

duroid elements, and if free Medusæ born from Hydroids are inferior to the Discophoræ proper, and these, again, inferior to the Ctenophoræ. It is certainly a most striking circumstance, that the only fossil free Acalephs known should be a Discophorous Medusa, for it is the type we should naturally expect to follow Hydroids in course of time, when it has once been ascertained that the earliest representatives of all classes are either the lowest of their type, or embryonic in their character or synthetic in the complication of their structure, as I have shown in the first volume of this work (pp. 107-122).

Some general remarks upon the geographical distribution of the Acalephs should naturally find a place here; but it is so indispensable to a true appreciation of the mode of distribution of animals, that their types should be correctly referred to their respective natural divisions, that, before considering the classification of the Acalephs in its details down to the genera and species, no accurate picture of their geographical range and mutual relations in space can fairly be presented. I must, therefore, postpone the consideration of this subject to another part of this monograph, when, in addition to the information already collected, I shall be able to avail myself of the investigations made by my son upon the Acalephs of the Pacific coast of North America. It is a matter of great interest to me thus to have the means of comparing critically the Acalephs of the temperate zone, not only of the two sides of the Atlantic, but also of the Pacific, and to be able to complete, in a measure, the statements of Brandt relating to the Discophorous Medusæ collected by Mertens, most of which were described, after his death, from the drawings made by the naturalists of the *Seniavin*.

SECTION IX.

CLASSIFICATIONS OF ACALEPHS.

The improvements in the classification of the Acalephs have been the consequence of a gradual and successive expansion of the boundaries of that class, resulting from the recognition of Acalephian characters in animals at first not suspected to be at all related to them. The class, as such, has not been at once recognized as a natural group, in consequence of the want of such a striking similarity of its members, as is observed, for instance, among Birds or Insects; but it has grown by successive additions, forced, as it were, by internal evidence upon the notice of naturalists, and slowly acquired, at long intervals, by laborious, successive steps. However, the very character of this gradual progress renders the study of the