

extending beyond the branchial sac posteriorly. In this section he placed the two species *Ascidia intestinalis*, Linnæus, and *Ascidia canina*, O. F. Müller.

In 1828, Fleming ("British Animals," p. 468), adopting Savigny's term, founded the genus *Ciona*, for the common British species *Ciona intestinalis*. For a considerable time, however, this name was not received, and we find in Forbes and Hanley's "British Mollusca" (1853), the two species *intestinalis* and *canina* still retained in the genus *Ascidia*.

Things remained in this condition till 1870, when Hancock (Ann. and Mag. of Nat. Hist., ser. iv., vol. vi.) revived *Ciona* as a generic name, gave it a full and satisfactory definition, and added a new species, *Ciona fascicularis*. The name has since been used by Kupffer, Heller, and Traustedt, and may now be considered as firmly established.

The body in *Ciona* is always sessile and attached, and is usually elongated antero-posteriorly. The test is soft and almost gelatinous, being flaccid and transparent when living. The musculature of the mantle is equally developed upon both sides of the body, and is rather characteristic. A few strongly marked bundles—twelve to fourteen in *Ciona intestinalis*—are found running longitudinally from the bases of the siphons at the anterior end to the opposite extremity of the body. The other muscle bands, which are transverse and oblique, are very much weaker and more irregularly arranged. On account of the strength of the longitudinal bands, and the softness of the test, the body has very great powers of contraction.

The branchial sac is neither folded nor plicated when living and expanded, but usually when a specimen, which has been put into alcohol living, and has contracted its whole body forcibly, is examined, the branchial sac is found to be crumpled and corrugated, so as to give very much the appearance of "minute plication." This is merely caused, however, by the pressure of the surrounding mantle, and when that has been removed the sac may be spread out so as to assume more the look of its natural structure.

The most characteristic features of *Ciona* are the dorsal lamina, which is in the form of languets, like those of *Corella*, and the alimentary and genital viscera, which are situated upon the left side of the branchial sac, as in *Ascidia*, but extend beyond it posteriorly, so as to form a rudimentary abdomen. In this last character *Ciona* differs from both *Corella* and *Ascidia*, and shows affinity with *Ecteinascidia* and some of the other Clavelinidæ.

This genus contains only a small number of species. In addition to *Ciona canina*, O. F. Müller, *Ciona intestinalis*, Linnæus, and *Ciona fascicularis*, Hancock, which have been mentioned above, there remain the *Ascidia corrugata* of the "Zoologia Danica," which is probably either *Ciona canina* or *Ciona intestinalis*, Alder's¹ *Ascidia pulchella*, which may possibly be merely a variety of *Ciona intestinalis*, and Verrill's² *Ciona*

¹ Observations on British Tunicata, Ann. and Mag. Nat. Hist. ser. iii., vol. xi., 1863.

² Description of some imperfectly known and new Ascidiæ from New England, Amer. Journ. of Sci. and Arts, ser. iii., vol. i., No. 2, 1871.