

The first checklist of lichens, lichenicolous and allied fungi of Altaysky krai (Siberia, Russia)

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ABSTRACT — The first check-list of lichen-forming, lichenicolous and allied fungi of Altaysky krai is presented. Literature records as well as distribution within the region are given for every species. The known species diversity of Altaysky krai at the present time has been estimated as 545 species of lichens, 12 lichenicolous fungi and one saprotrophic lichen-related fungus. Based on a completeness index relating the number of macrolichen species and expected number of microlichen species, the predicted lichen diversity of Altaysky krai would be about 882-1084 species.

KEY WORDS — lichens, lichenicolous fungi, West Siberia, South Siberia, Altai, Kulunda, Priobskoye Plateau, Biya-Chumysh Upland, biodiversity.

Introduction

Altaysky krai (Altai province) is a large (169,100 km²) administrative area of the Russian Federation, situated at the southern part of West Siberia between 50° and 55° N and 77° and 87° E (Fig. 1).

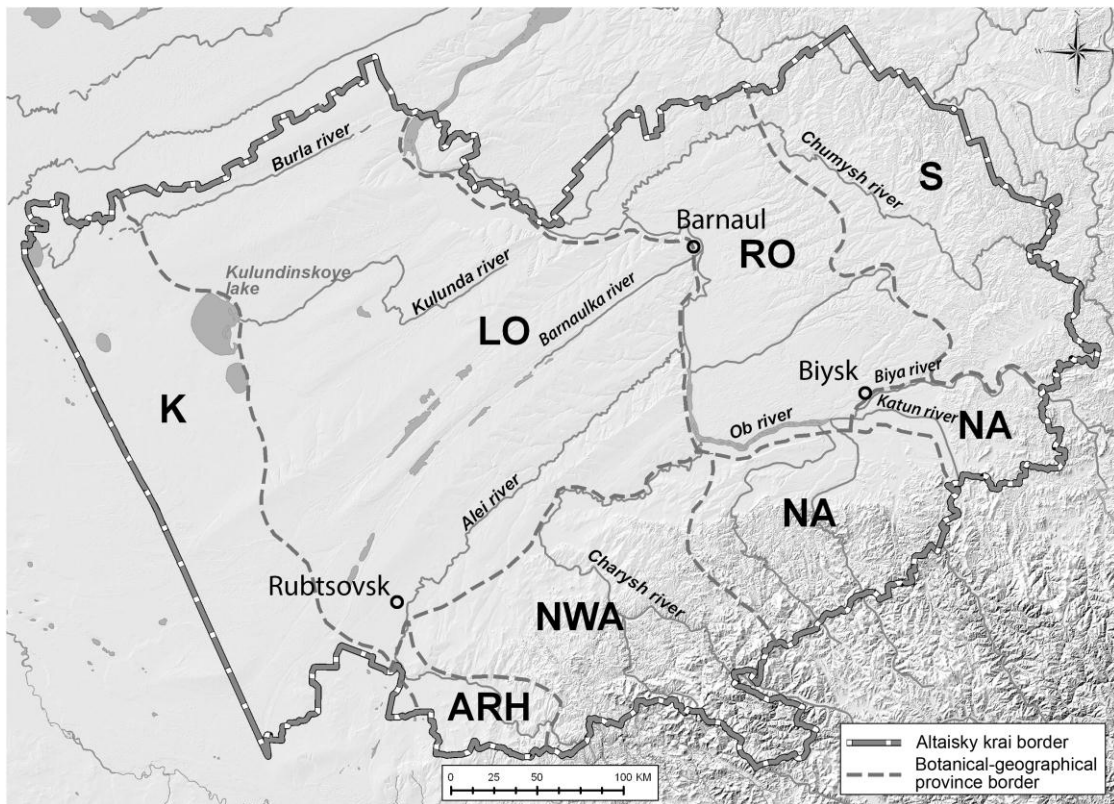


FIG. 1. Botanical-geographical regions in Altaysky krai. Region abbreviations: **K** – Kulunda; **LO** – Ob River Left-bank territory; **RO** – Ob River Right-bank territory; **S** – Salair and adjacent territories; **ARH** – Alej River hills; **NA** – North Altai; **NWA** – North West Altai.

The territory belongs to steppe and forest-steppe zones mainly in the Ob' river basin and situated where the southeastern part of the West-Siberian Plain and the Altai Mountains meet. The range of elevation is between 79 and 2490 m above sea level. The natural conditions are highly diverse and the vegetation is represented by a wide range of communities. They vary on the plain from semi-desert to steppe, meadow steppe, *Betula pendula* forest-steppe, and *Pinus sylvestris* forests. More than 60% of the flatlands were plowed up to be agrocommunities. The Altai Mountains, composed of both acidic and basic rocks, show vertical zonation, including steppe, relict subnival *Abies sibirica* forest, mountain taiga forests with *Abies sibirica*, *Pinus sibirica*, *Picea obovata* and *Larix sibirica*, subalpine and alpine meadows, and mountain tundras (Figs. 2-14).

The lichen investigation of Altaisky krai includes two stages: the first stage, in the time period prior to the late 20th century (ca. 1990), involved only minor data on a few lichens, usually collected incidentally during vegetation study for various botanical or geobotanical publications. The second stage, from 1990 until the present time, includes comprehensive study by botanists trained in lichenology. The very first reports, including data on only a few lichen species, were published by Georgi (1800) for the territory of Kolyvan in the Altai Mts. and by Tanphiliev (1902) for the Kulunda Plain and left-bank side of the Ob' River. Regular investigations of the Altaisky krai lichen flora started at the beginning of 1990's. A detailed history of the lichen diversity investigations was published recently (Davydov & Skachko 2014); the data are dispersed among more than forty publications. In addition, unpublished data of E. A. Davydov and E. Yu. Skachko, based on the study of herbarium material from ALTB and mostly concerning distribution of taxa, were used. The aim of the present work is summarizing all of the data in a single list using current nomenclature.



FIG. 2. Dry steppe desert-like communities on tertiary clays. Vicinity of the Tassor Lake, Kulunda. The habitat of the vagrant lichens. A: vagrant lichens *Aspicilia fruticulosa*, *Xanthoparmelia camtschadalis*, *Neofuscelia ryssolea* (Photo by M.M. Silantieva).



FIG. 3. Dry steppe communities with stones. Vicinity of the Tassor Lake, Kulunda. The habitat of the epilithic lichens on the plain
(Photo by M.M. Silantieva).



FIG. 4. *Pinus sylvestris* forest; island forests within the steppe zone. Vicinity of Kornilovo. Ob River Left-bank territory.
(Photo by M.M. Silantieva).



FIG. 5. *Pinus sylvestris* – *Cladonia* light forest (Pine bor). Ob River Left-bank territory. (Photo by A.V. Gribkov).



FIG. 6. *Betula pendula* forest at forest-steppe zone. Island-like forests within steppes and agrocommunities. Ob River Left-bank territory. (Photo by M.M. Silantieva).



FIG. 7. *Abies sibirica* – *Betula pendula* subnemoral forest in spring. Salair range, the headwaters of the Berd' River.
(Photo by A.V. Gribkov)



FIG. 8. *Abies sibirica* subnemoral forest (chern'). Salair range. (Photo by A.V. Gribkov)



FIG. 9. Forest belt and rock outcrops in North Altai (Photo by M.M. Silantieva)



FIG. 10. Cliff near the Belaya River. Vicinity of Podpolatsy, North-West Altai (Photo by M.M. Silantieva)



FIG. 11. *Picea obovata* forest within *Pinus sylvestris* forest massive at Ob River Right-bank territory. The habitat of boreal species in forest-steppe zone. Vicinity of the Kislukha (Photo by A. V. Gribkov).



FIG. 12. Limestone outcrops. Silur open-cast “Tigrek”. The only habitat in Altai for the rare lichens *Aspicilia lacteola*, *Placidium krylovianum*, *Teloschistes brevior*. Tigrek State Reserve, North-West Altai (Photo by P.V. Golyakov).



FIG. 13. *Abies sibirica* high-grass forest with nemoral elements. Tigirek State Reserve, North-West Altai. The habitat of the nemoral lichens with disjunctive distribution area. (Photo by E.A. Davydov).



FIG. 14. Rock outcrops and stonefields with patches of alpine meadows and tundra at the high-mountain belt. Razrobotnaya Mt. (1962 m s.m.), Tigirek State Reserve, North-West Altai. The habitat of arctic-alpine species (Photo by E.A. Davydov).

The check-list

The species in the check-list are arranged alphabetically, the accepted names are given according to “A checklist of the lichen flora of Russia” (Urbanavichus 2010). Regarding the botanical-geographical regions we follow Silantieva (2006) with the only exception being that the Ob’ bottomland is not accepted as a separate region by us (Fig. 1). Lichenicolous fungi are marked with an asterisk (*) and saprophytic fungi with a plus sign (+). Two tables are included after the species list. Table 1 lists a number of previously reported species later excluded from the lichen flora of Altaisky krai. Table 2 summarizes the distribution of species on the botanical-geographical regions.

**Abrothallus parmeliarum* (Sommerf.) Arnold

Ref: Zhurbenko & Davydov 2000: 110.

Dist: **NWA**

Acarospora badiofusca (Nyl.) Th. Fr.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Acarospora cervina A. Massal.

Ref: Davydov 2001: 142.

Dist: **NWA**

Acarospora fulva N. S. Golubk.

Ref: Davydov 2001: 142; Davydov 2004: 54; Davydov 2005: 17; Davydov 2011: 74.

Dist: **ARH, NWA**

Acarospora impressula Th. Fr.

Ref: Davydov 2001: 142.

Distr: **NWA**

Acarospora jenisejensis H. Magn.

Ref: Davydov 2004: 51; Davydov 2005: 17; Davydov 2011: 74.

Dist: **NWA**

Acarospora schleicheri (Ach.) A. Massal.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Acarospora sinopica (Wahlenb.) Körb.

Ref: Davydov 2001: 142.

Dist: **NWA**

Acarospora veronensis A. Massal.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Alectoria ochroleuca (Hoffm.) A. Massal.

Ref: Kuznetsov 1914: 32; Davydov 2001: 142; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NA, NWA**

Alectoria sarmentosa (Ach.) Ach.

Ref: Davydov 2011: 79; Davydov et al. 2012: 24.

Dist: **NWA**

Allocetraria madreporiformis (Ach.) Kärnefelt et A. Thell

Ref: Davydov 2001: 142.

Dist: **NWA**

Amandinea punctata (Hoffm.) Coppins et Scheid.

Ref: Davydov 2001: 142; Davydov 2005: 19; Davydov 2011: 83.

Syn: *Buellia stigmatea* Körb.

Ref: Davydov 2001: 144; Davydov 2005: 19.

Dist: **NWA**

Anamylopsora pulcherrima (Vain.) Timdal

Ref: Davydov 2001: 142.

Dist: **NWA**

Anaptychia bryorum Poelt

Ref: Davydov 2001: 142.

Dist: **NWA**

Anaptychia setifera (Mereschk.) Räsänen

Ref: Davydov 2001: 142.

Dist: **NWA**

Arctoparmelia centrifuga (L.) Hale

Ref: Davydov 2001: 142; Davydov 2005: 19; Davydov 2011: 79.

Syn: *Lichen centrifugus* L.

Ref: Georgi 1800: 1407

Dist: **NWA**

Arthonia didyma Körb.

Ref: Davydov 2004: 54; Davydov 2005: 17; Davydov 2011: 73.

Dist: **NWA**

Arthonia dispersa (Schrad.) Nyl.

Ref: Davydov 2001: 142.

Dist: **NWA**

Arthonia punctiformis Ach.

Ref: Davydov 2001: 142; Davydov 2005: 17; Davydov 2011: 73.

Dist: **LO, NWA**

Arthonia radiata (Pers.) Ach.

Ref: Davydov 2001: 142; Davydov 2005: 17; Davydov 2011: 73.

Dist: **NWA**

Arthonia ruana A. Massal.

Right bank of Alei River at the vicinity of Rubtsovsk, valley *Populus nigrum* forest, on bark of *P. nigrum*, 7 V 2000, leg. & det. Skachko.

Dist: **LO**

Arthopyrenia grisea (Schleich.) Körb.

Ref: Davydov 2001: 143; Davydov 2005: 17; Davydov 2011: 73.

Dist: **NWA**

Arthrorhaphis citrinella (Ach.) Poelt

Ref: Davydov 2011: 76; Davydov et al. 2012: 24.

Dist: **NWA**

Arthrosporium populorum A. Massal.

Ref: Davydov 2001: 143.

Dist: **LO, RO, NWA**

Aspicilia aquatica (Fr.) Körb.

Ref: Davydov 2001: 143; Davydov 2005: 18; Davydov 2011: 75.

Dist: **NWA**

Aspicilia candida (Anzi) Hue

Ref: Davydov 2001: 143.

Dist: **NWA**

Aspicilia cinerea (L.) Körb.

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 143; Davydov 2005: 18; Davydov 2011: 75.

Dist: **K, LO, NWA**

Aspicilia dudinensis (H. Magn.) Oxner

Ref: Davydov 2005: 18; Davydov 2011: 75.

Dist: **NWA**

Aspicilia lacteola Oxner

Ref: Davydov 2001: 143.

Dist: **NWA**

Aspicilia maculata (H. Magn.) Oxner

Ref: Davydov 2001: 143; Davydov 2005: 18; Davydov 2011: 75.

