

Eschscholtz has founded his subdivisions of the Phanerothropæ and Cryptocarpæ, truly marks the limit between the primary subdivisions which ought to be admitted among the Discophoræ.

In the first place, the marginal veil exists in some of the Acraspeda of Gegenbaur, as well as in his Craspedota: it is, for instance, well developed in the Medusa, or *Aurelia aurita*, the most common of all the European Discophoræ, and has already been described and figured by Ehrenberg in his elaborate paper upon that species. I have also found it in another species of the same genus, *Aurelia flavidula* Pér. and LeS., which is quite as common upon the Atlantic coast of North America, as the *Aurelia aurita* is along the shores of Europe. As to the position and structure of the eyes in Discophoræ, there is in that respect no essential difference among them upon which a primary subdivision may be founded; and Gegenbaur, who has paid special attention to these organs, has already been led to discard them as a test of their closer affinities. Indeed, while these organs are altogether wanting in some of the Gymnophthalmata, others of the same division have quite as highly organized eyes as some of the Steganophthalmata; and as to the difference in their position, it is not essentially modified by the folds of the marginal disk which generally protect them, and these folds are also wanting in some of them. Moreover, all the marginal organs of the Discophoræ—those which have been described as eyes as well as those which are considered as auditive sacs—are either simple or modified tentacles, and therefore strictly homologous with one another, so much so that the differences which exist among them constitute, in my opinion, only generic differences, as the modifications, number, and position of the tentacles themselves, and can in no way be made the basis of a primary subdivision, as Forbes maintained.

The distinction introduced by Eschscholtz seems to me of higher importance, though the manner in which he has expressed the differences he perceived does not seem to have impressed other naturalists very forcibly; for all those who have made a special study of the Acalephs since his time have discarded the characters upon which he subdivided the Discophoræ into Phanerothropæ and Cryptocarpæ, and even gone so far as to consider the distinction as erroneous. It is true, Eschscholtz did not know how the Cryptocarpæ are reproduced: he did not even observe their sexual organs, and therefore united them together under that name. But the discovery of ovaries and spermaries in the majority of the Cryptocarpæ did not increase the resemblance of their reproductive organs to those of the Phanerothropæ beyond what it really is: it only showed, that, like these, they also have organs of the sexes. Had not the discovery of their presence obliterated the distinction made by Eschscholtz, it would have been remembered that in the Phanerothropæ the ovaries as well as the spermaries are complicated organs, contained in