Larger cold-climate fungi

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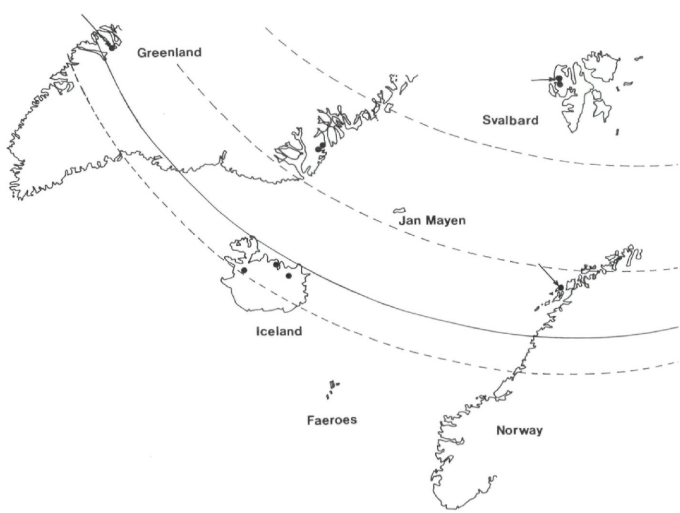
Abstract. – Sixty four basidiomycetes and ascomycetes from four countries viz. Greenland; Iceland; Andoy Island, Norway; and Svalbard (Spitzbergen) are recorded. The distribution of these arcto-alpine fungi is given.

Introduction

Several field naturalists have kindly made collections of larger fungi for me in rather inaccessible areas of the arctic or subarctic whilst carrying out their own studies. Although the records resulting are not exhaustive they were considered of sufficient interest to be brought together, especially as recently a more organized attempt to study the flora of agarics of cold climates is underway (LAURSEN & AMMIRATI, 1982 d). Collecting sites are shown on the map and abbreviations listed below.



Lists of species

The species are arranged in families and the epithets for convenience wherever possible follow the New Checklist of British Agarics & Boleti (DENNIS, ORTON & HORA, 1960: NCL). The collecting localities are indicated on the map.

Greenland

These records are based on collections made by A. ERSKINE during the summers of 1979 & 1980 within 30 Kms of Mestersvig airstrip NE Greenland (72°14′ N; 23°55′ W) and by A. FOX (Univ. of Aberystwyth, White Fronted Goose Study) during May–August 1979 at Eqalungmiut Nunat (67°30′ N; 50°30′ W).

Collection sites: ERSKINE: Fundal river (FR); Goose Sø (Goose Lake) (GS); Hamne Hut (Fangskhytte) (HH); Lemming Valley (L); Mestersvig (MV); New Expedition Hut (Nye Exp. Hytte) (NH); Sortehjorne Hut (SH); Tunnelelv Gorge (T); Washburn Hut (WH). FOX: Eqalungmiut Nunat (EN).

Basidiomycotina: Agaricales: Agaricaceae

Agaricus aff. *arvensis* SCHAEFF.: SECR.

GS; in *Salix arctica* on moist sandy soil. Basidiome poorly preserved and slightly over-mature.

It is necessary to have details of the ring structure, gill-margin structure and general overall appearance for a definitive determination. However, *A. arvensis, A. fissuratus* (MOELL.) MOELL. and *A. macrocarpus* (MOELL. & SCHAEFF.) PILÁT are widespread in boreal and temperate areas of Europe and N America; it is also recorded from S Hemisphere. *A. arvensis* is recorded from Greenland by LANGE (1955).

A. campestris L.: FR.-group

EN; on dry, freely draining soil; also on heath-herb slopes with *Salix glauca* and *Calamagrostis* sp.

Details of the pileus-colour and gill-margin are lacking; one collection was tentatively identified as *A. porphyrocephalus* P. D. ORTON. The distribution of *A. campestris* is much the same as for the *A. arvensis* grp. (see above). A member of the *A. campestris* grp. has been recorded by LANGE (1955) for Greenland.

