

Kirk, 1910 "Subantarctic islands of New Zealand."



ARTICLE XXIV.—TWO SPONGES FROM CAMPBELL ISLAND.

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PLATE XXV.

LEUCOSOLENIA, Bowerbank, 1862.

*Leucosolenia echinata*.

*Leucosolenia echinata*, Kirk, Trans. N.Z. Inst., xxvi, 177.

This sponge was found between the tide-marks in Perseverance Harbour, Campbell Island. The sponge has not been reported outside New Zealand.

STYLOHALINA, n. gen.

Halichondrine sponges, in which the skeleton consists entirely of styli.

*Stylohalina conica*, n. sp. (Plate XXV.)

Sponge forming flattened or conical masses, each cone having at its apex a single large oscule. The surface of the sponge shows numerous minute elevations, between which lie definite pore-areas, irregular in outline. In each area there are from 5 to 20, or more, small round or oval pores. At times several pore-areas are confluent. The dermal membrane is glossy, and of close texture, but quite thin. The surface is echinated by projecting spicules. Diameter of one of the two specimens, 2.5 cm.; height from base of sponge to summit of oscule-bearing cone, 1 cm. The other specimen has a diameter of 4 cm., and is less regular in shape. Colour, yellowish-white.

Skeleton entirely of styli (figs. 2, 3). The basal end of the spicule is usually evenly rounded, and from this end for about two-thirds of the length of the spicule there is little or no tapering; then the spicule tapers slightly, and presently more noticeably, terminating in a sharp point. Occasionally there is a slight approach to the tylostylote condition, a slight swelling developing close to the base. This swelling does not always extend right round the spicule, but sometimes suggests a short, blunt, feebly developed spinule. All, or nearly all, the spicules are very slightly curved, and usually, near the apex, there is a still slighter curve in the opposite direction. Thus the curvature of the spicule is, on the whole, slightly sigmoid. Average size of spicules 0.36 mm. by 0.01 mm.

In the dermal membrane the spicules are numerous on the papillae, where many spicules have the apical portion projecting at almost any angle. A few spicules lie parallel to the surface. In the pore-areas there are fewer spicules, the membrane being very thin. In the body of the sponge spicules are not numerous, and are usually scattered irregularly; sometimes arranged in small irregular groups,

*Stylohalina conica*  
Bowerbank 1862  
non Hall  
Kirk

or making some approach to forming spiculo-fibres. In some of the larger inhalent canals, particularly those that terminate under the papillae, the wall is strengthened by spicules, with the apical ray directed towards the surface of the sponge. Spicules seldom project into the canals or subdermal spaces; never into the small spherical flagellated chambers.

Under the pore-areas there lie subdermal cavities varying in size and shape. From these cavities run branching inhalent canals—sometimes one, sometimes many—starting from a single cavity.

Sponge found in Perseverance Harbour, Campbell Island, between the tide-marks.

It is with reluctance that I propose a new genus for this sponge. Its affinities appear to me to be almost entirely with *Halichondria*; but Ridley and Dendy's classification (1), which I prefer to follow as nearly as may be, expressly limits the family *Homorrhaphidae* to sponges whose spicules are oxea or strongyla. It seems to me impossible to refer this sponge to the *Suberitidae*. In von Lendenfeld's classification also (2) the sponge would have to be placed in the *Suberitidae*. If the genus *Stylohalina* becomes recognised, it will involve the founding of a new family, *Stylohalinidae*, for Halichondrine sponges without spongin and with a skeleton consisting of styli only.

Bowerbank's *Halichondria simplex* (3) was described from a single dried specimen. I cannot be sure that the Campbell Island sponge is not identical with it.

