

Foraminiferal and Radiolarian skeletons, and finally, numerous Sponge-spicules of various kinds. In the cœenchyme between the polyps, the accretions are present only in small quantity, and fill here simple scattered cavities, which may be recognised after decalcification as wide lacunæ. The rest of the cœenchyme is soft; and in its homogeneous matrix we meet with large canals, lined by pigmented epithelium and traversing the cœenchyme in every direction; they are especially numerous in the lower cœenchymatous investment, which consequently presents a reticulate spongy texture. As appears from longitudinal sections, these canals are direct continuations of the cœlenteron from the base of the polyp outwards, and extend from this point upwards through the whole of the cœenchyme; they may consequently be homologised with the endodermal connecting tubes to be found in all Zoanthidæ. The mesogloea of the cœenchyme exhibits also numerous roundish cell-islets lined by epithelium, in which we may perceive the origin of such ectodermal cell-heaps as have been described for *Epizoanthus*. The whole of the endodermal epithelium is pigmented by dark granules, as are also the large endodermal connecting-tubes. On the other hand, the roundish cell-aggregations just mentioned are free from pigment granules; this difference of condition affords an indirect proof that the latter are by no means of endodermal origin, but are purely ectodermal structures. Finally, the soft cœenchyme exhibits fine nucleated fibres starting from the endoderm, and, as is usual, numerous mesogloéal cells provided with fine processes.

“The main bulk of the whole colony is to be regarded as cœenchyme; the individual polyps consist merely of a mesogloéal cylinder lined internally by endoderm, of moderate thickness and homogeneous consistence. The supporting lamina of the mesenteries is of similarly weak development. Below, the latter enclose a canal filled with cells, which in the case of the macromesenteries is frequently divided up by cross anastomoses. The muscle-pennons are well developed, and appear, especially in the larger mesenteries, as branching processes, which extend over a wide stretch of the mesentery. Nothing of interest can be said about the mesenterial filaments. In none of the specimens investigated could I find generative organs. The stomatodæum is pear-shaped in section, with a well-marked siphonoglyphe.”

The sphincter is mesodermal, simple, and only slightly developed. It begins early, as a narrow strip, in that part of the body-wall which is drawn horizontally inwards, and extends without any thickening to the edge of the invaginated part. The number of the mesenteries, which are arranged on the microtype, varied in five individuals between thirty-four and forty.

Corticifera tuberculosa,* Klunzinger (Pl. I. fig. 5).

Individuals closely appressed together and flattened polygonally, generally separated by a deep furrow, and of very dissimilar sizes, so that the surface of the contracted