

A contribution to the lichen flora of the Scoresby Sund area, Central East Greenland

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Abstract – 60 taxa of lichens from the Scoresby Sund area in Central East Greenland are listed. 24 entries represent the first report from the inner, continental part of the fjord system.

Lichen flora / Scoresby Sund / Greenland

INTRODUCTION

The Danish palaeobotanist, Nikolaj Hartz, is the true pioneer as regards lichenological field work in the Scoresby Sund area. He studied and collected numerous lichens, totally about 200 species, in the surroundings of the greatest fjord in the world in 1891-92 (Hartz, 1895; Lynge & Scholander, 1932). The collections were published by Deichmann Branth (1894) and are kept in herb. C. From Hekla Havn on Danmarks Ø (70°27'N, 26°15'W; Fig. 1), where he wintered 1891/92. Hartz made botanical trips to many localities along the coasts of the enormous fjord.

Thomson (1984, 1997) evidently did not know or neglected these localities, as Hartz's specimens are poorly represented on his distribution maps. The "old-fashioned" lichen names used by Branth are another possible explanation, but later revisions of the material have adjusted the names in order to bring them in accordance with modern nomenclature.

More than hundred years have passed since the pioneer work of Hartz, and in this great span only a few comparatively small collections of lichens have been made in the Scoresby Sund area by non-lichenologists. Thus the topographer, P. Dusén, collected a few lichens here on Nathorst's expedition in 1899. They were determined by Malme (1929). The primary purpose of the expedition was to find traces of André, who was lost during his trip in balloon fra Svalbard in 1898.

However, the botanist, Geoffrey Halliday, University of Lancaster, collected many macrolichens in the northernmost part of the Scoresby Sund area in July and August 1971 (Hansen, 1982). *Solorina saccata* is represented in Halliday's material, and his specimen is among the first finds of the species in East Greenland. Owing to this and additional finds made by Roderich Corner, we now know that *S. saccata* is fairly common in the Scoresby Sund area.

Corner visited the area in July 1993 and July and August 1997 and collected lichens at different localities on Gåseland, Milne Land, Bjørneøer and Scoresby Land. Together with some specimens collected by P. & B. Nelson in July

1994 the whole material was forwarded to the author for determination. It includes totally 60 lichen taxa, of which more than a third consists of taxa that are additions to the known lichen flora of the inner part of the fjord system.

The author investigated the lichen flora at four localities near the entrance to Scoresby Sund in the summer of 1987 and recorded 202 lichen taxa from this area. The extensive land areas in the inner part of Scoresby Sund have a very interesting lichen flora with both continental and oceanic elements, which it would be of great importance to investigate more intensively in the light of the ongoing climate changes. The region is presumably much richer in lichens than indicated by the comparatively few finds reported on so far.

MATERIAL AND METHODS

Study area

Gåseland (I), Milne Land (II) and Scoresby Land (IV) are extensive mountainous areas with large ice caps in their central parts (Fig. 1). The mountains rise to altitudes above 2 km, and lichens were collected up to 1400 m a.s.l. at Hjørnedal in Gåseland. However, most lichens collections are from altitudes below 200 m a.s.l. in the coastal lowland areas, which are cut by numerous watercourses. Such watercourses are also abundantly occurring on Karstryggen and in Schuchert Dal, which separates Scoresby Land from Jameson Land. Bjørneøer (III) consist of a dozen islands with mountains up to c. 650 m high. They are located between Milne Land and Renland.

The geological conditions of the region, which is situated within the East Greenland Caledonian fold belt, are rather complex. Migmatitic gneiss, granite and sediments of different age are the dominant rock types (Escher & Stuart Watt, 1976). Tertiary basalts occur, for example, at Hjørnedal. Both acid and alkaline soils are found in the area. *Cassiope tetragona* heaths and other dwarf shrub heaths, fell-fields (often named as "lichen heaths" in the terminology of Corner; true lichen heaths dominated by *Cladonia* – and *Stereocaulon* species presumably occur as patches in openings in dwarf shrub heaths), marshes, snowbeds and saxicolous lichen communities are the most important vegetation types. Floristically, the area can be characterized as medium arctic, continental (Jensen, 1999). Climatically, the Scoresby Sund area is situated both in the low arctic zone (Gåseland) and the high arctic zone (Milne Land, Scoresby Land). The mean temperature of the warmest month, July, is c. 3°C at Ittoqqortoormiit in the oceanic zone near the entrance of Scoresby Sund; the mean temperature of the coldest month, February, is –17°C according to measurements made by Asiaq/Grønlands Forundersøgelser; cf. also Hansen (1995a). The annual precipitation is 365 mm (data for the year 2000). However, the summer is warmer, the winter colder and the precipitation lower in the inner, continental part of Scoresby Sund.

