

where throughout the whole sponge. They have the form of thick hexacts, pentacts, tetracts, triacts or diacts, whose rays, uniformly thick, strong and cylindrical—exhibit blunt or rounded ends, and are more or less abundantly covered with short, strong, conical spines. These teeth or spines are either uniformly scattered over the whole surface, or occur only on the distal ends of the several rays, the median and proximal portions remaining smooth. As these peculiar spicules of the basal pad have been figured in the case of *Hyalonema sieboldii* in Max Schultze's classic work on Hyalonematidæ, I have not devoted to them any special illustration.

Of all the skeletal parts of *Hyalonema sieboldii*, the long spicules of the basal tuft have been longest and most intimately studied. These basalia form a long loosely wound strand, which measures 30 to 60 cm. or more in length, and breaks up towards the foot in a brush-like fashion. To the detailed descriptions of former investigators I have but little new to add, and therefore refer to their accounts, especially to that of Max Schultze.¹ He found in one tuft 200 to 300 separate spicules, of which the shorter lay nearer the axis. The shape of the inferior extremity was certainly determined only in the shorter forms. He observed a simple pointed termination, similar to that of the superior extremity hidden within the sponge. Besides perfectly smooth forms, numerous spicules occur with a tooth-bearing spiral ridge. The free margin of the latter projects obliquely outwards and upwards, so that a similar direction is given to the leaf or nail-like, pointed or slightly rounded spines which it bears. Interruptions of the spirals sometimes occur, and these are often so regularly disposed, that the remaining portions of the projecting ridges are alternately opposed to one another.

On some very well-preserved (spirit) specimens collected by Dr. Hilgendorf in Sagami Bay, Japan, I was able to study the very inferior extremity of many of the long spicules of the tuft. It appeared that the spinose main portion of the spicule is followed by a short, narrow, smooth neck, which bears terminally a solid, cap-like or hemispherical thickening whose upper rounded margin exhibits eight recurrent teeth, forming an anchor-like figure.

2. *Hyalonema gracile*, n. sp. (Pl. XXVII. figs. 14-23).

This species of *Hyalonema* was dredged in the neighbourhood of the Philippine Island Mindanao (lat. 8° 0' N., long. 121° 42' S., Station 211), from a depth of 2225 fathoms, and on a blue mud ground. Its body, which is approximately pear-shaped, measures 2.5 cm. in length by 1.6 cm. in breadth. The upper end, which is somewhat narrowed and transversely truncated, bears a delicate sieve-plate, while the lower, conically pointed end runs out into a basal tuft, 1.5 mm. broad and about 3 cm. long. The component spicules are not numerous, nor twisted, and they diverge but slightly

¹ Die Hyalonemen, Taf. ii. figs. 1-7.