Dist: **NWA**

Aspicilia transbaicalica Oxner

Ref: Davydov 2001: 143; Davydov 2005: 18; Davydov 2011: 75.

Dist: **LO, NWA**

Aspicilia vagans Oxner

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Bacidia beckhausii Körb.

Ref: Davydov 2011: 81; Davydov et al. 2012: 24.

Dist: **NWA**

Bacidia friesiana (Hepp) Körb.

Ref: Davydov 2001: 143; Davydov 2005: 18; Davydov 2011: 81.

Dist: **NWA**

Bacidia hemipolia (Nyl.) Malme

Ref: Davydov & Printzen 2012b: 62.

Dist: **NWA**

Bacidia rubella (Hoffm.) A. Massal.

Ref: Stas' 2000: 48.

Dist: **LO**

Bacidina arnoldiana (Körb.) V. Wirth et Vězda

Ref: Davydov et al. 2007: 61; Davydov 2010: 13; Davydov 2011: 81.

Dist: **NWA**

Bacidina inundata (Fr.) Vězda

Ref: Davydov et al. 2007: 62; Davydov 2010: 13; Davydov 2011: 81.

Dist: **NWA**

Baeomyces placophyllus Ach.

Ref: Davydov 2011: 74.

Dist: **NWA**

Baeomyces rufus (Huds.) Rebent.

Ref: Davydov 2001: 143; Davydov 2010: 12; Davydov 2011: 74.

Dist: **NWA**

Biatora chrysantha (Zahlbr.) Printzen

Ref: Davydov 2004: 49; Davydov 2005: 18; Davydov 2011: 81; Davydov & Printzen 2012b: 63.

Dist: **NWA*****Biatora fallax*** Hepp

Ref: Davydov & Printzen 2012b: 63.

Dist: **NWA*****Biatora helvola*** Körb. ex Hellb.Talmensky district, at the vicinity of Novaya Zarya settlement, mixed forest, on *Populus tremula*, 24.V.2000, leg. Skachko.Dist: **RO*****Biatora meiocarpa*** (Nyl.) Arnold

Ref: Davydov & Printzen 2012b: 63.

Dist: **NWA*****Biatora ocelliformis*** (Nyl.) ArnoldSyn: *Lecidea ocelliformis* Nyl.

Ref: Davydov 2001: 151.

Dist: **NWA*****Biatora vernalis*** (L.) Fr.

Ref: Davydov 2001: 143; Davydov 2011: 82; Davydov & Printzen 2012b: 64.

Dist: **NWA*****Brodoa oroarctica*** (Krog) Goward

Ref: Davydov 2001: 143; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA*****Bryoria capillaris*** (Ach.) Brodo et D. Hawksw.

Ref: Davydov 2001: 143; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NA, NWA*****Bryoria furcellata*** (Fr.) Brodo et D. Hawksw.

Ref: Stas' 2000: 48; Davydov 2001: 143; Davydov 2005: 19; Davydov 2011: 79.

Dist: **LO, RO, NWA*****Bryoria fuscescens*** (Gyeln.) Brodo et D. Hawksw.

Ref: Davydov 2001: 143.

Dist: **NWA*****Bryoria implexa*** (Hoffm.) Brodo et D. Hawksw.

Ref: Davydov 1995: 30; Stas' 1998: 104; Stas' 2000: 48; Davydov 2001: 143; Davydov 2005: 19; Davydov 2011: 79.

Syn: *Bryopogon implexum* (Hoffm.) Elenk.

Ref: Keller, 1914: 291.

Dist: **LO, RO, NWA**

Bryoria lanestris (Ach.) Brodo et D. Hawksw.

Ref: Davydov 2001: 143; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Bryoria nadvornikiana (Gyeln.) Brodo et D. Hawksw.

Ref: Davydov 2001: 143; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NA, NWA**

Bryoria nitidula (Th. Fr.) Brodo et D. Hawksw.

Ref: Davydov 2001: 144; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Buellia arborea Coppins et Tønsberg

Ref: Davydov & Printzen 2012b: 64.

Dist: **NWA**

Buellia disciformis (Fr.) Mudd

Ref: Davydov 2001: 144; Davydov 2005: 19; Davydov 2011: 84.

Dist: **LO, RO, NWA**

Buellia erubescens Arnold

Ref: Davydov 2001: 144.

Dist: **NWA**

Buellia griseovirens (Turner et Borrer ex Sm.) Almb.

Ref: Davydov & Printzen 2012b: 64.

Dist: **NA, NWA**

Buellia schaeferi De Not.

Ref: Davydov 2001: 144; Davydov 2005: 19; Davydov 2011: 84.

Dist: **LO, NWA**

Calicium abietinum Pers.

Ref: Davydov 2001: 144; Davydov 2005: 18; Davydov 2011: 84.

Dist: **NWA**

Calicium salicinum Pers.

Ref: Davydov 2001: 144.

Dist: **NWA**

Calicium trabinellum (Ach.) Ach.

Ref: Davydov 2010: 13; Davydov 2011: 84.

Dist: **NWA**

Calicium viride Pers.

Ref: Davydov 2001: 144; Davydov 2005: 18; Davydov 2011: 84.

Dist: **NWA**

Caloplaca ammiospila (Wahlenb.) H. Olivier

Ref: Davydov 2001: 144.

Dist: **NWA**

Caloplaca biatorina (A. Massal.) J. Steiner

Ref: Davydov 2001: 144.

Dist: **NWA**

Caloplaca cerina (Ehrh. ex Hedw.) Th. Fr.

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 144; Davydov 2005: 20; Davydov 2011: 85.

Dist: **K, LO, RO, NWA**

Caloplaca cerinelloides (Erichsen) Poelt

Ref: Davydov 2001: 144.

Dist: **NWA**

Caloplaca chalybea (Fr.) Müll. Arg.

Ref: Davydov 2001: 144; Davydov 2010: 13; Davydov 2011: 85.

Dist: **NWA**

Caloplaca chlorina (Flot.) H. Olivier

Ref: Davydov 2001: 144.

Dist: **NWA**

Caloplaca chrysophthalma Degel.

Ref: Davydov & Printzen 2012a: 86.

Dist: **NWA**

Caloplaca cirrochroa (Ach.) Th. Fr.

Ref: Davydov 2001: 144; Davydov 2010: 13; Davydov 2011: 85.

Dist: **NWA**

Caloplaca diphyodes (Nyl.) Jatta

Ref: Davydov et al. 2007: 62; Davydov 2010: 13; Davydov 2011: 85.

Dist: **NWA**

Caloplaca epithallina Lyngby

Ref: Zhurbenko & Davydov 2000: 111; Davydov 2001: 144.

Dist: **NWA**

Caloplaca executata Dalla Torre et Sarnth.

Ref: Davydov 2004: 51; Davydov 2005: 20; Davydov 2011: 85.

Dist: **NWA**

Caloplaca ferruginea (Huds.) Th. Fr.

Ref: Davydov 2001: 144; Davydov 2010: 13; Davydov 2011: 85.

Dist: **NWA**

Caloplaca grimmiae (Nyl.) H. Olivier

Ref: Davydov 2004: 49; Davydov 2005: 20; Davydov 2011: 85.

Dist: **NWA**

Caloplaca haematites (Chaub. ex St.-Amans) Zwackh

Ref: Davydov 2001: 144; Davydov 2005: 20; Davydov 2011: 85.

Dist: **NWA**

Caloplaca herbidella (Hue) H. Magn.

Ref: Davydov & Printzen 2012b: 64.

Dist: **NWA**

Caloplaca holocarpa (Hoffm. ex Ach.) A. E. Wade

Ref: Stas' 1998: 107; Korolyuk et al. 2000: 103; Stas' 2000: 51; Davydov 2001: 144; Davydov 2005: 20.

Dist: **K, LO, ARH, RO, NWA**

Caloplaca jungermanniae (Vahl) Th. Fr.

Ref: Davydov 2001: 145.

Dist: **NWA**

Caloplaca pyracea (Ach.) Th. Fr.

Ref: Davydov 2011: 85.

Dist: **NWA**

Caloplaca saxicola (Hoffm.) Nordin

Ref: Davydov 2001: 145.

Dist: **NWA**

Caloplaca sorocarpa (Vain.) Zahlbr.

Ref: Davydov & Printzen 2012b: 64.

Dist: **NWA**

Caloplaca transcaspica (Nyl.) Zahlbr.

Ref: Davydov 2010: 13; Davydov 2011: 85.

Syn: *Caloplaca paulsenii* (Vain.) Zahlbr.

Ref: Davydov 2001: 145.

Dist: **NWA**

Caloplaca variabilis (Pers.) Müll. Arg.

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 145.

Dist: **K, NWA**

Caloplaca vitellinula (Nyl.) H. Olivier

Davydov 2010: 13.

Syn: *Caloplaca lithophila* H. Magn.

Ref: Davydov 2004: 51; Davydov 2005: 20; Davydov 2011: 85.

Dist: **LO, NWA**

Calvitimela aglaea (Sommerf.) Hafellner

Ref: Davydov 2011: 77.

Dist: **NWA**

Calvitimela armeniaca (DC.) Hafellner

Ref: Davydov 2011: 77.

Dist: **NWA**

Candelariella aurella (Hoffm.) Zahlbr.

Ref: Korolyuk et al. 2000: 103; Korolyuk et al. 2000: 104; Davydov 2001: 145; Davydov 2005: 18; Davydov 2011: 86.

Dist: **K, LO, RO, NWA**

Candelariella lutella (Vain.) Räsänen

Ref: Davydov 2001: 145; Davydov 2005: 18; Davydov 2011: 86.

Dist: **NWA**

Candelariella placodizans (Nyl.) H. Magn.

Ref: Davydov 2001: 145.

Dist: **NWA**

Candelariella vitellina (Hoffm.) Müll. Arg.

Ref: Davydov 2001: 145; Davydov 2005: 18; Davydov 2011: 86.

Syn: *Candelariella vitellina* (Hoffm.) Müll. Arg. var. *assericola* Räsänen

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 145.

Dist: **K, LO, NWA**

Candelariella xanthostigma (Ach.) Lettau

Ref: Davydov 2001: 145; Davydov 2005: 18; Davydov 2011: 87.

Dist: **RO, NWA**

Carbonea vorticosa (Flörke) Hertel

Ref: Davydov 2001: 145; Davydov 2010: 13; Davydov 2011: 77.

Dist: **NWA**

Catillaria erysiboides (Nyl.) Th. Fr.

Ref: Davydov 2011: 76; Davydov et al. 2012: 25.

Dist: **NWA**

Catillaria nigroclavata (Nyl.) Schuler

Ref: Davydov 2001: 145.

Dist: **NWA**

Cetraria aculeata (Schreb.) Fr.

Syn: ***Cetraria steppae*** (Savicz) Kärnefelt (see Nadyeina et al. 2013)

Ref: Davydov 2011: 79.

Dist: **NWA**

Cetraria ericetorum Opiz

Ref: Davydov 2001: 145.

Dist: **NWA**

Cetraria islandica (L.) Ach.

Ref: Davydov 1995: 30; Davydov 2001: 145; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NA, NWA**

Cetraria laevigata Rass.

Ref: Davydov 2001: 145; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Dist: **LO, NA, NWA**

Cetraria odontella (Ach.) Ach.

Ref: Davydov 2001: 145; Davydov 2005: 19; Davydov 2011: 79.

Syn: ***Cornicularia odontella*** (Ach.) Rohl.

Ref: Davydov 1995: 31.

Dist: **NWA**

Cetraria sepincola (Ehrh.) Ach.

Ref: Davydov 1995: 30; Davydov 2011: 79.

Syn: ***Tuckermannopsis sepincola*** (Ehrh.) Hale

Ref: Davydov 2001: 158; Strelnikova & Davydov 2002: 190; Davydov 2005: 19.

Dist: **RO, NA, NWA**

Cetrariella delisei (Bory ex Schaer.) Kärnefelt et A. Thell

Ref: Davydov 2001: 145.

Dist: **NWA**

Cetrelia cetrarioides (Delise et Duby) W. L. Culb. et C. F. Culb.

Ref: Davydov 1995: 30; Davydov 2001: 145; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Chaenotheca chrysocephala (Turner ex Ach.) Th. Fr.

Ref: Davydov 2005: 20.

Dist: **NWA**

Chaenotheca furfuracea (L.) Tibell

Ref: Davydov 2001: 146; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Chaenotheca gracilentia (Ach.) Mattsson et Middelb.

Ref: Davydov 2010: 14; Davydov 2011: 87.

Syn: ***Cybebe gracilentia*** (Ach.) Tibell

Ref: Davydov 2005: 20; Davydov et al. 2007: 62.

Dist: **NWA**

Chaenotheca stemonea (Ach.) Müll. Arg.

Ref: Davydov 2001: 146; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Chaenotheca trichialis (Ach.) Th. Fr.

Ref: Davydov 2001: 146; Davydov 2005: 20; Davydov 2011: 88.

Dist: **RO, NWA**

****Chaenothecopsis hospitans*** (Th. Fr.) Tibell

Ref: Davydov et al. 2007: 60; Davydov 2011: 74.

Dist: **NWA**

Chrysothrix chlorina (Ach.) J. R. Laundon

Ref: Davydov et al. 2012: 25.

Dist: **NA**

Circinaria elmorei (E. D. Rudolph) Owe-Larsson et al.

Ref: Korolyuk et al. 2000: 103. as '***Aspicilia desertorum*** (Kremp.) Mereschk.'

