

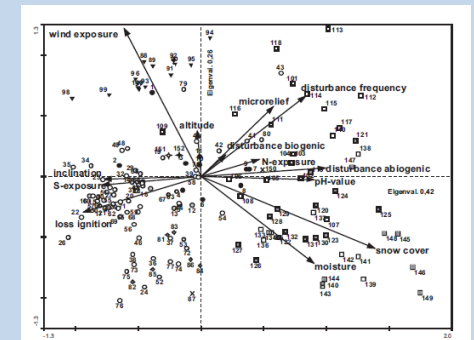
AVA – The Arctic Vegetation Archive

Greenland Data

stored in Münster



Site ID	Date	Coordinates	Species
1	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
2	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
3	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
4	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
5	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
6	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
7	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
8	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
9	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
10	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
11	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
12	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
13	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
14	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
15	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
16	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
17	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
18	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
19	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
20	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
21	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
22	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
23	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
24	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
25	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
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27	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
28	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
29	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
30	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
31	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
32	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
33	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
34	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
35	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
36	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
37	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
38	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
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42	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
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44	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
45	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
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47	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
48	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
49	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa
50	2000/08/17	60.11 N, 21.1 W	Deschampsia flexuosa



Helga Bültmann & Fred J. A. Daniëls
Münster

Relevé datasets in Münster - Overview

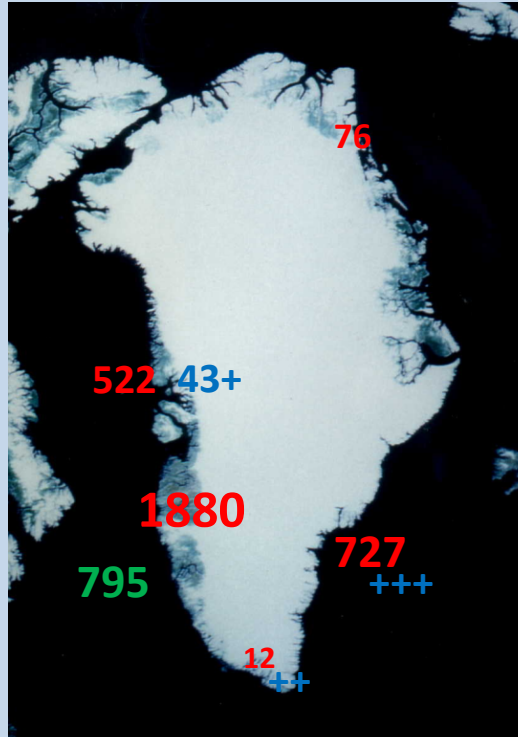
W Greenland:

Kangerlussuaq Area
& Sisimiut
1880 relevés

Umanak District
& Disko
522 & 43+

Kangerlussuaq to
Upernavik:
>200 relevés

795 relevés of Böcher
54, 59, 63



N Greenland:
76 relevés

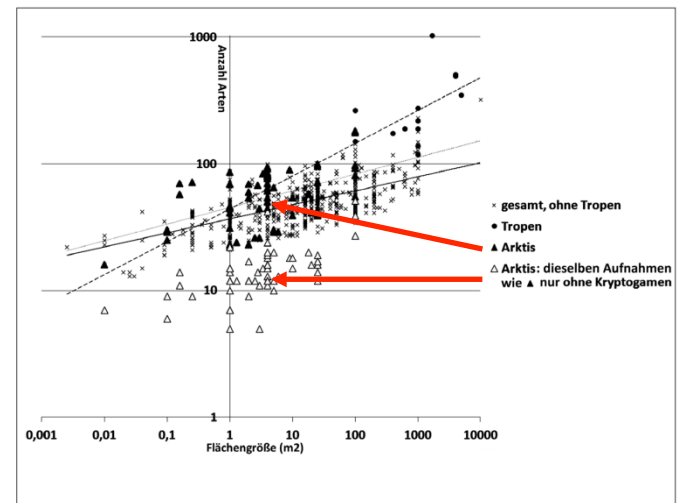
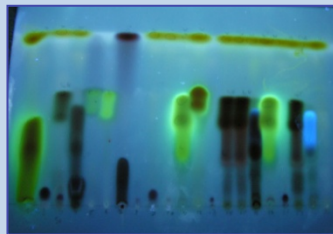
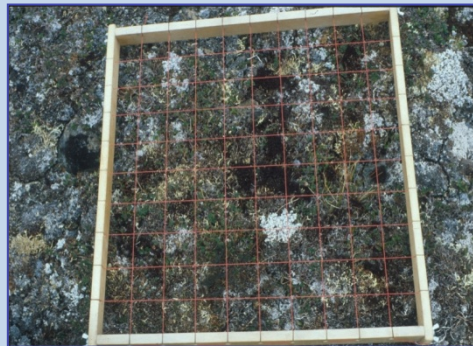
SE Greenland:
Ammassalik Area
727 relevés
many published
relevés not digitized
+++

