

## New or interesting Greenland lichens VIII

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**Abstract** – Three species of lichens, viz. *Aspicilia subplicigera*, *Lecanora caesiosora* and *Verrucaria halophiloides*, are reported as new to Greenland. Notes on the distribution of these species and additionally eight interesting lichen taxa are given.

**Lichens / Greenland**

### INTRODUCTION

Eleven lichens of particular taxonomical and phytosociological interest are dealt with in the present paper. The lichens were collected by Paul Gelting and appeared during the continuous revision of his great Greenland lichen material. Two specimens collected by Mogens Skytte Christiansen are included in the investigation. Additional information about interesting lichens collected by Dr Gelting can be found in the following papers: Hansen (1983, 1984, 1986, 2003, 2004a & b).

### MATERIAL AND METHODS

#### Collection and Identification

Paul Gelting carried out most of his collecting work in the coastal area between 67°N and 70°N in West Greenland. Most of the lichen specimens stated in the following list originate from this region. A few come from more southern localities. The Greenland floristic provinces (Böcher *et al.* 1978), where the specimens have been collected, are stated with the abbreviations N, NE, CE, SE, S, SW, CW and NW (Fig. 1). The material, a total of 29 lichen specimens, was studied with Zeiss light microscopes. The specimens are deposited at the Botanical Museum, University of Copenhagen (C).

### LIST OF LICHENS

*Acarospora scabrida* Hedl. Ex H. Magn. – SW: Disko, Qeqertarsuaq/ Godhavn, 69°15'N, 53°32'W, on gneissic rock, P. Gelting 19760; Fortunebay, 69°16'N, 53°44'W, alt. 40 m, on gneissic rock, P. Gelting 1 September 1949; NW: Disko, Qutdligssat, 70°05'N, 53°01'W, on basaltic rock, P. Gelting 1 August 1950.

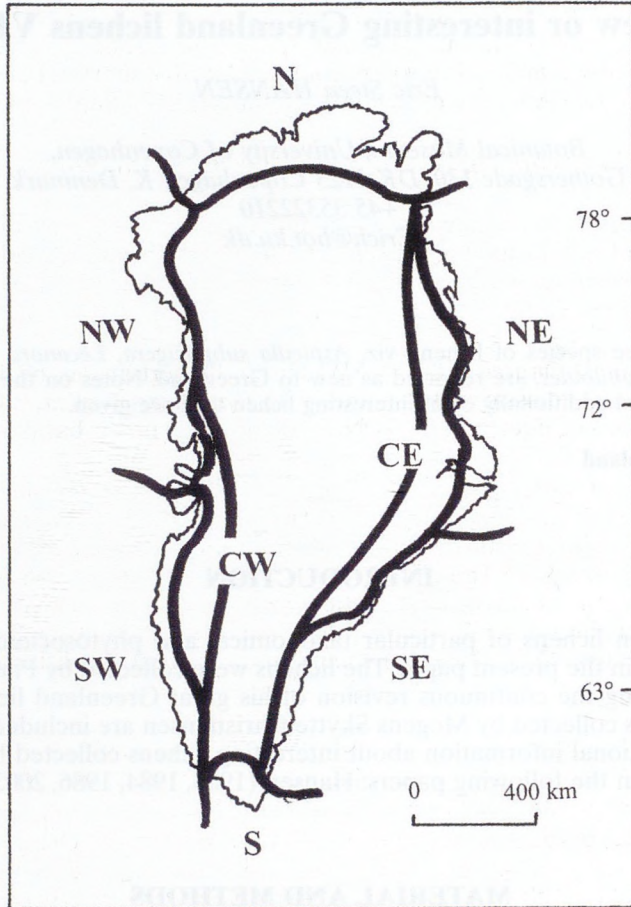


Fig. 1. The floristic provinces of Greenland according to Böcher *et al.* (1978) (N = North Greenland, NE = North East Greenland, CE = Central East Greenland, SE = South East Greenland, S = South Greenland, SW = South West Greenland, CW = Central West Greenland, NW = North West Greenland).