Dist: **K**

Circinaria contorta (Hoffm.) Nordin et al.

Syn: ***Aspicilia contorta*** (Hoffm.) Kremp.

Ref: Davydov 2001: 143.

Dist: **K, LO, NWA**

Circinaria fruticulosa (Eversm.) Sohrabi

Syn: *Aspicilia fruticulosa* (Eversm.) Flagey

Ref: Davydov 1996: 23; Stas' 1998: 104; Korolyuk et al. 2000: 103.

Dist: **K**

Circinaria hispida (Mereschk.) Nordin et al.

Syn : *Aspicilia hispida* Mereschk.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Cladonia acuminata (Ach.) Norrl.

Ref: Davydov 2001: 146; Davydov 2005: 18; Davydov 2011: 76.

Dist: **NWA**

Cladonia amaurocraea (Flörke) Schaer.

Ref: Davydov 1995: 30; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Dist: **RO, NA, NWA**

Cladonia arbuscula (Wallr.) Flot.

Ref: Davydov 2011: 76

Syn: *Cladina arbuscula* (Wallr.) Hale et W. L. Culb.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 146; Davydov 2005: 18.

Syn: *Cladonia silvatica* (L.) Web.

Ref: Tanphil'ev 1902: 250; Kuznetsov 1914: 18.

Dist: **K, LO, ARH, RO, NWA**

Cladonia bacilliformis (Nyl.) Glück

Troitsky district, at the vicinity of Lesnoi settlement, mixed forest, on log, 25.VIII.1997, leg. Skachko.

Dist: **RO**

Cladonia bellidiflora (Ach.) Schaer.

Ref: Stas' 1998: 105; Stas' 2000: 49.

Dist: **K, LO, ARH**

Cladonia borealis S. Stenroos

Ref: Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Dist: **LO, NA, NWA**

Cladonia botrytes (K. G. Hagen) Willd.

Ref: Davydov 1995: 30; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Davydov 2005: 18; Davydov 2011: 76.

Dist: **K, LO, ARH, NWA**

Cladonia cariosa (Ach.) Spreng.

Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Davydov 2005: 18; Davydov 2011: 76.

Dist: **LO, NWA**

Cladonia carneola (Fr.) Fr.

Ref: Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Dist: **NA, NWA**

Cladonia cenotea (Ach.) Schaer.

Ref: Davydov 1995: 30; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Dist: **K, LO, ARH, RO, NA, NWA**

Cladonia chlorophaea (Flörke ex Sommerf.) Spreng.

Ref: Davydov 1995: 30; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Davydov 2005: 18; Davydov 2011: 76.

Dist: **LO, NWA**

Cladonia coccifera (L.) Willd. s. lat.

Ref: Davydov 1995: 31; Stas' 1998: 105; Stas' 2000: 49.

Dist: **K, LO, ARH, NWA**

Cladonia coniocraea (Flörke) Spreng.

Ref: Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Dist: **LO, NA, NWA**

Cladonia cornuta (L.) Hoffm.

Ref: Davydov 1995: 31; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Syn: ***Cladonia cornuta*** f. ***phyllostoca*** (Flk.) Arnold

Ref: Stas' 1998: 106; Stas' 2000: 49.

Dist: **K, LO, ARH, RO, NA, NWA**

Cladonia crispata (Ach.) Flot.

Ref: Stas' 1998: 106; Stas' 2000: 49; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 76.

Dist: **K, LO, ARH, NA, NWA**

Cladonia cryptochlorophaea Asahina

Ref: Davydov 1995: 31.

Dist: **NWA**

Cladonia cyanipes (Sommerf.) Nyl.

Ref: Davydov 2001: 146; Davydov 2005: 18; Davydov 2011: 76

Dist: **NWA**

Cladonia decorticata (Flörke) Spreng.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 146.

Dist: **K, LO, ARH, NWA**

Cladonia deformis (L.) Hoffm.

Ref: Davydov 1995: 31; Davydov 2001: 146; Davydov 2005: 18; Davydov 2011: 77.

Dist: **NWA**

Cladonia ecmocyna Leight.

Ref: Davydov 1995: 31; Stas' 1998: 106; Stas' 2000: 50.

Dist: **LO, NWA**

Cladonia fimbriata (L.) Fr.

Ref: Davydov 1995: 31; Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, RO, NA, NWA**

Cladonia foliacea (Huds.) Willd.

Ref: Stas' 1998: 106; Davydov 2001: 146; Davydov et al. 2012: 25

Syn: ***Cladonia endiviaefolia*** (Dicks.) Fr.

Ref: Tanphil'ev 1902: 250.

Dist: **K, NWA**

Cladonia furcata (Huds.) Schrad.

Ref: Davydov 2001: 147; Davydov 2005: 18.

Syn: ***Cladonia furcata*** (Huds.) Schrad. var. ***pinnata*** (Flörke) Vain.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, NWA**

Cladonia glauca Flörke

Ref: Stas' 1998: 106; Stas' 2000: 50.

Dist: **K, LO**

Cladonia gracilis (L.) Willd.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Strelnikova & Davydov 2002: 190; Davydov 2005: 18.

Dist: **K, LO, ARH, NA, NWA**

Cladonia gracilis subsp. ***turbinata*** (Ach.) Ahti

Ref: Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **NWA**

Cladonia humilis (With.) J. R. Laundon

Ref: Davydov 2001: 147.

Dist: **NWA**

Cladonia macilenta Hoffm.

Ref: Davydov 1995: 31.

Dist: **K, LO, ARH, RO, NWA*****Cladonia macilenta*** Hoffm. var. ***bacillaris*** (Genth) Schaer.

Ref: Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Syn: ***Cladonia bacillaris*** (Ach.) Nyl.

Ref: Davydov 1995: 30; Stas' 1998: 105; Stas' 2000: 49.

Dist: **K, LO, ARH, RO, NWA*****Cladonia macroceras*** (Delise) Hav.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **LO, NWA*****Cladonia macrophyllodes*** Nyl.

Ref: Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **NWA*****Cladonia mitis*** Sandst.Syn: ***Cladina mitis*** (Sandst.) Hustich.

Ref: Davydov 1995: 30; Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 146; Davydov 2005: 18.

Syn: ***Cladonia arbuscula*** (Wallr.) Flot. subsp. ***mitis*** (Sandst.) Ruoss (see Ahti et al. 2013)

Ref: Davydov 2011: 76.

Dist: **K, LO, ARH, NWA*****Cladonia mongolica*** Ahti

Ref: Davydov 2001: 147.

Dist: **NWA*****Cladonia ochrochlora*** Flörke

Ref: Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **NWA*****Cladonia parasitica*** (Hoffm.) Hoffm.

Ref: Stas' 1998: 106; Stas' 2000: 50.

Dist: **K, LO*****Cladonia phyllophora*** Hoffm.

Ref: Davydov 1995: 31; Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, NA, NWA**

Cladonia pleurota (Flörke) Schaer.

Ref: Davydov 1995: 31; Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, NA, NWA**

Cladonia pocillum (Ach.) Grognot

Ref: Davydov 1995: 31; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **NWA**

Cladonia polycarpoides Nyl.

Ref: Stas' 1998: 106; Stas' 2000: 50.

Dist: **K, LO**

Cladonia pyxidata (L.) Hoffm.

Ref: Davydov 1995: 31; Stas' 1998: 106; Korolyuk et al. 2000: 103; Stas' 2000: 50; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, NWA**

Cladonia ramulosa (With.) J. R. Laundon

Syn: *Cladonia pityrea* (Flörke) Fr.

Ref: Davydov 1995: 31.

Dist: **NWA**

Cladonia rangiferina (L.) F. H. Wigg.

Ref: Tanphil'ev 1902: 250; Kuznetsov 1914: 18; Davydov 2011: 77.

Syn: *Cladina rangiferina* (L.) Nyl.

Ref: Davydov 1995: 30; Stas' 1998: 106; Stas' 2000: 51; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18.

Dist: **K, LO, ARH, RO, NA, NWA**

Cladonia rei Schaer.

Ref: Davydov 1995: 31; Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, NWA**

Cladonia scabriuscula (Delise) Nyl.

Ref: Stas' 1998: 106; Stas' 2000: 50.

Dist: **K, LO, ARH**

Cladonia squamosa Hoffm.

Ref: Stas' 2000: 50 (as '*Cladonia subsquamosa* (Nyl. et Leight) Cromb.').

Dist: **LO**

Cladonia stellaris (Opiz) Pouzar et Vězda

Ref: Davydov 2011: 77.

Syn: *Cladina stellaris* (Opiz) Brodo.

Ref: Stas' 1998: 106; Stas' 2000: 51; Davydov 2001: 146; Strelnikova & Davydov 2002: 190; Davydov 2005: 18.

Syn: *Cladonia alpestris* (L.) Rabenh.

Ref: Tanphil'ev 1902: 250.

Dist: **K, LO, ARH, NA, NWA**

Cladonia stricta (Nyl.) Nyl.

Syn: *Cladonia lepidota* Nyl.

Ref: Stas' 1998: 106; Stas' 2000: 50.

Dist: **K, LO, ARH**

Cladonia stygia (Fr.) Ruoss

Syn: *Cladina stygia* (Fr.) Ahti

Ref: Davydov 2001: 146; Strelnikova & Davydov 2002: 190.

Dist: **NA, NWA**

Cladonia subulata (L.) F. H. Wigg.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, NWA**

Cladonia sulphurina (Michx.) Fr.

Ref: Davydov 2001: 147; Strelnikova & Davydov 2002: 190; Davydov 2005: 18; Davydov 2011: 77.

Dist: **NA, NWA**

Cladonia symphycarpa (Flörke) Fr.

Ref: Stas' 1998: 106; Davydov 2001: 147.

Dist: **K, NWA**

Cladonia turgida Hoffm.

Ref: Davydov 1995: 31; Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Davydov 2010: 13; Davydov 2011: 77.

Dist: **K, LO, ARH, NWA**

Cladonia uncialis (L.) F. H. Wigg.

Ref: Stas' 1998: 106; Stas' 2000: 50; Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, ARH, RO, NWA**

Cladonia verticillata (Hoffm.) Schaer.

Ref: Davydov 2011: 77

Syn: *Cladonia cervicornis* (Ach.) Flot. ssp. *verticillata* (Hoffm.) Ahti

Ref: Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 146; Davydov 2005: 18.

Dist: **K, LO, ARH, NWA**

Cliostomum griffithii (Sm.) Coppins

Ref: Davydov 2001: 147.

Dist: **NWA**

Collema cristatum (L.) F. H. Wigg.

Ref: Davydov 2001: 147.

Dist: **NWA**

Collema fasciculare (L.) F. H. Wigg.

Ref: Davydov 2001: 147.

Dist: **NWA**

Collema flaccidum (Ach.) Ach.

Ref: Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 82.

Dist: **NWA**

Collema furfuraceum (Arnold) Du Rietz

Ref: Davydov 2001: 147; Davydov 2005: 18; Davydov 2011: 82.

Dist: **NWA**

Collema limosum (Ach.) Ach.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Collema nigrescens (Huds.) DC.

Ref: Davydov 2001: 148; Davydov 2005: 18; Davydov 2011: 82.

Dist: **NWA**

Collema subflaccidum Degel.

Ref: Davydov 2001: 148; Davydov 2005: 18; Davydov 2011: 82.

Dist: **NWA**

Collema tenax (Sw.) Ach. em. Degel. s. lat.

Ref: Davydov 2001: 148.

Dist: **NWA**

Cyphelium inquinans (Sm.) Trevis.

Ref: Davydov 2001: 148.

RO, NWA

Cyphelium tigillare (Ach.) Ach.

Ref: Davydov 2001: 148; Davydov 2005: 18; Davydov 2011: 84.

Dist: **NWA**

Dermatocarpon arnoldianum Degel.

Ref: Davydov 2001: 148.

Dist: **NWA**

Dermatocarpon luridum (With.) J. R. Laundon

Ref: Davydov 2001: 148.

Dist: **NWA**

Dermatocarpon miniatum (L.) W. Mann

Ref: Davydov 2001: 148; Davydov 2005: 20; Davydov 2011: 73.

LO, NWA

Dermatocarpon miniatum var. ***complicatum***

Syn: ***Dermatocarpon intestiniforme*** (Körb.) Hasse

Ref: Davydov 2001: 148.

Dist: **NWA**

Dermatocarpon vellereum Zschacke

Ref: Davydov 2001: 148; Davydov 2005: 20; Davydov 2011: 73.

Dist: **NWA**

Dimelaena oreina (Ach.) Norman

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 148; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, NWA**

Diploschistes diacapsis (Ach.) Lumbsch

Syn: ***Diploschistes steppicus*** Reichert.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Diploschistes muscorum (Scop.) R. Sant.

Ref: Davydov 2001: 148; Davydov 2005: 17; Davydov 2011: 75.

Dist: **LO, NWA**

Diploschistes scruposus (Schreb.) Norman

Ref: Davydov 2001: 148.

Dist: **LO, NWA**

Diplotomma alboatrum (Hoffm.) Flot. s. lat.

Ref: Davydov 2011: 84.

Dist: **NWA**

Diplotomma chlorophaeum (Hepp ex Leight.) K. P. Singh et S. R. Singh.

Syn: ***Buellia porphyrica*** (Arnold) Mong.

Ref: Davydov 2001: 144.

Dist: **NWA**

Diplotomma epipolium (Ach.) Arnold

Ref: Davydov 2010: 13.

