

the middle of the parenchyma, and in the most varied relations to the dermal surface. In contrast to most other species of *Hyalonema*, small oxyhexacts with straight (Pl. XXIX. fig. 9) and with bent (Pl. XXIX. fig. 10) rays are not abundant. The latter occur indeed in very sparse isolation. Both forms are characterised by this, that the rays are throughout their whole extent thickly beset with small barbs, turned obliquely inwards, *i.e.*, towards the middle.

The dermal skeleton is supported by medium or small-sized, simple, smooth, hypodermal oxyptentacts without a trace of a distal sixth ray, and also by numerous medium-sized hypodermal oxydiacts, which all lie tangentially. Above these hypodermalia, auto-dermal pentact pinuli occur, which exhibit short, slightly toothed, basal rays of moderate strength, and a narrow distal, 0.4 to 0.5 mm. in length, with somewhat long narrow obliquely inserted, pointed lateral spines. Large dermal amphidiscs, 0.35 mm. in length (Pl. XXIX. fig. 6) are tolerably abundant. In their breadth and in the somewhat flatly arched short terminal umbels, with eight broad, lancet-shaped, umbel rays, they at once recall the approximately equal, strong dermal amphidiscs of *Hyalonema sieboldii*. They are all disposed at right angles to the surface, with their centre in the dermal membrane (Pl. XXIX. fig. 5). Besides these, numerous smaller amphidiscs with short hemispherical terminal umbels (Pl. XXIX. fig. 8) occur in tangential disposition. Less frequently medium-sized amphidiscs occur, essentially resembling the greater above described (Pl. XXIX. fig. 7).

In the sieve-membrane covering the superior terminal surface of the sponge, and to a large extent coalescent with the subjacent parenchymal layer, skeletal elements occur similar to those in the external skin. The inner surface of the large lacunæ and passages penetrating the parenchyma, and also of the efferent canals is here *smooth*, exhibiting *no* gastral or canalicular skeleton, containing neither hypogastral pentacts nor pinuli nor amphidiscs, in fact, solely supported by weakly developed, somewhat curved diacts like those which occur so abundantly in the parenchyma.

The marginalia, which form a continuous projecting fringe on the sharp upper margin of the body, are straight oxydiacts, whose proximal end inserted in the parenchyma is smooth, while the much longer and very gradually pointed distal end is beset with lateral spines projecting obliquely downwards (Pl. XXIX. fig. 5). At the boundary between the distal and proximal portions, four cruciately disposed hemispherically arched knobs project, being traces of the rudimentary transverse rays.

The basal pad of the smaller (Pl. XXIX. fig. 4) and of the large funnel-shaped specimen (Pl. XXIX. fig. 1) consists of six- to two-rayed, strongly developed spicules, with cylindrical, externally truncated, or rounded straight rays. These agree thoroughly with similar structures in the hitherto described species of *Hyalonema*. The proximal portion of each ray is smooth; the distal, on the other hand, is thickly beset with coarse conical spines; more rarely the whole surface of the spicule is uniformly spinose.