S Greenland:
(12) relevés +

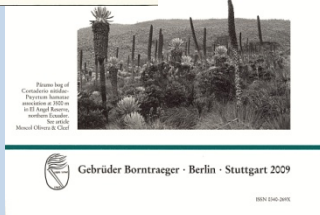
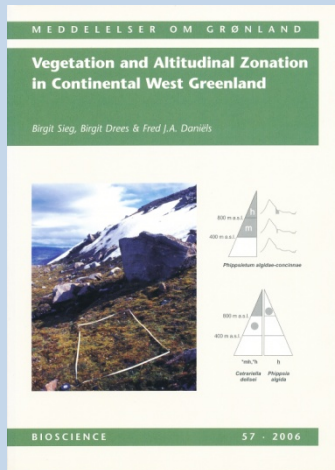
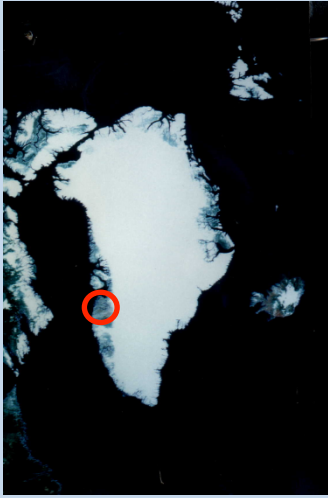
digitized
digitized
not digitized

3217 original relevés & 795 literature (Böcher) & >>270 original relevés not digitized

>>270 original relevés not digitized from W & NW Greenland,
also cryptogam identification not yet finished.



Aim: complete cryptogam identification and compute the data into Turboveg this year



AZV: West-Greenland – Kangerlussuaq Area 2000-2010

Altitudinal Zonation in Greenland

Fred Daniëls, Birgit Drees, Birgit Sieg, Carsten Sult

digitized: 786 relevés & 1 transect of 253 plots

Cryptogams + Habitat + Georeferenced +

Jörg Hüls

digitized: 125 relevés & transects of 235 plots

Cryptogams (+) Habitat + Georeferenced +

Kangerlussuaq Area – Sisimiut

Altitudinal Zonation & Climate Gradient Continental-Oceanic

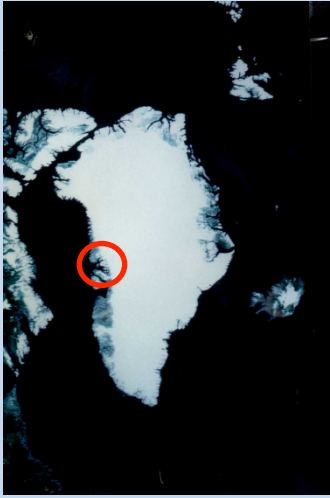
Michael Ginth

digitized: 481 relevés

Cryptogams (+/-) Habitat + Georeferenced –

1880

Drees, B. & Daniëls, F.J.A. 2009. Mountain vegetation of south-facing slopes in continental West Greenland. *Phytocoenologia* 39: 1-25.
Sieg, B., Drees, B. & Hasse, T. 2009. High-altitude vegetation of continental West Greenland. *Phytocoenologia* 39: 27-50.



