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Smittina oblita sp. nov., a new cheilostomatous bryozoan from the southwest Atlantic

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Abstract: The cheilostomatous bryozoan *Smittina oblita sp. nov.* is described from samples collected in the Patagonian Shelf and the Burdwood Bank (southwest Atlantic Ocean). This new species seems to be related to *Smittina lebruni* (Waters, 1905), and *Smittina antarctica* (Waters, 1904), from which it differs in its characteristic suboral avicularia.

Key words: *Smittina*, new species, cheilostomatous Bryozoa, Argentina, southwest Atlantic Ocean.

Smittinids are one of the most diversified groups of cheilostomatous bryozoans, with around 25 genera (D. P. Gordon, pers. comm.) and more than 300 species throughout the world oceans. As well as in many other cheilostome taxa, specific richness within this family was consistently underestimated by earlier authors. Morphological features used to characterize smittinid species are often subtle, and can be clearly discerned only by scanning electron microscopy. As a consequence, some species formerly regarded as widely-distributed, actually included several more or less endemic taxa. Modern studies devoted to this family (e.g., Soule & Soule, 1973; Hayward & Thorpe, 1990) described a high proportion of new species, suggesting that more smittinids still remain to be discovered.

The genus *Smittina* Norman is represented in the continental shelf off Argentina by at least a dozen species (see Hayward & Thorpe, 1990; reviewed in López Gappa, 2000), most of which have a Magellanic distribution, being present in cold-temperate waters around the southern tip of South America.

The aim of this study is to describe a new species of the genus *Smittina* discovered in several samples from the Patagonian Shelf and the Burdwood Bank, which had not been found previously in the area in spite of the exhaustive collections of smittinid bryozoans gathered by British expeditions in Antarctic and sub-Antarctic regions (Hayward & Thorpe, 1990).

Smittina oblita sp. nov.

(Figs. 1-6)

