

## **A contribution to the lichen flora of Hold with Hope and Hudson Land, North East Greenland**

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**Abstract** – This paper lists 80 taxa of lichens from Hold with Hope and Hudson Land in North East Greenland. 15 species are new to this region. *Vulpicida tilesii* represents a southern range extension in Greenland. Notes on the distribution of the collected taxa are given.

**Lichen flora/ Hold with Hope/ Hudson Land/ Greenland**

### **INTRODUCTION**

The area between Scoresby Land (c. 72°N) and Wollaston (c. 74°N) is fairly well known lichenologically owing to the comprehensive collection work by B. Lyngé and P. F. Scholander during two Norwegian expeditions in 1929 and 1930 (Lyngé & Scholander, 1932; Lyngé, 1940). The British physician, R. Corner, and Mrs. K. Watson visited some of Lyngé's and Scholander's localities, for example, Myggbukta, Moskusoksefjord and Loch Fyne, but they also collected lichens in a number of additional localities, which apparently are very rich in lichens. This valuable material was forwarded to the author for determination. Totally Corner and Watson collected 80 taxa of lichens, i. e. about a third of the known lichen flora of Hold with Hope and Hudson Land. Comprehensive lichen collections are available from the areas just north and south of this region (Deichmann Branth, 1894; Lyngé & Scholander, 1932; Lyngé, 1940; Hansen, 1982, 1996, 2008a & b). However, extensive areas along the coast of North East Greenland have never been visited by lichenologists and accordingly are in need of additional investigations. Presumably they are just as rich in lichens as the land areas farther north in East Greenland (Alstrup *et al.*, 2000).

### **MATERIAL AND METHODS**

#### **Study area**

The fjord, Loch Fyne, and the valley, Badlanddal, separate the mountainous and more or less coastal Hold with Hope area from the likewise mountainous, but more inland Hudson Land area. The maximum altitude of the mountains is about 1500 m a. s. l. Both areas are intersected by numerous valley and watercourses, for example, Badlanddal, Ulvedal and Stordal. The geological

conditions of the region are fairly complex. Tertiary basalts are of great importance on Hold with Hope, while Devonian and younger sediments are the predominant rocks in Hudson Land. These sediments border on to rocks belonging to the Caledonian fold belt farther inland (Escher & Stuart Watt, 1976). All these rocks are rich in nutrients, and this is distinctly reflected in the composition of the lichen flora with many eutrophic species. Floristically and climatically Hold with Hope differs from Hudson Land. The first area is situated in the medium arctic, oceanic zone, while Hudson Land is located in the medium arctic, continental zone (Jensen, 1999). Therefore, the meteorological observations from Daneborg (Hansen, 2008b) give a very rough estimate of the climatic conditions of the two land areas, only.

### Collection and Identification

Collection of lichens was carried out at numerous sample plots in Hope with Hope and Hudson Land (Fig. 1). The collected material, a total of 107 lichen specimens, was studied with Zeiss light microscopes and determined/checked by the author. An asterisk (\*) in front of the name in the list of lichens indicates that the taxon is an addition to the lichen flora of the region. The specimens are deposited at the Botanical Museum, University of Copenhagen (C). The nomenclature in the list follows Santesson *et al.* (2004).

### LIST OF LICHENS

*Alectoria nigricans* (Ach.) Nyl. – I: Myggbukta, 73°31'N, 21°37'W, alt. 200 m, on soil on hill in bare scree area, R. Corner 16 July 1984. A common, bi- and circumpolar, terricolous lichen (Hansen, 1995).

*Arthrorhaphis alpina* (Schaer.) R. Sant. – I: Myggbukta, 73°30'N, 21°28'W, alt. 100 m, on mineral soil together with *Cladonia pocillum*, R. Corner 17 July 1984. A widespread, bipolar, terricolous lichen (Nimis, 1993).

*Aspicilia candida* (Anzi) Hue – VI: Upper Stordal, c. 73°50'N, 22°30'W, on sandstone fragment together with *Polysporina simplex*, K. Watson 1983. A widespread, circumpolar, saxicolous lichen with distinct preference for rocks with high contents of calcium (Thomson, 1997; Brodo *et al.*, 2001).

\* *Baeomyces carneus* Flörke – VII: Loch Fyne, c. 73°40'N, 22°00'W, alt. 75 m, on mineral soil on ridge together with *Candelariella placodizans*, *Cetrariella delisei*, *Cladonia pocillum* and *Fulgensia bracteata*, K. Watson 1983. A widespread, bi- and circumpolar, terricolous lichen (Hansen, 2008b).

