

centradenia in the Velellidæ is probably due to their pelagic habit of life, and the development of the vertical sail as an excellent means of passive locomotion. The Porpitidæ, on the other hand, are probably inhabitants of different depths, and only occasionally come to the surface; their hydrostatic apparatus and the gas-secreting gland are therefore more developed.

Gonostyles.—The numerous polypites of the subumbrella, which produce by budding the medusiform gonophores, are in the Velellidæ mouth-bearing siphons, as in the Porpitidæ, not mouthless palpons as in the Discalidæ. They are, therefore, usually called "smaller polypes," "sexual polypites," or "peripheral siphons" (shortly "perisiphons"). They occupy usually, densely crowded in great numbers, a broad gonostylar zone, and often the whole space of the subumbrella between the central siphon and the submarginal corona of tentacles. But at first their number seems to be restricted to eight or sixteen; at least this is the case in *Rataria cristata* (Pl. XLIV. fig. 2), and also in some similar young larvæ (*Ratarula*) of *Verella*. Their form and structure are the same as in the Porpitidæ, already described above (p. 36).

Tentacles.—The corona of submarginal tentacles is in the Velellidæ far less developed than in the Porpitidæ; their structure, too, is simpler than in the latter. The corona is simple, composed of a single series of filaments in *Rataria* and *Verella*; it is double or multiple, and composed of two or three (seldom more) series in *Armenista*. Their number is probably originally eight, and this occurs in some *Ratarula*-larvæ; but there are other similar larvæ in which the corona bears a variable number of tentacles irregularly disposed. Some very small and young larvæ of the *Ratarula*-form exhibit only two tentacles, at opposite poles of the major axis of the ellipse, and corresponding to the two primary stigmata of the pneumatocyst.¹ The only *Rataria* which I have observed in the adult state (with gonophores) possessed sixteen tentacles, rather regularly disposed along the limb (Pl. XLIV. figs. 1, 2). In *Verella* this number is soon increased, and amounts in the simple series usually to fifty to eighty, often more than a hundred. In *Armenista* there are usually some hundreds, or sometimes thousands; the smaller tentacles of the outer (or distal) series alternating with larger filaments of the inner (or proximal) series.

Form of the Tentacles.—The general structure of the tentacles in the Velellidæ is the same as in the Porpitidæ, but their form is much simpler, and the three rows of stalked cnidospheres, which are characteristic of the tentacles of the latter family, are wanting. The submarginal filaments of all Velellidæ are simple cylindrical tubes, sometimes slightly compressed, usually gradually tapering towards the rounded distal end, seldom somewhat club-shaped; in very young larvæ they are conical and pointed. Their armature with cnidoblasts is very different from that of the two other families. Usually each tentacle bears only two lateral ribands of cnidoblasts, sometimes four (two stronger

¹ Compare Bedot, 60, 1884.