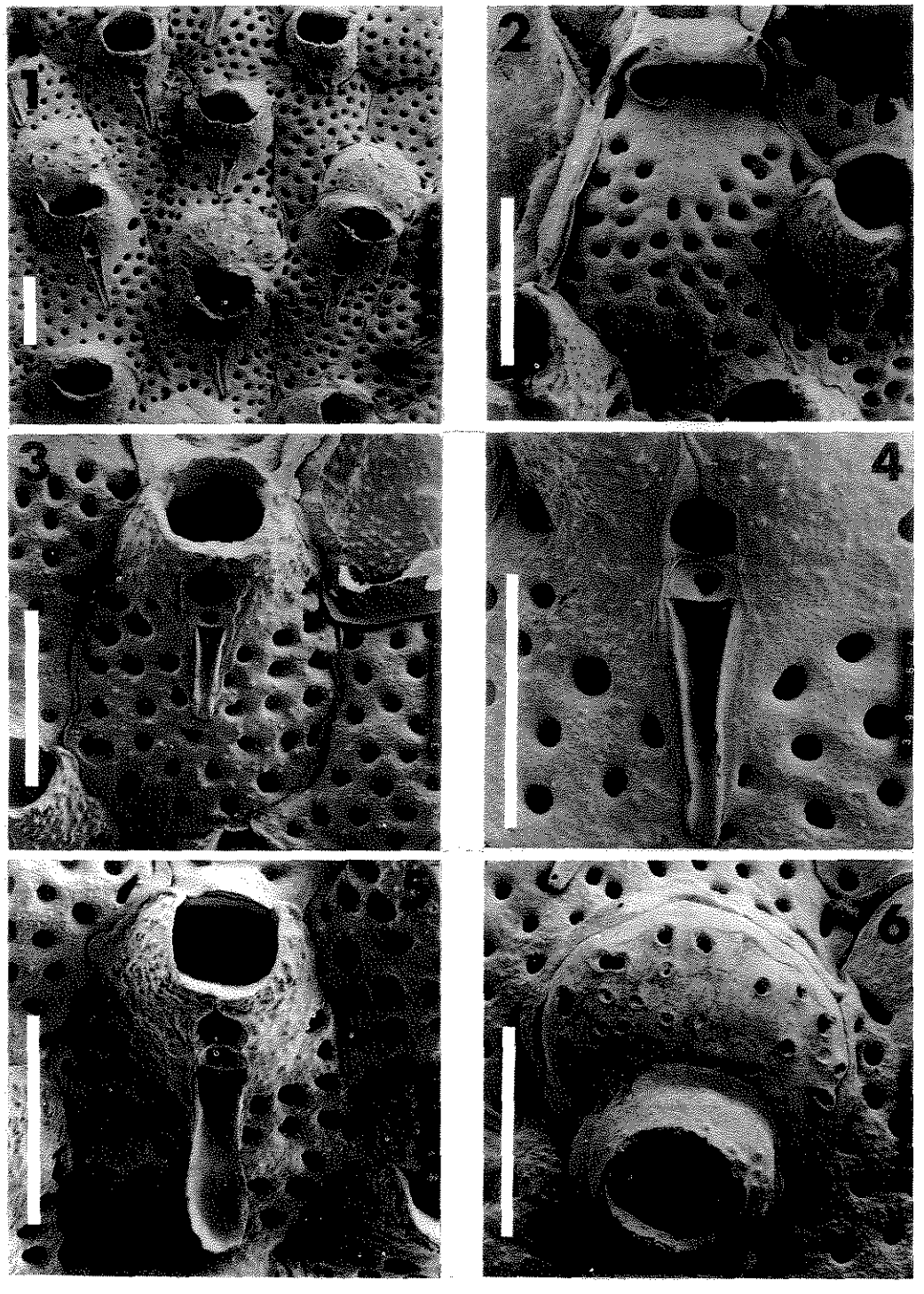
Description

Colony encrusting, unilaminar. Autozooids oval to hexagonal, slightly convex, separated by distinct sutures (Fig. 1). Frontal wall finely granular, perforated by relatively few, evenly distributed, large and rounded pores. Primary orifice wider than long, distal border straight and finely denticulate (Fig. 2). Lyrula short and very broad, occupying most of the proximal border of the orifice. Two distolateral oral spines present in early ontogeny, later obscured by the development of the peristome. Peristome well developed, tubular, protruding over the surface of the autozooid, growing medially and fusing above the avicularium to delimit a large round foramen (Fig. 3). All autozooids with one suboral avicularium situated immediately proximal to peristomial foramen. Most avicularia long and slender, crossbar slender and complete, with a poorly developed columella; opesia small and rounded; palate almost entire, with a crescentic foramen below the crossbar (Fig. 4). Mandible of the avicularium long, slender and blunt. This avicularium is replaced in some autozooids by a large, spatulate one, with a well chitinized mandible, almost reaching the orifice of the proximal zooid (Fig. 5). Ovicell rounded, broader than long, perforated by several irregularly rounded frontal pores, recumbent over the frontal wall of the distal zooid during early ontogeny, later becoming more or less immersed (Fig. 6). Peristome extending on to frontal surface of ovicell.

Material

Holotype: MACN-In 34990, R/V *Orient Maru I*, station 39, 21/03/76, 50° 35' S, 63° 14' W, 150-152 m. Collected by R. Menni. Growing around a hydroid stem.

Paratypes: MACN-In 34991, ARA *Islas Orcadas*, between 50° 40' S, 58° 04' W and 50° 54' S, 58°



Figs. 1-6. *Smittina oblita sp. nov.*, MACN-In 32359. 1, General view of several zooids, three of them ovicelled. 2, Zooid from the colony margin, showing oral spines and primary orifice during early ontogeny. 3, One zooid, showing peristome and suboral avicularium. 4, Detail of the most common type of suboral avicularium. 5, One zooid bearing a spatulate avicularium. 6, Detail of ovicell. All scales represent 0.2 mm.

10' W, 128-132 m, 08/02/76. Collected by N. Cazzaniga. Growing on a bilaminar colony of *Smittina lebruni*.

