

ФЛОРИСТИЧЕСКИЕ НАХОДКИ

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М. P. Zhurbenko, E. S. Hansen

LECANORA GEOPHILA AND *ARCTOPELTIS THULEANA* (LICHENES)
FROM THE SIBERIAN ARCTICМ. П. ЖУРБЕНКО, Э. С. ХАНСЕН. *LECANORA GEOPHILA* И *ARCTOPELTIS THULEANA* (LICHENES) ИЗ
СИБИРСКОЙ АРКТИКИ

Two lichen species are reported from the Siberian Arctic as new and rare to Russia and briefly described.

During our revision of the arctic lichens collected by the first author some interesting lichen species were identified (Zhurbenko, Hansen, 1992). Among them *Lecanora geophila* (Th. Fr.) Poelt is new to Russia and also to Asia and *Arctopeltis thuleana* Poelt is a rarely reported arctic species. The first species is collected from the western coast of Taimyr Peninsula, the second one — from the New Siberian Islands. Biogeographically these localities belong to the arctic and high arctic tundras respectively (Yurtsev et al., 1978). The following description of the species are based upon the specimens cited. Specimens are deposited at the Lichen Herbarium of the Komarov Botanical Institute (BIN) in St. Petersburg (LE).

Lecanora geophila (Th. Fr.) Poelt (= *Placodium geophilum* Th. Fr., *Lecanora pachythallina* Lynge, *L. superfluens* H. Magn.)

Thallus squamulose-lobulate, forming rosettes on soil ca. 5—7 mm diam., upper side light yellow, not rarely with a greenish tinge, glossy or matt, sometimes with a thin pruina; lower side slightly paler and mottled brownish towards the base; separate lobes 1—1.5 (2) mm wide, more or less terete, on the edges usually enlarged and palmately incised, usually ascending. Apothecia, when developed, rather numerous, 0.5—1.5 mm diam. (up to 4 mm according to Poelt (1986)), angular rounded, not rarely irregular, sometimes confluent; disk yellow to light-brown, glossy, plane, later slightly convex. Thalline margin concolorous with the thallus, at the beginning rather thick and slightly raised, later thin to disappearing and level with the disk. Epihymenium granulose, yellowish brown; hymenium 60—70 μm high, hyaline and interspersed with granulose yellowish deposits; hypothecium hyaline; asci with spores mostly immature, spores unicellular 11—12 \times 7 μm (9—13 \times 5—7 μm according to Poelt (1986)). Thallus C—, K + slightly yellow, P + slightly yellow.

Distribution. Greenland, Asia (Taimyr), North America (Poelt, 1986; Ryan, 1989). New record supports the hypothesis of a circumpolar distribution of the species.

Investigated specimens. Siberia, western part of Taimyr Peninsula, coast of Cara Sea at the vicinity of the mouth of river Uboinaia, 73°39' N, 82°22' E, exposed edge of coastal terrace, altitude ca. 20 m a. s. l., on mineral soil with plant

remnants, locally rather abundant, associated with *Alectoria ochroleuca* (Hoffm.) Massal., *Parmelia omphalodes* (L.) Ach. subsp. *glacialis* Skult, *Hypogymnia subobscura* (Vain.) Poelt, *Coelocaulon aculeatum* (Schreber) Link, *Brodoa oroarctica* (Krog) Goward, 31 VII 1990, Zhurbenko N 90210; 1 VIII 1990, Zhurbenko N 90211; 2 VIII 1990, Zhurbenko N 90212; rev. E. S. Hansen.

At the Herbarium of BIN there is also one specimen of *Lecanora geophila* collected by E. Almqvist in 1878 during «Vega» expedition most probably also at the western coast of Taimyr in the region of archipelago Minin. Unfortunately the label is handwritten and difficult to read. The specimen was identified by W. Nylander as «*Lecanora geophila* Th. Fr.», but apparently this record has not been published.

Arctopeltis thuleana Poelt (= *Placodium chrysoleucum* var. *feracissimum* Th. Fr., *Lecanora thulensis* Th. Fr. var. *feracissimum* Th. Fr., *Placolecnora thulensis* (Th. Fr.) Kopacz.)

