

hemispherical umbels, with many (usually twelve) rays, and thin axial rods, either smooth or with median nodes (Pl. XXXVIII. figs. 8, 9).

The gastral skeleton exhibits smooth hypogastral pentacts similar to those occurring in the skin, the same form of pinuli as autogastralia, and similar or somewhat smaller amphidiscs (Pl. XXXVIII. figs. 1, 12). While the smooth pentacts and the amphidiscs are confined to the gastral membrane and to the lining of the largest efferent passages, the pinuli have a somewhat wider distribution, and, becoming scarcer as the four basal rays are more prolonged, are continued into the efferent system of canals even to the fine terminal branches, where they finally entirely cease (Pl. XXXVIII. fig. 1).

The projecting fringe of spicules on the external sharp margin of the oscular region consists of marginal oxydiacts at least 0.5 mm. in length, with long distal ray bearing minute obliquely disposed spines. The proximal ray, which is about a third shorter, bears very small backwardly directed teeth. At the boundary between the two rays four cruciately disposed hemispherical or somewhat larger knobs protrude (Pl. XXXVIII. fig. 11).

In the lower narrowed end of the body, and especially in the basal pad, compact six to two-rayed spicules with blunt, toothed, or spinose ends occur, like those in the same position in most species of *Hyalonema*. The spicules of the basal tuft vary greatly in length, and resemble in structure those of *Hyalonema sieboldii*, to which *Hyalonema apertum* presents a close resemblance in the general structure of its spicules. While the upper portion of these long-stalked anchors is quite smooth, the lower bears oblique rows of barbs on projecting ridges, and, on the very end, borne on a smooth narrow neck, a hemispherical or helmet-shaped terminal knob with four to eight shovel-shaped marginal anchor teeth, which are directed obliquely upwards and outwards. The intersection of the axial canals in these long anchor spicules always lies in the lower swollen end, in the head of the anchor.

In a rich collection of Japanese forms brought home by Dr. Hilgendorf, and deposited in the Berlin Zoological Museum, are several dried and well-preserved spirit specimens of *Hyalonema apertum*. On closer examination of these I found two small dried specimens of this species, which had been temporarily designated by Professor W. Marshall as *Hyalonema affine*, Marshall. I refer on this point to the brief description which Marshall gives, in his researches on Hexactinellids (1875), of *Hyalonema affine*, a species which he had erected for a form which had been already examined by Max Schultze and noted by him as "B" and "C."

The diagnosis which Marshall gives (*loc. cit.*, p. 234) is as follows:—" *Hyalonema affine*, if not, as I believe, a distinct species, is at least a specially well defined variety of *Hyalonema sieboldii*. The tuft is 47 cm. long and only 8 mm. broad; the sponge body proper has a length of 9 cm. Other specimens exhibit, with an axial strand of about the same length, though of greater breadth, a larger sponge-body, which measures for instance