

are of a rectangular outline, elongated in the direction of the axis of the digestive tube, the dorsal pair being a little shorter than the ventral. Their free surface bears a rather sharp prominent crest. The fifth plate is situated behind the other four, between the two dorsal ones; its form is almost triangular, one of the angles being directed forwards. These masticatory plates have a structure resembling that of the "shell" of the Cymbuliidæ, but are rather more dense; striæ of growth may be observed in them, and they are covered by the gastric epithelium.

Behind the muscular band the stomach gradually narrows to pass into the intestine, and into this hinder portion of the organ on the left side opens the bile-duct.

Huxley¹ asks with respect to the Limacinidæ "whether the first flexure of the intestine is also dorsal" (like the pallial cavity) "or whether, as in all other Pteropods, it is ventral." In *Limacina* from its origin the intestine bends towards the right and dorsally, and eventually opens at the right side of the pallial cavity. Its flexure is thus the same as that called "dorsal" or "hæmal" among the Gastropods (Pl. I. fig. 3).

The Circulatory and Excretory Organs.—The heart is situated at the posterior end of the pallial cavity, and is even visible, owing to the transparency of the mantle, behind the shield. It presents an auricle directed towards the left and a ventricle lying posteriorly, both contained in a pericardium, which is quite excluded from the circulation. In front of the heart is the elongated, thin-walled kidney, arising from the pericardium, with the cavity of which it communicates. It enlarges anteriorly in such a way as to form an elongated triangle whose base is forwards, and opens into the pallial cavity by a small narrow aperture.

The Generative Organs.—The gonad, which in this case is a hermaphrodite gland, occupies all the initial portion of the visceral mass. The efferent duct arises anteriorly at the ventral aspect of the gland, and then passes forwards across the intestine and to the right of the œsophagus. This duct (Pl. I. fig. 3, *j*) is very thin at its origin but expands about its middle, where its walls become glandular; it then contracts again and reaches the accessory glands (albuminiparous and muciparous glands) and the receptaculum seminis.

The genital aperture is situated at the right side of the cephalic region, and is protected by a kind of little operculum. At this opening commences the spermatic groove (Pl. I. fig. 3, *l*), formed by a fold of skin, which is directed towards the dorsal surface of the head, passes to the right side of the right tentacle, and reaches the anterior surface of the fins, where it terminates at the opening of the copulatory organ. This is the same disposition as that already known to exist in the Cavoliniidæ. When protruded the copulatory organ divides into two branches, for instance in *Limacina lesueuri* (Pl. I. fig. 2, *c*).

Nervous System.—The nervous centres are united around the œsophagus behind the buccal mass. The cerebral ganglia (Pl. I. fig. 7, *c*) are situated at the sides of the œsophagus, and connected by a long supra-œsophageal or dorsal commissure.

¹ On the Morphology of the Cephalous Mollusca, *loc. cit.*, p. 43.