

in the Velellidæ elliptical. In the expanded state the mouth may assume the most different forms, trumpet-shaped, discoidal, &c.

The thick wall of the central siphon is always very contractile, and composed of five layers:—(1) An outer epithelium or epidermis, rich in cnidocysts; (2) a very thick layer of strong longitudinal muscles; (3) a solid fulcrum or a homogenous structureless elastic supporting plate; (4) a thin layer of circular muscles; (5) an inner epithelium or entoderm. The mouth is armed with peculiar cnidocysts and provided with sensillæ. The upper or proximal half of the central siphon contains in its epidermis often (but not always) a number of bent tracheæ, which end here.

*Gastrobasal Plate.*—The basal or proximal part of the central siphon in all Disconnectæ is separated from the superjacent centradenia by a strong fulcrum, or a structureless elastic supporting plate (*lamina gastrobasalis*). This horizontal fulcral plate (also called the roof of the central polypite, “le plancher” of Bedot, 59, 60) is covered on the upper face by the basal surface of the centradenia, on the lower face by the entodermal epithelium of the stomach. It corresponds to the jelly-plate which forms the roof of the manubrium in the Medusæ. Its central part is solid, whilst its peripheral part is pierced by eight or more gastral ostia; these form an octoradial corona in the Discalidæ and the smaller Porpitudæ, whilst their number is increased in the larger forms of the latter family (sixteen to thirty-two or more). Sometimes the numerous ostia form here vertical lanceolate fissures, and the septa between them form an elegant multiradiate star, composed of numerous vertical lamellæ. The Velellidæ exhibit instead of this regular star a bilateral arrangement of the gastral ostia; they form here two opposite longitudinal rows of fissures (usually sixteen) on the two lateral margins of the lanceolate gastrobasal plate.

*Centradenia or Central Gland.*—The central space of the body, between the apical or proximal pneumatophore and the basal or distal central siphon, is in all Disconnectæ occupied by a peculiar large glandular organ, wanting in all the other Siphonophoræ (or Siphonanthæ). This interposed central organ is usually called the liver (*hepar*); but as its structure and function are complicated and not merely hepatic, it may be better called *centradenia*, or central gland. It is composed essentially of a dense network of entodermal gastral canals, and of a compact parenchyma of exodermal epithelium, with innumerable cnidoblasts, filling up the meshes or intervals of that network. The physiological function of the gastral canals may be partly hepatic (digestive), partly renal (excretory); the exodermal epithelium, however, seems partly to perform the function of a pneumadenia (or gas-producing gland), partly to be a large reservoir of cnidoblasts for other purposes.

*The Form of the Centradenia* is in general lenticular or discoidal, sometimes sub-globular or even cylindrical, sometimes more conical or flatly expanded; its peripheral outline is circular, or sometimes regularly octagonal, in the Discalidæ and Porpitudæ; it