Collection and Identification

Lichens were collected at many sample plots in the Scoresby Sund area (Fig. 1). The collected material, a total of 93 lichen specimens, was studied with Zeiss light microscopes. All determinations were checked by the author. Lichens,

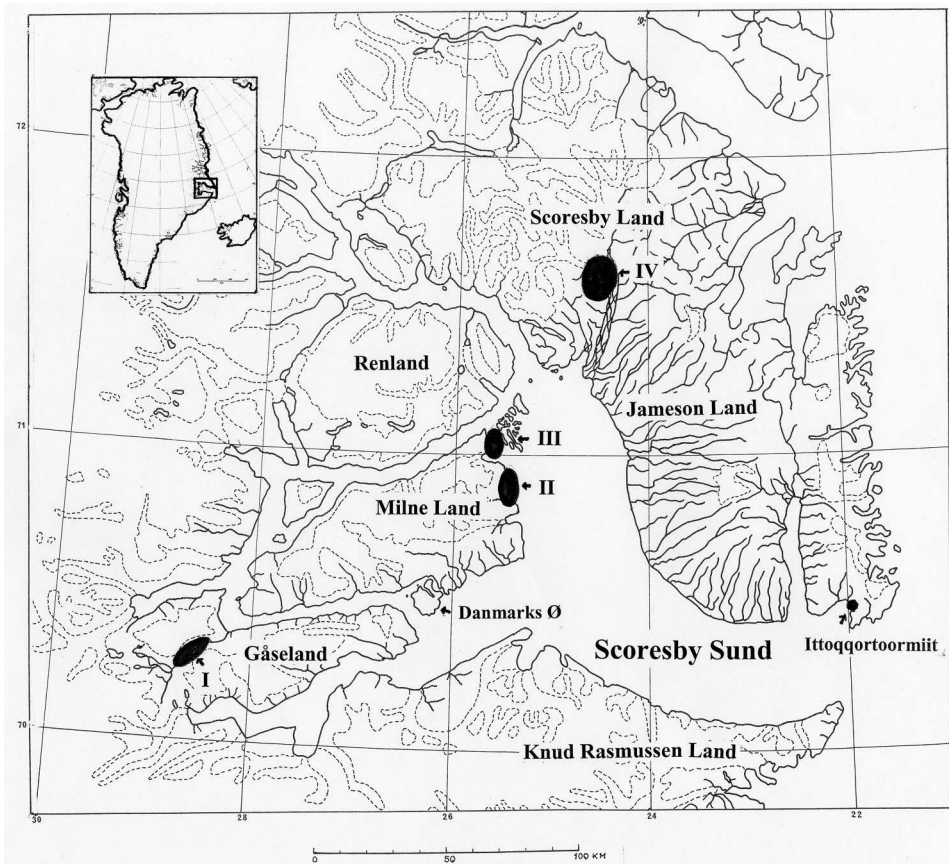


Fig. 1. Location of the investigations area in the Scoresby Sund area in Central East Greenland. I: Gåseland. II: Milne Land. III: Bjørneøer. IV: Scoresby Land. The inlay map of Greenland shows the position of the Scoresby Sund area.

which are new to the inner part of Scoresby Sund, are marked by an asterisk (*) in front of the name in the following list of lichens. The specimens are deposited at the Botanical Museum, University of Copenhagen (C). The nomenclature in the following list of lichens follows Santesson *et al.* (2004).

LIST OF LICHENS

Alectoria nigricans (Ach.) Nyl. – II: Site south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m, on soil over rock ledges together with *Sphaerophorus fragilis*, R. Corner 8 August 1997. A common, circumpolar and bipolar, terricolous lichen.

* *Arctoparmelia centrifuga* (L.) Hale – II: Site west of bay situated south of Bregnepynt, 70°51'N, 25°30'W, alt. 100 m, on mosses on rock, R. Corner 10 August 1997. A common, circumpolar, saxicolous lichen.

