

definite, rounded or oval pore-areas (Pl. XXX. fig. 2a) about 1 mm. in diameter; these pore-areas are often very thickly scattered over the surface of the sponge, being separated from one another only by thin strands of tissue. The dermal membrane within the pore-areas is reduced to a fine, lace-like network by the presence of numerous large pores, of which from thirty to forty often occur in a single pore-area. The pores themselves are rounded openings, usually oval, but often more or less polygonal and varying in greatest diameter from 0.07 to 0.35 mm.

*Skeleton.*—(a) *Dermal*; a loose reticulation of scattered tylota, often arranged in small brushes, in a radiate manner, around the pore-areas. (b) *Main*; a very loose and irregular reticulation of styli, united together in parts to form loose fibres; rather abundantly echinated by smaller, spined styli.

*Spicules.*—(a) *Megasclera*; of three kinds. (1) Styli (Pl. XXVII. fig. 15), entirely smooth or slightly spined at the base; stout, usually slightly curved, and tapering gradually to a very sharp point at the apex; size about 0.52 by 0.03 mm; making up the main skeleton. (2) Much smaller, entirely spined styli (Pl. XXVII. fig. 15a), usually straight, tapering gradually from the base to a sharp point at the apex; with the spination more pronounced at the base than elsewhere, and often with distinct heads (tylostylote); size about 0.18 by 0.013 mm.; echinating the loose fibres of the main skeleton. (3) Tylota (Pl. XXVII. fig. 15b), with straight, smooth shaft and slightly expanded heads, which are very short and abruptly truncated, often slightly spined at the end; size about 0.33 by 0.0063 mm.; dermal. (b) *Microsclera*; tridentate isochelæ (Pl. XXVII. figs. 15c, 15d), with strongly curved, stout shaft; variable in size, measuring up to about 0.044 mm. in length; exceedingly abundant, especially in the dermal membrane. Occasionally smooth, simple sigmata are seen, about 0.09 mm. long, but so rarely as to suggest that they probably occur only as foreign bodies.

A remarkable feature of this species is the frequent truncation of the heads of the tylota, often accompanied by minute spination. This, however, is not a constant feature and may sometimes be observed in *Myxilla rosacea*, Schmidt; it may also occur in *Myxilla cribrigera*, nobis. The two species, *Myxilla cribrigera* and *Myxilla nobilis* agree closely in several respects, but are sharply distinguished from one another by the fact that the former has no echinating spined styli such as are present in the latter.

Another very interesting point is the transitional character of the larger stylote spicule; it is apparently normally smooth, but may be slightly spined (*cf.* *Myxilla paucispinata*, nobis, p. 132).

*Localities.*—Station 148A, January 3, 1874, lat. 46° 53' S., long. 51° 52' E.; south of the Crozets; depth, 240 to 550 fathoms; bottom, hard ground, gravel, shells. One specimen, apparently a piece broken off from a larger one. Probably belonging to a slight geographical variety.

Station 320, February 14, 1876; lat. 37° 17' S., long. 63° 52' W.; off the mouth of