Phytocoenologia 34 (2) 241–270 Berlin–Stuttgart, June 29, 2004

Phytosociological aspects of *Dryas integrifolia* vegetation on moist-wet soil in Northwest Greenland

by Christoph H. LÜNTERBUSCH and Fred J. A. DANIELS, Münster

Polarforschung 76 (3), 95 – 108, 2006 (erschienen 2007)

Phytosociology of Beach and Salt Marsh Vegetation in Northern West Greenland

by Ortrun Lepping¹ and Fred J. A. Daniels²

Northwest-Greenland 1990-2000

Fred Daniëls, Helga Bültmann, Ortrun Lepping, Christoph Lünterbusch

Dryas integrifolia vegetation (Christoph Lünterbusch)

digitized: 232 relevés & 1 transect of 21 plots

Cryptogams + Habitat + Georeferenced -

Coastal vegetation & settlement vegetation (Ortrun Lepping)

digitized: 139 relevés

Cryptogams +/- Habitat + Georeferenced –

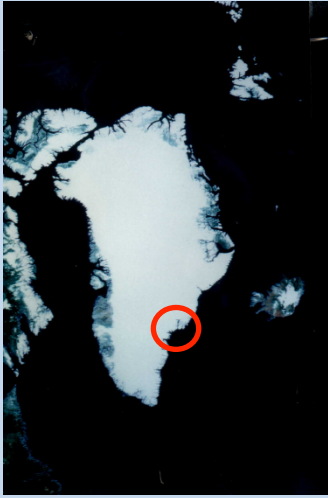
Snow beds, heaths, steppe, scree

digitized: 130 relevés: vascular plants

not digitized: 43+

Cryptogams +/- (collected) Habitat + Georeferenced –

522 & 43+



Polarforschung 65 (2): 71-82, 1995 (erschienen 1997)

Eine pflanzensoziologische Übersicht der *Oxyria digyna*- und *Chamaenerion latifolium*-Vegetation im küstennahen Bereich Südost-Grönlands

Von Christoph Lünterbusch, Helga Bültmann und Frederik J.A. Daniëls

Phytocoenologia	35 (4)	909-949	Berlin-Stuttgart, December 13, 2005
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Syntaxonomy of arctic terricolous lichen vegetation, including a case study from Southeast Greenland

by Helga BÜLTMANN, Münster



Applied Vegetation Science 14 (2011) 230-241

Vegetation change in Southeast Greenland? Tasiilaq revisited after 40 years

Fred J.A. Daniëls, Johannes G. de Molenaar, Milan Chvtrv & Lubomir Tichv

AMBIO (2011) 40:650-659
DOI 10.1007/s13280-011-0071-3

Flora and Vegetation of Tasiilaq, Formerly Angmagssalik, Southeast Greenland: A Comparison of Data Between Around 1900 and 2007

Fred J. A. Daniëls, Johannes G. de Molenaar

SE Greenland: Ammassalik 1966-2010

Fred Daniëls, Helga Bültmann, Christoph Lünterbusch, Hans De Molenaar, H. F. Ferwerda

Scree, alluvial, fjellfield vegetation (Christoph Lünterbusch 1995)

digitized: 135 relevés & 2 transects with 45 plots

Cryptogams + Habitat + Georeferenced -

Lichen rich vegetation (Helga Bültmann 1995)

digitized: 152 relevés

Cryptogams + Habitat + Georeferenced -

Fjellfield vegetation (Hedzer Ferwerda 1980)

digitized: 153 relevés

Cryptogams + Habitat + Georeferenced -

Daniëls 1982, De Molenaar 1974, 1976

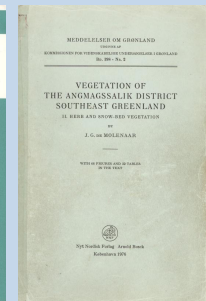
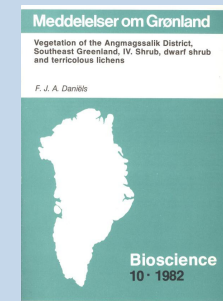
digitized: 110 relevés & +++ not digitized

