. The spinelets on the disk are much longer and more robust than elsewhere, attaining their greatest size in the neighbourhood of the centre. The oscular orifice is rather indistinct, margined by five somewhat irregular tufts or spinelets, longer and more robust than any of the others. No definite or regular valves appear to be formed. It is doubtful to what extent the dermal chamber is