Microporella svalbardenis. Kuklinski & Hayward, 2004; 82-83; Fig. 2A-C

Microporella svalbardensis sp. nov. (Fig. 2A–C; Table 2)

Material

Holotype. NHM 2003.3.10.7. a mature colony of less than 1 cm^2 on pebble from Kongsfjorden, West Spitsbergen (79°03.5′N 11°39.4′E), 10 m depth (06 August 2001; coll. P. Kuklinski).

Paratypes. NHM 2003.3.10.8-9. collected from Kongsfjorden, West Spitsbergen (79°01.8′N 11°49.8′E) at 12 m depth (03 August 2002).

Description

Colony encrusting, developing extensive unilaminar sheets. Autozooids oval to hexagonal, convex, separated by deep grooves. Frontal shield thickly calcified, coarsely granular, perforated by numerous rather large pores; nodular calcification develops between the pores as the frontal shield thickens through ontogeny. Primary orifice wider than long, more or less semicircular, proximal border straight, above a slightly convex inner rim with a distinct condyle in each proximolateral corner. Two to four erect spines disposed around the distal and lateral borders of the orifice, often missing in older autozooids; four spines may be present on some autozooids at the margin of the colony, but frequently only a single pair develops. Ascopore large, transversely oval to crescentic and crossed by thin radial bars; situated close to the proximal rim of the orifice, within a broader concave area of smooth calcification; a large umbo develops on the proximal edge of the smooth area, and may be especially prominent in later ontogeny. Avicularium single or absent, lateral, on the right or left, level with the ascopore or just slightly proximal to it; rostrum triangular, acute to the frontal plane of the autozooid, directed laterally or distolaterally, supporting a short, setiform mandible, of varying length. Ovicell prominent, about as wide as long; frontal surface coarsely granular, developing a stout and median umbo, with distinct marginal pores but imperforate centrally.

Ecology

Microporella svalbardensis was found at four of the 43 stations sampled, encrusting pebbles, shells of *Chlamys islandica* and the cirripede *Balanus balanus*, from 10 to 20 m depth. Abundance varied from 4 (Stn 8: 79°01.8′N 11°49.8′E) to 240 (Stn 9: 79°03.5′N 11°39.4′E) colonies per m^2 of seafloor. The surface area of individual colonies ranged from less than 1 cm^2 to very large colonies exceeding 10 cm^2. The temperature during the sampling ranged from 2.50 °C (Stn 7) to 4.99 °C (Stn 8), while salinity was between 33.43 psu (Stn 7) and 34.17 psu (Stn 2).

Table 2. *Microporella svalbardensis*: measurements of the holotype (mm).

	n	Mean ± standard deviation
Autozooid length	20	0.66 ± 0.056
Autozooid width	20	0.40 ± 0.049
Primary orifice length	20	0.10 ± 0.009
Primary orifice width	20	0.13 ± 0.014
Ovicell length	20	0.29 ± 0.029
Ovicell width	20	0.38 ± 0.043
Avicularium length	20	0.09 ± 0.016
Avicularium width	20	0.05 ± 0.006

Etymology

Latin, *-ensis*: place, with reference to the type locality.

Remarks

The genus *Microporella* occurs in all of the world's seas, including the polar oceans. All species presently known are remarkably similar but are readily distinguished by the size and proportions of the primary orifice, the number of oral spines, and the morphology of the ascopore, and its position relative to the primary orifice. The perforation of the frontal shield and the size, position and frequency of the adventitious avicularia are useful secondary characters. Only one species, *M. arctica* Norman, 1903b, has been described from the western Arctic realm. Although it was not figured by Norman (1903b), it was precisely described, and Norman's description matches that of Kluge (1962, 1975), and can be recognized in Kluge's careful figure (Kluge 1962, 1975: fig. 362). *Microporella arctica* has a more finely granular frontal shield than the new species described here, and the ascopore is a slender, non-reticulate crescent separated from the proximal edge of the primary orifice by a distance almost as great as the length of the orifice. It mostly lacks spines, except for four or five present only in newly budded autozooids. *Microporella svalbardensis* sp. nov. is especially characterized by its large, reticulate ascopore, set in a conspicuous, dished area of smooth calcification close to the proximal rim of the orifice. It is quite probable that *M. svalbardensis* sp. nov. was part of the material attributed by Kluge (1962, 1975) to *M. ciliata* (Pallas), as his description refers to a large "denticulate" ascopore borne close to the orifice rim and associated with a "sort of tubercle" (umbo) developing in later ontogeny. *Microporella ciliata* is a

Microporella svalbardenis. Kuklinski & Hayward, 2004; 82-83; Fig. 2A-C

temperate northeast Atlantic and Mediterranean species characterized by a denticulate, crescentic ascopore widely separated from the primary orifice, four or five oral spines and a finely granular frontal shield perforated by small, inconspicuous pores.

