

concentric systems of motory cells in all the eight spheromeres. It is impossible to read the true family characters of the Rangiidæ and Neisidæ in Lesson's indifferent descriptions, and but for the familiarity I have acquired with the different types of *Acalephs*, I should not have ventured to point them out at all; but I hope, in this way, to call the attention of naturalists more directly to these curious species. However, while I indulge in this piece of presumption, I feel compelled to repeat a remark already made elsewhere, that the difference between characterizing a family by its peculiar structural form and simply pointing out its existence and probable differences should never be lost sight of. When considering the North American species of this type, we shall also examine how far Gegenbaur is correct in referring all the true Beroidæ to a single genus, *Beroë Brown*. Meanwhile, I would only call attention to the fact, that Lesson has referred to this genus many species which belong to the family of Cydippidæ, and were mistaken by him for genuine Beroidæ, because the specimens he noticed had lost their tentacles: such are most, if not all, his *Béroës Mélonides*.

We have thus three families of Ctenophoræ Eury stomæ: the BEROIDÆ proper, the NEISIDÆ, and the RANGIDÆ, one of which only—the Beroidæ—is satisfactorily known.

SECTION III.

THE NATURAL FAMILIES OF THE CTENOPHORÆ SACCATÆ.

As was shown in a preceding section, the Ctenophoræ Saccatæ constitute a natural sub-order, corresponding to the genera *Callianira* and *Cydippe* of Péron and Eschscholtz, to the families *Callianiridæ* and *Cydippidæ* of Gegenbaur, and to the tribe *Cydippæ*, and part of the tribe *Callianiræ*, of Lesson. We have now to consider the natural limits of the families of this group.

The genus *Callianira* of Péron, from which Eschscholtz derived the name of his family *Callianiridæ*,—in which, besides *Callianira*, he includes *Cydippe* and *Cestum*,—has not been observed for more than half a century. Our knowledge of these *Acalephs* is therefore limited to the few and rather indifferent statements included in the characteristics of the genus as described by Péron, and some other remarks,

uniformly arched, an unquestionable difference between the anterior and the posterior rows on one side and the lateral rows on the other side; and a practised eye cannot fail to perceive a marked

difference in the curve of corresponding rows of the same pair among the anterior and posterior ones, as well as among the proximate lateral rows of the same side.