*Brodoa oroarctica* (Krog) Goward – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 500 m & 800 m, on rocks, R. Corner 24 July 1984. A widespread, circumpolar, saxicolous lichen (Hansen, 2008a).

*Bryoria chalybeiformis* (L.) Brodo & D. Hawksw. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mosses, R. Corner 24 July 1984. A widespread, bi- and circumpolar, terricolous lichen (Hansen, 2008b).

*Buellia papillata* (Sommerf.) Tuck. – VII: Loch Fyne, c. 73°40'N, 22°00'W, on mosses, K. Watson 1983. A widespread, bi- and circumpolar, terricolous and muscicolous lichen (Hansen, 2008b).

*Caloplaca castellana* (Räsänen) Poelt – VI: Upper Stordal, 73°51'N, 22°27'W, alt. c. 500 m, on *Rhizocarpon geminatum* on siliceous stone, R. Corner

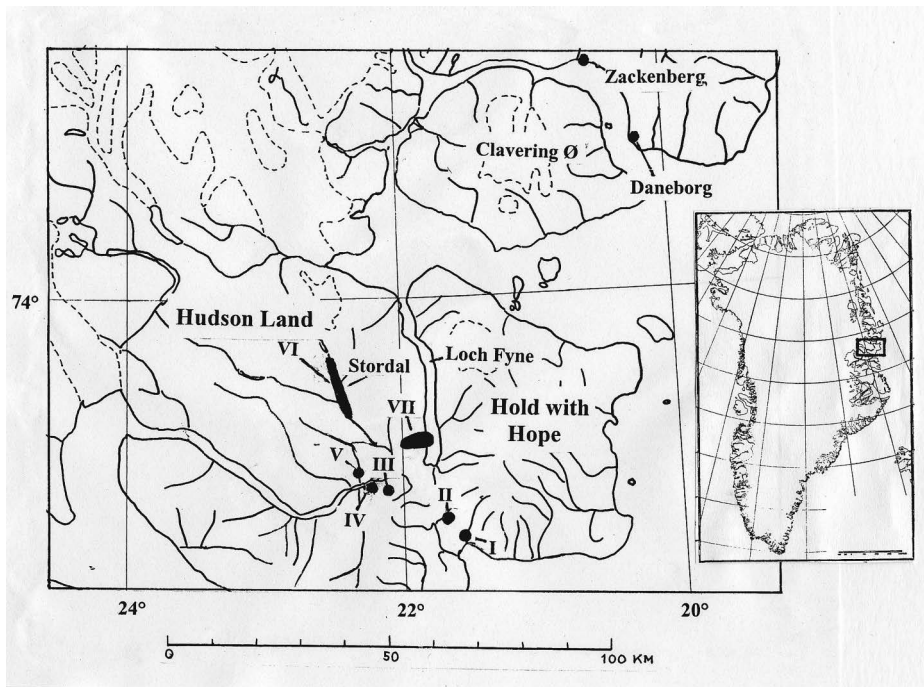


Fig. 1. Location of the investigation areas and localities in Hope with Hope and Hudson Land in North East Greenland. I: Myggbukta. II: Badlanddal. III: Ladderbjærg. IV: Ulvedal. V: Moskusoksefjord. VI: Stordal & Upper Stordal. VII: Loch Fyne. The inlay map of Greenland shows the position of Hold with Hope and Hudson Land.

24 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, on *Rhizocarpon geminatum* on siliceous rock, K. Watson 1983. A widespread, circumpolar, saxicolous lichen (Hansen, 1995).

*Caloplaca cerina* (Ehrh. ex Hedw.) Th. Fr. – VII: Loch Fyne, 73°40'N, 22°00'W, on reindeer antlers together with, for example, *Candelariella aurella* and *Lecanora hagenii* v. *fallax*, K. Watson 1983. A widespread, circumpolar, terricolous lichen (Hansen, 1995).

\* *Caloplaca citrina* (Hoffm.) Th. Fr. – VII: Loch Fyne, 73°40'N, 22°00'W, on reindeer antlers, K. Watson 1983. A cosmopolitan species growing on more or less calcareous substrates (Nimis, 1993; Thomson, 1997).

*Caloplaca tiroliensis* Zahlbr. – VII: Loch Fyne, 73°40'N, 21°57'W, alt. 200 m, on mosses together with *Cladonia pocillum* and *Physconia muscigena*, R. Corner 13 July 1984. A widespread, bi- and circumpolar, terricolous lichen (Hansen, 1995).

