

The mantle is thin, and towards the posterior end becomes semi-gelatinous, and forms a solid tail-like body, which projects for a considerable distance into the large hollow of the peduncle. In the spirit specimen this "tail" was much contracted, and did not nearly fill up the hollow, with the walls of which it had no connection at any point. In minute structure it is not unlike the test, but is covered externally by a complete layer of squamous epithelium (the ectoderm) formed of diamond-shaped or short fusiform cells. There is a homogeneous matrix containing numerous rounded, fusiform, irregular, and stellate protoplasts, often crowded together. Here and there sinuses containing blood-corpuscles are met with.

The branchial sac (Pl. II. fig. 5) seems at first sight very different from that of *Ascopera gigantea*, but a comparison with the part of the latter represented on Pl. III. fig. 4, shows that the two are not so very different after all, although the arrangement in the present species is much more regular, and the stigmata are less curved, and run longitudinally, thus causing the sac to have rather a Cynthiad appearance. Molgulid characteristics are seen, however, in the irregularity in the length of the stigmata, in the way in which they cross behind the transverse vessels, thus appearing to break up the latter, and in the occasional presence of very delicate short transverse bars crossing the stigmata between the adjacent fine longitudinal vessels (Pl. II. fig. 5).

The dorsal tubercle has rather a remarkable appearance (Pl. III. fig. 2), being placed transversely, and elongated, so that its hollow is deep and narrow, while the horns are large, turned outwards (one anterior, and one posterior), and equally coiled.

The oesophageal aperture is situated far forward in the branchial sac, not far from the atrial aperture. The intestine, as in *Ascopera gigantea*, forms a long narrow loop, the rectum being parallel to the first part of the intestine.

The genital gland on the left side lies on the ventral edge of the rectum, and is large, of a bright yellow colour, and more irregular in shape than that of *Ascopera gigantea*.

The gland on the right side lies near the ventral edge, is large, and elongated antero-posteriorly. Behind it is situated the crescentic thin-walled renal sac.

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

Molgula, Forbes.

Ascidia, Müller, Zool. Dan., vol. iv. 1806. In part.

Molgula, Forbes, History of British Mollusca, vol. i. p. 36. 1853. In part.

Molgula, Kupffer, Jahresber. der Commiss., &c., p. 223. 1875. In part.

Molgula, Heller, Untersuch. ü. d. Tun. d. Adriat. Meer., Abth. iii. p. 27. 1877.

Molgula and *Anurella*, Lacaze-Duthiers, Asc. Simp. des côtes de France, p. 568.

Molgula, Traustedt, Oversigt over de fra Danmark og dets nordlige Bilande kjendte Ascidiæ Simplicis. Vidensk. Medd. Nat. Foren. i Kjøbenhavn, 1879-80, p. 421. 1880.