

rays are frequently not exactly opposed, but more or less regularly alternating (Pl. XXXI. fig. 12), more elongated medium-sized forms also occur, which are sharply distinguished from the above, by the fact that the umbel is not hemispherical but terminally truncate, and furnished with more straightly stretched, obliquely inserted, terminal rays (Pl. XXXI. fig. 14). A somewhat smaller form also occurs, in which the umbel rays are not broadened out in paddle-like fashion, but exhibit a narrow point, and in which the axial rod is more or less thickly beset with lateral spines. Finally, the familiar small amphidiscs, with narrow, smooth, axial rods and hemispherical many-rayed (sixteen to twenty) umbels (Pl. XXXI. fig. 16), also occur in tolerable abundance, varying in the different regions of the body. In the lowest terminal portion of the body, in the so-called basal pad, strongly developed spicules with six to two rays occur as in all species of *Hyalonema*. The rounded or truncate ends of the rays are beset with conical teeth or spines, extending to a greater or less distance interiorly (Pl. XXXI. fig. 15).

The long spicules of the basal tuft exhibit spiral or annular, obliquely projecting ridges and rows of teeth, which are inserted on the projecting edge of the ridges.

There now follow those species of *Hyalonema*, the upper end of which was not sufficiently preserved for deciding the question, whether there is a sieve-plate or not.

1. *Hyalonema lusitanicum*, Barboza du Bocage (Pl. XXVIII. figs. 12-17; Pl. XXXIX. figs. 16-18).

The specimen which Barboza du Bocage obtained in the neighbourhood of Setubal in Portugal, and which he described and figured<sup>1</sup> under the title *Hyalonema lusitanicum*, consisted of a spirally twisted tuft of spicules, the narrower end of which was for a length of 16 cm. and also at the terminal point, completely covered by a continuous layer of *Palythoa*, while in the longer free portion the spicules diverged in bushy tufted fashion. Neither on this specimen, nor on others which Bocage afterwards obtained from the same locality, could any portion of sponge-body be detected. The following diagnosis was given:—"Hyalonema polypario elongato, fibris setaceis hyalinis spiralter tortis, corio polypigero ad apicem usque ad  $\frac{2}{3}$  longitudinis totius involutis; polypis dilatatis, ellipticis, valde aggregatis, parum elevatis, per series longitudinales ac spirales regulariter digestis." Barboza must afterwards have found more perfect forms in which the sponge-body was preserved, for I found in the British Museum in South Kensington, London, a spirit specimen with the label *Hyalonema lusitanicum*, Barboza du Bocage, and described as a gift from the discoverer. The specimen was 56 cm. in length, and exhibited on the much damaged upper end a projecting tuft.

<sup>1</sup> *Proc. Zool. Soc. Lond.*, 1864, p. 265.