

cover it entirely, when brought together by an antitropic movement, in the direction of the antero-posterior diameter. The relative size of these lobes, as well as of the auricles, at the actinal end of the lateral chymiferous tubes, varies greatly in different representatives of this sub-order, but the lobes and auricles exist in all; in all there are four auricles, one to each lateral chymiferous tube; and in all there are only two lobes of the spherosome, each formed by the combination of two spheromeres. The locomotive flappers are limited to the compact part of the spherosome, the lateral ones being generally much shorter than the anterior and posterior ones. In no Ctenophoræ is the bilateral symmetry more prominently marked than in the Mnemiidæ; and when the lobes of the spherosome are fully extended, the cœliac diameter greatly exceeds the diaecœliac diameter.

To these three sub-orders I would refer all the Ctenophoræ I know; and unless *Cestum* proves to have marked structural peculiarities not described by the naturalists who had an opportunity of examining that genus, it must be referred to the *Cydippidæ*, with which Eschscholtz has already associated it. I believe, however, that *Cestum* is likely to prove the type of a distinct sub-order, if the account given by Eschscholtz and Mertens of its chymiferous tubes is at all correct. But the circumstance that both have overlooked the cœliac tube, which exists in all Ctenophoræ, lessens my confidence in their description. The figure of Vogt is still more defective, as it also omits the interambulacral tube which Eschscholtz represents. The most striking difference between *Cestum* and the true *Cydippidæ*, to which Eschscholtz refers this genus, consists, according to the figures I have examined, in the trend of the tentacular sac, which in *Cestum* is in the direct prolongation of the interambulacral tube, and opens on the actinal side of the spherosome, while in *Pleurobrachia* it is bent in the opposite direction and opens on the abactinal side. There can be no question on that point. LeSueur,—who has published the first figure of *Cestum*,—Eschscholtz, Mertens, and Vogt, all represent it in the same position, in illustrations which are not copied one from the other, and even represent different species. All the authors who have described *Pleurobrachia* represent that apparatus in this genus as I have myself seen it, trending in the opposite direction, with the sole exception of Grant, who erroneously represents it in a reverse position, in a paper specially intended to illustrate a nervous system which is wanting. This mistake may show the importance of studying minutely the symmetry of these animals.

Another peculiarity of *Cestum*, mentioned by some naturalists who have observed this genus, is the presence of only four rows of locomotive flappers along the abactinal side of the elongated spherosome: this is the statement of Eschscholtz. Vogt represents such flappers on both sides of the animal, and says expressly (*Zool. Briefe*, p. 257) that they exist upon all the margins of the body.