

occur which stain in the same manner as the granular gland cells, but no cell wall has been observed (*cf.* Pl. XIV. fig. 6).

Mesoglaea.—The mesoglaea of *Antipathes* is similar to that of other Antipathinæ, but in many cases transverse striæ have been observed to occur in it at irregular intervals (Pl. XIV. fig. 6, *me*). It appears possible that these may be artificial products, but they have not been observed in other genera. The mesoglaea is of considerable thickness in this genus (31 to 42 μ).

Entoderm.—The entoderm is relatively thin and consists chiefly of irregular hyaline gland cells situated near the base of the layer, above which a number of small cubical cells usually occur (Pl. XIV. fig. 6, *e*). These may correspond with the epithelial cells of *Antipathella*, but their outline is not well defined in the specimens examined. The entodermal muscular layer is rudimentary and, as in *Antipathella subpinnata*, is most readily observed in vertical sections of the stomodæum.

The inner aperture of the stomodæum is somewhat funnel-shaped, and the lower border is continued for some distance along the free lower margin of the transverse mesenteries and is also continued on to the directive mesenteries. Its course is best studied by means of a consecutive series of sagittal sections. Starting from the stomodæal lumen the sections first pass through the wall of the stomodæum and a little later sections of a transverse mesentery are reached. The mesentery consists of a thin vertical plate of mesoglaea clothed on each side by a rather thin layer of entoderm of normal structure. Its base is fused with a moderately thick transverse plate of tissue, which is a reflexed portion of the stomodæum. The mesoglaea of the mesentery and stomodæum is thickened at the point of fusion. The upper surface of this transverse plate is clothed with a layer of entoderm, thicker than that of the mesentery. The lower surface consists of stomodæal ectoderm cells, which present the characteristic staining with borax-carmin. A little nearer to the lateral extremity the two directive mesenteries, which proceed from the angles of the stomodæum, are well marked. They consist, like the transverse mesentery, of a delicate strand of mesoglaea clothed on each side with entoderm, and reach to a point slightly below the recurved stomodæal plate, with which they are fused. A thickening is formed at the lower border of each directive mesentery, consisting of entoderm cells above and of stomodæal ectoderm cells beneath; the lower ectodermal border is markedly curved. The recurved stomodæal plate next loses its connection with the directive mesenteries, and in the succeeding sections becomes gradually reduced in diameter until it forms a thickening of the lower border of the transverse mesentery, which is no thicker than the terminal dilation of a mesenterial filament. Ultimately both directive and transverse mesenteries have a free thickened border consisting of cells derived from the ectoderm of the stomodæum and apparently similar to the median lobe of the Actinian mesenterial filament.

Ova.—The ova are relatively large and frequently measure 0.25 mm. in diameter.