

## SECTION II.

## SUBDIVISIONS OF CTENOPHORÆ, FORMING SUB-ORDERS.

A comparison of the various attempts to subdivide the Ctenophoræ is very instructive with reference to the principles upon which classifications may be based. Eschscholtz,<sup>1</sup> as early as the year 1829, divided them into three families: CALLIANIRIDÆ, with the genera *Cestum*, *Cydippe*, and *Callianira*; MNEMIDÆ, with the genera *Eucharis*, *Mnemia*, *Calymma*, and *Axiotima*; and BEROIDÆ, with the genera *Beroe*, *Medea*, and *Pandora*. Mertens admits four families: *Cestums*, *Callianiras*, *Beroes*, and *Idyas*. Lesson, who considers the whole order as a family under the name of BEROIDÆ, subdivides them into eight tribes: *Cestoidea*, with the genera *Cestum* and *Lemniscus*; *Callianiræ*, with the genera *Callianira*, *Chiaia*, *Polyptera*, *Mnemia*, *Bucephalon*, and *Bolina*; *Leucothoææ*, with the single genus *Leucothoæa*; *Calymmææ*, with the genera *Calymma*, *Eucharis*, *Aleinoe*, *LeSueuria*, and *Axiotima*; *Neisidæ*, with the genus *Neis*; *Ocyroææ*, with the genus *Ocyroæ*; *Cydidipææ*, with the genera *Mertensia*, *Anais*, *Eschscholtzia*, *Janira*, and *Cydippe*; and the *Beroææ* proper, with the genera *Beroe*, *Idya*, *Medea*, *Cybalisia*, and *Pandora*: to which, strange to say, a number of *Diphyidæ*, *Tunicata*, *Noctiluca*, and *Bipinnaria*, are added. Leuckart, who considers them as a distinct class, subdivides them primarily into two orders, the *Eurystomata* and *Stenostomata*. Gegenbaur admits five families, which he groups under three heads: 1°, those the body of which is extended into lobes, with or without tentacles, the *Callianiridæ* and *Calymmidæ*; 2°, those which have no lobes,

<sup>1</sup> When considering the works of a master in any department of Natural History, I am in the habit, first, of identifying myself with his views as completely as I possibly can, and ascertaining how far, in the course of the progress of our science, additional evidence may have been accumulated in support of his opinions, even if the new facts should tend at the same time to modify them; for it is generally the case, that those who have been long engaged upon a difficult subject instinctively perceive relations which become more apparent only with the lapse of time. Next, I proceed to a critical revision of the bearing of each fact, in order to avoid one-sided appreciations and useless

discussions. And, finally, I present the result of my own investigations, combined with the information thus obtained from the labors of my predecessors. This method I have found particularly useful in the study of the *Aclephs*, most of which are described in so many different ways by different authors and at different periods, with such unequal knowledge of their structure, that, unless we supply the deficiencies of older writers by the light cast upon these animals from modern investigations, a large number of the most interesting types of the class would have to be entirely left out of consideration in our renewed attempts at tracing their natural affinities.