

and these are always so differentiated, that two opposite lateral vessels (right and left) are symmetrical, different from the two sagittal vessels (shorter ventral and longer dorsal canal). The sagittal plane, which divides the body of the nectophore into right and left halves, is therefore precisely marked by the two latter opposite canals. Usually both halves are symmetrical, but sometimes more or less asymmetrical. The velum which surrounds the ostium of the muscular nectosac is usually rather broad and strong. The four radial canals are connected above the insertion of the velum by a constant circular canal.

*Pallial Canals.*—Besides the four constant radial canals, there are in many Calyconectæ one, or two pallial canals or nutritive vessels of the jelly-substance of the nectophore. An apical pallial canal runs in many Diphyopsidæ from the top of the nectosac to the apex of the umbrella. *Praya* and others have two pallial canals at the ventral side, an ascending and a descending.

*Number and Arrangement of the Nectophores.*—The number of the swimming-bells, and their arrangement on the top of the stem, are employed by modern authors to divide this order into three families:—Monophyidæ, Diphyidæ, and Polyphyidæ. The Monophyidæ (or Sphæronectidæ) possess a single large nectophore on the top of the stem; this is smooth and without distinct edges in the true Sphæronectidæ, sharp-edged or pyramidal in the Cymbonectidæ.

The Diphyidæ, comprising the great majority of genera and species (among the living Calyconectæ), have always two large nectophores on the top of the stem. These are opposite, of nearly equal size and similar form, with rounded exumbrella, in the subfamily Prayidæ. They are also of nearly equal size and similar form in the subfamily Diphyopsidæ; but in this group the exumbrella is sharp-edged, pyramidal, and the two nectophores are not opposed, but one placed behind or below the other. The remarkable subfamily Abylidæ is distinguished by two nectophores of very unequal size and dissimilar form; the first or anterior being much smaller than the second or posterior. The form of the two very different nectophores becomes in this group extraordinarily strange and complicated.

The Polyphyidæ (or Hippopodidæ) and the closely allied Desmophyidæ are distinguished from the other Calyconectæ by the possession of a biserial nectosome, similar to that of most Physonectæ. There are here at least four to six nectophores (sometimes ten to twelve or more), arranged in two opposite series. They have here no definite edges, and are mitriform or reniform in *Desmophyes*, *Hippopodius*, and *Polyphyes*; whereas they are angular (pentagonal), prismatic, or pyramidal in *Vogtia*.

It may be that all the Calyconectæ with rounded nectophores represent a natural suborder of this order (Sphæronectaridæ), and all the others (with edged or pyramidal nectophores) another suborder (Cymbonectaridæ). The first suborder (Sphæronectaridæ) comprises the Sphæronectidæ, Prayidæ, Desmophyidæ, and Hippopodidæ. The second