

New or interesting Greenland lichens X

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Abstract – Six species of lichens, viz. *Catinaria atropurpurea*, *Cladonia metacorallifera*, *Lecidea promiscens*, *Micarea nitschkeana*, *Pertusaria* cf. *corallina* and *Schaereria parasemella*, are reported for the first time from Greenland. Notes on the distribution of these species and additionally thirteen interesting species of lichens are given.

Lichens / Greenland

INTRODUCTION

Nineteen lichens of particular taxonomical and phytogeographical interest are dealt with in the present paper. The lichens are part of a big material transferred to the Botanical Museum, University of Copenhagen from the Botanical Institute, University of Århus, in 2003. Most of the Greenland lichens were collected by Svanhildur Svane. Two specimens collected by the author and Paul Gelting, respectively, are included in the investigation.

MATERIAL AND METHODS

Collection and Identification

All of the lichens stated in the following list have been collected at different localities in the floristic province, S = South Greenland (Böcher *et al.* 1978). The material, a total of twenty lichen specimens, was checked by the autor with Zeiss light microscopes. The specimens are deposited at the Botanical Museum, University of Copenhagen.

LIST OF LICHENS

Caloplaca exsecuta (Nyl.) Dalla Torre & Sarnth. – S: Mt. Nuluk, south of Igaliko, 60°58'N, 45°26'W, alt. 600-800 m, on siliceous rock, S. Svane 5418 D.

C. exsecuta is new to South Greenland. The species has previously been reported from West and South East Greenland (Hansen *et al.*, 1987). It has a circumpolar, arctic-alpine distribution (Thomson, 1997).

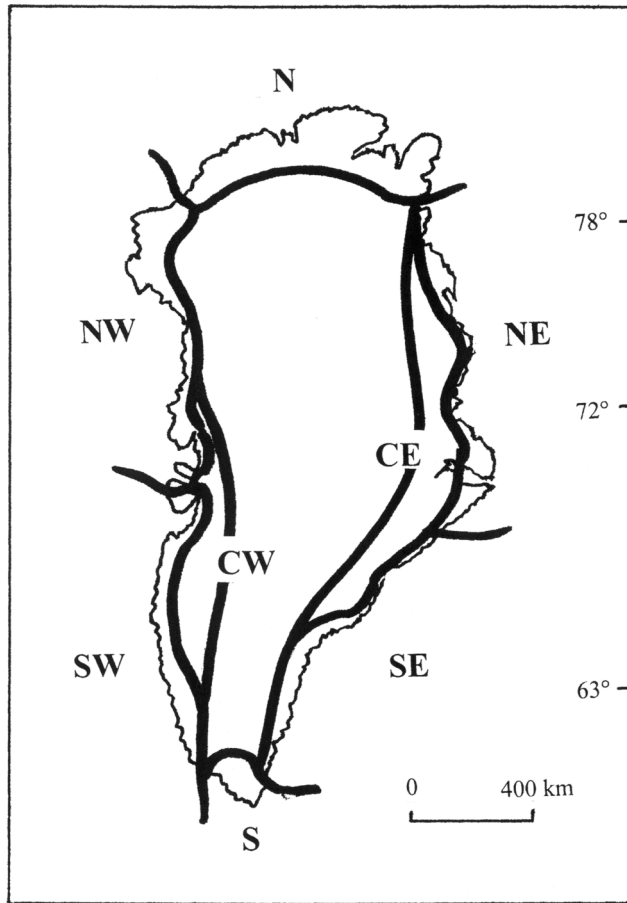


Fig. 1. The floristic provinces of Greenland according to Böcher *et al.* 1978 (N = North Greenland, NE = North East Greenland, CE = Central East Greenland, SE = South East Greenland, S = South Greenland, SW = South West Greenland, CW = Central West Greenland, NW = North West Greenland).

Caloplaca phaeocarpella (Nyl.) Zahlbr. S: Igaliko, 61°01'N, 45°26'W, alt. 0-100 m, on twig, S. Svane 5392 A.

