

has been already seen in several species of *Styela* (e.g., *Styela oblonga* and *Styela flava*). They are represented in this sac by four closely placed internal longitudinal bars (Pl. XXII. fig. 2, *br.f.*), forming meshes which contain each one stigma only.

The transverse vessels are all of one size, and are rather wide. The internal longitudinal bars are broad and ribbon-like, and bound rather wide series of meshes, of which there are three rows in each interspace. Each mesh contains six or seven stigmata, and occasionally narrow transverse bars are present, crossing them for short distances. The tentacles are numerous and very delicate. Each of the polycarps on the inner surface of the mantle is somewhat flask-shaped (Pl. XXII. fig. 3, *g.*), and has a funnel-like duct at the narrower end. The walls of this genital mass contain scattered rod-shaped calcareous spicula (Pl. XXII. fig. 4, *sp.*), rather like those found in the test of *Cynthia complanata*.

One specimen of *Polycarpa minuta* was dredged in the Antarctic Ocean (to the south of Kerguelen Island), at Station 150; February 2, 1874; lat. 52° 4' S., long. 71° 22' E.; depth, 150 fathoms; bottom temperature, 1°·8 C.; bottom, rock.

*Polycarpa molguloides*, Herdman (Pl. XXII. figs. 5-7).

*Polycarpa molguloides*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880-81, p. 76.

*External Appearance*.—The body is transversely ovate, or sub-cylindrical; it is elongated dorso-ventrally and depressed; and is attached by the wide posterior end. The apertures are distant, they are both on the anterior end (upper surface), and are inconspicuous.

The surface is entirely covered by a thick layer of sand, shells, &c. The colour is dark brown.

Length (antero-posterior), 3 cm.; breadth (dorso-ventral), 7 cm.; thickness (lateral), 4 cm.

*The Test* is moderately thick and leathery; it is covered with branched hair-like processes, to which the sand-grains, &c., are attached.

*The Mantle* adheres closely to the test; it is thick and rough, and the musculature is feeble.

*The Branchial Sac* has four folds upon each side. The transverse vessels are nearly all of one size, but occasionally a larger one is met with. There are six internal longitudinal bars on the folds, and four in the interspaces. The meshes are transversely elongated, and contain each twelve stigmata.

*The Dorsal Lamina* is a plain membrane.

*The Tentacles* are numerous and crowded; they are all of one length, and are of a dark brown colour.

This is a very remarkable species, and is exactly like a *Molgula* in external appearance (Pl. XXII. fig. 5), the body being entirely covered with a thick coating of sand and