

65. *Myzostoma willemoesii*, n. sp. (Pl. XIV. figs. 1-8).

One of the Canada balsam preparations, which were made during the voyage by v. Willemoes Suhm, and sent me by Mr. Murray at the end of 1882, contained a large and a small *Myzostoma*, and was labelled "*Myzostoma*, one pair from *Comatula*-arm-cave, Kermadec." The specimens were deeply stained with carmine, and no doubt much squeezed, as could be seen by the numerous folds. Although not much more than the contour of the animal could be observed (figs. 1, 2), it was evident that it was a new species. I received from Mr. P. H. Carpenter some additional material, which enabled me to study the form of the cyst. This species inhabits *Antedon basicurva* and *Antedon inæqualis*, P. H. C., and causes the pinnules to become spirally twisted; the margins of the spirals are in close apposition, forming a space in which the parasite lives, communicating with the exterior by an aperture at the point and by a fissure at the base. Fig. 6 represents one of these malformed pinnules in *Antedon inæqualis*, P. H. C., magnified five times, and fig. 7 shows the first three joints of this pinnule viewed from the inside (*A*) and from the outside (*B*). The ambulacral furrow is continued through the basal fissure into the interior of the cyst as far as its point. The single joints of the pinnule have, as may well be seen in fig. 7, a regular roof-shape, and each side, the one turned towards the arm, as well as the one turned away, is smooth and equal. In two cysts, however, of *Antedon basicurva*, P. H. C., and in one more than the other, the sides of the pinnule-joints that are turned towards the arm are longer than the others and irregularly notched (fig. 8, *C*). Each cyst contains a female and a male, the female being always the larger, and placed quite close to and with its ventral side attached towards the inner wall of the cyst. This species differs in many respects from the other dioecious cysticolous forms (*Myzostoma cysticolum*, *Myzostoma tenuispinum*, *Myzostoma inflator*, *Myzostoma murrayi*), and recalls the typical free-living forms, in that both male and female are furnished with powerful suckers and ten pairs of long cirri.

The female taken out of the cyst (fig. 6) is displayed in fig. 3, viewed from above, and in fig. 4 viewed from below. All the other cysticolous forms are turned upwards on both sides; but in this species it is the anterior and posterior ends of the body that are turned up, the mouth and cloaca therefore being also turned upwards. The diameter of the disk of the body, which is circular when extended, is 2.8 mm., the thickness in the middle is about the same as in a full-grown specimen of *Myzostoma glabrum*, but becomes less towards the marginal portion, which is therefore somewhat transparent. The ten pairs of cirri are not greater than .15 mm. in length; the anterior parapodia, situated close to the mouth, are the smallest (fig. 3**); the parapodia are arranged in two longitudinal rows nearer to the middle line than to the border, and are at quite equal distances from each other (fig. 4, *p*). They are small and obtusely pointed, .12 mm. long at the most;