

The Dorsal Lamina (Oral Band, Ventral Plait, Epibranchial Fold, Languets).

This structure occupies the region of the branchial sac directly opposite to the endostyle, and marks the dorsal edge.

In the majority of Simple Ascidiæ it is present in the form of a membrane of varying breadth, according to the species, which commences anteriorly by the union of two pads which converge from the dorsal ends of the posterior peripharyngeal band, and are separated by a groove, called by Julin the "epibranchial groove." This groove is also of varying length, according to the species. In some (*e.g.*, *Corella parallelogramma*) it is comparatively short, while in others (*e.g.*, *Ascidia venosa*) it is of considerable length. Although it frequently approaches close to the two halves of the peripharyngeal groove, it appears to be always completely shut off from both by the union of the two sides of the posterior peripharyngeal band. It is only this first or anterior portion of the dorsal lamina which is united to the mantle; the rest of it is free, the branchial sac being in this region separated from the mantle by the dorsal part of the peribranchial cavity. The epibranchial groove is lined in its entire extent with low columnar ciliated epithelium. Behind the epibranchial groove the dorsal lamina usually widens gradually as it approaches the œsophageal aperture, and then narrows suddenly, and terminates in a low ridge leading round the posterior end of the sac to join the extremity of the endostyle.

The dorsal lamina has, especially in its posterior broader part, the free edge somewhat bent round, usually to the right but sometimes to the left side (fig. 9, p. 40), so as to form a semi-canal leading down to the œsophageal aperture, and it is along this groove that the string of food-particles agglutinated with mucus passes on its way to the œsophagus. The left (convex) side¹ of the lamina is in many species marked by a series of more or less distinct transverse ridges or ribs, usually corresponding to the transverse vessels and the horizontal membranes of the branchial sac, and crossing from the base to the free edge, where they frequently terminate in projecting teeth or knobs (Pl. XXXI. fig. 7).

In different species the dorsal lamina differs considerably in its breadth and the presence and amount of development of ribs and teeth—the length depends upon the position of the œsophageal aperture.

In several genera of the Ascidiidæ (*Ciona*, *Corella*, *Abbyssascidia*, *Chelyosoma*, and *Corynascidia*) the dorsal lamina is represented by a single, or in some cases a double, series of triangular flaps or tapering finger-like processes named languets (Pl. XXV. fig. 7, Pl. XXVI. fig. 7, and Pl. XXXIV. fig. 9). These are also found in the Clavelinidæ and in some of the Cynthiidæ (*e.g.*, *Cynthia* and rarely *Styela*). In some cases the languets are united together at their bases by a narrow membrane, so as

¹ Sometimes both sides are ribbed transversely.