

occasionally assume a definite shape, as in *Iophon piceum*, Vosmaer, which is cup-shaped, and in *Iophon cylindricus*, nobis, which is cylindrical. A common feature of the genus is the distinctness of the dermal membrane and pores.

Of the spicules the most remarkable are the bipocilli, which are, so far as we are aware, confined to the genus.

The genus has a wide distribution, as will be seen by reference to the localities given for the various species, of which six were obtained by the Challenger.

*Iophon pattersoni*, Bowerbank, sp.

1866. *Halichondria Pattersoni*, Bowerbank, Mon. Brit. Spong., vol. ii. p. 255; vol. iii. p. 115, pl. xlvi.

1866. *Halichondria scandens*, Bowerbank, Mon. Brit. Spong., vol. ii. p. 259; vol. iii. p. 112, pl. xlv.

1866. *Halichondria Hyndmani*, Bowerbank, Mon. Brit. Spong., vol. ii. p. 264; vol. iii. p. 115, pl. xlvi.

1866. *Halichondria nigricans*, Bowerbank, Mon. Brit. Spong., vol. ii. p. 266; vol. iii. p. 113, pl. xlv.

1867. *Alebion hyndmani*, Gray, Proc. Zool. Soc. Lond., May 1867, p. 534.

1867. *Iophon scandens*, Gray, Proc. Zool. Soc. Lond., May 1867, p. 534.

1867. *Iophon nigricans*, Gray, Proc. Zool. Soc. Lond., May 1867, p. 534.

1880. *Esperia Pattersoni*, Vosmaer, Notes from Leyden Museum, vol. ii. p. 143.

1880. *Esperia Hyndmani*, Vosmaer, Notes from Leyden Museum, vol. ii. p. 144.

1880. *Esperia scandens*, Vosmaer, Notes from Leyden Museum, vol. ii. p. 144.

1880. *Esperia nigricans*, Vosmaer, Notes from Leyden Museum, vol. ii. p. 144.

1881. *Alebion proximum*, Ridley, Proc. Zool. Soc. Lond., January 1881, p. 117.

Sponge massive, amorphous, crumbling. Colour dark brown. Surface uneven, corrugated.

The skeleton consists of (1) a dermal layer of long, dumb-bell-shaped spicules (tylota) with the knobs usually slightly spined and the shaft smooth. (2) A rather loose reticulation of spined stylote spicules penetrating all through the body. Two kinds of microsclera are present; (1) palmate anisochelæ, with pointed smaller ends, very fine, measuring up to 0.03 mm. long. (2) Minute bipocilli. Both of these vary greatly in numbers in different specimens, and in different parts of the same specimen. For measurements of the styli and tylota see the table given below.

The Challenger specimens of *Iophon* from Stations 308, 311, and from Tristan da Cunha form connecting links between several previously known, though ill-defined, forms. We are thus enabled to unite these several forms as varieties of a single species. In all of them the external appearance seems to be the same, and the distinction has lain chiefly in slight variations in form and size of the spined styli and of the tylota (*vide* table below). The microsclera vary considerably in the numbers in which they occur, but this cannot be considered as a specific distinction. We thus have a single species