

The function of the muscular bundles is easily seen; they tend to raise the pedal disk at certain points from the underlying substance, and by thus forming a vacuum, cause the pedal disk to act like a sucker and secure the firm attachment of the animal.

The wall is 1 cm. thick, and is, moreover, remarkably firm, so that it furnishes a very effectual protection; it feels like cartilage or like the cellulose mantle of *Phallusia mammillata*, and, like the latter, easily separates into shreds on division. Under the microscope it shows a homogeneous fundamental substance in which fine filaments cross in all directions, and form a thickly tangled layer. Each filament runs separately, and can be followed some little way. From these the processes of the numerous minute cells are to be distinguished by their greater thickness and fine granulation.

The surface of the wall rises in numerous knobs 0.5 cm. across, which often have a small dark spot on the highest point; they are commonly arranged, though irregularly, in transverse and longitudinal rows. The wall feels otherwise quite smooth.

A special mesodermal circular muscle is present, even though in all the specimens the oral disk was widely extended, and the wall only slightly or not at all contracted. The circular muscle is of some breadth, as it measures nearly 2 cm., but its thickness can hardly be measured without the microscope; it lies close under the endoderm as a thin layer of bundles of muscular fibres (Pl. VI. fig. 3). If we consider that the body wall of the animal is not only very thick, but of cartilage-like consistency, we can easily understand that the contraction of the muscle is unable to effect rapid closure of the oral disk.

The bundles vary in strength, according as they consist of a smaller or greater number of fine muscular fibres; in their lower third they form a single layer, in which there is no perceptible further grouping; farther up, the bundles become arranged in rows, and then, as a larger quantity of connecting substance passes in between the rows, the latter radiate to the number of nine or ten into the gelatinous substance.

The wide oral disk, whose surface is covered with indistinct radial furrows, is not so strong as the wall, but, in comparison with other Actiniæ, equally rich in cartilage-like supporting substance. The radial muscles, whose bundles are compacted into a tolerably thick and firm layer, lie in the oral disk, separated from the ectoderm by a broad intermediate layer of supporting substance; some of the bundles become detached from the principal mass, and run through the fundamental connective tissue towards the endoderm, where they terminate. As they cross each other on the way they form an irregular network.

The tentacles are undeniably the most interesting portion of the oral disk, and their odd form attracts attention even on a superficial glance. They consist of two parts, a basal tuberos swelling, or bulb, and a hollow process, or tentacle tube (Pl. II. fig. 9; Pl. IX. figs. 8 and 9). The bulb is formed by a strong thickening of the supporting substance; and since this is most extensive on the peripheral side of the tentacle, the canal, which is not enlarged in other respects, runs eccentrically near the adaxial side.