Syn: *Buellia epipolia* (Ach.) Mong.

Ref: Davydov 2001: 144.

Dist: **NWA**

Endocarpon alaicum Tomin

Ref: Davydov 2001: 148.

Dist: **NWA**

Epilichen scabrosus (Ach.) Clem.

Ref: Davydov 2011: 86; Davydov et al. 2012: 25.

Dist: **NWA**

Evernia divaricata (L.) Ach.

Ref: Davydov 2001: 148; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Evernia mesomorpha Nyl.

Ref: Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 148; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Dist: **K, LO, ARH, NA, NWA**

Evernia mesomorpha Nyl. f. *arenicola* (Savicz) Rass.

Ref: Davydov 2001: 148.

Dist: **NWA**

Fellhanera subtilis (Vězda) Diederich et Sérus.

Ref: Davydov & Printzen 2012b: 64.

Dist: **NWA**

Flavocetraria cucullata (Bellardi) Kärnefelt et A. Thell

Ref: Davydov 2001: 148; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Syn: *Allocetraria cucullata* (Bellardi) Randle et Saag

Ref: Stas' 2000: 49.

Syn: *Cetraria cucullata* (Bellardi) Ach.

Ref: Kuznetsov 1914: 32; Davydov 1995: 30.

Dist: **LO, NA, NWA**

Flavocetraria nivalis (L.) Kärnefelt et A. Thell

Ref: Davydov 2001: 148; Davydov 2005: 19; Davydov 2011: 79.

Syn: *Cetraria nivalis* (L.) Ach.

Ref: Kuznetsov 1914: 32; Davydov 1995: 30.

Dist: **NWA**

Flavoparmelia caperata (L.) Hale

Ref: Davydov 2001: 148; Davydov 2005: 19; Davydov 2011: 79.

Syn: *Parmelia caperata* (L.) Ach.

Davydov 1995: 32.

Dist: **NWA**

Flavopunctelia soledica (Nyl.) Hale

Stas' 1998: 105; Stas' 2000: 48; Davydov 2001: 148; Davydov 2005: 19; Davydov 2011: 79.

Dist: **K, LO, ARH, RO, NWA**

Fulgensia bracteata (Hoffm.) Räsänen

Ref: Davydov 2001: 148; Davydov 2011: 85.

Dist: **NWA**

Fulgensia fulgens (Sw.) Elenkin

Ref: Davydov 2001: 148.

Dist: **NWA**

Fuscidea mollis (Wahlenb.) V. Wirth et Vězda

Ref: Davydov 2001: 148.

Dist: **NWA**

Glypholecia scabra (Pers.) Müll. Arg.

Ref: Davydov 2001: 149.

Dist: **NWA**

Graphis scripta (L.) Ach.

Ref: Davydov 2001: 149; Davydov 2010: 13; Davydov 2011: 75; Davydov et al. 2012: 26.

Dist: **NWA**

Gyalecta jenensis (Batsch) Zahlbr.

Ref: Davydov 2001: 149.

Dist: **NWA**

Heterodermia japonica (M. Satô) Swinscow et Krog

Ref: Davydov & Printzen 2012a: 86.

Dist: **NA**

Heterodermia speciosa (Wulfen) Trevis.

Ref: Davydov 1995: 31; Davydov 2001: 149; Davydov 2010: 13; Davydov 2011: 84.

Dist: **NWA**

Heteroplacidium fusculum (Nyl.) Gueidan et Cl. Roux

Syn: *Verrucaria fuscula* Nyl.

Ref: Davydov 2001: 159.

Dist: **NWA**

Hydropunctaria rheitrophila (Zschacke) Keller, Gueidan et Thüs

Ref: Davydov 2010: 12; Davydov 2011: 74.

Dist: **NWA**

Hypocenomyce scalaris (Ach.) M. Choisy

Ref: Davydov 2011: 86.

Dist: **LO, RO, NWA**

Hypogymnia austerodes (Nyl.) Räsänen

Ref: Davydov 2001: 149.

Dist: **NWA**

Hypogymnia bitteri (Lynge) Ahti

Ref: Davydov 2001: 149; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Hypogymnia farinacea Zopf

Ref: Davydov 2001: 149; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Hypogymnia physodes (L.) Nyl.

Ref: Davydov 1995: 31; Stas' 1998: 105; Davydov 2001: 149; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 79.

Syn: *Hypogymnia physodes* f. *stigmatea* (Bitt.) Rass.

Ref: Davydov 1995: 31; Stas' 1998: 105; Stas' 2000: 48.

Syn: *Hypogymnia physodes* f. *farbosa* (Ach.) W. Wats.

Ref: Stas' 1998: 105; Stas' 2000: 48.

Syn: *Hypogymnia physodes* f. *vittatoides* (Mereschk.) Räsänen

Ref: Davydov 1995: 31; Stas' 1998: 105; Stas' 2000: 48; Davydov 2001: 149.

Dist: **K, LO, ARH, RO, NA, NWA**

Hypogymnia subobscura (Vain.) Poelt

Ref: Davydov 2001: 149; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Hypogymnia tubulosa (Schaer.) Hav.

Ref: Davydov 1995: 31; Stas' 1998: 105; Stas' 2000: 48; Davydov 2001: 149; Davydov 2005: 19; Davydov 2011: 79.

Dist: **K, LO, ARH, NWA**

Hypogymnia vittata (Ach.) Parrique

Ref: Davydov 1995: 31; Davydov 2001: 149.

Dist: **NWA**

Icmadophila ericetorum (L.) Zahlbr.

Ref: Davydov 2001: 149; Davydov 2005: 20; Davydov 2011: 75.

Dist: **NWA**

Immersaria cupreoatra (Nyl.) Calat. et Rambold

Ref: Davydov 2011: 85.

Syn: *Bellemeria cupreoatra* (Nyl.) Clauzade et. Cl. Roux

Ref: Davydov 2001: 143; Davydov 2005: 19.

Dist: **NWA**

Imshaugia aleurites (Ach.) S. L. F. Mey.

Ref: Davydov 2001: 149; Davydov 2005: 19; Davydov 2011: 79.

Dist: **NWA**

Japewia tornoënsis (Nyl.) Tønsberg

Ref: Davydov 2001: 149.

Dist: **NWA**

Lasallia pensylvanica (Hoffm.) Llano

Ref: Davydov 1995: 31; Davydov 2001: 149; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Lasallia pertusa (Rass.) Llano

Ref: Davydov 1995: 32; Stas' 1998: 106; Davydov 2001: 149.

Dist: **K, NWA**

Lasallia rossica Dombro.

Ref: Davydov 1995: 32; Davydov 2001: 149; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Lecania croatica (Zahlbr.) Kotlov

Ref: Davydov & Printzen 2012b: 65.

Dist: **NA, NWA**

Lecania cyrtella (Ach.) Th. Fr.

Ref: Davydov 2001: 149; Davydov 2010: 13; Davydov 2011: 82.

Dist: **NWA**

Lecania cyrtellina (Nyl.) Sandst.

Ref: Davydov & Printzen 2012b: 65.

Dist: **NA**

Lecania erysibe (Ach.) Mudd

Ref: Korolyuk et al. 2000: 104.

Dist: **K**

Lecania koerberiana J. Lahm

Ref: Davydov 2001: 149.

Dist: **NWA**

Lecanora albella (Pers.) Ach.

Ref: Davydov 2010: 13; Davydov 2011: 77.

Dist: **RO, NWA**

Lecanora albellula (Nyl.) Th. Fr.

Ref: Davydov 2005: 18; Davydov 2011: 77; Davydov & Printzen 2012b: 65.

Dist: **LO, RO, NWA**

Lecanora argentata (Ach.) Malme

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecanora argopholis (Ach.) Ach.

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 77.

Dist: **K, LO, NWA**

Lecanora baicalensis Zahlbr.

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora bicincta Ramond

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecanora bolcana (Pollini) Poelt

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora campestris (Schaer.) Hue

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecanora carpinea (L.) Vain.

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **LO, NWA**

Lecanora chlarotera Nyl.

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Syn: ***Lecanora rugosella*** Zahlbr.

Ref: Davydov 2001: 150.

Dist: **NWA*****Lecanora crenulata*** Hook.

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 150.

Dist: **K, NWA*****Lecanora crustacea*** (Savicz) Zahlbr.

Ref: Davydov 2001: 150.

Dist: **NWA*****Lecanora dispersa*** (Pers.) Sommerf.

Ref: Davydov 2001: 150.

Dist: **NWA*****Lecanora expallens*** Ach.Pervomaisky district, between Bobrovka and Raskazikha settlements, *Pinus sylvestris* – *Vaccinium vitis-idaea* forest, on *P. sylvestris*, 4 VIII1998, leg. & det. Skachko.Dist: **RO*****Lecanora farinaria*** Borrer

Ref: Davydov & Printzen 2012b: 66.

Dist: **NWA*****Lecanora frustulosa*** (Dicks.) Ach.

Ref: Korolyuk et al. 2000: 104.

Dist: **K*****Lecanora fuscescens*** (Sommerf.) Nyl.

Ref: Davydov 2011: 78; Davydov et al. 2012: 26.

Dist: **NWA*****Lecanora geophila*** (Th. Fr.) Poelt

Ref: Zhurbenko & Davydov 2000: 112; Davydov 2001: 150.

Dist: **NWA*****Lecanora hagenii*** (Ach.) Ach.

Ref: Korolyuk et al. 2000: 103.

Syn: ***Lecanora lithophila*** (Wallr.) Oxner

Ref: Korolyuk et al. 2000: 104.

Dist: **K, LO**

Lecanora intricata (Ach.) Ach.

Ref: Davydov 2010: 13; Davydov 2011: 78.

Dist: **NWA**

Lecanora saxicola (Pollich) Ach.

Syn: ***Lecanora muralis*** (Schreb.) Rabenh.

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **K, LO, NWA**

Lecanora polytropa (Hoffm.) Rabenh.

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Syn: ***Lecanora polytropa*** var. ***alpigena*** Schaer.

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora populicola (DC.) Duby

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora praesistens Nyl.

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora pseudosarcopidoides M. Brand et van den Boom

Ref: Davydov & Printzen 2012b: 66.

Dist: **NWA**

Lecanora pulicaris (Pers.) Ach.

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **RO, NWA**

Lecanora rupicola (L.) Zahlbr.

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora semipallida H. Magn.

Syn: ***Lecanora xanthostoma*** Wedd ex Cl. Roux.

Ref: Davydov 2001: 151.

Dist: **NWA**

Lecanora subcarpineae Szatala

Ref: Davydov & Printzen 2012a: 86.

Dist: **NA**

Lecanora subintricata (Nyl.) Th. Fr.

Ref: Davydov 2001: 150.

Dist: **NWA**

Lecanora subrugosa Nyl.

Ref: Davydov 2001: 150; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecanora symmicta (Ach.) Ach.

Ref: Davydov 2001: 150; Davydov & Printzen 2012a: 86.

Syn: *Biatora symmicta* (Ach.) Fr.

Ref: Stas' 2000: 48.

Dist: **LO, NWA**

Lecanora valesiaca (Müll. Arg.) Stizenb.

Ref: Davydov 2001: 151.

Dist: **NWA**

Lecanora varia (Hoffm.) Ach.

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 78.

Dist: **RO, NWA**

Lecidea atrobrunnea (Ramond ex Lam. et DC.) Schaer.

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 85.

Dist: **NWA**

Lecidea auriculata Th. Fr.

Ref: Davydov 2004: 52; Davydov 2005: 18; Davydov 2011: 85.

Dist: **NWA**

Lecidea betulicola (Kullh.) H. Magn.

Ref: Davydov & Printzen 2012b: 66.

Dist: **NWA**

Lecidea confluens (Weber) Ach.

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 86.

Dist: **NWA**

Lecidea erythrophaea Flörke ex Sommerf.

Ref: Davydov & Printzen 2012b: 66.

Dist: **NA**

Lecidea lapicida (Ach.) Ach.

Ref: Davydov 2001: 151; Davydov 2005: 18.

Dist: **NWA**

Lecidea lapicida (Ach.) Ach. var. *pantherina* Ach.

Ref: Davydov 2011: 86.

Dist: **NWA**

Lecidea promiscens Nyl.

Ref: Davydov 2004: 52; Davydov 2005: 18; Davydov 2011: 86.

Dist: **NWA**

Lecidea sanguineoatra auct. non (Wulfen) Ach.

Ref: Davydov & Printzen 2012b: 67.

Dist: **NWA**

Lecidea syncarpa Zahlbr.

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 86.

Dist: **NWA**

Lecidea tessellata Flörke

Ref: Davydov 2001: 151.

Dist: **NWA**

Lecidella anomaloides (A. Massal.) Hertel et H. Kilius

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecidella elaeochroma (Ach.) M. Choisy

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecidella euphorea (Flörke) Hertel

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecidella stigmatea (Ach.) Hertel et Leuckert

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Lecidoma demissum (Rutstr.) Gotth. Schneid. et Hertel

Ref: Davydov 2001: 151; Davydov 2011: 86.

Dist: **NWA**

Lepraria incana (L.) Ach.

Ref: Davydov 2001: 151.

Dist: **LO, RO, NWA**

Leptogium asiaticum P. M. Jørg.

Ref: Davydov 2001: 151; Davydov et al. 2007: 64; Davydov 2010: 13; Davydov 2011: 82.

