

The parenchymal spicules supporting the soft body are represented by a large number of simple spindle-shaped diacts, varying in length up to 3 mm. Both their ends are simply pointed or rounded off, and not unfrequently provided with small spines. While most of these spicules appear to be smooth centrally, some exhibit there an annular swelling, and others two opposite, or four cruciate tubercle-like elevations, into which two or four cross branches of the axial canal are seen to penetrate. Even in the diacts which are smooth centrally sometimes similar cross branches from the axial canal can be detected.¹

The spindle-shaped spicules are, for the most part, not perfectly straight but slightly bent, lying in strands or somewhat irregularly scattered. Slender diacts are also occasionally to be found beset towards both ends with inwardly directed hooks (Pl. XXVII. fig. 3). Between the spindle-spicules there is a somewhat sparse occurrence of proper oxyhexacts and derivative spicules, the latter with five to three rays, or even with two opposed at right angles. Larger smooth hexacts very rarely occur. Somewhat more abundantly, but yet rarely, slender hexacts are found with distally directed teeth, as represented in Pl. XXVII. fig. 13. Similar hexacts with curved rays (Pl. XXVII. fig. 10), as figured by Max Schultze (*loc. cit.*, Taf. iv. fig. 4), I have only very rarely seen—so rarely, indeed, that I doubt whether they have not found their way in from some other species of *Hyalonema*, and are not really foreign to *Hyalonema sieboldii*. I am also doubtful whether the peculiar amphidiscs, which were found so abundantly in the limiting membranes, are also proper to the parenchyma.

The dermal skeleton is mainly composed of strongly developed pentact hypogastralia, which form by their mutually apposed tangential rays a comparatively wide-meshed rectangular lattice-work, while the strands of the finer network of the skin are supported by tangentially disposed diacts. The narrowed ends of the somewhat blunt rays are frequently to some extent covered with tubercles, or are at least rough. They usually exhibit the same character on the same pentact, but in different spicules vary so far at least, that some are pointed and others quite blunt, some relatively smoother and others more or less markedly beset with terminal protuberances. The distal (sixth) ray has so completely disappeared that only the merest hint persists in the form of a slight prominence.

On the hypodermalia and on the dermal strands of diacts extended between them there are seen countless autodermal pinuli, which are here exclusively pentacts. The four basal rays intersecting at right angles lie wholly in the dermal membrane; the somewhat long distal ray, which is drawn out into a long fine point, is always at right angles to the surface of the skin, and thus projects freely into the water perpendicular to the body-surface. There is no proximal sixth ray, or its presence is

¹ M. Schultze, *Die Hyalonemen*, Taf. iii. and iv.