

Edwardsiæ. The examination of the Challenger material has further confirmed the correctness of this view, but shows at the same time that the number of the varying types is by no means exhausted.

Most corals will doubtless be placed later on with the *Hexactiniæ*; perhaps a natural division into forms having a skeleton and forms without skeleton may not be possible, as even the closer limitation of the *Hexactiniæ* given here does not exclude the possibility of many of their families having more affinity to single families of corals than to other *Hexactiniæ*. At all events it is advisable to keep this possibility in view in investigating corals.

I shall discuss the families in an ascending series, according to the grade of their organisation, and shall define the latter from two points of view. An *Actinia* is placed lower down in the scale (1) the more uniformly the parts of the body are developed, (2) the smaller the degree of histological differentiation. The first point requires us to consider how far the septa resemble one another, how far the reproductive organs are uniformly distributed, and so forth. From the second point we must keep in view the nature of the muscular system; is it preponderately ectodermal, endodermal, or mesodermal, is there a circular muscle present and to what degree is it developed? Further, I consider the presence of the acontia, the cinclides, and the "bourses marginales" as tokens of a higher organisation. Taken from this point of view, the *Corallimorphidæ* are the lowest in every respect, the *Sagartidæ* and *Amphianthidæ* the highest.

Family, CORALLIMORPHIDÆ, R. Hertwig.

Hexamerous *Actiniæ* with a double corona of tentacles, a corona of marginal principal tentacles, and a corona of intermediate accessory tentacles. Septa slightly differentiated, all furnished with reproductive organs. Muscular system weak in all parts of the body. No circular muscle.

Corallimorphus, Moseley.

Corallimorphus, Moseley, 1877, Trans. Linn. Soc., ser ii., Zool., vol. i. p. 299.

Marginal and intermediate tentacles knobbed and distinguished from one another by their size. The largest tentacles correspond to the first cycle of septa, the smallest to the last cycle of septa and to the interseptal spaces; no terminal tentacle-openings (perforations through the extremities of the tentacles, see p. 8).

The family *Corallimorphidæ* is at present represented only by a single genus, *Corallimorphus*, which was founded by Moseley for deep-sea *Actiniæ* shortly after the conclusion of the voyage of the Challenger, and divided into two species, *Corallimorphus rigidus* and *Corallimorphus profundus*. It was considered most closely allied to Leuckart's genus *Discosoma* (Rüppell, Reisc im nordl. Africa, 1828), and characterised as follows:—"Body rigid, smooth, gelatinous, not contractile, without pores, but with an adherent base; disk circular and large; tentacles non-retractile, elongate, conical, with a rounded terminal