

ization, the spherosome of which is largely charged with calcareous spiculæ. I would add, that, considering all these relations of the two classes, the Echinoderms appear to me as closely related to the Acalephs, as the Acalephs are to the Polyps, and so completely built upon one and the same plan, that it is out of the question to regard them any longer as the representatives of two distinct, primary divisions of the animal kingdom.

SECTION V.

CLOSER AFFINITIES OF AURELIA.

As soon as the ephyrae have freed themselves from the strobila stock, they lose rapidly their hydroid affinities. We have seen, in a former paragraph, how intimate the relations of all the parts of an Ephyra are to those of the Scyphostoma, from which they are derived. An ephyra, properly speaking, is only a transverse segment of a scyphostoma, which has become independent of the stem from which it was once a part. But as soon as it has accomplished its liberation, new tendencies are manifested, leading towards new affinities, not perceptible in the strobila state. The ephyra grows to be a genuine Discoid medusa, with all the structural characteristics of the Discophoræ proper. As a free ephyra, however, it is already a Medusa and no longer a Hydroid; and it is interesting now to look back upon the time when the origin of the Ephyrae was unknown, and to consider what place was then assigned to them in the system. They were, for a long time, considered as an independent genus among the Discophoræ. When a naturalist, so extensively acquainted with the Acalephs as Eschscholtz was, found it natural to separate the Ephyra, as a genus, from the genus to which he referred the adult Aurelia, and to place it at the end of the family of the Medusidæ, in the immediate vicinity of the naked-eyed Medusæ, this is significant, as indicating the great difference existing between the young and the perfect Medusa; but it also marks the direction in which the difference points: it is towards the lower Discophoræ, the Cryptocarpæ of Eschscholtz, which I propose to unite with the Hydroids. Yet, even at this early period of its existence, our Aurelia shows already signs of its true affinities; for, as soon as the sexual organs begin to be formed, they occupy distinctly an interambulacral position, as in all genuine Discophoræ, and do not follow the course of the radiating chymiferous tubes, as in the naked-eyed Medusæ. The points in which the younger ephyrae agree more nearly with the Cryptocarpæ than with the Phanerocarpæ, are the direct origin of the chymiferous tubes from