

Finally Bowerbank again gave, in 1869,<sup>1</sup> a more minute description of his *Farrea occa*, and supplied three new figures on pl. xxiv. figs. 1, 7. In this latter very detailed communication the siliceous network with its quadrate meshes, regarded as dermal skeleton and compared in form to a harrow, is represented by Bowerbank just as formerly; on the other hand, in addition to the more irregular and rough network of beams regarded as belonging to the inner framework, a number of variously formed isolated siliceous spicules are figured and described as accessory parts of the skeleton. These have four, five, or more rays, and do not present the right angles of the Hexactinellidan spicules. The generic characters of *Farrea* were summarised by Bowerbank in the same paper (p. 76) in the following manner:—"Skeleton siliceo-fibrous. Fibres canaliculated, canals continuous. Rete symmetrical; interstices rectangulated." The view first announced in the well-known paper by Wyville Thomson On the Vitreous Sponges,<sup>2</sup> is noteworthy; it is to the effect that the framework of beams which in the skeleton of *Farrea* forms a system with exactly square meshes has arisen by an amalgamation of regular hexradiate spicules.

Among the deep-sea sponges collected by Count Pourtalés in the Caribbean Sea Oscar Schmidt found in 1870<sup>3</sup> several irregular dichotomously branched tubes from 2 to 6 mm. in diameter. These were attached by a plate-like expansion, were thick-walled at the base, and became towards the wide open upper extremity gradually thin-walled and fragile, till finally on the outermost and doubtless youngest parts of the little tubular tree only a single layered network of siliceous beams and square meshes was found. From the intersections of the latter rough slender conical teeth projected on both sides. In addition to this siliceous network, which, in its youngest parts at least, presents a certain resemblance to the harrow-like siliceous network of beams of *Farrea occa* which Bowerbank regarded as a dermal skeleton, Oscar Schmidt also found and described the following free siliceous spicules:—(1) long spindle-spicules beset with barbs; (2) long spicules which run out at one extremity to a point, and are provided on the other with a hemispherical or slightly convex and marginally toothed umbel-like roof or cap; (3) hexradiate spicules, in which each of the rays is beset on its extremity with three pronged, thin teeth, with minute convex terminal umbels; (4) thin spicules which run out to a point at one extremity, and are provided on the other somewhat expanded end with five to eight bristle-like narrow prickles which project in a brush-like manner. These various spicules, which occurred in special abundance in the neighbourhood of the surface, were regarded by Oscar Schmidt as sufficiently characteristic of a new species distinct from the *Farrea occa* of Bowerbank, and this he designated *Farrea facunda*.

In the same year (1870) Saville Kent described,<sup>4</sup> along with several other Hexac-

<sup>1</sup> *Proc. Zool. Soc. Lond.*, p. 339.

<sup>2</sup> *Spongien des Atlantischen Gebietes*, p. 16.

<sup>3</sup> *Ann. and Mag. Nat. Hist.*, 1868.

<sup>4</sup> *Monthly Micr. Journ.*, November 1870.