*A. scabrida* is new to North West Greenland and to Disko. This somewhat nitrophilous species has previously been reported from South, North East and North Greenland (Lynge, 1937, 1940; Alstrup *et al.*, 2000). It is also known from Scandinavia, Iceland, the Alps, North America and Siberia (Thomson, 1997; Santesson *et al.*, 2004).

***Arctomia interfixa*** (Nyl.) Vain. – SW: Disko, Qeqertarsuaq/Godhavn, the Arctic Station, 69°15'N, 53°32'W, alt. 25 m, on *Andreaea* sp. On N.-exposed, vertical, gneissic rock, P. Gelting 14039; Augpilagtunguaq at the Arctic Station, alt. 65 m, on *Andreaea* sp. on gneissic rock, P. Gelting 20265.



*A. interfixa* is a rare Greenland lichen, previously reported from two localities on Disko, only (Hansen, 1983). The species has probably been neglected in other parts of Greenland. It is also known from North America, Fennoscandia and the Russian Arctic (Andreev *et al.*, 1996; Thomson, 1997; Santesson *et al.*, 2004).

*Aspicilia subplicigera* (H. Magn.) Oxner – NW: Disko, Asuk, 70°11'N, 53°17'W, on basaltic rock, P. Gelting 18872a.

*A. subplicigera* is new to Greenland. It has an ashy grey, radiate-areolate thallus and centrally located apothecia. The hymenium reacts I+ yellowish brown. The species is also known from North America and the Russian Arctic (Andreev *et al.*, 1996; Thomson, 1997).

*Buellia stigmatea* Körb. – SW: Disko, Qeqertarsuaq, 69°15'N, 53°32'W, alt. 30 m, on moist gneissic rock together with *Umbilicaria vellea*, P. Gelting 15676; Diskofjord, Storø (Qeqertaq), 69°31'N, 54°06'W, alt. 3 m, on basaltic boulder near the sea, P. Gelting 13877.

Some authors, for example, Santesson *et al.* (2004) consider *B. stigmatea* as conspecific with the very variable, cosmopolitan species, *Amandinea punctata*, which usually grows on nutrient-rich substrata and are tolerant of air pollution (Purvis *et al.*, 1992). Like Thomson (1997), the present author considers it to be a separate saxicolous taxon with an arctic-alpine distribution, which, however, is in need of further investigation. Lyngé (1937, 1940) has previously reported *B. stigmatea* from Nuussuaq in West Greenland and different localities in North East Greenland.

*Diploschistes muscorum* (Scop.) R. Sant. – CW: Arfersiorfik Fjord, Itivdliarsuk, 67°55'N, 50°40'W, alt. 20 m, on mosses and lichens on a thin layer of soil on with steppe-like vegetation over gneissic rock, P. Gelting 15905.

*D. muscorum* is new to the Egedesminde District. The species has previously been reported from South West, North East and North Greenland (Hansen, 1999, 2000, 2001; Alstrup *et al.*, 2000). It has a very wide range from arctic to tropical areas, and also occurs in the Southern Hemisphere (Thomson, 1997).

*Lecanora caesiosora* Poelt – SW: Disko, Qeqertarsuaq/Godhavn, the Arctic Station, 69°15'N, 53°32'W, on gneissic rock together with *Umbilicaria arctica*, P. Gelting 19688.

*L. caesiosora* is new to Greenland. The present specimen is fertile. Thallus reacts K+ yellow, C-. The species is sometimes difficult to separate from sorediate morphotypes of *Lecanora cenisia* (Purvis *et al.*, 1992). It has an arctic-boreal-montane distribution in Europe (Nimis, 1993; Santesson *et al.*, 2004), but has so far not been reported from North America or Russia.

