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Larger fungi of the Canadian Arctic

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Abstract: In all 143 fungal taxa collected in the years 1971 and 1974 are presented from different habitats of the Arctic and Subarctic tundra in the Keewatin and Franklin areas of N.W.T., Canada and at Fort Churchill, Manitoba. Of the 143 species reported, 122 species are new in N.W.T. and Fort Churchill. The diversity of mycorrhizal species was highest in drier lichen-moss and moss tundra heaths, and in late snow patches, the most common genera being *Cortinarius*, *Inocybe*, *Hebeloma*, *Lactarius*, and *Russula*. The most frequent saprobic fungi were *Hygrocybe*, *Arrhenia*, *Clitocybe*, *Galerina* some of which are bryophilous and *Helvella* species. In the forest tundra, numerous species typical of conifer forests were found as mycorrhizal symbionts of *Picea* and *Larix*. These collections remain the primary source of information on macrofungi in this region.

Key words: Agaricales, Russulales, Aphyllophorales, gasteromycetes, Ascomycota, ecology, Arctic tundra, Forest tundra, Canada N.W.T, Fort Churchill/Manitoba

Introduction: This is a continuation of the presentation of the mycological material the authors collected in Arctic Canada in the years 1971 and 1974. Species of the genera *Lactarius* (Ohenoja and Ohenoja 1993) and *Inocybe* are published (Ohenoja, Vauras and Ohenoja 1998). Also material on *Marasmius epidryas* (Redhead et al. 1982), *Bryoglossum (Mitrula) gracile* (Kankainen 1969), *Spathularia* (Ohenoja 1989), and *Arrhenia auriscalpium* (Cripps and Horak 2006) has been dealt with in the published articles, and a small note was given after the first trip to Rankin Inlet (Ohenoja 1972). These remain the few reports on larger fungi from this region, however, there are some unpublished reports in DAOM (Ottawa).

Materials and Methods: This article is focused on fungi collected by the authors August 10-17, 1971 and July 30-August 28, 1974 in the Hudson Bay area (N.W.T. and Manitoba). The samples are preserved in the Botanical Museum of the University of Oulu (OULU), but much material has been distributed as duplicates to the herbaria DAOM (Ottawa), C (Copenhagen), H (Helsinki), and TUR (Turku). Dr. D.B. Savile identified some of the *Salix* species. The authors received help in determination of some fungi as noted in the species list. The nomenclature of the fungi presented follows *Index Fungorum*.

The collection localities were situated at Fort Churchill, Manitoba, at Rankin Inlet and Baker Lake (N.W.T., District of Keewatin), and Repulse Bay (N.W.T., District of Franklin).

Fort Churchill along the southeastern coast of Hudson Bay (lat. 58° 40' N, long. 93° 46' W) is situated on forest tundra at the extent of latitudinal tree-line for the Northern climatic region. This represents a transition zone between subarctic forest and tundra. *Picea mariana* (Miller) Britton, Sterns & Poggenb., *P. glauca* (Moench) Voss, *Larix laricina* (Du Roi) K. Koch and *Betula "occidentalis"* are low lying plants that support many fungi. There is also a rich *Salix*

flora with *S. lanata* L. ssp. *S. richardssonii* Hook., *S. planifolia* Pursh, *S. niphoclada* Rydb. and *S. vestita* Pursh; these species were also found in other localities except at Repulse Bay.

Rankin Inlet (lat. 62° 49' N, long. 92° 05' W) and Baker Lake (lat. 64° 20' N, long. 96° 00' W) are situated in the low Arctic zone within the Arctic climatic region and Repulse Bay (lat. 66° 31' N, long. 86° 15' W) lies in the middle Arctic zone (Polunin 1951).

There are acidic and calcareous soils in all mentioned areas, with *Dryas integrifolia* Vahl and *Salix reticulata* L. There are few differences between the vegetation of Rankin Inlet and Baker Lake, although the tundra at Baker Lake is more mossy and less rocky than at Rankin Inlet. *Betula glandulosa* Michaux occurs at Rankin Inlet and Baker Lake, but does not occur at Repulse Bay, and *Salix* species are low-growing in these areas. *Arctostaphylos* and *Cassiope tetragona* (L.) D. Don plus *Bistorta vivipara* (L.) Gray are rather common on all study sites.

