

MEDDELELSER OM GRØNLAND

UDGIVNE AF

KOMMISSIONEN FOR VIDENSKABELIGE UNDERSØGELSER I GRØNLAND

Bd. 116 · Nr. 6

TREÅRSEXPEDITIONEN TIL CHRISTIAN DEN X's LAND 1931-34

UNDER LEDELSE AF LAUGE KOCH

**MOSSES FROM CLAVERING Ø
AND THE SURROUNDING AREAS**

BY

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WITH 1 FIGURE IN THE TEXT

KØBENHAVN

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BIANCO LUNOS BOGTRYKKERI

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The mosses dealt with in the list below were all collected by Dr. PAUL GELTING on the Three-Year Expedition to Christian X's Land 1931—34 under the leadership of Dr. LAUGE KOCH.

By far the greater part of the collections is derived from Clavering Ø, especially from the surroundings of the station of the expedition at Eskimonæs, where a very large number of vegetation samples were collected, samples of mosses (and lichens) having been secured by circling in a great many formations. In addition a great many, as a rule abundant samples of the moss vegetation from numerous localities within the area have been brought home, so it is possible on the basis of this material to form a fairly reliable estimate of the frequency of most of the species found and of the part they play in the vegetation cover. This especially applies to the swamp-gravel-heath formations (*Cassiope-Dryas-Vaccinium-Salix arctica*-lichen heaths, etc.), snow-patches, and meadows, while a relatively small number of mosses were collected on rock walls, in ravines, and in similar localities. Hence it is not improbable that species which principally grow in such localities, occur in larger numbers and with greater frequency than suggested by the material collected.

The list includes some few moss samples from Scoresby Sund.

List of localities whence collections are at hand. The figures in parentheses indicate the number of the localities mentioned in "Studies on the Vascular Plants of East Greenland between Franz Joseph Fjord and Dove Bay" by PAUL GELTING (Medd. om Grønland. Bd. 101, Nr. 2, Copenhagen 1934).

Sabine Ø.

- (2) Germania Havn (lat. 74°33' N., long. 18°50' W.), $\frac{7-12}{5}$ 1932.
- (3) Hvalrosø (lat. 74°31' N., long. 18°45' W.), $\frac{8}{5}$ 1932

Wollaston Forland.

- (9) Herschell Bjærg (lat. 74°15' N., long. 19°33' W.) including Eskimo graves, May 1932.
- (11) Sandodden (lat. 74°18' N., long. 20°10' W.), $\frac{30}{4}-\frac{4}{5}$ 1932 and $\frac{19-20}{8}$ 1933.

- (51) Kap Giesecke (lat. $74^{\circ}30'$ N., long. $21^{\circ}40'$ W.), including Tyrolerfjord and St. Sødal, $1\frac{2}{8}$ 1933.

Clavering Ø.

- (12) Grønnedal (lat. $74^{\circ}15'$ N., long. $20^{\circ}14'$ W.), $\frac{3}{5}$ 1932, $\frac{18}{8}$ 1933.
 (15) Kap Mary (lat. $74^{\circ}10'$ N., long. $20^{\circ}10'$ W.), $\frac{1}{9}$ and $\frac{23}{10}$ 1931; $\frac{29-30}{4}$ and $\frac{18-20}{5}$ 1932; $\frac{18}{8}$ 1933.
 (16) Lervig (lat. $74^{\circ}10'$ N., long. $20^{\circ}17'$ W.), including Magnetikerbjærg. $\frac{1}{9}$ and $\frac{23}{10}$ 1931; $\frac{16-17}{8}$ 1933.
 (17) Hird Bugt (lat. $74^{\circ}10'$ N., long. $20^{\circ}17'$ W.), including Rundetaarn, $\frac{18}{5}$ 1932 and $\frac{18-22}{7}$ 1933.
 (18) Elvsborg (lat. $74^{\circ}09'$ N., long. $20^{\circ}35'$ W.), $\frac{1}{9}$ and $\frac{24}{10}$ 1931; $\frac{18}{5}$ 1932; $\frac{20}{7}$ 1933.
 (28) Dødemandsbugten (lat. $74^{\circ}08'$ N., long. $20^{\circ}55'$ W.), $\frac{1}{9}$ 1931; $\frac{4}{4}$, $\frac{18}{5}$, and $\frac{15-19}{7}$ 1932.
 (29) Dybedal (lat. $74^{\circ}10'$ N., long. $20^{\circ}50'$ W.), $\frac{18}{7}$ 1932.
 (31) Eskimobugt (lat. $74^{\circ}07'$ N., long. $21^{\circ}41'$ W.), $\frac{24}{8}$ — $\frac{11}{9}$ 1931; $\frac{16}{6}$ 1932; $\frac{23}{8}$ 1933.
 (32) Eskimonæs (lat. $74^{\circ}06'$ N., long. $21^{\circ}20'$ W.), including Fladstrand. This locality was the station of the expedition from $\frac{4}{8}$ 1931 to $\frac{25}{8}$ 1932 and was visited again in the summer of 1933.
 (33) Granatlv (lat. $74^{\circ}40'$ N., long. $21^{\circ}34'$ W.), incl. Halle Bjærge. $\frac{15}{8}$ 1931; $\frac{20}{7}$ — $\frac{8}{8}$ 1932; $\frac{9}{8}$ — $\frac{13}{8}$ 1933.
 (34) Rustplateau (lat. $74^{\circ}13'$ N., long. $21^{\circ}25'$ W.), $\frac{20}{7}$ — $\frac{26}{7}$ 1932 and August 1938.
 The plateau attains an altitude of 600—700 m above sea-level, rising gradually towards the north, where it exhibits a height of 1100 m above sea-level in Westmar Bjærg.
 (52) Theodolit Plateau (lat. $74^{\circ}24'$ N., long. $21^{\circ}42'$ W.), including Eigils Elv. $\frac{31}{7}$ 1933.
 (54) Dry River incl. Gederyggen (lat. $74^{\circ}30'$ N., long. $21^{\circ}55'$ W.), August 1933.

