Subclass I. DISCONANTHÆ.

Order I. DISCONECTÆ, Haeckel, 1888.
(Pls. XLIII. to L.).

Chondrophoræ, Chamisso, 1821, **16**,[1] p. 363.
Velellidæ, Eschscholtz, 1829, **1**, p. 165.
Cirrhigradæ, Blainville, 1834, **24**, p. 303.
Porpitariæ, Haeckel, 1869, MS. Canar.

Definition.—Siphonophoræ with a permanent primary umbrella, without nectophores and bracts. Nectosome campanulate, lenticular or discoidal, including a polythalamous, originally octoradial pneumatocyst, which exhibits numerous stigmata on its upper face, and tracheæ on its lower face. Siphosome composed of a central primary siphon, and one or more concentric girdles of gonostyles (either secondary siphons, or instead of these palpons), the latter producing gonophores. The primary larva (Disconula) has a regular octoradial umbrella, with eight radial canals and a connecting circular canal at the margin, which bears eight primary radial tentacles.

The order Disconectæ comprises three families, the Discalidæ, Porpitidæ, and Velellidæ; all members of this order agree in so many important characters, and differ so widely from all the other Siphonophoræ, that I divide the whole class into two subclasses, Disconanthæ and Siphonanthæ. The first subclass, Disconanthæ, represented by the Disconectæ only, is developed from the octoradial and octonemal medusoid larva Disconula; it retains the primary corona of eight or more marginal tentacles, possesses a centradenia, and produces the polymorphous persons by budding from the subumbrella. The second subclass, Siphonanthæ, on the other hand, represented by four orders (Calyconectæ, Physonectæ, Auronectæ, and Cystonectæ), differs in the bilateral form of its mononemal larva, Siphonula; this, as well as each of the following siphons, has only a single tentacle; the centradenia is wanting, and the polymorphous persons of the cormus bud in the ventral line of the primary siphon.

History.—Eschscholtz, in his fundamental work,[2] separated from the other Siphonophoræ the family Velellidæ, comprising the genera *Porpita* and *Velella* of Lamarck (1815). So early as 1821 these were united as "Medusæ chondrophoræ" by Chamisso and Eysenhardt. Eschscholtz added as a third genus *Rataria*, and found the peculiar character of all Velellidæ in the possession of an internal polythalamous cartilaginous shell, the chambers of which are filled with air. Brandt afterwards (in 1835, **25**) separated the Porpitidæ (with circular shell, without vertical crest) from the true Velellidæ

[1] The figures in black type refer to the Bibliography at the end of the Report.
[2] System der Acalephen, 1829, p. 165, (1).