*Candelariella aurella* (Hoffm.) Zahlbr. – VII: Loch Fyne, 73°40'N, 22°00'W, on reindeer antlers, K. Watson 1983. A cosmopolitan species growing on many types of substrates (Nimis, 1993; Hansen, 1995).

*Candelariella placodizans* (Nyl.) H. Magn. – VII: Loch Fyne, 73°40'N, 22°00'W, alt. 75 m, on mineral soil on ridge, K. Watson 1983. A widespread, circumpolar, terricolous lichen (Hansen, 1995).

*Candelariella vitellina* (Hoffm.) Müll. Arg. – I: Myggbukta, 73°31'N, 21°37'W, alt. 100 m & 150 m, on siliceous stones on hill together with, for

example, *Rhizocarpon geographicum*, Corner 16 July 1984; VI: Upper Stordal, 73°50'N, 22°30'W, on siliceous rock together with *Physcia dubia* and *Xanthoria elegans*, K. Watson 1983. A cosmopolitan, saxicolous lichen (Hansen, 1995).

\* *Cetraria islandica* (L.) Ach. – I: Myggbukta, 73°29'N, 21°34'W, alt. 100 m, on soil in *Dryas-Cassiope tetragona* heath, R. Corner 18 July 1984; V: Moskusoksefjord, 73°35'N, 22°25'W, alt. 200 m, among mosses on soil, R. Corner 30 July 1984. A common and widespread, terricolous lichen.

*Cetraria muricata* (Ach.) Eckfeldt – I: Myggbukta, 73°31'N, 21°35'W, alt. 270 m, on soil on top of hill together with *Evernia mesomorpha*, *Hypogymnia subobscura* and *Physconia muscigena*, R. Corner 16 July 1984; III: Ladderbjærg, c. 73°36'N, 22°10'W, alt. c. 1000 m, among mosses together with *Flavocetraria nivalis*, *Physconia muscigena* and *Stereocaulon alpinum*, K. Watson 1983; VII: Loch Fyne, 73°40'N, 22°00'W, on mosses on soil, K. Watson 1983. A widespread, circumpolar, terricolous lichen.

*Cetrariella delisei* (Bory ex Schaer.) Kärnefelt & Thell – V: Moskusoksefjord, 73°35'N, 22°25'W, alt. 200 m, among mosses, R. Corner 30 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, alt. 75 m, on mineral soil on ridge, K. Watson 1983. A common, circumpolar, terricolous lichen.

*Cladonia pocillum* (Ach.) Grognot – I: Myggbukta, 73°30'N, 21°28'W, alt. 100 m, on soil on coastal cliff together with *Phaeophyscia kairamoi*, R. Corner 15 July 1984; VI: Stordal, 73°42'N, 22°00'W, alt. 300 m, on mineral soil on S. – exposed slope below snowbed together with *Psora decipiens*, R. Corner 28 July 1984; Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mosses, R. Corner 24 July 1984; VII: Loch Fyne, 73°40'N, 21°57'W, alt. 200 m, on mosses near pond, R. Corner 13 July 1984 & 73°42'N, 21°53'W, alt. 200 m, on mosses on soil in marsh, R. Corner 12 July 1984 & 73°40'N, 22°00'W, alt. 75 m, on soil on ridge, K. Watson 1983. A widespread, circumpolar, terricolous lichen.

*Collema bachmanianum* (Fink) Degel. v. *millegranum* Degel. – I: Myggbukta, 73°30'N, 21°28'W, alt. 100 m, on soil in depression on talus slope, R. Corner 17 July 1984; VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on soil and gravel on W. – exposed talus slope together with *Phaeophyscia sciastra*, R. Corner, 24 July 1984; VII: Loch Fyne, 73°41'N, 21°55'W, on mosses on rock, R. Corner 12 July 1984. A scattered, circumpolar, terricolous lichen (Nimis, 1993).

*Dermatocarpon polyphyllizum* (Ny.) Blomb. & Forssell – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 300 m, along crevices in rock, R. Corner 24 July 1984. *D. polyphyllizum* is known from Russia, Greenland, the Nordic countries and Antarctica (Heidmarsson, 2001).

*Evernia mesomorpha* Nyl. – I: Myggbukta, 73°31'N, 21°35'W, alt. 270 m, on soil on the top of hill, R. Corner 16 July 1984. A circumpolar, otherwise corticolous lichen with a disjunct distribution in Central East Greenland (Thomson, 1984).

