and decrease gradually in size from the axial to the abaxial margin of the pedicle. The distal or abaxial end of the horizontal main canal (*ns*) of the pedicle passes over into the canal-cross which is formed by the four radial canals of each nectophore. The jelly-lamella of the pedicle is covered on both sides by a strong muscular plate composed of horizontal parallel bundles of radial muscle-fibres, which run parallel to the upper and lower margins of the pedicle (fig. 31, *nm*). The surface of the muscular plate is covered by a flat pavement epithelium of the exoderm.

The arrangement of the nectophores around the trunk is different in the various genera of Auronectæ. All the swimming-bells lie in a single horizontal plane, radially arranged, in *Stephalia* and *Auralia* (Pl. VII. figs. 39, 40, 48). But in *Stephonalia* and in the larger *Rhodalia*, where they are much more numerous, they compose probably three alternating horizontal rings, as is supposed in the semi-diagrammatic figures (Pl. III. figs. 13, 14). In the specimens preserved in spirit examined, the majority of the nectophores were detached from the cœnosome and their form much altered by contraction. The remaining axial parts of their pedicles, however, densely placed parallel in regular narrow intervals, allowed their arrangement around the trunk to be recognised with great probability (Pl. I. fig. 1; Pl. III. figs. 13, 14). Therefore, this may be very similar to that of *Forskalia* among the Physonectæ (Pl. VIII.), with this difference, however, that in *Forskalia* the common stem is much longer and more slender than in *Rhodalia*. Therefore, the spiral column of the nectophores in the nectosome is here much broader and not so high as in the former. The nectophores of the living adult *Rhodalia* compose probably three transverse series, disposed quincuncially, and so alternating, that those of the first and third transverse series are placed in the same meridional plane of the stem, whilst those of the second transverse series are interpolated between the first and third. But this quincuncial arrangement is only produced by mutual pressure and dislocation of the nectophores, the basal pedicles of which form a single corona (fig. 14). Probably the form of the pear-shaped nectophores is polyhedral by mutual compression in the living animal, whilst it is more roundish in the contracted spirit specimens.

Each nectophore is a medusiform bell, the pear-shaped umbrella of which is composed of a rather thick and firm jelly-plate. Its inside is covered by a strong muscular subumbrella, composed of circular fibres. The entrance (figs. 6, 16, *w*) into the wide cavity of the nectosac is closed in the periphery by a broad circular velum, which projects from the margin of the umbrella (figs. 13, 16, *v*). The entire surface of the nectophores, as well the outside (exumbrella) as the inside (subumbrella), is covered by a flat pavement epithelium. The main axis of the nectophores is radial to the vertical main axis of the trunk, and therefore horizontal in the middle transverse row of nectophores; it is somewhat ascending in a centrifugal direction in the upper row, and somewhat descending in the lower row (figs. 13, 14).

The nutritive canal-system of each nectophore (Pl. IV. fig. 17, *n*) is, as usual,