

membrane to a network, but we have found no perfect examples of this arrangement. *Oscula* small and scattered, having their margins usually sunk a little below the general surface of the sponge.

*Skeleton*.—(a) *Dermal*; consisting of a very irregular layer of tylote spicules, scattered, or in loose bundles and brushes which may commence beneath the surface and project outwards. (b) *Main*; a very irregular reticulation of entirely spined styli. No very distinct fibres are present, although primary lines of spicules may be recognised, with little difficulty, running vertically towards the surface.

*Spicules*.—(a) *Megasclera*; (1) entirely spined styli (Pl. XXVII. fig. 11), with the spination well marked, usually slightly curved and sharply pointed at the apex, size about 0·52 by 0·034 mm. (2) Tylota (Pl. XXVII. fig. 11a), with heads only faintly developed, entirely smooth, with straight shaft and well-rounded ends, size about 0·42 by 0·01 mm. We have not found any distinct echinating spicules, although sometimes entirely spined styli, much smaller than those described, occur, which may perhaps represent them. (b) *Microsclera*; (1) tridentate isochelæ (Pl. XXVII. fig. 11b), with strongly curved shaft and of rather peculiar shape, length about 0·047 mm. (2) Very slender sigmata, usually much contort, length about 0·05 mm. Neither kind of microsclera occurs very abundantly.

This sponge, represented in the collection only by two small pieces, closely resembles in external appearance an *Iophon*, and may readily be distinguished from other *Myxillæ* by its dark colour (should this prove to be a constant feature of the species). It is distinguished from *Myxilla paupertas*, Bk., and *Myxilla nobilis*, nobis, by the presence of the sigmata, the entire spination of the large stylus, and the absence of the echinating stylus; and from the latter also by the fact that the tylota are smoothly rounded off at the ends. The sponge contains a considerable amount of foreign matter, chiefly Foraminifera.

*Locality*.—Station 150, February 2, 1874; lat. 52° 4' S., long. 71° 22' E.; west of Heard Island, Southern Ocean; depth, 150 fathoms; bottom, coarse gravel; bottom temperature, 35°·2. Two specimens.

*Myxilla mariana*, Ridley and Dendy (Pl. XXVII. figs. 12, 12a, 12b, 12c, 12d).

1886. *Myxilla mariana*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 472.

Sponge massive; represented in the collection only by a few fragments, the largest of which is about 25 mm. long by 12 mm. broad. *Colour* in spirit very pale, yellowish-grey. *Texture* fairly compact, but soft and rather crumbling. *Surface* smooth, more or less glabrous, but very uneven and deeply furrowed by wide meandering grooves, so as to give rise to a number of irregular, stumpy lobes. *Dermal membrane* thin, transparent, adhering rather firmly to the underlying tissues. *Pores*; these appear to be rather scarce, and we have observed no definite pore-areas. *Oscula* small and scattered.