*Flavocetraria cucullata* (Bellardi) Kärnefelt & Thell – I: Myggbukta, 73°29'N, 21°34'W, alt. 100 m, on soil in *Dryas-Cassiope tetragona* heath, R. Corner 18 July 1984. A widespread, terricolous lichen.

*Flavocetraria nivalis* (L.) Kärnefelt & Thell – III: Ladderbjærg, 73°36'N, 22°10'W, alt. c. 1000 m, among mosses, K. Watson 1983; VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mosses, R. Corner 24 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, alt. c. 75 m, K. Watson 1983. A common and widespread, terricolous lichen.

*Fulgensia bracteata* (Hoffm.) Räsänen – VII: Loch Fyne, 73°40'N, 22°00'W, alt. c. 75 m, on soil on ridge together with *Cladonia pocillum*, K. Watson 1983. A widespread, circumpolar, terricolous lichen (Hansen, 1995).

\* *Hypogymnia austerodes* (Nyl.) Räsänen – VI: Upper Stordal, 73°51'N, 22°27'W, alt. c. 600 m, on soil and plant remains, R. Corner 24 July 1984. A widespread, circumpolar, terricolous lichen (Hansen, 1995).

*Hypogymnia subobscura* (Vain.) Poelt – I: Myggbukta, 73°31'N, 21°35'W, 270 m, on soil on top of hill, R. Corner 16 July 1984 & 73°31'N, 21°37'W, alt. 200 m, on mosses and soil together with *Megaspora verrucosa*, R. Corner 16 July 1984. A widespread, circumpolar, terricolous lichen (Thomson, 1984).

\* *Ionaspis lacustris* (With.) Lutzoni – VII: Loch Fyne, 73°43'N, 21°53'W, alt. 200 m, in spray zone on basaltic rock by waterfall together with *I. suaveolens*, R. Corner 12 July 1984 & on rock by melt water runnel, R. Corner 13 July 1984. A scattered, circumpolar, saxicolous lichen (Thomson, 1997).

\* *Ionaspis suaveolens* (Fr.) Th. Fr. ex Stein – VII: Loch Fyne, 73°43'N, 21°53'W, alt. 200 m, on moist basaltic rock, R. Corner 12 July 1984. A scattered, circumpolar, saxicolous lichen (Thomson, 1997).

*Lecanora argopholis* (Ach.) Ach. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. c. 600 m, on siliceous rock near stream in ravine. R. Corner 24 July 1984. A widespread, circumpolar, saxicolous lichen (Hansen, 1995).

*Lecanora atromarginata* (H. Magn.) Hertel & Rambold – VI: Upper Stordal, 73°51'N, 22°27'W, alt. c. 500 m, on siliceous stone, R. Corner 24 July 1984. A widespread, circumpolar, saxicolous lichen.

*Lecanora* cf. *dispersa* (Pers.) Sommerf. – VI: Upper Stordal, c. 73°50'N, 22°30'W, on siliceous stone together with, for example, *Xanthoria elegans*, K. Watson 1983. A common and widespread, circumpolar lichen growing on many types of substrates (Thomson, 1997).

*Lecanora epibryon* (Ach.) Ach. – VII: Loch Fyne, 73°40'N, 22°00'W, alt. c. 75 m, on soil, K. Watson 1983. A widespread, circumpolar, terricolous lichen.

*Lecanora hagenii* (Ach.) Ach. v. *fallax* Hepp – VII: Loch Fyne, 73°40'N, 22°00'W, on reindeer antlers, K. Watson 1983. A widespread, circumpolar lichen growing on old bones, plant remains etc.

*Lecidea atrobrunnea* (Ramond ex Lam. & DC.) Schaer. – I: Myggbukta, 73°31'N, 21°37'W, alt. 100 m, on siliceous rock, R. Corner 16 July 1984; VII: Loch Fyne, 73°40'N, 21°57'W, alt. 200 m, on bird perch knoll, R. Corner 11 July 1984. A widespread, bi- and circumpolar, saxicolous lichen (Nimis, 1993).

*Lecidea ramulosa* Th. Fr. – VII: Loch Fyne, 73°40'N, 21°57'W, alt. c. 200 m, on mosses on soil rich in humus near pond, R. Corner 13 July 1984. A scattered, circumpolar, terricolous lichen (Thomson, 1997).