Hudson Land and Hold-with-Hope.

- (39) Røjevand (lat. $73^{\circ}57'$ N., long. $22^{\circ}07'$ W.), $\frac{23}{7}$ 1933.
 (22) Knudshoved (lat. $73^{\circ}40'$ N., long. $20^{\circ}35'$ W.), $\frac{13}{2}$ — $\frac{16}{3}$ 1932.

Strindberg Land.

- (59) Gunvors Fjæld (lat. $75^{\circ}44'$ N., long. $24^{\circ}35'$ W.), November 1931 and $\frac{26-27}{8}$ 1932.

Payer Land.

- (54) Revet (lat. $74^{\circ}25'$ N., long. $21^{\circ}50'$ W.), $\frac{7}{7}$ 1932 and $\frac{24}{7}$ — $\frac{3}{8}$ 1933.
 (56) Hansens Havn (incl. Manley Land) (lat. $74^{\circ}13'$ N., long. $22^{\circ}20'$ W.), $\frac{13}{9}$ 1931 and $\frac{5}{8}$ 1933.

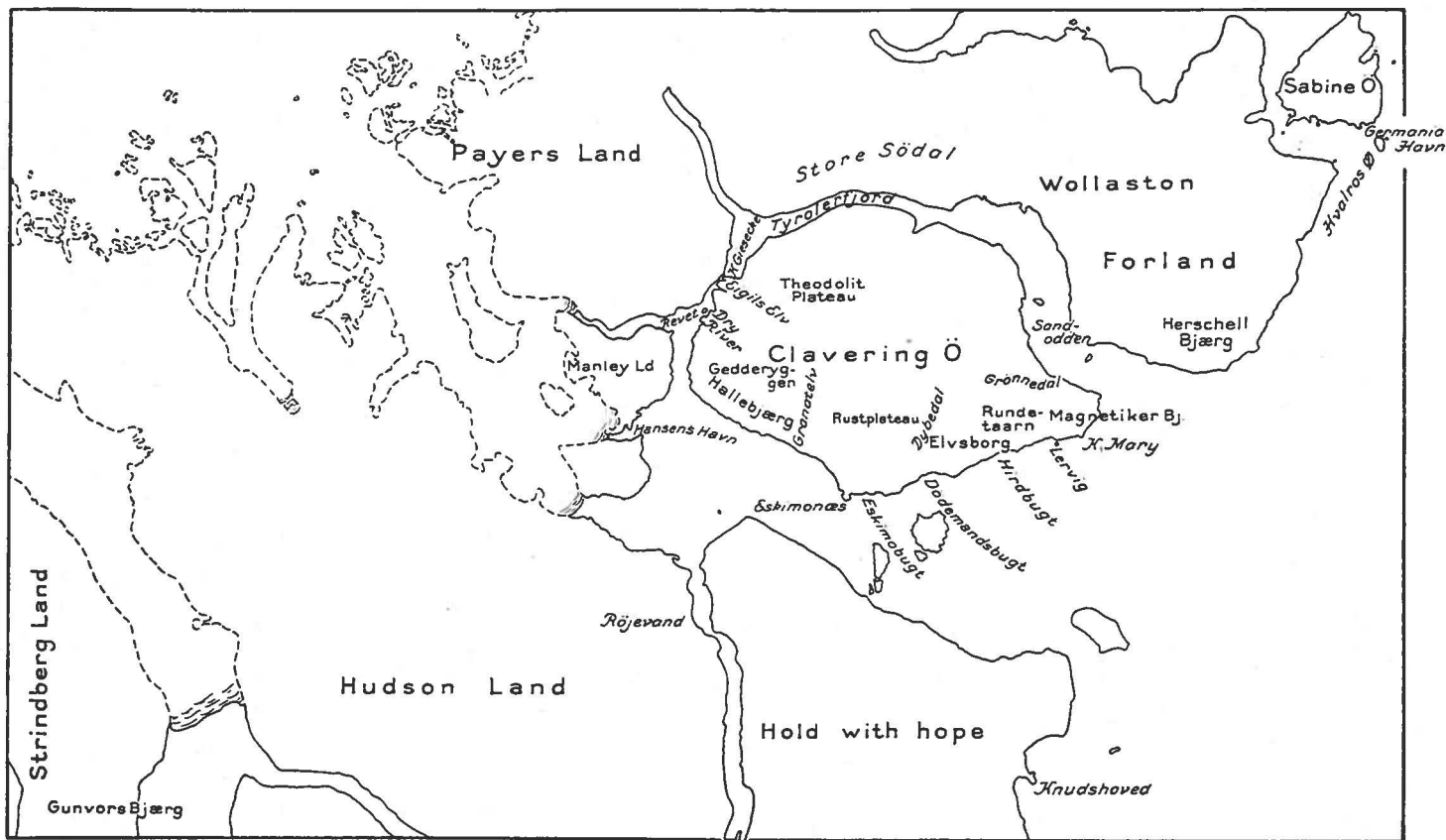


Fig. 1. Map of the area whence the mosses dealt with in the present paper are derived.

Scoresby Sund.

