

to consider the method, and not the value, of the characters assigned to the groups themselves. Inasmuch as Gegenbaur has introduced the element of form in the characteristics of his families, instead of alluding solely to the features of their structural complication, as Eschscholtz had done, he has made a decided advance over the classification of the latter. This is the more apparent when it is remembered that these structural complications are not at all overlooked by him; but, on the contrary, are made use of in grouping the families under three more comprehensive heads, to which, however, he has assigned no names, but which correspond very closely to the groups called families by Eschscholtz. It is proper, therefore, that we should inquire into the meaning of these groups, and at the same time remember also that Leuckart likewise admits divisions among the Ctenophoræ superior to the families, which he calls orders, and of which he admits two,—the EURYSTOMATA and STENOSTOMATA, the former corresponding to Eschscholtz's family Beroidæ, the latter to Eschscholtz's united families Callianiridæ and Mne-miidæ; admitting, further, that the Ctenophoræ are a class and not an order. We have thus, as subdivisions of Ctenophoræ, *three families* distinguished by Eschscholtz, corresponding to *three higher divisions, including five families* admitted by Gegenbaur, and *two orders* admitted by Leuckart.

With these facts before us it cannot be difficult to untie the knot of these conflicting views, only leaving, for the present, the question of the natural limits of all these groups out of consideration.¹ Leuckart and Gegenbaur have evidently both felt that the natural families of the Ctenophoræ are linked together by features of a more comprehensive value than family characters; but, placing only a subordinate importance in questions of classification, one of them has given no names to the groups based upon those features, while the other has called them orders. If, as I have urged again and again, families are based upon peculiar patterns of form, and orders, natural groups founded upon the degree of complication of the structure, the characters assigned by Gegenbaur and Leuckart to these divisions are truly of the kind upon which orders are founded; but, the characters of orders resting upon the sum of structural complications which determine their relative standing in the class, it is plain that special points in that complication which do not extend to all the members of the order can only lead to the recognition of secondary natural groups sharing the characteristics of orders, but not themselves orders, and for which I have proposed the name of *sub-orders*.

¹ In all discussions like the present, a perfect familiarity with the objects themselves is a necessary requirement; for if the natural features of these objects are first to be ascertained during the discussion and by the study of a given classification,

there is an end to every critical inquiry into the importance and relative value of the characters assigned to the divisions adopted by different authors, and the meaning and rank of the divisions themselves.