

the cormidia of *Abyla pentagona*, detached from the common stem, live independently and develop into a sexual *Eudoxia*.¹ Leuckart, who had made the same observation simultaneously, demonstrated further that the monogastric *Eudoxia campanula* is nothing more than the detached cormidium of the polygastric *Diphyes acuminata* (5, pp. 41, 69; 8, pp. 268, 277).

Huxley, in his excellent description of Diphyidæ, separated the monogastric forms or *Eudoxiæ* under the title "Diphyozoids."² He pointed out, with full reason, that it is necessary on practical grounds to retain generic and specific names for the single Diphyozoids, though they may possibly be only detached and independent portions of "Polygastric Diphyidæ." He gave a full anatomical description of many new or imperfectly known *Eudoxiæ*, and comparing their structure with that of the sessile cormidia of corresponding polygastric Diphyidæ, he suspected an ontogenetic connection between these two forms (*op. cit.*, 1859).

During my residence in the Canary Island, Lanzerote (in the winter of 1866-67), I had occasion to examine nearly all the interesting genera of Diphyozoids which Huxley had accurately described. I was able to confirm most of his suppositions concerning their connection with certain polygastric Diphyidæ, observing directly the development and detachment of the former from the latter (compare above, pp. 101, 102).

The metagenesis which connects the monogastric and polygastric Diphyidæ is usually combined with a peculiar metamorphosis, some interesting cases of which have recently been described by Chun (86-88).

The detached and independent cormidia of Calyconectæ—or the "Diphyozoids"—arise in two different main-forms, *Eudoxia* and *Ersæa*, which we regard here as representing two different families, Eudoxidæ and Ersæidæ. Each *Eudoxia* is composed of two medusoid persons, a sterile medusome (bract with siphon and tentacle) and a fertile medusome (gonophore). *Ersæa* differs from *Eudoxia* in the possession of a sterile "special nectophore," and is therefore composed of three medusomes.

The sterile medusome has in all Eudoxidæ the same characteristic composition of three essential parts—a bract (covering scale or hydrophyllium), a siphon placed in the dorsal part of the bracteal cavity, and a tentacle attached to the base of the siphon. The fertile medusome, or the gonophore, occupies the ventral part of the bracteal cavity.

Bract or Hydrophyllium.—The protectum or bract of each *Eudoxia* ("Deckstück or Deckblatt" of German authors) is the modified umbrella of the sterile medusome. This is very obvious in the genera *Eudoxella* (Pl. XXXII.) and *Aglaisma* (Pl. XL.), where the four radial canals of the subumbrella are preserved by heredity, whilst its muscle-plate is lost by adaptation; furthermore, the jelly cap is strongly developed, forming a thick and firm protecting shield or cap ("covering scale").

Regarding the characteristic form of the bract, I distinguish two subfamilies among

¹ 4, p. 78; 7, p. 295, Taf. xvi. figs. 1, 2.

² 9, pp. 57-66, pls. iii.-v.