

*Body* usually globular, attached or free, often incrustated with sand. Branchial aperture six-lobed, atrial four-lobed.

*Test* usually thin but tough, often having hairs on the outer surface.

*Mantle* thin and membranous; musculature usually feeble; consisting chiefly of long radiating bundles arising from the sphincters, and of short fusiform clumps of fibres scattered through the mantle.

*Branchial Sac* folded longitudinally; stigmata more or less curved, coiled spirally in infundibula.

*Tentacles* compound.

*Alimentary Canal* on the left side of the branchial sac.

*Genitalia* developed on both sides.

*Renal Organ* in the form of a crescentic sac placed in the centre of the right side of the mantle, and usually containing concretions.

This genus has been so fully discussed recently by Lacaze-Duthiers in his great monograph on the Molgulidæ<sup>1</sup> that it seems superfluous to give a detailed account here of the general characters. A few special points, however, require to be mentioned. As is stated above, I have found it impossible in dealing with this collection to recognise Lacaze-Duthiers' genus *Anurella*, on account of the absence in the adult animal of any characters distinguishing it from *Molgula*.

None of the distinguishing features of the genus *Molgula* can be derived from the external appearance. Most of the species are globular and unattached, but on the other hand some are elongated, and some quite irregular in shape; some are attached, and some are even shortly pedunculated. The condition of the test also furnishes no criterion. Typically it is thin and membranous, but covered with sand-grains attached to long hair-like processes. *Molgula gigantea* has its posterior half in this condition, but the anterior part is perfectly smooth and has no incrusting sand, while *Molgula pyriformis* is perfectly free on the entire surface both from adhering sand and hairs.

The musculature of the mantle is characteristic for many of the species, but does not hold for all. It is feebly developed on the whole, leaving the mantle transparent (Pl. V. fig. 9), and consists chiefly of (1), the sphincters round the apertures, which are clearly defined and of moderate strength; (2), a series of longitudinal bundles, which radiate from the lower edge of each of the sphincters, and gradually die away as they recede from the apertures; and (3), of bundles of fibres scattered over the general surface of the mantle. These last are partly the ordinary narrow greatly elongated bands found in other groups, but they are chiefly a characteristic form found only in the Molgulidæ, namely short fusiform clumps consisting of from two to a dozen, but generally four to six, thick short fibres closely united and tapering rapidly towards both ends so as to form a

<sup>1</sup> Les Ascidies Simples des côtes de France.