

*Plocamia coriacea*, Bowerbank, sp., var. *elegans*, nov. (Pl. XXIX. fig. 9; Pl. XXXI. fig. 1).

1874. *Isodictya coriacea*, Bowerbank, Mon. Brit. Spong., vol. iii. p. 228, pl. lxxvi. figs. 7-12.

1881. *Dirrhopalum coriaceum*, Ridley, Journ. Linn. Soc. Lond. (Zool.), vol. xv. p. 481, pl. xxix. figs. 3-7.

1886. *Plocamia coriacea*, var., Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 475.

A single, small, dichotomously branched specimen (Pl. XXXI. fig. 1) of the form shown in the figure. Total height 38 mm.; diameter of branches, which are cylindrical, about 2.5 mm. *Colour* in spirit pale yellow. *Texture* soft and spongy. *Surface* even and minutely hispid. *Dermal membrane* very thin, delicate and transparent. *Oscula* and *pores* unknown; the sponge is apparently lipostomous.

*Skeleton*.—A close but irregular Isodictyal reticulation of the characteristic sausage-shaped spicules of the genus; amongst these, towards the surface, one distinguishes radiating lines of smooth stylole spicules, which terminate in free, projecting brushes, causing the hispidity of the surface.

*Spicules*.—(a) *Megasclera*; of three very distinct kinds. (1) (a) Fairly stout, slightly curved, smooth styli, with sharp points and evenly rounded bases (which are rarely or never spined, and differ from those of the type in this respect); above the base there is a slight constriction; these spicules vary much in size, averaging about 0.5 by 0.0126 mm.; they occur in the primary, radiating lines, from whose ends they freely project. (β) Very much slenderer, sharply pointed, straight subtylostyli, measuring about 0.3 by 0.003 mm., abundant in tufts on the surface, scattered through the dermal membrane, &c. (2) Curved, stout, entirely spined, sausage-shaped spicules (Pl. XXIX. fig. 9), with a slightly developed head at each end, which bears more numerous but perhaps smaller spines than the shaft; size about 0.11 by 0.0094 mm. This is the most abundant and characteristic spicule, it forms the Isodictyal reticulation above mentioned. (3) Entirely but slightly spined, slightly curved styli, narrowing towards the base, which bears more spines than the shaft; measuring about 0.18 by 0.0094 mm.; only fairly abundant, echinating the radiating, main fibres near the surface. (b) *Microsclera*; of two kinds. (1) Small, palmate isochelæ, length about 0.019 mm., very abundant in the dermal membrane, but not so common in the deeper parts of the sponge; (2) very numerous, slender toxa, with minutely spined ends, varying considerably in size, full grown examples being about 0.1 mm. long.

Bowerbank's species was, in the first instance, very imperfectly described, but it will be seen by reference to Ridley's description and figures (*loc. cit.*) that in the arrangement of the skeleton and the form and proportions of the various spicules the Challenger variety comes very near to it. The main difference in spicular measurements concerns the toxa, which seem to attain a greater size in Bowerbank's sponge than they do in ours.