Cryptogams + Habitat + Georeferenced -

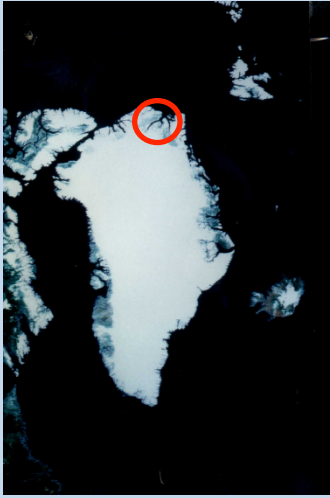
Daniëls & De Molenaar 2007

digitized: 110 relevés & transekt of 22 plots

Cryptogams + Habitat + Georeferenced +



727 & +++



N-Greenland 1995

Fred Daniëls

digitized: 76 relevés

Cryptogams + Habitat + Georeferenced -



76

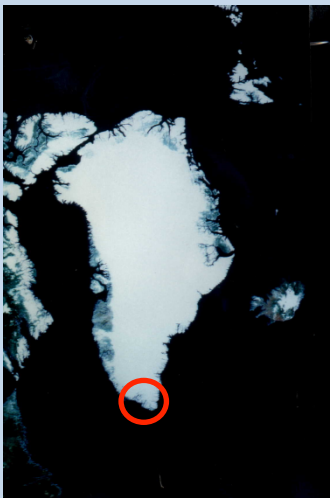


S-Greenland 2009

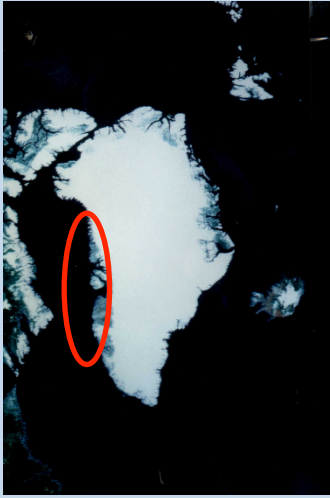
Fred Daniëls & Helga Bültmann

digitized: 12 relevés (vascular plants)

Cryptogams +/- (collected) Habitat + Georeferenced –
not digitized: 20



12 & +



West-Greenland 1992-1993

Fred Daniëls & Helga Bültmann

not digitized: >200 original relevés

Cryptogams +/- (collected) Habitat + Georeferenced –



West-Greenland

Böcher, T. W. 1954. Oceanic and continental vegetational complexes in Southwest Greenland. MOG 148/1

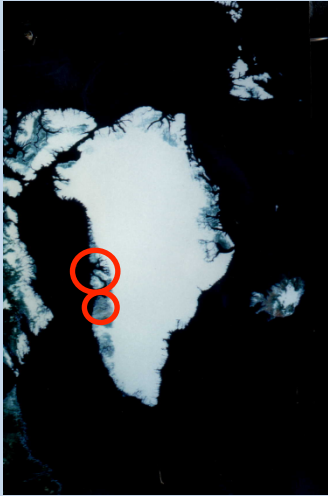
digitized: 386 relevés

Böcher, T. W. 1959. Floristic and ecological studies in middle West Greenland. MOG 156/5

digitized: 83 relevés

Böcher, T. W. 1963. Phytogeography of middle West Greenland. MOG 148/3

digitized: 326 relevés



AZV: West-Greenland – Kangerlussuaq Area 2000-2010

Altitudinal Zonation in Greenland

Fred Daniëls, Birgit Drees, Birgit Sieg, Carsten Sult

digitized: 786 relevés - Cryptogams + Habitat + Georeferenced +

Northwest-Greenland 1990-2000

Fred Daniëls, Helga Bültmann, Ortrun Lepping, Christoph Lünterbusch

Dryas integrifolia vegetation (Christoph Lünterbusch)

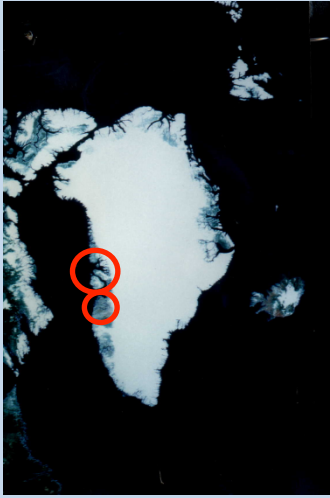
digitized: 232 relevés - Cryptogams + Habitat + Georeferenced –

* extensive header data, e.g. geographical and soil data

* cryptogams studied with scrutiny in original relevés

Header Data:

Date	+	+
Location	+	+
GPS	+	-
Relevé size	+	+
Altitude, Aspect, Slope, position in landscape	+	+
Cover values (vegetation, different layers, soil, humus, rocks)	+	+
Vegetation height	+	+
Stand size	+	+
Vegetation type	+	+
Ordinal scales: wind protection, snow cover, water, erosion, cryoturbation	+	+
soil layers	+	-
lab data from soil samples:		
pH, conductivity, loss on ignition	+	+
K, Na, Mg, Ca, C, N, P	-	+



