

very long, slender branches, but produced into a terminal portion which bears no branches, and which itself extends further than any of them and is indistinguishable from them excepting in being a direct continuation of the main stem. Length of sponge (=that of the main stem) 475 mm.; diameter of stem and branches about 2 to 2.5 mm. The branches are long, flexuous and string-like, and do not bear secondary branches. *Colour* in spirit greyish-yellow. *Texture* tough, string-like, with a coating of soft, friable consistence. *Surface* roughened with minute monticular eminences like the surface of a file; hispid. *Oscula* minute, scattered.

*Skeleton*.—There is a slender axial core of dense, amber-coloured horny matter containing only a few slender spicules; this core merges into a thick cylinder composed of obliquely (sublongitudinally) arranged, closely placed spicules, which, when seen in longitudinal section, present an irregular lattice-like arrangement, crossing one another at acute angles. Transverse sections of the stem or branches show that there is also an arrangement of stouter stylote spicules radiating from the central horny axis to the circumference, beyond which they project like the spokes of a wheel. The skeleton is much more strongly developed in the lower part of the stem than in the branches, and a transverse section of this region bears under the microscope a most striking resemblance to the flat bottom of a circular basket, the spicules representing the twigs of which it is composed. In the branches the sheath of spicules surrounding the horny axis is much thinner, and is covered with a thick coating of brownish-yellow, granular choanosome containing the canal system and flagellated chambers. We have already mentioned the large, radiating stylote spicules which project beyond the surface of the sponge; each of these as it leaves the sponge is surrounded by a faggot-like bunch of very small, slender styli, which also have their apices projecting outwards.

*Spicules*.—*Megasclera*; (1) very long, smooth, slender styli (Pl. XL. fig. 8); straight, or nearly so; usually, but not invariably, tapering very gradually to a very fine point at the apex, size up to about 1.75 by 0.018 mm. (2) Smooth, slender strongyla (Pl. XL. fig. 8b), measuring up to about 0.77 by 0.01 mm. (3) Very slender, smooth styli, surrounding the large ones as above mentioned, size about 0.42 by 0.0035 mm. (4) Small, spined styli, of rare occurrence (very rare or absent except near the base of the main stem), found radiately disposed, completely embedded in the densest parts of the spicular skeleton; spines rather large compared to the size of the spicule, short and usually recurved towards its base; size of spicule about 0.175 by 0.0125 mm. A few of the slenderer amongst the smooth styli taper so much towards the base as to become almost or sometimes quite oxeote (Pl. XL. fig. 8a, b).

This species comes very close to Bowerbank's *Dictyocylindrus hispidus*,<sup>1</sup> but differs from it in its mode of branching and in the presence of the smooth, cylindrical spicules (strongyla), which seem to replace the unequal-ended oxea found in the latter species.

<sup>1</sup> *Vide* Mon. Brit. Spong., vol. iii. pl. xvii.