The habitats for the Arctic localities are peat communities, patterned hummock-sedge communities (tussock tundra), seepage slopes, unpatterned *Carex* and *Eriophorum* meadows on wet lowland depressions, snow patches, and grassy mounds of ground squirrels. At Rankin Inlet and Baker Lake the sandy areas, e.g. along rivers, provide diverse habitats for fungi, similar to burnt ground patterns. At Repulse Bay windswept plains and polygonal soils are typical between very rocky terrains.

The collection dates were as follows: Fort Churchill 24.8.1971, 23-25.8.1974, Baker Lake 14-21.8.1974, Rankin Inlet 10-23.8.1971, 30.7. and 22.8.1974, Repulse Bay 1-5.8.1974.

Results: Fungi characteristic of various habitats are presented in order of: boletes, gilled mushrooms (white then dark spored), non-gilled, gasteromycetes and ascomycete groups.

In the low Arctic area there were significant sandy areas on dunes and along roads and rivers (Fig. 1) with *Salix herbacea* L., *S. arctophila* Cockerell ex A. Heller, *Epilobium latifolium* L., *Cassiope tetragona*, *Empetrum nigrum* ssp. *hermaphroditum*, and *Vaccinium uliginosum* L. var. *alpinum* Bigelow. Typical fungi in sandy habitats were:

Inocybe impexa
Laccaria maritima
Clavaria argillacea
Helvella atra
H. corium
Thuemenidium arenarium

Fungi on dry tundra heaths of *Alectoria-Cetraria*, *Carex-Dryas* and *Cassiope-Dryas* heaths (with *Salix* spp., *Arctostaphylos*) (Fig. 2):

Clitocybe lateritia
Gymnopus fuscopurpureus
Hebeloma alpinum
Hygrocybe lilacina
Inocybe lacera
Rhodocybe popinalis
Lactarius dryadophilus
Russula altaica
R. delica

Fungi in dryish tundra heaths (with *Betula glandulosa*, *Salix arctica* Pall., *S. herbacea*, *S. polaris* Wahlenb. ssp. *pseudopolaris* (Flod.) Hultén, *S. reticulata* L., *Cassiope tetragona*, *Vaccinium uliginosum* var. *alpinum*, *V. vitis-idaea* L. var. *minus* Lodd., *Arctostaphylos alpina* (L.) Spreng., *Dryas integrifolia* and *Bistorta vivipara*) (Fig. 3):

Leccinum scabrum
Amanita groenlandica
Clitocybe diatreta
Cystodermella adnatifolia
Loreleia postii
Omphaliaster asterosporus
Entoloma sericeum

Cortinarius favrei
C. cinnamomeoluteus
C. polaris
C. subtorvus
Inocybe dulcamara
I. geophylla
I. leioccephala
Lactarius nanus
L. rufus
Russula laccata
R. nana
R. pubescens
Calvatia cretacea
C. turneri
Helvella albella

Moist mossy tundra heaths (with *Betula glandulosa*, *Salix reticulata*, etc., *Cassiope tetragona*, *Dryas integrifolia*) (Fig. 4):

Clitocybe candicans
Gymnopus fuscopurpureus
Laccaria montana
Mycenitis epidryas
Coprinopsis martinii
Cortinarius septentrionalis
Hebeloma monticola
Inocybe geophylla var. *lilacina*
Lactarius glyciosmus
L. lanceolatus
L. torminosus
Russula rivulicola
Russula Subsect. *Xerampelinae*
Helvella queletii
Humaria hemisphaerica

River shores, seeping patches and snow-beds (with *Salix herbacea*, *S. reticulata*, *Cassiope tetragona*, *C. hypnoides* (L.) D. Don, *Dryas integrifolia*) (Fig. 5):

Arrhenia auriscalpium
Arrhenia rustica
Laccaria pumila
Galerina pseudomycenopsis

Inocybe calamistrata
Lactarius pseudouvidus
L. salicis-herbaceae
Thelephora caryophyllea
Helvella aestivalis

Fungi on turfy, half-bare habitats of tundra heath and on roadsides (with grasses, sedges) (Fig. 6):

Arrhenia chlorocyanea
Lichenomphalia hudsoniana
Entoloma alpicola
Hebeloma mesophaeum
Naucoria tantilla
Psilocybe montana
Clavulina coralloides
Bovista limosa
B. tomentosa
Geopora arenosa
Helvella lacunosa
Peziza badia
Sarcoleotia globosa

Fungi in wet boggy hummocky *Carex*-*Eriophorum* communities (with e.g. *Arctagrostis latifolia* (R. Br.) Griseb.) (Fig. 7):

Arrhenia lobata
Arrhenia philonotis
Lichenomphalia umbellifera
Galerina pseudomycenopsis
Inocybe hirculus
Lactarius torminosulus
Bryoglossum gracile
Scutellinia patagonica

Leccinum scabrum, *Lactarius rufus*, *Russula pubescens*, *R. delica* and *Amanita groenlandica* were found only in the low arctic localities, where e.g. *Betula* occurs.

