

the margin is covered with short cirri, but the specimens were not sufficiently well preserved to enable me to fix the number; on the two specimens mounted and preserved by v. Willemoes Suhm (one is displayed in fig. 11) only a few cirri (c.) were to be observed. In these specimens, however, the abundant ramification of the intestinal cæca was very distinct; it is more abundant in this species than in any other. Cross sections show from twenty to thirty cæca on each side, irregularly branched. This rich ramification of the intestinal cæca, together with the form of the body and the existence of cirri, are the principal structural features that distinguish this species from the closely-allied *Myzostoma deformatore*, with which it agrees in many other points, including the structure of the generative organs. It is, like the above-mentioned species, hermaphrodite, but differs from the typical free-living forms, in that the male generative opening and testis are only developed upon one side of the body; the testicular follicles are concentrated into a compact mass on one side, on the other there are only small rudiments of them, and the space generally occupied by these organs is filled with the highly-developed ovarian follicles.

The individual shown in figs. 12 and 13 was 3 mm. long, the breadth of the animal rolled up was 1.7 mm.

*Host.*—*Pentacrinus alternicirrus*, P. H. C., from Station 214 (south-east of the Philippine Isles) of the Challenger Expedition. There were fourteen specimens of *Pentacrinus* dredged at this Station, some of which were inhabited by several, some by many, specimens of *Myzostoma pentacrini*, and had the arms enlarged.

62. *Myzostoma deformatore*, n. sp. (Pl. XII. figs. 1–9).

This species is parasitic in the pinnules, into which it bores its way in couples, causing them to become swollen and ovoid. This species is rarer than *Myzostoma pentacrini*. I examined four pinnules, three of which had the form shown in figs. 2 and 3, and no corresponding swelling of the arm-joint; in another one (figs. 4–6) the arm-joints (a.–c.) were swollen too.

The cysts have the same colour as the arm; their walls are calcareous, of considerable thickness and hardness, and may be recognised as malformed pinnules by their mode of attachment to the arm, especially when (figs. 2, 3) the ambulacral groove is continued along the whole length of the pinnule. The last-mentioned cyst measured 9 mm. in length, by 4.5 mm. in breadth in the middle, and ended in an obtuse point about 1 mm. in length, into which the concavity of the cyst did not enter. The arm itself was not much altered, either in form or consistence, the only alteration was a slight swelling of the joint bearing the malformed pinnule (fig. 3), and a shortening of the pinnule of the other side (fig. 2\*); but it cannot be said with any certainty that this last-mentioned alteration has anything to do with the parasite in the opposite pinnule. As is always the case in this species, the