

thread cells are scattered freely over it. The gelatinous substance of the umbrella shows a considerable degree of firmness, in spite of its being very thin and without any cellular elements. The gelatinous substance varies in thickness in different places, according to the different longitudinal furrows of the exumbrella and the subumbrella, being thinnest along the interradial furrows (in the middle of the corner pillars) and thickest at the two sides of the pillars, and above in the cap-shaped apical cover of the umbrella (figs. 1-3, *ug*).

The subumbrella or nectocalyx is nearly cubical. The four corners of the cube are interradial and formed by the narrow septa of the broad gastral pouches, or by the "fused streaks" by which the subumbrella is connected with the umbrella. The muscular layer of the subumbrella is thus divided into four rectangular muscular plates, which are placed nearly vertically to each other in the interradial "fused streaks"; they correspond to the four lateral surfaces of the cube, and form the axial wall of the four radial pouches (fig. 3, *mw*). The circular fibres of each muscular plate are, however, interrupted in its perradial middle line by a band-shaped, longitudinal muscle, which extends from the ocular niche, upwards to the mesogonia and downwards to the frenulum (fig. 3, *mp*). The broad coronal muscle is therefore actually divided here into eight quadrangular coronal areae as in *Pericolpa* (System, taf. xxiii.). Whilst, however in *Pericolpa*, these areae lie in the principal radii (four perradial and four interradial), in *Charybdea* they are placed adradially.

The umbrella margin (figs. 1, 5, 8), in a wider sense, bears four perradial sense clubs and four interradial tentacles. These marginal organs are connected by a remarkable nerve ring of peculiar structure. Below this nerve ring, however, the umbrella margin passes into a broad velarium, a thin marginal membrane resembling the velum of the Craspedotæ, but, however, essentially different. As regards the eight marginal organs they are undeniably derived phylogenetically from the eight principal tentacles of *Tessera* and *Tesserantha* (Pl. XV.); the four sense-clubs from the four perradial principal tentacles, and the four tentacles from the four interradial. In this respect the condition is exactly inverted in the Cubomedusæ, as in the Peromedusæ (specially in the Pericolpidæ). In the Discomedusæ all the eight principal tentacles are transformed into rhopalia.

The velarium or marginal membrane (figs. 2, 5, 8, *va*), represents a membranous, annular distal process of the umbrella margin. It has hitherto been simply termed velum, and placed beside the similarly termed velum of the Craspedotæ. These two formations are, however, only analogous, not homologous; they have originated independently of each other, and their structure though similar is in no way identical, that is, their relation to the nerve ring is essentially different. As in all *Charybdea* belonging to the sub-family of the Tamoyidæ, the velarium is traversed by special canals, and is fastened in a very peculiar fashion to the subumbrella by the four perradial frenula (suspensors or supporting folds, figs. 2, 8, *vf*). These frenula are muscular, vertical,