*Lecidea tessellata* Flörke – VII: Loch Fyne, 73°40'N, 22°00'W, on basaltic rock together with *Melanelia infumata*, *Sporastatia testudinea* and *Xanthoria elegans*, K. Watson 1983; 73°42'N, 21°53'W, alt. 200 m, on basaltic rock on low cliff, R. Corner 12 July 1984. A widespread, bi- and circumpolar, saxicolous lichen.

\* *Lecidella bullata* Körb. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 600 m, on siliceous rock near waterfall in small ravine, R. Corner 24 July 1984 & 73°52'N, 22°30'W, on siliceous rock together with *Melanelia infumata*, *Physcia dubia*, *Umbilicaria virginis* and *Xanthoria elegans*, R. Corner 23 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, on calcareous sandstone together with *Xanthoria elegans*, K. Watson 1983. A widespread, circumpolar, saxicolous lichen (Thomson, 1997).

*Lecidella euphorea* (Flörke) Hertel – VII: Loch Fyne, 73°40'N, 22°00'W, on reindeer antlers, K. Watson 1983. A widespread, circumpolar lichen growing on old bones, wood etc. (Hansen, 1995).

*Lobothallia melanaspis* (Ach.) Hafellner – VII: Loch Fyne, 73°43'N, 21°53'W, alt. 150 m, on periodically submerged stones in melt water runnel,

R. Corner 13 July 1984. A widespread, circumpolar, saxicolous lichen (Nimis, 1993; Hansen, 1995).

*Megaspora verrucosa* (Ach.) Hafellner & V. Wirth – I: Myggbukta, 73°31'N, 21°37'W, alt. 200 m, on soil, R. Corner 16 July 1984. A widespread, bi- and circumpolar, terricolous lichen (Nimis, 1993; Hansen, 1995).

*Melanelia infumata* (Nyl.) Essl. – I: Myggbukta, 73°30'N, 21°28'W, on rock, R. Corner 17 July 1984 & 73°31'N, 21°37'W, alt. 200 m, on top of boulder together with *Xanthoria elegans*, R. Corner 16 July 1984; VI: Upper Stordal, 73°52'N, 22°30'W, on bird-perch rock together with *Physcia dubia* and *Xanthoria elegans*, R. Corner 23 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, alt. c. 75 m, on rock on ridge, K. Watson 1983. A widespread, circumpolar, saxicolous lichen.

*Melanelia stygia* (L.) Essl. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 500 m, on rock, R. Corner 24 July 1984. A widespread, circumpolar, saxicolous lichen (Thomson, 1984).

*Myxobilimbia lobulata* (Sommerf.) Hafellner – I: Myggbukta, 73°29'N, 21°34'W, alt. 20 m, on mosses and soil in coastal Dryas heath, R. Corner 18 July 1984. A widespread, circumpolar, terricolous and muscicolous lichen (Nimis, 1993).

*Ochrolechia frigida* (Sw.) Lynge – VII: Loch Fyne, 73°41'N, 21°55'W, on mosses, R. Corner 12 July 1984. A common and widespread, circumpolar, terricolous and muscicolous lichen.

*Ochrolechia upsaliensis* (L.) A. Massal. – I: Myggbukta, 73°30'N, 21°28'W, alt. 100 m, on soil, R. Corner 17 July 1984. A widespread, circumpolar, terricolous lichen (Hansen, 1995).

*Phaeophyscia constipata* (Norrl. & Nyl.) Moberg – I: Myggbukta, 73°31'N, 21°37'W, alt. 200 m, on mosses on rocky hill together with *Melanelia infumata* and *Physconia muscigena*, R. Corner 16 July 1984; VII: Loch Fyne, 73°41'N, 21°55'W, on mosses on rock together with *Phaeophyscia kairamoi*, *Physconia muscigena* and *Xanthoria elegans*, R. Corner 12 July 1984. A scattered, circumpolar, terricolous lichen (Moberg & Hansen, 1986; Andreev *et al.*, 1996; Thomson, 1997).

*Phaeophyscia endococcina* (Körb.) Moberg – VII: Loch Fyne, 73°43'N, 21°55'W, alt. 300 m, on partially submerged rock in small stream, R. Corner 12 July 1984. A scattered, circumpolar, saxicolous lichen (Moberg & Hansen, 1986; Hansen, 1995).

\* *Phaeophyscia kairamoi* (Vain.) Moberg – I: Myggbukta, 73°30'N, 21°28'W, alt. 100 m, on soil on small, coastal cliff, R. Corner 15 July 1984; VII: Loch Fyne, 73°41'N, 21°55'W, on mosses on bird-perch stones together with *Xanthoria elegans*, R. Corner 12 July 1984. A scattered, circumpolar, terricolous lichen (Moberg & Hansen, 1986; Hansen, 1995).

