This folder contains the text, tables and figures for the data report on the Canadian Transect conducted in July and August of 1999. Below is the table of contents for the data report. Following that is the list of files included in the Cfolder. For more information, go to: http://www.geobotany.uaf.edu

1999 CANADIAN TRANSECT FOR THE CIRCUMPOLAR ARCTIC VEGETATION MAP

DATA REPORT: Participants, sampling scheme, site descriptions, soil descriptions and properties, plant species cover, and photographs

Grizelle González, William A. Gould, and Martha K. Raynolds

In support of the following research:
Arctic Climate Change, Substrate, and Vegetation, OPP-9908829, 7/1/99 - 6/30/03, D.A. Walker, PI, W.A. Gould and H. Epstein, Co-PIs

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Note for those working with the Excel table data: There are not the exact same number of relevés in each table. Some relevés didn't have certain information...some relevés were split into an "a" and "b". It means one table can't be pasted into another with the assumption that each column has data from the same relevé.

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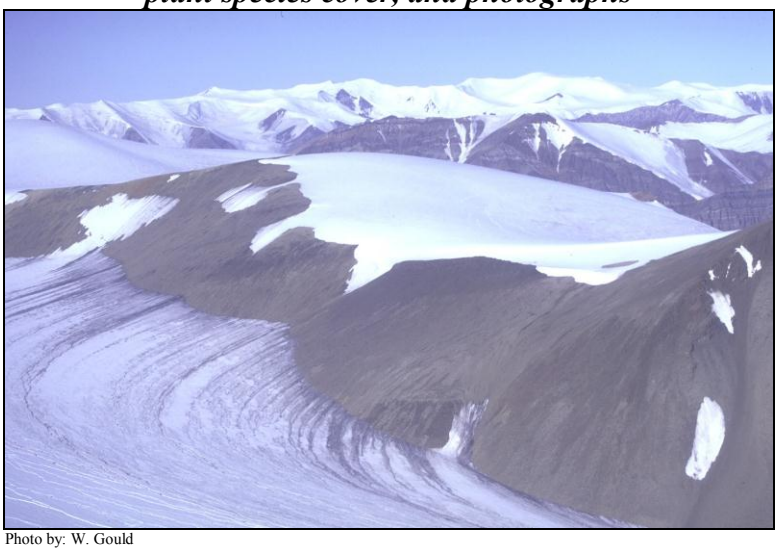

Photo by: W. Gould

Aerial view of glaciers on Axel Heiberg

Grizelle González, William A. Gould, and Martha K. Raynolds

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University of Minnesota Itasca Biology Program and NSF Postdoctoral Fellowship in Math, Science, Engineering, and Technology

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Introduction

Variations in vegetation cover and species composition related to climate are evident from the southern to northern Arctic. Scientists involved in the Circumpolar Arctic Vegetation Mapping (CAVM) project and undergraduate students in a University of Minnesota field course conducted a north-south transect in the Canadian Arctic in order to investigate this large-scale variation in vegetation. Data obtained from the transect will help define phytogeographic zonation in the Arctic related to climate. Four goals of the project were: 1) to help resolve interpretations of Arctic vegetation zonation (*i.e.* the Russian, European, and North American schools of thought) in order to develop a uniform internationally accepted terminology for use in the CAVM, 2) better understand vegetation patterns in the least documented of the circumpolar regions, 3) develop a table of major vegetation types along a mesotopographic sequence within vegetation zones related to climate, and 4) to further interest and research in the Arctic by involving graduate and undergraduate students in the project through a University of Minnesota sponsored field course, *Arctic Field Ecology*. University students from the United States and Canada joined vegetation scientists from Canada, Germany, Norway, Russia, and the United States in the transect from the northern to southern Canadian Arctic designed to investigate large-scale variation in vegetation related to climate (Table 1, Fig. 1, Gould and Walker, *in prep*.).

This report summarizes the environmental, vegetation, and soil data collected from 116 relevés along a transect from Amund Ringnes, Axel Heiberg, and Ellesmere Islands in the north to a research camp at the southern edge of the tundra (Fig. 2).

Table 1. Students and researchers participating in the 1999 Canadian Transect for the Circumpolar Arctic Vegetation Map.

