

to a varying extent above the surface of the septum, and shows many variations in the details of its constitution; a second specialised but much weaker cord stretches along the wall, close to the origin of the septum. As the retractor in transverse section is placed on the septum like a pennon, Schneider and Röttcken have given it the name of "muscular pennon." On the other hand, the "parietobasilar" muscle is differentiated from the transverse muscles; it lies in the angle between the pedal disk and wall, into which it projects with a crescentic margin, like the plica semilunaris in the corner of the eye. It extends to different distances up the wall and towards the central point of the pedal disk. It originates from the transverse muscular layer, by a process of pleating which is beautifully shown in *Leiothealia nymphæa*. As the muscular fold here still lies loosely on the septum, we can pass a needle into the pouch-like interspace. Apart from the parietobasilar muscle, the transverse muscles are most strongly developed in the upper third of the body of the Actinia (Pl. II. fig. 6; Pl. IV. fig. 9; Pl. VII. figs. 5 and 12).

As the two surfaces of a septum differ from and are unequal to one another in the arrangement of the muscles, there are predispositions to a peculiar arrangement of the septa which, with few exceptions, is found in all Actiniæ, viz., that the septa are united in pairs, so that we cannot speak appropriately of single septa but of pairs of septa. The equivalent sides of the septa of the pair, i.e., the sides in which the muscles run in the same direction, are turned towards each other. As a rule, it is the sides with the longitudinal muscles, and only in two pairs the sides with the transverse muscles. These two pairs of septa occupy a perfectly fixed position in the body of the Actinia, and may consequently be used for fixing direction, on which account we shall name them the "directive" septa. The directive septa correspond to the œsophageal grooves, and are fastened to the œsophagus from the oral angle downwards to the end of the lappets of the œsophagus. They constitute the principal reason why such stress should be laid on the form of the mouth, and they themselves contribute very essentially to a more clear expression of the biradially symmetrical character of the body of the Actinia.

The history of the development of the septa will help us to understand some further characteristics of their arrangement. We see from it that the septa of a pair have generally a common origin, and that only the first six pairs form an exception to this rule. The most recent researches show that the septa of the first six pairs appear independently and at different times, and that they become united secondarily in pairs; as they are placed first, and according to a special principle, it is appropriate to distinguish them as "principal" septa from the others, the "accessory" septa. In some cases (in *Sagartia*, *Phellia*, &c.) they are permanently recognisable from the fact that they only are inserted into the œsophagus; usually, however, this peculiarity is shared by numerous accessory septa, and they are then merely distinguished by their somewhat larger size. The difference of size may, however, be almost equalised, which makes the determination of the principal septa difficult. This is, however, made easier by the fact that the two pairs