* *Arthrorhaphis alpina* (Schaer.) R. Sant. – IV: West side of Karstryggen, 71°33'N, 24°35'W, alt. c. 100 m, on mineral soil, R. Corner 11 July 1993. A widespread, terricolous lichen.

Brodoa oroarctica (Krog) Goward – II: North side of bay south of Bregnepynt, 70°51'N, 25°25'W, alt. 30 m, among mosses on stone in lichen heath, R. Corner 2 August 1997. A common and widespread, saxicolous lichen.

Bryocaulon divergens (Ach.) Kärnefelt – IV: Site at the terminus of Bjørnbo Gletscher, 71°37'N, 24°40'W, alt. c. 300 m, on dry soil on NW. – exposed slope together with *Dryas* sp. and *Flavocetraria cucullata*, R. Corner 13 July 1993. A widespread, terricolous lichen.

Cetraria islandica (L.) Ach. – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil, P. & B. Nelson July 1994; II: North side of bay south of Bregnepynt, 70°51'N, 25°26'W, alt. 20 m, on soil in lichen heath, R. Corner 30 July 1997; site situated west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on soil rich in humus, R. Corner 30 July 1997; site west of bay south of Bregnepynt, 70°51'N, 25°32'W, alt. 100 m, on soil rich in humus, R. Corner 11 August 1997; site south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m, on soil in lichen heath, R. Corner 8 August 1997; site north of Bregnepynt, 70°56'N, 25°27'W, alt. 25 m, on soil in lichen heath, R. Corner 7 August 1997; IV: Karstryggen, 71°33'N, 24°37'W, alt. 600 m, on calcareous soil on scree, R. Corner 11 July 1993. A common, widespread, terricolous lichen.

Cetraria muricata (Ach.) Eckfeldt – IV: South side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°39'W, alt. 200 m, on soil on scree, R. Corner 13 July 1993. A widespread, terricolous lichen.

Cetrariella delisei (Bory ex Schaer.) Kärnefelt & Thell – II: Site south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m, on soil in lichen heath, R. Corner 8 August 1997; III: Most westerly island of Bjørneøer, 71°03'N, 25°36'W, alt. 10 m, on soil in lichen heath, R. Corner 4 August 1997 (the specimen is fertile); west side of Karstryggen, 71°33'N, 24°35'W, alt. 100 m, on soil, R. Corner 11 July 1993 (the specimen is fertile). A common, circumpolar, terricolous lichen.

Cladonia amaurocraea (Flörke) Schaer. – II: North side of bay south of Bregnepynt, 70°51'N, 25°25'W, alt. 30 m, on soil in lichen heath together with *Cladonia gracilis* and *Flavocetraria cucullata*, R. Corner 2 August 1997. A common, circumpolar, terricolous lichen.

* *Cladonia borealis* S. Stenroos – I: Hjørnedal, c. 70°18'N, 28°30'W, near sea level, on soil rich in humus, P. & B. Nelson July 1994; III: East side of the most westerly island of Bjørneøer, 71°03'N, 25°36'W, alt. 30 m, on soil in lichen heath, R. Corner 4 August 1997. A common and widespread, terricolous lichen. The last mentioned specimen is fertile.

Cladonia cariosa (Ach.) Spreng. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on clayey soil in *Cassiope tetragona* heath, R. Corner 30 July 1997. A widespread, terricolous lichen.

* *Cladonia cornuta* (L.) Hoffm. – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil rich in humus, P. & B. Nelson July 1994. A widespread, terricolous lichen.

* *Cladonia ecmocyna* Leight. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°32'W, alt. 100 m, on plant remains in *Salix herbacea* snowbed together with *Cetraria islandica*, R. Corner 11 August 1997. A common, circumpolar, terricolous lichen.

Cladonia gracilis (L.) Willd. – II: Site west of bay south of Bregnepynt, 70°50'N, 25°27'W, alt. 10 m, among mosses in *Cassiope tetragona* heath at the base of E.-exposed cliff, R. Corner 31 July 1997 & alt. 50 m, on soil at the base of cliff, 11 August 1997; north side of bay south of Bregnepynt, 70°51'N, 25°25'W, alt. 30 m, on soil in lichen heath, R. Corner 2 August 1997. A common, circumpolar, terricolous lichen.

