

over the different radial chambers (fig. 6). There is always a distinct hole in the supporting lamella through which the ectodermal epithelium of the pedal disk sends a cellular mass projecting like a mushroom towards the gastric space above the surface of the endodermal epithelium. This epithelial mass completely closes the opening, but consists of two layers of cells, firmly pressed together; when these part asunder, which must be the case when the posterior body-end of the animal becomes distended, an open canal is formed in the epithelium, through which water can penetrate into the inside of the body. Similar arrangements probably exist in *Edwardsia*; the aboral section of this Actinia, being likewise separated from the preceding by a constriction, can be alternately distended and contracted, and during this process the openings might be of great service.

Tribe II. PARACTINIÆ.

Actinaria with septa united in pairs. Septa of each pair furnished with transverse muscular fibres on the sides turned from one another, and with longitudinal muscular fibres on the sides turned towards one another, excepting the two pairs of directive septa, which are opposite one another, and have longitudinal muscles on the sides turned from one another, and transverse muscles on the sides turned towards one another. Number of the septa not determined by the number six. Mouth fissure-shaped, œsophagus with two œsophageal grooves and two œsophageal lappets.

I have separated two forms from the Hexactiniæ because the number of their antimeres does not increase in multiples of six, and I have given them the name of "Paractiniæ" because they resemble the Hexactiniæ in the most important points, and therefore represent a parallel group. Above all, they are furnished with œsophageal grooves and have septa arranged in pairs, of which two pairs corresponding to the œsophageal grooves are placed opposite one another, have longitudinal muscles on the sides turned from one another, and are therefore true directive septa. The tentacles have undergone retrograde metamorphosis in both forms, which differ, however, so greatly from one another that I consider them as the representatives of two different families.

Family, SICYONIDÆ.

Sessile Paractiniæ with tetramerous arrangement of the septa; circular muscle mesodermal; tentacles transformed by retrograde metamorphosis into small knob-like stumps.

The most striking characteristic of the Sicyonidæ—apart from the retrograde metamorphosis of the tentacles, which is also met with among the Hexactiniæ—is the tetramerous arrangement of the septa. Hæckel, as we know, sought in his *Generelle Morphologie* for soft-membraned ancestors of the fossil Tetracorallia, and believed he had found one of their descendants in *Cerianthus*. Recent works on the anatomy of *Cerianthus*