The mycorrhizal fungi that follow were found only at Fort Churchill, associated with *Larix*, *Picea*, *Betula*, and *Salix* species (Fig. 8-9):

Suillus grevillei var. *clintonianus*

S. viscidus
Hygrophorus speciosus
Tricholoma inamoenum
T. vaccinum
Cortinarius bovinus
C. gentilis
C. delibutus
C. obtusus
Lactarius deterrimus
L. pubescens
L. cf. resimus
L. trivialis
Russula paludosa
R. cf. violaceoincarnata

Also the rare saprobic *Sarcosphaera coronaria* was found in a mossy conifer stand east of Fort Churchill. It is a rare ascomycete in Europe as well. Other saprophytes were *Pluteus cervinus*, *Fomitopsis pinicola* and *Xeromphalina caudicinalis*.

These collections remain the primary source of information for this region of the Canadian arctic. Huhtinen (1985) reported *Geoglossum arenarium*, *Poculum firmum*, *Bryoglossum gracile*, *Sarcoleotia globosa*, *Helvella corium*, and *Laccaria maritima* (Huhtinen 1987) from timberline areas in northern Québec. Most of the taxa presented here also occur in other circumpolar areas (Miller 1982, Knudsen and Borgen 1982, Laursen and Chmielewski 1982, Gulden et al. 1985, 1988, Knudsen and Borgen 1998, Borgen 2006, Borgen et al. 2006, Knudsen and Vesterholt 2008, etc.) and in alpine habitats (Moser 1982, Senn-Irlet 1988, etc.). Also the fungus flora in the forest tundra at Hudson Bay seems to be much the same as e.g. in Fennoscandia.

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Figs. 1-9. Habitats for Arctic localities. Fig. 1. Sandy esker at Rankin Inlet (with *Empetrum* etc.). Fig. 2. Dry heath and polygons at Rankin Inlet. Fig. 3. Drier lichen-moss heath at Baker Lake (with *Betula glandulosa*, *Ledum*, etc.). Fig. 4. Mossy heath on seashore at Repulse Bay. Fig. 5. Seeping slope and snow bed at Rankin Inlet (with *Salix* spp. etc.). Fig. 6. Turfy ground at Rankin Inlet with sedges. Fig. 7. Wet bog at Rankin Inlet (with *Eriophorum scheuchzeri*, *Saxifraga aizoides*, etc.).

Figs. 1-9 (continued). Fig. 8. Forest tundra at Fort Churchill (with *Picea glauca*, *Larix laricina*, *Salix* spp. etc.). Fig. 9. Fungi of the forest tundra at Fort Churchill (*Suillus clintonianus*, *Hygrophorus speciosus*, *Pluteus cervinus*, *Cortinarius bovinus*, *Lactarius deterrimus*, *L. pubescens*, *L. rufus*, *L. trivialis*, *Russula violaceoincarnata*, *Russula nana*).

Appendix material (species list with authorities) follows.

Appendix Table 1. Species list. Abbreviations: FC-74 Fort Churchill 1974, BL-74 Baker Lake 1974, RI-71 Rankin Inlet 1971, RI-74 Rankin Inlet 1974, RB-74 Repulse Bay 1974.

