

of scales on the calyx. The ventral scales are quite rudimentary. The opercular scales are flat structures, of which the smaller ventral ones are almost completely covered by the side edges of the next lateral ones. When closed together they form a flat, not prominent operculum.

Calyx scales always broader than high, the lateral edges very unequal. The one free edge mostly contracted, that which is covered by the free edge of the others convex, broad and strongly toothed, as likewise the lower edge. The upper edge is not convex. The scales decrease in height from above downwards. Height to breadth, 0.25–0.33; 0.25–0.32; 0.17–0.38 mm. Ventral calyx spicules are spiny scales, 0.16–0.17 mm. Opercular scales, short and flat, 0.2–0.1 mm. Cœnenchyma spicules, oval, four-cornered to polygonal plates; at the base of the calyx 0.36 mm. long., 0.22 mm. broad; on the stem smaller, with the lateral edges overlapping, the covered edge always toothed, 0.12–0.23; 0.15–0.12; 0.19–0.12; 0.16–0.08 mm.

This species, in the condition of the dorsal calyx scales, unites the *Convexæ* with the *Carinatæ*, in which the two rows of calyx scales come together at an angle.

*Habitat*.—Station 163A, off Twofold Bay, Australia; depth, 150 fathoms; bottom, green mud.

### B. *Carinatæ*.

#### *Primnoella biserialis*, n. sp. (Pl. XVII. fig. 3; Pl. XXI. fig. 14).

A stem, 25 mm. long, without root and apex, bears whorls of eight polyps at wide intervals. These are covered dorsally with two longitudinal rows of scales, which come together at an angle, and form thereby a dorsal keel. The axis is thin, in the basal part yellowish-brown, and somewhat brittle from a deposit of calcareous salts, in its further course it is horny and flexible, but not in such a degree as in the two foregoing species. Thickness at the base 1 mm. The calyces commence at a height of 30 mm. up the stem, at first with whorls of four, then of six, and further on of eight polyps. The calycine apices of one whorl do not reach the bases of that of the next, there always remains an interval, averaging 1 mm. The length of the calyx reaches 1.5 mm. When laid against the stem the calyces join laterally with one another very closely, so that each whorl when viewed superficially looks like a thickening of the stem, and thereby the whole acquires an appearance like a rosary. Each calyx is covered dorsally by two alternating rows of broad, flat scales, which come together at an angle in the mid dorsal line. Sixteen to eighteen scales lie over one another in a longitudinal row. These are sharply marked off from the scales of the cœnenchyma, which form polygonal plates. Ventrally the median line is membranous, with rudimentary calcareous bodies, bounded laterally by two lateral rows of small scales. The calyx mouth is large, oval.