LITHOTHAMNION VARDØENSE

A NEW ALGA

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M. FOSLIE

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Some years ago I received a number of dead nodules of Lithothamnia, which had been brought up by excavators in the harbour of Vardö in East Finmarken, towards the north eastern boundary of Norway. Living Lithothamnia are no more to be found in this harbour. Some of the nodules had a rather strange appearance to me, partly resembling *Lithothamnion tophiforme* f. *globosa,* but the branches being thinner, partly and particularly approaching *L. norvegicum* f. *nodulosa,* but the branches being more straight than in this form. Afterwards I met with similar, but living nodules further to the south, at Lofoten. The specimens collected here were apparently also sterile, but I succeeded at length to find reproductive organs in a few of them. This gives me the occasion to describe a new species.

Lithothamnion vardöense Fosl. mscr.

Frond freely developed at the bottom, spherical or compressed-spherical, up to about 8 cm. in diameter, repeatedly subdichotomously branched; branches issuing in all directions from the centre, more or less anastomosing, terete and subcylindrical or subcompressed, frequently 1.5—2 mm. thick; outer branches often with wart-like processes or short branchlets, forming smaller or larger bundles; conceptacles of sporangia convex but little prominent, crowded in the outer branches, about 300 μ in diameter; sporangia two-parted, 90—110 μ long and 40—60 μ broad; conceptacles of cystocarps conical, 300—400 μ in diameter.

In typically developed specimens the branches are erect, fastigiate and straight, with rounded ends, often forming almost obpyramidal branch-systems as in *Lithoth. tophiforme* f. *globosa.* But when

growing in shallow water in places where the tidals run strongly, the species often becomes more or less compressed or even irregular, with in part truncate, or even a little dilated, nearly disc-shaped ends of branches. In such specimens particularly the outermost branches are often provided with wart-like processes or short branchlets densely crowded, forming smaller or larger, sometimes rather irregular bundles. The species then much approaches *Lithoth. norvegicum* f. *nodulosa* in habit. Cp. Norw. Lithoth. pl. 21, fig. 1—2.

In structure the species coincides in the main with the last named one. As remarked, I have seen but few conceptacles of sporangia. The roof of the latter is intersected with 40—50 muciferous canals. The sporangia seem always to be two-parted, whereas in the near *Lithoth. norvegicum* f. *nodulosa* they are four-parted. However, the systematical value of the partition of the sporangia is not yet fully elucidated.

This species is known from Vardö (only dead specimens) and from Svolvær in Lofoten, here forming a small bank in a narrow sound in 1—3 fathoms water. At the latter place it was sparingly furnished with sporangia in the beginnlng of the month of September.

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