

A NEW RECENT MARINE SPONGE (*ESPERELLA BELLA-BELLENSIS*) FROM THE PACIFIC COAST OF CANADA. \*

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(With one plate.)

The Geological Survey of Canada has lately received from British Columbia a large cup-shaped sponge that is a welcome addition to its very representative collection of Canadian recent marine sponges from the Atlantic, Arctic and Pacific oceans. The specimen is interesting not only on account of its size but also because it belongs to an apparently undescribed species of the Monaxonid genus *Esperella*. It was obtained by purchase from Mr. F. Landsberg of Victoria, B.C., who states, in a letter to the writer, that it was brought to the surface in August of 1904, from a depth of about 300 fathoms, off Bella Bella, an Indian village on the British Columbian coast, situated on Campbell island, and about 350 miles north of Victoria.

The sponge is large, cup-shaped, and expands widely above the short, stout stalk, the diameter of the almost circular rim exceeding the total height. The wall of the cup is relatively thin and the outer surface, in the dried state, the condition in which the specimen has been received, is rough.

The skeleton consists of an open irregular reticulation of coarse fibres that terminate outwardly, in the wall of the cup, at right angles to the surface. Within the cup the fibres lie quite evenly in the plane of the surface so that the inside surface is comparatively smooth. The fibres are much stouter in the lower part of the sponge, particularly in the stalk where they are disposed in a more nearly vertical direction.

The fibres are composed of stylote spicules with a fair proportion of spongin present. The surface membrane within the cup is strengthened by spicules lying in the plane of the membrane and forming at times loose fibres, the membrane of the outer surface holds similarly disposed spicules that more generally form, how-

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ever, definite fibres. The outer surface of the sponge is considerably abraded and little of the dermal membrane remains, but within the cup the membrane for the most part is preserved and exhibits numerous openings, from 1 to over 20 mm. across, leading from the interior of the wall.

The total height of the sponge is 407 mm. (16 inches), with a diameter at the rim above of 560 mm. (22 inches). The wall of the cup grows somewhat thinner as the rim is approached; it varies from nearly 30 to about 15 mm. through. The stalk is roughly lenticular in transverse section, and measures about 115 mm. (4½ inches) in the longer and about 65 mm. (2½ inches) in the shorter diameter.

The spicules are as follows: (a) *Megasclera*, of one kind, viz., stout, straight, smooth, sharply and rather abruptly pointed styli, thickest at mid-length; varying in length from .432 to .491 mm. with a maximum thickness of about .013 mm. (b) *Microsclera*, of two kinds. (1) Large palmate anisochelæ occurring abundantly in all parts of the sponge and often together in the form of rosettes particularly in the surface membrane; length varying from .085 to .091 mm. Numerous immature spicules of this kind are present. (2) Sigmata, simple and rather small; in length about .019 mm. Only a few examples of this form of spicule have been observed.

The most interesting features of this sponge are its symmetrical shape and its large size. As regards the spiculation it conforms to the general *Esperella* type of structure but the spicules are not of exactly the same size and shape as those of any species of the genus known to the writer. Bella Bella the village near which the sponge was obtained suggests the name by which the species may be known.

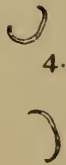
#### EXPLANATION OF PLATE.

Figure 1.—Side view of *Esperella bellabellensis*; slightly less than one-fifth natural size.

Figure 2.—Stylus; × 136.

Figures 3, 3a.—Anisochelæ; × 272.

Figure 4.—Sigmata; × 272.



ESPERELLA BELLABELLENSIS.