It is evident that these Corallines ought to be eliminated from the class of Polyps, since their vegetable nature is proved.

There are a few more animals which have been referred to the class of Polyps, such as the Lucernaria, the Eleutheria, and the fresh-water Hydra,[1] about the affinities of which I shall have more to say hereafter, when considering in detail the Hydroids and their alternate generations. I leave them aside for the present, as, on account of their small number of representatives, their position in the natural system can in no way affect the natural limits of the classes of Acalephs and Polyps. I shall also take occasion to present some considerations upon the affinities of the Rugosa,[2] a type entirely unknown at the present day, but the representatives of which are found, in large numbers, in the oldest stratified rocks forming part of the crust of our globe. So long is it since the Tunicata were removed from among the Zoöphytes, that there is hardly a naturalist living who may remember the time when they were confounded with Polyps. I need not, therefore, insist here upon their affinities with the Mollusks.

## SECTION III.

### THE CLASSES OF RADIATA.

We have thus far considered the various types of animals, chiefly with the view of ascertaining which among them are true Radiata and which are not; and it appears plainly, even from this rapid sketch, that while the Ctenophoræ, the Medusæ proper, the Siphonophoræ, the Hydroids, the Halcyonoids, and the Actinoids, are truly radiated animals, this is not the case with the Bryozoa, which properly belong to the type of Mollusks, nor with the Corallines, which are genuine Plants.

[1] Milne-Edwards refers the genus Hydra to the same class, to which he refers also the Anthozoa, the Tabulata, and the Rugosa, which he calls Zoantharia, separating, however, the genus Hydra, as a distinct sub-class; Leuckart, on the contrary, places it among the Hydroids proper. Many important papers have lately been published upon the structure of this type, but with conflicting results. While this page was in the printers' hands I received No. 31 of the Quarterly Journal of Microscopical Science for April, 1860, in which I find Prof. Allman's description of a new genus of Lucernarioid Hydroids, called Carduella, showing, more distinctly perhaps than Lucernaria proper, the Acalephian character of this family, on one hand, and also its affinity to the Rugosa, as well as to the embryonic forms of the higher Discophoræ.

[2] If, as I believe, not only the Tabulata, but also the Rugosa, belong to the Acalephs, the existence of this class upon our globe, instead of beginning in the Jurassic period, dates from the earliest geological ages characterized by the presence of organized beings. Thus far the oldest Acaleph known, was a Medusa from Solenhofen.