

continuous at the apex (Pl. XXIII. figs. 5 and 6). The polycarps are numerous and large, and of a yellow colour.

Three specimens of this species were found at Port Jackson, Australia, in from 6 to 15 fathoms.

*Polycarpa irregularis*, Herdman (Pl. XXIII. figs. 7 and 8).

*Polycarpa irregularis*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880-81, p. 72.

*External Appearance.*—The body is irregularly oblong, somewhat pyriform, erect, and rather compressed laterally. The anterior and posterior ends are narrow, and the middle two-fourths are wide, and have the dorsal and ventral edges parallel; the ventral edge is straight throughout; the dorsal slopes in its anterior and posterior fourths, but is straight in its central two-fourths. The body is attached by the narrow but irregular posterior end. The branchial aperture is terminal and prominent, and is surrounded by four large lobes and four small ones; the atrial is on the dorsal edge, rather more than one quarter of the way down; it is distinct.

The surface is very irregular; it is cut up by deep grooves and folds, and is partially covered by foreign bodies. The colour is a dirty yellowish-white.

Length of the body, 6 cm.; breadth of the body, 3.5 cm.

*The Test* is rather thick and tough; it is white and glistening on the inner surface.

*The Mantle* is thin, and the musculature is not strong.

*The Branchial Sac* has four folds upon each side. There are two or three narrow transverse vessels between each pair of wider ones. About eight internal longitudinal bars are present on the folds, and twelve in the interspaces. The meshes are transversely elongated, and contain each six stigmata.

*The Dorsal Lamina* is narrow and smooth.

*The Tentacles* are linear and rather distant; they are twenty-four in number, and are coloured black; some are rather smaller than the others, but are not placed alternately.

*The Dorsal Tubercle* is ovate in shape, but has the narrow end placed posteriorly; it is much convoluted and marked with black.

The surface of this large *Polycarpa* is curiously irregular (Pl. XXIII. fig. 7), especially at the posterior end. The test is thick and tough, and of a yellowish-white colour. The apertures are both distinct. The branchial has eight lobes, but four of them are large, while the others are merely intermediate smaller processes or folds.

In the branchial sac there are two distinct sizes of transverse vessels. Each pair of larger ones is separated by either three or, more rarely, two smaller ones (Pl. XXIII. fig. 8). The stigmata are small, and show a considerable amount of irregularity. Horizontal membranes are not much developed.