Dist: **NA, NWA**

Leptogium cyanescens (Rabenh.) Kőr.

Ref: Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 83.

Dist: **NWA**

Leptogium lichenooides (L.) Zahlbr.

Ref: Davydov 2001: 151.

Dist: **NWA**

Leptogium saturninum (Dickson) Nyl.

Ref: Davydov 1995: 32; Davydov 2001: 151; Davydov 2005: 18; Davydov 2011: 83.

Dist: **NWA**

Leptorhaphis atomaria (Ach.) Szatala

Ref: Davydov 2005: 17; Davydov 2011: 73.

Dist: **NWA**

Leptorhaphis lucida Kőr.

Ref: Davydov 2001: 151; Davydov 2005: 17; Davydov 2011: 73.

Dist: **NWA**

****Lichenodiplis lichenicola*** Dyko et D. Hawksw.

Ref: Zhurbenko & Davydov 2000: 112.

Dist: **NWA**

****Lichenostigma maureri*** Hafellner

Ref: Zhurbenko & Davydov 2000: 112; Davydov 2005: 17; Davydov 2011: 73.

Dist: **NWA**

****Lichenostigma rugosum*** G. Thor

Ref: Zhurbenko & Davydov 2000: 113.

Dist: **NWA**

Lobaria pulmonaria (L.) Hoffm.

Ref: Davydov 1995: 32; Davydov 1999: 18; Davydov 2001: 151; Strelnikova & Davydov 2002: 190; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NA, NWA, S**

Lobaria scrobiculata (Scop.) DC.

Ref: Davydov 1995: 32; Davydov 2001: 151; Strelnikova & Davydov 2002: 190; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NA, NWA**

Lobothallia melanaspis (Ach.) Hafellner

Ref: Davydov et al. 2007: 63; Davydov 2010: 13; Davydov 2011: 75.

Dist: **NWA**

Lobothallia praeradiosa (Nyl.) Hafellner

Ref: Davydov 2001: 151.

Dist: **NWA**

Megaspora verrucosa (Ach.) Hafellner et V. Wirth

Ref: Davydov 2010: 13; Davydov 2011: 75.

Dist: **NWA**

Megaspora verrucosa (Ach.) Hafellner et V. Wirth var. ***mutabilis*** (Ach.) Nimis et Cl. Roux

Ref: Davydov & Printzen 2012b: 67.

Dist: **NWA**

Melanelia disjuncta (Erichsen) Essl.

Ref: Davydov 2001: 152; Davydov 2005: 19; Davydov 2011: 80.

Dist: **NWA**

Melanelia hepatizon (Ach.) A. Thell

Ref: Davydov 2001: 152.

Dist: **NWA**

Melanelia stygia (L.) Essl.

Ref: Davydov 2001: 152; Davydov 2005: 19; Davydov 2011: 80.

Dist: **NWA**

Melanelia tominii (Oxner) Essl.

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 152; Davydov 2005: 19; Davydov 2011: 80.

Syn: ***Parmelia tominii*** Oxner

Ref: Davydov 1995: 32.

Dist: **K, NWA**

Melanelixia albertana (Ahti) O. Blanco et al.

Ref: Davydov 2011: 80

Syn: ***Melanelia albertana*** (Ahti) Essl.

Ref: Davydov 2001: 152; Davydov 2005: 19.

Dist: **NWA**

Melanelixia subargentifera (Nyl.) O. Blanco et al.

Ref: Davydov 2010: 13; Davydov 2011: 80.

Syn: ***Melanelia subargentifera*** (Nyl.) Essl.

Ref: Davydov 2005: 19; Davydov et al. 2007: 63.

Dist: **NWA**

Melanelixia subaurifera (Nyl.) O. Blanco et al.

Syn: *Melanelia subaurifera* (Nyl.) Essl.

Ref: Davydov 2001: 152.

Dist: **RO, NWA**

Melanohalea exasperata (De Not.) O. Blanco et al.

Ref: Davydov 2011: 80.

Syn: *Melanelia exasperata* (De Not.) Essl.

Ref: Davydov 2001: 152; Strelnikova & Davydov 2002: 190; Davydov 2005: 19.

Dist: **NA, NWA**

Melanohalea exasperatula (Nyl.) O. Blanco et al.

Ref: Davydov 2011: 80.

Syn: *Melanelia exasperatula* (Nyl.) Essl.

Ref: Davydov 2001: 152; Davydov 2005: 19.

Dist: **NWA**

Melanohalea infumata (Nyl.) O. Blanco et al.

Ref: Davydov 2011: 80.

Syn: *Melanelia infumata* (Nyl.) Essl.

Ref: Davydov 2001: 152; Davydov 2005: 19.

Dist: **NWA**

Melanohalea olivacea (L.) O. Blanco et al.

Ref: Davydov 2011: 80.

Syn: *Melanelia olivacea* (L.) Essl.

Ref: Stas' 1998: 105; Stas' 2000: 48; Davydov 2001: 152; Davydov 2005: 19.

Syn: *Parmelia olivacea* (L.) Ach.

Ref: Davydov 1995: 32.

Dist: **K, LO, ARH, RO, NWA**

Melanohalea septentrionalis (Lyngé) O. Blanco et al.

Ref: Davydov 2011: 80.

Syn: *Melanelia septentrionalis* (Lyngé) Essl.

Ref: Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 152; Davydov 2005: 19.

Dist: **K, LO, ARH, RO, NWA**

Micarea denigrata (Fr.) Hedl.

Ref: Davydov 2001: 152; Davydov 2011: 81; Davydov et al. 2012: 27.

Dist: **NWA**

Micarea prasina Fr.

Ref: Davydov 2001: 152; Davydov 2005: 18; Davydov 2011: 81.

Dist: **NWA**

Micarea ternaria (Nyl.) Vězda

Ref: Davydov 2005: 18; Davydov 2011: 81.

Dist: **NWA**

**Muellerella ventosicola* (Mudd) D. Hawksw.

Syn: **Muellerella pygmaea* (Körb.) D. Hawksw. var. *ventosicola* (Mudd) Triebel

Ref: Zhurbenko & Davydov 2000: 113.

Dist: **NWA**

Mycobilimbia carneoalbida (Müll. Arg.) S. Ekman et Printzen

Ref: Davydov 2004: 52.

Dist: **NA, S**

Mycobilimbia tetramera (De Not.) Vitik. et al. ex Hafellner et Türk

Ref: Davydov 2004: 52; Davydov 2005: 19; Davydov 2011: 86.

Dist: **NWA**

Mycoblastus sanguinarius (L.) Norman

Ref: Davydov 2010: 13; Davydov 2011: 78

Syn: *Lichen sanguinarius* L.

Ref: Georgi 1800: 1405.

Dist: **NWA**

+*Mycocalicium subtile* (Pers.) Szatala

Ref: Davydov 2011: 74.

Dist: **NWA**

Myelochroa aurulenta (Tuck.) Elix et Hale

Ref: Davydov 2004: 50.

Dist: **NA**

Naetrocymbe punctiformis (Pers.) R. C. Harris

Ref: Davydov 2011: 73.

Syn: *Arthopyrenia punctiformis* (Pers.) A. Massal.

Ref: Davydov 2001: 143; Davydov 2005: 17.

Syn: *Arthopyrenia punctiformis* var. *atomaria* (Ach.) Anzi

Ref: Davydov 2001: 143; Davydov 2005: 17.

Dist: **NWA**

Naetrocymbe rhypona (Ach.) R. C. Harris

Ref: Davydov 2011: 73

Syn: *Arthopyrenia rhypona* (Ach.) A. Massal.

Ref: Davydov 2001: 143; Davydov 2005: 17.

Dist: **NWA**

**Nectriopsis lecanodes* (Ces.) Diederich et Schroers

Ref: Davydov 2011: 88.

Syn: *Nectria lecanodes* Ces.

Ref: Zhurbenko & Davydov 2000: 113; Davydov 2005: 17.

Dist: **NWA**

Neofuscelia pulla (Ach.) Essl.

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 152; Davydov 2005: 19.

Syn: *Xanthoparmelia pulla* (Ach.) O. Blanco et al.

Ref: Davydov 2011: 81.

Dist: **K, LO, NWA**

Neofuscelia ryssolea (Ach.) Essl.

Ref: Davydov 2001: 152.

Syn: *Parmelia ryssolea* (Ach.) Nyl.

Ref: Korolyuk et al. 2000: 103.

Dist: **K, NWA**

Nephroma bellum (Spreng.) Tuck.

Ref: Zavarzin & Davydov 2000: 12; Davydov 2001: 152; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Nephroma helveticum Ach.

Ref: Zavarzin & Davydov 2000: 15; Davydov 2001: 152; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Nephroma parile (Ach.) Ach.

Ref: Davydov 1995: 32; Zavarzin & Davydov 2000: 20; Davydov 2001: 152; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Nephroma resupinatum (L.) Ach.

Ref: Davydov 2001: 152; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Ochrolechia androgyna (Hoffm.) Arnold

Ref: Davydov & Printzen 2012a: 87.

Dist: **NWA**

Ochrolechia arborea (Kreyer) Almb.

Ref: Davydov 2010: 13; Davydov 2011: 75; Davydov & Printzen 2012a: 87.

Dist: **NA, NWA**

Ochrolechia frigida (Sw.) Lyngé

Ref: Davydov 2001: 152.

Dist: NWA

Ochrolechia pallescens (L.) A. Massal.

Ref: Davydov 2001: 152; Davydov 2010: 13; Davydov 2011: 75; Davydov & Printzen 2012a: 87.

Dist: NWA

Ochrolechia turneri (Sm.) Hasselrot

Ref: Davydov 2010: 13; Davydov 2011: 75; Davydov & Printzen 2012a: 88.

Dist: NWA

Ochrolechia upsaliensis (L.) A. Massal.

Ref: Davydov 2001: 152; Davydov 2005: 20; Davydov 2011: 75.

Dist: NWA

Opegrapha vulgata (Ach.) Ach.

Ref: Davydov 2001: 153.

Dist: NWA

Ophioparma lapponica (Räsänen) Hafellner et R. W. Rogers

Syn: ***Ophioparma ventosa*** var. ***lapponica*** (Räsänen) R. Sant.

Ref: Davydov 2001: 153.

Dist: NWA

Ophioparma ventosa (L.) Norman

Ref: Davydov 2001: 153; Davydov 2005: 18; Davydov 2011: 86.

Dist: NWA

Pannaria conoplea (Ach.) Bory

Ref: Davydov 2001: 153.

Dist: NWA

Parmelia omphalodes (L.) Ach.

Ref: Davydov 2001: 153; Davydov 2005: 19; Davydov 2011: 80.

Syn: ***Lichen omphalodes*** L.

Ref: Georgi 1800: 1408.

Dist: NWA

Parmelia saxatilis (L.) Ach.

Ref: Davydov 2001: 153; Davydov 2005: 19; Davydov 2011: 80.

Dist: NWA

Parmelia sulcata Taylor

Ref: Keller, 1914: 291; Davydov 1995: 32; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 153; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 80.

Dist: **K, LO, ARH, RO, NA, NWA**

Parmelina tiliacea (Hoffm.) Hale

Ref: Davydov 2001: 153; Davydov 2005: 19; Davydov 2011: 80.

Syn: ***Parmelia scortea*** (Ach.) Ach.

Ref: Davydov 1995: 32.

Dist: **NWA**

Parmeliopsis ambigua (Wulfen) Nyl.

Ref: Stas' 1998: 105; Stas' 2000: 48; Davydov 2001: 153; Davydov 2005: 19; Davydov 2011: 80.

Dist: **K, LO, ARH, RO, NWA**

Parmeliopsis hyperopta (Ach.) Arnold

Ref: Davydov 2001: 153; Davydov 2005: 19; Davydov 2011: 80.

Dist: **RO, NWA**

Peccania coralloides (A. Massal.) A. Massal.

Ref: Davydov 2001: 153.

Dist: **NWA**

Peltigera aphthosa (L.) Willd.

Ref: Davydov 1995: 32; Davydov 2001: 153; Strelnikova & Davydov 2002: 190.

Syn: ***Peltigera aphthosa*** f. ***crispata*** (L.) Willd.

Ref: Davydov 1995: 32

Dist: **NA, NWA**

Peltigera canina (L.) Willd.

Ref: Davydov 1995: 32; Stas' 1998: 104; Stas' 2000: 48; Davydov 2001: 153; Davydov 2005: 20; Davydov 2011: 83.

Dist: **K, LO, ARH, RO, NWA**

Peltigera collina (Ach.) Schrad.

Ref: Davydov 1995: 32; Davydov 2001: 153; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Peltigera continentalis Vitik.

Ref: Davydov 2001: 153.

Dist: **NWA**

Peltigera degenii Gyeln.

Ref: Davydov 2001: 153; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Peltigera didactyla (With.) J. R. Laundon

Ref: Davydov 2001: 153; Davydov 2005: 20; Davydov 2011: 83.

Syn: ***Peltigera spuria*** (Ach.) DC.

Ref: Davydov 1995: 33; Stas' 1998: 104; Stas' 2000: 48.

Dist: **K, LO, RO, NWA**

Peltigera elisabethae Gyeln.

Ref: Davydov 2001: 153; Davydov 2005: 20; Davydov 2011: 83.

Peltigera mauritzii Gyeln.

Ref: Davydov 1995: 32.

Dist: **NWA**

Peltigera extenuata (Nyl. ex Vain.) Lojka

Syn: ***Peltigera didactyla*** var. ***extenuata*** (Nyl. ex Vain.) Goffinet et Hastings.

