

portion of the sac slightly enlarged, and shows the wide, but very thin transverse vessels (*tr.*), and internal longitudinal bars (*i.l.*). One of the longitudinal folds is here seen (*br.f.*), and it shows nine internal longitudinal bars, four on each side and one at the edge. It is obvious from the figure how the space between two adjacent bars decreases as you work along the fold from the large mesh (*mh.*) of the space between the folds to the free edge of the fold. Pl. II. fig. 1, represents a portion of the branchial sac more magnified to show the complicated branching and anastomosing of the vessels, and the way in which the stigmata lie in different planes, there being in some places as many as three systems of vessels crossing one behind the other. A small part is shown very highly magnified in Pl. II. fig. 2, to exhibit the stigmatic ciliated cells; over the greater part of the vessels of the sac the cilia have been lost. Figure 3 shows a small part of the surface of a vessel still more highly magnified; the epithelium is squamous, and the cells are large, delicate, and distinctly nucleated. Pl. III. fig. 4, shows a part of the branchial sac where the stigmata are much more regular, the smaller vessels being less curved. This is distinctly an approach to the arrangement of the stigmata in *Ascopera pedunculata*.

The dorsal lamina (Pl. III. fig. 5, and Pl. I. fig. 2, *d.l.*), is wide, but short. There are eight large and strong tentacles (Pl. III. fig. 5), and the same number of much smaller ones, while, alternating with these sixteen, there are about the same number of very minute but still compound ones. The dorsal tubercle (Pl. III. fig. 5, *d.t.*), is large, and much coiled. There is no distinct peritubercular area.

The œsophageal aperture (Pl. I. fig. 2) is situated far forward in the branchial sac, and is ear-shaped, with a double lip on the right side. It lies on a flat triangular area at the posterior extremity of the dorsal lamina, at the point of convergence of the fourteen branchial folds (see Pl. I. fig. 2, 1-7). The œsophagus (Pl. I. fig. 3, *œ.*) is short, cylindrical, and rather narrow. It runs directly posteriorly, and opens suddenly into the wider end of the small pyriform stomach (*st.*). At the posterior narrower end of the stomach the wide intestine commences. The wall of the stomach is thick, and its outer surface is rough from the presence of a number of small rounded projections. This structure is continued on to the first portion of the intestine, but soon dies away; and the rest of the tube has a thin membranous wall through which the coiled faecal masses are distinctly seen. The wide intestine runs directly posteriorly from the stomach for a considerable distance (*i.*), then turns round ventrally, and, after running for a short distance anteriorly, turns at right angles dorsally, so as to come in contact with the first part of the intestine. Here the tube, which may now be called the rectum (*r.*), becomes very narrow, and during the remainder of its course lies in close contact with the first part of the intestine, the stomach, and finally the œsophagus.

Along the ventral edge of the rectum lies the large, yellow, sausage-like, genital gland (Pl. I. fig. 3, *g.*) with its axis directed antero-posteriorly. The duct is of moderate length (*g.d.*) and projects from the anterior end, opening into the peribranchial cavity,