

groove; two pairs, with dorsal macrosepta and ventral microsepta, adjoin the former on either side; twelve pairs, with ventral macrosepta and dorsal microsepta, adjoin the latter. The small dorsal and the large ventral septal regions are therefore separated on either side by microsepta. There are in all thirty macrosepta and thirty microsepta.

The following observations seem to me to justify these statements. From the dissection of individual septa, it was evident to me that the œsophagus is surrounded by two kinds of septa, viz., macrosepta, which are attached along the entire length of the œsophagus; and microsepta, which end on the oral disk before it becomes raised into the oral lip. In all of them the muscular fibres which rise obliquely are very distinct, the longitudinal fibres less so.

The only example of *Sphenopus arenaceus* which I was able to examine was bisected longitudinally parallel to the sagittal plane, so that only the one half (Pl. II. fig. 10) contained the œsophageal groove and the septa fastened to it. At the end of the œsophageal groove three macrosepta followed one another before I liberated the first microseptum by dissection, whilst the adjoining part of the other half begins with a microseptum, and the macrosepta and microsepta come alternately. If we then compare the transverse section through *Zoanthus* (Pl. XIV. fig. 3), we find a similar arrangement of the septa in the region of the œsophageal groove, except that in *Sphenopus* the outermost of the four macrosepta placed in a row in *Zoanthus* is wanting. As it falls in the line through which the section has been taken in dividing the animal, it has most likely been destroyed.

At the dorsal end we first meet with a microseptum, then with a macroseptum; after which, on dissection, I found the septa arranged in the following order, two microsepta, one macroseptum, one microseptum, one macroseptum, one microseptum, one macroseptum. In the adjoining portion of the other half, I found one microseptum, one macroseptum, one microseptum, one macroseptum, two microsepta, one macroseptum. If we compare this arrangement with fig. 3 of *Zoanthus*, and consider the two pairs of microsepta discovered by dissection to be homologous with the two lateral pairs of microsepta in *Zoanthus*, we should likewise meet with the same corresponding conditions if we assume that one of the small directive septa and the adjoining macroseptum have been destroyed in making the section.

Finally, as regards the number of the septa, I determined them according to the lines of insertion which shone through the œsophagus; in this way we can settle the number of the macrosepta, with which the number of microsepta corresponds, presupposing, of course, that they are arranged in the same way as in *Zoanthus*. I found this to be the case in at least half of the septa dissected.

The reproductive organs and mesenteric filaments were cemented by mucus into a badly preserved mass, and were not adapted for examination.