Ref: Davydov 2001: 153.

Dist: **NWA**

Peltigera horizontalis (Huds.) Baumg.

Ref: Davydov 1995: 32; Davydov 2001: 153.

Dist: **NWA**

Peltigera lepidophora (Nyl. ex Vain.) Bitter

Ref: Davydov 2001: 154; Davydov 2011: 83.

Dist: **NWA**

Peltigera leucophlebia (Nyl.) Gyeln.

Ref: Stas' 1998: 104; Stas' 2000: 48; Davydov 2005: 20; Davydov 2011: 83.

Dist: **LO, NWA**

Peltigera malacea (Ach.) Funck

Ref: Davydov 1995: 32; Stas' 1998: 104; Stas' 2000: 48; Davydov 2001: 154; Davydov 2005: 20; Davydov 2011: 83.

Dist: **K, LO, ARH, NWA**

Peltigera membranacea (Ach.) Nyl.

Ref: Davydov 1995: 32.

Dist: **NWA**

Peltigera monticola Vitik.

Ref: Davydov 2001: 154.

Dist: **NWA**

Peltigera neckeri Hepp ex Müll. Arg.

Ref: Davydov 2001: 154; Strelnikova & Davydov 2002: 190.

Syn: *Peltigera polydactyloides* Nyl.

Ref: Davydov 1995: 33.

Dist: **NA, NWA**

Peltigera neopolydactyla (Gyeln.) Gyeln.

Ref: Davydov 2001: 154.

Dist: **NWA**

Peltigera occidentalis (E. Dahl) Kristinsson

Ref: Davydov 2001: 154.

Dist: **NWA**

Peltigera polydactylon (Neck.) Hoffm.

Ref: Davydov 1995: 33; Davydov 2001: 154; Davydov 2005: 20; Davydov 2011: 83.

Dist: **RO, NWA**

Peltigera ponojensis Gyeln.

Pervomaisky district, at the vicinity of Biysk near the Sosnovka community. leg. Skachko, det. Zavarzin A. A.

Dist: **RO**

Peltigera praetextata (Flörke ex Sommerf.) Zopf

Ref: Davydov 2001: 154; Strelnikova & Davydov 2002: 190; Davydov 2005: 20; Davydov 2011: 83.

Syn: *Peltigera canina* (L.) Willd. var. *subcanina* (Gueln.) Frey

Ref: Davydov 1995: 32.

Dist: **NA, NWA**

Peltigera rufescens (Weiss) Humb.

Ref: Stas' 1998: 104; Stas' 2000: 48; Davydov 2001: 154; Davydov 2005: 20; Davydov 2011: 83.

Dist: **K, LO, NWA**

Peltigera scabrosa Th. Fr.

Ref: Davydov 1995: 33; Davydov 2001: 154; Davydov 2005: 20; Davydov 2011: 83.

Dist: **NWA**

Peltigera venosa (L.) Hoffm.

Ref: Davydov 2001: 154.

Dist: **NWA**

Pertusaria albescens (Huds.) M. Choisy et Werner

Ref: Davydov 2001: 154; Davydov 2010: 13; Davydov 2011: 75; Davydov & Printzen 2012a: 88.

Dist: **NWA**

Pertusaria alpina Hepp ex H. E. Ahles

Ref: Davydov 2001: 154; Davydov 2005: 20; Davydov 2011: 75; Davydov & Printzen 2012a: 88.

Dist: **NWA**

Pertusaria amara (Ach.) Nyl.

Ref: Davydov 2001: 154; Davydov 2010: 13; Davydov 2011: 76; Davydov & Printzen 2012a: 88.

Dist: **NWA**

Pertusaria coccodes (Ach.) Nyl.

Ref: Davydov & Printzen 2012b: 67.

Dist: **NA, NWA**

Pertusaria lactea (L.) Arnold

Syn: *Ochrolechia lactea* (L.) Hafellner et Matzer

Ref: Davydov 2001: 152.

Dist: **NWA**

Pertusaria panyrga (Ach.) A. Massal.

Ref: Davydov 2001: 154.

Dist: **NWA**

Pertusaria pupillaris (Nyl.) Th. Fr.

Ref: Davydov & Printzen 2012b: 67.

Dist: **NWA**

Pertusaria sommerfeltii (Flörke ex Sommerf.) Fr.

Ref: Davydov 2001: 154; Davydov 2005: 20; Davydov 2011: 76; Davydov & Printzen 2012a: 89.

Dist: **NA, NWA**

Phaeophyscia ciliata (Hoffm.) Moberg

Ref: Stas' 1998: 107; Stas' 2000: 51; Davydov 2001: 154; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, ARH, RO, NWA**

Phaeophyscia constipata (Norrl. et Nyl.) Moberg

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 154.

Dist: **K, NWA**

Phaeophyscia endophoenicea (Harm.) Moberg

Ref: Davydov 2001: 154; Davydov 2005: 19; Davydov 2011: 84.

Dist: **NWA**

Phaeophyscia hispidula (Ach.) Essl.

Ref: Davydov 2001: 154.

Dist: **NWA**

Phaeophyscia kairamoi (Vain.) Moberg

Ref: Davydov 2001: 155; Davydov 2010: 13; Davydov 2011: 84.

Dist: **NWA**

Phaeophyscia nigricans (Flörke) Moberg

Pavlovsky district, Shtabka settlement, *Pinus sylvestris* forest, on *Betula pendula*, 13 X 1997, leg. Skachko; Kosikhinsky district, at the vicinity of the Krasilovskoye lake, *Populus tremula* – *Betula pendula* forest, on *P. tremula* 20 VII 1996, leg. Skachko.

Dist: **LO, RO**

Phaeophyscia orbicularis (Neck.) Moberg

Ref: Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, RO, NWA**

Phaeophyscia sciastra (Ach.) Moberg

Ref: Davydov 2001: 155; Davydov 2010: 13; Davydov 2011: 84.

Dist: **LO, NWA**

Phaeorrhiza sareptana (Tomin) H. Mayrhofer et Poelt

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

****Phaeosporobolus usneae*** D. Hawksw. et Hafellner

Ref: Zhurbenko & Davydov 2000: 114; Davydov 2005: 21; Davydov 2011: 88.

Dist: **NWA**

Phlyctis argena (Spreng.) Flot.

Ref: Davydov 2001: 155; Davydov 2010: 13; Davydov 2011: 75.

Dist: **NWA**

Physcia adscendens (Fr.) H. Olivier

Ref: Davydov 1995: 33; Stas' 1998: 107; Stas' 2000: 51; Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, ARH, RO, NWA**

Physcia aipolia (Ehrh. ex Humb.) Fűrnr.

Ref: Davydov 1995: 33; Stas' 1998: 107; Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, NWA**

Physcia alnophila (Vain.) Loht. et al.

Ref: Davydov 2010: 13; Davydov 2011: 84.

Dist: **NWA**

Physcia caesia (Hoffm.) Fűrnr.

Ref: Stas' 1998: 107; Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, ARH, NWA**

Phyiscia clementei (Turner) Maas Geest.

Ust'-Kalmansky district, a bank of the Kalmanka River, at the base of trunks of *Lonicera tatarica*, 1 V. 2000, leg. Skachko.

Dist: **LO**

Phyiscia dimidiata (Arnold) Nyl.

Ref: Davydov 2001: 155.

Dist: **NWA**

Phyiscia dubia (Hoffm.) Lettau

Ref: Davydov 2001: 155.

Dist: **LO, NWA**

Phyiscia phaea (Tuck.) J. W. Thomson

Ref: Davydov 2001: 155.

Dist: **NWA**

Phyiscia stellaris (L.) Nyl.

Ref: Davydov 1995: 33; Stas' 1998: 107; Stas' 2000: 51; Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, ARH, NWA**

Phyiscia tenella (Scop.) DC.

Ref: Stas' 1998: 107; Korolyuk et al. 2000: 104; Stas' 2000: 51; Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, ARH, NWA**

Phyiscia tribacia (Ach.) Nyl.

Ref: Stas' 1998: 107; Stas' 2000: 51; Davydov 2001: 155.

Dist: **LO, NWA**

Phyisciella chloantha (Ach.) Essl.

Syn: ***Phaeophyscia chloantha*** (Ach.) Moberg

Ref: Davydov 2004: 50.

Dist: **NA**

Phyisciella denigrata (Hue) Essl.

Ref: Davydov 2010: 13; Davydov 2011: 84.

Syn: ***Phaeophyscia denigrata*** (Hue) Moberg

Ref: Davydov 2001: 154; Davydov et al. 2007: 64.

Dist: **NWA**

Physconia deterosa (Nyl.) Poelt

Ref: Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **LO, RO, NWA**

Physconia distorta (With.) J. R. Laundon

Ref: Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Syn: *Physcia pulverulenta* (Scheb.) Hampe

Davydov 1995: 33.

Dist: **LO, NWA**

Physconia enteroxantha (Nyl.) Poelt

Ref: Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **NWA**

Physconia muscigena (Ach.) Poelt

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 84.

Dist: **K, LO, NWA**

Physconia perisidiosa (Erichsen) Moberg

Ref: Davydov et al. 2007: 63; Davydov 2010: 13; Davydov 2011: 85.

Dist: **NWA**

Pilophorus cereolus (Ach.) Th. Fr.

Ref: Davydov & Printzen 2012a: 89.

Dist: **NA**

Placidium krylovianum (Tomin) Breuss

Syn: *Catapyrenium krylovianum* (Tomin) Breuss

Ref: Davydov 2001: 145.

Dist: **NWA**

Placidium rufescens (Ach.) A. Massal.

Syn: *Catapyrenium rufescens* (Ach.) Breuss

Ref: Davydov 2001: 145.

Dist: **NWA**

Placynthiella icmalea (Ach.) Coppins et P. James

Ref: Davydov 2010: 13; Davydov 2011: 74; Davydov & Printzen 2012a: 89.

Dist: **NWA**

Placynthiella oligotropha (J. R. Laundon) Coppins et P. James

Ref: Davydov 2001: 155; Davydov 2005: 19; Davydov 2011: 74.

Dist: **NWA**

Placynthium nigrum (Huds.) Gray

Ref: Davydov 2001: 155.

Dist: **NWA**

Platismatia glauca (L.) W. L. Culb. et C. F. Culb.

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 80.

Dist: NWA

Pleopsidium chlorophanum (Wahlenb.) Zopf

Ref: Davydov 2001: 156.

Dist: NWA

Pleopsidium gobiense (H. Magn.) Hafellner

Ref: Davydov 2011: 74.

Syn: *Acarospora gobiensis* H. Magn.

Ref: Davydov 2001: 142; Davydov 2005: 17.

Dist: NWA

Porpidia crustulata (Ach.) Hertel et Knoph

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 86.

Dist: NWA

Porpidia macrocarpa (DC.) Hertel et A. J. Schwab

Ref: Davydov 2010: 13; Davydov 2011: 86.

Dist: NWA

Protopannaria pezizoides (Weber) P. M. Jørg. et S. Ekman

Syn: *Pannaria pezizoides* (Weber) Trevis.

Ref: Davydov 2001: 153.

Dist: NWA

Protoparmelia badia (Hoffm.) Hafellner

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 80.

Dist: NWA

Protoparmelia cupreobadia (Nyl.) Poelt

Ref: Davydov 2011: 80.

Dist: NWA

Protoparmelia nephaea (Sommerf.) R. Sant.

Ref: Korolyuk et al. 2000: 104.

Dist: K

Protothelenella santessonii H. Mayrhofer

Ref: Zhurbenko & Davydov 2000: 114.

Dist: NWA

Pseudephebe minuscula (Nyl. ex Arnold) Brodo et D. Hawksw.

Ref: Davydov 2011: 80.

Dist: **NWA**

Pseudephebe pubescens (L.) M. Choisy

Ref: Davydov 2001: 156

Dist: **NWA**

Pseudevernia furfuracea (L.) Zopf

Ref: Davydov 1995: 33; Stas' 1998: 105; Stas' 2000: 48; Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 80.

Dist: **K, LO, ARH, RO, NWA**

Psora decipiens (Hedw.) Hoffm.

Ref: Korolyuk et al. 2000: 103; Davydov 2001: 156; Davydov 2011: 81.

Dist: **K, NWA**

Psorotichia schaeferi (A. Massal.) Arnold

Ref: Davydov 2001: 156.

Dist: **NWA**

Punctelia subrudecta (Nyl.) Krog

Ref: Davydov 2001: 156; Davydov 2004: 55; Davydov 2005: 19; Davydov 2011: 80.

Dist: **NWA**

Pycnora leucococca (R. Sant.) R. Sant.

Ref: Davydov & Printzen 2012b: 68.

Dist: **NWA**

Pycnora sorophora (Vain.) Hafellner

Ref: Davydov & Printzen 2012b: 70.

Dist: **NWA**

**Pyrenidium actinellum* Nyl.

Ref: Zhurbenko & Davydov 2000: 114.

Dist: **NA, NWA**

Pyxine sorediata (Ach.) Mont.

Ref: Davydov 2004: 51.

Dist: **NA**

Ramalina calicaris (L.) Fr.

Ref: Davydov 1995: 33; Davydov 2001: 156.

Dist: **NWA**

Ramalina capitata (Ach.) Nyl.

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 82.

Dist: **NWA**

Ramalina dilacerata (Hoffm.) Hoffm.

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 82.

