

diagrammatic form in the following figure (Fig. 10), which shows the most essential points made out by his investigations.

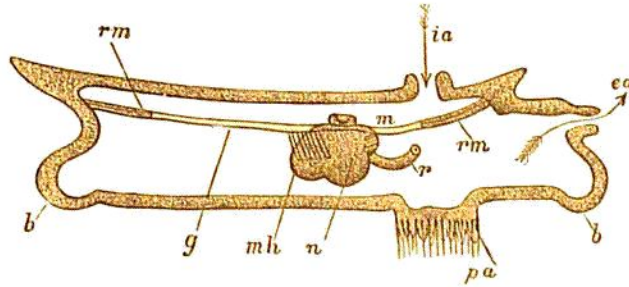


FIG. 10.—Diagrammatic section of *Octacnemus bythius* (after Moseley).

b. margin of basal disc; *i.a.* branchial aperture; *e.a.* atrial aperture; *p.a.* pedicle of attachment; *n.* nucleus; *g.* horizontal membrane; *r.m.* radiating muscles; *r.* rectum; *m.* mouth; *m.h.* muscles of nucleus.

Description of the Second Specimen, and General Remarks.

After the curious external form, the most remarkable point in regard to *Octacnemus* is certainly the condition of the branchial sac, in which there are evidently no apertures for allowing water to pass into the peribranchial cavity. In comparing this condition with that seen in the genus *Cystingia*, Moseley is probably incorrect, since there is nothing in the original description of that form to lead us to suppose that there are no openings in the branchial sac. As to the nature of the "horizontal membrane" of the above description, I agree with Moseley that it represents part at least of the branchial sac, and I would suggest that it is merely the posterior part of the ventral wall of that organ, the anterior part of which has fused with the mantle. The accompanying diagram (Fig. 11) represents my view as to the morphology of the animal, and shows its relations to the structure of other Tunicata.

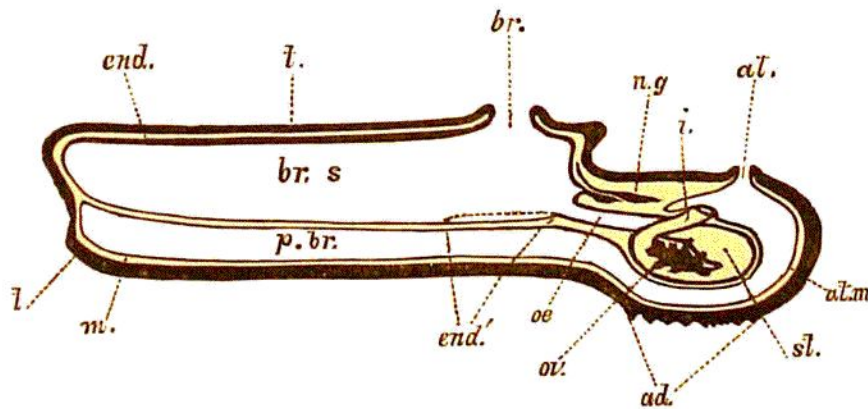


FIG. 11.—Diagram showing the probable structure of *Octacnemus*. (From left side.)

ad. probable place of attachment; *at.* atrial aperture; *at. m.* membrane lining peribranchial cavity; *br.* branchial aperture; *br. s.* branchial sac; *end. end.'* portions of endostyle; *i.* intestine; *m.* mantle; *n. g.* nerve ganglion; *o.* oesophagus; *ov.* ovary; *p. br.* peribranchial cavity; *st.* stomach; *t.* test.

The body is apparently flattened antero-posteriorly, so that the anterior or upper surface upon which the apertures are both placed is not far from the posterior or lower attached side. If the oesophageal aperture be regarded as indicating the posterior end