specimens differ somewhat in the position of the viscera (Pl. X., compare figs. 1 and 9). The visceral mass forms a compact rounded clump, part of which is coloured dark brown, while the remainder is pale yellow (Pl. X. fig. 9). The brown portion is the alimentary canal, and the yellow is formed of the reproductive organs, part of it being the ovary and the rest the cæca of the testis. Fig. 10 shows the anterior surface of the visceral mass on which the nervous system (*n.g.*) is placed. The large dark-coloured mass is the wall of the stomach (*st.*), and the reproductive organs appear at both sides of it.

On the whole, I regard this form as being allied to *Salpa*. The condition of the visceral mass is very like the "nucleus" in *Salpa*, and occupies much the same position in the body (compare Fig. 7, p. 55, and Fig. 11, p. 93). The musculature might readily be derived from a series of transversely-running bands by an antero-posterior shortening which would approximate the bands closely, and then by a portion of the muscles being drawn out radially into the eight conical processes. The endostyle and the nervous system are in their proper places, but there seems to be no trace of a dorsal lamina; and the branchial sac is certainly in a remarkable condition. If the obliteration of the side walls of the sac in *Salpa* has been brought about by the locomotory habits of that form, of course no such change would be necessary in the case of an ally such as *Octacnemus*, which was attached, or at least not locomotor; but it is difficult to see why the stigmata in the walls of the sac should become closed up, unless perhaps nutrition and aeration were performed sufficiently by the water gaining access to the large cavities of the body through the branchial and atrial apertures, without there being any definite current.

Order III. LARVACEA.

The Larvacea are free-swimming pelagic forms, provided with a large locomotor appendage (the tail), in which there is a skeletal axis (the urochord).

A relatively large test (the "Haus") is formed with great rapidity as a secretion from the ectoderm; it is merely a temporary structure which may be cast off and replaced by another.

The branchial sac is simply an enlarged pharynx with two ventral ciliated openings (stigmata) leading to the exterior. These open independently on the ventral surface. There is no separate peribranchial cavity.

The nervous system consists of a large anterior and dorsally-placed ganglion, and a long nerve-cord, with smaller ganglia, stretching backwards from it over the alimentary canal to reach the tail, along which it runs on the left side of the urochord.