Students	
Dianna Alsup (Texas A&M University)	
April Desjarlais (University of Saskatchewan)	
Howard Hill (Northeastern Illinois Univ.)	
Christine McDaniel Hill (Northeastern Illinois Univ.)	
Chris Schadt (Univ. of Colorado)	
Researchers, location () and area of expertise	
Dr. Fred Daniëls (Westfälische Wilhelms-Universität, Ger.)	Greenland
Dr. Sylvia Edlund (Ottawa, Ontario)	High Arctic Canada
Dr. Arve Elvebakk (University of Tromso, Norway)	Svalbard
Dr. William Gould (University of Minnesota)	Canada
Dr. Nadya Matveyeva (Komorov Bot. Institute)	Taimyr Peninsula, Russia
Dr. Boris Yurtsev (Komorov Botanical Institute)	Russia
Dr. Skip Walker (University of Alaska)	Alaska

Fig. 1. Group participants at the Daring Lake research camp. Standing from left to right: Christine Hill, Howard Hill, Boris Yurtsev, Fred Daniëls, Sylvia Edlund, Arve Elvebakk, April Desjarlais, Dianna Alsup. Seating from left to right: Skip Walker, Nadya Matveyeva, Bill Gould, and Chris Schadt.

Methods

Site descriptions

We visited Sixteen locations along a 2000 km transect covering over 16° of latitude (Table 2, Fig. 2). We selected sites with the following criteria in mind: They should 1) be distributed between each of Yurtsev's (1994) five phytogeographic subzones, 2) be logistically accessible with a minimum of flying time, 3) have accessible undisturbed habitats (topographic positions and moisture conditions), and 4) be representative of regional climatic and substrate conditions. Vegetation and soils were sampled on acidic substrates in the southern Arctic (subzone 5) and on neutral and nonacidic substrates in the northern Arctic (subzones 1-4).

The transect included a set of four stops with logistic support (Daring Lake, Cambridge Bay, Resolute, and Eureka) and day travel by airplane, helicopter, all-terrain vehicle (ATV), and on foot from these locations to our set of 16 sampling areas (Fig. 2). Sampling areas were selected using air photos and topographic and vegetation maps when available. Vascular, lichen, and bryophyte floristic surveys were conducted at each of the sixteen sites. Sampling at eight sites involved conducting relevés along a complete mesotopographic gradient (Fig. 3) with the goal of describing the range of representative vegetation and soils in 1) dry, 2) mesic-zonal, 3) wet, 4a) early snowbed, 4b) late snowbed, and 5) riparian environments; and on available substrates. Sampling at eight additional sites included either only floristic surveys or surveys with relevés along a partial topographic sequence.

Table 2. Location and dates of sites along the 1999 Canadian Transect.

Site #		Location	Date	Lat., Long.	Elevation (m)	Subzone	Dominant Vegetation	Mean July Temp. (°C)	Annual Precip. (mm)
		Amund Ringnes Island							
		Northwest coast (first stop)	8/2/99	78 41 N, 96 45 W	2	1	cushion-forb		
1	*	Stratigrapher River	8/2/99	78 38 N, 96 50 W	40-50	1	cushion-forb		
		Axel Heiberg Island							
2		Cape Levvel	8/2/99	78 58 N, 94 15 W	10	2	prostrate dwarf-shrub		
4	*	Bunde Fiord	8/1/99	80 30 N, 94 35 W	30-40	2	prostrate dwarf-shrub		
3		Expedition Fiord	8/2/99	79 25 N, 90 45 W	150	3	prostrate dwarf-shrub		
		Ellesmere Island							
5		Eureka	7/29/99-8/4/99	80 00 N, 84 55 W	20-30	3	prostrate dwarf-shrub	5.4	68.0
		Black top Ridge	7/30/99	80 04 N, 85 29 W	200	1	cushion-forb		
		Hare Ridge	7/30/99	80 05 N, 86 15 W	200	1	cushion-forb		
	*	East Wind Lake	7/31/99	80 06 N, 85 34 W	135-150	3	hemiprostrate dwarf-shrub		
		Cornwallis Island (Resolute area)							
	*	North of Signal Hill	8/6/99	74 44 N, 94 52 W	125	2	prostrate dwarf-shrub		
6		Resolute Bay	8/6/99	74 41 N, 94 55 W	75	2	prostrate dwarf-shrub	4.0	139.6
		Victoria Island							
7	*	Hadley Bay (northern island)	8/8/99	72 31 N, 109 19 W	135	2	prostrate dwarf-shrub		
8	*	Tuktu River (central island)	8/8/99	70 46 N, 109 09 W	150	3	hemiprostrate dwarf-shrub		
9		Thanhieser site (southern island)	7/28/99	69 08 N, 105 09 W	30	4	erect dwarf-shrub	8.0	141.0
10	*	Mount Pelly (southern island)	7/19-28/99, 8/9/99	69 11 N, 104 45 W	60	4	erect dwarf-shrub	8.0	141.0
		Mainland							
11	*	Daring Lake	8/9/99-8/11/99	64 51 N, 111 31 W	70	5	low-shrub	9.5	219.5

