

Sir Wyville Thomson, and a number of portions of arms of *Pentacrinus*. This species does not produce real cysts upon the arms of its host, but only swellings of several (3-6) joints, which gradually disappear. In fig. 9 there is displayed a swollen arm viewed from the dorsal surface and from the right and left sides. The swollen segments of the arms are not placed so close together as in the normal healthy arm, and are irregular in shape, being sometimes partially replaced by intercalated plates; the basal pieces of the pinnules that arise from these joints are considerably enlarged. The cavity where the *Myzostoma* lives lies between two neighbouring joints; it opens on to the exterior by a slit which is bordered in an irregular fashion. If more than one *Myzostoma* be associated together in the same malformation, then the cavity of this is divided up into secondary cavities, one for each parasite. Thus in fig. 9 the swollen portion of the arm shows two cavities, separated from each other by a thick calcareous wall, and each opening by a separate aperture and ending in a tube-like prolongation on the ambulacral furrow. Fig. 10 represents the arm (fig. 9C) cut in the direction of the arrow and viewed from the distal end. In each cavity is a *Myzostoma*, with the anterior end turned towards the tube-like prolongation on the ambulacral furrow, and the pharynx extends out of the aperture. The swelling in one of the specimens in my possession occupied only two joints, a third joint being only slightly malformed; there was but one aperture on the dorsal side (fig. 15), and the cavity contained but a single specimen. The expression "absorption of the calcareous matter" used by v. Willemoes Suhm is not, in my opinion, happily chosen. There is in fact no absorption, but only a transference of the calcareous matter; it disappears inside in consequence of the growing *Myzostoma*, but is deposited again peripherally, and increases the thickness of the arm. Nor are the arms so brittle at the place occupied by the parasite as his description would seem to indicate; they appeared to me to possess as great a resistance as any of the other parts; the malformations, however, must interfere seriously with the mobility of the arm.

This *Myzostoma* (figs. 12, 13) is of a uniform brown colour, and like all the encysted forms has its lateral portions turned upwards, so that sometimes the marginal borders lie one upon the other (fig. 12); sometimes the dorsal surface appears to be reduced to a longitudinal furrow, so great is the folding of the sides of the body (cross section, fig. 14). Inside the cavity, the animal is placed with its ventral side turned towards the axis of the arm of the *Pentacrinus*, the dorsal fissure towards the periphery of the cavity, occasionally directly (fig. 9B) towards its opening.

The animal is rolled up in such a regular fashion that it becomes tube-like; from one end (fig. 13) projects the pharynx (*ph.*), and from the other the cloacal papilla (*cl.*), both being terminal in position. The parapodia (*p.*) are placed on each side in a semicircle, between the centre and the margin of the body; they are small, conical warts of .2 mm. in length, and lie in shallow cavities.

Suckers are entirely absent. The form of the body when unrolled is circular, and