Siphonochalina intermedia,[1] Ridley and Dendy (Pl. VII. fig. 1; Pl. XLVI. fig. 3).

1886. *Siphonochalina intermedia*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 331.

Sponge (Pl. VII. fig. 1) (sessile? or stipitate?), bushily ramose. Branches stout, tubular, sometimes anastomosing, short as compared with those of the next species, averaging about 56 mm. in length and 16 mm. in diameter; each branch varies considerably in diameter in different parts of its length, and is broadest near the summit. All the branches tend to grow vertically upwards. The total height of the single specimen in the collection is 87 mm. and the breadth 116 mm., but something seems to have been cut off from it. *Colour* in spirit greyish-yellow. *Texture* soft and spongy; tough and fibrous. *Surface* smooth, glabrous, with a reticulate appearance due to the underlying tissues appearing through the delicate, transparent dermal membrane. *Oscula*, large circular openings, one at the summit of each branch, about 8 mm. in diameter.

Skeleton.—(*a*) *Main;* the main skeleton, as seen in vertical section (Pl. XLVI. fig. 3) is a very regular, rectangularly-meshed network of spiculo-fibre, the primary fibres running vertically to the surface, and the secondary ones crossing them at right angles. Both primary and secondary fibres are rather slender, and have a core of polyserially arranged, slender, oxeote spicules. The amount of horny matter in each fibre is large; in the primary fibres there are many more spicules than in the secondary ones. The fibres of both sets measure about 0·032 mm. in diameter. There are also very numerous oxeote spicules scattered through the choanosome between the fibres. (*b*) *Dermal;* the true dermal skeleton is a very delicate, triangularly or polygonally-meshed reticulation of spiculo-fibre, the fibre forming each side of a mesh being composed of a single spicule and a very large proportion of horny matter. (When mounted in Canada balsam the horny fibre is rendered almost invisible, and the dermal skeleton then appears as a unispicular reticulation of oxeote spicules.) The dermal skeleton is supported on the ends of the primary fibres, which also form the nodes in a much coarser reticulation of stouter spiculo-fibre lying immediately below it.

Spicules.—Slender oxea, rather abruptly pointed, measuring up to about 0·1 mm. in length, and up to about 0·006 mm. in thickness, but usually slenderer.

This sponge certainly comes very close to Esper's *Spongia tubulosa*,[2] but the spicules in that species are, according to Ehlers,[3] twice as thick as in ours. Possibly *Siphonochalina intermedia* should be regarded as only a variety of *Spongia tubulosa*, but until more is known of the skeleton arrangement in the latter species the two had better remain distinct; as regards external form, they are almost identical (*vide* Esper's figure, *loc. cit.*).

Locality.—Port Jackson; 7 to 8 fathoms. One specimen.

[1] This species and the next were also obtained by Dr. v. Lendenfeld, who first used the specific names *intermedia* and *annulata* in his MS. Catalogue.

[2] Fortsetz. der Pflanzenthiere, pt. i. p. 196, pl. liv.

[3] Die Esper'schen Spongien, p. 19.