

section it gave the impression of a disintegrated epithelium, in longitudinal it resembled a loose connective-tissue. This layer is important as containing small, spherical, deeply-staining cells, which I regard as young ova. The masses of ova are in parts so considerable as to present the appearance of mosaic, if part of the wall of the genital tube be cut out, stained, and viewed from the surface (fig. 2). Next comes the second zone of mesogloea, the layer of most importance, since ova of various sizes are embedded in it. Some of these are certainly connected with the superficial epithelium; this condition, I believe, occurs in all ova, and is effected by the fibre-arrangement characteristic of Actinian ovaries, of which remnants only could here be detected (fig. 1).

The lumen of the tube was mostly filled by a cell-detritus, but at some points was lined by a clearly ciliated epithelium (figs. 4, 6); I reckon therefore the lumen as a ciliated canal, serving for the transit of ripe ova and perhaps also of embryos, and opening to the exterior outside the oral disc. The ripe ova appear to lie on the floor of the tube, since here I found compact masses of a finely granular substance, appearing to me to resemble ova.

As to the distribution of the ova in the genital tube, I have the following facts to add: the smaller ovules are met with in sections through the upper part of the tube, forming a ring, on the one side of which the generative elements are more closely packed than on the other. This lop-sided development of sexual cells is expressed more obviously lower down, where on one side of the section they are entirely wanting, the ripening ova being only present in the other half.

With regard to the connection of the genital tube with the body of the Actinia, I have arrived at no positive results. At the pore, the organ merely perforates the oral lip without being attached to it, as I can assert both from macroscopic dissection and transverse sections; while at the lower end I have discovered no intimate connection with the mesentery; what I saw there was only an epithelial adhesion, not a transition from the mesogloea of the mesentery into that of the genital tube. Such a connection, however, must certainly occur at this point.

From my description it may be recognised that *Aulorchis* is one of the most interesting Actiniæ, and that it would be very desirable that a richer material of it should be acquired by fresh Deep Sea investigations.

#### Family 7, PHELLIDÆ.

#### Genus *Phellia*, Gosse.

*Phellia spinifera*, n. sp. (Pl. II. figs. 8, 9).

The bark-like part of the body-wall is bedecked with thorn-like pointed knobs, distributed more richly on the upper than on the lower parts.