*Phaeophyscia sciastra* (Ach.) Moberg – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on gravelly soil and mosses on W. – exposed talus slope, R. Corner 24 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, on mosses together with *Xanthoria elegans*, K. Watson 1983; 73°41'N, 21°55'W, on rock, R. Corner 12 July 1984. A widespread, circumpolar lichen growing on soil, mosses and rocks (Moberg & Hansen, 1986; Hansen, 1995).

*Physcia caesia* (Hoffm.) Fűrnr. – VII: Loch Fyne, 73°40'N, 22°00'W, alt. c. 75 m, on sandstone fragment together with *Xanthoria elegans*, K. Watson 1983. A common and widespread, bi- and circumpolar, saxicolous lichen (Nimis, 1993).

*Physcia dubia* (Hoffm.) Lettau – VI: Upper Stordal, 73°52'N, 22°30'W, on bird-perch rock, R. Corner 23 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, on

basaltic rock and on reindeer antlers, K. Watson 1983 & 73°40'N, 21°57'W, on manured rock, R. Corner 10 July 1984. A widespread, circumpolar, saxicolous lichen.

***Physconia muscigena*** (Ach.) Poelt – I: Myggbukta, 73°31'N, 21°35'W, alt. 270 m, on soil on top of hill, R. Corner 16 July 1984 & 73°31'N, 21°37'W, alt. 200 m, on mosses on rocky hill, R. Corner 16 July 1984; II: Badlanddal, 73°32'N, 21°43'W, on soil in *Dryas-Cassiope tetragona* heath, R. Corner 14 July 1984; III: Ladderbjærg, 73°36'N, 22°10'W, alt. c. 1000 m, on mosses, K. Watson 1983; VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mosses, R. Corner 24 July 1984; VII: Loch Fyne: 73°40'N, 22°00'W, alt. 75 m, on mosses on ridge and on reindeer antlers, K. Watson 1983 & 73°41'N, 21°55'W, on mosses on rock, R. Corner 12 July 1984 & 73°42'N, 21°53'W, alt. c. 200 m, on mineral soil together with *Rinodina mniaraea*, R. Corner 12 July 1984. A widespread, circumpolar, terricolous and saxicolous lichen (Hansen, 1995).

\* ***Placynthium pannariellum*** (Nyl.) H. Magn. – VII: Loch Fyne, 73°43'N, 21°53'W, on siliceous rock near melt water runnel and on rocks by waterfall in ravine, R. Corner 13 July 1984. A rare, saxicolous lichen known so far from Greenland, Svalbard and Europe (Thomson, 1984).

***Polyblastia theleodes*** (Sommerf.) Th. Fr. – VII: Loch Fyne, 73°40'N, 22°00'W, on gravelly soil, K. Watson 1983. A scattered, circumpolar, saxicolous lichen (Thomson, 1997).

***Polysporina simplex*** (Davies) Vezda – VI: Upper Stordal, c. 73°50'N, 22°30'W, on sandstone fragment, K. Watson 1983. A widespread, bi- and circumpolar, saxicolous lichen (Thomson, 1997).

***Pseudophebe minuscula*** (Nyl. ex Arnold) Brodo & D. Hawksw. – VII: Loch Fyne, 73°40'N, 22°00'W, on siliceous rock together with *Rhizocarpon geminatum* and *Xanthoria elegans*, K. Watson 1983. A common, bi- and circumpolar, saxicolous lichen.

***Psora decipiens*** (Hedw.) Hoffm. – IV: Ulvedal, 73°36'N, 22°17'W, on mineral soil, R. Corner 29 July 1984; V: Moskusoksefjord, 73°35'N, 22°25'W, alt. 200 m, among mosses on soil, R. Corner 30 July 1984; VI: Stordal, 73°42'N, 22°00'W, alt. 300 m, on mineral soil on S. – exposed slope, R. Corner 28 July 1984; Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mineral soil on W. exposed talus slope together with *Rinodina mniaraea*, R. Corner 24 July 1984. A cosmopolitan, terricolous lichen (Nimis, 1993).

***Psora rubiformis*** (Ach.) Hook. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mineral soil, R. Corner 24 July 1984. A widespread, circumpolar, terricolous lichen.

