

spicules from the delicate quadrate meshwork, and are distinctly marked off from one another by a somewhat sharp-edged, spicule-bearing border, extending down to the bushy basal portion. Towards the external margin, the flat body which measures 3 to 5 cm. in thickness, becomes gradually sharper; the maximum height is 40 cm., and the breadth about as much. The somewhat irregular knobbed base is continued into a bushy beard-like basal tuft of spicules 10 to 12 cm. in length. By this the sponge is fixed among the coral and other detritus (Pl. XLIX.).

The parenchymal skeleton consists of large or medium-sized smooth oxypentacts, which probably had their four tangential rays originally inserted in some bounding surface, while the fifth stood radially. Afterwards, however, they came to be embedded in the parenchyma. The angles of the five rays are generally, though by no means always, right angles, and one or other of the rays not unfrequently exhibits a simple curvature near its origin. The individual rays usually have a length of 10 to 20 mm. Throughout the whole parenchyma irregularly scattered, small, lank oxyhexacts also occur, with rays of about equal length, straight or slightly curved, and usually somewhat roughened, *i.e.*, beset with small pointed tubercles, which are occasionally longer, and project obliquely outwards, as represented in Pl. L. fig. 6. Less frequently uncinata forms occur, but only near the two limiting surfaces, and usually in radial disposition. Some uncinate only attain a length of 2 to 4 mm. (Pl. L. fig. 3), but most are much longer. The short, smooth, spindle-shaped oxydiacts, which occur so abundantly in the parenchyma of *Poliopogon gigas*, to be described below (Pl. XLVIII. figs. 3, 7), are here wholly absent.

The supporting spicules of the gastral skeleton are, as in all Hyalonematids, strongly developed, smooth oxypentacts of varied dimensions. Their radially directed ray may attain a length of 1 to 2 cm., while the four tangentials, crossed approximately or exactly at right angles, and but rarely bent, may be as long or longer, and are apposed to one another in twos or threes to form the familiar quadratic lattice-work. The autodermal pinuli are somewhat small pentacts about 0.4 mm. in length, with straight spines directed obliquely upwards and outwards. The outer end of the distal ray passes into a long thin point; the basal portion is smooth. The four moderately long (0.1 mm.) basal rays, are internally smooth, but are on their outer halves beset with short, distant, outward directed teeth, and end in slightly conical points. While disposed at right angles to the distal ray, they do not form right angles with one another, but two opposite obtuse and acute angles, with a slight curvature in the two acute angles so that the form of the central portion of a 8 results (Pl. L. fig. 5). Numerous eight-rayed amphidiscs of various size, but of similar form occur in the dermal membrane, and appear to penetrate thence into the parenchyma. The larger have the middle portion of their axis rod inserted in the dermal membrane, while the one end projects freely to the exterior, and the other into a subdermal space. Some of these have a length of 0.2 mm. and a moderate thickness, are