At first it is a low thin crest in the base of the soft muscular sail, and afterwards arises as a high vertical lamella, usually of more or less triangular form; the top of the triangle is the highest point of the body, and placed in the upper or apical pole of the vertical main axis. The broad base of the triangle, placed in one diagonal line of the parallelogram-shaped disc, is usually about one and a half times as long as each of the two equal lateral sides. The substance of the crest is a thin chitinous plate, secreted from that part of the pneumatosaccus which arises from the diagonal of the disc as a vertical fold. It is perfectly homogeneous, solid, and structureless, and contains no canals nor air-chambers. A number of lines or thin ridges, parallel to the two ascending edges of the triangular crest, and visible on both flat sides of it, indicate its successive growth.

Central Siphon.—The large central polypite of the Velellidæ differs from that of the Porpitidæ and Discalidæ in its bilateral compression; the transverse section of its basal part is circular in the two latter families, elliptical in the former; the major axis of the ellipse corresponds to that of the umbrella. Its general structure and shape are otherwise the same as in the other Disconectæ. The central siphon is comparatively large in the small *Rataria*, where the number and size of the peripheral siphons is small, whereas in the larger species of *Velella* and *Armenista*, where the peripheral siphons are very numerous, the central polypite is less preponderant. The thick wall of the central siphon is very contractile, and composed of two strong muscle-plates, an outer longitudinal and an inner circular, both separated by a strong elastic fulcrum. The wall often exhibits prominent radial or longitudinal folds, eight in the smaller, sixteen or more in the larger forms. Correspondingly, the terminal mouth is often four-lobed or eight-lobed (Pl. XLIII. figs. 4, 8, *so*; Pl. XLIV. figs. 2–5, *so*).

Centradenia.—The large central gland, or the so-called "central organ" (formerly "liver"), exhibits the peculiar composition described above (p. 31). Bedot has given an accurate histological description of its structure (**59, 60**). In the Velellidæ it is more developed than in the Discalidæ, but much less than in the Porpitidæ. It does not usually occupy the greater part of the superior face of the subumbrella as in the latter, but only its central part, between the centre of the float above and the base of the large central siphon below. The outline and the horizontal section of the centradenia are not circular, as in the Porpitidæ and Discalidæ, but elliptical or lanceolate, the major axis of the ellipse corresponding to that of the umbrella. Its superior or apical face is more or less conical, and fills up the concave inferior face of the pneumatocyst. Its inferior or basal face is even, separated by the gastrobasal plate from the base of the central siphon. The difference between the hepatic vessels in the superior half of the central gland, and the renal vessels in its inferior half, seems to be usually not so striking in the Velellidæ as in the Porpitidæ. The canal-plexus, as well as the compact parenchyma of exoderm cells, which fills up the interstices of the canal-network, and probably secretes the gas, is in the former far less developed than in the latter. This weaker development of the