C. phaeocarpella is new to South Greenland. It is widely distributed in Greenland (Hansen *et al.*, 1987). *C. phaeocarpella* has a circumpolar, arctic distribution (Andreev *et al.*, 1996; Thomson, 1997).

Catinaria atropurpurea (Schaer.) Vezda & Poelt (= *Catillaria atropurpurea* (Schaer.) Th. Fr.) – S: Igaliko, 61°00'N, 45°25'W, 0-20 m, on twig, S. Svane 5429 B; Narssarssuaq, 61°11'N, 45°24'W, alt. 50 m, on twig, S. Svane 5326 C.

C. atropurpurea is new to Greenland. It has a circumpolar, arctic-alpine to temperate distribution (Thomson, 1997; Hafellner & Türk, 2001).

Cladonia luteoalba Wheldon & A. Wilson – S: Nanortalik, 60°09'N, 45°15'W, on soil, E. S. Hansen 93160; Narssarssuaq, slope of Mt. Suluaq, 61°10'N, 45°24'W, alt. 20-50 m, on soil in *Betula pubescens* scrub, S. Svane 5270 A.

C. luteoalba is new to South Greenland. It is widely distributed in Greenland, but is usually sparse at its localities (Hansen, 1986, 1995). The species is also known from North America, Europe, Russia, China, Japan and India (Stenroos, 1990; Esslinger & Egan, 1995; Zhurbenko *et al.*, 2005).

Cladonia metacorallifera Asahina – S: Narsaq, Kvanefjeld, 60°58'N, 46°00'W, alt. 600 m, on soil rich in humus, S. Svane 5475 C.

C. metacorallifera is new to Greenland. The present specimen is sterile, but has distinct, yellowish cups, which are partly decorticate. Characteristic appressed squamules cover the basal part of the podetia. Thallus reacts PD –, K – and UV +. Accordingly the new Greenland specimen belong to *v. metacorallifera*. The taxon has a wide range and is known from North and South America, Europe, Russia and Japan (Thomson, 1997; Zhurbenko *et al.*, 2005).

Cladonia symphy carpia (Flörke) Fr. – S: Tasiusaq, 61°09'N, 45°38'W, alt. 0-200 m, on soil, S. Svane 5379 C.

C. symphy carpia is new to South Greenland. It has previously been reported from Disko (Hansen, 1983). A specimen of “*Cladonia dahliana* Kristinsson” (leg. H. B. Andersen; det. S. Svane) from Danmarks Ø in Central East Greenland probably belongs to this species, which is closely related to *C. cariosa* (Ach.) Spreng. *C. symphy carpia* has a circumpolar, arctic-alpine to temperate distribution (Thomson, 1997; Zhurbenko *et al.*, 2005).

Collema fuscovirens (With.) J. R. Laundon (= *C. tuniforme* (Ach.) Ach., *C. furvum* (Ach.) DC.) – S: Narssarssuaq, 61°11'N, 45°24'W, alt. 50 m, on rock near lake, S. Svane 5332 C.

C. fuscovirens is new to South Greenland. It has previously been reported from Greenland (Degelius, 1954; Thomson, 1997). A specimen collected by P. Gelting at Østerdalspassagen, Godhavn, Disko probably also belongs to this taxon. *C. fuscovirens* has a circumpolar, arctic-alpine distribution.

Lecania subfuscula (Nyl.) S. Ekman (= *Bacidia subfuscula* (Nyl.) Th. Fr.) – S: Tasiusaq, 61°09'N, 45°38'W, alt. 0-200 m, on twig, S. Svane 5378 A.

L. subfuscula is new to South Greenland. It has previously been reported from West Greenland (Branth & Grønlund, 1888; Lyngé, 1937). However, the Greenland material of *L. fuscula* is very heterogenous. Particularly the older collections growing on bone are in need of revision. The species has a circumpolar, arctic distribution (Esslinger & Egan, 1995; Andreev *et al.*, 1996; Thomson, 1997).

