

distal end ; the thicker proximal end is cut out concavely, and inserted at the lower part of the corner, swelling above the umbrella margin in such a manner that a small axial cavity, or pedal funnel ("infundibulum pedale," fig. 3, *it*), remains between the two.

The four tentacles are strong, cylindrical, hollow filaments, 4 mm. thick, thickened like a club at the basis (to 6 mm.), and longer than the height of the umbrella (probably several times as long in the uninjured animal). In the longitudinal and transverse sections, their thick wall shows the same peculiar and complicated structure, fully described by Claus in *Charybdea marsupialis*.

The four perradial sense clubs or marginal bodies ("rhopalia") lie above the umbrella margin, in the ectodermal sense niches ("crypta rhopalaria or ocularia") already mentioned. The structure of these highly-developed organs of sense in *Charybdea murrayana* is the same as in the Mediterranean *Charybdea marsupialis*, where they were first investigated by Gegenbaur in 1836, and recently and minutely by Claus in 1878. They have a very complex structure, and essentially resemble those of the Peromedusæ and Discomedusæ, as they contain both optical and acoustic organs ; their finer structure, however, varies in several respects, and in some ways very peculiar. Each sense club is fastened by a thin peduncle into the sense niche of the exumbrella, and is partly covered externally by the protective scale, which projects like a roof over the exodermal aperture of the rhopalar niche. It contains a large otolite sac containing numerous crystalline endodermal otolites in its club-shaped swollen terminal part. The six eyes, two larger unpaired in the perradial middle line, and four smaller paired on the two sides of the unpaired, lie above the otolite sac ; each unpaired eye consists of a pigment cup, a thick lens, and a powerful corpus vitreum lying between them ; the lens is wanting in the smaller paired eyes. A very large ganglion opticum of a highly developed structure forms the nerve centre of the optical apparatus.

The nervous system has the same high centralisation as in the other Cubomedusæ, and corresponding to their highly developed organs of sense, it shows itself in a more complete and more centralised form, than in the other Acraspeda ; in this respect it attains the highest stage of formation among all Acraspeda. The central nervous system, which was discovered in *Tamoya* by Fritz Müller (1859), consists of a complete nerve ring and of eight ganglia, the four larger perradial being placed at the basis of the sense clubs, and the four interradianal at the basis of the tentacle pedalia ; from the perradial ganglia sense nerves go out to the organs of sense and motor nerves to the longitudinal muscles, while motor nerves go out to the tentacles from the interradianal ganglia. The former always lie considerably higher than the latter, so that the nerve ring rises in a vaulted arch from the rhopalar niche to the basis of the pedalia. The whole nerve ring (figs. 2-8, *rc*) therefore forms four depressed arches. Their highest part lies perradially, their lowest part interradianally. The nerve ring lies embedded in a groove of the subumbrella, interrupting its muscular plate, and consists of a clear axial cord and two more turbid