

The most important parts of the quadrate framework consists of strong pentacts, whose greatly prolonged tangential rays are placed in apposition to, and across one another in a manner similar to that occurring in the species of *Euplectellidæ* already described. The unpaired ray extends in a radial direction to near the external skin. There is not, however, a special pentact at each of the intersections of the beams of the lattice-work. An intersection without a pentact in fact usually alternates, in the longitudinal and transverse direction, with one which is so provided (Pl. XIV. fig. 2).

Delicate and much extended comitalia, consisting of diacts, triacts, and tetracts, are closely apposed to the strong pentact rays. Besides these the longitudinal strands of fibres contain numerous long diacts equipped with upwardly directed barbs, and exhibiting on their inferior extremities a knob-like thickened anchor-head with three teeth (Pl. XIV. fig. 5). The intersection of the axial canal lies above the latter, and is usually marked externally by four barbs arranged in a cruciform manner. In addition to the numerous spicules with a smaller number of rays, delicate regular hexacts and sparsely scattered rosettes occur under the parenchymalia which lie outside the quadrate lattice-work. Among the rosettes I found, near the external skin, some lophiohexasters with long bundles of very fine, straight, perfectly parallel terminal rays, and I have also occasionally seen perfectly unconnected oxyhexasters, but whether these belonged to this sponge I was forced to leave doubtful, though since then I have been led to regard this as very improbable.

The absence of such oxyhexasters, as are so abundantly present in other *Euplectellid* species, is very striking, and may perhaps be explained by the fact that the specimen in question is very young, as it seems to me not impossible that certain forms of spicules only originate at a somewhat late period. Such characteristic spicules as the thick pentacts of *Euplectella aspergillum*, or the compass spicules of *Euplectella oweni*, are at any rate entirely absent from the circular membrane surrounding the parietal apertures.

In the dermal skeleton the delicate dagger-like hypodermal hexacts with a prolonged proximal ray, which are so characteristic of the family of *Euplectellidæ*, exhibit the familiar connections and arrangement, and in most cases bear a floricome on the projecting distal ray (Pl. XIV. fig. 2). The floricome in no way differs from that described in *Euplectella aspergillum*. On some of these hypodermal hexacts a bundle of freely projecting peculiar diacts may be observed in place of the floricome (Pl. XIV. fig. 2). These diacts are distinguished by four prongs which project cross-wise in the middle, by the sharp points on the outer and inner ends, and by fine lateral teeth or prickles. These lateral prickles are, however, sometimes absent (Pl. XIV. figs. 3, 4). The gastralialia are simple pentacts with prolonged radial distal rays.

As characteristic peculiarities of this young sponge the following features may be noted:—(1) the bundles of pointed diacts which project freely from the lateral wall and are provided with median nodes; (2) the three-toothed anchors of the longitudinal