

vi., Communications, p. 69) what was corroborated by Klunzinger (Korallthiere des rothen Meeres, Heft i. p. 82, 1877), that the numerous tentacles, which in *Discosoma* (Verrill and Klunzinger) and in the allied *Homactis* and *Stephanactis* (Verrill) are always united in a radial series or a group, are connected with the same radial chamber. The circular muscle seems also wanting in *Discosoma*, as the animal is not able to draw the wall over the oral disk. We might therefore incorporate the genus *Corallimorphus* with Verrill's sub-family the Discostominæ, were it not for the difference that the secondary tentacles in *Corallimorphus* are limited to a single corona, whilst in the Discostominæ they appear in larger and variable numbers. This greater regularity indicates an essentially higher grade of organisation in the Corallimorphidæ.

We must likewise bear in mind an affinity between the Corallimorphidæ and Allmann's genus *Corynactis* (Ann. Mag. Nat. Hist., ser. i., vol. xvii. p. 417), as in the latter the tentacles end in a roundish head and are partly intermediate, partly marginal. Many might also consider as points of affinity the facts that in both genera the nematocysts attain an extraordinary size, that both genera recall the skeleton-forming Zoantharia, and that the nature of the mesoderm is the same in both. The cardinal point only remains open to discussion, Are the intermediate tentacles secondary tentacles, which share the intraseptal parts with the marginal tentacles, or have they merely been forced by growth from the periphery towards the centre? This question cannot be settled by studying either the drawings or the descriptions given by Allmann, Gosse, Klunzinger, and others. Verrill also, who placed the genus *Corynactis* among the Discosomidæ, considered it as probable, but certainly not proved by actual observation that several tentacles are evaginated from each radial chamber.

Finally, it may not be superfluous to lay stress on this fact, that the double corona of tentacles does not justify us in assuming any connection between the Corallimorphidæ and the Cerianthidæ, which also have a circle of accessory tentacles in the periphery of the mouth; for what turns the scale in the definition of the grade of relationship is that the Cerianthidæ have not yet attained to the characteristic paired arrangement of the septa.

As at present there is only one genus in the whole family, it depends upon the degree of importance assigned to the special characters, whether we consider them to be characteristic of the genus merely or of the whole family. The most important undeniably are the double corona of tentacles, the equal distribution of the reproductive elements, and the absence of the circular muscle, and for this reason I have included these points in the diagnosis of the family.

*Corallimorphus rigidus* (Pl. II. figs. 1 and 4-6; Pl. IX. 11, 12; Pl. XII. 1-7).

*Corallimorphus rigidus*, Moseley, 1877, Trans. Linn. Soc., ser. ii., Zool., vol. i. p. 301.

Number of the intermediate tentacles twenty-four, of the marginal forty-eight. Origins of the septa, in the lower third of the wall and outer third of the pedal disk, shown by swollen thickenings of the supporting plate.