

very massive, and generally somewhat cuboidal; while the next few are narrower with flattened sides, but still of great thickness in a dorsoventral direction. The thickness gradually diminishes, and the outer part of the pinnule consists of moderately long, somewhat flattened joints, with the dorsal edges sharpened and projecting slightly forward over the bases of their successors. The distichal pinnules on the outer sides of the ray are longer and have somewhat larger joints than those borne by the radials. Beyond the distichal axillary, the size of the pinnules gradually decreases, the lower joints becoming at first prismatic and then flattened, but remaining distinctly larger than their successors for some little distance beyond the palmar axillaries. The later pinnules are short and styliform.

The disk bears numerous small scaly plates, which are more thickly grouped on the anal tube than elsewhere. Disk-ambulacra strongly but irregularly plated; those of the arms distinctly above the arm-groove, and supported by regular bifid plates which become differentiated on the pinnules into covering plates and ill defined side plates.

Colour when fresh—the stems almost white, and the crowns light yellow or light reddish-orange (Moseley); in spirit, white or whitish-brown.

*Locality*.—Station 192, September 26, 1874; in the Arafura Sea, off the Ki Islands; lat. 5° 49' S., long. 132° 14' E.; 140 fathoms; blue mud. Seven specimens, and possibly more.

*Remarks*.—This species is readily distinguished from its nearest ally (*Metacrinus cingulatus*) by the characters of its stem-joints (Pl. XXXIX. figs. 3–11). They are much more sharply stellate than in that type (Pl. XLI. figs. 1–3), having deeper re-entering angles; while the horizontal ridges on the sides of the internodal joints are generally not continuous, but interrupted at the angles, which are somewhat produced outwards (Pl. XXXIX. fig. 3). One specimen presents a curious variation in this respect. The horizontal ridges on the thicker joints are enlarged so as to have a somewhat diamond shaped aspect, with more or less produced lateral angles (Pl. XXXIX. fig. 11); and when this ridge is large it shows itself very plainly in a terminal view of the joint-face, outside the line of teeth (compare Pl. XXXIX. figs. 8 and 11). In this specimen too the downward extension of the basals over the upper stem-joints is especially well marked, and the supra-nodal joint is rather more hollowed to receive the cirrus-bases than it is in the type. The stems of five specimens all terminate below in a nodal joint. In two cases there appears to have been an attached portion of stem beneath; for the surface of this lowest nodal joint is comparatively fresh and its central canal visible; but in the other three stems this surface is somewhat worn, and I cannot make out the opening of the central canal, which appears to have been closed up, the animal living in a semi-free condition like *Pentacrinus wyville-thomsoni*, *Pentacrinus maclearanus*, or *Pentacrinus alternicirrus*. The respective lengths of these stems are as follows:—(1) 38·5 cm. long, closed at the thirty-fifth node; (2) 23·5 cm. long, closed