but usually about 0·2 mm. in diameter (Pl. XL. fig. 10). The spicules represented on Pl. XL. figs. 3, 11, 13, also occur here and there in the parenchyma, but do not really belong to this species, being extrinsic importations from other forms, perhaps from a *Crateromorpha*.

The basis of the dermal skeleton consists of strongly developed smooth oxypentacts. The apposition of the tangential rays of the latter forms the square-meshed lattice-work, which can be recognised even with the unaided eye (Pl. XL. fig. 2). This gives this sponge a greater compactness than is possessed by any other species of *Hyalonema*. The radially directed proximal ray is longer than the tangentials. Adjacent to the latter lie strands of smooth oxydiacts with central swelling or nodes. The autodermal pentact pinuli exhibit comparatively long, straight, spinose basal rays, about 0·05 mm. in length, while the somewhat short (about 0·1 mm.) projecting distal is characterised by the long lateral spines, directed upwards and outwards, which begin at some distance from the base, are somewhat distantly inserted in the middle portion, become more closely apposed in the upper part of the ray, and finally form a kind of bud, in the middle of which lies the end of the ray, in nowise thin or gradually pointed, but rather thick and ending in a conical point (Pl. XL. fig. 16).

The abundant and characteristic amphidisc in the skin is a large, strongly developed form, 0·4 mm. in length, in which the thick smooth axial rod is centrally beset by eight slim tubercles or bosses. The somewhat broad, but not very long terminal umbels are not uniformly hemispherically arched, but are at their outer end slightly truncated. The eight umbel rays with broad, blade-like, longitudinal bases, have a broad paddle-like form and a rounded end (Pl. XL. fig. 7).

Besides these, there is a frequent occurrence of those small amphidiscs with hemispherical, twelve- or more rayed terminal umbels, and with slim delicate axial rod, which occur in the skin of all species of *Hyalonema* (Pl. XL. fig. 15). In the gastral membrane, however, the hypogastral pentacts are either wholly absent, or of very sparse occurrence, while the strongly developed smooth oxydiacts and the associated pentact autogastral pinuli are very abundant. The latter exhibit rather long slightly spinose basals, and a free fir-tree-like ray, which runs out into a thin terminal point and bears short curved lateral spines. I did not find any large amphidiscs in the gastral membrane, but the small forms occur in great abundance.

The marginal fringe of the superior oscular aperture is formed of oxydiacts which attain a length of only 1 mm. The freely projecting distal ray is beset with hook-shaped externally curved spines, while the proximal bears only small pointed tubercles. At the boundary between the two, on the thickest portion of the spicule, four cruciately disposed hemispherical bosses project (Pl. XL. fig. 6).

In the basal pad numerous strong spicules with six to two rays occur, in which the blunt ends are thickly beset with spines. It may be frequently observed, especially in