Thallus forming rosettes of closely appressed, crowded apothecia, 7—13 mm diam. and 4—7 mm high, attached to the stony substrate by a central umbilicus. Apothecia lecanorine, individuals usually 1 to 7 mm diam. and ca. 0.5 mm thick at the margin, with a complex irregular shape, e. g. broken saddleshaped. Disk with strongly uneven or undulate surface, as a rule dark brown, sometimes light brown, to black. Thalline margins pale as the lower surface, uneven, at the beginning rather thick and entire later disappearing, sometimes with light pruina. Lower surface deeply fissured, more or less concolourous, whitish with weak creamy or rosy tinge, on the edge sometimes with greenish tinge. Epihymenium dark, brownish olive; hymenium 50—60 μm high, with granulose deposits; tips of paraphyses dark, clavate thickened, about 5 μm thick; excipulum and hypothecium hyaline, structurally poorly differentiated. Algal cells green, globose, about 12—18 μm diam.; medulla lax, with numerous small hollow areas, prosoplectenhimatous, composed of hyphae 3—5 μm thick. Lower cortex paraplectenhimatous, about 50 μm high. Spores unicellular, rather thick walled, ellipsoid, 4—7.5 \times 9—15 μm , 8 per ascus. Thalline margin of the apothecia K \pm yellowish, KC + orange, C—, P—.

Distribution. Greenland, Europe (Svalbard, Novaya Zemlja), Asia (arctic coast and islands: Taimyr Peninsula, Minin archipelago; New Siberian Islands; Chukotka Peninsula, near settlement Neshkan), North America (Canada) (Wainio, 1909; Malme, 1932; Kopaczewskaja, 1971; Poelt, 1983). An arctic species connected with coastal areas.

Investigated specimens. New Siberian Islands, Bennett Island, 76°37'—45' N, 148°28'—149°27' E, ca. 150 m a. s. l., southfacing coastal siliceous cliffs, on open vertical stone surfaces, the collection consisting of about 10 specimens. Associated with *Umbilicaria* sp., *Xanthoria elegans* (Link) Th. Fr., *Physcia* sp., *Pannaria hookeri* (Borr. ex Sm.) Nyl., *Rhizoplaca melanophthalma* (Ram.) Leuck. et Poelt. 9 VIII 1989, Zhurbenko N 8917, det. E. S. Hansen.

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LITERATURE CITED

- Kopaczewskaja E. G. *Placolecnora* // Handbook of the lichens of the U.S.S.R. 1 issue. L.: Nauka, 1971. P. 219—238. — Malme G. O. Lichenes orae Sibiriae borealis inde ab insula Minin usque ad promontorium Ryrkajpia in expeditione Vegae lecti // Arkiv för Botanik. 1932. Bd 25A.H.2. S. 1—42. — Poelt J. Über den Formen-kreis der Flechte *Lecanora contractula* //

Int. J. Mycol. Lichenol. 1983. H. 1. S. 143—160. — *Poelt J. Placodium geophilum* Th. Fries — Eine vergessene Flechte // Int. J. Mycol. Lichenol. 1986. H. 3. S. 55—56. — *Ryan B. D.* A new species of *Lecanora* sect. *Dactylon* (lichenized ascomycotyna) from Mexico, with notes on other species of the section in North America // *Cryptogamic Botany*. 1989. N 1. P. 243—248. — *Wainio E. A.* Lichenes in viciniis hibernae expeditionis Vegae prope pagum Pitlekai in Siberia septentrionali a D : re E. Almquist collecti // *Arkiv för Botanik*. 1909. Bd 8. H. 4. S. 1—175. — *Yurtsev B. A., Tolmatchev A. I., Rebristaja O. V.* The floristic delimitation and subdivision of the Arctic // *The Arctic floristic region*. L.: Nauka, 1978. P. 9—104. — *Zhurbenko M. P., Hansen E. S.* New, rare or otherwise interesting lichen species from the Siberian Arctic // *Mycotaxon*. 1992. N 45. P. 278—284.

Komarov Botanical Institute RAS
St. Petersburg

Botanical Museum, University of Copenhagen
Denmark

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