

previously treated with chromic acid. The former were unfortunately of absolutely no use, their tissues were macerated, and the form of the body disfigured by pressure almost past recognition, whilst the latter permitted a detailed description of the body form and of many anatomical conditions; the septa had, however, suffered severely in preservation, which, as I have noticed, is usually the case in material prepared by means of chromic acid.

Making allowance for changes caused by pressure, the form (Pl. II. fig. 7) is the same in all the specimens. The body begins with a relatively small, firmly attached base, rises to a considerable height, and gradually expands like a stemless chalice up to the oral disk, which unfolds like a flower. This form is rare among the Actiniæ, especially in contracted animals, since, on the other hand, the inversion of the margins of the oral disk usually causes the body to diminish in size upwards like a cone.

The ectodermal side of the pedal disk (Pl. IX. fig. 5) is covered with numerous (more than a hundred) radial ridges, which begin at the margin, and, partly at least, extend as far as the centre. They form a very dainty figure, as they have a vandyked, wavy course, and project with unusual sharpness above the level of the disk. On the endodermal side there are strong muscular cords, piercing the bases of the septa in bundles (fig. 4); they are crossed by other muscular cords, which pass transversely through the pedal disk from the endodermal to the ectodermal side. These perforating muscular fibres originate from the two muscular layers of the septa; this is best shown in transverse sections taken perpendicularly to the direction of the septa (fig. 1). Some of the longitudinal and of the transverse fibrillæ diverge and reach the mesoderm in bundles; their fibrillæ become intermixed, as they become interwoven with one another and with the layer of the basal circular muscles. The bundles then run towards the depressions which separate the ridges on the ectodermal side, and become fastened at the bottom of them; here they split up into the fibrillæ of which they are composed (fig. 7), so that their ends appear to be dendritically branched, and remind us of the ends of the muscular fibres of the Ctenophora.

As the perforating bundles originate from the muscles of the septa, it naturally follows that they are arranged regularly in radial rows. Each septum has two hardly separate corresponding rows, one of which is derived principally from the transverse muscles, the other principally from the longitudinal muscles. This is seen in the section which I have given in fig. 3, and which was taken parallel to the boundary surfaces of the pedal disk. As the section has fallen somewhat obliquely, we see at one end the bases of the septa cut through obliquely, then the circular muscles intersected by the bundles of perforating muscles, and, finally, the bundles running in two rows through the supporting substance.

Both the intersecting bundles of muscles and the depressions on the surface of the pedal disk (fig. 1) are wanting below the beginnings of young septa. This shows that the muscular layers of the septa only grow secondarily into the supporting substance, and that the depressions on the surface are occasioned by their becoming fastened to its ectodermal side.