

slightly arborescent, as is shown in Pl. II. fig. 2, and arranged close to one another like the leaves of a book. At the free edge of the pleat the musculature is interrupted, since here the fibres of the mesogloea, which serve as foundation for the muscle-pleat, radiate into the epithelium. For some distance they are united in a bundle; they then part, and each fibre individually tends in the direction of the epithelial surface. The nerve-fibre layer is consequently pierced by fine fibrils, arranged parallel to and at equal distances from one another. I would have gladly determined how far the connective tissue fibres reach, and whether they are connected with individual epithelial cells or not; but in thin sections I could only follow them into the dim granular striated layer of epithelial cells, in which they were no longer distinguishable from other fibres. Attempts to exhibit the isolated fibres by brushing and agitating thin sections, or by maceration in alkali, yielded no result; and staining with picrocarmine was also unsuccessful. The latter generally stains the mesogloéal structures of a deep red, and is therefore peculiarly adapted for exhibiting the mesogloéal lamina which carries the muscles, but it refuses to differentiate the fibrils. The red tint is therefore only seen to extend so far as is expressed in the figure by shading; the fibrils probably do not stain, but only the cement substance uniting them. The condition here described may be followed on to the oral disc, inasmuch as the supporting laminae of the muscle pleats here also run out in fibres, and the individual fibres radiate to the epithelium. I have only further to remark that radial furrows, shallow and slightly expressed, run from the edge of the oral opening towards the tentacles.

The stomatodæum, in the only specimen which I could examine, was evaginated, and consequently so tightly stretched that even the siphonoglyphes were almost smoothed out, and hardly recognisable.

The mesenteries agree in number with the tentacles; all reach the stomatodæum, and bear generative organs. The younger mesenteries touch the stomatodæum somewhat further back, and are in other respects less developed than the older; but their generative organs are more voluminous than those of the first and second orders. Stomata in the mesenteries, and acontia, I have not been able to recognise.

Family 3, ACTINIDÆ, A. Andres.

Antheadæ, Hertwig.

Genus *Hormathia*, Gosse.

Actiniæ with broad diffuse endodermal sphincter; smooth thin body-wall, and parietal spherules (*i.e.* marginal spherules placed on the body-wall).