* *Cladonia mitis* Sandst. – II: Site west of bay south of Bregnepynt, 70°50'N, 25°27'W, alt. 10 m, on soil in *Cassiope tetragona* heath rich in lichens, R. Corner 31 July 1997; site just south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m, on soil in heath rich in lichens together with *Stereocaulon alpinum*, R. Corner 8 August 1997; Bregnepynt, 70°55'N, 25°24'W, alt. 30 m, on soil in heath rich in lichens, R. Corner 7 August 1997; IV: Site at the south side of watercourse from Bjørnbo Gletscher, 71°37'N, 24°39'W, alt. 200 m, among mosses on sheltered scree, R. Corner 13 July 1993. A common and widespread, terricolous lichen.

* *Cladonia phyllophora* Hoffm. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on soil in lichen heath, R. Corner 30 July 1997. A circumpolar, terricolous lichen.

Cladonia pocillum (Ach.) Grognot – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil, P. & B. Nelson July 1994. A widespread, more or less calciphilous and terricolous lichen.

Cladonia pyxidata (L.) Hoffm. – I: Hjørnedal, c. 70°18'N, 28°30'W, near sea level, on mineral soil, P. & B. Nelson July 1994. A common, widespread, terricolous lichen.

Cladonia rangiferina (L.) F. H. Wigg. – II: Site west of bay south of Bregnepynt, 70°50'N, 25°27'W, alt. 10 m, among mosses in *Cassiope tetragona* heath rich in mosses, R. Corner 31 July 1997 & 70°50'N, 25°29'W, alt. 50 m, on soil at the base of cliff, R. Corner 11 August 1997 & 70°51'N, 25°30'W, alt. 100 m, on soil on N.-exposed ledge, R. Corner 10 August 1997. A common and widespread, terricolous lichen.

* *Cladonia stygia* (Fr.) Ruoss – II: Site west of bay south of Bregnepynt, 70°50'N, 25°29'W, alt. 50 m, on soil at the base of cliff, R. Corner 11 August 1997; III: West side of the most westerly island of Bjørneøer, 71°03'N, 25°37'W, at sea level, among mosses on rock ledge, R. Corner 4 August 1997 & alt. 30 m & 100 m, on soil in *Cassiope tetragona* heath patches, R. Corner 5 August 1997. A widespread, terricolous lichen.

* *Cladonia sulphurina* (Michx.) Fr. – II: Site just north of Bregnepynt, 70°55'N, 25°26'W, alt. 30 m, on soil rich in humus in lichen heath, R. Corner 7 August 1997; site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 30 m, on plant remains in lichen heath, R. Corner 30 July 1997. A common, circumpolar, terricolous lichen.

* *Cladonia trassii* Ahti – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil, P. & B. Nelson July 1994. A widespread, terricolous lichen with a distinct preference for moist habitats.

* *Collema undulatum* Laurer ex Flot. var. *granulosum* Degel. – IV: West side of Karstryggen, 71°33'N, 24°35'W, alt. 100 m, on limestone rocks, R. Corner 11 July 1993. A widespread, saxicolous lichen.

* *Cystocoleus ebeneus* (Dillwyn) Thwaites – IV: Site at the south side of watercourse from Bjørnbo Gletscher, 71°37'N, 24°37'W, alt. 100 m, on N. – exposed, sloping rock face in *Cassiope tetragona* heath, R. Corner 13 July 1993. A circumpolar and bipolar, saxicolous lichen.

Flavocetraria cucullata (Bellardi) Kärnefelt & Thell – II: North side of bay south of Bregnepynt, 70°51'N, 25°25'W, alt. 30 m, on soil in lichen heath, R. Corner 2 August 1997; IV: Site at the south side of watercourse from Bjørnbo Gletscher, 71°37'N, 24°39'W, alt. 200 m, on soil on scree, R. Corner 13 July 1993; site at the terminus of Bjørnbo Gletscher, 71°37'N, 24°40'W, alt. c. 300 m, on soil on dry, NW.-exposed slope with *Dryas* sp., R. Corner 13 July 1993. A common and widespread, terricolous lichen.

Flavocetraria nivalis (L.) Kärnefelt & Thell – I: Hjørnedal, c. 70°18'N, 28°30'W, alt. 1400 m, over mosses, P. & B. Nelson July 1994; II: Site south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m, on soil on lichen rich ledge, R. Corner 8 August 1997; IV: Karstryggen, 71°33'N, 24°37'W, alt. 600 m, on soil on limestone scree, R. Corner 11 July 1993. A common and widespread, terricolous lichen.

