

base to the inferior part of the dorsal side of the pneumatophore and placed in the sagittal plane. In *Stephalia* (Pl. VII.) it is of the same size as a nectophore; in *Rhodalia* (Pl. III.) much smaller. The comparison of the vertical sagittal section (Pl. V. fig. 24; Pl. VII. fig. 40) and of the vertical frontal section (Pl. V. figs. 25, 26) proves that the aurophore possesses a singular medusoid structure; it is pierced by a cylindrical central canal, the auroductus (*la*) running in a nearly horizontal direction and opening inside into the cavity of the pneumatophore by the aurophyle (figs. 16, 24, *li*), outside by an external mouth, the aurostigma (figs. 15, 24, 40, *lo*). The auroduct or central canal is lined inside by a thick-walled peculiar tube, the pistillum; while it is surrounded outside by a number of radial chambers, which are separated by septa and communicate with the pericystic cavity of the pneumatosaccus.

The remarkable structure of the single parts of the aurophore, compared with the corresponding parts of the nectophores and the pneumatophore, makes it probable that the aurophore is a modified nectophore, transformed into a pneumadenia; in this case it has the morphological value of a medusoid person. On the other hand, it is possible that it was originally only a secondary organ of the pneumatophore, a basal apophysis of the air-funnel (Pl. VII. fig. 50). Perhaps its outer opening corresponds to that which the *Discolabidæ* exhibit at the base of the pneumatophore.

The transverse section of the aurophore (Pl. V. fig. 25, in the proximal part; fig. 26, in the middle part) exhibits in its outer wall from outside to inside the following five strata:—(1) A simple exodermal epithelium (*e*) composed of rather flat small cells; (2) a muscular plate composed of longitudinal muscle-fibrillæ, which are probably direct prolongations of the epithelial cells; (3) a thin cartilaginous fulcral plate (*z*), much thinner than the same fulcrum of the pneumatophore, but very firm and elastic, consisting of structureless jelly, strongly stained by carmine; (4) a thin layer of ring-muscles; (5) a thick entodermal epithelium, composed of very large cylindrical cells.

The same five strata recur also in the inner wall of the aurophore, following, however, in the inverse order; the entoderm lying outside, the exoderm inside. The latter surrounds the central cavity of the aurophore, which is filled by the pistillum; between them is visible the vagina pistilli, a structureless tube (*lf*) intensely stained by carmine; it seems to be a chitinous cuticular membrane, formed by a direct prolongation of the pneumatocyst (*pf*).

The outer wall of the aurophore (exumbrella) and the inner wall (subumbrella) are connected by a variable number of radial septa; and by these are separated wide radial chambers (figs. 24–26, *lr*). These correspond probably to the radial pouches of the pneumatophore in the *Physonectæ*, and to the radial canals of the medusoid nectophores; they are, however, much wider than the latter. Their number is variable; usually between eight and twelve. In the middle part of the aurophore (in transverse sections which cut the pistillum at right angles in its middle part) eight to twelve radial