

from each other by a mesogloecal septum, so that on the zooidal surface of the branch there is no tissue which with justice can be considered coenenchyma. The tentacles are arranged in pairs, those situated at each end of the sagittal axis having an unusual situation. In this genus the zooid appears to clasp the sclerobasic axis to a greater extent than in other genera; thus whilst the lateral pairs of tentacles arise from the peristome, that in the sagittal axis is inserted at a very much lower level, apparently at a point corresponding with the centre of the sclerenchyma. Thus in profile view the ectoderm of the oral cone extends as a relatively flat plate towards the lateral tentacles, but at each end of the long axis of the mouth becomes suddenly depressed and follows the contour of the sclerenchyma to the middle line, and then becomes evolved to form the sagittal tentacles (Pl. IV. fig. 4).

The zooid is much compressed vertically, though not so much as in *Aphanipathes*. The tentacles are fleshy fusiform processes, but frequently in preserved specimens become much contracted. Those in the sagittal axis appear to be longer and thicker than the others, as is the case in *Leiopathes glaberrima*. There are ten mesenteries present, which have a similar arrangement and relative length to those of *Aphanipathes*, &c. The stomodæum is elongated in the sagittal axis, and the ectoderm clothing its inner wall is thrown into irregular folds. Some little distance below the oral aperture these folds become very complex, and form on each side an elongate branched tubular process, the inner walls of which have the same structure as the inner wall of the stomodæum, with which they are continuous. These convolutions occupy a position which in the main is parallel to the sagittal axis of the zooid, and possess a lumen which opens into the stomodæum.

SCHIZOPATHINÆ.

The genera forming the subfamily Schizopathinæ differ from all other Antipathidæ in a most important point—the fact that the zooids are dimorphic. The mode in which this dimorphism is brought about will be best understood by a comparison with the arrangement of parts in *Parantipathes larix*. In this species the great elongation of the zooid along the axis of the branch, *i.e.*, in the transverse axis of the zooid, leads to a corresponding increase in the length of the transverse mesenteries. In this, as in all other genera of Antipathidæ, the transverse mesenteries are the only ones which bear reproductive organs. In the Schizopathinæ the elongate zooid becomes divided by two involutions of the peristome into three sections, a central one containing the stomodæum and one at each end in which the reproductive organs are situated. These three sections may remain close together or may become separated from each other by a considerable interval. In reference to their apparent functions, the names *gastrozooid* may be given to the central zooid, and that of *gonozooid* to the one on each side of it. The sequence