*relevés conducted along toposequence

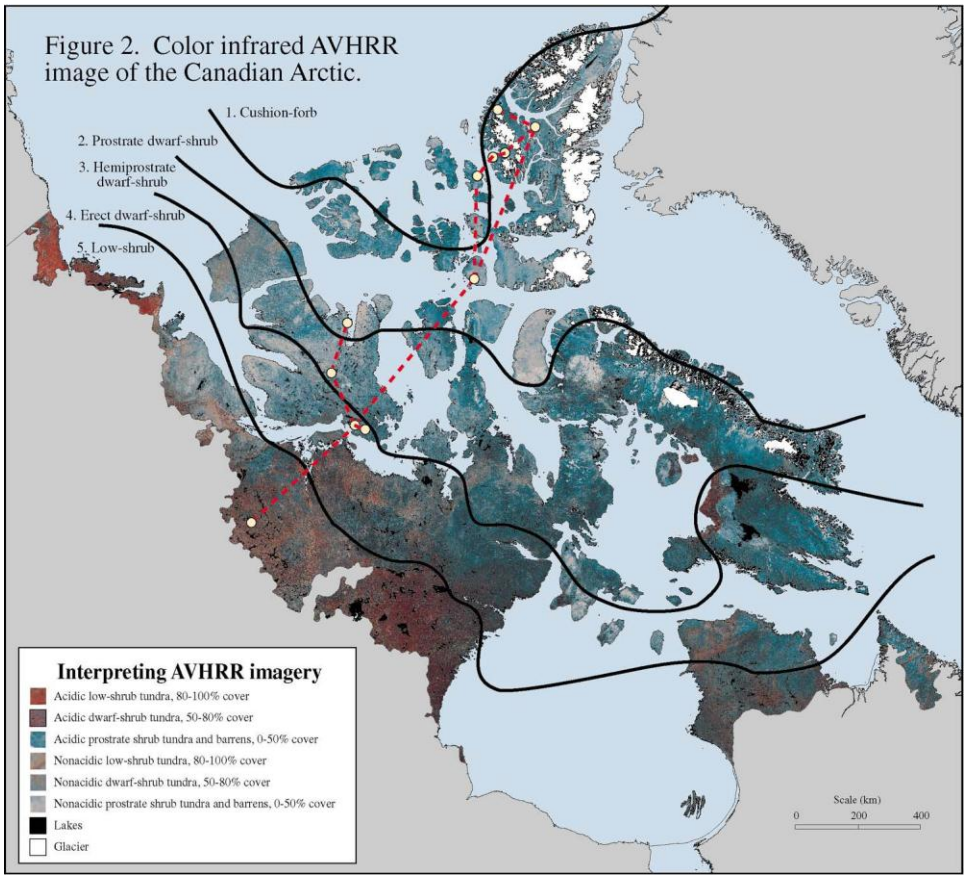
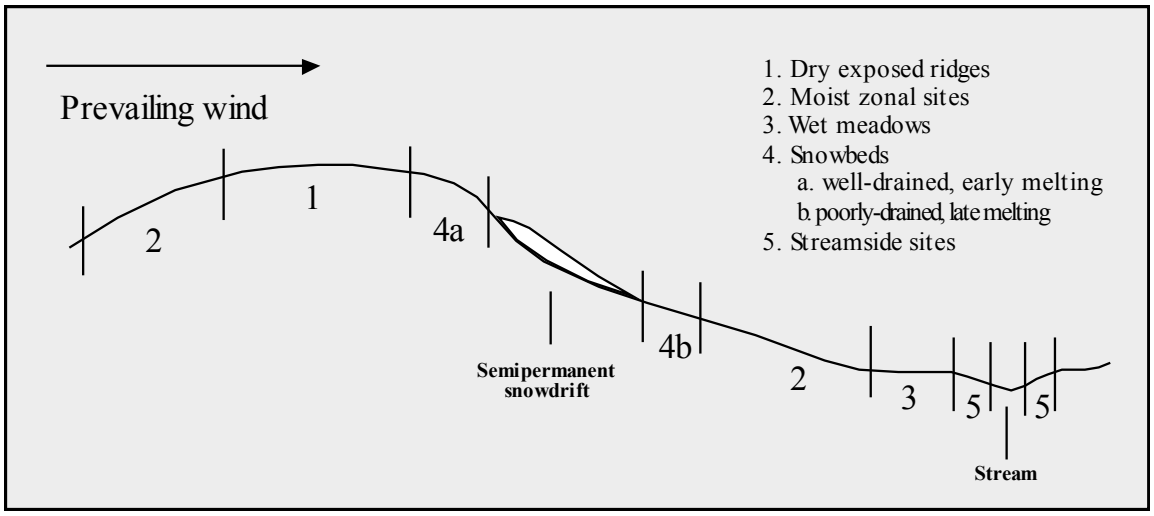


