

by Chun, who called it *Muggiæa kochii* (86, p. 1157, Taf. xvii. fig. 2). Chun demonstrated that this polygastric Calyconecta is a true Monophyid, and that the cormidia, arising from the common stem, become detached and sexually developed as the free monogastric generation, which was described by Busch under the name *Eudoxia eschscholtzii*.<sup>1</sup> Chun also gave the full description of its ontogeny, and found that the larva, arising from the fertilised egg of *Eudoxia eschscholtzii*, does not possess the pentagonal pyramidal nectophore of *Muggiæa*, but the edgeless campanulate nectophore of *Monophyes*; the latter afterwards buds from the base of the former, and remains when the former is detached. Chun supposed, therefore, that three different generations should be distinguished in this species—(1) *Monophyes pyramidalis* (85, fig. 1), (2) *Muggiæa kochii* (fig. 2), and (3) *Eudoxia eschscholtzii* (fig. 3). I cannot agree with this opinion, but I regard the first form (fig. 1) only as the larva of the second (fig. 2). The primary edgeless nectophore of *Monophyes* is only a provisional larval organ, and the fact that it is afterwards replaced by the secondary five-edged pyramidal nectophore of *Muggiæa* may be explained by the fundamental law of biogeny—by the hypothesis that *Monophyes* is the original ancestral form of *Muggiæa*.

The mature *Eudoxia* of *Muggiæa* is very similar to the monogastric genus *Cucullus*, the *Eudoxia* of *Diphyes*. It differs in the rounded and edgeless surface of the conical or spathiform bract, which has three or five edges in *Cucullus*. In respect of this difference, the name *Cucubalus* (given in 1824 by Quoy and Gaimard, 24) may be retained for it. The spathiform bract is obliquely conical, with a deep ventral groove, rounded dorsal convexity, pointed apex, and simple phyllocyst (compare above, Genus 11B, p. 109). The free *Eudoxia* of the Mediterranean *Muggiæa kochii* may, therefore, bear the name *Cucubalus eschscholtzii*.

A second species, slightly differing from the Mediterranean one, was observed by me in the Canary Island Lanzerote, and may retain the name *Muggiæa pyramidalis*; it differs from the former mainly in the size of the conical hydroœcium, the top of which attains half the length of the nectosac. The free *Eudoxia* of this Atlantic species has a conical bract, with a blunt apex and an ovate larger phyllocyst; it may be called *Cucubalus pyramidalis*.

A third species of *Muggiæa* is probably the Tropical Pacific form, described by Huxley in 1859 as *Diphyes chamissonis*.<sup>2</sup> It agrees with *Muggiæa pyramidalis* in the size of the high hydroœcium, but differs from this Atlantic and from the Mediterranean species in the more campanulate form of the nectophore, the denticulate shape of its edges, and the stronger teeth of its mouth. The free *Eudoxia* of this Pacific species may, perhaps, be *Cucubalus cordiformis* of Quoy and Gaimard.<sup>3</sup> *Muggiæa* differs from the preceding

<sup>1</sup> 67, p. 33, Taf. iv. figs. 7-10; Taf. v. figs. 1-9.

<sup>2</sup> 9, p. 36, pl. i. fig. 3.

<sup>3</sup> 2, p. 94, pl. iv. figs. 24-27; 24, pl. vi. fig. 1.