Lecidea promiscens Nyl. – S: Mt. Nuluk, south of Igaliko, 60°58'N, 45°26'W, alt. 600-800 m, on siliceous rock, S. Svane 5418 A.

L. promiscens is new to Greenland. It has a wide circumpolar, arctic-alpine distribution and its range extends so far as southern Europe and Afghanistan (Andreev *et al.*, 1996; Thomson, 1997). *L. promiscens* is very close to *L. promiscua* Nyl. and *L. auriculata* Th. Fr.

Lecidella carpathica Korb. (= *Lecidea carpathica* (Korb.) Szatala, *L. latypiza* auct., *L. evansii* H. Magn.) – S: Igaliko, 61°00'N, 45°25'W, alt. 0-20 m,

on siliceous rock, S. Svane 5434C; Umiusat, 61°11'N, 45°30'W, alt. 0 m, on siliceous rock together with *Umbilicaria torrefacta*, S. Svane 5386A.

L. carpathica is new to South Greenland. The species has previously been reported from Disko in West Greenland and Gletscher Sø in North Greenland (Alstrup *et al.*, 2000; Hansen, 2004a). It has a circumpolar, arctic-alpine, boreal and temperate distribution (Esslinger & Egan, 1995; Andreev *et al.*, 1996; Thomson, 1997). The present material has a distinct granular, yellowish thallus and numerous flat to convex apothecia.

Lecidella wulfenii (Hepp) Körb. (= *Lecidea wulfenii* (Hepp) Arnold) – S: Narsaq, Kvanefjeld, 60°58'N, 46°00'W, alt. 600 m, on mosses, S. Svane 5476 C; Tasiusaq, 61°09'N, 45°38'W, alt. 0-200 m, on mosses, S. Svane 5382 D.

L. wulfenii is new to South Greenland. According to the many plants the species must be very common here just as elsewhere in Greenland (Lynge, 1937, 1940; Alstrup *et al.*, 2000; Hansen, 2002a). It has a circumpolar, arctic-alpine distribution (Thomson, 1997).

Micarea incrassate Hedl. – S: Mt. Nuluk, south of Igalika, 60°58'N, 45°26'W, alt. 600-800 m, among mosses on soil, S. Svane 54 16 D.

M. incrassate is new to South Greenland. It is common on Disko in West Greenland and has also been reported from East Greenland (Thomson, 1997; Alstrup *et al.*, 2000; Hansen, 2002b). *M. incrassate* has a circumpolar, arctic-alpine distribution and belongs to the group of bipolar lichens (Coppins, 1983).

Micarea nitschkeana (J. Lahm ex Rabenh.) Harm. (= *Bacidia nitschkeana* (J. Lahm ex Rabenh.) Zahlbr. – S: Igaliko, 61°00'N, 45°25'W, alt. 0-20 m, on twig, S. Svane 5429 A.

M. nitschkeana is new to Greenland. The species is widely distributed in Europe including the Alps. In addition it is known from California (Nimis, 1993). The present specimen has numerous apothecia. The spores are 2-4-celled. Thallus is poorly developed.

Mycobilimbia tetramera (De Not.) Vitik. *Et al.* (= *M. obscurata* (Sommerf.) Rehm) – S: Mt. Nuluk, south of Igaliko, 60°58'N, 45°27'W, alt. 400-600 m, on moss, S. Svane 5412 A; Tasiusaq, dry hill south of the settlement, 61°09'N, 45°38'W, 0-200 m, on moss, S. Svane 5384 D.

M. tetramera is new to South Greenland. Recently Hansen (2004b) outlined its distribution in and outside Greenland.

Myxobilimbia microcarpa (Th. Fr.) Hafellner (= *Bacidia microcarpa* (Th. Fr.) Lettau) – S: Mt. Nuluk, south of Igaliko, 60°58'N, 45°27'W, alt. 400-600 m, on plant remains, S. Svane 5412 B.

M. microcarpa is new to South Greenland. The species has previously been reported from Kitsigsut and Blåfjeld (Disko) in South West Greenland (Lynge, 1937). It has a circumpolar, arctic-alpine to boreal distribution (Thomson, 1997; Hafellner & Türk, 2001).

