

*troglydytes*, because he mistook sections through the oral disk for sections through the œsophagus. To avoid such errors it is only needful to bear in mind that the oral disk has strong radial ectodermal or mesodermal muscles, whilst the œsophagus is almost always devoid of muscles on its ectodermal side. Oral disk and œsophagus can be also easily distinguished by the different character of the epithelium.

There are, however, numerous other difficulties attendant on the interpretation of transverse sections, as the principles of arrangement are often not visible from the large number of the septa which are pressed together and displaced by contraction. Such sections are, therefore, unadvisable in large forms, and especially in those of which we have only a single specimen at our disposal; in these cases dissection with knives and scissors is preferable. For this purpose we find out the oral angle, and open the intraseptal space of a pair of directive septa by an incision into the œsophagus; when we have cut through the base of the septum along the œsophagus, oral disk, wall and pedal disk, we have a fixed starting-point, and are then able to detach the septa pair by pair, and arrange them in series one after another. Any one at all versed in the matter will soon know from the size of the septa, from the distance of the directive septa, and from the way in which the septa follow one another, when he lights upon the next pair of principal septa: he then knows that he has examined one-sixth of the body, and does not require to investigate the remaining five-sixths, as the same formation is repeated in the usual forms of Actiniæ.

Another mode of preparation, which takes still less time, consists in detaching the pedal disk in such a way that the bases of the septa still remain in it. By this means we can easily see the arrangement of the septa, but not distinguish, however, how many of them are complete.

When we have separated and prepared the pairs of septa in the manner described, we also get a view of the distribution of the tentacles which are evaginations both of the intraseptal and the interseptal spaces. As a rule, each intraseptal space has only a single tentacle, while the number borne by the interspaces may be greater. This is by no means remarkable, as the interseptal spaces are seats of active growth. In those Actiniæ, in which there is a continual increase in the number of septa in the interspaces, there is also a continuous evagination of new tentacles, and as the formation of the latter precedes that of the former, it may happen that numerous tentacles are already present, whilst the septa belonging to them are either entirely wanting or their rudiments only perceptible. In *Antholoba*, for example, the innumerable tentacles of the umbrella margin belong chiefly to the interspaces (Pl. I. fig. 9).

Like the septa the tentacles differ in age, so that we can distinguish tentacles of the first, second, third order, &c. This often causes distinction in size, which is best seen in the Corallimorphidæ, where the entire arrangement of the septa is reflected in the size of the tentacles (Pl. II. figs. 1 and 3). The six largest tentacles belong to the primary intraseptal spaces, the next six, which are only a little smaller, to the