

lining. They occur also in the mesenteries, the stomatodæum, and the oral disc, and may perhaps be caused by inadequate preservation.

In the upper part of the body-wall lies, close under the endoderm, a mesodermal sphincter muscle, its length amounting to about 1 cm., while its greatest breadth reaches 5 mm. at the upper end, from which point it gradually thins out. It is of interest from several points of view; in the first place, the muscle-fibres are abnormally strong; consequently the muscle-bundles are formed of but few elements, and consist in many cases only of two to four. Again, the individual tracts are so far from running parallel to one another, that in a longitudinal section many bundles are cut absolutely transversely, others obliquely, and others for long stretches superficially; thus an appearance of extremely entangled fibres is presented (Pl. III. fig. 3a).

Finally, *Aulorchis* affords proof of the endodermal origin of the mesogloæal muscle-bundles, as we find on the endodermal side every transition from the mesogloæal bundles to the endodermal layer of circular fibres; in one place the bundles lie close under the fibrous layer, at another are in communication with it by a broader or narrower band; finally, we find slight infoldings of the endodermal muscle-layer (Pl. III. fig. 3b).

The stomidia lie in two alternating rows between the edges of the mouth and of the body-wall, somewhat nearer to the former; they are about sixty-four in number (thirty-two between two pairs of directive mesenteries). The stomidia of the inner row are larger than those of the outer; the smallness of the latter producing the impression, that they have just been formed, and that a further increase of their number is taking place. Radial ridges on the oral disc start at the edge of the body-wall and run up to the individual stomidia.

Transverse sections through the oral disc exhibit a strong mesodermal musculature; this is interrupted along the lines of mesenterial insertion, and falls therefore into marked radial bands which cause the radial ridges of the oral disc. The individual muscle-bundles contain a few strong fibres, and are so separated from one another by mesogloæal sheaths, stout or slight, that the lines of mesogloæa form dendritic figures springing now from the ectodermal, now from the endodermal side (Pl. III. fig. 2).

The mesogloæa sends into the ectoderm arborescent supporting offsets, on which to my surprise I was unable to find muscle-fibres. It seems as if in *Aulorchis* the ectodermal musculature is completely wanting; I would gladly have expressed something definite on this point, had the histological condition of the animal not been so indifferent; but the ectoderm, where present, was unfortunately reduced to a detritus, in which no structure could be detected.

In order to demonstrate how the stomidia penetrate the thickness of the oral disc, I have drawn two figures, in the one of which (Pl. III. fig. 4) are seen the openings of the tube to the exterior and to the cœlenteron; in the other (fig. 5) the section passes through a spot where the stomidial tube is closed at both ends, whence it may be