Synopsis of the Families of Calyconectæ.

| I. Suborder Calyconectæ monogastricæ. | Cormidium composed of two medusomes, a sterile and a fertile, without special nectophore, | 4. Eudoxidæ. |
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| Cormus represented by a single cormidium, with a single siphon and a single tentacle. | Cormidium composed of three medusomes, a sterile, a fertile, and a special nectophore, . | 5. Ersæidæ. |
| II. Suborder CALYCONEOTÆ POLYGASTRIOÆ. One or two nectophores on the top of the stem. | $ \begin{cases} \textbf{A single nectophore,} & . \\ \textbf{Two nectophores,} & . & . \end{cases} $ | 6. Monophyidæ.7. Diphyidæ. |
| Cormus represented by a long tubular stem, which bears numerous ordinate cormidia, separated by free internodia; each cormidium with a siphon and a tentacle. A biserial nectosome on the top of the stem, composed of four to eight or more nectophores, opposite in pairs. | Each cormidium with a bract, | Desmophyidæ. Polyphyidæ. |

Family IV. EUDOXIDÆ, Haeckel, 1888.

Eudoxidæ, Hkl., System der Siphonophoren, 95, p. 32.

Definition.—Calyconectæ monogastricæ, representing a single cormidium, which is composed originally of two persons; a sterile medusome (siphon with tentacle and bract) and a fertile medusiform gonophore (male or female).

The family Eudoxidæ comprises those monogastric Calyconectæ which present in the fully developed and sexually mature state only a single cormidium, composed of two different medusomes, a sterile and a fertile. The sterile medusome is a bilateral medusoid person with three essential and constant organs, a bract (umbrella), a siphon (manubrium), and a tentacle (capturing filament). The fertile medusome is a gonophore with umbrella and manubrium, but without tentacles; the sexual cells are produced in the wall of the mouthless manubrium.

Eschscholtz (1, p. 124) in his System of the Diphyidæ, distinguished first two main groups in this family—I. Monogastricæ ("with a single suctorial tube"), Eudoxia, Ersæa, Aglaisma; and II. Polygastricæ ("with a long digestive tube bearing numerous suctorial tubes or lateral branches"), Abyla, Cymba, Diphyes.

Lesson (3, p. 437), adopting the division of Eschscholtz, and collecting the descriptions of other observers (mainly Quoy and Gaimard, 2 and 20), described a greater number of "Diphyidæ monogastricæ," with not less than nine genera (*loc. cit.*, pp. 453-462). Some other species were described by Will (65) and Busch (67).

The true nature of the monogastric Diphyidæ (called usually Eudoxiæ sensu ampliori) was not recognised before 1853. In the spring of that year Gegenbaur discovered that