AZV: West-Greenland – Kangerlussuaq Area 2000-2010

Altitudinal Zonation in Greenland

Fred Daniëls, Birgit Drees, Birgit Sieg, Carsten Sult

digitized: 786 relevés - Cryptogams + Habitat + Georeferenced +

Northwest-Greenland 1990-2000

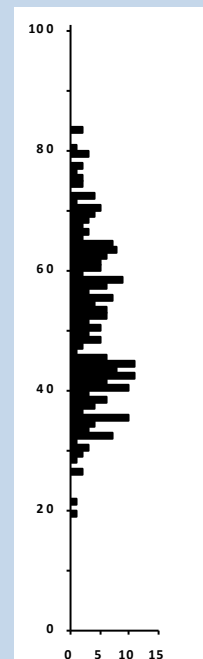
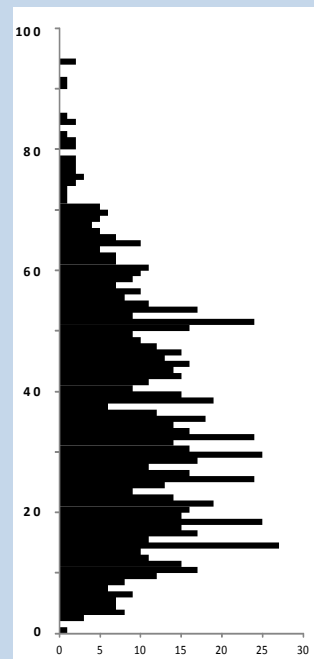
Fred Daniëls, Helga Bültmann, Ortrun Lepping, Christoph Lünterbusch

Dryas integrifolia vegetation (Christoph Lünterbusch)

digitized: 232 relevés - Cryptogams + Habitat + Georeferenced –

* extensive header data, e.g. geographical and soil data

* cryptogams studied with scrutiny in original relevés



Identified Vegetation Types

	S	W	NW	SE	N
Juncetea maritimi - Coastal salt marsh vegetation	+		++	++	
Ammophiletea - Dry coastal beach and sand dune vegetation			++		
Cakiletea maritima - Therophytic strandline vegetation			+		
Potamogetonetea - Rooted floating or submerged macrophyte vegetation of meso-eutrophic waters			+	++	
Phragmito-Magnocaricetea - Swamp vegetation of tall sedges, herbs and grasses					++
Salicetea purpureae - Riparian willow shrub vegetation		++			
Isoeto-Littorelletea - Small rush vegetation on temporarily moist-wet soil			+	++	
Scheuchzerio palustris-Caricetea fuscae - Sedge grass and dwarf shrub mire and fen vegetation		++	+++	++	++
Asplenieta trichomanis - Fern and herb vegetation of rock fissures and ledges				++	
Thlaspietea rotundifolii - Talus slope, debris and alluvial vegetation	+	++	++	+++	
Drabo corymbosae -Papaveretea dahliani - High-Arctic polar desert vegetation of forbs, rushes, bryophytes and lichens					++
Salicetea herbaceae - Snowbed vegetation		++	+++	+++	
Loiseleurio-Vaccinieta - Dwarf shrub heath and low shrub vegetation on acidic poor substrate	++	+++	+++	+++	
Carici-Kobresietea - Achionophytic dwarf shrub and graminoid vegetation on non-acidic substrate		+++	+++	++	++
Saxifrago-Calamagrostietea purpurascens - Boreal and low arctic steppe vegetation of the inland on dry, warm substrate		+++	+		
Juncetea trifidi - Xerophytic graminoid vegetation on acidic sandy-gravelly substrates				+++	
Mulgedio-Aconitetea - Tall forb and shrub vegetation on mesic-moist soil				++	
Vaccinio-Piceetea - Scrub and low forest of Betula pubescens ssp. czerepanovii	+				
Molinio-Arrhenatheretea - Anthropogenic pastures and meadows on fertile soil	+				