SPECIES	SYNONYMS	LOCALITIES				
		FC-74	BL-74	RI-71	RI-74	RB-7
BOLETALES						
<i>Gomphidius borealis</i> O.K. Mill., Aime & Peintner		X				
<i>Leccinum scabrum</i> (Bull.) Gray coll.		X	X	X	X	
<i>Leccinum scabrum</i> (Bull.) Gray ssp. <i>tundrae</i> P. Kallio ¹				X	X	
<i>Leccinum variicolor</i> Watling			X			
<i>Suillus grevillei</i> (Klotzsch) Singer var. <i>clintonianus</i> (Peck) Singer	<i>S. grevillei</i> f. <i>badius</i>	X				
<i>Suillus viscidus</i> (L.) Roussel	<i>Fuscoboletinus laricinus</i>	X				
AGARICALES						
<i>Agaricus</i> cf. <i>campestris</i> L.				X		
<i>Amanita groenlandica</i> Bas ex Knudsen & T. Borgen			X	X	X	X
<i>Amanita nivalis</i> Grev.	<i>A. alpina</i>		X			
<i>Arrhenia auriscalpium</i> (Fr.) Fr.			X	X	X	
<i>Arrhenia chlorocyanea</i> (Pat.) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina viridis</i> , <i>O. smaragdina</i>			X		
<i>Arrhenia lobata</i> (Pers.) Kühner & Lamoure ex Redhead	<i>Leptoglossum lobatum</i>			X		
<i>Arrhenia philonotis</i> (Lasch) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina</i> p.		X			
<i>Arrhenia rustica</i> (Fr.) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina</i> r.		X	X		X
<i>Arrhenia sphagnicola</i> (Berk.) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina gerardiana</i>					X
<i>Arrhenia velutipes</i> (P.D. Orton) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina</i> v.				X	
<i>Cantharellopsis prescottii</i> (Weinm.) Kuyper	<i>Gerronema albidum</i> s.auct.		X			
<i>Clitocybe candicans</i> (Pers.) P. Kumm.		X				
<i>Clitocybe diatreta</i> (Fr.) P. Kumm.		X			X	
<i>Clitocybe lateritia</i> J. Favre			X			
<i>Clitocybe sinopica</i> (Fr.) P. Kumm.			X			
<i>Collybia tuberosa</i> (Bull.) P. Kumm. (incl. <i>C. cirrata</i>)		X	X			
<i>Coprinopsis martinii</i> (P.D. Orton) Redhead, Vilgalys & Moncalvo	<i>Coprinus</i> m.					X
<i>Cortinarius anomalus</i> (Pers.) Fr.		X				
<i>Cortinarius bovinus</i> Fr.		X				
<i>Cortinarius brunneus</i> (Pers.) Fr. coll.		X			X	
<i>Cortinarius cinnamomeoluteus</i> P.D. Orton			X			
<i>Cortinarius delibutus</i> Fr.		X				
<i>Cortinarius faurei</i> D.M. Hend.	<i>C. alpinus</i> s. auct.			X	X	X
<i>Cortinarius gentilis</i> (Fr.) Fr.		X				
<i>Cortinarius minutalis</i> Lamoure			X			
<i>Cortinarius norvegicus</i> Høil.			X		X	X
<i>Cortinarius obtusus</i> (Fr.) Fr.		X				
<i>Cortinarius parvannulatus</i> Kühner				X	X	X
<i>Cortinarius polaris</i> Høil.			X	X	X	X

