

trunk of the siphosome in wide spiral turnings. Hence, it appears as though the axis of the cone formed by the nectophores was only a lateral branch of the upper end of the coenosarc; but in reality the upper part of the latter is deflexed and turned around the lower part. The youngest and smallest nectophores, therefore, are placed at the uppermost part, the oldest and largest at the lowermost part of the nectosome. The point of vegetation of the former is very near to that of the siphosome, but separated from it by a small interval (Pl. XXIX. fig. 7, *x*. Compare 35, p. 553, Taf. xlvii. fig. 27, *ab*).

*Nectophores*.—The nectocalyces of the Polyphyidæ appear in two different forms, which are characteristic of the two subfamilies of this family. The Hippopodidæ (*sensu stricto*) have smooth nectophores, similar to a horse-shoe, with rounded surface (*Hippopodius* and *Polyphyes*, Pl. XXIX. figs. 1–8); they may be derived from the Prayidæ. The Vogtidæ, on the other hand, represented by the genus *Vogtia* (figs. 9–14), have pentagonal nectophores with angular surfaces; they may be derived from the Diphyopsidæ. The fundamental form is always bilaterally symmetrical, a deep ventral groove dividing the nectophore into two equal halves. The jelly-substance is very voluminous and usually hard, cartilaginous; the nectosac is relatively very small and more or less rudimentary.

The special form and the arrangement of the nectophores in alternately opposite pairs are very peculiar. That part of the nectophore which bears the circular opening of the nectosac must be regarded, of course, as the basal part. Opposite to this is the apical part, or the true pedicle of the nectophore, a small triangular lamella, by which it is attached to the common stem. This pedicle arises in the sagittal plane of the nectophore, midway between the two parallel ventral wings, which include the deep concave ventral groove. Strictly speaking, only the vertical inferior half of this axial groove, beyond the pedicle, represents the ventral side, whilst its superior half, above the pedicle, belongs to the dorsal side. The outer or abaxial part of this latter forms the free convex dorsal face of the nectophore, which ascends more or less vertically in the lateral profile view of the nectosome. Each nectophore embraces with the two lateral wings of the ventral groove the adjacent parts of two other (superior) nectophores; with the descending ventral part of the wing the same part of the opposite nectophore, and with the ascending dorsal part of the wing the basal part of the superjacent nectophore of the same side. An important consequence of this peculiar arrangement is, that the openings of the nectosacs become hidden and nearly closed by the uppermost covering part of the subjacent nectophore; only the openings of the two lowermost (oldest and largest) nectophores lie quite open, and are not covered.

*Nectosac*.—The swimming cavity in the nectophores of the Polyphyidæ is very small, flat, and reduced, and the muscle-plate of its subumbrella very thin; the power of swimming therefore very weak. Indeed these Calyconectæ swim more slowly than any of the other groups of this order. The velum, too, which surrounds the wide opening of the nectosac, is very small, usually crescentic or sickle-shaped, broader in the dorsal