Pertusaria* cf. *corallina (L.) Arnold – S: Narsaq, Kvanefjeld, 60°58'N, 46°00'W, alt. 600 m, on rock, S. Svane 5457 B.

P. corallina is new to Greenland. The occurrence of this common European lichen in the subarctic part of South Greenland is of great interest.

However, the coralloid isidia of the present specimen is longer than usually seen in more southern material. No distinct Pd-reaction was found in the Greenland material.

Polyblastia sendtneri Kremp. – S: Narssarssuaq, valley at Kiattuut, 61°12'N, 45°20'W, alt. 40 m, on mineral soil, S. Svane 5341 G.

P. sendtneri is new to South Greenland. The species is common in more northern parts of Greenland (Hansen, 1986, 2001; Alstrup *et al.*, 2000). It has a circumpolar, arctic-alpine distribution (Nimis, 1993; Thomson, 1997). *P. sendtneri* is sometimes confounded with *P. terrestris* Th. Fr., but has smaller spores (15-30 × 9-15 µm).

Porina mammillosa (Th. Fr.) Vain. (= *Segestria mammillosa* Th. Fr.) – S: Mt. Nuluk, south of Igaliko, 60°58'N, 45°26'W, alt. 600-800 m, on plant remains, S. Svane 5416 G.

P. mammillosa is new to South Greenland. There are two previous reports of the species from Greenland (Branth & Grønlund, 1888); Alstrup, 1986). P. Eberlin collected the *P. mammillosa* at “Kekertatsiak” situated at the border between S. and S. E. Greenland during the famous umiak-expedition in 1883-85. The other Greenland specimen available are from Bjørneø north of Nuuk/Godthåb. *P. mammillosa* has an arctic-alpine to boreal distribution (Esslinger & Egan, 1995; Nimis, 1993)

Pyrenopsis rhodosticta (Taylor) Müll. Arg. – S: Narsaq, Kvanefjeld, 60°58'N, 46°00'W, alt. 600 m, on siliceous rock, S. Svane 5463 D.

P. rhodosticta is probably very rare in Greenland. There are a few previous report of its occurrence in this area (Dahl, 1950; Thomson, 1997), but it they are somewhat dubious. Some superficially similar, but probably taxonomically different species have previously been included in a broad conception of “*P. rhodosticta*” (Purvis *et al.*, 1992; Santesson *et al.*, 2004). Further critical studies of these taxa are needed, before the total distribution of *P. rhodosticta* can be outlined.

Schaereria parasemella (Nyl.) Lumbsch (= *Hafellnera parasemella* (Nyl.) Houmeau & Cl. Roux) – S: Narssarssuaq, 61°11'N, 45°24'W, alt. 50 m, on sterile crustaceous lichen on wood, S. Svane 5325 B.

S. parasemella is new to Greenland. The species is also known from Alaska, Scandinavia, France and Russia (Clauzade & Roux, 1985; Andreev *et al.*, 1996; Thomson, 1997; Santesson *et al.*, 2004). It is sometimes mistaken with *Japewia tornoënsis* (Nyl.) Tønsberg, but has cylindrical asci and uniseriate, globose spores.

CONCLUSION

Part of the lichens dealt with in the present paper, for example, *Caloplaca phaeocarpella*, *Cladonia luteoalba*, *Micarea incrassate* and *Polyblastia sendtneri*, are more or less common in more northern parts of Greenland, but apparently have been neglected in South Greenland. Other species such as the six lichens that

are new to Greenland, but also *Porina mammillosa* and *Pyrenopsis rhodosticta*, are probably very rare in Greenland. Most of the listed lichens have a circumpolar, arctic-alpine distribution, which as regards some species, for example, *Candelariella xanthostigma*, *Catinaria atropurpurea* and *Mycobilimbia hypnorum*, ranges into boreal and even temperate areas. The total distribution of, for example, *Pyrenopsis rhodosticta*, is partly unknown.

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