Kap Stewart (lat. 70°25' N., long. 22°30' W.) and Kap Hooker (lat. 70°25' N., long. 23°20' W.).

The nomenclature employed is, for the liverworts, after KARL MÜLLER: "Die Lebermoose" in RABENHORST'S "Kryptogamenflora" Zweite Auflage, 6. Band, Leipzig 1906—1911, and for the leaf mosses after "Skandinavisk Bladmossflora" by C. Jensen, Copenhagen 1939.

HEPATICAE

Fimbriaria pilosa (WAHLB.) TAYLOR.

Eskimonæs: several localities in *Dryas* heaths and south-facing snow-patches.

Marchantia polymorpha L.

Eskimonæs: in snow-patches in favourably exposed places, fruiting; Granatelv: in snow-patches and bogs; Rustplateau; Magnetikerbjærg.

Aneura pinguis (L.) DUM.

Granatelv; Revet; Kap Giesecke; Manley Land; Halle Bjærg. Rather sparse in all localities in tufts of marsh mosses such as *Catocopium nigratum*, *Hypna*, *Oncophorus Wahlenbergii*, etc.

Gymnomitrium concinnatum (LIGHTF.) CORDA.

Eskimonæs; Dybedal; in both places rather sparse in dry lichen heaths.

Alicularia scalaris (SCHRADER) CORDA.

Eskimonæs, in *Carex rupestris*-*Dryas* heaths.

Haplozia atrovirens (SCHL.) DUM.

Eskimonæs, in *Dupontia* littoral meadows and on the spit of land affected by solifluction; Rundetaarn, 260 m above sea-level, everywhere sparse on damp soil among other mosses.

Sphenolobus minutus (CRANTZ) STEPH.

Eskimonæs: several places in *Cassiope-Salix herbacea*- and lichen heaths; Dybedal. Usually rather sparsely entangled in dense tufts of *Conostomum* and other densely tufted mosses.

Lophozia quinquedentata (HUDS.) COGNIAUX.

Eskimonæs, in many localities; Dybedal; Grønnedal; Sandodden; Revet. Further, at Kap Hope in Scoresby Sund.

Commonly distributed on moist and fairly dry heath soil and in snow-patches, mostly as var. *tenera* C. JENSEN.

Lophozia quadriloba (LINDB.) EVANS.

Eskimonæs, many localities; Store Sødal, 220 m above sea-level (forma *heterophylla* BRYHN & KAALAAS).

Grows most frequently in moist soil, in bogs, interwoven with tufts of *Hypna* and other marsh mosses.

Lophozia Floerckei (W. et M.) SCHIFFNER.

Hird Bugt, on Rundetaarn, c. 560 m above sea-level, very sparse in tufts of *Hypnaceae*.

Lophozia Kunzeana (HÜB.) EVANS.

Eskimonæs, in *Cassiope* heaths.

Lophozia ventricosa (DICKS.) DUM.

Eskimonæs, in *Cassiope* heaths and snow-patches; Store Sødal; Kap Giesecke; Rustplateau; Hansens Havn.

Lophozia alpestris (SCHLEICH) EVANS.

Dybedal, in *Salix herbacea-Carex rigida* heaths.

Lophozia Wenzelii (NEES.) STEPH.

Eskimonæs.

Rather sparse, among other marsh mosses, on a moist talus cone frozen to the bottom on the northeastern side of Eskimonæs.

Lophozia Hornschuchiana (NEES.) MACOUN.

Granatelv, 60 m above sea-level; in a *Carex rariflora* bog in company with *Scorpidium scorpioides* and other swamp mosses.

Cephalozia pleniceps (AUST.) LINDB.

Eskimonæs, several localities; Dybedal.

The species occurs especially in bogs, but was also found in *Cassiope* heaths and *Carex rigida-Salix herbacea* snow-patches.

Cephaloziella.

Species of this genus, which is very difficult to determine, were found in a great many of the moss samples derived from wet soil as well as from dry heath soil and gravelly soil, but nearly always only as scattered quite sterile plants interwoven in the tufts of other mosses, sometimes as dark coatings of the soil, especially in snow-patches, and in such cases so highly interwoven with algae and fungal hyphae or mixed with lichens that, for instance, a demonstration of adventitious leaves, if any such are present, is very difficult. A substantial part seem to be referable to *Cephaloziella divaricata* (FRANC.) SCHIFFNER, but other plants should probably be referred to *C. rubella* (NEES) DOUIN, *C. Hampeana*, and forms of *C. alpina* DOUIN.

Odontoschisma Macouni (AUST.) UNDERWOOD.

Eskimonæs; Store Sødal 220 m above sea-level; Dybedal; Kap Giesecke.

The species grows both on moist soil and intermixed with tufts of other mosses, and was collected both in bogs and in *Cassiope* and *Carex rigida-Salix herbacea* heaths.

Blepharostoma trichophyllum (L.) DUM.

Eskimonæs, many localities; Store Sødal; Knudshoved; Lervig; Manley Land; Hansens Havn.

A common species, which was found both on dry soil in *Cassiope* and *Carex rigida-Salix herbacea* heaths and on wet soil, in unmixed tufts as well as, and most frequently, interwoven in tufts of other mosses, often in great abundance.

Anthelia julacea (L.) DUM.

Eskimonæs; Dybedal; Store Sødal. Occurs most frequently on fairly dry soil, thus in *Carex rigida-Salix herbacea* heaths, but was only found in small quantities intermixed with tufts of other mosses.

Anthelia Juratzkana (LIMPR.) TREVIS.

Eskimonæs, in abundance in late-thawing snow-patches, sparingly in *Carex rigida* associations.