Dist: **NWA**

Ramalina farinacea (L.) Ach.

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 82.

Dist: **LO, NWA**

Ramalina obtusata (Arnold) Bitter

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 82.

Dist: **NWA**

Ramalina pollinaria (Westr.) Ach.

Ref: Davydov 1995: 33; Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 82.

Dist: **LO, RO, NWA**

Ramalina polymorpha (Lilj.) Ach.

Ref: Davydov 1995: 33; Korolyuk et al. 2000: 104; Davydov 2001: 156.

Dist: **K, NWA**

Ramalina roesleri (Hochst. ex Schaer.) Hue

Ref: Davydov 1995: 33; Davydov 2001: 156.

Dist: **NWA**

Ramalina sinensis Jatta

Ref: Stas' 1999; Davydov 2010: 13; Davydov 2011: 82.

Dist: **NA, S, NWA**

Ramalina thrausta (Ach.) Nyl.

Ref: Davydov 2001: 156; Davydov 2011: 82.

Dist: **NWA**

Ramalina vogulica Vain.

Ref: Davydov 2001: 156; Davydov 2004: 55; Davydov 2005: 19; Davydov 2011: 82.

Dist: **NWA**

Rhizocarpon alpicola (Wahlenb.) Rabenh.

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 86.

Dist: **NWA**

Rhizocarpon badioatrum (Flörke ex Spreng.) Th. Fr.

Ref: Davydov et al. 2007: 62; Davydov 2010: 14; Davydov 2011: 86.

Dist: NWA

Rhizocarpon cinereovirens (Müll. Arg.) Vain.

Ref: Davydov 2001: 156.

Dist: NWA

Rhizocarpon disporum (Nägeli ex Hepp) Müll. Arg.

Ref: Davydov 2001: 156; Davydov 2005: 19; Davydov 2011: 86.

Syn: ***Rhizocarpon montagnei*** (Flotow et Körb.) Körb.

Ref: Korolyuk et al. 2000: 104.

Dist: K, NWA

Rhizocarpon distinctum Th. Fr.

Ref: Davydov 2001: 157.

Dist: NWA

Rhizocarpon eupetraeum (Nyl.) Arnold

Ref: Davydov 2001: 157; Davydov 2011: 86.

Dist: NWA

Rhizocarpon geminatum Körb.

Ref: Davydov 2001: 157.

Dist: NWA

Rhizocarpon geographicum (L.) DC.

Ref: Davydov 2001: 157; Davydov 2005: 19; Davydov 2011: 86.

Dist: NWA

Rhizocarpon geographicum (L.) DC. subsp. ***kittilense*** (Räsänen) Ahti

Ref: Davydov 2001: 157.

Dist: NWA

Rhizocarpon grande (Flörke ex Flot.) Arnold

Ref: Davydov 2001: 157; Davydov 2005: 19.

Dist: NWA

Rhizocarpon petraeum (Wulfen) A. Massal.

Ref: Davydov 2001: 157.

Dist: NWA

Rhizocarpon polycarpum (Hepp) Th. Fr.

Ref: Davydov 2001: 157.

Dist: NWA

Rhizoplaca chrysoleuca (Sm.) Zopf

Ref: Davydov 2001: 157; Davydov 2005: 18; Davydov 2011: 78.

Dist: **LO, NWA**

Rhizoplaca melanophthalma (DC.) Leuckert et Poelt

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 157; Davydov 2005: 18; Davydov 2011: 78.

Dist: **K, NWA**

Rhizoplaca peltata (Ramond) Leuckert et Poelt

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 157; Davydov 2010: 13; Davydov 2011: 78.

Dist: **K, NWA**

Rhizoplaca subdiscrepans (Nyl.) R. Sant.

Ref: Davydov 2010: 13; Davydov 2011: 78; Davydov & Printzen 2012a: 89.

Dist: **NWA**

Rimularia fuscisora Muhr et Tønsberg

Ref: Davydov & Printzen 2012b: 70.

Dist: **NWA**

Rimularia insularis (Nyl.) Rambold et Hertel

Ref: Davydov 2001: 157; Davydov 2011: 74; Davydov et al. 2012: 31.

Dist: **NWA**

Rinodina archaea (Ach.) Arnold

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 157.

Dist: **K, NWA**

Rinodina bischoffii (Hepp) A. Massal.

Ref: Davydov 2001: 157.

Dist: **NWA**

Rinodina excrescens Vain.

Ref: Davydov & Printzen 2012b: 70.

Dist: **NA**

Rinodina exigua (Ach.) Gray

Ref: Davydov 2001: 157.

Dist: **NWA**

Rinodina immersa (Körb.) Arnold

Ref: Davydov 2001: 157.

Dist: **NWA**

Rinodina milvina (Wahlenb.) Th. Fr.

Ref: Davydov 2010: 13; Davydov 2011: 85.

Dist: **NWA**

Rinodina pyrina (Ach.) Arnold

Ref: Davydov 2001: 157; Davydov 2005: 19; Davydov 2011: 85.

Dist: **LO, RO, NWA**

Rinodina septentrionalis Malm

Ref: Davydov 2001: 157.

Dist: **NWA**

Rinodina sophodes (Ach.) A. Massal.

Ref: Davydov 2001: 157; Davydov 2005: 19; Davydov 2011: 85.

Dist: **NWA**

Rinodina terrestris Tomin

Syn: ***Rinodina mucronatula*** H. Magn.

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Rinodina turfacea (Wahlenb.) Körb.

Ref: Davydov 2001: 157.

Dist: **NWA**

Romjularia lurida (Ach.) Timdal

Ref: Davydov 2011: 86.

Syn: ***Lecidea lurida*** (Ach.) DC.

Ref: Davydov 2001: 151.

Syn: ***Mycobilimbia lurida*** (Ach.) Hafellner et Türk.

Ref: Davydov 2005: 19.

Dist: **NWA**

Rusavskia elegans (Link.) S. Y. Kondr. et Kärnefelt

Ref: Davydov 2005: 20.

Syn: ***Xanthoria elegans*** (Link) Th. Fr.

Ref: Korolyuk et al. 2000: 104; Stas' 2000: 51; Davydov 2001: 160; Davydov 2011: 85.

Dist: **K, LO, RO, NWA**

Rusavskia papillifera (Vain.) S. Y. Kondr. et Kärnefelt

Ref: Davydov 2005: 20.

Syn: ***Xanthoria papillifera*** (Vain.) Poelt

Ref: Davydov 2001: 159; Davydov 2011: 85.

Dist: **NWA**

Rusavskia sorediata (Vain.) S. Y. Kondr. et Kärnefelt

Syn: *Xanthoria sorediata* (Vain.) Poelt

Ref: Davydov 2001: 160.

Dist: **NWA**

Sagedia zonata Ach.

Syn: *Aspicilia obscurata* (Fr.) Arnold

Ref: Korolyuk et al. 2000: 103.

Dist: **K**

Sarcogyne regularis Körb.

Ref: Davydov 2001: 157.

Dist: **NWA**

Schaereria fuscocinerea (Nyl.) Clauzade et Cl. Roux

Ref: Korolyuk et al. 2000: 104.

Dist: **K**

Schaereria parasemella (Nyl.) Lumbsch

Syn: *Hafellnera parasemella* (Nyl.) Houmeau et Cl. Roux.

Ref: Davydov 2001: 149.

Dist: **NWA**

Scoliciosporum chlorococcum (Graewe ex Stenh.) Vězda

Talmensky district, at the vicinity of Novaya Zarya settlement, on *Populus tremula*, leg. Skachko; Barnaul, Yuzhny satellite settlement, on *Pinus sylvestris*, leg. Skachko.

Dist: **LO, RO**

Scoliciosporum perpusillum J. Lahm ex. Körb.

Ref: Davydov & Printzen 2012b: 70.

Dist: **NWA**

Seiropora lacunosa (Rupr.) Frödén

Syn: *Xanthoanptychia villosa* (Ach.) S. Kondr. et Kärnefelt subsp. *lacunosa* (Rupr.) S. Kondr. et Kärnefelt

Ref: Davydov 2004: 48.

Dist: **K**

Solorina crocea (L.) Ach.

Ref: Davydov 2001: 157.

Dist: **NWA**

Solorina saccata (L.) Ach.

Ref: Davydov 1995: 33; Davydov 2001: 157.

Dist: **NWA**

****Sphaerellothecium reticulatum*** (Zopf) Etayo

Syn: ****Echinothecium reticulatum*** Zopf

Ref: Zhurbenko & Davydov 2000: 111; Davydov 2005: 17; Davydov 2011: 73.

Dist: NWA

Sphaerophorus globosus (Huds.) Vain.

Ref: Davydov 2001: 157.

Dist: NWA

Spilonema revertens Nyl.

Ref: Davydov 2005: 18; Davydov 2011: 82.

Dist: NWA

Sporastatia polyspora (Nyl.) Grunmann

Ref: Davydov 2011: 76.

Dist: NWA

Sporastatia testudinea (Ach.) A. Massal.

Ref: Davydov 2010: 13; Davydov 2011: 76.

Dist: NWA

Staurothele rufa (A. Massal.) Zschacke

Ref: Davydov 2001: 157.

Dist: NWA

Stereocaulon alpinum Laurer

Ref: Davydov 1995: 33; Davydov 2001: 157.

Dist: NWA

Stereocaulon condensatum Hoffm.

Ref: Davydov 1995: 33; Davydov 2001: 157.

Dist: NWA

Stereocaulon paschale (L.) Hoffm.

Ref: Davydov 1995: 33; Davydov 2001: 158.

Dist: NWA

Stereocaulon saxatile H. Magn.

Ref: Davydov 2001: 158.

Dist: NWA

Stereocaulon tomentosum Fr.

Ref: Davydov 2001: 158; Davydov 2005: 19; Davydov 2011: 82.

Dist: NWA

Sticta limbata (Sm.) Ach.

Ref: Davydov 2004: 53; Davydov et al. 2012: 32.

Dist: **NA, NWA**

**Stigmidium pseudopeltideae* Cl. Roux et Triebel

Ref: Zhurbenko & Davydov 2000: 115.

Dist: **NWA**

Synalissa ramulosa (Hoffm. ex Bernh.) Fr.

Syn: *Synalissa symphorea* (Ach.) Nyl.

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 158.

Dist: **K, NWA**

**Taeniolella pertusariicola* D. Hawksw. et H. Mayrhofer

Ref: Zhurbenko & Davydov 2000: 115; Davydov 2005: 21; Davydov 2011: 88.

Dist: **NWA**

Teloschistes brevior (Nyl.) Hillmann

Syn: *Xanthoanptychia villosa* (Ach.) S. Kondr. et Kärnefelt subsp. *brevior* (Nyl.) S. Kondr. et Kärnefelt

Ref: Davydov 2004: 48.

Dist: **NWA**

Tephromela atra (Huds.) Hafellner

Ref: Davydov 2001: 158; Davydov 2005: 18; Davydov 2011: 78.

Dist: **NWA**

Tetramelas insignis (Nägeli ex Hepp) Kalb

Ref: Davydov 2011: 85

Syn: *Buellia insignis* (Nägeli ex Hepp) Th. Fr.

Davydov 2001: 144; Davydov 2005: 19.

Dist: **NWA**

Thamnotia vermicularis (Sw.) Schaer.

Ref: Davydov 1995: 33; Davydov 2001: 158; Strelnikova & Davydov 2002: 190; Davydov 2005: 20; Davydov 2011: 75.

Dist: **NA, NWA**

Thelocarpon epibolum Nyl.

Ref: Zhurbenko & Davydov 2000: 115; Davydov 2001: 158; Davydov 2005: 20; Davydov 2011: 88.

Dist: **NWA**

Toninia alutacea (Anzi) Jatta

Ref: Davydov et al. 2012: 33.

Dist: **NA**

Toninia opuntioides (Vill.) Timdal

Ref: Davydov 2004: 53; Davydov 2011: 82.

Dist: **NWA**

Toninia physaroides (Opiz) Zahlbr.

Ref: Davydov 2011: 82.

Dist: **NWA**

Toninia sedifolia (Scop.) Timdal

Ref: Davydov 2001: 158.

Syn: ***Toninia coeruleonigricans*** (Lightfl.) Th. Fr.

Ref: Korolyuk et al. 2000: 103.

Dist: **K, NWA**

Toninia tristis (Th. Fr.) Th. Fr.

Ref: Davydov 2001: 158.

Dist: **NWA**

Trapeliopsis flexuosa (Fr.) Coppins et P. James

Ref: Davydov 2001: 158; Davydov 2010: 12; Davydov 2011: 74.

Dist: **NWA**

Trapeliopsis granulosa (Hoffm.) Lumbsch

Ref: Davydov 2001: 158; Davydov 2005: 19; Davydov 2011: 74.

Dist: **NWA**

Tremolecia atrata (Ach.) Hertel

Ref: Davydov 2001: 158.

Dist: **NWA**

Umbilicaria altaiensis J. C. Wei et Y. M. Jiang

Ref: Davydov 2010: 14; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria aprina Nyl. var. ***halei*** Llano

Ref: Davydov 2011: 87.

Dist: **NWA**

Umbilicaria cinereorufescens (Schaer.) Frey

Ref: Davydov 2010: 14; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria cylindrica (L.) Delise ex Duby

Ref: Davydov 2001: 158; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria decussata (Vill.) Zahlbr.

Ref: Davydov 2001: 158; Davydov 2005: 20; Davydov & Printzen 2012a: 90.

