

Locality.—(?) Station 135, October 15, 1873; lat. $37^{\circ} 1' 50''$ S., long. $12^{\circ} 19' 10''$ W.; Tristan da Cunha; depth, 360 fathoms; bottom, volcanic sand.

Habitat.—Singapore (Carter); Prince of Wales Channel, West and Alert Islands, Torres Strait (Ridley); (?) Tristan da Cunha (Challenger).

Rhizochalina pedunculata, Ridley and Dendy (Pl. VIII. fig. 1; Pl. IX. figs. 2, 6).

1886. *Rhizochalina pedunculata*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 332.

Sponge (Pl. VIII. fig. 1) irregularly rounded, slightly elongated, with one end drawn out into a short, stout peduncle, to the extremity of which is firmly attached a quantity of black sand. The sponge has evidently lived in an erect position, attached to the bottom by the peduncle. Height, inclusive of peduncle, 40 mm.; breadth 25 mm. Unfortunately, a portion of the peduncle is broken off obliquely, leaving only a fragment of the base. Irregularly scattered over the surface of the sponge occur a number of fistulæ, about 4 mm. in diameter, all broken off (? some naturally terminating) close to the surface of the sponge, so as to present the appearance of so many oscula; nine such fistulæ are present, varying a little in width. *Colour* of the body a dirty brownish-yellow. The bast-layer and dermal membrane together form a very thin coating to the sponge, no thicker than a sheet of writing paper, which readily peels off from the underlying tissues. *Surface* slightly rough and wrinkled. *Texture* firm and compact throughout. Wide canals penetrate right to the centre, converging and opening into the bases of the fistulæ, which probably act as oscular tubes.

Skeleton.—Arranged as in *Rhizochalina fistulosa*, with (a) a dermal network of chiefly oxeote spicules, lying immediately below the thin, transparent external membrane. The spicules of the dermal network vary very greatly in size and form. We have (1) sausage-shaped (strongylote) spicules (Pl. IX. fig. 2) with rounded ends, nearly straight or very slightly curved, measuring 0.106 by 0.01 mm., 0.23 by 0.013 mm., 0.19 by 0.017 mm., &c. It is not uncommon to find small strongylote spicules with a central bulbous inflation (Pl. IX. fig. 2, b, c); these are probably young forms. (2) More numerous, oxeote spicules, nearly straight, or slightly curved, sometimes becoming blunted at the end, varying greatly in size, from 0.09 by 0.0047 mm. to 0.25 by 0.009 mm. (There can be little doubt that the smaller spicules are here, as in other cases, simply young forms, which have not yet attained their maximum size.) (b) A bast-like reticulation of spiculo-fibres, which in this species forms only a very thin layer, consisting of a unilamellar network of fibres, composed of oxeote (and strongylote?) spicules similar to those forming the dermal network. The fibres are very compact, averaging about 0.1 mm. in diameter. (c) A rather scanty reticulation of spiculo-fibres, ramifying through the interior of the sphere and supporting the canal system. Also a great number of loose