

of gonostyles, which bear the gonophores (mouthless palpons in the Discalidæ, mouth-bearing siphons in the Porpitiidæ and Velellidæ); (III.) a simple or multiple corona of submarginal tentacles.

*Umbrella.*—That part of the body, which is the true homologue of the umbrella in the common Medusæ, is in the Disconnectæ the most voluminous part of the whole cornus. It includes the polythalamous pneumatocyst, and bears all the other organs on its lower face. The latter corresponds to the subumbrella of the typical Medusæ, while the upper face is homologous with their exumbrella. Both faces are separated by the peripheral margin or limb of the umbrella, which constantly bears a corona of muciparous glands. The exodermal epithelium of the umbrella everywhere includes scattered nematocysts. Beyond it there is a nervous plate, mainly developed on the limb and the upper face. The muscles of the umbrella are more developed on the upper than on the lower face; they are composed of an outer layer of longitudinal or radial fibres, and an inner layer of transverse or circular fibres.

*Exumbrella.*—The superior (apical or proximal) part of the umbrella, which is separated from the inferior part (or subumbrella) by the glandiferous limb, is sometimes a nearly even horizontal disc, at other times more or less convex. Its upper free face is either smooth or papillate, always pierced by stigmata; its lower face is in contact with the centradenia. The exumbrella in all Disconnectæ is composed of two parallel plates, which are separated by the reticulate plexus of the pallial canals; the outer plate is the pneumatocodon, the inner is the pneumatosaccus.

*Pneumatophore.*—The hydrostatic apparatus, or the swimming-bladder, which we call pneumatophore, has in the Disconnectæ another and a far more complicated structure than in all the other Siphonophoræ (or the Siphonanthæ). Only the first beginning can be common to the two subclasses, viz., a simple pneumadenia, or a gas-producing gland of the exumbrella. But this is centrally placed in the Disconanthæ, excentrically in the Siphonanthæ; and further, the chitinous pneumatocyst, which covers the inside of the pneumadenia, is a simple monothalamous cyst in the latter, a multiple polythalamous cyst in the former. Another important difference is furnished by the openings of the pneumatocyst; the simple pneumatocyst of the Siphonanthæ is either closed, or has only a simple opening (infundibulum) at the lower pole, and another simple mouth (stigma) on the upper pole of its main axis. The polythalamous pneumatocyst of the Disconanthæ, however, has numerous openings on both faces, internal tracheæ on the lower face, external stigmata on the upper face.

*Pneumatocodon.*—The pneumatophore as a whole, or the hydrostatic apparatus, is composed of all the above-mentioned parts, and of the two plates of the exumbrella also already referred to. The outer or upper of these is the pneumatocodon, the uppermost lamella of the entire umbrella. It is composed of three layers, an outer exodermal epithelium, a nervous plate (composed of a loose reticulum of branched ganglion cells),