Summary

- * already large number of data digitized from many regions of Greenland**

to do

- finish more relevés**
- include literature**

to think about

- * preservation & standardization of header data**
- * quality control**

Mucina, L., Bültmann, H., Dierssen, K., Theurillat, J.-P., Dengler, J., Czarni, A., Sumberova, K., Raus, T., Di Pietro, R., Garcia, R. G., Chytrý, M., Yakushenko, D., Schaminee, J.H.J., Bergmeier, E., Guerra, A.S., Daniels, F.J.A., Ermakov, N., Valachovic, M., Pignatti, S., Rodwell, J.S., Pallas, J., Capelo, J., Weber, H.E., Lysenko, T., Solomeshch, A., Dimopoulos, P., Aguiar, C., Freitag, H., Hennekens, S.H., Tichý, L. 2013. Vegetation of Europe: Hierarchical floristic classification system of plant, lichen, and algal communities

EuroVegChecklist browser

Expand Collapse Search Search from current position Search options Export

Phanerogamic communities Moss & Lichen communities Algal communities

VEGETATION OF AZONAL HABITATS

VEGETATION OF ARCTIC, BOREAL AND ALPINE ZONES

VEGETATION OF MONTANE HERBLANDS, GRASSLAND, FELL-FIELDS AND

MUL - Mulgedio-Aconitetea Hadač et Klika in Klika et Hadač 1944

HER - Salicetea herbaceae Br.-Bl. 1948

SES - Elyno-Seslerietea Br.-Bl. 1948

ARC - Tripleurospermo hookeri-Poetea arcticae Mucina et Ermakov c

ARC-01 - Phippsio-Cochleariopsietalia groenlandicae Hadač 1989

ARC-01A - Cochleariopsion groenlandicae Hadač 1989

ARC-01B - Cerastio arctici-Saxifragion cernuae H. Hartmann ex

ARC-02 - Epilobietalia angustifolii-Betuletalia nanae Ishbirdin ex Mu

PAP - Drabo corymbosae-Papaveretea dahlianae Daniëls classis nova

PAP-01 - Saxifraga flagellaris-Papaveretalia dahlianae Daniëls ordo

KOB - Carici rupestris-Kobresietea bellardii Ohba 1974

LOI - Loiseleurio-Vaccinietea Eggler ex Schubert 1960

TRI - Juncetea trifidi Hadač in Klika et Hadač 1944

SAX - Saxifraga tricuspidatae-Calamagrostietea purpurascens Drees

VEGETATION OF MONTANE HEATHLANDS AND CONIFEROUS FORESTS

VEGETATION OF TEMPERATE ZONE

VEGETATION OF MEDITERRANEAN

VEGETATION OF CONTINENTAL SEMIDESERTS

VEGETATION OF ANTHROPOGENIC HABITATS

AZONAL FORESTS AND SCRUB

AZONAL CLASSES OF MACARONESIA AND AZORES

ZONAL CLASSES OF MACARONESIA AND AZORES

Drabo corymbosae-Papaveretea dahlianae Daniëls classis nova hoc loco

Polar deserts of Arctic Ocean archipelagos

pap01 This new class is typified (holotypous) by the *Drabo corymbosae-Papaveretalia dahlianae* (for the valid description of the order see below) and diagnostic species of the class as the same as the diagnostic species the *Drabo corymbosae-Papaveretalia dahlianae* - so far the only order described within this class. The polar deserts (defined by Bay, C. 1997. *Journal of Vegetation Science* 8: 685-696, Fig. 7 as the Subzone A) are characterised by sparse vegetation of vascular plants, pronounced occurrence of lichens, lack of woody plants, and missing sedges and rushes (unlike in the tundra vegetation of the Carici-Kobresietea). (FD).

Synonyms

- Drabo-Papaveretea dahlianae Daniëls 2002 (2b, 8)
- Drabo-Papaveretea dahlianae Daniëls et Wilhelm 2002 (2b, 8, 31)

Typical class species

Gowardia nigricans, *Alectoria ochroleuca**, *Alopecurus borealis*, *Aulacomnium turgidum**, *Draba corymbosa**, *Draba subcapitata*, *Flavocetraria cucullata**, *Flavocetraria nivalis**, *Papaver radicum*, *Parmelia skultii*, *Poa abbreviata*, *Potentilla pulchella*, *Puccinellia angustata**, *Racomitrium lanuginosum**, *Saxifraga cespitosa*, *Saxifraga flagellaris**, *Saxifraga oppositifolia* subsp. *oppositifolia**, *Schistidium frigidum*, *Sphaerophorus globosus**, *Sticta arctica*, *Thamnia vermicularis* subsp. *subuliformis*, *Thamnia vermicularis**

