

the surface of the sponge; no secondary skeleton lines appear to be developed, but there are a very great number of loosely scattered megasclera. The fibres themselves are composed each of a central axis of smooth oxeote spicules very abundantly echinated by spined styli.

*Spicules.*—(a) *Megasclera*; (1) smooth, straight, somewhat fusiform, hastately pointed oxea, size about 0·2 by 0·005 mm. (2) Entirely spined, usually slightly curved, sharp pointed styli, which may attain a length of about 0·2 mm., but this is exceptional and they are usually much smaller, measuring about 0·1 by 0·005 mm. Although Carter (*loc. cit.*) describes two forms of spined stylote spicules, which he distinguishes according to their size, yet, as he himself states, both are echinating, and it appears to us probable that the smaller are simply young forms of the larger. (b) *Microsclera*; of one kind, viz., tridentate isochelæ, with moderately curved shaft, length up to about 0·02 mm.

This is a very fine and well characterised species, and as it is as yet very little known (although possibly common in Southern Australia), and as no figures of it are extant, we have thought it advisable to give a somewhat detailed description of it in this place.

Mr. Carter has very kindly sent us a small piece of his sponge for examination; we find from it that as regards the form and size of the spicules and the arrangement of the main skeleton, the Challenger sponge agrees sufficiently closely with that from Port Phillip Heads, but in the latter we have been able to discover no definite dermal reticulation such as we have described above, the dermal skeleton being an irregular reticulation of scattered oxeote and stylote spicules. It must, however, be borne in mind that we have only had a small piece to examine, and that this reticulation may possibly be present in other, and perhaps older, parts of the sponge, hence we have not thought fit to separate the two as distinct species.

*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. One fine specimen.

*Habitat.*—Port Phillip Heads, Southern Australia (Carter); Bass Strait, (Challenger).

### Genus *Plocamia*, Schmidt (Pls. XXIX., XXXI.).

1870. *Plocamia*, Schmidt, Spong. Atlant. Gebiet., p. 62.

1881. *Dirrhopalum*, Ridley, Journ. Linn. Soc. Lond. (Zool.), vol. xv. p. 476.

Sponge of varying form, may be encrusting or erect and branched. Spicules.—(a) *Megasclera*; dumb-bell-shaped or sausage-shaped (the characteristic spicules of the genus), and stylote. (b) *Microsclera*; isochelæ and (at any rate usually) toxa.

For details regarding the history and characters of this genus the reader is referred to Mr. S. O. Ridley's paper on the genus *Dirrhopalum* (*loc. cit., supra*).

The name "*Dirrhopalum*" was substituted for "*Plocamia*" on insufficient grounds, and must be abandoned in favour of the latter. The Challenger only obtained a single specimen of the genus, but this specimen is a very interesting one.