In a broad study of *Microporella* from Hokkaido, Japan Suwa & Mawatari (1998) described seven species. Most of them have the crescentic ascopore, but in none is it crossed by thin radial bars, as in *M. svalbardensis* sp. nov., and only in *M. formosa* Suwa & Mawatari do autozooids approach the size of those of *M. svalbardensis* sp. nov.

The frontal shield of *M. svalbardensis* sp. nov. is superficially similar to that seen in *M. alaskana* and *M. germana* described by Dick & Ross (1988), but both species differ from *M. svalbardensis* in autozooid dimensions, and in the morphology and relative size of the ascopore, which is largest in the latter species.

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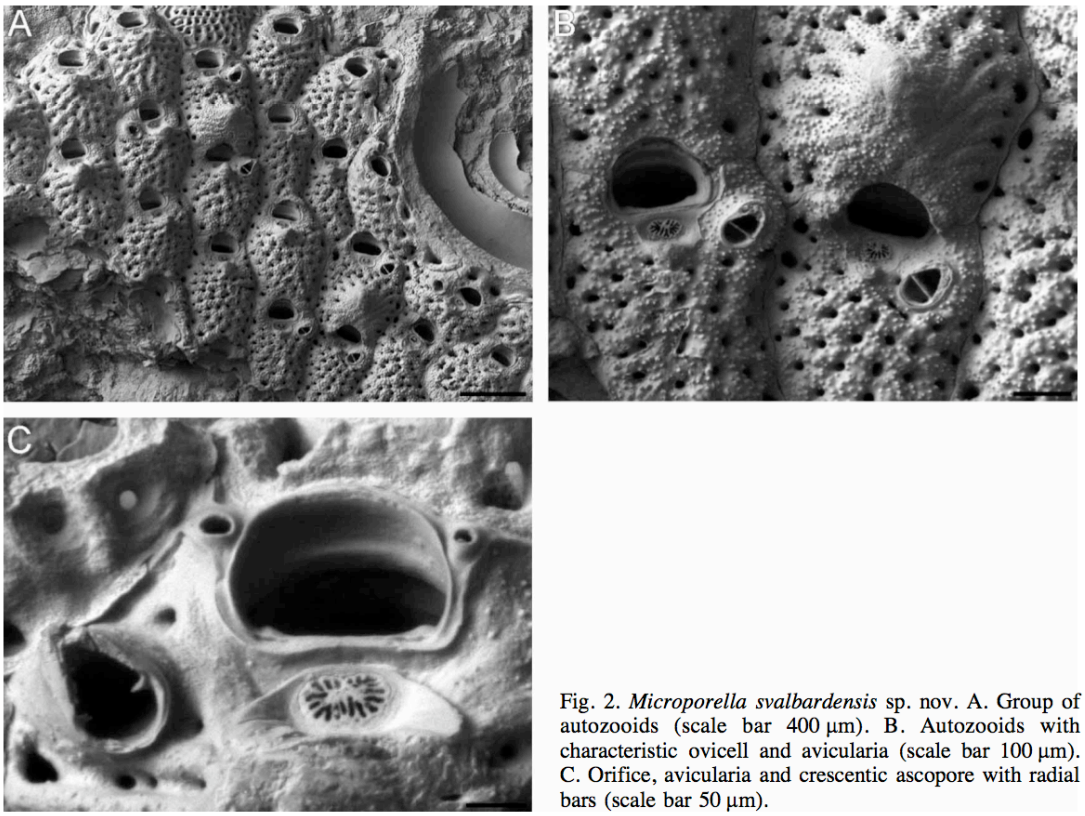

Fig. 2. *Microporella svalbardensis* sp. nov. A. Group of autozooids (scale bar 400 µm). B. Autozooids with characteristic ovicell and avicularia (scale bar 100 µm). C. Orifice, avicularia and crescentic ascopore with radial bars (scale bar 50 µm).