#### WORKS REFERRED TO IN TEXT.

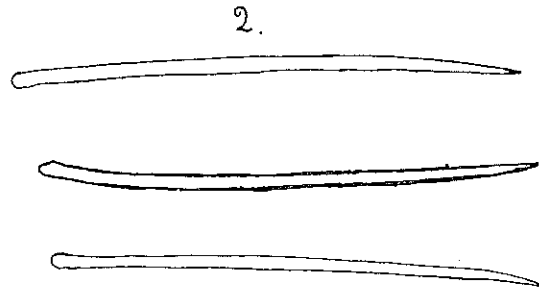
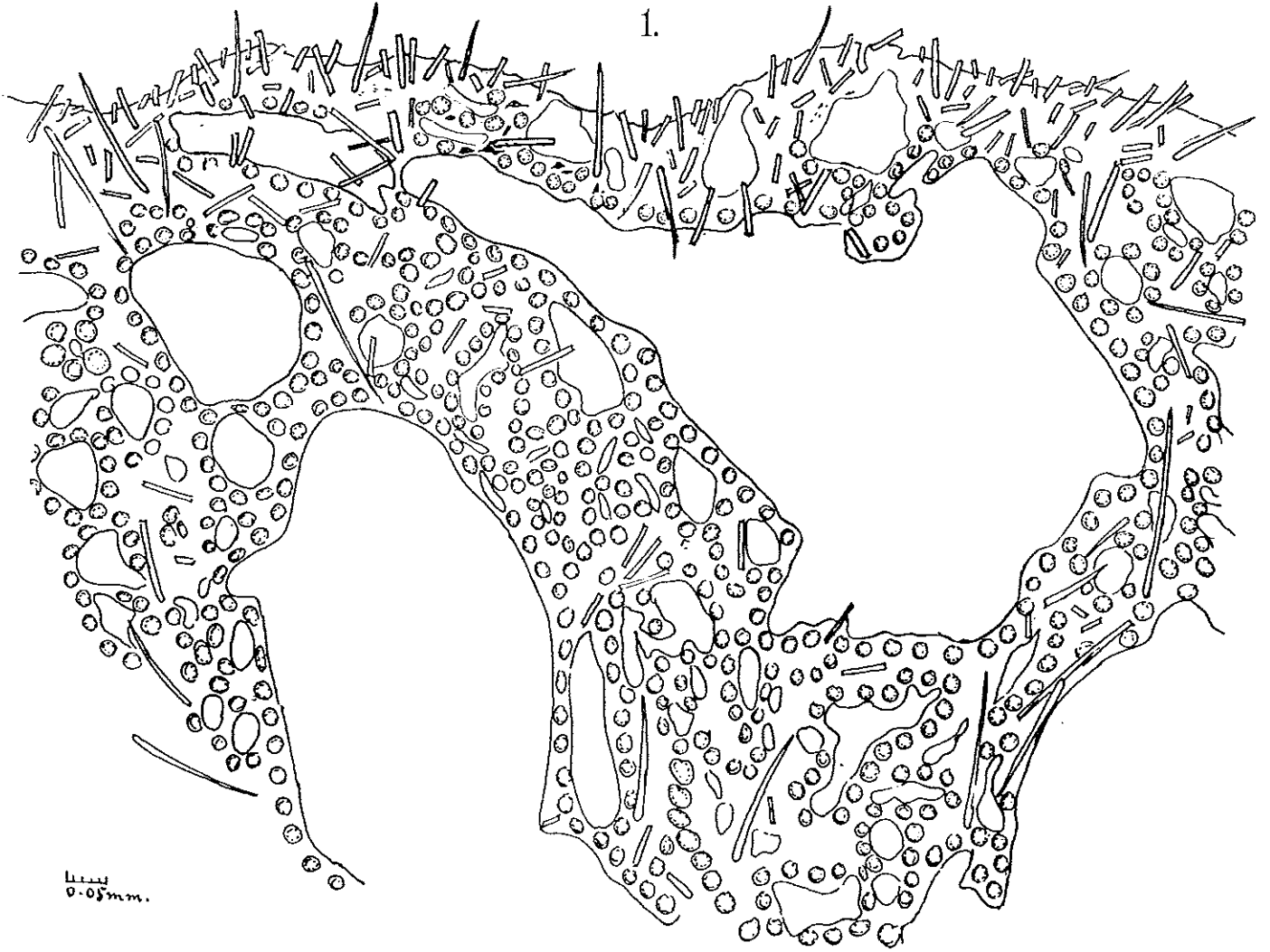
1. "Challenger' Reports." Monaxonida. Ridley and Dendy.
2. "Sponges in the Australian Museum." Von Lendenfeld. 1888.
3. "Monograph of the British Spongiadae." Bowerbank. 1864.
4. Contribution to a Knowledge of the New Zealand Sponges. Kirk. Trans. N.Z. Inst., vol. xxvi.

#### DESCRIPTION OF PLATE XXV.

*Stylohalina conica*, n. sp.

Fig. 1. Section at right angles to surface.

Figs. 2, 3. Spicules.



0.05mm.



0.05mm.

PLATE XXV.