Relevant literature

- Aleksandrova, V.D. 1988. *Vegetation of the Soviet polar deserts*. Cambridge University Press, Cambridge, UK.
- Bay, C. 1997. Floristical and ecological characterization of the polar desert zone of Greenland. *Journal of Vegetation Science* 8: 685-696.
- Daniëls, F. J. A. 2002. Higher syntaxa from the Russian Arctic. In Reynolds, M.K. and Markon, C.J. Fourth International Circumpolar Arctic Vegetation Mapping Workshop in Moscow. Open File Report 02-181. U.S. Department of the Interior.

© Mucina et al. (2013). Vegetation of Europe The index includes 101 classes, 279 orders, and 1048 alliances

EVC-Browser by Stephan Hennekens

EuroVegChecklist browser

Search
☒ Search from current position

☒ Phanerogamic communities
 ☐ Moss & Lichen communities
 ☐ Algal communities

EPIGEIC BRYOPHYTE AND LICHEN VEGETATION

- FUN - Funarietea hygrometricae von Hübschmann 1957
- CER - Ceratodonto purpurei-Polytrichetea piliferi Mohan 1978
- PSO - Psoretea decipiens Mattick ex Follmann 1974
 - PSO-01 - Barbuletalia unguiculatae von Hübschmann 1960
 - PSO-02 - Toninietalia coeruleonigricantis Hadač in Klika ex Hadač
 - PSO-03 - Fulgensietalia desertori Crespo et Barreno 1975
- CAM - Campylopodetea vaporarii Brullo, Privitera et Puglisi 2004

EPILITHIC BRYOPHYTE AND LICHEN VEGETATION

- PLA - Platyhypnidio-Fontinalieteae antipyreticae Philippi 1956
- ALA - Aspicillietea lacustris Wirth 1972
 - ALA-01 - Hydroverrucarietalia Černohorský et Hadač ex Klement
- VMA - Verrucarietea mauraе Drehwald 1993
- GAN - Grimmietea anodontis Hadač et Vondráček in Ježek et Vondráček
- GAP - Grimmietea alpestris Hadač et Vondráček in Ježek et Vondráček
 - GAP-01 - Grimmietalia alpestris Šmarda 1944
- CTE - Ctenidietea mollusci von Hübschmann ex Grgić 1980
- CLA - Clauzadeetea immersae Roux in Roux et al. 2009
- VNI - Verrucarietea nigrescentis Wirth 1980
- RHI - Rhizocarpetea geographici Wirth 1972
 - RHI-01 - Rhizocarpetalia obscurati Wirth 1980
 - RHI-02 - Rhizocarpetalia geographici Klement 1949
 - RHI-03 - Acarosporietalia sinopicae Creveld 1981
 - **RHI-04 - Umbilicarietalia cylindricaе Oberdorfer ex Klika et Hadač**
 - RHI-04A - Umbilicarium cylindricaе Frey 1933
 - RHI-04B - Rhizocarpion alpicolae (Frey 1933) Klement 1955
 - RHI-05 - Parmelietalia saxatilis Wirth 1972
 - RHI-06 - Rinodino confragosae-Xanthorietalia elegantis Creveld or
- ACA - Aspicillietea candidae Asta et Roux ex Roux class. nova hoc loco
- POR - Porpidietea zeoroidis Roux class. nova hoc loco
- COL - Collematetea cristati Wirth 1980

Umbilicarietalia cylindricaе Oberdorfer ex Klika et Hadač 1944

Ombrophilous lichen communities on siliceous rocks and boulders in upper montane to nival belts and of arctic distribution

rhi02 With the "Umbilicarium cylindricaе" Gams 1927 (originally Gyrophorion) Creveld (1981) choose an invalid alliance as the type of the Umbilicarietalia cylindricaе Oberdorfer ex Klika et Hadač 1944. Hoc loco the Lectotypus Umbilicarium cylindricaе Frey 1933 in Frey, E. 1933. Die Flechtengesellschaften der Alpen. Ber. d. Geobot. Forschungsinst. Rübel in Zürich 1932: 36-51 is chosen from Klika, J. & Hadač, E. 1944. Rostlinná společenstva střední Evropy. Příroda (Praha) 36: 249-259.

