of its broad truncated basal plate to a solid substratum, and that the long spicular tuft, whose inferior compact portion is surrounded by the crust of a parasitic polype, *Palythoa fatua*, projected from the narrowed extremity. Passing over his accurate description of the long siliceous filaments, as well as of the elegant, very manifold, small, siliceous spicules of the sponge body proper, we need only here refer to the important observation made by Max Schultze, to the effect that both in the long tuft-spicules, and in the many-rayed or rod-shaped spicules of the body itself, and even in the axial part of the remarkable "Amphidiscs," a fine central canal extends, which is usually intersected at the middle by one or two transverse canals which cross it at right angles.

While Ehrenberg,[1] in opposition to this opinion of Max Schultze, still maintained that we had to deal with an artificial Japanese production, von Martens examined the debated organism in Japan, and in the same publication (p. 480) essentially confirmed Max Schultze's opinion.

A theory of the nature of *Hyalonema*, similar to that expressed by Max Schultze in his first communication in the Comptes rendus, was expressed some years later by Bowerbank in one of his papers on the Anatomy and Physiology of Sponges.[2] Bowerbank united *Hyalonema* with *Halichondria*, *Isodictya* and *Spongilla*, in the suborder of his Silicea, with a "spiculo-reticulate skeleton,"—the skeleton being "continuously reticulate in structure but not fibrous." The genus *Hyalonema*, Gray, was here characterised by Bowerbank in the following manner:—"Skeleton an indefinite network of siliceous spicula, composed of separated elongated fasciculi reposing on continuous membranes, having the middle of the sponge perforated vertically by an extended spiral fasciculus of single, elongated, and very large spicula, forming the axial skeleton of a columnar cloacal system."

Süss in 1862[3] called attention to a fossil from the Carboniferous limestone of Yorkshire, which had been already described by M'Coy as *Serpula parallela*, which exhibited a bundle of from fifteen to thirty or more round, smooth, parallel rods of the thickness of a knitting needle, and each provided with a central canal. This he named *Hyalonema parallelum*.

In 1864 Barboza du Bocage made a communication[4] on a new species of the genus *Hyalonema*, which was discovered off the coast of Portugal at great depths. He named it *Hyalonema lusitanicum*. Bocage regarded the form and peculiarly regular arrangement of the polypes, which partly surrounded the siliceous spicular tuft and were provided with forty tentacles, as especially characteristic of his new species. His diagnosis runs thus:—"Hyalonema polypario elongato fibris setaceis, hyalinis, spiraliter tortis, corio polypigero ab apice usque ad $\frac{2}{3}$ longitudinis totæ involutis polypis dilatatis, ellipticis valde aggregatis, parum elevatis, per series longitudinales ac spirales regulariter digestis."

[1] *Monatsber. d. k. preuss. Akad. d. Wiss. Berlin*, 1861, p. 450.
[2] *Phil. Trans.*, 1862, p. 1113.
[3] *Verhandl. d. k. k. zool.-bot. Gesellsch. Wien*, 1862, p. 85.
[4] *Proc. Zool. Soc. Lond.*, 1864, p. 266.