

relations of this rare form of spicule in other sponges are so obscure as to afford no apparent clue to its classificatory importance, if it has any. As examples of other genera in which it occurs we may cite *Spongilla* and *Higginsia*.

*Dendropsis bidentifera*,<sup>1</sup> Ridley and Dendy (Pl. XXXVIII. fig. 1; Pl. XL. figs. 7, 7a, 7b, 7c; Pl. XLVI. fig. 8).

1886. *Dendropsis bidentifera*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 483.

Sponge (Pl. XXXVIII. fig. 1) erect, stipitate, dichotomously branched; stem cylindrical, branches flattened (especially towards their apices), and all approximately in the same plane. The largest specimen has a total height of about 200 mm.; the stem is 75 mm. long and about 8 mm. in diameter; the branches are at first of nearly the same diameter as the stem, but lessen upwards. *Colour* in spirit greyish-yellow. *Texture* tough and hard. *Surface* rough, with numerous minute prominences, and hispid.

*Skeleton*.—There is a dense, compact, axial core (Pl. XLVI. fig. 8, a) of closely interlacing, for the most part sublongitudinally disposed, smooth stylote spicules; from this central axis very much larger, stout, smooth, stylote spicules radiate to the surface, beyond which the apices of many of them project. Usually these spicules occur in loose bundles or bands of three or four together, the bases of those nearest to the centre being embedded in the axial core; they are surrounded by dense sheaves (Pl. XLVI. fig. 8, b) of the characteristic stylote spicules, the apices of which also often project beyond the surface.

*Spicules*.—(a) *Megasclera*; (1) smooth, stout, sharply pointed styli (Pl. XL. fig. 7, a), commonly with a rather sharp bend towards the base, towards which also the spicule usually narrows; in the dense central axis these spicules commonly measure about 0.35 by 0.025 mm.; these are, however, very much smaller than those radiating to the surface, which measure about 1.1 by 0.044 mm. There occur also very long and slender, smooth styli (Pl. XL. fig. 7, a); these are not nearly so abundant as either of the foregoing, but still can hardly be called rare; they are of variable size, and may measure about 1.75 by 0.02 mm.; sometimes, through the blunting and rounding off of the apex, the long slender styli give rise to strongylote spicules (Pl. XL. fig. 7, b). (2) The "bidentate" styli (Pl. XL. figs. 7, c, 7a, 7b); long, straight, slender, slightly fusiform and hastately pointed, each with two small, sharp spikes projecting from the base, which may be slightly enlarged. In the base the axial thread is also slightly enlarged, and seems to give off a branch to each spike. These spicules are very constant in shape and size, measuring about 0.56 by 0.0075 mm.; their disposition in the sponge has already been indicated. (b) *Microsclera*; small, entirely spined oxea (Pl. XL. fig. 7c), each one having usually a rather sharp bend in the centre; size about

<sup>1</sup> So-called from the presence of the two spikes on the base of the characteristic stylus.