Blepharozia ciliaris (L.) DUM.

Dybedal, abundant in *Carex rigida-Salix herbacea* heaths.

Scapania paludicola (LOESKE et K. M.) C. JENSEN.

At Kap Hooker in Scoresby Sund, in a *Carex rariflora* swamp.

Scapania mucronata H. BUCH.

Eskimonæs; Rundetaarn; Dybedal; Rustplateau.

Small *Scapania* forms of the *curta* group, here comprised under the name of *S. mucronata*, were found in a large number of moss samples, especially from dry localities such as *Salix arctica*-lichen heaths, *Carex rupestris* heaths, and *Cassiope* heaths, but also from fairly moist soil, however, always as single scattered plants or quite diminutive tufts among other mosses and only in a sterile state. The identifications must therefore be characterised as not entirely certain, especially in view of the considerable variation in the size of the cells, the length of the leaf apices, and the thickness of the cell walls exhibited by the plants examined. Possibly a number of these plants should be referred to forms of the very closely related species *S. scandica* or *S. curta*.

Sphagnum teres (SCHIMP) ÅNGSTR.

Granatelv; Knudshoved; Sandodden, everywhere in wet soil in company with *Aulacomnium palustre*, *Camptothecium nitens*, and other swamp mosses.

Sphagnum Warnstorffii Russow.

Scoresby Sund: Kap Hooker, rather sparse in bogs among *Aulacomnium palustre*.

ANDREAEALES

Andreaea rupestris HEDW. subsp. *papillosa* (LINDB.) C. J.

In Scoresby Sund, at Kap Hope, sparsely in a tuft of *Dicranum Starckeii*.

BRYALES

Polytrichum piliferum HEDW.

Eskimonæs; Revet; Dybedal; Rustplateau. Found in many localities, especially on dry soil, abundant in *Salix arctica* heaths rich in lichens, but also in *Dryas* heaths and *Carex rigida*-*Salix herbacea* heaths.

Polytrichum juniperinum WILLD.

Eskimonæs; Dybedal; Store Sødal; Sandodden; Hird Bugt; Rustplateau; Tyrolerfjord; Hansens Havn; Kap Hooker.

The species is very common, especially on heath soil, where it grows singly or in small groups among other mosses. With fruits it was collected at Kap Giesecke in Tyrolerfjord.

Polytrichum strictum SM.

Eskimonæs, in a snow-patch 250 m above sea-level.

Polytrichum norvegicum HEDW.

Eskimonæs, in a snow-patch 250 m above sea-level.

Polytrichum Jensenii HAGEN.

Kap Stewart and Kap Hooker in Scoresby Sund.

In both localities the species grew in wet soil in company with *Calliergon sarmentosum*, *Bryum pseudotriquetrum*, *Scapania paludicola*, and other swamp mosses.

Polytrichum alpinum HEDW.

A very common species, which is met with in dry as well as in moist localities at all heights above the sea, often abundant, but always sterile, rarely ♂.

The species varies greatly both in height, branching, the length of the leaves, and the dentitions of the leaf margin.

Var. *simplex* SCHIMP., which is low and unbranched, often with but slightly toothed leaves, is common on dry soil.

Var. *septentrionale* (SW.) LINDB.

Eskimonæs, abundant in *Salix arctica* and *Luzula confusa* heaths. The majority of the specimens of *Polytrichum alpinum* found have but

slightly denticulate leaves with short unicellular obtuse teeth. Leaves with long pluricellular teeth have not been observed.

Oligotrichum incurvum (HUDS.) LINDB.

Dybedal; isolated low sterile plants on dry gravelly soil in *Carex rigida-Salix herbacea* heaths.

Timmia austriaca HEDW.

Eskimonæs, in many localities, on dry as well as on fairly moist soil; here also in "Isbundsmosen" in large tufts c. 15 cm high; further, in abundance on the herb-slopes haunted by pink-footed geese, Clavering Ø, 1000 m above sea-level. — Kap Hooker in Scoresby Sund.

Philonotis tomentella MOL.

Eskimonæs; Granatelv; Grønnedal; Sandodden; Hird Bugt, on Rundetaarn; Halle Bjærge; Vesttinden 1000—1100 m; Rustplateau 1100 m; Knudshoved.

Common on more or less moist soil, in large unmixed tufts and mixed with other mosses.

Bartramia ityphylla BRID.

Eskimonæs, frequent in fairly dry localities such as *Cassiope* heaths, in *Luzula confusa* and *Salix arctica* heaths rich in lichens, and in pure *Salix arctica* heaths, but as a rule sparse. All the plants collected belong to var. *strigosa* (WBG.) HN.

Conostomum tetragonum (BRID.) LINDB.

Eskimonæs, in *Vaccinium* heaths; Dybedal, in abundance in *Salix herbacea* heaths, fruiting; Revet, 920 m above sea-level and 300 m above sea-level in snow-patches.

Paludella squarrosa (HEDW.) BRID.

In Scoresby Sund, at Kap Hooker, in abundance in a pool.

Catoscopium nigratum (HEDW.) BRID.

Eskimonæs, in snow-patches and *Arctagrostis* meadows; Revet, in abundance on moist soil and in *Carex saxatilis* bogs; Lervig, Halle Bjærge; Elvsborg; Theodolit Plateau.

Common, and often abundant or, as the main species, on swampy soil and in snow-patches; occasionally with fruits.

Meesia uliginosa HEDW.

Eskimonæs, several localities; Store Sødal; Theodolit Plateau; Revet; Granatelv; Kap Giesecke.

Common on wet soil in *Eriophorum* and *Carex saxatilis* bogs as well as in littoral meadows and in *Cassiope* heaths, often fruiting.