Amanitaceae

Amanita nivalis GREV.

EN, amongst dwarf *Salix* scrub.

A widespread northern boreal species, preferably called *A. hy-*

perborea (KÜHNER, 1972 a; but see BAS, 1978). It occurs on several Scottish mountains growing with *Salix herbacea*, eg. Cairnwell.

Boletaceae

Leccinum rotundifoliae (SINGER) SMITH, THIERS & WATLING

MV, overlooking bay, about 4.8 km north of NH, i viii 79, amongst *Vaccinium uliginosum* but near *Betula nana* on dry peaty soil. EN, most abundant bolete in area.

A widespread northern boreal species associated with dwarf birch.

L. salicola WATLING

3.2 km north of WH; about six basidiomes within 3 m of one another, amongst *Salix* and *Betula nana* on dry sandy soil. Apparently also at EN judging from colour transparencies supplied by FOX.

Although originally described from Bettyhill, Sutherland, Scotland it is widespread on cliff-tops amongst *Salix repens* along the northern coast, where it is frequently dried out by winds charged with salt-spray; more recently recorded from the Ebudes (WATLING, unpubl. data).

L. scabrum subsp. *tundrae* KALLIO

EN; two collections may represent this taxon. KALLIO (1975) indicates that this subspecies is characterised by the persistent white pore surfaces, the relatively thick and short stipe and the fairly hard consistency of the flesh. In many cases the flesh turns slightly pink on exposure to the atmosphere especially obvious at the stipe-apex and surrounding pileus-trama.

Coprinaceae

Coprinus sect. *Vestitae* cf. *cortinatus* J. LGE.

Near hut at MV airstrip, growing in gravel, 28 viii 79.

Most velar remnants have been lost from the basidiome; slight differences in shape and size of basidiospores undoubtedly indicate a distinct taxon.

Cortinariaceae

Cortinarius favrei (MOSER) ex HENDERSON (subgenus *Myxacium*)

Between T & WH, amongst *Cassiope* on damp sandy soil, 7 viii 79; beside HH, amongst *Salix arctica* and moss on moist sandy soil, 17 viii 79.

This is *C. alpinus* BOUD. ss. FAVRE non BOUD.; the validated name was based on collections from Beinn Eighe, Wester Ross, Scotland

(HENDERSON, 1958) although it is rare there. It is a widespread taxon in northern Europe and Greenland; LAURSEN & AMMIRATI (1982 b) record it from Alaska.

Cortinarius spp.

Several collections have been examined, one resembling *C. hinnuleus* FR., but accurate field-data records are not offered (see LANGE, 1957 pg 35); often material is so weathered the original and therefore diagnostic colours are lost completely. One taxon with almost smooth basidiospores appeared to be associated with a *Saxifraga oppositifolia* / *Silene acaulis* community.

Galerina vittaeformis (FR.) MOSER

(= *Galerina rubiginosa* (PERS.: FR.) GILLET f. *bispora* SMITH & SINGER)

Near huts at MV airstrip, in moss on moist sandy soil, 28 viii 1979 (25 + basidiomes).

This taxon is recorded from several arctic-alpine habitats but as pointed out by GULDEN (1980) rarely in sufficient precision; GULDEN (1980) records it from Finse, S Norway. In Scotland *G. vittaeformis* (4-spored) is widespread in both lowland and montane communities but this is undoubtedly a broad concept; cf. KÜHNER 1935 & 1972 b).

G. pseudocerina SMITH & SINGER

GS, amongst *Silene acaulis* and moss, on sandy damp salty soil.

This is a widespread boreal species described by KÜHNER from the Alps (1972 b) and Scandanavia. GULDEN (1980) records it from Finse, S Norway and REID (1979) from Svalbard. It has been recently recorded from Scotland, although probably overlooked there because of its small size, and has probably been confused in the past with more common species of *Galerina*.

