Zoology Part LXXVII: Report on the SIPHONOPHORÆ. By Professor Ernst Haeckel. Bound in Volume 28,1888.

an older free Eudoxia).—The hydrophyllium or bract has a diameter of 10 to 12 mm., and a sphenoidal or wedge-shaped, rather complicated form, which is best understood if we imagine the true axis of the umbrella standing vertically, its upper or apical pole marked by the top, the lower or basal pole by the centre of the aperture of the cavity. The latter (or the original ostium subumbrellæ) is surrounded by five prominent points, an odd dorsal basal point (u^8) and four paired lateral; two of these are dorso-lateral basal points (u^6 right, u^7 left), the two others ventro-lateral basal points (u^4 right, u^5 left).

The opposite apical or superior part of the ripe bract (fig. 14) has the form of a house-roof or of a triangular prism, inclined ventrally. The apical crest (*nk*) is strongly inclined towards the ventral side, so that the dorsal apical point (u^{12}) may be regarded as the original apex of the bilateral umbrella. The opposite ventral apical point (u^1), on the contrary, marks the upper pole of the curved axis of the phyllocyst (*bc*).

The ventral face of the bract is pentagonal and marked by five prominent points, one odd and four paired. The odd is the above-mentioned ventral apical point (u^1). The upper pair of points are the ventro-lateral apical (u^2 right, u^3 left); the lower pair of points are the ventro-lateral basal points (u^4 right, u^5 left).

The dorsal face of the bract is quadrangular in the upper part, crest-shaped in the lower part, and is marked by five points, three odd and two paired. The uppermost is the odd dorsal apical point (u^{12}), the lowermost the odd dorsal basal point (u^8), the hindermost (between the former) the odd dorsal caudal point (u^9). At the right side (u^{10}) and left side (u^{11}) the two dorso-lateral points are prominent. The wedge-shaped dorsal crest (*ng*) is in the ripe bract (fig. 14) opposite and parallel to the apical crest (*nk*). All crests and edges of the bract are elegantly denticulated.

The mature bract of the free Eudoxia (fig. 14) differs from the young bract of the sessile Eudoxoma (fig. 13) mainly in the development of a pair of arched prominent transverse ridges or girdle-wings (u^2, u^{10}, right; u^3, u^{11}, left). These separate more distinctly the thicker apical half of the hydrophyllium from its thinner ventral half. An accurate comparison of fig. 13 (young) and fig. 14 (adult) will explain the other differences of these two forms, which are produced by further growth.

Bracteal Cavity (figs. 13, 14, *bh*, seen from the right side).—The subumbrellar cavity has the form of a helmet or a Phrygian cap; it is campanulate, with strongly curved axis, concave at the ventral, convex at the dorsal side. The cavity occupies in the young bract (fig. 13) about two-thirds of the whole body; in the adult (fig. 14) only the basal half. Its basal aperture, or the original mouth of the umbrella, is armed with five large triangular, pyramidal points or teeth, one odd and four paired; the posterior odd tooth (u^8) is the dorsal basal point; the two ventro-lateral basal teeth (u^4, u^5) are larger and wider apart than the two dorso-lateral basal teeth (u^6, u^7). A deep ventral groove, through which passes the stem of the cormus (fig. 13, α), is placed in the sagittal plane of the bract, immediately to the ventral side of the subumbrellar cavity (*bh*).

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