

similar to that of *Physophora* and the other Discolabidæ, the cormidia being ordinate and arranged symmetrically in a flat spiral line, which is twisted around the flat and broad base of the shortened vesicular stem. (Compare Pl. XII. figs. 7–9; fig. 7, dorsal view; fig. 8, lateral view, from the left side; fig. 9, ventral view.)

The ventral view (fig. 9) exhibits at once the bilateral form of the corm, which is bisected in the ventral median line by the series of buds; these develop from two separate blastocrenes (springs of buds, or “puncta vegetationis”). The superior blastocrene (*ib*) is the point of development of the nectosome (bracts), and from it radiate bilaterally the ridges which bear the pedicles of the bracts. Each convex ridge is composed of four finer parallel ribs; these are straight and horizontal in the uppermost and oldest ridges, undulating and vertical in the youngest and lowermost ridges. There are five or six quadripartite ridges on each side of the trunk of the nectosome, divergent from the ventral towards the dorsal side, where the large ovate pneumatophore arises. The inferior blastocrene (fig. 9, *is*) is the punctum vegetationis of the siphosome; its numerous buds, densely crowded in the lower half of the ventral median line, become so developed and dislocated that the superior compose a corona of palpons (*q*), the inferior a basal corona of gonostyles (*g*) and alternating siphons (*s*) and tentacles (*t*). The arrangement of these parts in the lateral view of the corm, after removal of the majority of the palpons (fig. 8), seems to demonstrate that the cormidia, although densely crowded without interval, are nevertheless ordinate. Each cormidium seems to be composed of a large siphon, and the appertaining tentacle, of two gonodendra (a male and a female group of gonophores), and of a certain number of palpons. Further, each cormidium of the siphosome seems to belong to a corresponding quadripartite ridge of the nectosome, with four parallel ribs bearing a number of bracts (figs. 8, 9, *bp*).

Respecting the phylogenetic origin and development of this peculiar arrangement, we may assume that originally each ridge of the nectosome (with a group of bracts), and each cormidium of the siphosome, have arisen from a single medusome, the former from its umbrella, the latter from its manubrium; both being widely dislocated afterwards. But in these ordinate cormidia of the Anthophysidæ, as well as in the similar ones of the Discolabidæ and Nectalidæ, a further comparative morphological study is required to solve the difficult question of their original composition.

*Pneumatophore.*—The float filled with air occupies the upper half of the cœnosome, and is usually ovate or ellipsoidal. Its uppermost part is sometimes prominent over the corona of bracts, at other times retracted and hidden between them. Its apex usually bears a pink or purple pigment-star with eight rays, composed of elegant polygonal exoderm cells (figs. 5–9). The centre of this star is usually colourless. The pneumatosaccus includes the thin-walled chitinous pneumatocyst. Its lower part is connected by a variable number of radial septa (usually eight or sixteen) with the pneumatocodon or the outer wall of the float (fig. 7, *p*).