Hebeloma aff. *leucosarx* P. D. ORTON

SH, damp sandy soil in *Salix arctica*, 24 viii 1979.

The arctic species of *Hebeloma* have not been critically studied; this is in contrast to the alpine taxa (BRUCHET, 1970). The present material differs from ORTON's taxon in the broadly clavate apex to the cheilocystidia surmounting a long narrow pedicel. In this feature the collection agrees with *H. populinum* ROMAGN. *H. leucosarx* was described from willow-carrs (ORTON, 1960) in both England and Scotland; it is recognised by the predominantly white flesh, weeping gills, tomentose edge to the immature pileus and pinkish buff colours.

? *H. marginatulum* (FAVRE) BRUCHET

EN. Possible record based on transparency only; see WATLING, 1977.

H. mesophaeum (PERS.) QUÉL.

Near SH, in *Salix arctica* on moist sandy soil, 24 viii 79 (25 basidiomes within 10 metres).

A distinctive taxon recorded from elsewhere in Greenland (LANGE, 1957); but see WATLING (1977). This fungus is not confined to arctic and subarctic areas but is equally at home in lowland communities.

Entolomataceae

Nolanea clandestina (FR.: FR.) KUMMER

Near SH, close to *Salix, Cassiope* and *Epilobium,* on moist sandy soil, 24 viii 79.

A species at home in both lowland grass-communities and boreal regions.

N. cucullata (FAVRE) P. D. ORTON

Near HH, in *Salix arctica* and *Polytrichum piliferum,* on moist sandy soil, 17 viii 79 (25 basidiomes scattered about hut).

This agaric was originally described from the Alps (FAVRE, 1955) but has been found widely in hill-pasture, and montane communities in Scotland.

Nolanea sp.

FR, amongst *Salix arctica* near mineral vein, vii 80.

This collection resembles *N. clandestina* in general appearance in the dried state (dark brown pileus, light brown, thick gills) but microscopically quite distinct (angular-globose basidiospores). It is possibly *N. sericea* a taxon widely distributed in grassy areas.

Hygrophoraceae

Hygrophorus conicus (SCOP.: FR.) FR. (= *Hygrocybe conica* (SCOP.: FR.) KUMMER)

NH, on hill behind hut, 300 m above sea level, on dry peaty soil near *Vaccinium uliginosum,* viii 80.

A common boreal agaric both in Europe and N America. Found in the British Isles in both lowland, island and montane communities. Recorded for Greenland by LAMOURE, LANGE & PETERSEN (1982).

Russulaceae

Lactarius representaneus BRITZ.

In front of WH amongst *Salix arctica,* on dry sandy soil, 9 viii 79; 91 m; above NH amongst *Vaccinium uliginosum,* on dry sandy soil, 20 viii 79; c. 8 km south of SH on hillside in *S. arctica,* 22 viii 79; near SH in *Salix arctica* and *Cassiope tetragona* on moist sandy soil, 24 viii 79.

Recorded by KNUDSEN & BORGEN (1982) from Greenland.

Russula alpina (BLYTT) MOELLER & SCHAEFFER

Beside HH amongst *Salix arctica* and moss on moist sandy soil, 17 viii 79 (10 basidiomes within a metre circle); same locality near *S. arctica* and *Cassiope* on moist sandy soil (2 basidiomes); beside track to SH in moss near *S. arctica,* 22 viii 79. Very common about EH often in large numbers, frequently growing in *Polytrichum* on heath-herb slopes (many faded basidiomes).

R. nana KILLERMAN is an older, and therefore, the correct name for this fungus.

R. norvegica REID

SH, near pool 200 m below hut, on damp peaty soil amongst grass and *Salix arctica,* vii 80.

The differences between this species and *R. alpina* are discussed by REID (1972). It has been recorded from the Norwegian mountains (REID, 1972), from the Alps (KÜHNER, 1975) and more recently by KNUDSEN & BORGEN (1982) from Greenland.