<i>Cortinarius septentrionalis</i> Bendiksen, K. Bendiksen & Brandrud			X			
<i>Cortinarius subtorvus</i> Lamoure			X		X	
<i>Cystodermella adnatifolia</i> (Peck) Harmaja			X			
<i>Entoloma alpicola</i> (J. Favre) Bon & Jamoni			X		X	
<i>Entoloma sericeum</i> (Bull.) Quél.		X	X			
<i>Galerina pseudomycenopsis</i> Pilát	<i>G. moelleri</i>		X	X		X
<i>Galerina pumila</i> (Pers.) M. Lange	<i>G. mycenopsis</i>	X				
<i>Gymnopus confluens</i> (Pers.) Antonin, Halling & Noordel.			X			
<i>Gymnopus fuscopurpureus</i> (Pers.) Antonin, Halling & Noordel.	<i>Collybia obscura</i>		X			
<i>Hebeloma alpinum</i> (J. Favre) Bruchet						X
<i>Hebeloma crustuliniforme</i> (Bull.) Quél.		X				
<i>Hebeloma mesophaeum</i> (Pers.) Quél.		X	X	X	X	X
<i>Hebeloma monticola</i> Vesterh.				X		
<i>Hygrocybe cinerella</i> (Kühner) Arnolds			X	X		
<i>Hygrocybe conica</i> (Schaeff.) P. Kumm.		X				
<i>Hygrocybe lilacina</i> (C. Laest.) M.M. Moser				X	X	
<i>Hygrophorus speciosus</i> Peck	<i>H. lucorum</i> var. <i>speciosus</i>	X			X	
<i>Inocybe calamistrata</i> (Fr.) Gillet		X	X	X	X	X
<i>Inocybe dulcamara</i> (Alb. & Schwein.) P. Kumm. ²		X	X	X	X	X
<i>Inocybe geophylla</i> (Fr.) P. Kumm. var. <i>geophylla</i>			X			
<i>Inocybe geophylla</i> (Fr.) Fr. var. <i>lilacina</i> Gillet	<i>I. lilacina</i>	X				
<i>Inocybe geraniodora</i> J. Favre cf. ²			X	X		X
<i>Inocybe hirculus</i> Vauras ²					X	
<i>Inocybe impexa</i> (Lasch) Kuyper ²	<i>I. lacera</i> var. <i>maritima</i>			X		
<i>Inocybe lacera</i> (Fr.) P. Kumm. var. <i>lacera</i> ²				X		
<i>Inocybe leioccephala</i> D.E. Stuntz ²			X	X		
<i>Inocybe mixtilis</i> (Britzelm.) Sacc. ²		X				
<i>Inocybe nematoloma</i> Joss. ²	<i>I. subexilis</i>			X		
<i>Inocybe rimosa</i> (Bull.) P. Kumm.	<i>I. fastigiata</i>	X	X	X	X	X
<i>Inocybe rivularis</i> Jacobsson & Vauras ²			X	X	X	
<i>Inocybe terrigena</i> (Fr.) Kühner ²		X				
<i>Inocybe tjallingiorum</i> Kuyper ²		X				
<i>Laccaria laccata</i> (Scop.) Cooke (incl. var. <i>pallidifolia</i> (Peck) Peck) ³		X			X	X
<i>Laccaria maritima</i> (Theodor.) Singer ex Huhtinen	<i>L. trullisata</i> f. <i>rugulospora</i>				X	
<i>Laccaria montana</i> Singer ³		X	X	X	X	X
<i>Laccaria pumila</i> Fayod ³	<i>L. altaica</i>		X	X	X	X
<i>Lepista multififormis</i> (Romell) Gulden	<i>L. polygonarum</i>		X			
<i>Lichenomphalia hudsoniana</i> (H.S. Jenn.) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina luteolilacina</i>		X			X
<i>Lichenomphalia umbellifera</i> (L.) Redhead, Lutzoni, Moncalvo & Vilgalys	<i>Omphalina ericetorum</i>	X	X	X	X	X

<i>Loreleia postii</i> (Fr.) Redhead, Moncalvo, Vilgalys & Lutzoni	<i>Gerronema p.</i>			X		
<i>Melanoleuca cognata</i> (Fr.) Konr. & Maubl.			X			
<i>Mycena epipterygia</i> (Scop.) Gray var. <i>badiceps</i> M. Lange		X				
<i>Mycena megaspora</i> Kauffman	<i>M. permixta</i>		X	X		
<i>Mycenitis epidryas</i> (Kühner) Antonin & Noordel.	<i>Marasmius e.</i>	X	X	X	X	X
<i>Naucoria tantilla</i> J. Favre	<i>Alnicola t.</i>			X	X	
<i>Omphaliaster asterosporus</i> (J.E. Lange) Lamoure	<i>Hygroaster a.</i>		X			
<i>Omphalina pyxidata</i> (Bull.) Quél.				X	X	X
<i>Pluteus cervinus</i> (Schaeff.) P. Kumm.	<i>P. atricapillus</i>	X				
<i>Psilocybe montana</i> (Pers.) P. Kumm.			X			
<i>Rhodocybe popinalis</i> (Fr.) Singer			X			
<i>Rickenella fibula</i> (Bull.) Raitelh.			X			
<i>Tricholoma inamoenum</i> (Fr.) Gillet		X				
<i>Tricholoma vaccinum</i> (Schaeff.) P. Kumm.		X				
<i>Xeromphalina caudicinalis</i> (With.) Kühner & Maire	<i>X. fellea</i>	X				
RUSSULALES						
<i>Lactarius deterrimus</i> Gröger		X				
<i>Lactarius dryadophilus</i> Kühner			X	X	X	X
<i>Lactarius glyciosmus</i> (Fr.) Fr.			X			
<i>Lactarius lanceolatus</i> O.K. Mill. & Laursen			X	X	X	X
<i>Lactarius nanus</i> J. Favre					X	
<i>Lactarius pseudouvidus</i> Kühner			X	X	X	X
<i>Lactarius pubescens</i> (Fr.) Fr.		X				
<i>Lactarius rufus</i> (Scop.) Fr.		X	X			
<i>Lactarius salicis-herbaceae</i> Kühner			X	X	X	
<i>Lactarius cf. resimus</i> (Fr.) Fr.		X				
<i>Lactarius torminosus</i> (Schaeff.) Gray (incl. <i>L. torminosulus</i> Knudsen & T. Borgen)			X	X	X	
<i>Lactarius trivialis</i> (Fr.) Fr.			X			
<i>Russula aeruginea</i> Fr. coll.		X			X	
<i>Russula altaica</i> (Singer) Singer		X	X	X	X	X
<i>Russula delica</i> Fr.		X	X	X		
<i>Russula laccata</i> Huijsman	<i>R. norvegica</i>	X		X		
<i>Russula nana</i> Killerm.	<i>R. alpina</i>	X	X	X		X
<i>Russula paludosa</i> Britzelm.		X				
<i>Russula pubescens</i> A. Blytt ²	<i>R. subalpina</i>		X			
<i>Russula rivulicola</i> Ruots. & Vauras ⁴			X			
<i>Russula cf. violaceoincarnata</i> Knudsen & T. Borgen ⁴		X				
<i>Russula</i> Subsection <i>Xerampelinae</i> Singer			X	X	X	X
APHYLLOPHORALES						
<i>Clavaria argillacea</i> Fr.				X		
<i>Clavulina coralloides</i> (L.) Schröt.			X			
<i>Fomitopsis pinicola</i> (Sw.) P. Karst.		X				

