This genus differs from *Esperella* only in having the chelate spicule equal-ended instead of unequal-ended. The original type of the genus is *Esperiopsis villosa*, Carter, a "Porcupine" sponge,[1] first described under the name *Esperia villosa*, and this has been hitherto the sole species included therein.

The Challenger adds six new species, and we must also include one old one, namely, *Esperiopsis edwardii*, Bowerbank, sp., represented in the collection by a new variety. The synonymy of the latter sponge will be found under the species.

Several of the species of this genus are remarkable for their well-defined external forms, which serve as excellent guides by which to separate them from one another and from others of the genus.

The distribution of the genus is very wide, both vertically and horizontally, but it appears to prefer deep water in temperate or boreal seas.

Esperiopsis symmetrica, Ridley and Dendy (Pl. XIX. figs. 6, 6′, 6*a*, 6*b*, 6*c*; Pl. XXVI. figs. 4, 4*a*; Pl. XLVI. fig. 7).

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

Sponge (Pl. XXVI. figs. 4, 4*a*) erect, straight, slender, cylindrical, unbranched (in so far as evidenced by the Challenger specimens), covered with numerous, long, slender spicular tufts, giving it the appearance of a bottle brush. The largest specimen is 44 mm. in length by 4 mm. in diameter (including the projecting processes, which are themselves about 1 mm. in length). *Colour* in spirit dark chocolate-brown. *Texture* fibrous and soft between the tufts of spicules. *Surface* closely beset with the projecting, seta-like processes already mentioned. (*Oscula* and *Pores* unknown.)

Skeleton.—Well seen in transverse or longitudinal section (Pl. XLVI. fig. 7). Radiately arranged. In transverse section the sponge is circular, and from its centre radiate numerous loose bands of spiculo-fibre, after the manner of the spokes of a wheel; these fibres (Pl. XLVI. fig. 7, *d*) project far beyond the surface of the sponge, thus causing the hairy appearance. At a short distance within the circumference of the sponge itself is a regular circle, formed by the cut ends of longitudinal bands of spicules; each group of cut ends occupying one of the segments between two radiating fibres. At a short distance outside this circle, just beneath the surface of the sponge, is another similar but much less regular circle of cut spicules. The longitudinal fibres of the skeleton are confined almost exclusively to these two sheaths, placed one within the other; the inner (Pl. XLVI. fig. 7, *b*) being fairly compact and well defined, but the outer (Pl. XLVI. fig. 7, *c*) irregular and diffuse, while sometimes the two run into one another. There are no definite longitudinal fibres in the centre of the sponge, but a few loose, more or less longitudinally placed spicules.

[1] *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xiv. p. 213, pl. xiii. figs. 13–15; pl. xv. fig. 36.