Other material: MACN-In 32405-1, 32389-1 and 32394-1, same locality as paratypes. MACN-In 32359-1, F/V *Api IV*, near the Beagle Channel, Tierra del Fuego, October/78. R/V *Shinkai Maru* Cruises: SM IV, station 71, 48° 30' S, 62° 31' W, 141 m, 28/07/78. SM IV, station 92, 50° 30' S, 62° 31' W, 159 m, 14/08/78. SM IV, station 108, 52° 31' S, 67° 18' W, 92 m, 11/08/78. SM IV, station 111, 52° 29' S, 64° 35' W, 183 m, 12/08/78. SM IV, station 119, 53° 31' S, 66° 27' W, 95 m, 10/08/78. SM V, station 79, 49° 27' S, 62° 29' W, 152 m, 09/09/78. SM V, station 101, 51° 30' S, 65° 32' W, 134 m, 07/09/78. SM V, station Ad. 3, 49° 26' S, 63° 27' W, 145 m, 05/09/78. SM X, station 135, 54° 30' S, 58° 30' W, 133 m, 03/02/79. SM X, station 138, 54° 30' S, 56° 35' W, 135 m, 02/02/79. SM XI, station 68, 48° 27' S, 65° 27' W, 103 m, 05/03/79.

Measurements [mm, mean (minimum - maximum)]

Autozooid length: 0.66 (0.46 - 0.83), n = 20. Autozooid width: 0.35 (0.27 - 0.46), n = 20. Length of secondary orifice: 0.13 (0.10 - 0.16), n = 20. Width of secondary orifice: 0.18 (0.11 - 0.22), n = 20. Ovicell length: 0.20 (0.17 - 0.24), n = 5. Ovicell width: 0.36 (0.29 - 0.40), n = 5. Avicularium length (slender): 0.18 (0.14 - 0.23), n = 20. Avicularium length (spatulate): 0.31 (0.26 - 0.34), n = 3.

Etymology

From Latin *oblitus*, *-a*, *-um*, forgotten.

Distribution

Patagonian shelf off Santa Cruz and Tierra del Fuego Provinces (Argentina), Burdwood Bank, and north of Malvinas (Falkland) Islands (Fig. 7).

Observations

This new species seems to be closely related both to the Magellanic *Smittina lebruni* (Waters, 1905), and to *Smittina antarctica* (Waters, 1904), an endemic Antarctic species (Hayward, 1995), from which it differs in its characteristic avicularia, form of colony growth and presence of oral spines. *S. oblita* also differs from *S. antarctica* in the presence of distal oral crenulations and a peristomial foramen.

The most common type of avicularium of *Smittina oblita* is remarkably similar to that of *Smittoidea curtisensis* Gordon, 1984, a New Zealand smittinid.

Smittina oblita was found growing around hydroid stems, and encrusting the valve of the gastropod *Trochita* sp., polychaete tubes, the hydrocoral *Errinopsis reticulum*, and zoaria of the erect bryozoans *Aspidostoma giganteum*, *Smittina lebruni*, *Ogivalia elegans* and *Hornera sp.* Colony size ranged from 1.4 to 13.3 mm. Ovicells were present during all months in which samples were collected (February, March, July through October).

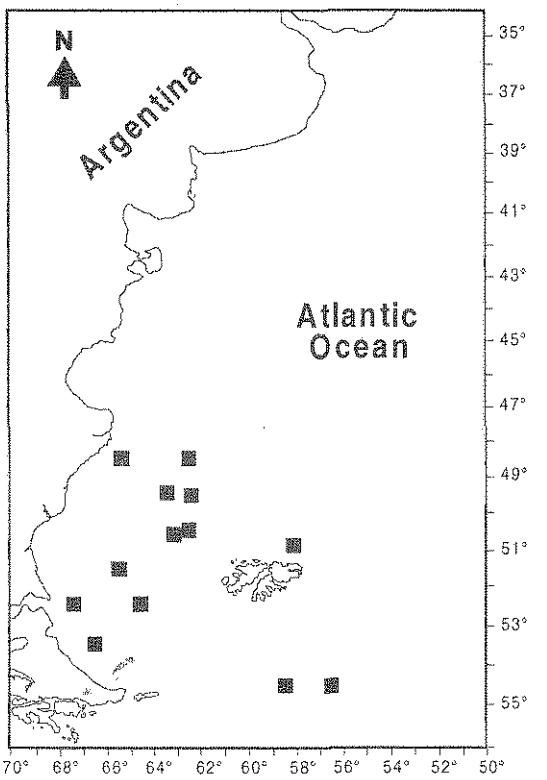


Fig. 7. Geographic distribution of *Smittina oblita sp. nov.*

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