? *R. oreina* SINGER

SH, near pool 200 m below hut, on damp peaty soil amongst *Salix arctica,* vii 80.

The material was old but apart from the grey-brown colour agreed with this rather common Greenland agaric (KNUDSEN & BORGEN, 1982).

Probably better known as *R. xerampelina* var. *pascua* FAVRE.

Tricholomataceae

Collybia dryophila (BULL.: FR.) KUMMER

EN, very common in a variety of situations, notably amongst dry *Carex*-dominated communities on slopes but also under *Salix*-scrub canopies.

A very common lowland agaric although equally at home in the mountains of Scotland. MOSER (1982) records it from the subalpine zone of Austria, and LANGE from Greenland (LANGE, 1955) etc.

Laccaria laccata (SCOP.: FR.) COOKE

On track below SH, near *Poa abbreviata* and *Silene acaulis* amongst sand and gravel, 23 viii 79 (12 basidiomes); near fjord edge below SH, amongst moss and *Salix arctica* on damp sandy soil, viii 80.

A transparency from EH which could be this, *L. ohiensis* or *L. tetraspora* was received from FOX.

Leptoglossum sp?

EN. A field description only supplied and agrees with a member of this group; perhaps *L. rickenii* (HORA) SINGER or even *Arrhenia*.

? *Melanoleuca graminicola* (VEL.) KÜHN. & MAIRE

On hillside overlooking MV bay about 3.2 km north of NH, amongst *Salix* on damp soil, 1 viii 79 (group of 7 basidiomes); on hillside at NW corner (Permklippen) amongst *Carex rigida*, 1 viii 79; about 3.2 km north of WH, amongst *Vaccinium* and *Cassiope* on dry mossy soil, 19 ix 79 (group of 5 basidiomes); GS on mossy soil.

This agaric appears to be widespread, distinct, undescribed taxon, apparently lacking facial cystidia although a few bluntly tapered (some barbed) cells were located in one collection (spores 8.5–10×5.5–6.5 μm; development of dextrinoid deposits in the trama). The spores are slightly larger than those of *M. graminicola* but have some features in common with those of *M. striimarginata* MÉTROD.

Mycena vitilis (FR.) QUÉL.

Beside HH, amongst *Salix arctica* and moss on moist sandy soil, 17 viii 79. EN, common on degrading moss-hummocks, especially amongst *Polytrichum* in July.

A common widespread fungus in boreal and temperate Europe and N America.

Omphalina ericetorum (FR.: FR.) M. LGE.

EN. Most abundant fungus in marshy areas in June and July; in many sites present in *Aulacomium*-mats. Common throughout boreal and temperate zone, including Greenland (LANGE, 1955).

O. luteovitellina (PILÁT & NANNF.) M. LGE.

About 2 kms south of HH, 400 m inland from Archers Bay, on moist peaty soil, viii 80.

This is a true montane and arctic agaric recorded from Scandinavia, the Alps and the Scottish mountains. *Omphalina alpina*

(BRITZ.) BRESINSKY & STANGL is apparently an earlier name for this taxon.

O. obatra FAVRE

Near SH, in moss near *Salix arctica* on damp sandy soil, 3 viii 79; SH in moss near *Pyrola grandiflora* and *Cassiope,* c. 609 m above sea level on moist sandy soil, 23 viii 79.

The first collection is tetrasporic whilst the second represents the 2-spored 'form'. This species was described from the Alps but is characteristically montane. Care must be taken to distinguish it from *O. obscurata* etc; see below.

O. obscurata (KÜHNER) ex REID

EN; a colour transparency of a common species associated with *Polytrichum* and with a good likeness to this species was communicated by Fox.

Previously recorded by LANGE (1957) and WATLING (1977) from Greenland and appears to be a common rather northerly agaric on base-poor soils.

