

be a bundle of parallel spindle-shaped muscle-cells, and is probably an inner prolongation of the exodermal muscle-stratum of the outer wall. The inner insertion of the pistillum forms a broad circular ring in the "foveola auropylæ" of the pneumatophore. This foveola (fig. 16, *pl*) contains the auropyle or the inner opening which leads from the axial canal of the auropore into the large cavity of the pneumatophore. The longitudinal muscle-fibres of the pistillum diverge here in a radial direction horizontally, and are inserted at the circular margin of the foveola, ending abruptly with a sharp boundary line on the pneumatocyst (fig. 24, *lp*¹).

Judging from these peculiar structures of the pistillum, we suppose that it acts as a strong muscle, by the contraction of which the auropore is opened and the air contained in the pneumatophore expelled. Its morphological explanation is very difficult; one might suppose it to be a part of a modified stomach (manubrium) of the medusoid person; more probably, however, it is a secondary apophysis of the exoderm only (similar to the endocystic tapetum of the Physonectæ), grown inside from the spiraculum into the central cavity of the auropore, which corresponds to the umbrella-cavity of the Medusa. In this case the margin of the aurostigma (*lo*) may be compared perhaps with the umbrella margin of the Medusa, and the pistillum with its velum turned inside into the umbrella cavity (?).

Nectophores (*n*).—The nectocalyces or swimming-bells form an elegant corona round the base of the pneumatophore. This corona is simple in *Stephalia* (Pl. VII. figs. 39, 40, 48) and in *Auralia*; it is multiple in *Stephonalia* and *Rhodalia* (Pl. I. fig. 1; Pl. II. fig. 6; Pl. III. figs. 13, 14). The circular corona is bisected in the sagittal plane of the body, on the dorsal side by the auropore (*l*), on the ventral side by the set of buds (*i*). The nectophores are pyriform medusoid persons of equal size; their number is eight to sixteen in *Stephalia*, twenty to thirty in *Stephonalia*, fifty to eighty or more in *Rhodalia*.

Pedicles of the Nectophores.—The swimming-bells are attached on the periphery of the cylindrical nectosome (or the upper half of the bulbous trunk) by means of large lamellar pedicles, similar to mesenterial plates (Pl. III. figs. 13, 14). Each pedicle is a thin transparent lamella of quadrangular or nearly square form, and consists of a cartilaginous vertical jelly-plate placed in a meridional plane of the trunk. The thinner upper and the thicker lower margins of the pedicle are free; the inner or axial margin is thickened and arises by a broad base from the cœnosome; the outer or abaxial margin passes over into the conical apical part of the nectophore (Pl. IV. fig. 16, *np*). A wide canal, the peduncular canal of the nectophore (Pl. V. fig. 31, *ns*), arising from the network of canals in the cœnosome, and placed radially to its vertical main axis, runs horizontally along the thickened lower margin of each pedicle, and gives off at right angles a series of twenty to thirty small, lateral, vertically ascending branches. These branches, or the "secondary peduncular canals" (*nl*), are therefore directed parallel to one another and to the vertical main axis of the trunk; they are single, blind, slightly curved or undulating,