Meesia triquetra (HOOK. et TAYLOR) ÅNGSTR.

Revet; Store Sødal, 220 m above sea-level; Halle Bjærge; Kap Giesecke.

The species grows everywhere on very wet soil in company with *Scorpidium scorpioides*, *Drepanocladus brevifolius*, *D. revolutus*, *Oncophorus Wahlenbergii*, and other swamp mosses, often in abundance.

Meesia longiseta HEDW.

Store Sødal, in bogs in company with *Hypna*, *Meesia triquetra* and *M. uliginosa*.

Aulacomnium palustre (HEDW.) SCHWAEGR.

Very common in all the localities investigated, often in abundance, especially on moist soil, but also frequent in *Vaccinium* heaths, *Salix arctica* heaths, on herb-slopes, and in other mesophilous associations.

Var. *imbricatum* BR. et SCH.

Store Sødal 220 m above sea-level.

Aulacomnium turgidum (WBG.) SCHWAEGR.

Common in all the localities investigated. It prefers drier soil than *A. palustre* and grows especially on heath soil in *Vaccinium-Salix arctica-Carex rigida* communities, but is also frequently met with in company with *A. palustre*.

Mnium orthorrhynchum BR.

Eskimonæs, in *Cassiope* heaths and *Cetraria nivalis-Carex rupestris* heaths, singly or as small tufts among other mosses.

Mnium medium BR. EUR. var. *curvatulum* (LINDB.) C. JENSEN.

Eskimonæs, in abundance in south-facing snow-patches near the nesting places of pink-footed geese.

Mnium rugicum LAUR.

Eskimonæs; Knudshoved; everywhere sparse, in company with *Aulacomnium palustre* and other swamp mosses.

Cinclidium subrotundum LINDB.

Eskimonæs, in *Eriophorum Scheuchzeri* bogs; Revet; Store Sødal, in bogs; Elvsborg; Hansens Havn.

Of sparse occurrence everywhere among other swamp mosses, such as *Drepanocladus revolvens*, *Calliergon giganteum*, and *Catoscopium nigratum*.

Cinclidium arcticum (BR. EUR.) SCHIMP.

Granatelv, of sparse occurrence in bogs; Halle Bjærgene.

Bryum argenteum HEDW.

Eskimonæs, rock fissures near the nesting places of the pink-footed geese and in *Calamagrostis purpurascens* patches; Knudshoved, on a bird top. — According to Dr. GELTING the species is decidedly ornithocoprophilous.

Bryum pseudotriquetrum (HEDW.) SCHWAEGR.

Very common in all the localities investigated, ♀ plants are common, ♂ and fruits not observed.

The species is met with on wet soil in *Eriophorum* bogs as well as on dry soil, e. g. *Dryas* heaths, and often constitutes a considerable part of the moss carpet.

Subsp. *crispulum* (HAMPE) C. JENSEN.

Eskimonæs, many localities; Grønnedal; Granatelv; Hird Bugt; Germania Havn; Halle Bjærge; Rundetaarn.

This form is especially abundant in bogs, where it may constitute the main part of the mossy vegetation, but it was also collected on dry soil, for instance in *Betula nana* and *Dryas* heaths and in *Arctagrostis* meadows. On moist soil it may form extensive patches up to c. 10 cm deep, almost without intermingling with other species. ♀ plants are frequent, but fruits and ♂ plants were not observed.

Subsp. *neodamense* (ITZIGS).

Eskimonæs, several localities; Granatelv; Revet; Krattet; Rundetaarn, 560 m above sea-level; Sandodden; Røjevand.

Grows on very wet soil in *Eriophorum* and *Hypnace* bogs.

B. neodamense is a very delicate species, so closely related in habit and leaf-form to *Bryum pseudotriquetrum*, notably its subsp. *crispulum*, that it is often difficult or impossible to decide whether a given plant should most correctly be referred to one or the other of these forms.

Bryum teres LINDB.

Eskimonæs: Vesthavn, on a bone, in *Dupontia* littoral meadows, abundant and viviparous, in *Carex saxatilis* patches, and in the lagoon; Revet.

According to Dr. GELTING the species is coprophilous and to some extent tolerant of salt-water.

Bryum inclinatum (BRID.) BR. et SCH.

Elvsborg, fruiting; Hird Bugt, fruiting.

Bryum archangelicum BR. et SCH.

Eskimonæs: *Carex rupestris*-*C. Nardina* heaths, frequent in small tufts, occasionally with capsules; Elvsborg, on soil manured by birds, fruiting.

Bryum pendulum (HORNSCH.) SCHIMP.

Eskimonæs, *Arctagrostis* meadows and near the nesting places of pink-footed geese; Grønnedal; Kap Herschell; Sandodden; Elvsborg.

In the localities mentioned the species is most frequently abundant and richly fructifying. The greater number of the specimens examined

are referable to var. *compactum* (HORNSCH.) SCHIMPER or to transitional forms to the latter.

Bryum lapponicum KAURIN.

Eskimonæs, in *Dupontia* littoral meadows, in abundance and with mature capsules, and in the lichenous zone, poor in phanerogams, within the littoral meadows it is of rather sparse occurrence, but fruiting.

Bryum arcticum (R. BR.) BR. et SCH.

Eskimonæs, in *Cassiope* heaths; Grønnedal; Revet; Herschell Bjærg; always fruiting.

Bryum obtusifolium LINDB.

Clavering Ø, Kap Mary, in abundance in cold streamlets; Hird Bugt; Sandodden in brooks; Vesttinden 1000 m above sea-level; Rundetaarn 560 m above sea-level; Eskimonæs 1000 m above sea-level, abundant on wet soil.

