

and synapticula (Pl. VIII. fig. 6), into a continuous network, which seems to be firmest on the inferior portion of the sack, becoming more and more loose towards the upper end. While the principal strands of fibres are irregularly disposed, for the most part obliquely, on the inferior and middle thirds of the body, the upper third exhibits a more regular arrangement of the longitudinal beams and circular transverse ridges.

The latter lie, as in all Euplectellidæ, on the inner side of the former. The strong principalia of the lattice-work are in the regular upper portion almost exclusively tetracts, in the larger and more irregular inferior portion, on the other hand, triacts and diacts predominate. The comitalia consist chiefly of triacts and diacts.

Closely disposed spicules, with from six to two rays, also occur in the parenchyma, viz., somewhat numerous, small, smooth or spinose, regular hexacts, with rays running out to fine points (Pl. XI. fig. 2); more rarely small, smooth discohexacts (0.17 mm. in diameter), with from four to six hooks on the arched terminal discs, and finally, discohexasters irregularly scattered in somewhat large numbers (Pl. XI. fig. 1; Pl. VIII. fig. 4). Most of these discohexasters exhibit the same characters and dimensions as the discohexacts, which have just been mentioned. The very short principal rays usually run out into two, less frequently into three, long terminal rays, which are, at their origin, united in a bow-like manner, and which, narrowing in the middle, again increase in strength towards the terminal hemispherical disc, which bears six strong hooks (Pl. VIII. fig. 4). Hexasters with somewhat longer and narrower terminal rays occur scattered at intervals, and on their transversely truncated extremities, four to six small hooks project transversely. In the neighbourhood of the outer surface graphiohexasters occur with long tufts of parallel, straight, very delicate, terminal rays (Pl. VIII. fig. 5).

The sword-like hexact hypodermalia are delicate, and run out to fine points. To their distal ray a floricome is always attached, which does not differ essentially from the well-known floricome of *Euplectella aspergillum* (Pl. VIII. fig. 3).

The gastral skeleton consists of somewhat stronger pentacts, in which both the prolonged distal and the four tangentials are either transversely rounded off, or terminate in a knob-like swelling (Pl. VIII. fig. 7).

The thickened margin which surrounds the upper terminal opening bears two circularly arranged rows of hexacts with strongly developed distal rays. In the spicules of the outer circle the straight distals, which measure from 2 to 3 mm. in length, are directed obliquely outwards and upwards, while the slightly bent, strong, distal rays of the inner circle, which are 1½ cm. in length, bend together in dome-like fashion over the opening, so that only a central space, about 8 mm. in breadth, remains (Pl. VII.).

The folded layer of simple sacciform chambers surrounds clefts or short canals, which either open freely by wide internal openings, or are arched over by a continuation of the gastral skin (Pl. XI. fig. 1). The inner trabecular framework occurs in a thin layer on the inner side of the efferent passages which lead from the wide openings of the