

fibres, which end in repeated branches under the ectoderm like those of *Zoanthus*, but are more numerous, more sharply contoured and waved repeatedly in their course. Besides the branched corpuscles of connective tissue, small and large islands of cells lie in the supporting substance; I presume that these islands of cells represent the system of cellular cords which are always found in *Zoanthus*, but are wanting in *Epizoanthus*. At certain points they are prolonged into longish sausage-shaped cords, several of which may also become united into a dendritic figure. In many parts of the cœnenchyma I still found the remains of a branched vascular system, which formed very small meshes, especially about the endodermal connective tubes. I therefore feel justified in my conjecture that the oval islands of cells are caused by the unsatisfactory state of preservation, and are produced by the disintegration of a system of anastomosing cords.

A powerful circular muscle lies in the horizontally inverted part of the wall; it is broad at the beginning of the oral disk and becomes narrower from within outwards. The imperfect state of preservation did not allow me to give any histological description of its bundles of fibrillæ which run in the mesoderm between the ectoderm and endoderm. I could not make out that it was divided into a larger and a smaller part as in *Zoanthus*.

The large size of the individual polyps of *Epizoanthus parasiticus* renders them admirably suited for dissection by means of knife and scissors. If we cut open the animal longitudinally and spread it out by turning back the upper end of the wall (Pl. III. fig. 12), we find adjacent to the latter, the double corona of long, filamentous tentacles, the aggregate number of which amounts to seventy or eighty. The tentacles of the inner row alternate with those of the outer. The oral disk extends far down, and is covered with shallow radial furrows corresponding to the tentacles. It is divided by a distinct thickening from the œsophagus, in which our attention is at once attracted to the single œsophageal groove. When spread out the œsophageal groove forms a scutiform plate, separated from the adjacent parts of the œsophagus by longitudinal furrows, and divided by a more distinct median furrow into a right and a left half; it is prolonged far below the lower margin of the œsophagus, so that it is almost twice its length. The triangular lappet formed in this way is likewise divided into two by the prolonged longitudinal furrow, and deeply indented at the end.

Below the lower margin of the œsophagus there are seen thirty-two to thirty-four septa, the zigzag margins of which are caused by the reproductive organs; these are macrosepta, the microsepta only becoming visible when the others are folded back. I examined the mutual relations of the two kinds of septa in transverse sections and with essentially the same result as G. v. Koch in *Epizoanthus axinellæ* (Morphol. Jahrb., Bd. vi. p. 359, 1880). Two pairs of directive septa lie at the ends of the sagittal axis, the dorsal pair consisting of microsepta, the ventral of macrosepta; the latter only reach the œsophagus and are