

62 mm. and is about 6 mm. thick; it is strongly curved. (The colour is now reddish, but this is due to the rusting of the case in which the sponge was packed, which has also affected many other specimens from the same station.) *Texture* soft and spongy. *Surface*, on one (the convex) side very rough and uneven, with a worn appearance, on the other slightly rough and longitudinally wrinkled. *Pores* oval, about 0.03 mm. in long diameter, in irregular groups.

*Skeleton*.—(a) *Dermal*; the dermal membrane is supported on the ends of brushes of tornote spicules which radiate outwards from below the surface of the sponge; these spicules may also occur scattered horizontally through the dermal membrane. (b) *Main*; the main skeleton is a very loose and confused reticulation of large, smooth, stylote spicules, with a tendency towards the formation of incipient fibre.

*Spicules*.—(a) *Megasclera*; of two kinds. (1) Large, stout, slightly curved, sharply and gradually pointed, smooth styli (Pl. XXVII. fig. 1), size about 0.77 by 0.04 mm. (2) Hastately pointed, smooth tornota (Pl. XXVII. figs. 1a, 1b), size about 0.35 by 0.01 mm.; dermal. (b) *Microsclera*; of two kinds. (1) Tridentate isochelæ (Pl. XXVII. fig. 1c), with stout, strongly curved shaft; length up to about 0.04 mm., but more usually about 0.025 mm.; abundant. (2) Very abundant sigmata, rather stout and often much contort, size about 0.07 by 0.004 mm.

This species evidently comes very close to *Myxilla spongiosa*, nobis, from the same station, but is sharply marked off from it by the form of the dermal spicules (perhaps also by their arrangement), by the greater stoutness of the stylus, and by the difference in size and shape of the tridentate isochelæ, as well, perhaps, as by the general form of the sponge.

*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°.2. One specimen.

*Myxilla cribrigera*, Ridley and Dendy (Pl. XXVII. figs. 7, 7a, 7b).

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

Sponge apparently free; digitate, consisting of a single long, digitate process arising from a shorter, stouter, transverse piece. Total length of sponge 50 mm.; length of the transverse piece 31 mm.; diameter of main lobe about 12 mm. *Colour* in spirit dark, yellowish-grey. *Texture* soft and spongy. *Surface* minutely and irregularly hispid. *Dermal membrane* very distinct, thin, transparent, often readily separating from the underlying tissues. *Oscula* small, scattered, with their margins flush with the surface (?). *Pores* arranged in definite, more or less circular pore-areas. The surface of the sponge presents in many places distinct rounded areas, marking the position of subdermal cavities covered over only by the thin, transparent dermal membrane, which is in these places penetrated by very large, oval pores. These cribriform areas, and even the pores