

tentacles are mesodermal; the strong sphincter, which is also enclosed in the mesoderm, lies close under the endoderm, and contracts the wall so strongly that the surface becomes arranged in ridge-like, projecting folds. The tentacles only are different; they are placed in four alternating rows, are equal to one another in size, and are much longer and more powerful than in *Dysactis crassicornis*, so that even when contracted they form slightly curved horns 3 cm. long. The most striking point, however, is the wide, gaping opening at the free end, from which one might give the animal the specific name *tubulifera*. This Actinia probably belongs to the genus *Paractis*, the smooth surface of the wall, the mesodermal circular muscle, and the equality of size in the tentacles of the individual rows being common to both. The two specimens of this Actinia before me are both 3 cm. high and 6 cm. broad at the pedal disk; they become smaller towards the upper end, the diameter of which only amounts to 2.5 cm.

The last Actinia to be considered belongs to the forms in which the tentacles have undergone retrograde formation, on account of which I have named it *Liponema multiporum*. The only specimen of it was hardened in chromic acid and also greatly injured, a combination most unfavourable for examination. The pedal disk and the lower part of the wall were torn, the œsophagus forcibly protruded and also torn, so that the oral disk was stretched and misplaced; it formed the side walls of the body, and this led me at first to take it for the wall and the wall for the pedal disk, till I discovered my mistake in examining it histologically.

The oral disk is devoid of freely moving tentacles, but has instead numerous, small stomidia, roundish openings not measuring more than 2 mm. in diameter. The tentacles in *Liponema multiporum* have undergone retrograde formation to a greater extent than in any other Actinia, as there are not the smallest remains of their walls, while in *Polyopis* these can still be recognised as thickened ridges surrounding the openings (Pl. XIV. fig. 7).

Part of the stomidia, which number several hundreds, are arranged on the margin of the oral disk in a repeatedly waved circle, the remainder lie at short distances from one another on the oral disk, on which they are distributed nearly to the oral opening. After dissecting a number of septa I became convinced that more than one stomidium communicates with each radial chamber; in fact, I believe that the marginal openings must be considered principal stomidia, the others accessory stomidia. We therefore have here the same conditions as in the Discosomidæ and Corallimorphidæ, if we consider the tentacles to be replaced by the stomidia. The oral disk is covered with numerous fine ridges which wind between the accessory stomidia and so have a very sinuous course. The radial muscles are ectodermal and borne by fine supporting folds, having the same constitution as in *Cerianthus*. I have also examined the circular muscular system of the wall; I found it thickly pleated in the whole upper region of the wall, especially in the part adjoining the oral disk, where it formed a kind of sphincter. The pleating ceases rather suddenly at the outer margin of the principal stomidia. The