***Rhizocarpon geminatum*** Körb. – I: Myggbukta, 73°31'N, 21°37'W, alt. 150 m, on siliceous rock on W. – exposed talus slope, R. Corner 16 July 1984; VI: Upper Stordal, 73°51'N, 22°27'W, alt. 500 m & 800 m, on siliceous rock, R. Corner 24 July 1984. A widespread, circumpolar, saxicolous lichen.

***Rhizocarpon geographicum*** (L.) DC. – I: Myggbukta, 73°31'N, 21°37'W, alt. 100 m & 150 m, on siliceous rock on W. exposed talus slope, R. Corner 16 July 1984. A common and widespread, saxicolous lichen.

\* ***Rhizocarpon pusillum*** Runemark – VII: Loch Fyne, 73°40'N, 22°00'W, on *Sporastatia testudinea* on siliceous rock, K. Watson 1983. An arctic-alpine, circumpolar, saxicolous lichen.

***Rhizoplaca melanophthalma*** (DC.) Leuckert & Poelt – III: Ladderbjærg, 73°36'N, 22°10'W, alt. c. 1000 m, on basaltic rock, K. Watson 1983; VII: Loch Fyne, 73°40'N, 22°00'W, on basaltic outcrop together with *Melanelia*

*infumata*, K. Watson 1983. A widespread, bi- and circumpolar, saxicolous lichen (Nimis, 1993).

***Rinodina mniaraea*** (Ach.) Körb. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 800 m, on mineral soil on stable, W. – exposed talus slope, R. Corner 24 July 1984; VII: Loch Fyne, 73°42'N, 21°53'W, alt. c. 200 m, on mineral soil, R. Corner 12 July 1984. A common, circumpolar, terricolous lichen.

***Solorina bispora*** Nyl. – VII: Loch Fyne, 73°42'N, 21°53'W, alt. 200 m, on mineral soil, R. Corner 12 July 1984. A widespread, circumpolar, terricolous lichen.

***Solorina octospora*** Arnold – V: Moskusoksefjord, 73°35'N, 22°25'W, alt. 200 m, among mosses on soil in depression in block field, R. Corner 30 July 1984. A scattered, circumpolar, terricolous lichen (Thomson, 1984; Hansen, 1995).

***Solorina saccata*** (L.) Ach. – V: Moskusoksefjord, 73°36'N, 22°08'W, alt. 200 m, on mineral soil. R. Corner 29 July 1984. A widespread, circumpolar, terricolous lichen.

***Sporastatia testudinea*** (Ach.) A. Massal. – I: Myggbukta, 73°31'N, 21°37'W, on basaltic, W. facing rock, R. Corner 16 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, on basaltic rock, K. Watson 1983. A common, bi- and circumpolar, saxicolous lichen.

***Staurothele fissa*** (Taylor) Zwackh – VII: Loch Fyne, 73°43'N, 21°53'W, alt. 200 m, on siliceous rock by waterfall, R. Corner 13 July 1984. A widespread, circumpolar, saxicolous lichen (Andreev *et al.*, 1996; Thomson, 1997).

***Stereocaulon alpinum*** Laurer – III: Ladderbjærg, 73°36'N, 22°10'W, c. 1000 m, among mosses on soil, K. Watson 1983. A common, circumpolar, terricolous lichen.

\* ***Stereocaulon glareosum*** (L. I. Savicz) H. Magn. – VII: Loch Fyne, 73°40'N, 22°00'W, on soil, K. Watson 1983. A widespread, circumpolar, terricolous lichen.

***Thamnolia vermicularis*** (Sw.) Schaer. – VII: Loch Fyne, 73°40'N, 22°00'W, on mosses on soil, K. Watson 1983. A common, bi- and circumpolar, terricolous lichen.

\* ***Toninia sedifolia*** (Scop.) Timdal – IV: Ulvedal, 73°36'N, 22°17'W, on soil, R. Corner 29 July 1984. An almost cosmopolitan, terricolous lichen (Timdal, 1991).

***Tremolecia atrata*** (Ach.) Hertel – I: Myggbukta, 73°31'N, 21°37'W, alt. 100 m & 150 m, on siliceous rock on W. – exposed talus slope, R. Corner 16 July 1984. A common, bi- and circumpolar, saxicolous lichen.

\* ***Umbilicaria lyngei*** Schol. – I: Myggbukta, 73°30'N, 21°28'W, on rock, R. Corner 17 July 1984 & 73°31'N, 21°27'W, R. Corner 16 July 1984; VI: Upper Stordal, 73°51'N, 22°27'W, on rock, R. Corner 24 July 1984 & 73°52'N, 22°30'W, alt. 200 m, on rock, R. Corner 23 July 1984. An arctic-alpine, circumpolar, saxicolous lichen (Hansen, 1995).

