

*Spicules*.—(a) *Megasclera*; of one kind only, viz., smooth, sharp pointed, slightly curved styli (Pl. XIX. figs. 7, 7'); size about 0·33 by 0·0126 mm. (b) *Microsclera*; of one kind only, viz., palmate isochelæ (Pl. XIX. fig. 7a), with only slightly curved shaft and with the extremity of the anterior palm slightly everted; length about 0·03 mm.

This sponge differs from Bowerbank's original mainly in its much more robust growth and (as evidenced by his preparations in the British Museum) in the superior stoutness of the stylote spicules (about 0·0126 as against 0·0078 mm.). The isochelate spicule in the Challenger sponge is also a little larger than in the British form. From an examination of Bowerbank's preparations we have been led to the conclusion that the isochelate spicule which he describes as tridentate is rather palmate, and that there is only one kind of megasclera, which varies somewhat in size. Examples of the same species obtained by the "Triton," off the east coast of Scotland, approach more nearly in external form to the Challenger variety, but still are not nearly so robust and massive.<sup>1</sup>

*Locality*.—Station 313, January 20, 1876; lat. 52° 20' S., long. 67° 39' W; east of the Strait of Magellan; depth, 55 fathoms; bottom, sand; bottom temperature, 47°·8. One fine specimen.

*Esperiopsis cylindrica*, Ridley and Dendy (Pl. XIX. figs. 2, 2a, 2b).

1886. *Esperiopsis cylindrica*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 340.

Sponge erect, cylindrical, branching dichotomously; consisting of a flattened, branching base, about 19 mm. in diameter, from which arises a simple, erect, cylindrical stem, about 4 mm. in diameter. At a height of 187 mm. above the base the main stem, after becoming slightly flattened, divides into two branches, each of which again divides into two; the total height of the specimen being 275 mm. *Colour* in spirit yellowish-grey. *Texture* hard and tough. *Surface* minutely hispid. *Dermal membrane* not very distinct; thin and transparent. Neither *pores* nor *oscula* observed.

*Skeleton*.—The centre of the sponge is occupied by a dense core of horny fibre, formed apparently by the almost complete fusion of several longitudinal fibres which are probably branches of the same. This horny core is covered only by a thin rind of granular tissue. A very large proportion of the spicular skeleton is, of course, embedded in the horny substance. There is one central, axial fibre of spicules, which does not, however, form a simple axis, but branches in a tree-like manner, the branches coming off at very acute angles; doubtless this main spicular axis and its branches are to be regarded as the proper core of the horny axis. There is also a system of primary fibres radiating from the central axis to the surface of the sponge; these, like the axial fibres just described, are composed for the most part of large stylote spicules; the inner end of each fibre is

<sup>1</sup> Ridley, *Journ. Linn. Soc. Lond.* (Zool.), vol. xvii. p. 108.