The species occurs in extensive reddish carpets, especially in cold streamlets and drainage streams from melting snow.

Anomobryum concinatum (SPRUCE) LINDB.

Elvsborg, on soil manured by birds in company with *Barbula recurvirostris*.

Leptobryum pyriforme (HEDW.) WILS.

Eskimonæs, in *Catabrosa algida* snow-patches, fruiting.

Webera commutata SCHIMP.

Eskimonæs; Grønnedal; Krattet; Revet, several places, a very much elongated, delicate form, in dense tufts 2—4 cm high.

Webera gracilis (SCHLEICH.) D NOT.

Eskimonæs, common; Dybedal; Granatelv; Revet; Magnetikerbjærg; Rustplateau; Scoresby Sund: Kap Stewart, fruiting.

Common on fairly moist soil, especially in snow-patches, where it forms extensive carpets up to 1 cm thick. On Rustplateau it was collected in abundance up to c. 1000 m above sea-level.

Webera nutans HEDW.

Eskimonæs; Grønnedal; Granatelv; Lervig, fruiting; Tyrolerfjord, fruiting.

Frequent on dry sandy soil. In bogs a much elongated delicate form is frequently intermingled in tufts of *Aulacomnium palustre*; it should probably be referred to var. *sphagnetorum* SCH.

Webera cruda (HEDW.) BRUCH.

Eskimonæs, many localities; Dybedal; Dødemandsbugten; Dry River on Gederyggen 640 m above sea-level; Rustplateau.

Commonly distributed on dry soil and in rock fissures. often fruiting.

Webera polymorpha (HOPPE et HORNSCH.) SCHIMP.

Eskimonæs, in *Cassiope* heaths.

Tayloria lingulata (DICKS.) LINDB.

Eskimonæs, in *Carex saxatilis* bogs rich in mosses and in *Dupontia* littoral meadows, in both localities sterile and sparingly intermingled with tufts of *Bryum pseudotriquetrum* and *Drepanocladus revolvens*.

Tetraplodon mnioides HEDW.

Elvsborg; Eskimonæs, in *Empetrum-Vaccinium* heaths and in patches of *Festuca rubra*, fruiting.

Haplodon Wormskjoldii (HORNE MANN) R. BR.

Eskimonæs: the herb-slopes of geese, abundant and fructifying in moist patches of *Poa arctica*.

Splachnum vasculosum HEDW.

Eskimonæs, in *Dupontia* bogs; Revet, in very large cushions up to 10 cm deep in company with *Meesia uliginosa* and *Drepanocladus revolvens*, fruiting, in both places on musk-ox excrements. — Coprophilous.

Encalypta ciliata HEDW.

Eskimonæs; Hird Bugt; Rundetaarn.

Collected only very sparsely in these places, everywhere on dry soil, where it grew in company with *Ceratodon*, *Polytrichum alpinum*, *Ditrichum flexicaule*, and *Encalypta rhabdocarpa*.

Encalypta rhabdocarpa SCHWAEGR.

Eskimonæs, in many localities; Granatelv; Elvsborg; Gederyggen; Manley Land; Hansens Havn.

Var. *spathulata* (C. MÜLL.) HAGEN.

Eskimonæs, in *Dryas* heaths in company with the main species.

Encalypta rhabdocarpa belongs to the commonest species, being abundant, and often with fruits, on dry heath soil, in rock fissures, and sometimes also on moist soil.

Encalypta alpina SM.

Eskimonæs, in many localities; Granatelv; Røjevand; Elvsborg; Lervig.

Frequent on dry heath soil and in snow-patches, but in most cases as occasional scattered plants or as small tufts among other mosses. It was only found sterile.

Tortula ruralis HEDW.

Eskimonæs, many localities; Elvsborg; Sandodden; Granatelv; Gederyggen, 640 m above sea-level; Vesttinden, 1000 m above sea-level. Seems to be common on dry sandy soil. At Elvsborg it was found in abundance on bird-manured soil. Only found sterile.

Tortula mucronifolia SCHWAEGR.

Scoresby Sund: Kap Hooker, on a bird top c. 40 m above sea-level, with capsules, which on July 1st, 1933, were ripe but with the lids still attached.

Pottia Heimii (HEDW.) FÜRNR.

Scoresby Sund: Kap Stewart, fruiting.

Var. *obtusifolia* (R. BR.) HAGEN.

Elvsborg, in moist soil in company with *Bryum teres*. Vesthavn at Eskimonæs, on a bone in company with *Bryum teres*, in both places with ripe capsules at the beginning of July. *Pottia Heimii* varies fairly considerably, especially in the form of the leaf and in the number of the papillæ. The plant from Kap Stewart resembles most closely the main species but has somewhat shorter pointed leaves and more papillose leaves than plants from Scandinavia and Iceland. Var. *obtusifolia* is the commonest form in arctic regions, it differs from the main species by its broader rounded or short-tipped and denser papillose leaves. It has been impossible to detect any difference between var. *obtusifolia* and *Pottia papillosa* HARMSSEN from Ellesmere Land (The Godthaab Expedition 1928, The Mosses by LOUIS HARMSSEN and GUNNAR SEIDENFADEN, Medd. om Grønland. Bd. 28 No. 2). — According to Dr. GELTING the species is coprophilous and halotolerant.

Stegonia latifolia (SCHWAEGR.) VENT. var. *pilifera* (BRID.) BROTH.

Elvsborg, on bird-manured soil, fruiting.

