

Percival Wright,<sup>1</sup> who dredged *Hyalonema lusitanicum* from a depth of 480 fathoms south-west of Setubal, and had observed it in the fresh condition, found it embedded in mud up to that part of the siliceous spicular tuft which was not covered by *Palythoa*, while the upper extremity of the tuft bore a sponge body with several oscular openings. In the polypes forming the crust of the stalk movements of the tentacles were observed.

Hyalonemas were dredged in a similar situation in the Gulf Stream by Wyville Thomson from a depth of 550 fathoms.

In his memoir on *Holtenia carpenteri*,<sup>2</sup> Wyville Thomson refers to a *Hyalonema loveni* as a new species, without however describing or characterising it.

Percival Wright<sup>3</sup> now described in an elaborate paper the *Hyalonema* found off the coast of Portugal by Barboza du Bocage, Wyville Thomson and himself, and named it *Hyalonema mirabile*. On a specimen with an oval cup-shaped body, about 8 inches in length and 4 inches in breadth, "a number of irregular large openings (oscula)" could be seen in an upper pitting, and these "are covered over with a delicate open sarcode network, the edges of the meshes of which are thickly lined by the spicules called 'spiculate cruciform spicules' by Bowerbank." A figure of this, given on his pl. iii., shows the sieve-net on the upper truncated surface of the sponge body, extending evenly over the oscular opening and over the layer of the "spiculate cruciform spicules" in the net beams.

The two sponges described by Sars in 1872, in his work "On some remarkable forms of animal life from the great deeps off the Norwegian coast," and named as *Hyalonema longissimum* and *Hyalonema parvum*, manifestly do not belong to the Hexactinellida any more than his *Hyalonema boreale*.

In the work entitled Depths of the Sea, Wyville Thomson reported in 1873 on some *Hyalonemata* which he had dredged to the north of the Butt of Lewis from a depth of 450 to 500 fathoms. In these the root-tuft alone measured 40 cm. or more. He identified these forms as *Hyalonema lusitanicum*, Barboza du Bocage, and figured (*loc. cit.*, p. 421) a slender specimen about 34 cm. in length. It is noteworthy that this figure does not include the sieve-net which was observed by Percival Wright in his Portuguese specimen (described under the title *Hyalonema mirabile*), covering the oscular openings of the upper truncated surface. Instead of this a central conical boss projects about 2 cm. above the upper bounding surface, which is provided with large openings.

Higgin next described, in 1875,<sup>4</sup> a *Hyalonema* from Zebu (one of the Philippine Islands) as *Hyalonema cebuense*. This form resembles, indeed, in many respects the Japanese *Hyalonema sieboldii*, but according to Higgin's description and figures differs from that species chiefly in the following points:—the form of the body resembles that of a hewer's mallet; the polype crust of the stalk is absent; the "large stout acerate

<sup>1</sup> *Ann. and Mag. Nat. Hist.*, ser. 4, vol. ii. p. 323.

<sup>2</sup> *Phil. Trans.*, p. 701, 1869.

<sup>3</sup> *Quart. Journ. Micr. Sci.*, p. 73, 1870.

<sup>4</sup> *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xv. p. 377.