

middle of the layer. The stomodæal gland cells are seldom found near the surface of the layer, and do not appear to be so numerous as in many other species. A number of large subcylindrical gland cells occur near the middle of the layer, which take a deep homogeneous stain in hæmatoxylin. Others, which are small and oval, are more distinctly granular. A well-marked and relatively thick nervous layer is found beneath the epithelial layer, and a number of ganglion cells may frequently be distinguished at its base. Finally, a row of ectodermal muscular fibres is applied to the surface of the mesogloea.

*Entoderm.*—In transverse sections of a tentacle the entoderm consists of a confused mass of cells, two or three rows deep, the outlines of which are not well defined. Each cell apparently contains a round or oval body with deeply-stained granules around its periphery. The zooids examined are not sufficiently well preserved to allow one to decide whether these are simply nuclei or a small type of granular gland cell interposed between more homogeneous epithelial cells. The entoderm of the body-wall contains a number of ribbon-shaped epithelial cells, each bearing a nucleus at the base of the protoplasmic dilation which reaches the surface of the layer. A number of hyaline gland cells occupy the lower portion of the layer and are interposed between the slender proximal ends of the epithelial cells. No entodermal muscular layer has been observed in this species.

*Testis.*—The whole of the zooids examined contain a large number of spermatic capsules in various stages of development. These are present in such quantity as to entirely obliterate the lumen of the cœlenteron. They appear to be developed in connection with the transverse mesenteries, but are pressed close against the entoderm of the body-wall, and also between the folds of the stomodæum. In most specimens they occupy a considerable portion of the lumen of the tentacles and are pressed into every available space. The spermatic capsules themselves are well preserved, but the tissue in which they are imbedded is more or less granular in the sections examined, so that I have been unable to make out their relations to the mesogloea of the transverse mesenteries.

### *Tylopathes crispa.*

The general structure of this species is similar to that of *Antipathella subpinnata*. The surface of the tentacles is raised into oval transverse papillæ, the centre of which, as usual, is occupied by a battery of nematocysts, with elongated nucleated fibres beneath. The bundles of nematocysts are sometimes subcylindrical, but at others they are fan-shaped and each bundle of nematocysts and fibres is contracted towards the middle, as in *Leiopathes glaberrima*. A number of hyaline gland cells are interposed between adjoining batteries of nematocysts and pass from the surface to the base of the layer. These hyaline cells contain a large number of yellowish green bodies of irregular outline; these