

knob, of several sizes, disposed in regular series at the margin of the disk, and in two circlets on its surface."

Setting aside such characters in this definition as are common to many Actiniæ, and are therefore only of secondary value for differential diagnosis, the following points remain:—(1) The stiffness and slight contractility of the body, (2) the knobbed nature of the tentacles, (3) their distribution in several series. I attach special importance to the second and third characters, but the third requires to be more clearly defined, for it often happens in the Actiniæ that some of the tentacles have migrated inwards, far on to the disk, and are separated by a broad interspace from the marginal tentacles; Moseley has not taken into account a characteristic in the position of the tentacles which distinguishes the Corallimorphidæ from nearly all true Actiniæ, viz., that two tentacles, a marginal and an intermediate, communicate with the same intraseptal space. The intermediate tentacles thus acquire special value, as they have not merely been pushed by growth from the margin towards the centre, but may be considered as new formations of independent origin. They are therefore distinctly opposed to the marginal tentacles, have no homology with anything in most other Hexactiniæ, and consequently deserve the special designation of "accessory" tentacles.

In considering the tentacles we must not forget their varying size, especially as it reveals at the first glance the whole arrangement of the body of the Actinia. Of the marginal tentacles six are the largest, and are distributed at equal distances, then follow six more the next in size, which halve the interspaces between the first six, then twelve which come in the interspaces between the first six and the second six, and so on. This also holds good for the intermediate accessory tentacles, so that we can speak of tentacle cycles of the first, second, and third orders which completely correspond to the cycles of septa. The equalisation of the tentacles, which is elsewhere met with, has not made its appearance, and the arrangement according to cycles, which must be regarded as a primitive condition, still predominates.

An equally primitive condition is shown in the distribution of the reproductive elements over all the septa, in the indistinctness of the œsophageal grooves on the œsophagus, and in the slight differentiation of the muscular system in all parts of the body. The transverse and the longitudinal muscles form a uniform, hardly even slightly pleated layer on the septa, so that both the strong retractor and the parietobasilar muscle are still wanting; the muscular layers on the oral disk and the tentacles are smooth, and there is not the least indication of a special circular muscle. All this explains the small capacity for movement in our animal, which is, moreover, due to the nature of the supporting substance, which by its toughness reminds us of cartilage, and is richly developed in the septa, the oral disk, and the wall.

The close relationship of the Corallimorphidæ to *Discosoma*, which Moseley declared probable, undeniably exists. Verrill was the first to point out (Proceedings Elliot Soc.,