Tricholoma sp.

NH, middle of clump of *Dryas octapetala* on dry sandy rocky soil, 20 viii 79. (Pileus 40 mm broad, vinaceous buff; pileipellis a radially arranged cutis with some dark encrusted filamentous hyphae. Basidiospores 5–6×4–4.5 μm, hyaline, non amyloid, thin-walled).

Gasteromycetales: Lycoperdaceae

General Note: Large numbers of puff-balls appeared during July and August throughout EN, generally on plateau regions amongst *Salix* scrub but also on dry barrens, and even areas of late snow-lie vegetation amongst *Salix herbacea* as found on the south sides of Axewater.

Calvatia arctica FERD. & WINGE

On slope on left bank of T near WH, amongst *Betula nana* and near *Empetrum nigrum* on sandy soil, 27 viii 79.

MILLER (1969) has hinted at the synonymy of this and the following taxon.

C. cretacea (BERK.) LLOYD

East side of L, near *Salix arctica* and *Dryas* on damp sandy soil, 29 vii 79.

Previously recorded for Greenland (LANGE, 1948). A collection differing in darker coloured capillitial hyphae was found near MV airstrip (South side of Noret), 30 vii 79.

Ascomycotina: Pezizales: Helvellaceae

Helvella corium (WEBERB.) MASS.

MV; on damp peaty soil at south-east corner of bay near *Salix arctica* and mosses.

Recorded by DISSING (1966) from Greenland.

Helotiales: Geoglossaceae
Mitrula paludosa FR.

Beside HH, in clump of wet moss close to *Salix arctica* and *Polygonum viviparum,* 17 viii 79 (cluster of 13 ascomata).

Recorded by LANGE (1957) from Greenland.

Iceland

These records are based on collections made by W. BAIRD (Royal Scottish Museum, Edinburgh) during a visit to Mývatn, Northern Iceland.

Collection sites: Kálfaströnd at Mývatn (K); Dalvík, N of Akureyri (D); Melafjall near Dalvík (M); Akureyri (AK).

Basidiomycotina: Agaricales: Agaricaceae

Agaricus? squamuliferus (MOELL.) MOELL.

K; in grass.

Boletaceae
Leccinium scabrum subsp. *tundrae* KALLIO

N west AK, with *Betula nana,* 30 vii 78; also east of Hverfjall with *B. nana* and *Empetrum:* see under that subspecies above (p. 310).

CHRISTIANSEN (1941) records *L. scabrum* (BULL.: FR.) S. F. GRAY from Iceland.

Coprinaceae
Lacrymaria glareosa (FAVRE) WATLING

Langidalur Valley; the collection approaches *L. rigidipes* (PECK) WATLING described from N America. *L. glareosa* has been recognised in the British Isles, including Scotland, and Norway (WATLING, 1979).

It differs from *L. velutina* (PERS. FR.) K. & M. in the smaller size of the basidiomes, and less ornamented and narrower basidiospores, and from *L. polytrichi* (HOLMSK.: FR.) K. & M. in the duller colouration. This last species is recorded for Iceland by CRISTIANSEN (1941) under the generic name *Cortiniopsis*.

Cortinariaceae
C. trivialis J. LGE.

K; no field data but recorded from northern and montane communities (FAVRE, 1960). This species has been confused with *C. collinitus* (SOW.: FR.) FR. in the past, an agaric recorded from Iceland by CHRISTIANSEN (1941).

Inocybe albodisca KÜHN.

K; no further data.

I. decipiens BRES.

K; no further data. A record under this name appears in CHRISTIANSEN (1941) and it is recorded for Greenland by LAMOURE, LANGE & PETERSEN (1982).

Russulaceae
Lactarius vellereus (FR.) FR.

K; no field data. A rather interesting collection which agrees in all ways, although slightly immature, with Scottish and Finnish material. Generally considered an agaric of the broad-leaved forest; see KNUDSEN & BORGEN (1982) on *Russula delica*.