* *Leprocaulon subalbicans* (I. M. Lamb) I. M. Lamb & A. M. Ward – II: Site west of bay south of Bregnepynt, 70°51'N, 25°30'W, alt. 100 m, on *Andreaea* sp. over rock, R. Corner 10 August 1997. Distributed in North America and Greenland and often growing on mosses over fairly moist rock faces.

* *Leptogium lichenoides* (L.) Zahlbr. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 10 m, on plant remains on seepage rock face, R. Corner 31 July 1997; IV: Karstryggen, 71°33'N, 24°35'W, alt. c. 200 m, on moss cushion, R. Corner 11 July 1993. A circumpolar, terricolous lichen.

Lopadium coralloideum (Nyl.) Lynge – II: Site west of bay south of Bregnepynt, 70°50'N, 25°29'W, alt. 20 m, on plant remains in lichen heath on sheltered, E.-facing ledge, R. Corner 31 July 1997. A circumpolar, terricolous and sometimes saxicolous lichen.

Melanelia commixta (Nyl.) Thell – II: Site west of bay south of Bregnepynt, 70°51'N, 25°26'W, alt. 30 m, on thallus of *Umbilicaria virginis*, R. Corner 30 July 1997. A circumpolar, saxicolous lichen.

* *Melanelia disjuncta* (Erichsen) Essl. – III: Northern end of the most westerly island of Bjørneøer, 71°04'N, 25°37'W, alt. 50 m, on rock, R. Corner 5 August 1997. IV: South side of watercourse at Bjørnbo Gletscher, 71°36'N, 34°33'W, alt. 50 m, on boulder, R. Corner 12 July 1993. A circumpolar, saxicolous lichen.

Melanelia hepatizon (Ach.) Thell – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on rock, R. Corner 30 July 1997. A common, circumpolar, saxicolous lichen.

Melanelia stygia (L.) Essl. – IV: Karstryggen, 71°33'N, 24°36'W, alt. 200 m, on siliceous boulder, R. Corner 11 July 1993 & 16 July 1993; south side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°35'W, alt. 50 m, on boulder, R. Corner 12 July 1993. A circumpolar, saxicolous lichen.

* ***Nephroma expallidum*** (Nyl.) Nyl. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°26'W, alt. 200 m, on soil in *Cassiope tetragona* heath, R. Corner 30 July 1997; site south of Bregnepynt, 70°55'N, 25°24'W, alt. 200 m, among mosses in *Cassiope tetragona* heath, R. Corner 7 August 1997; IV: South side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°37'W, alt. 100 m, on mosses and plant remains in N.-exposed *Cassiope tetragona* heath, R. Corner 13 July 1993. A circumpolar, terricolous lichen, which is comparatively common in West Greenland, but rare in East Greenland (Hansen, 1995).

Ochrolechia frigida (Sw.) Lynge – I: Hjørnedal, c. 70°18'N, 28°30'W, near sea level, on soil rich in humus, P. & B. Nelson July 1994. A common and widespread lichen.

Parmelia saxatilis (L.) Ach. – II: Site south of Bregnepynt, 70°55'N, 25°26'W, alt. 30 m, on lichen rich rock ledge together with *Sphaerophorus fragilis*, R. Corner 7 August 1997. A common and widespread, saxicolous lichen.

* ***Parmeliella triptophylla*** (Ach.) Müll. Arg. – IV: South side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°37'W, alt. 100 m, on plant remains on N.-exposed *Cassiope* heath, R. Corner 13 July 1993. A widespread, terricolous lichen.

Peltigera didactyla (With.) J. R. Laundon – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on soil, R. Corner 30 July 1997. A common and widespread, terricolous lichen. The specimen is infested with *Illosporium carneum* Fr.

* ***Peltigera leucophlebia*** (Nyl.) Gyeln. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on mosses in lichen heath, R. Corner 30 July 1997; site south of Bregnepynt, 70°55'N, 25°24'W, alt. 200 m & 70°55'N, 25°26'W, alt. 30 m, both specimens growing on mosses in *Cassiope tetragona* heath rich in lichens, R. Corner 7 August 1997; IV: South side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°37'W, alt. 100 m, on mosses in *Cassiope tetragona* heath, R. Corner 13 July 1993. A widespread, terricolous lichen.