Dist: **NWA**

Umbilicaria deusta (L.) Baumg.

Ref: Davydov 1995: 33; Davydov 2001: 158; Davydov 2005: 20; Davydov 2011: 87.

Syn: *Lichen deustus* L.

Ref: Georgi 1800: 1413.

Dist: **NWA**

Umbilicaria hirsuta (Sw. ex Westr.) Hoffm.

Ref: Davydov 1995: 33; Davydov 2001: 158; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria hyperborea (Ach.) Hoffm.

Ref: Davydov 2001: 158; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria lyngei Schol.

Ref: Davydov 2004: 53; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria muehlenbergii (Ach.) Tuck.

Ref: Davydov 1995: 33; Davydov 2001: 158; Strelnikova & Davydov 2002: 190; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NA, NWA**

Umbilicaria nylanderiana (Zahlbr.) H. Magn.

Ref: Davydov 2001: 158; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria polaris (Schol.) Zahlbr.

Ref: Davydov 2011: 87.

Dist: **NWA**

Syn: *Umbilicaria krascheninnikovii* auct. non (Savicz) Zahlbr. (see Davydov et al. 2011)

Ref: Davydov 2001: 158; Davydov 2005: 20.

Dist: **NWA**

Umbilicaria polyphylla (L.) Baumg.

Ref: Davydov 2001: 158; Davydov 2010: 14; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria proboscidea (L.) Schrad.

Ref: Davydov 1995: 33; Davydov 2001: 158; Davydov 2010: 14; Davydov 2011: 87.

Dist: **NWA**

Umbilicaria subglabra (Nyl.) Harm.

Ref: Davydov 2001: 159; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NWA*****Umbilicaria torrefacta*** (Lightf.) Schrad.

Ref: Davydov 2004: 54; Davydov 2005: 20; Davydov 2011: 87

Dist: **NWA*****Umbilicaria vellea*** (L.) Hoffm.

Ref: Davydov 1995: 33; Davydov 2001: 159; Strelnikova & Davydov 2002: 190; Davydov 2005: 20; Davydov 2011: 87.

Dist: **NA, NWA*****Usnea barbata*** (L.) F. H. Wigg. s. lat.

Ref: Davydov 2011: 80.

Syn: ***Usnea scabrata*** Nyl.

Ref: Davydov 2001: 159; Davydov 2005: 19.

Dist: **RO, NWA*****Usnea cavernosa*** Tuck.

Ref: Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 80.

Dist: **NWA*****Usnea dasypoga*** (Ach.) Nyl.

Ref: Davydov 1995: 34; Davydov 2011: 80.

Syn: ***Usnea filipendula*** Stirt.

Ref: Davydov 2001: 159; Strelnikova & Davydov 2002: 190; Davydov 2005: 19.

Syn: ***Usnea sublaxa*** Vain.

Ref: Davydov 1995: 34.

Dist: **NA, NWA*****Usnea fulvorenans*** (Räsänen) Räsänen

Ref: Davydov 1995: 34; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 81.

Dist: **K, LO, NWA*****Usnea glabrata*** (Ach.) Vain.

Ref: Davydov 1995: 34; Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 81.

Dist: **RO, NWA*****Usnea glabrescens*** (Nyl. ex Vain.) Vain.

Ref: Stas' 2000: 49; Strelnikova & Davydov 2002: 190.

Syn: ***Usnea glabrescens*** (Nyl. ex Vain.) Vain. **var. glabrella** Motyka

Ref: Stas' 1998: 105.

Dist: **LO, NA**

Usnea hirta (L.) F. H. Wigg.

Ref: Davydov 1995: 34; Stas' 1998: 105; Stas' 2000: 49; Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 81.

Dist: **K, LO, ARH, NWA**

Usnea lapponica Vain.

Ref: Davydov 2001: 159.

Dist: **NWA**

Usnea lapponica Vain. var. *altaica* Räsänen ex Rass.

Ref: Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 81.

Dist: **NWA**

Usnea longissima Ach.

Ref: Davydov 2004: 54; Davydov 2005: 19; Davydov 2011: 81.

Dist: **RO, NWA**

Usnea subfloridana Stirt.

Ref: Davydov 1995: 34; Davydov 2001: 159; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 81.

Dist: **LO, RO, NA, NWA**

Usnea substerilis Motyka

Ref: Davydov 2001: 159.

Dist: **NWA**

Usnea wasmuthii Räsänen

Ref: Davydov 2001: 159.

Dist: **NWA**

Vahliella leucophaea (Vahl) P. M. Jørg.

Syn: *Fuscopannaria leucophaea* (Vahl) P. M. Jørg.

Ref: Davydov 2001: 149.

Dist: **NWA**

Verrucaria aethiobola Wahlenb.

Ref: Davydov 2010: 12; Davydov 2011: 74.

Dist: **NWA**

Verrucaria aquatilis Mudd

Ref: Davydov et al. 2007: 63; Davydov 2010: 12; Davydov 2011: 74.

Dist: **NWA**

Verrucaria denudata Zschacke

Ref: Davydov 2001: 159; Davydov 2005: 20; Davydov 2011: 74.

Dist: **NWA**

Verrucaria hochstetteri Fr.

Ref: Davydov 2001: 159.

Dist: **NWA***Verrucaria hydrela* Ach.

Ref: Davydov et al. 2007: 64; Davydov 2010: 12; Davydov 2011: 74.

Dist: **NWA***Verrucaria margacea* (Wahlenb.) Wahlenb.

Ref: Davydov 2011: 74.

Syn: *Verrucaria applanata* Hepp ex Zschacke

Ref: Davydov 2001: 159; Davydov 2005: 20

Dist: **NWA***Verrucaria muralis* Ach.

Ref: Davydov 2001: 159.

Dist: **LO, NWA***Verrucaria nigrescens* Pers.

Ref: Davydov 2001: 159.

Dist: **NWA***Vulpicida juniperinus* (L.) J.-E. Mattsson et M. J. Lai

Ref: Davydov 2001: 159.

Dist: **NWA***Vulpicida pinastri* (Scop.) J.-E. Mattsson et M. J. Lai

Ref: Stas' 2000: 49; Davydov 2001: 159; Strelnikova & Davydov 2002: 190; Davydov 2005: 19; Davydov 2011: 81.

Syn: *Cetraria pinastri* (Scop.) Gray

Ref: Davydov 1995: 30; Stas' 1998: 104

Dist: **K, LO, ARH, RO, NA, NWA***Vulpicida tilesii* (Ach.) J.-E. Mattsson et M. J. Lai

Ref: Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 81.

Dist: **NWA***Xanthomendoza fallax* (Hepp ex Arnold) Søchting et al.

Ref: Davydov 2011: 85.

Syn: *Xanthoria fallax* (Hepp ex Arnold) Arnold

Ref: Korolyuk et al. 2000: 104; Stas' 2000: 51; Davydov 2001: 160.

Syn: *Oxneria fallax* (Hepp ex Arnold) S.Y. Kondr. et Kärnefelt

Ref: Davydov 2005: 20.

Dist: **K, LO, RO, NWA**

Xanthoparmelia camtschadalis (Ach.) Hale

Ref: Korolyuk et al. 2000: 103; Stas' 2000: 49; Davydov 2001: 159; Davydov 2010: 13; Davydov 2011: 81.

Syn: *Parmelia molliuscula* Ach. var. *vagans* Nyl.

Ref: Tanphil'ev 1902: 250.

Syn: *Parmelia vagans* Nyl.

Ref: Kuznetsov 1914: 7, 25; Stas' 1998: 105.

Dist: **K, LO, ARH, NWA**

Xanthoparmelia conspersa (Ehrh. ex Ach.) Hale

Ref: Stas' 1998: 105; Davydov 2001: 159; Davydov 2005: 19; Davydov 2011: 81

Syn: *Parmelia conspersa* (Ehrh.) Ach.

Ref: Elenkin, 1904.

Dist: **K, NWA**

Xanthoparmelia desertorum (Elenkin) Hale

Ref: Davydov, 2006: 215.

Dist: **K**

Xanthoparmelia stenophylla (Ach.) Ahti et D. Hawksw.

Ref: Davydov 2011: 81

Syn: *Parmelia stenophylla* (Ach.) Heugel.

Ref: Davydov 1995: 32.

Syn: *Xanthoparmelia somloënsis* (Gyeln.) Hale

Ref: Korolyuk et al. 2000: 104; Davydov 2001: 159; Davydov 2005: 19.

Dist: **K, RO, NWA**

Xanthoparmelia tinctina (Maheu et A. Gillet) Hale

Ref: Davydov 2001: 159.

Syn: *Parmelia tinctina* Maheu et A. Gillet

Ref: Davydov 1995: 32.

Dist: **NWA**

Xanthoria candelaria (L.) Th. Fr.

Ref: Davydov 1995: 34; Stas' 1998: 107; Stas' 2000: 51; Davydov 2001: 159.

Dist: **K, LO, NWA**

Xanthoria polycarpa (Hoffm.) Th. Fr. ex Rieber

Ref: Stas' 1998: 107; Stas' 2000: 51.

Dist: **K, LO, ARH**

Xylographa parallela (Ach.) Fr.

Ref: Davydov 2001: 160; Davydov 2005: 17; Davydov 2011: 74.

Dist: **NWA**

Xylographa vitiligo (Ach.) J. R. Laundon

Ref: Davydov 2001: 160; Davydov 2005: 17; Davydov 2011: 75.

Dist: NWA

Excluded taxa

The distribution of lichens within botanical-geographical regions is presented in a table.

TABLE 1. Taxa, excluded from the lichen flora of Altaisky krai with corresponding references.

Species	References	Reference where the taxon was excluded
<i>Lasallia papulosa</i> (Ach.) Llano	Davydov, 2001: 149	Davydov, 2011: 88
<i>Lasallia pustulata</i> (L.) Mérat	Georgi, 1800: 1413	Davydov, 2001: 141
<i>Lecanora chloropodia</i> (Erichsen) Almb.	Davydov, 2001: 150	Davydov, 2011: 88
<i>Ochrolechia parella</i> (L.) A. Massal.	Davydov, 2001: 152; Davydov, 2005: 20	Davydov, 2011: 88
<i>Physconia grisea</i> (Lam.) Poelt	Davydov, 1995: 33	Davydov, 2001: 141
<i>Protoparmelia atriseda</i> (Fr.) R. Sant. & V. Wirth	Davydov, 2001: 156; Davydov, 2005: 19	Davydov et al. 2012: 29
<i>Prothelenella sphinctrinoides</i> (Nyl.) H. Mayrhofer & Poelt	Davydov, 2001: 156; Davydov, 2005: 20	Davydov, 2011: 88
<i>Pyrenula laevigata</i> (Pers.) Arnold	Davydov, 2001: 156	Davydov, 2011: 88
<i>Pyrenula nitidella</i> (Flörke ex Schaer.) Müll. Arg.	Davydov, 2001: 156	Davydov, 2011: 88
<i>Trapeliopsis wallrothii</i> (Flörke ex Spreng.) Hertel & Gotth. Schneid.	Davydov, 2005: 19	Davydov, 2011: 88
<i>Usnea ceratina</i> Ach.	Keller, 1914: 291	Davydov, 2001: 141
<i>Usnea fragilesceus</i> Hav. ex Lyngé	Davydov, 1995: 34	Davydov, 2001: 141
<i>Xanthoria parietina</i> (L.) Th. Fr.	Davydov, 1995: 34	Davydov, 2001: 141

TABLE 1. The distribution of lichen species within the botanical-geographical regions of Altaisky krai.

№	Region	Region abbreviation	Species number
1.	Kulunda	K	107
2.	Ob River Left-bank territory	LO	112
3.	Ob River Right-bank territory	RO	58
4.	Salair and adjacent territories	S	3
5.	Alei River hills	ARH	47
6.	North Altai	NA	59
7.	North West Altai	NWA	517

Discussion

The known species diversity of Altaisky krai at the moment includes 545 species of lichens, 12 lichenicolous fungi and 1 saprotrophic lichen related fungus.

Although not all of the regions of the province were studied equally, some features of its diversity can be discussed. According to the limited data, the most lichenologically diverse region in Altaisky krai is North-West Altai. This seems plausible, since this mountainous region has the most diverse natural conditions and greatest substrate diversity, with a long geological history. Moreover, a considerable part of the region is covered by specially protected areas, including Tigirek Strict Reserve. The North Altai is also a diverse mountain territory and the lichen flora of this region is expected to be increased significantly after further special investigation. The flatlands of Altaisky krai have been strongly transformed, leading to a serious degradation of many natural communities. The species diversity of these territories is relatively lower compared to the mountains. The same was shown for the bigger regions, e.g. the diversity of South Siberia as a whole is 1691, but of West Siberia is only 594 species (Urbanavichus, 2011).

The microlichens to macrolichens ratio, or “the completeness index” (Urbanavichus, 2011) was used for the theoretical estimations of Altaisky krai lichen flora richness. For the well-studied territories this index is between 2.5 and 3.3 (ibid.) For Altaisky krai it is 1.2, which is considerably less than for Russia in general (2.2) and comparable to South (1.5) and West Siberia (1.2). Theoretically, a completely investigated lichen flora of Altaisky krai (when the completeness index = 2.5 – 3.3) would seem to be about 882-1084 species, but considering that we have incomplete data on macrolichens as well (e.g. Parmeliaceae, Cladoniaceae), the last number looks more realistic.

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