

cone, $7\frac{1}{2}$ cm. from the umbrella margin, the umbrella is deeply constricted by a horizontal circular furrow, the coronal furrow ("fossa coronaris," *ec*). The umbrella cone or "cone zone" ("zona conaris") is a perfectly simple smooth cone, pointed above and widening symmetrically below; its firm, gelatinous substance is of nearly equal thickness throughout, about 8 mm.; in the coronal furrow (*ec*) its thickness suddenly diminishes to 2–3 mm. (fig. 35). The external surface of the cone is flat throughout without any ornament. The corona of the umbrella, on the contrary, is subdivided by a lower horizontal circular furrow into two zones, the upper pedal zone and the lower lobe zone.

The pedal zone ("zona pedalis") is divided by sixteen deep longitudinal furrows into the same number of projecting wedge-like gelatinous socles, the pedalia. Of these the four interradial are considerably smaller (25 mm. high, 12 mm. broad above, and only 8 mm. below), and bear below the four sense clubs and their ocular lobes ("pedalia ocularia"). The twelve remaining gelatinous socles ("pedalia tentacularia") bear the tentacles and their lobes below, and are much larger (35 mm. high, 13 mm. broad above, 17 mm. below). Between each two interradial ocular pedalia (fig. 19, *ni*) there are three larger tentacular pedalia, the central one (*up*) lying perradially, the two lateral (*ua*) adradially, (comp. figs. 18 and 19). The firm gelatinous substance of the umbrella is 10–12 mm. in thickness in the upper part of the pedalia, whilst in their lower part it is diminished to 3–5 mm. Each pedal is limited on the upper convex margin by a crescentic area ("areola semilunaris") (fig. 34, *xs*), which is divided by 8–10 small shallow longitudinal furrows into the same number of smaller swellings ("gyruli"); they end above in the bottom of the large coronal furrow, and contain pointed processes of the exumbrel zonal muscle (fig. 34).

The exumbrella of the corona of the umbrella in our *Periphylla*, as probably in all *Pero-medusæ*, is distinguished, not only by the longitudinal and transverse furrows already mentioned, which penetrate more or less deeply and are connected with important internal anatomical and ontogenetic conditions of organisation, but also by special exumbrel muscles. In the deep coronal furrow between the umbrella cone and umbrella corona ("fossa coronaris," *ec*) there is a ring-shaped external zonal muscle ("musculus zonaris," *mz*), with sixteen exumbrel points projecting from its distal margin; these are triangular, having the point directed downwards and correspond to the radii of the marginal lobes; they consequently lie subradially, and their distal end passes below in the furrow, between the two pedalia in whose prolongation the lobe clasp (fig. 34, *mz*) is placed. Both the zonal muscle itself and the muscular points proceeding from it are composed of strong annular fibres.

The true umbrella margin (in the wide sense) ("margo umbralis," *um*; Pl. XVIII. fig. 1; Pl. XIX. fig. 6; Pl. XX. fig. 8; Pl. XXII. fig. 22) is formed by the lobe zone of the umbrella corona already mentioned, and consists of the following important organs:—four interradial sense clubs, twelve tentacles (four perradial and eight adradial), and