

sixteen subradial marginal lobes, inserted between the former and the latter. These organs in all Peromedusæ, show very peculiar and complicated conditions of structure, which thoroughly distinguish them from both the Stauromedusæ and the Cubomedusæ. Notwithstanding, these structures are phylogenetically derived from those of the Stauromedusæ and then from those of the Pericolpidæ (comp. my System, 1879, taf. xxiii.). The four perradial tentacles and their four interradial sense clubs have arisen from the eight principal tentacles of the Tesseridæ, and are therefore homologous with the "marginal anchors" of the Lucernaridæ; on the other hand the eight adradial tentacles with the alternating marginal lobes of the Pericolpidæ, are homologous with the hollow arms of the Lucernaridæ. The umbrella margin of the Periphyllidæ has plainly arisen in this way from that of the Pericolpidæ, as instead of each perradial tentacle, there are three tentacles with two additional marginal lobes between them. The number of tentacles rises in this way from four to twelve, and the number of the marginal lobes from eight to sixteen. The original number of the four sense clubs remains invariable in all Peromedusæ, and is typical of the whole order.

The sixteen marginal lobes ("lobi marginales," Pl. XVIII. fig. 1; Pl. XXII. fig. 22; Pl. XXIII. figs. 29-32) of the corona of the umbrella are, on the whole, egg-shaped, lie subradially in the meridian plane of the fourth order, and are divided into four pair of ocular lobes (*lo*), and four pair of alternating tentacular lobes (*lt*). The two ocular lobes ("lobi oculares") of each umbrella quadrant lie exradially, as the interradial eye is set between them. The marginal incision between them up to the eye is 17 mm. deep, half as deep as the incision between each ocular lobe and the neighbouring tentacular lobe. The two ocular lobes of each pair therefore compose a broadly oval, ocular principal lobe, whose free margin is divided into two secondary lobes (fig. 1). Each ocular secondary lobe is divided by a deep longitudinal furrow into two halves, an adocular and an exocular. The exocular or external half, which touches the adradial tentacle, is wing-shaped and thinned, and runs into a delicate membranous selvage in the margin of the lobe ("patagium," *lp*). The inner or adocular half, which touches the interradial eye, is strongly thickened, so that in conjunction with that of the adjacent secondary lobe, it forms a thick swelling, projecting convexly outwards, in direct prolongation of the ocular pedalum (*ur*). Each ocular principal lobe therefore appears like a broad oval leaf, which has a midrib 1 cm. broad, side-wings 3 cm. broad, and is 4 cm. long in all (in the middle line). The two tentacular lobes ("lobi tentaculares") of each quadrant of the umbrella lie coradially, as they enclose the perradial tentacle between them and are divided externally from the ocular lobes by the adradial tentacle. Each of the two tentacle lobes represents a longish oval leaf 4 cm. long and 2 cm. broad, divided by a deep subradial longitudinal furrow into two lateral swellings; this furrow forms the direct process of the coradial furrow, which separates the adradial pedalia of the furrow zone from the perradial. Each of the two swellings of each tentacular lobe is almost linear. A very