

in the specimen figured by Max Schultze on Taf. i., 13 cm., while the root-tuft is 48 cm. long and 1.5 cm. broad. I wish, however, to lay special emphasis on this, that in *Hyalonema affine* the dermal skeleton (partly rubbed off however, though not to such an extent as Max Schultze describes) exhibits peculiar characteristics. From the lower end of the sponge body, from the position where the axial tuft enters, numerous longitudinal strands, 0.5 mm. in breadth, arise, dividing repeatedly and anastomosing with one another, becoming gradually narrower in so doing, and I did not observe these longitudinal strands in any other specimen of *Hyalonema*, although I examined a considerable number in various states of preservation. The strands are composed of uniaxial, decidedly long (8 cm.) pliable spicules which frequently intersect. At the point of intersection there is a tolerably constant occurrence of a spicule with dimensions which neither I nor Max Schultze have ever found in *Hyalonema sieboldii*, namely, with an axial length of fully 3 mm. The intersecting bundles lie in the direction of the axes. Between these strands there is a further dermal skeleton, but this in no way differed from that of the other specimens. Similarly the afferent apertures, and indeed the rest of the spongetissue, agreed both in macro- and microscopic characters with *Hyalonema sieboldii*, though the apertures were not so abundantly present. It seemed to me, however, that the great differences in size, and especially the peculiar character of the dermal skeleton, justified the erection of a new species, closely related to *Hyalonema sieboldii*."

According to this description, which was of course based on a single, dry, and probably not very well preserved specimen, it seems to me possible that the form above described as *Hyalonema apertum* may be identical with Marshall's *Hyalonema affine*, and I have indeed hesitated long whether I should adopt the older designation. There is, however, in Marshall's diagnosis no mention of some of the peculiarities which are typical and characteristic of *Hyalonema apertum*, especially the complete absence of the terminal sieve membrane, while the character especially emphasised by Marshall, namely, the presence of intersecting bundles of long uniaxial spicules below the skin of the dried specimen, occurs also in various other species of *Hyalonema* (though not in *Hyalonema sieboldii*, owing to the presence of countless commensal polypes), so that no certain and exclusive character seems to remain to *Hyalonema affine*. The dimensions of the body or of the basal tuft cannot be regarded as in any way determinative.

Since, then, it is not probable that *Hyalonema affine*, Marshall, is identical with my *Hyalonema apertum*, I prefer to retain for the time the latter title.

3. *Hyalonema (Stylocalyx) depressum*, n. sp. (Pls. XXXV., XXXVI.).

In the Mid-North Pacific, north of the Mellish Islands (Station 246, lat. 36° 10' N., long. 178° 0' E.), from a depth of 2050 fathoms and a Globigerina ooze ground, several specimens of *Hyalonema* were dredged, which in general form differ markedly from the