

Although Savigny in his "Mémoires" introduced the name *Styela*, Macleay was, as far as I am aware, the first to use it as a generic term. This was in 1823, but the genus was not accepted by subsequent writers, and the species of *Styela* were included in *Cynthia* until 1868, when Hancock made use of the word "*Styela*" in a generic sense, and 1874, when Heller returned to the original spelling, and defined the genus *Styela* as it is employed here. Kupffer ("Jahresber. der Commiss., &c.," 1875) does not recognise any of the sub-divisions of *Cynthia*, and Traustedt accepts *Styela*, not in Heller's sense, but as including *Polycarpa*.

*Styela* is distinguished from *Pelonaia* and *Bathyoncus* very clearly by the structure of the branchial sac. It is more difficult to separate it from *Polycarpa*, but as I have said above (page 149), it is convenient to give generic names to the two groups of species, until we find a connecting link. Heller gave two characteristics by which they differ,—(1), the course of the intestine, which in *Styela* forms a narrow loop, while in *Polycarpa* it takes a wide, open curve; and (2), the genitalia, which are found in *Styela* as one, two or more, but never many, long simple or branched organs, while in *Polycarpa* they form a large number of generally small and rounded bodies scattered over the inside of the mantle upon both sides of the body, and called "polycarps" by Heller.

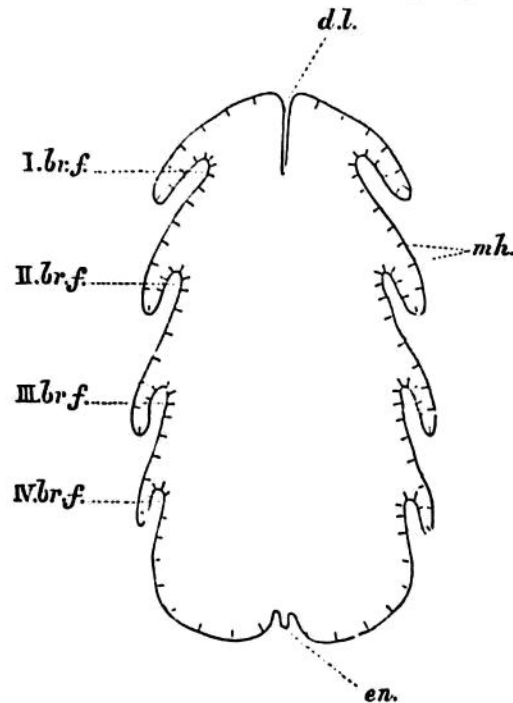


FIG. 17.—Diagrammatic transverse section of the Branchial Sac of *Styela*.

I., II., III., IV. *br.f.*, the branchial folds; *d.l.*, the dorsal lamina; *en.*, the endostyle; *mh.*, one of the meshes.

The branchial sac is found in various conditions in the genus *Styela*. In typical forms it has eight well-marked folds, four upon each side (fig. 17, I., II., III., IV. *br.f.*), and a greater number is never present; but many species have less than eight. The fold nearest to the endostyle on each side appears first to become slighter, less of a true fold, and more of a mere crowding together of the internal longitudinal bars, and then finally disappears. In *Styela grossularia* there is only one recognisable fold in the branchial