

Myzostomida except *Myzostoma willemoesii*). It would be desirable, however, to place this beyond a doubt by the help of sections, since it is always possible that (except in *Stelechopus* and the encysted species) there may be microscopic rudiments of suckers remaining; and, on the other hand, it is possible that certain cavities on the ventral surface of many species do not really represent suckers at all, as they were formerly supposed to do. It seems also the limit of the suckers and their appearance generally varies according to the different state of contraction in which they are.

The shape and arrangement of the suckers is also of importance for classificatory purposes. In *Myzostoma calycotyle* (Pl. III. figs. 25, 26) there are stalked suckers, which have a very singular relation to the parapodia, being situated quite close to their external sides, commencing from the middle line of the body. The general rule is that they occupy the middle of the interval between two parapodia.

Alimentary Canal.

I have already spoken of the general configuration of the alimentary canal, and its influence on the outer form of the body. It remains to be stated that there are species (*Stelechopus*) in which the alimentary canal, instead of being ramified and divided into stomach, intestines, &c., is simple and straight, with only feeble indications of lateral branches. This peculiarity, accompanied as it is by other important variations from the typical structure, is of great use for systematic purposes.

Generative Organs.

The suggestion made by v. Willemoes Suhm that some Myzostomida were in all probability dioecious, has been amply verified by my investigations, and I have also to add to our knowledge of the group many facts concerning the structure and disposition of the organs themselves. The following is a general account of the structure of these organs, leaving out the genus *Stelechopus*, which is but imperfectly known. The cloacal aperture is situated on a papilla, and is the common opening for the rectum and oviduct. The male sexual openings are two, corresponding to the number of the testes; they open on the ventral surface of the body, one on each side, between the third parapodium and the margin of the body. The apertures are sometimes simple, but sometimes their borders are prolonged into a tube-like continuation which is very contractile, and may assume therefore very different shapes even in the same species. The male apertures are absent, or only present on one side in the Myzostomida *Cysticola*, which is owing to the fact that the testes in this group are either absent or unilaterally developed.