

*Skeleton*.—(a) *Dermal*; consisting of scattered tylota, sometimes arranged in irregular brushes. (b) *Main*; arranged very much as in *Myxilla rosacea*, var. *japonica*, but not so firm and dense; the meshes of the spicular network are triangular and the side of each triangle is of one spicule's length, and usually composed of several spined styli lying together parallel with one another, the rudimentary fibre thus formed being echinated, chiefly at the nodes, by smaller spined styli.

*Spicules*.—(a) *Megasclera*; of three kinds. (1) Entirely and considerably spined, almost or quite straight, sharply pointed styli (Pl. XXVII. figs. 9, 9a), measuring about 0.28 by 0.0155 mm., making up the main skeleton. (2) Much smaller, straight, very sharply pointed and entirely spined styli (Pl. XXVII. fig. 9b), measuring about 0.12 by 0.008 mm., echinating the skeleton fibre. (3) Tornota or tylota (Pl. XXVII. fig. 9c), somewhat hastately pointed or with slightly developed, smooth, oval heads, pointed at the ends; size about 0.22 by 0.0063 mm., dermal. (b) *Microsclera*; (1) tridentate isochelæ (Pl. XXVII. figs. 9d, 9e) of rather peculiar form, and with very strongly curved shaft; length about 0.044 mm. Numerous much smaller isochelæ also occur which at first sight appear to be different in shape, but they are probably merely young forms of the larger. The isochelæ are extremely abundant, especially in the dermal membrane, forming in places an almost continuous layer. (2) Very small and very slender sigmata, usually contort and much bent, length usually about 0.02 mm., very rarely up to 0.063 mm.

The external appearance of the sponge and the shape of the isochelæ are well-marked characters of this species, and serve to distinguish it from others of the genus.

*Locality*.—Station 320, February 14, 1876; lat. 37° 17' S., long. 53° 52' W.; off the mouth of the Rio de la Plata; depth, 600 fathoms; bottom, green sand; bottom temperature, 37°. Six or eight pieces, mostly in a rather fragmentary condition.

*Myxilla nobilis*, Ridley and Dendy (Pl. XXVII. figs. 15, 15a, 15b, 15c, 15d; Pl. XXX. figs. 2, 2a).

1886. *Myxilla nobilis*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 473.

Sponge (Pl. XXX. fig. 2) massive or lobate, may be encrusting. The largest specimen consists of two lobes, a large one and a small one, arising from a common base; the base is about 56 mm. long by 25 mm. broad and the larger lobe is 56 mm. in height. Another specimen encrusts the branches of a dead Coral. *Colour* in spirit greyish-yellow. *Texture* loose, soft and spongy; rather cavernous. *Surface* uneven but not hispid. *Dermal membrane* very distinct, transparent, glabrous; easily separable from the underlying tissues. *Oscula*; round, scattered openings, having their margins flush with the general surface of the sponge. *Pores* very distinct, arranged for the most part in very