Peltigera rufescens (Weiss) Humb. – I: Hjørnedal, c. 70°18'N, 28°30'W, alt. 1400 m, on mosses, P. & B. Nelson July 1994; IV: West side of the southernmost part of Schuchert Dal, 71°21'N, 24°37'W, alt. c. 100 m, on mineral soil and mosses, P. & B. Nelson 18 July 1994. A common and widespread, terricolous lichen with preference for alkaline ground.

Peltigera venosa (L.) Hoffm. – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil together with *Lepraria* sp., P. & B. Nelson July 1994; III: The most westerly island

of Bjørneøer, 71°03'N, 25°37'W, alt. 20 m, on soil on seepage rock face, R. Corner 5 August 1997. A widespread, terricolous lichen with preference for calcareous soil.

* *Pertusaria geminipara* (Th. Fr.) C. Knight ex Brodo – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil, P. & B. Nelson July 1994. A widespread, bipolar, terricolous lichen.

Physcia caesia (Hoffm.) Fűrnr. – IV: East side of Karstryggen, 71°33'N, 24°37'W, alt. 200 m, on siliceous boulder, R. Corner 16 July 1993. A widespread, saxicolous lichen with preference for manured and alkaline substrates.

Physconia muscigena (Ach.) Poelt – I: Hjørnedal, c. 70°18'N, 28°30'W, alt. 1400 m, on mosses, P. & B. Nelson July 1994. A circumpolar, terricolous and saxicolous lichen.

* *Protoblastenia rupestris* (Scop.) J. Steiner – IV: West side of Schuchert Dal, 71°29'N, 24°31'W, alt. 50 m, on calcareous rock within sprayzone of waterfall together with *Verrucaria* sp., R. Corner 17 July 1993. A circumpolar, saxicolous lichen with preference for alkaline rocks.

Pseudophebe minuscula (Nyl. Ex Arnold) Brodo & D. Hawksw. – IV: East side of Karstryggen, 71°33'N, 24°36'W, alt. 200 m, on siliceous boulder, R. Corner 11 July 1993; south side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°35'W, alt. 50 m, on boulder, R. Corner 12 July 1993. A common, bipolar, saxicolous lichen.

Psora decipiens (Hedw.) Hoffm. – IV: East side of Karstryggen, 71°33'N, 24°35'W, alt. c. 300 m, on mineral soil, R. Corner 9 July 1993. A widespread, terricolous lichen with preference for alkaline soil.

Rhizocarpon geographicum (L.) DC. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 50 m, on siliceous rock, R. Corner 30 July 1997; III: The most westerly island of Bjørneøer, 71°03'N, 25°37'W, alt. 30 m, on siliceous rock, R. Corner 5 August 1997. A common and widespread, saxicolous lichen.

Rinodina mniaraea (Ach.) Körb. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 10 m, on plant remains on seepage rock face, R. Corner 31 July 1997. A common, circumpolar, terricolous lichen.

Solorina crocea (L.) Ach. – I: Hjørnedal, c. 70°18'N, 28°30'W, on mineral soil, P. & B. Nelson July 1994; IV: South side of watercourse at Bjørnbo Gletscher, 71°37'N, 24°39'W, alt. 200 m, on soil and mosses on scree, R. Corner 13 July 1993. A common, circumpolar snowbed-lichen.

Solorina saccata (L.) Ach. – II: Site west of bay south of Bregnepynt, 70°50'N, 25°29'W, alt. 30 m, on soil in heath rich in mosses, R. Corner 10 July 1997; site south of Bregnepynt, 70°55'N, 25°25'W, alt. 200 m, on mosses in crevice of basic rock on cliff, R. Corner 8 August 1997; IV: East side of Karstryggen, 71°33'N, 24°35'W, alt. 100 m, on mineral soil, R. Corner 11 July 1993. A widespread, terricolous lichen with preference for alkaline soil.

Sphaerophorus fragilis (L.) Pers. – II: Sites west of bay south of Bregnepynt, 70°51'N, 25°27'W, alt. 20 m, on soil in lichen heath on sheltered, E.-exposed ledge, R. Corner 31 July 1997 & 70°51'N, 25°30'W, alt. 50 m, on boulder on scree below cliff, R. Corner 11 July 1997; sites south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m & 70°55'N, 25°26'W, alt. 30 m, on lichen rich rock ridges, R. Corner 7 & 8 August 1997. A widespread, saxicolous lichen.

