

I had given the title *Tretodictyum cyathus*. I do not hesitate, therefore, to abandon my generic and specific designation for this form, and to adopt Carter's title, which has the priority. Thus the generic title *Tretodictyum* is wholly given up, and the two other species which belong to the same genus are no longer called *Tretodictyum tubulosum* and *Tretodictyum latum*, but *Hexactinella tubulosa* and *Hexactinella lata*.

The specimen figured by Carter, unfortunately not in its entirety, was obtained from Misaki, Japan, at the entrance of the Bay of Tokio. According to his description, it closely resembles the *Phakellia ventilabrum*, Bwk., figured by Bowerbank in his Monograph of British Sponges.<sup>1</sup> "The surface is on both sides even and uniform; uniformly scattered over internally with circular apertures about  $\frac{1}{2}$  inch in diameter, and about the same distance apart, and externally with a dermal, quadrilateral, spicular reticulation." "Wall about  $\frac{1}{8}$  of an inch thick, composed of two layers, viz., one on each side of an irregular central plane of condensed tissue, each layer consisting of plumose fibre curving upwards and outwards florally from the central plane of condensed tissue, strengthened by transverse fibres in their course."

Isolated spicules are represented, according to Carter, by the following types:—(1) dermal pentacts; (2) uncinates, called barbulæ by Carter; (3) thin oxydiacts; (4) scopulæ with two, three, or four slightly divergent teeth; (5) simple or spinose oxyhexacts; (6) oxyhexasters and discohexasters of different kinds.

*Character of the Genus.*—The wall of each of the cup-shaped or tubular specimens is traversed by canals, which are not exclusively disposed at right angles to the bounding surface.

The dictyonal framework is principally composed of radial, longitudinal, straight or slightly bent fibrous reticulate plates, about 1.5 mm. in breadth. These are separated from one another by spaces of similar form and breadth, but are at the same time bound together laterally by numerous transverse beams. A more irregularly developed fibrous network with round openings extends in some species over the outer, in others over the inner (gastral) surface of the dictyonal framework, and thus conceals either on the outside or inside the above mentioned longitudinally directed radial plates and their cleft-like interspaces.

The dermal and gastral skeleton consists of pentacts or hexacts, and numerous scopulæ of various forms. In addition to delicate uncinates, numerous oxyhexasters, discohexasters, and more rarely small oxyhexacts and discohexacts appear in the parenchyma.

1. *Hexactinella tubulosa*, n. sp. (Pl. XCIII.).

Simple or dichotomously branched, sometimes also laterally anastomosing tubes about 1 cm. in diameter, with a wall varying from 2 to 3 mm. in thickness, rise from a flat

<sup>1</sup> Vol. iii. pl. xxii.