

*Stelechopus* numerous parallel muscle bundles (fig. 1, *mm.*), reaching on both sides from the intestine to the integument. The intestine (*i.*) is more simple in structure, and there is no development of lateral diverticula; the entire alimentary canal is a simple tube (*i.*) passing through the body; it is frequently constricted, and at each constriction there is often a slight bulging out, but there is not any regularity to be observed in the arrangement of those bulgings; only in one individual (fig. 2) there was at the commencement a rudimentary diverticulum divided into three branches. The mouth is sometimes a small transverse slit, and sometimes a conspicuous round aperture of .16 mm. diameter (fig. 3, *m.*), situated below the anterior margin of the body. It opens into a muscular tube, the pharynx (*ph.*), which does not, as it appears to do in fig. 1, pass directly into the intestine at its commencement, but opens into it some way behind from above, so that there is an anterior blind prolongation of the intestine. In none of the specimens did this pharynx project out of the mouth. With regard to the terminal part of the alimentary tract, I got no certain results; however, the tube which opens at the end of the caudal appendage would seem to be the cloaca, since the intestine appears to be continued into it, and I observed a mass of granular crumbling substance, which I believe to be fæces, projecting from it; also a muscular tube opens into it from above (*od.*), which must represent an oviduct, since there were a number of eggs visible in it. If this interpretation be right, then there is exactly the same relation between the rectum and the oviduct as in the genus *Myzostoma*. Mature ova are seen scattered through the body as oval or round bodies of .06–.1 mm diameter, with a nucleus of .03 mm. and a nucleolus of .008 mm. in breadth (fig. 7). There are also to be found at the sides of the body, between the intestine and the integument, numerous accumulations of cells, which are distinctly different from the eggs by their granular appearance and smaller and variable size; these may serve as male genital cells. Since the specimens were not very well preserved, I can say nothing positive about these cells, neither have I succeeded in finding the male genital openings. It is possible, therefore, that the male sexual products find their way to the exterior by way of the cloaca, and it would be of the very greatest importance to clear up this point, which has special bearings upon the affinities of the group with the Tardigrada. This is all that I have been able to make out concerning the structure of this highly interesting form; too little, seeing its great importance, but sufficient to warrant its separation from the other *Myzostomida*.

*Host.*—*Hyocrinus* and *Bathycrinus*, off Crozet Islands, 1600 (Station 147) and 1375 fathoms, Challenger Expedition.<sup>1</sup>

<sup>1</sup> The label on the two preparations of v. Willemoes Suhm is "*Myzostomum* from *Hyocrinus*, 1600 fathoms, off Crozet Islands," but the passage in his sixth letter, which undoubtedly refers to these specimens, says:—"Ausser diesen gewöhnlichen *Myzostomen* gibt es übrigens auf Crinoiden noch andere allerdings mit diesen verwandte Parasiten, die ich im antarktischen Meer bei den Crozet-Inseln auf den aus 1375 Faden heraufgebrachten Gattungen *Hyocrinus* und *Bathycrinus* fand, *Myzostomiden* die ich einst daheim in Musse zu bearbeiten hoffe" (*Zeitschr. f. wiss. Zool.*, Bd. xxvi. p. lxxix.).