Tortella tortuosa (HEDW.) LIMPR.

Eskimonæs, numerous localities; Elvsborg; Revet; Lervig; Herschell Bjærg

Common in pure tufts or mixed with other mosses on fairly dry soil.

Eucladium aeruginosum (SM.) C. JENSEN.

Eskimonæs, many localities; Elvsborg; Revet, 200 m above sea-level; Lervig; Hird Bugt.

Grows on moist as well as on fairly dry soil, where it may form tufts several centimetres high, or among other mosses such as *Ditrichum flexicaule*, *Distichium capillaceum*, often in abundance. ♀ plants were collected on the southernmost point of Eskimonæs.

Barbula rufa (LOR.) JUR.

Eskimonæs; Granatelv; Gunvors Fjæld.

Collected in several localities on dry soil, e. g. in *Cassiope* and *Dryas* heaths, and in *Luzula confusa* heaths, but always singly or in very small groups scattered over the remaining moss vegetation.

Barbula recurvirostris (HEDW.) DICKS.

A very common and often fructifying species, which was found in

a large number of the samples collected from dry as well as moist soil and from rock fissures. The leaves are as a rule short-tipped (f. *brevifolia*).

Rhacomitrium lanuginosum (HEDW.) BRID.

Dybedal, 200—300 m above sea-level; Hvalrosø.

According to Dr. GELTING, the species is of fairly abundant occurrence on Hvalrosø, but otherwise it is sparse.

Rhacomitrium canescens (HEDW.) BRID.

Eskimonæs, several localities, in *Cassiope* and *Salix arctica* heaths especially in dry patches rich in lichens. Revet, 920 m above sea-level.

Rhacomitrium heterostichum (HEDW.) BRID. var. *sudeticum* (FUNCK.)

DIXON.

Eskimonæs, on the spit of land affected by solifluction, sparsely in *Dryas* heaths among other mosses.

Hydrogrimmia mollis (BR. et SCH.) LOESKE.

Scoresby Sund, at Kap Tobin, forming large cushions 2—3 cm deep in a streamlet.

Schistidium apocarpum (HEDW.) BR. EUR.

Eskimonæs, on gravelly soil as also in abundance on perpendicular rock walls, forming dense black tufts 2—3 cm high and with nearly filiform stems (forma *tenerrima* CHALUBINSKY, var. *tenerrimum* BR. Germ.); Revet, the main species found in an *Elyna* heath; Vesttinden, 1000—1100 m above sea-level (f. *epilosa*).

Dicranum scoparium HEDW. var. *integrifolium* LINDB.

Eskimonæs, in company with *Timmia austriaca* in large cushions more than 15 cm deep in *Cassiope* heaths and mossy patches.

Dicranum fuscescens TURN. subsp. *congestum* (BRID.) C. JENSEN.

Eskimonæs, numerous localities; Dybedal; Theodolit Plateau; Knudshoved; Rustplateau, 1000 m above sea-level.

The species grows mostly on dry soil. At Eskimonæs it occurs in abundance in *Cassiope-Salix arctica-Empetrum-Vaccinium* heaths and in other xerophilous associations.

Dicranum Muehlenbeckii BR. EUR. var. *brevifolium* LINDB.

Scoresby Sund, Kap Hooker, in *Cassiope* heaths.

Dicranum Starckeii WEB. et MOHR.

Scoresby Sund, Kap Hope.

Oncophorus virens (HEDW.) BRID.

Eskimonæs, many localities; Granatelv; Grønnedal; Revet; Hird Bugt.

Judging from the large number of samples, *O. virens* belongs to the commonest mosses, especially on Eskimonæs. The majority of the plants examined have more or less serrated leaves and should accordingly be referred to var. *serratus* SCHIMP. The species usually grows on drier soil than *O. Wahlenbergii*, to which it bears a close habitual resemblance, e. g. in *Vaccinium-Salix arctica-Cassiope* heaths, but also in snow-patches and on swampy ground.

Oncophorus Wahlenbergii BRID.

Eskimonæs; Dybedal; Granatelv; Store Sødal; Sandodden; Tyrolerfjord; Revet.

Common in bogs, often in abundance and fruiting, but it was also collected on dry soil in *Cassiope-Salix arctica-Carex rigida* heaths.

Dichodontium pellucidum (HEDW.) SCHIMP.

Eskimonæs, in *Carex rigida* heaths; Hird Bugt, in bogs; in both places sparsely among other mosses.

Cynodontium alpestre (WBG.) LINDB.

A single tuft with immature capsules was found in a *Carex rupestris-Dryas* heath.

Amphidium lapponicum (HEDW.) SCHIMP.

Eskimonæs, common on the ground, e. g. in *Dryas* and *Salix arctica* heaths, dry lichen heaths, *Carex rigida* heaths, and on rock ledges, often in abundance and fruiting; Hird Bugt; Herschell Bjærg; Eskimo graves, abundant on soil, fruiting.

Trematodon brevicollis HORNSCH.

Eskimonæs, in *Dryas* heaths rich in grasses and herbs, singly or in small groups on gravelly soil. When collected, on July 11th, the capsules were almost ripe.

Ceratodon purpurens (HEDW.) BRID.

Eskimonæs; Dybedal; Grønnedal; Granatelv; Revet, 200 m above sea-level; Rundetaarn; Rustplateau; Vesttinden 1000—1100 m above sea-level; Hird Bugt.

Rather common on dry soil, but as a rule sparse among other mosses. On Eskimonæs it grew in high compact tufts at the nesting places of the pink-footed geese. It was only collected sterile and nearly always with short-tipped or obtuse leaves (f. *compacta*, *obtusifolia*).

