

generally described as "tasters." It may, however, be possible, that they are originally not palpons, but palpacles. In this case their morphological value would be different, as is now assumed. They would be the dislocated tentacles, and not the manubrium of the metamorphosed medusome, the umbrella of which is the nectophore. A proof of this explanation seems to be given by the fact, that in *Apolemopsis* (according to the accurate figure of Lesueur) a bunch of four tasting filaments arises from the base of each nectophore. Kölliker (4, p. 19) and Leuckart (8, p. 317) state, that in *Apolemia* also a bunch of three or four tasters belongs to each single nectophore.

*Pneumatophore.*—The float filled with air is relatively small in the Apolemidæ, compared with the large nectophores. It has a very simple structure, as in the oldest and lowest forms of Physonectæ. The ovate pneumatosaccus (which sometimes contains no pneumatocyst?) is a simple invagination of the apex of the tubular trunk. The inflated pyriform uppermost part of the latter, or the pneumatocodon, which loosely surrounds the pneumatosac, is not connected with it by vertical radial septa (as is constantly the case in the Agalmidæ and Forskalidæ). There is wanting, therefore, in the Apolemidæ the corona of radial pouches which is characteristic of the pneumatophore in the two latter families. The spheroidal basal or lowermost part of the pneumatosac—the pneumatic infundibulum, or the gas-secreting gland, pneumadenia—is separated from its ovate larger upper part by an incomplete annular constriction, the pneumatopyle (pylorus infundibuli). (Compare 50, p. 272, Taf. xix. fig. 93.)

*Nectophores.*—The large and vigorous nectocalyces of the Apolemidæ have a somewhat different shape in the two subfamilies. The two opposite nectophores of *Dicymba* (Pl. XVIII. fig. 1) resemble those of *Praya* (Pl. XXXI. figs. 1–7). They are ovate, with a rounded and edgeless exumbrella, and bear at the ventral or axial side a large longitudinal furrow, bounded by two parallel wings; between these wings there arises in the upper part the lamellar triangular pedicle, which attaches the nectophores to the top of the stem, beyond the pneumatophore. The two ventral grooves of the two opposite nectophores, the larger of which embraces the smaller, form together a hydrœcial canal, in which the siphosome may be partly retracted. *Apolemia* bears to *Hippopodius* much the same relation as *Dicymba* exhibits to *Praya*. The large ventral groove of each nectophore here embraces a corresponding part of two obliquely opposite nectophores, a superior and an inferior (compare 8, p. 314). The form of the umbrella is similar to that of *Hippopodius*, and so also is the arrangement in the biserial nectosome. The mouth of the nectosome is relatively small, and directed downwards and outwards. The four radial vessels of the powerful subumbrella, connected by a small ring-vessel above the insertion of the velum, are strongly differentiated. The two sagittal canals (shorter ventral and longer dorsal) make a simple curve in the median plane of the nectophore, whereas the two lateral canals (right and left) are much prolonged and have a complicated course, with two to four undulate turnings; from the