

The branchial sac has the stigmata rather irregularly arranged (Pl. V. fig. 3). In some places they form transverse rows, while in others they run obliquely or in spirals. The transverse vessels are often imperfect, but horizontal membranes are generally present, and extremely delicate ones, running only for short distances, may be seen here and there (Pl. V. fig. 3). This branchial sac in some of its features indicates an approach to the Cynthiad type. The lips of the endostyle are prominent.

One of the larger tentacles, placed on the ventral edge of the circlet, greatly exceeds the others in size. This disproportionate development of one of the tentacles is also found in a species of *Culeolus* (*C. wyville-thomsoni*), but there it is the most dorsally placed tentacle that is gigantic.

The great distance of the dorsal tubercle from the tentacular circlet is notable. It lies immediately under the nerve ganglion, which is seen in Pl. V. fig. 2, at the base of the atrial siphon.

One specimen of *Molgula pedunculata* was obtained to the south of Kerguelen Island, at Station 150, on February 2, 1874; lat. 52° 4' S., long. 71° 22' E.; depth, 150 fathoms; bot. temp. 1°·8 C.; hard ground.

*Molgula horrida*, Herdman (Pl. V. figs. 4-7).

*Molgula horrida*, Herdman, Preliminary Report, Proc. Roy. Soc. Edin., 1880-81, p. 235.

*External Appearance.*—The body is rudely ovate, inclined towards quadrangular in shape, and somewhat compressed laterally. The anterior end is wide, rather truncated, and convex in its ventral part. The posterior end is wider than the anterior, it is convex but flattened in the middle. The ventral edge is strongly convex, with a depression in the middle of its length; the dorsal is concavo-convex, going from the anterior to the posterior end. The body is attached by the ventral part of the left side. The apertures are both on the right side near the anterior end; they are not distant, are slightly projecting, and have the lobes irregular. The branchial is half-way from the ventral edge to the centre; the atrial is near the dorsal edge.

The surface is irregular and rough, and is almost entirely covered with sand and adhering animals.

The colour, when the test is visible, is dull brown.

Length of the body, 5 cm.; breadth of the body, 5 cm.

*The Test* is thick, solid, and very stiff. It is smooth and glistening on the inner surface.

*The Mantle* is very thick but not muscular, the bands being very fine. The siphons are wide, funnel-shaped, and distinctly lobed.

*The Branchial Sac* is very thick, is of a dark green colour, and has seven folds on each side. The transverse vessels are irregular, in fact generally indeterminable, being