Synonyms

- Umbilicarietalia cylindricaе Oberdorfer 1938 (2b, 8)
- Umbilicarietalia cylindricaе Wirth 1972 (31)
- Rhizocarpetalia alpicolae Creveld 1981 (syntax.syn)

Umbilicarium cylindricaе Frey 1933

Ombrophilous communities of umbilicate lichens on tops and vertical faces of siliceous rocks and boulders in upper montane to nival belts and of arctic distribution

Synonyms

- Gyrophorion Gams 1927 (2b, 8)
- Umbilicarium havaasii Creveld 1981 (syntax.syn)

Rhizocarpion alpicolae (Frey 1933) Klement 1955

Ombrophilous communities of crustose lichens on exposed siliceous rocks and boulders of upper montane to nival belts and of arctic distribution

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Phanerogamic communities Moss & Lichen communities **Algal communities**

VEGETATION OF FRESHWATER ALGAE
 CHA - Charetea intermediae F. Fukarek 1961
 CHA-01 - Charetalia intermediae Sauer 1937
 CHA-01A - Charion intermediae Sauer 1937
 CHA-01B - Charion vulgaris (Krause et Lang 1977) Krause 1981
 CHA-02 - Nitelletalia flexilis W. Krause 1969
 CLG - Cladophoretea glomeratae Bobrov et al. 2007
 LEF - Lemanetea fluvialis Weber-Oldecop ex Täuscher 1998
 AST - Asterionelletea formosae Täuscher 1998 nom. inval.
 NAV - Naviculetea gregariae Pankow ex Täuscher 1998
ALGAE VEGETATION ON MOIST AND WET ROCKS
VEGETATION OF MARINE ALGAE
 ENT - Entophysalidetea deustae Giaccone in Giaccone et al. 1993 nom.
 ENT-01 - Neogoniolitho notarisi-Nemodermetalia tingitani Molinier 1993
 ENT-02 - Bangietalia atropurpureae Giaccone in Giaccone et al. 1993
 ENT-03 - Pleurocapsetalia gloeocapsoidis Ercegović 1932
 ENT-04 - Fucetalia vesiculosi Julve 1992 nom. inval.
 ENT-05 - Hyelletalia caespitosae Ercegović 1932
 ENT-06 - Dalmatelletalia polyformis Ercegović 1932
 CYS - Cystoseiretea crinitae Giaccone 1965
 LIS - Lithophylletea soluti Giaccone 1965
 CAU - Caulerpetea racemosae Giaccone et Di Martino 1997
VEGETATION OF SOIL ALGAE
VEGETATION OF AEROPHYTIC ALGAE ON ACIDIC SURFACES

Charetalia intermediae Sauer 1937

Submerged macroalgal stonewort swards in neutral to alkaline and lime-rich waters
cha02 The alliance Charion intermediae Sauer 1937 validates the order Charetalia Sauer 1937, which should be named Charetalia intermediae.

Synonyms

- Charetalia Sauer ex Krausch 1964 (valid.superfl.)
- Lamprothamnietalia papulosi Van Raam et Schaminée in Schaminée, Weeda et Westhoff 1995 (3b, 8)

Charion intermediae Sauer 1937

Perennial submerged macroalgal stonewort swards in neutral to alkaline waters
cha03 Sauer (1937) described the Macrocharacetum (p. 486) with two relevés and one with Chara intermedia as the only Chara species together with Nitellopsis obtusa. This relevé validates the Charion Sauer 1937 and order Charetalia Sauer 1937, in consequence here named as the Charion intermediae and the Charetalia intermediae.

Synonyms

- Charion fragilis Krausch 1964 (syntax.syn)
- Limno-Charion Krausch 1964 p.p. (3a, 8, 29c)
- Charion globularis Krausch 1964 nom. mut. propos.
cha04 The proposal on the introduction of the mutated form of the name was published by Šumberová et al. in Chytrý (2011: 257).
- Charion asperae W. Krause 1969 p.p.
- Charion contrario-asperae Pietsch 1987 p.p. (5, 8)
- Charion rudis-hispidae Pietsch 1987 (5, 8)

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