

(Pl. XXX. fig. 3, e), which proves to be a new species, characterised by remarkably fine microsclera; it will be found described on p. 84 under the name *Esperiopsis pulchella*.

The spination of the styli appears to be a very inconstant character in this species (*vide infra*), and it is doubtful whether it is of even specific value; nevertheless we have made use of the fact that these spicules may be spined in selecting a name for the species. This consideration tends to throw considerable doubt on the correctness of separating genera, e.g., *Tedania* and *Trachytodania*, on this character alone.

Locality.—Station 192, September 26, 1874; lat. $5^{\circ} 49' 15''$ S., long. $132^{\circ} 14' 15''$ E.; Little Ki Island, New Guinea; depth, 140 fathoms; bottom, blue mud. One specimen.

A second specimen in the collection is probably a slight variety of the above. It is, however, a mere fragment, but it comes from the same station. The spiculation is as follows:—(a) *Megasclera*; (1) large, smooth styli, with fairly sharp points (seldom or never showing spination); measuring about 0.77 by 0.028 mm.; (2) tylota, with very well developed, oval heads; measuring about 0.42 by 0.0078 mm. (b) *Microsclera*; (1) tridentate isochelæ, with slightly curved shaft; length about 0.063 mm.; (2) large, slender, simple (very rarely contort) sigmata, up to about 0.145 mm. in length.

Myxilla mollis, Ridley and Dendy (Pl. XXVII. figs. 4, 4a, 4b).

1886. *Myxilla mollis*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 471.

Sponge massive, amorphous. Largest specimen about 62 mm. long by 31 mm. broad and 12 to 19 mm. thick. *Colour* in spirit pale, creamy yellow. *Texture* uniform throughout, very soft and spongy. *Surface* usually very uneven, but smooth. *Dermal membrane* distinct, thin, transparent. *Oscula* scattered, having their margins flush with the surface of the sponge. *Pores* scattered (?).

Skeleton.—(a) *Dermal*; composed of loosely scattered tylote spicules, together with a certain proportion of styli; sometimes forming a very irregular reticulation, in which occasionally several spicules are found lying side by side, parallel with one another. (b) *Main*; as loose and irregular as the dermal layer, consisting of a very indefinite reticulation of stylote or subtylostylote spicules.

Spicules.—(a) *Megasclera*; of two kinds. (1) Smooth subtylostyli or styli (Pl. XXVII. fig. 4); these form the main skeleton and are generally subtylostylote, being more or less enlarged at the base, and tapering more or less gradually to a sharp point at the apex; size about 0.42 by 0.01 mm.; (2) tylota (Pl. XXVII. fig. 4a), each with a straight, slender shaft and a distinct oval head at each end; entirely smooth; measuring about 0.22 by 0.006 mm.; occurring abundantly in the dermal layer of the skeleton. (b) *Microsclera*; (1) tridentate isochelæ (Pl. XXVII. fig. 4b), with slightly curved shaft which, towards the two ends, often appears to be expanded on each side into a slight fimbria; length