***Umbilicaria torrefacta*** (Leightf.) Schrad. – VI: Upper Stordal, 73°51'N, 22°27'W, alt. 500 m, on rock, R. Corner 24 July 1984. A widespread, circumpolar, saxicolous lichen (Hansen, 1995).

***Umbilicaria virginis*** Schaer. – I: Myggbukta, 73°30'N, 21°28'W, on rock, R. Corner 17 July 1984; VI: Upper Stordal, 73°51'N, 22°27'W, alt. 500 m & 800 m, on rocks, R. Corner 24 July 1984 & 73°52'N, 22°30'W, alt. 300 m, on rock by tunnel, R. Corner 23 July 1984; VII: Loch Fyne, 73°40'N, 22°00'W, on basaltic rock, K. Watson 1983. A common, circumpolar, saxicolous lichen.



*Usnea sphacelata* R. Br. – I: Myggbukta, 73°31'N, 21°27'W, alt. 100 m, on boulder on coastal talus slope, R. Corner 15 July 1984. A more or less common, bi- and circumpolar, saxicolous lichen.

\* *Vulpicida tilesii* (Ach.) J. E. Mattsson & M. – J. Lai – V: Moskusoksefjord, 73°35'N, 22°22'W, alt. 150 m, on soil in *Dryas-Cassiope tetragona* heath, R. Corner 30 July 1984. A widespread, circumpolar, terricolous lichen (Thomson, 1984; Mattsson, 1993; Hansen, 2008).

\* *Xanthoria borealis* R. Sant. & Poelt – VII: Loch Fyne, 73°40'N, 21°57'W, alt. 200 m, on plant remains on bird-perch knoll, R. Corner 11 July 1984 & 73°40'N, 22°00'N, on mosses on rocky ridge, K. Watson 1983. A more or less common, circumpolar, saxicolous lichen (Hansen, 1995).

*Xanthoria elegans* (Link) Th. Fr. – I: Myggbukta, 73°31'N, 21°37'W, on basaltic rock, R. Corner 16 July 1984; III: Ladderbjærg, 73°36'N, 22°10'W, alt. c. 1000 m, on basaltic rock, K. Watson 1983; VI: Upper Stordal, 73°52'N, 22°30'W, on bird-perch rock, R. Corner 23 July 1984 & on basaltic rock, K. Watson 1983; VII: Loch Fyne, 73°41'N, 21°55'W, on mosses on rock, R. Corner 12 July 1984 & 73°40'N, 22°00'W, alt. c. 75 m, on basaltic rocks and on reindeer antlers, K. Watson 1983

## CONCLUSION

Corner's and Watson's lichen collections represent an important contribution to the known lichen flora of Hold with Hope and Hudson Land. As expected from the geological and climatic conditions the flora is fairly rich in species growing on more or less alkaline soil, viz. *Cladonia pocillum*, *Collema bachmanianum* v. *millegranum*, *Fulgensia bracteata*, *Megaspora verrucosa*, *Phaeophyscia constipata*, *Physconia muscigena*, *Psora decipiens*, *P. rubiformis*, *Rinodina mniaraea*, *Solorina bispora*, *S. octospora*, *S. saccata*, *Toninia sedifolia* and *Vulpicida tilesii*. Most of these species are also known from other Greenland localities with extensive occurrences of loess and other types of calcareous soil, for example, Kangerlussuaq in South West Greenland (Hansen, 2001). Most previous collections of *Solorina octospora* have been carried out between 71°N and 75°N in East Greenland (Hansen, 1995; Thomson, 1984). Another find of particular interest is that of *Evernia mesomorpha* at Myggbukta. Here it was also found by Lyngé and Scholander. The species is very common in North America, where it grows on bark of *Betula*, *Larix* and *Picea*, while it occurs as an extremely rare disjunct species in Greenland. The origin of these few populations at Myggbukta is somewhat enigmatic. A plausible hypothesis could be that the species has been transported with drift wood from Siberia to Greenland and afterwards has adapted to its present soil substrate. The occurrence of *Vulpicida tilesii* at Moskusoksefjord is of great interest. The species is sometimes used in geological prospecting in North and North East Greenland, as its occurrence in a certain area usually indicate soils rich in calcium and rocks such as marble and other types of limestone (Hale, 1983; Hansen, 1995).

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