

SECTION VIII.

SUCCESSION OF ACALEPHS.

Thirty-three years ago, while examining the Museum of the Grand Duke of Baden, in Carlsruhe, my attention was attracted by two slabs of limestone slate from Solenhofen, the counterparts of one another, upon which a perfect impression of a Discophorous Acaleph was distinctly visible. The impression made upon my mind by the preservation, through countless ages, of an animal so soft as a jelly-fish, was so vivid, that, though I have never seen those fossils since, I well remember their general appearance. I regret the more, however, that I did not at the time make a sketch of them, since to this day they have remained undescribed; and, so far as I know, no allusion to genuine fossil Acalephs is to be found anywhere except in the first volume of this work (p. 24), where I mention the occurrence of Medusæ in the limestone of Solenhofen as indicative of the earliest period of the existence of that class upon earth. At the time I saw these fossils, our knowledge of the Acalephs was very scanty; few good illustrations existed; and the works of Eschscholtz and his followers had not yet been published: so that, had I even been conversant with every thing then known about this class of animals, I could not have determined to what family they belonged. I earnestly hope that some of the German naturalists, who of late have so largely contributed to the advancement of our knowledge of that class, may be induced by this notice to hunt up those fossils, and publish an accurate description of them with good illustrations, that their close affinity to the numerous families now distinguished among Acalephs may be ascertained. It is now a matter of great importance, for it may afford indications of the connection between the living types of Acalephs and their oldest representatives on earth; since it has been ascertained that certain Coral stocks, a large number of which occur in the Palæozoic rocks, called Tabulata by Milne-Edwards, and thus far referred to the class of Polyyps, are genuine Hydroid Acalephs, while a comparison of another type of Corals, called Rugosa by Milne-Edwards, with the Tabulata, makes it highly probable that they also are Acalephs, rather than Polyyps.

As shown before, the Tabulata, unquestionably, are Hydroids. Direct evidence to that effect has been obtained by an examination of the animal of Millepora; and as all the other Tabulata, both living and fossil, have the same structure of their solid Polyparium as Millepora, it is evident that the whole group must be considered as essentially acalephian. As far as the Polyparium of the Rugosa is