

transparent. *Oscula* few, scattered, rather small. *Pores* arranged in definite, but rather irregular groups (pore-areas), each group containing about twenty or thirty, fairly closely placed, rounded or oval pores; diameter of pores about 0.1 mm.

*Skeleton*.—Very irregular; in parts one can distinguish primary lines of loose fibre running vertically to the surface of the sponge, crossed by still looser secondary fibres or by scattered spicules; in other parts the arrangement is even less regular and may be described as irregularly Halichondrioid. The fibre, such as it is, is composed of basally spined styli, and is echinated by much smaller, entirely spined styli (also in places by the larger styli?). At the surface the main skeleton passes into loose fibres and brushes of tylota. The latter are abundantly present in the dermal membrane, excepting in the pore-areas, which are almost or quite free from spicules and have the tylota around them arranged in a radiate manner.

*Spicules*.—(a) *Megasclera*; of three kinds. (1) Basally spined styli (Pl. XXVII. fig. 14), sharply pointed and usually curved; size about 0.46 by 0.019 mm.; making up the main skeleton. (2) Much smaller, entirely spined styli (Pl. XXVII. fig. 14a), usually straight, sharply and very gradually pointed at the apex, sometimes with distinct heads (tylostylote); size about 0.175 by 0.0125 mm.; echinating the skeleton fibre. (3) Tylota (Pl. XXVII. fig. 14b), with straight shafts and very slight heads, which terminate very shortly and abruptly and are flattened and slightly spined at the ends; size about 0.3 by 0.006 mm.; dermal. (b) *Microsclera*; of one kind only, viz., tridentate isochelæ, with very strongly curved shafts; size variable, up to about 0.034 mm. long.

The most characteristic feature of this variety is the extent to which the flattening of the ends of the tylota is carried; the proportions of the large spined stylus also differ considerably from those of the corresponding spicule in the type specimens, as will be seen by reference to the descriptions.

*Locality*.—Station 307, January 4, 1876; lat. 49° 24' 30" S., long. 74° 23' 30" W.; off the south-west coast of Patagonia; depth, 140 fathoms; bottom, blue mud. Two specimens.

The species which we have called *Myxilla nobilis*, and its varieties, have given us a great deal of trouble in determining their true relations; they appear to be sufficiently connected *inter se* to warrant us in considering them all as varieties of one species, and that species perhaps finds its nearest already known ally in Bowerbank's *Hymeniacidon* (*Myxilla*) *paupertas*; the two species seem, however, to be distinct. Bowerbank appears to have had only very small and badly preserved specimens, about which nothing is satisfactorily known excepting the spiculation, which, as evidenced by one of his preparations in the British Museum, is as follows:—(1) Basally spined styli, verging upon tylostylote, curved, attenuated and drawn out very gradually into very fine points; size up to about 0.52 by 0.012 mm. (2) Entirely spined styli ("internal defensive