

animals, and for a more correct appreciation of the affinities of the lower animals generally, that he deserves a prominent place in a history of their classification. (Compare vol. 1, pp. 179 and 209.) His special contributions to the systematic arrangement of the Acalephs relate chiefly to the Siphonophoræ, and are expressed in the following diagram:—

LEUCKART'S CLASSIFICATION OF THE SIPHONOPHORÆ, 1854.

- 1st Family. Calyphoridae.  
     1st Sub-family. *Diphyidae*: Abyla, Diphyes, Galeolaria, — Praya.  
     2d Sub-family. *Hippopodiidae*: Hippopodius.
- 2d Family. Physophoridae.  
     1st Sub-family. *Stephanomidae*: Apolemia, Agalma, Forskalia.  
     2d Sub-family. *Physophoridae* proper: Physophora.
- 3d Family. Rhizophysidae: Rhizophysa.
- 4th Family. Physalidae: Physalia.
- 5th Family. Velellidae: Velella, Porpita.

In the additions to the German edition of Van der Hoeven's Handbook of Zoology, Leuckart has divided the Ctenophoræ into two orders, the *Eurystomata* and *Stenostomata*, — an arrangement already hinted at by Eschscholtz and Van der Hoeven.

Since Eschscholtz, no naturalist has made more extensive and more valuable contributions to the natural history and anatomy of the Acalephs in general, than Gegenbaur, who has extended his researches to all the orders of the class, including the study of their development, in his comprehensive investigations. His classifications of the different groups of the class contain much also that is new and important, though I think he is mistaken in the rank he assigns to some of them. The different works in which he has published his researches are enumerated above (p. 27, note 13, and p. 87, note 1.) The chief importance of Gegenbaur's contributions to the classification of the Acalephs consists in the discrimination of several new families among the naked-eyed Medusæ, and more especially in the introduction of a new consideration by which to distinguish the Discophoræ proper from the naked-eyed Medusæ. It has been seen above, that Eschscholtz admitted two divisions among the Discophoræ, one of which he called Discophoræ planercarpæ, and the other Discophoræ cryptocarpæ, founding this distinction upon the presence or absence of special pouches for the reception of the sexual apparatus. Forbes admitted also two divisions, calling one Steganophthalmata, because the eyespecks are enclosed in a scalloped fold of the margin of the disk, and the other Gymnophthalmata, because the eyespecks are exposed along the margin, in close connection with the tentacles and the circular tubes. Gegenbaur founded a similar subdivision upon the presence or absence of an inverted rim along that same margin.