

elaboration of the bipocillate spicules. The other spicules are also larger in almost every case than the corresponding forms in other species of *Iophon*; *Iophon (Alebion) piceum*, Vosmaer, approaches it the most nearly in this respect, but even in this species the stylus measures only 0.32 mm. in length.

*Localities*.—Station 142, December 18, 1873; lat. 35° 4' S., long. 18° 37' E.; off the Cape of Good Hope; depth, 150 fathoms; bottom, green sand; bottom temperature, 47°. The young specimen.

Station 145A, December 27, 1873; lat. 46° 41' S., long. 38° 10' E.; off Prince Edward Island; depth, 310 fathoms; bottom, volcanic sand.

Station 148A, January 3, 1874; lat. 46° 53' S., long. 51° 52' E.; between Prince Edward and Kerguelen Islands; depth, 550 fathoms; bottom, hard ground, gravel, shells.

*Iophon cylindricus*, Ridley and Dendy (Pl. XVI. fig. 4; Pl. XVII. fig. 6).

1886. *Iophon cylindricus*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 349.

Sponge (Pl. XVI. fig. 4) erect, cylindrical (whence the specific name), with expanded base encrusting a dead Pecten shell; showing a slight tendency to branch at the apex. Height, including base, 44 mm. Average diameter 6 mm. (A second specimen, also growing on a dead shell, appears to represent little more than the base of the sponge.) *Colour* in spirit brown. *Texture* brittle and crumbling. *Dermal membrane* very distinct, transparent, and with numerous round pores. *Oscula* scattered over the surface (?).

*Skeleton*.—(a) *Dermal*; a very well developed network of not very closely aggregated tylota. (b) *Main*; a reticulation of loose spiculo-fibre, composed of stylote spicules.

*Spicules*.—(a) *Megasclera*; slightly curved, smooth styli (Pl. XVII. fig. 6, a, b), each tapering from near the apex to a very sharp point; size 0.25 to 0.29 by 0.011 mm. (b) *Microsclera*; of two kinds; (1) palmate anisochelæ of the usual *Iophon* type, measuring 0.025 mm. in length; (2) bipocilli, numerous and of the usual shape, 0.0127 mm. long.

It will be seen that this species approaches *Iophon laminalis*, nobis, in the smoothness of the styli, but the external form is very different. Further, the tylota are little more than half as stout, and the styli only half as stout and not half as long as the corresponding spicules in that species.

*Locality*.—Station 163A, April 4, 1874; lat. 36° 59' S., long. 150° 20' E.; north-east of Cape Howe, Australia; depth, 120 fathoms; bottom, green mud. Two specimens.