

*Palpacles* (Pl. XIX. fig. 1, *r*; Pl. XX. fig. 16, *r*).—From the upper face of the proximal base of each palpon arises a very thin tasting filament, usually two or three times as long as the palpon, but very extensible. It is usually described as an “accessory tentacle,” and represents a narrow cylindrical tubule with a very thin muscular wall, distinctly articulated, like the antenna of a longicorn insect. The palpacles of the living *Discolabidæ*, quietly floating at the surface of the sea, are usually in a perpetual feeling motion, undulating, tasting, and protruding in all directions.

*Gonostyles* (Pl. XX. figs. 11–16, *g*).—The corms of all *Discolabidæ* are monœcious, and their cormidia monoclinic, each possessing two gonostyles, a male and a female. These are placed on the peripheral margin of the vesicular spiral trunk, between the siphon and the palpon of each cormidium, the male (*gh*) below the female (*gf*). The female gonostyle is placed beyond the palpon, richly branched, and forms in the developed state an ovate bunch composed of many hundred subspherical clustered gynophores. The male gonostyle (*gh*) is placed above the siphon, and is very different in form. It is a single, very large, undivided palpon, with very contractile muscular wall; cylindrical in the expanded, slenderly pyriform in the contracted state. It is often elongated, hangs down like a tentacle, and is densely beset with numerous oblongish or spindle-shaped androphores arising from short pedicles, either arranged spirally or scattered irregularly. When the ripe androphores in the distal part of the gonostyle are detached, their pedicles remain as short knobs or papillæ (fig. 16, *hp*). (Compare 27, Heft iii. Taf. v. figs. 9–15.) The umbrella of the gonophores is small or rudimentary. The subspherical manubrium of the gynophores contains a single ovum only, and is much smaller than the oblongish manubrium of the androphores.

*Ontogeny* (Pl. XIX. figs. 5–8).—The larva which arises from the fertilised egg of the *Discolabidæ* is a Siphonula, the helmet-shaped umbrella of which (*b*) includes a pneumatophore (*p*) and has a deep ventral cleft. A large spindle-shaped siphon is suspended in the bilateral cavity of the umbrella or bract, beyond the pneumatophore, and at its dorsal side a tentacle, the tentilla of which bear each a simple subspherical cnidal knob, very different from that of the adult *Discolabidæ*. The development of this medusiform larva from the fertilised eggs of *Physophora magnifica* and its metamorphosis were observed by me in February 1867, in the Canary Island Lanzerote, and described in my *Entwicklungsgeschichte der Siphonophoren* (84, p. 17, Taf. i.–iv.).

The Challenger collection contained some larvæ of *Discolabidæ* very similar to these latter. The most remarkable are figured in Pl. XIX. figs. 5–8. Fig. 5 represents a very young Siphonula, the umbrella of which is nearly cap-shaped; the siphon possesses no tentacle, but some small buds of tentilla at its base. The larva, fig. 6, somewhat older, has a large bract with a canal, some buds of palpons, and a long tentacle, beset with a series of sessile cnidal knobs. These are replaced in the older larva, fig. 7, by pediculate spherical cnidonodes, or larval tentilla; the ventral cleft of the bract is much