

Spicules.—Small, slender oxea, very slightly curved; abruptly and often bluntly pointed; size about 0.1 by 0.0032 mm.

This species differs from *Pachychalina* (*Cladochalina*) *diffusa*, Ridley,¹ in the inferior amount of spongin in the fibre, in the slenderer spicules (0.0032 as against 0.0063 mm. thick) and in the much larger oscula.

Localities.—"Off Bahia, 7-20 fathoms"; several pieces. "Off Bahia" (inside label); "off Bermuda, shallow water" (outside label); several pieces.

Station 208, January 17, 1875; lat. 11° 37' N., long. 123° 31' E.; Philippine Islands; depth, 18 fathoms; bottom, blue mud. One small specimen (Pl. IV. fig. 4) of a variety, differing slightly in external appearance, but agreeing closely in microscopical structure, size of spicules, &c.

Pachychalina lobata, Ridley (Pl. V. fig. 1; Pl. XLVI. fig. 4).

1884. *Pachychalina lobata*, Ridley, Zool. Coll. H.M.S. "Alert," Brit. Mus., p. 404.

The Challenger obtained one specimen of this sponge (Pl. V. fig. 1), which, being in much better condition than the single specimen obtained by the "Alert," and described by Ridley (*loc. cit.*), enables us to add some interesting details. The specimen in question consists of a single, long, compressed, digitate process; it has apparently grown erect and measures 200 mm. in length, 16 mm. in breadth, and a little over 8 mm. in thickness. There is an almost uniserial row of circular oscula down each margin (*vide* fig. 1), each osculum being about 2 mm. in diameter. The dermal membrane is delicate and transparent, supported by a very beautiful and regular reticulation of spiculo-fibre. The pores are very numerous, reducing the dermal membrane in the meshes of the dermal reticulation to a mere network (Pl. XLVI. fig. 4).

This specimen differs from the type of the species; (1) in the size of the spicules, which measure only about 0.16 by 0.0115 mm. as against 0.21 by 0.0128 mm.; (2) in the possession of a more highly developed and regular dermal skeleton reticulation. That there is a similar dermal reticulation in the original type we have convinced ourselves by a re-examination of the specimen, but it is not so well developed as in the Challenger sponge; and thus the original description is incorrect in so far as it is stated that the dermal skeleton is "a closely-set coat of subparallel spiculo-fibres."

The specific name *lobata* was given by Ridley on the supposition that the species was identical with Esper's *Spongia lobata*,² but we have now arrived at the conclusion that this identification is untenable; hence the "Alert" specimen must stand as the type of *Pachychalina lobata*.

Locality.—Port Jackson; 30 to 35 fathoms. One specimen.

Habitat.—Port Darwin, Australia (Ridley, "Alert"); Port Jackson, Australia (Challenger).

¹ Ann. and Mag. Nat. Hist., ser. 5, vol. xiv. p. 183.

² Die Pflanzenthiere, vol. ii. p. 273, pl. xlvi.