<i>Hyphoderma argillaceum</i> (Bres.) Donk ⁵		X				
<i>Multiclavula corynoides</i> (Peck) R.H. Petersen	<i>M. septentrionalis</i>			X		
<i>Polyporus leptcephalus</i> (Jacq.) Fr. ⁵		X				
<i>Thelephora caryophyllea</i> (Schaeff.) Pers. ⁶			X	X	X	X
<i>Thelephora terrestris</i> Ehrh.				X		
GASTEROMYCETE FUNGI						
<i>Bovista limosa</i> Rostr.			X	X		
<i>Bovista nigrescens</i> Pers.				X		
<i>Bovista tomentosa</i> (Vittad.) De Toni				X		
<i>Calvatia cretacea</i> (Berk.) Lloyd			X	X	X	
<i>Calvatia turneri</i> Ellis & Everh.) Demoulin & M. Lange (incl. var. <i>groenlandica</i> M. Lange)	<i>C. tatrensis</i>		X	X	X	
<i>Lycoperdon nigrescens</i> Wahlenb.	<i>L. foetidum</i>			X		
<i>Lycoperdon molle</i> Pers. coll.				X		
ASCOMYCOTA						
<i>Bryoglossum gracile</i> (P. Karst) Redhead		X				
<i>Claviceps purpurea</i> (Fr.) Tul.	<i>C. microcephala</i>		X			
<i>Thuemenidium arenarium</i> (Rostr.) Korf	<i>Geoglossum a.</i>		X	X		
<i>Geopora arenosa</i> (Fuckel) S. Ahmad (incl. <i>G. arenicola</i>)		X		X	X	X
<i>Helvella albella</i> Quél.					X	
<i>Helvella atra</i> J. König			X			
<i>Helvella corium</i> (O. Weberb.) Massee			X		X	X
<i>Helvella lacunosa</i> Afzel			X	X		
<i>Helvella queletii</i> Bres.			X	X		X
<i>Helvella aestivalis</i> (R. Heim & L. Remy) Dissing & Raitv. ⁷						X
<i>Humaria hemisphaerica</i> (F.H. Wigg.) Fuckel					X	X
<i>Peziza badia</i> Pers.		X		X	X	
<i>Rutstroemia firma</i> (Pers.) P. Karst.	<i>Poculum firmum</i>		X	X		
<i>Rhytisma salicinum</i> (Pers.) Fr.		X	X	X		X
<i>Sarcoleotia globosa</i> (Sommerf.) Korf				X		
<i>Sarcosphaera coronaria</i> (Jacq.) J. Schröt.		X				
<i>Scutellinia patagonica</i> (Rehm) Gamundi ⁸			X			

¹ det. P. Kallio 1976³ det. G.M. Mueller 1989⁵ det. M. Kulju 2010⁷ det. S. Abbott 1991,² det. J. Vauras 1996⁴ det. J. Ruotsalainen 2009⁶ det. L.K. Weresub 1973⁸ det. T. Schumacher 1988