

arrangement, running towards the surface, where they break up into divergent tufts of slender bicapitate cylindrical spicules (tylota).

*Spicules*.—(a) *Megasclera*; (1) long, slender, slightly curved, hastately pointed styli; measuring about 0·3 by 0·0042 mm. These spicules may approach the tylostylote form (Pl. XXIII. figs. 9, 9a); (2) long, slender tylota, with usually only slightly developed, oval heads; size about 0·35 by 0·004 mm. (Pl. XXIII. figs. 9b, 9c). (b) *Microsclera*; exceedingly fine, hair-like, scattered raphides, about 0·13 mm. long.

This species is represented in the collection by a thick triangular lump with square-cut edges, which appear to be natural; the upper surface is almost flat. The sponge, especially near the lower surface, contains large quantities of foreign bodies, sand, fragments of shells, &c. It is quite possible that here, as in other cases, the foreign bodies to a certain extent replace the proper skeleton of the sponge. The species is characterised by the presence of these foreign bodies, whence the specific name, and by the proportions of the megasclera and raphides, but it comes near to *Tedania tenuicapitata*, being distinguished from it chiefly by the raphides being only about half as long as in that species, and by the presence of the foreign bodies; hence it may perhaps have to be united with it at some future time.

*Locality*.—Station 162, April 2, 1874; lat. 39° 10' 30" S., long. 146° 37' 0" E.; Bass Strait; depth, 38 fathoms; bottom, sand and shells.

*Tedania massa*, Ridley and Dendy (Pl. XI. figs. 4, 4a; Pl. XXIII. figs. 2, 2a, 2b).

1886. *Tedania massa*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 335.

Sponge (Pl. XI. fig. 4) massive, flattened and cake-like, amorphous or lobose. Size apparently indefinitely great, the largest specimen measuring as much as 325 mm. long by 200 broad, and from 12 to 25 mm. thick; other specimens are as much as 50 mm. thick. *Colour* in spirit, grey, brown, or pale yellow. *Texture* very soft and spongy. *Surface* fairly even, very minutely hispid. *Dermal membrane* fairly distinct, with a reticulate appearance. *Oscula* more or less numerous, scattered, or in rows along the margins of the flattened lobes (Pl. XI. fig. 4, o), flush with the surface or with slightly raised margins; diameter about 4 mm. *Pores* scattered, but commonly in groups (Pl. XI. fig. 4a).

*Skeleton*.—Divisible into three parts:—(1) a very loose, isodictyal reticulation of large, stout, stylote spicules. (2) A loose reticulation, with very large meshes, of stout, compact fibres like bands of horse-hair, composed of very long, fine, flexible, oxeote raphides, with more or less admixture of the stylote and diactinal spicules. One can distinguish primary fibres running more or less vertically to the surface, and secondary fibres crossing these at right angles; but the arrangement is very irregular and the fibres run for long distances without being crossed by others. (3) On approaching the surface of the sponge both these kinds of skeleton give place to a reticulation of hastately pointed cylindricals