

former possesses but one stomidium, the latter apparently must be provided each with two or three,—an inference confirmed by dissection. Since it is the rule amongst Actiniæ that the development of tentacles precedes that of mesenteries, we can also infer in this instance from the plentiful development of stomidia, an imminent addition to the mesenteries.

Genus *Aulorchis*, n. gen.

Liponemidæ, whose generative organs are modified into a tube perforating the oral lip; gonidial grooves on both sides drawn out into a long ear-like cone.

*Aulorchis paradoxa*,\* sp. n. (Pl. I. figs. 9, 10; Pl. III. figs. 2-6; Pl. IV. figs. 1-6).

Stomidia arranged in two alternating rows, approximately sixty in number.

*Habitat*.—Station 299, December 14, 1875; lat. 33° 31' S., long. 74° 43' W.; depth, 2160 fathoms. One specimen.

*Dimensions*.—Height, 4 cm.; greatest breadth (measured about half-way up the animal), 3 cm.

Among the accessory Challenger Actiniæ occurs this form, of great interest as enlarging by a new genus and new species the group of forms devoid of tentacles. Unluckily, I have had but the one solitary specimen for study, and even this was badly preserved, and had apparently suffered much from the dredge. It was exceedingly contracted; oral and pedal discs were externally unrecognisable, since both ends of the body-wall were closely drawn together. As a natural result of this condition, I have not been able to clear up many important points of the organisation so well as I could have wished. For investigation, I divided the specimen longitudinally, and dissected a sextant with scalpel and scissors, arriving at the following results.

The strongly contracted, and therefore small, pedal disc exhibits indistinct radial brownish wrinkles and furrows, and is sharply marked off from the body-wall, the surface of which is smooth. The latter is of a whitish tint, and of inconsiderable thickness, only here and there becoming more powerful, but never forming hooks or papillæ. Its consistence is less firm than that of cartilage, but considerably more so than that of Medusan mesogloea. The tissue is of a fibrous nature, composed of very fine fibrils, which are generally interlacing and reticulate. At many points, however, they are thicker and bound together in more parallel series, so that cords and lamellæ are formed, which, though staining brilliantly with carmine, are not sharply differentiated from their surroundings. These lamellæ are ranged parallel to the two surfaces, and run constantly closer to one another till a firmly united mass of fibres is formed just below the epithelium. At other points, however, the fibres are more loosely plaited, so that spaces remain between them, which are filled up by homogeneous mesogloea. In some places I detected hollow spaces in the tissue, which were devoid of an epithelial