Stereocaulon alpinum Laurer – I: Hjørnedal, c. 70°18'N, 28°30'W, alt. 1400 m, on soil, P. & B. Nelson July 1994; II: Site south of Bregnepynt, 70°54'N, 25°24'W, alt. 20 m, on soil in lichen rich heath, R. Corner 8 August 1997. A common, circumpolar, terricolous lichen.

* ***Stereocaulon glareosum*** (L. I. Savicz) H. Magn. – I: Hjørnedal, c. 70°18'N, 28°30'W, on soil, P. & B. Nelson July 1994; III: East side of the most westerly island of Bjørneøer, 71°03'N, 25°36'W, alt. 30 m, on soil in lichen heath, R. Corner 4 August 1997; IV: Karstryggen, Øvre Arkosedal, 71°34'N, 24°46'W, on soil, P. & B. Nelson 13 July 1993. A circumpolar, terricolous lichen. The two last mentioned specimens are fertile.

* ***Toninia arctica*** Timdal – IV: West side of Schuchert Dal, 71°21'N, 24°37'W, alt. c. 100 m, on mineral soil and mosses, P. & B. Nelson 18 July 1993. A terricolous lichen known from North America and Greenland.

* ***Umbilicaria deusta*** (L.) Baumg. – II: Sites west of bay south of Bregnepynt, 70°50'N, 25°27'W, alt. 10 m, on seepage channel on small, sheltered cliff & 70°51'N, 25°27'W, alt. 10 m, on seepage rock face, R. Corner 31 July 1997; III: East side of the most westerly island of Bjørneøer, 71°03'N, 25°36'W, alt. 50 m, on seepage rock face on sheltered cliff, R. Corner 4 August 1997. A circumpolar, saxicolous lichen with preference for temporarily moistened rock faces.

Umbilicaria vellea (L.) Hoffm. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°25'W, alt. 20 m, in seepage cracks on sheltered, vertical rock face, R. Corner 31 July 1997; III: Site on the most westerly island of Bjørneøer, 71°03'N, 25°37'W, alt. 20 m, in seepage cracks in sheltered, vertical rock, R. Corner 4 August 1997. A circumpolar, saxicolous lichen with preference for vertical rock faces. The thallus from the first locality is 10 cm broad.

Umbilicaria virginis Schaer. – II: Site west of bay south of Bregnepynt, 70°51'N, 25°26'W, alt. 30 m, on rock, R. Corner 30 July 1997. A common, circumpolar, saxicolous lichen.

* ***Usnea sphacelata*** R. Br. – I: Hjørnedal, c. 70°18'N, 28°30'W, alt. 1400 m, on rock, P. & B. Nelson July 1994. A widespread, bipolar, saxicolous lichen.

Xanthoria elegans (Link) Th. Fr. – IV: Karstryggen, 71°33'N, 24°37'W, alt. 200 m, on boulder, R. Corner 16 July 1993. A common and widespread, nitrophilous, saxicolous lichen.

CONCLUSION

R. Corner's lichen collections from the Scoresby Sund area constitute a valuable supplement to those of N. Hartz. Totally, they give an impression of a rich and diverse lichen flora consisting of different floristic elements known from

other parts of Greenland. Thus species such as *Cetrariella delisei*, *Cladonia ecmocyna*, *Solorina crocea* and *Umbilicaria deusta* belong to an oceanic element, which is commonly distributed in coastal areas of Greenland (Hansen, 1995b). A distinct continental element is represented by the following lichens: *Cladonia pocillum*, *Leptogium lichenoides*, *Melanelia disjuncta*, *Nephroma expallidum*, *Physconia muscigena*, *Psora decipiens*, *Protoblastenia rupestris*, *Rinodina mniaraea*, *Solorina saccata* and *Toninia arctica*.

Contrary to the oceanic lichens most of the continental species are restricted to more or less alkaline substrates, and therefore occur abundantly in North East Greenland and inland areas with calcareous ground in West Greenland (Hansen, 2001). Branth (1894) mentions *Acarospora schleicheri* as a foreign and very southern element in the lichen flora of Greenland, but to-day we know that the species is widely distributed in steppe-like areas in North America and Greenland and in the Mediterranean and South Africa as well (Lyngé, 1940; Poelt & Vezda, 1977; Hansen, 1995b, 2000, 2002; Thomson, 1997).

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