

membrane forms a circular fold, with numerous small evaginations on its edge. These correspond to the intraseptal and interseptal spaces, and must be compared to the marginal spherules, which are found in the same situation in *Actinia mesembryanthemum*, and are conspicuous by their splendid colour; they are, however, not so richly furnished as in the above-named *Actinia* with the strongly refractive nematocysts, which Rötteken, Schneider, and Duncan (Proc. Roy. Soc., London, vol. xxii. p. 263) held to be retinal rods, and were thus led to regard the marginal spherules as eyes.

The circular muscle (Pl. VI. fig. 6) is not visible to the naked eye, as it is very weak, and may be easily overlooked even under the microscope. The endodermal circular muscular layer is only folded a little more thickly than at other points, and shows three to four larger and a few smaller dendritic figures in transverse section. The folded muscular lamellæ, which are supported by relatively strong connective substance, project towards the gastric space, and are not enclosed in the connective substance of the wall, and in this way an insignificant circular swelling is formed. The nature of the circular muscle as described above furnishes a further point of comparison with *Anthea cereus*, in which the organ is only slightly stronger.

The tentacles are over a hundred in number, and lie in three circles close to the peripheral margin of the oral disk; the largest of them, belonging to the innermost circle, are only 0.5 cm. long; they are all thick-walled, and as thick at the rounded end as at the base. They are pierced by a small terminal opening, which is usually perceptible to the naked eye, especially in tentacles from which the epithelium has been stripped off.

The longitudinal muscles in the ectoderm, which pass on to the oral disk as radial fibres, recall in many respects the ectodermal muscular fibres in the wall of *Cerianthus*; they are borne by very thin supporting lamellæ, which are slightly branched and lie close together, though they never attain the same extraordinary length as in *Cerianthus* (Pl. VIII. fig. 9). Here and there we find isolated mesodermal bundles of muscles, whose fibres correspond in their extreme fineness to the longitudinal ectodermal muscles. As the wide œsophagus protrudes outwards the numerous longitudinal streaks on it are almost obliterated. The œsophageal grooves are also somewhat indistinct, as the tube is folded irregularly here and there. There is no reason, however, to question their existence, as I observed the directive septa in transverse sections.

All the septa appeared to be perfect, though the youngest did not reach far down the œsophagus. I could not settle their number accurately: the portion which I cut off, and which I took to be about one-fourth of the entire animal, contained six pairs of two different sizes, the smaller alternating regularly with the larger. This would give forty-eight septa for the whole animal, which are distributed in three cycles, taking for granted that this *Actinia* follows the hexamerous type. This view is so far warranted by the undeniable approximation of *Comactis flagellifera* to the hexamerous *Anthea cereus*.