*Lecanora hagenii* (Ach.) Ach. v. *hagenii* – SW: Disko, Qeqertarsuaq/Godhavn, the Arctic Station, 69°15'N, 53°32'W, on gneissic rocks, P. Gelting 19707 & 19639; NW: Nuussuaq, Atanikerdluk, 70°04'N, 52°23'W, on rock composed of sandstone, P. Gelting 31 October 1949.

*L. hagenii* is new to North West Greenland. It is new to Disko, too. Branth & Grønlund (1888) previously reported *L. hagenii* from Greenland. The taxon has a circumpolar, arctic to boreal and temperate distribution (Thomson, 1997).



*Pyrenopsis furfurea* (Nyl.) Leight. – SW: Sarpiussaat, Timaa, 68°34'N, 51°20'W, alt. 8 m, on seepage rock, P. Gelting 19155.

The specimen is very small, but has a distinct dark reddish brown, areolate and verruculose thallus and urceolate apothecia. The species is new to the Christianshåb District. It is also known from Disko, Julianehåb and Narssaq District, North America, Scotland and Scandinavia (Dahl, 1950; Gelting, 1954; Purvis *et al.*, 1992; Santesson *et al.*, 2004; Thomson, 1997).

*Verrucaria halophiloides* Vain. – SW: Disko Bugt, Grønne Ejlande, Niaqornat, 68°51'N, 52°05'W, on gneissic seashore rock, P. Gelting 19036; Hunde Ejlande, 68°52'N, 53°25'W, on gneissic seashore rock, P. Gelting 19290 & 19291; NW: Upernavik, Smålandene, Igdlutalik, 72°47'N, 56°35'W, alt. 4-6 m, on gneissic seashore rock, P. Gelting 14710 & 14716.

*V. halophiloides* is new to Greenland. It is also known from Scandinavia, Spitsbergen, Novaya Zemlya and Siberia (Santesson, 1939; Andreev *et al.*, 1996; Santesson *et al.*, 2004). The species has so far not been reported from North America, but is probably circumpolar (Thomson, 1997).

*Verrucaria maura* Wahlenb. – CW: Arfersiorfik Fjord, Itivdliarsuk, 67°55'N, 50°40'W, on gneissic rocks just above the *Fucus*-zone together with *Verrucaria degelii* and *V. erichsenii*, P. Gelting 15997 & 15998; SW: Kangaatsiaq, 68°19'N, 53°28'W, on gneissic rock together with *Verrucaria degelii*, P. Gelting 16636b; Sarpiussaat Timaa, 68°34'N, 51°20'W, on gneissic rock 1 m above the *Fucus*-zone, P. Gelting 19194.

*V. maura* is new to Christianshåb District and Egedesminde District. It has a wide arctic to temperate, circumpolar distribution (Thomson, 1997).

*Verrucaria striatula* Wahlenb. – SW: Kangaamiut, 65°50'N, 53°40'W, at the upper border of and just above the *Balanus*-zone on gneissic rocks facing NE, M. S. Christiansen 4635 & 4638; Disko, Diskofjord, Qivitut, 69°27'N, 53°38'W, in the upper part of the *Fucus*-zone on gneissic rocks facing S, P. Gelting 14168, 14178 & 14189; CW: Arfersiorfik Fjord, Eequaluarsuit, 68°05'N, 51°00'W, on gneissic seashore rock 20-30 cm above the *Fucus* zone, P. Gelting 15869.

*V. striatula* is new to Central West Greenland and Disko. It is also known from Scandinavia, North America and Novaya Zemlya (Andreev *et al.*, 1996; Thomson, 1997; Santesson *et al.*, 2004).

## CONCLUSION

The new localities given for the epilithic seashore lichens, *Verrucaria halophiloides* and *V. striatula*, indicate that these species are more common in West Greenland than suggested by the few previous reports from this area. Other species such as *Arctomia interfixa* and the three species reported here as new to Greenland is still considered to be very rare in Greenland. *Lecanora caesiosora* has so far not been reported from North America or the Russian Arctic, but it probably can be found in these areas. Most lichens stated in the list are known from Scandinavia.

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