Saelania glaucescens (HEDW.) BROTHERUS.

Eskimonæs, in many localities on dry heath soil, but everywhere sterile and sparse, as single plants or small tufts among other mosses.

Bryoxiphium norvegicum (BRID.) MITTEN.

Eskimonæs.

Here the species was collected in many places on heath soil, e. g. in *Salix arctica*-*Dryas-Cassiope* heaths, *Carex rupestris* and *Carex rigida* heaths, sometimes in abundance. Thus it was found in the majority of twenty samples selected at random from a number of circling samples from *Salix arctica* heaths and *Carex rigida* heaths.

In Greenland *Bryoxiphium* has previously only been collected near the Norwegian wireless station at Myggbukta by SIGURD AANDSTAD in 1932 (Bryologist, vol. xxxvii, 1934).

Distichium capillaceum (HEDW.) BR. EUR.

Very common in all the localities investigated. It occurs both on dry and on moist soil and often constitutes the main part of the moss carpet. Fruits are commonly found.

Distichium inclinatum (HEDW.) BR. EUR.

Theodolit Plateau, 100 m above sea-level, occurring sparsely on the bank of a brook among *Catoscopium nigratum*.

Ditrichum cylindricum (HEDW.) GROUPE.

Eskimonæs, a small sterile tuft on dry sandy soil in a lichenous heath, in company with *Ceratodon* and *Cephaloziella* sp.

Ditrichum flexicaule (SCHLEICH.) HAMPE.

A very common species rich in forms, rarely absent from moss samples derived from dry or not too moist soil, and often constituting the main part of the vegetation carpet. Only found sterile.

Fissidens osmundoides HEDW.

Eskimonæs; Tyrolerfjord; Revet.

The species was found to be very sparse everywhere, mostly occurring singly among other swamp mosses. Sterile.

Fissidens arcticus BRYHN.

Eskimonæs, in *Arctagrostis* bogs; Hird Bugt; Rundetaarn, 260 m above sea-level. The plants collected, which correspond entirely to the description given in N. BRYHN: "Fortegnelse over de under den 2. Norske Polarekspedition indsamlede Mosser. Kristiania 1906", in both localities occurred on swampy soil, where they grew sparsely, in most places singly, in tufts of *Drepanocladus revolvens*, *D. brevifolius*, *Bryum crispulum*, *Oncophorus*, and *Distichium capillaceum*.

Thuidium abietinum (SCHWAEGR.) BR. et SCH.

Dry River; Gederyggen, 640 m above sea-level in a *Dryas* heath.

Myurella julacea (HEDW.) BR. et SCH.

Very common, on Vesttinden up to 1100 m above sea-level, on both

dry and moist soil; the species was occasionally collected as pure tufts, but in most cases it was intermixed with other species, occurring in a large number of the collected samples of many different mosses.

Myurella tenerrima (BRID.) LINDB.

Eskimonæs, common, but as a rule sparsely mixed in tufts of other mosses; Grønnedal; Elvsborg.

Camptothecium nitens (HEDW.) SCHIMP.

Common everywhere on wet or moist soil, often in abundance, as a rule in company with *Aulacomnium palustre*. It is also met with, though sparsely, on dry soil in *Vaccinium-Empetrum* and *Cassiope* heaths.

Brachythecium albicans (NECK.) BR. EUR. var. *grønlandicum* (C. J.) BROTH.

Eskimonæs, Eskimobugten; Granatelv; Hird Bugt; Rundetaarn, Kap Giesecke.

In *Vaccinium-Empetrum* heaths, *Cassiope* heaths, and occasionally in bogs, always rather sparse among other mosses.

Brachythecium salebrosum (WEB. et MOHR) BR. et SCH.

Eskimonæs; Granatelv; Hird Bugt; Grønnedal; Lervig; Rundetaarn; Tyrolerfjord.

Occurs frequently, but as a rule only sparsely, among other mosses on heath soil.

Calliergon trifarium (WEB. et MOHR) KINDB.

Eskimonæs; Theodolit Plateau; Revet, 250 m above sea-level.

In all these localities it was rather sparse, growing among *Drepanocladus revolvens*, *D. brevifolius*, and *Calliergon giganteum*.

Calliergon turgescens (TH. J.) KINDB.

Eskimonæs; Eskimobugten; Store Sødal; Granatelv; Revet.

This species sometimes constitutes the main part of the moss vegetation in bogs in company with other *Hypnaceae*, but it is most frequently met with intermixed in tufts of other species. It was collected in Halle Bjærge up to a height of 600 m above sea-level.

Calliergon giganteum (SCHIMP.) KINDB.

Eskimonæs, several localities; Granatelv; Hird Bugt; Revet; Tyrolerfjord; Halle Bjærge.

In wet bogs, especially in *Eriophorum Scheuchzeri* bogs, where it often constitutes a very considerable part of the moss vegetation.

Calliergon stramineum (BRID.) KINDB.

Dybedal, intermingled with other swamp mosses in *Carex rigida-Salix herbacea* heaths.

Orthothecium strictum LOR.

Eskimonæs; Lervig; Revet, 200 above sea-level.

The species was only collected very sparsely, growing intermixed in tufts of *Catoscopium*, *Ditrichum flexicaule*. *Hypnum hamulosum*, and other mosses.

Hylocomium splendens (HEDW.) BR. et SCH.

Scoresby Sund, at Kap Hooker, a single stem in a tuft of *Drepanocladus uncinatus*.

Hylocomium Schreberi (BRID.) MITTEN.

Eskimonæs, a few plants in a *Carex rigida* heath.