Russula alpina BLYTT

K & D. – Recorded for Iceland by CHRISTIANSEN (1941).

R. norvegica REID

K. – Probably previously confused with *R. alpina* above.

Tricholomataceae
Laccaria laccata (SCOP.: FR.) CKE.

K. – Recorded for Iceland by CHRISTIANSEN (1941) under the synonym *Russuliopsis laccata* (SCOP.: FR.) SCHROET.; see HALLGRIMSSON (1981).

Omphalina ericetorum (FR.: FR.) M. LGE.

D. – Recorded for Iceland by CHRISTIANSEN (1941) under the synonym *O. umbellifera* (L.: FR.) FR.; see HALLGRIMSSON (1981).

Gasteromycetales: Lycoperdaceae

Lycoperdon frigidum DEMOULIN
9 km west AK, in grassy area.
Recently described as a separate taxon (DEMOULIN, 1972). DEMOULIN gives several records from Iceland in addition to Austria, Finland, Norway, Sweden, Spitzbergen and northern N America.

L. molle PERS.?
Near D, in grassy area on roadside.
Two collections one totally immature and the other apparently ripened after collection. At first thought referable to immature *L. muscorum* MORG. Recorded by HALLGRIMSSON (1971).

Ascomycotina: Pezizales: Helvellaceae
Helvella lacunosa AFZ.: FR.
Glymut, route north from Reykjavik, grassy slope beside *Betula nana*, 29 vii 1978.
Recorded from montane communities and boreal areas. This species is common in lowland and mountain areas of Europe. It is recorded for Iceland by CHRISTIANSEN (1941); see also DISSING (1966).

Norway

These records are based on collections made by R. MCBEATH (Royal Botanic Garden, Edinburgh) from the island of Andöy (AI) in Vesterålen.
Collection sites: Andenes (A); Arnyna (AR); Dverberg (DV).

Basidiomycotina: Agaricales: Boletaceae

Leccinum rotundifoliae (SINGER) SMITH, THIERS & WATLING
DV, peat moor with *Betula nana*, several collections 6 vii 79.

L. versipelle (FR. & HÖK.) SNELL
DV, under arborescent birch, 7 & 9 vii 79.
A common bolete of temperate birch woods northwards.

Leccinum sp.
DV; possibly *L. scabrum* subsp. *tundrae* KALLIO but unfortunately immature.

Coprinaceae
Panaeolus sphinctrinus (Fr.) Quél.

DV; on roadside, probably on remains of dung, 8 vii 79. A common widespread coprophilous agaric, not confined to northern latitudes.

Cortinariaceae
Galerina paludosa (Fr.) Kühn.

DV, in wet *Sphagnum* bed. A widespread fungus in northern Europe, eg. Fennoscandia: Lange (1946), Bresinsky (1966), Kallio & Kankainen (1966). Equally as widespread in Scotland in *Sphagnum* beds in montane and hill-land communities (Dennis, 1955; Watling, unpubl. data).

G. cf. *pseudocerina* Smith & Singer

DV, with moss and *Eriophorum* in wet ditch in peat bog, 6 vii 79.

G. tibiicystis (Atk.) Kühn.

DV, in *Sphagnum,* 14 vii 79.

A fungus widely distributed amongst *Sphagnum* in boreal regions. Common in Scotland and collected by the author in S Norway (near Bergen).

Inocybe cf. *relicina* f. *paludicola* Heim

Bleik, SW of A; on exposed *Dryas* heath, 10 vii 79.

A much disputed taxon but this collection agrees with data supplied by Heim (1931). The type form is said to be synonymous with *I. fuscomarginata* Kühn.; see under that species (p. 322).

Strophariaceae
Psilocybe crobula (Fr.) M. Lge.

DV, on dung, 6 vii 79.

A fairly widespread fungus known from several northern localities including Greenland (Lange, 1957), although not typically arcto-alpine in distribution.

