

The ectoderm of the stomodæum is considerably folded, and contains a number of hyaline gland cells near the surface, between which are bundles of spindle-shaped cells with deeply-stained nuclei. Between the basal ends of the spindle-shaped cells another row of hyaline gland cells occurs, the base of each cell being imbedded in a thin nervous layer. A few small, oval, granular gland cells may also be distinguished at irregular intervals near the surface of the layer, which are similar to those of *Antipathes dichotoma*.

Mesogloea.—The mesogloea varies from 2 to 5 μ in thickness, and apparently only differs from that of *Antipathes* and *Antipathella* in having frequently a dentate instead of a smooth surface.

Entoderm.—The entoderm is relatively thick, and consists chiefly of oval hyaline gland cells, between which a number of elongate thread-like cells occur. The surface of the layer is usually occupied by a row of epithelial cells which taper below to a fine thread, but in portions where the entoderm is thinner this row is not distinct. The gland cells do not stain in carmine or hæmatoxylin, but frequently appear to contain a reticulate or granular coagulum (Pl. XV. fig. 3, *g*). The entodermal surface of the mesogloea bears a row of circular muscular fibres, which extend from the body-wall, through the peristome, to the tentacles. The surface of the mesogloea is dentate in many parts, and the layer of muscular fibres follows the dentate outline. In horizontal sections the middle portion of each transverse mesentery is seen to be considerably thickened (0.10 to 0.18 mm.), and contains two or more rows of gland cells. Those near the surface are hyaline, but others near the base of the layer are filled with a finely granular mass which does not stain.

The mesenterial filaments are plate-like folds of the free margin of the transverse mesenteries (Pl. XV. figs. 4, 5). In transverse vertical sections of a zooid each filament is seen to consist of two portions. The rounded and slightly dilated free extremity stains deeply, and has a structure which corresponds precisely with that of the stomodæal ectoderm, whilst the remaining portion of the filament does not stain so deeply, and consists of a median strand of mesogloea clothed on each side by entoderm. The large oval gland cells of the entoderm are very prominent (Pl. XV. fig. 5, *g*) and often measure $23 \times 16 \mu$.

Parantipathes larix.

The zooid is relatively more elongate in this species than in any other with which I am acquainted. The tentacles are elongate and slender, and the whole of the zooidal tissues are unusually thin. The body-wall only measures from 64 to 75 μ in thickness. A series of horizontal sections show the variation in the shape of the stomodæum, the main features of which appear constant. In the upper sections the lumen is slit-like or more rarely oval, and the greatest diameter corresponds with the sagittal axis. Usually