

This sponge is interesting on account of the great depth (1600 fathoms) from which it was obtained, and with this must again be associated the presence of a definite external form. It is distinguished from other species of the genus by its very long megasclera and by the external form.

*Locality*.—Station 147, December, 30, 1873; lat. 46° 16' S., long. 48° 27' E.; between Prince Edward Island and Crozet Islands, Southern Ocean; depth, 1600 fathoms; bottom, Diatom ooze; bottom temperature, 34°·2. Two specimens, in bad condition.

*Esperiopsis anomala*, Ridley and Dendy.

1886. *Esperiopsis anomala*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 341.

Sponge digitate, irregularly ramose; branches subcylindrical, varying in diameter. One of the two specimens in the collection measures nearly 125 mm. in length but only about 6 mm. in average diameter. The second is about 50 mm. long and 8 broad, being somewhat compressed and giving off a few short, stumpy branches. *Colour* in spirit light greyish-yellow to dark grey. *Texture* very soft and compressible, but elastic, fibrous, and fairly tough. *Surface* uneven. *Dermal membrane* thin, delicate, transparent, rather loosely attached to the underlying tissues. *Oscula* (?). *Pores*, very abundant rounded openings through the thin dermal membrane, of various sizes.

*Skeleton*.—(a) *Dermal*; represented only by sparse, radiating brushes of spicules with outwardly projecting points. (b) *Main*; a rectangularly meshed reticulation of stout spiculo-fibre with primary and secondary lines distinct. Fibre containing a very large amount of spongin and few spicules.

*Spicules*.—(a) *Megasclera*; long but very slender styli, sometimes tending to become tylostylote, sharply pointed; size about 0·25 by 0·005 mm. (b) *Microsclera*; very minute, very slender isochelæ, very scarce, found in the dermal membrane, seen only in side view; length about 0·01 mm. Owing to their great slenderness these spicules are very difficult to make out; they give one the impression of being on the verge of disappearance. They become visible after prolonged soaking in Canada balsam.

The most remarkable feature about this sponge is the very strong development of spongin, which gives it quite a Chalinine appearance. It forms a very good instance of the manner in which horny fibre may be developed in any genus.

*Locality*.—Honolulu, 16 to 20 fathoms. Two pieces.

*Esperiopsis pulchella*, Ridley and Dendy (Pl. XIX. figs. 9, 9', 9a, 9b, 9c, 9d; Pl. XXX. fig. 3, e).

1886. *Esperiopsis* (?) *pulchella*, Ridley and Dendy, Ann. and Mag. Nat., ser. 5, vol. xviii. p. 341.

Under the above name we propose to describe a very small, encrusting sponge from Station 192. The sponge occurs in very small and excessively thin patches of a blackish