Tricholomataceae
Clitocybe phyllophila (Fr.) Kummer

A, growing amongst old wood at dock-side, 10 vii 79.

This taxon is widespread in temperate areas often in woodland communities but Hallgrimsson (1981) describes it from woodland and dwarf shrub heaths in Iceland.

Collybia dryophila (BULL.: FR.) KUMMER

DV, on exposed ridge with *Arctuous alpinus*.

This dark-capped form with slightly larger basidiospores parallels collections from other northern areas including Scottish hill-pastures and birchwoods; see also LANGE (1955).

Mycena pura (PERS.: FR.) KUMMER

DV, in moss on acid mountain ridge, 8 vii 79.

This agaric is both very variable and very widespread, and occurs in both lowland and montane areas. It is a widespread agaric in arcto-alpine communities, including Greenland, Fennoscandia and Switzerland; see GULDEN & JENSSEN (1982).

Omphalina pseudoandrosacea (BULL.: FR.) ss. QUÉL., ss. MOELLER.

DV, in *Sphagnum* bog, 6 vii 79.

This is the agaric MOELLER (1945), DENNIS & GRAY (1954) and WATLING & RICHARDSON (1971) recorded from the Faeroes, Shetlands and St Kilda respectively. It differs in its predominantly 2-spored basidia and very pale colours. It has been renamed.

O. fulvopallens nom. prov. by ORTON (in press).

O. luteolilacina (FAVRE) HENDERSON

DV, on exposed heath moor attached to *Coriscium vulgare* BREB.

This is a widespread basidiolichen in boreal and montane communities; it is a common agaric in the Scottish mountains. It has been synonymized with *O. hudsoniana* JENN.; the present author follows CLÉMENÇON (1982), and NCL.

Aphyllophorales

Polyporus brumalis (PERS.) FR.

AR, on dead branch of *Betula*, 14 vii 79.

A widespread polypore in temperate woodlands.

Svalbard

The records are based on collections made by A. ERSKINE during July 1981 in north and western areas of the main island.

Collection sites: Trygghamna (T); Ny Alesung (NA); Kongfjord (K); Bocksfjord (B); Austfjord (Af); Krossfjord (Kr); Indre Norskoya (IN); Ebeltoftodden (E).

Basidiomycotina: Agaricales: Agaricaceae

Agaricus macrosporus (MOELL & SCHAEFF.) PILÁT

A, near Austfjordnes hut, amongst *Dryas* on dry soil.

This agaric is characterised particularly by the large basidiospores. Several species of the genus have been collected on Svalbard (OHENOJA, 1971), but not specifically identified.

Bolbitiaceae

S. HUHTINEN has kindly sent me 3 members of this family, two in the genus *Bolbitius* and one in *Conocybe*. These will be discussed by HUHTINEN.

Cortinariaceae

Cortinarius cinereoviolaceus ss. KOBAYASI (1968); *simulatus* ss. OHENOJA (1971).

NA, 1 km south east of station, amongst *Salix* and moss, 27 vii 81.

This is not *C. simulatus* in the sense of British authors (ORTON, 1958) but agrees with the data given by KOBAYASI (et al., 1968) and OHENOJA (1971).

C. favrei (MOSER ex) HENDERSON

NA, 1 km south east of station, amongst *Salix*, 27 vii 1981.

Recorded by OHENOJA (1971) from Svalbard.

C. ? *glandicolor* var. *exilis* FAVRE

B, on hillside about 400 m from hot spring, amongst *Salix* and *Polygonum* on mossy soil over moraine, 29 vii 1981.

Galerina pseudopumila P. D. ORTON

IN, south west corner, growing amongst moss on wet soil, 10 vii 81.

