

dilated basal part. Sometimes the proximal half, or the stomach, is separated by a constriction from the distal half or the proboscis. The upper or proximal half only produces by budding the numerous medusiferous gonophores, whilst the distal part, or the contractile proboscis, is armed with cnidonodes. The wall is very contractile, since the longitudinal muscles of the exoderm and the circular muscles of the entoderm are not less developed than in the large central siphon. Sometimes the wall of the gonostyles exhibits eight longitudinal folds or ribs; and often, too, the patches of cnidocysts (or the cnidonodes) are arranged into eight parallel longitudinal rows along the proboscis.<sup>1</sup>

The gastral cavity of the gonostyles opens above into a canal of the subumbrella, or of the centradenia. Its lower or distal end is a closed cæcum in the monogastric *Discolidæ*, the terminal apex being densely beset with cnidocysts. It opens by a terminal mouth in the *Porpitidæ* and *Velellidæ*; this mouth is not less contractile and expansible than the larger mouth of the central siphon. Often the former exhibits four cruciate lips, more rarely eight; sometimes it is circular, without mouth lobes (compare the descriptions of the gonostyles by Kölliker (4), Vogt (5), Leuckart (8), Huxley (9), Agassiz (57), and others).

*Gonophores*.—The medusiform gonophores arise from the proximal part of the gonostyles, rarely isolated, usually crowded in smaller or larger groups or bunches. They are in all *Disconnectæ* of the same form, and are detached from the budding gonostyle before coming to sexual maturity. The detached gonophores are very small quadriradial *Medusæ* of very simple structure. Their subumbrella exhibits four regular radial canals which unite above the velum by a circular canal (compare the above-mentioned authors).

*Tentacles*.—The limb of the umbrella is in all *Disconnectæ* armed with a corona of tentacles, in the same manner as in all fully-developed *Hydromedusæ*. They are placed not at the margin itself, but more or less inside, at its lower face, the peripheral zone of the subumbrella. They are, therefore, strictly speaking, submarginal tentacles (such as occur also in some *Medusæ*, e.g., *Drymonema*). Some authors (Claus, Alexander Agassiz, &c.) regard these organs as self-subsistent persons or zooids, and call them "prehensile polypites," "marginal polypites," "tasters," "dactylozooids," &c. But this conception is quite erroneous, and, in my opinion, there can be no doubt that the submarginal corona of tentacles in the *Disconnectæ* are the same organs as in the common *Medusæ*, both from a morphological and from a physiological point of view.

*Octoradial Corona of Tentacles*.—It is a most important fact, not hitherto pointed out as it deserves, that in the larvæ of most *Disconnectæ* there occurs a typical stage, with a corona of eight equidistant and regularly disposed tentacles. They are placed at the distal end of the eight primary radial canals which arise from the base of the central siphon, run along the subumbrella, and are connected round the margin by the circular

<sup>1</sup> Compare 57, pl. ii. figs. 1-8.