

thinner towards the pointed distal end. Their structure resembles that of the oral styles of the Margelidæ (p. 1, Pl. I. fig. 5) and of the solid tentacles of the Peganthidæ (p. 30, figs. 10, 11, &c.) already described. Each tentacle, therefore, consists of four different layers: (1) a solid cylindrical endodermal axis, formed of a single row of clear coin-shaped chordal cells; (2) a thin but firm and very elastic fulcral plate; (3) a thin muscular plate composed of parallel longitudinal fibres; (4) an exodermal epithelium, bearing partly thread cells, partly pigment cells. The latter contain grains of blackish pigment, and are chiefly found on the abaxial or dorsal side of the tentacle, where they form a black longitudinal streak which represents the direct process of the ocelli and the exumbral ribs of pigment. The tentacles, with their basal ocelli, are the only organs of sense found in the *Tesserantha*, as in all Stauromedusæ; special auditory clubs, like those of the other Acraspedæ, are not present.

The deep cavity of the umbrella (subumbrella) consists of a lower simple cavity of the corona of the umbrella, whose vertical axis is occupied by the œsophagus (fig. 2, *at*), and of an upper quadrilocular part divided by four mesenteries into four conical funnel cavities (fig. 6, *ii*). These mesenteries or mesogonia (fig. 2, *wr*) are four thin perradial membranes, which stretch vertically between the four perradial angles of the base of the stomach and the middle line of the four radial pouches. They serve principally to attach the œsophagus, are cut out like a crescent at the lower free edge, and pass immediately into the tissue of the subumbrella at the upper, rather thinned, basal margin. The mesenteries must be regarded essentially as folds of the subumbrella, whose structure they share. We find them again in a similar form in the Charybdeidæ, Tiaridæ, and Pectyllidæ (Pl. IV. fig. 3, *wr*; Pl. VIII. fig. 9, *wr*). The four interradianal funnel cavities ("infundibula subumbralia," fig. 6, *ii*), which are divided by the four mesenteric folds, are conical sacs, opening below into the umbrella cavity, but projecting more or less with their cæcal point into the central gastral cavity; their aboral extension could not be exactly defined; they perhaps extend as far as the tæniola are set with filaments, to the beginning of the basal stomach.

The muscles of the subumbrella are formed by two different systems, which are found more or less modified in all Acraspedæ; a distal system of circular muscular fibres and a proximal system of radial muscular fibres. The first form the typical coronal muscle ("musculus coronarius," figs. 2-4, *mc*), a broad octagonal ring on the umbrella margin, whose eight angles are defined by the bases of the eight adradial tentacles. The system of radial or longitudinal muscles is composed of eight triangular deltoid muscles, whose broad base rests on the proximal margin of the coronal muscle. The four perradial deltoid muscles (figs. 3, 4, *md'*) are narrower and longer, and pass above into the mesenteric folds. The four interradianal deltoid muscles (figs. 3, 4, *md''*) are broader and shorter, and their truncated point is inserted at the four septal nodes (*kn*).

In *Tesserantha*, as in all Acraspedæ, the "gastrovascular" system consists of two