This species is called *Pholiota pumila* (FR.) KARST. by MOELLER (1945) in his accounts of the Faeroese agarics. Much discussion has centred on the correct name for this fungus; see WATLING (1977). The epithet *'moelleri'* (BAS, 1960) is generally accepted. It is a common northern and montane agaric; for further details see GULDEN (1980) and REID (1979).

G. pseudombrophila KÜHN.

T, north coast of Isfjord, on west side below prominent bird cliff, in moss on moss-covered moraine, 21 vii 81.

Described by KÜHNER (1972 b) based on collections from Abisko,

Sweden, and Norway and the Alps; GULDEN (1980) has recorded it from Finse, S Norway.

Hebeloma marginatulum (FAVRE) BRUCHET

NA, 1 km south east of station, amongst *Salix* and moss, 23 vii 81.

Apparently a widespread species in boreal and montane localities; it is only marginally different to material described from Greenland; see WATLING (1977).

H. mesophaeum (PERS.) QUÉL.

B, on hillside about 400 m from hot spring, amongst *Salix* and *Dryas* on sandy soil down hill to moraine, 29 vii 81.

A widespread taxon in the arctic and subarctic. This species has previously been recorded from Svalbard by OHENOJA (1971).

H. versipelle (FR.) GILLET

K (east side), north side of '14th July' Bay, under cliff with nesting guillemots, in *Silene* and moss on top of scree, 13 vii 81.

ROMAGNESI (1965) has redefined this taxon and it is this concept which is adopted herein; this same fungus has been recorded for Greenland (WATLING, 1977).

Inocybe dulcamara (A. & S. PERS.) KUMMER

B, on hillside about 400 m from hot spring, amongst *Salix* and *Dryas* on sandy soil downhill to moraine, 29 vii 81.

Apparently a relatively widespread fungus on base-poor, often purely or largely mineral soils in both boreal and temperate areas.

I. cf. *fuscomarginata* KÜHN.

B, on hillside about 400 m from hot spring, amongst *Salix* and *Dryas* on sandy soil, 29 vii 81.

This collection was very close to *I. dulcamara* except for the emarginate gills and voluminous paracystidia both features offered by KÜHNER (1955) as distinguishing characters. The reader is referred to an entry for *I. relicina* f. *paludicola* above (p. 12).

Russulaceae

Lactarius cf. *theiogalus* BULL.: S. F. GRAY

NA, 0.5 km south east of station, amongst *Salix,* 22 vii 81.

Without details as to the colour of the 'milk' and whether it changed colour on exposure to the air the determination can only be tentative. The collection resembles one from Spitsbergen so named by KOBAYASI & al. (1968). There is every possibility that our collec-

tion refers to *L. lapponicus* HARMAJA; see KNUDSEN & BORGEN (1982). Unfortunately there is considerable confusion as to the use of the epithet *'theiogalus'* and its possible synonymy with *L. tabidus* FR. The present collection did not have a 'cellular' scalp.

Russula alpina (BLYTT) MOELLER & SCHAEFF.

K, north side of E, amongst *Salix* and wet mosses, 1 viii 81. Recorded by KOBAYASI & al. from Svalbard (1968).

Tricholomataceae

Omphalina luteovitellina NANNF. & PILÁT

K, north and west sides of E, in moss and lichens, 12 vii 81 & 1 viii 81.

A widespread arctic, subarctic and alpine agaric. HEIKKILA & KALLIO (1969) note the occurrence of this agaric in Svalbard.

Gasteromycetales: Lycoperdaceae

Calvatia arctica FERD. & WING.

A, near expedition hut amongst *Dryas:* immature. Recorded by KOBAYASI & al. from Svalbard (1968).

C. cretacea (BERK.) LLOYD

K, west side south of E, on gravel amongst *Salix polaris, Silene* and *Dryas,* 12 vii 81.

A northern puff-ball recorded by OHENOJA (1971).

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Dried material where appropriate is housed in Royal Botanic Garden, Edinburgh (E). Identification of vascular plants has been left with the collectors, no voucher material was available of critical taxa.

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