Fig. 2. Color-infrared AVHRR composite of the Canadian Arctic north of treeline (the northern limit of trees) indicating the transect route, study site locations (Table 2), zonation patterns and defining growth form (Table 2), and a simplified interpretation of variation of CIR imagery in terms of vegetation (from Gould and Walker, *in prep.*). Zonal boundaries follow Elvebakk (1999) and are based on zonal boundaries of Edlund (1989), Yurtsev (1994), and observations from the 1999 Canadian Transect

Figure 3. Sampling scheme for determining variation in vegetation along mesotopographic gradients. Replicate relevés were conducted in dry, mesic, wet, snowbed, and riparian habitats along a toposequence at each eight study sites along the climatic gradient of the transect (from Gould and Walker, *in prep.*).



Data collection (relevés)

Vegetation

An attempt was made to sample at least three relevés within each site of the topographic gradient, but this was not always possible. Sample plots were marked with stakes, and the relevés were located in homogeneous areas of vegetation using the centralized replicate method of the Braun-Blanquet approach to vegetation description and classification (Mueller-Dombois and Ellenberg, 1974; Westhoff and van der Maarel, 1978). Estimates of vegetation cover used the Braun-Blanquet cover-abundance scale (r = rare, + = common but less than 1%, 1 = 1-5%, 2 = 6-25%, 3 = 25-50%, 4 = 51-75%, 5 = 76-100%). Relevés varied in size as the minimal area needed to obtain a representative sample for the plant communities varied with barren, herb, prostate shrub and tall shrub tundra. Voucher collections were made for all vascular plants, bryophytes and lichens occurring in the relevé. Bryophytes were identified by Drs. Olga Afonina, Nadya Matveyeva, and Fred Daniëls. Lichens were identified by Drs. Mikhail Zhurbenko, Nadya Matveyeva, and Fred Daniëls. Drs. Olga Afonina, Nadya Matveyeva, and Mikhail Zhurbenko are affiliated with the Komarov Botanical Institute, St. Petersburg, Russia.

Soils

Field sampling

Soils were collected adjacent to the relevés and described and classified according to the U.S. soil taxonomy (Soil Survey Staff, 1975). Soil samples were air-dried in the laboratory. Bulk density and soil moisture samples were taken from the sides of the soil or from large solid plugs for the wet soils using a 240 ml soil can.

Laboratory analysis

Laboratory analyses were conducted at the University of Fairbanks Plant and Soil Test Laboratory in Palmer, Alaska. Soil pH was measured using a paste of 1:1 ratio of air-dried soil and deionized water. Soil moisture percent was calculated for each site by oven drying 10 g of fresh sample at 105 °C for 48 hrs, and reported on oven-dried basis. P and K (Mehlich 3 extract) analysis were performed using the ICP Optima XL. Carbon and Nitrogen percents were measured using a LECO CHN-1000 Carbon, Hydrogen and Nitrogen Analyzer. The particle size (percent of sand, silt, clay) analysis was performed by using the Bouyoucos-Hydrometer method (Day, 1965).

Data Sets

Figure 4. Characteristic vegetation communities along a mesotopographic sequence in each of the five subzones of the Canadian Arctic (. Photo matrix)

Table 3. Preliminary vegetation classification based on habitat and dominant species and sample numbers for each type (Veggies by site (8) and habitat (5))

Table 4. List of vegetation communities and microsites sampled (Veget. by releve no. (plant community, releve description

Table 5. Environmental data for relevés

Table 6. Percent of live cover and non-living cover and height of vegetation

Table 7. Soils data

Table 8. Relevé vascular species data

Table 9. Relevé bryophyte species data

Table 10. Relevé lichen species data

Table 11. Sample site description data sheet including the legend for environmental variables

Table 12. Sample relevé data sheet including the Braun-Blanquet cover scale

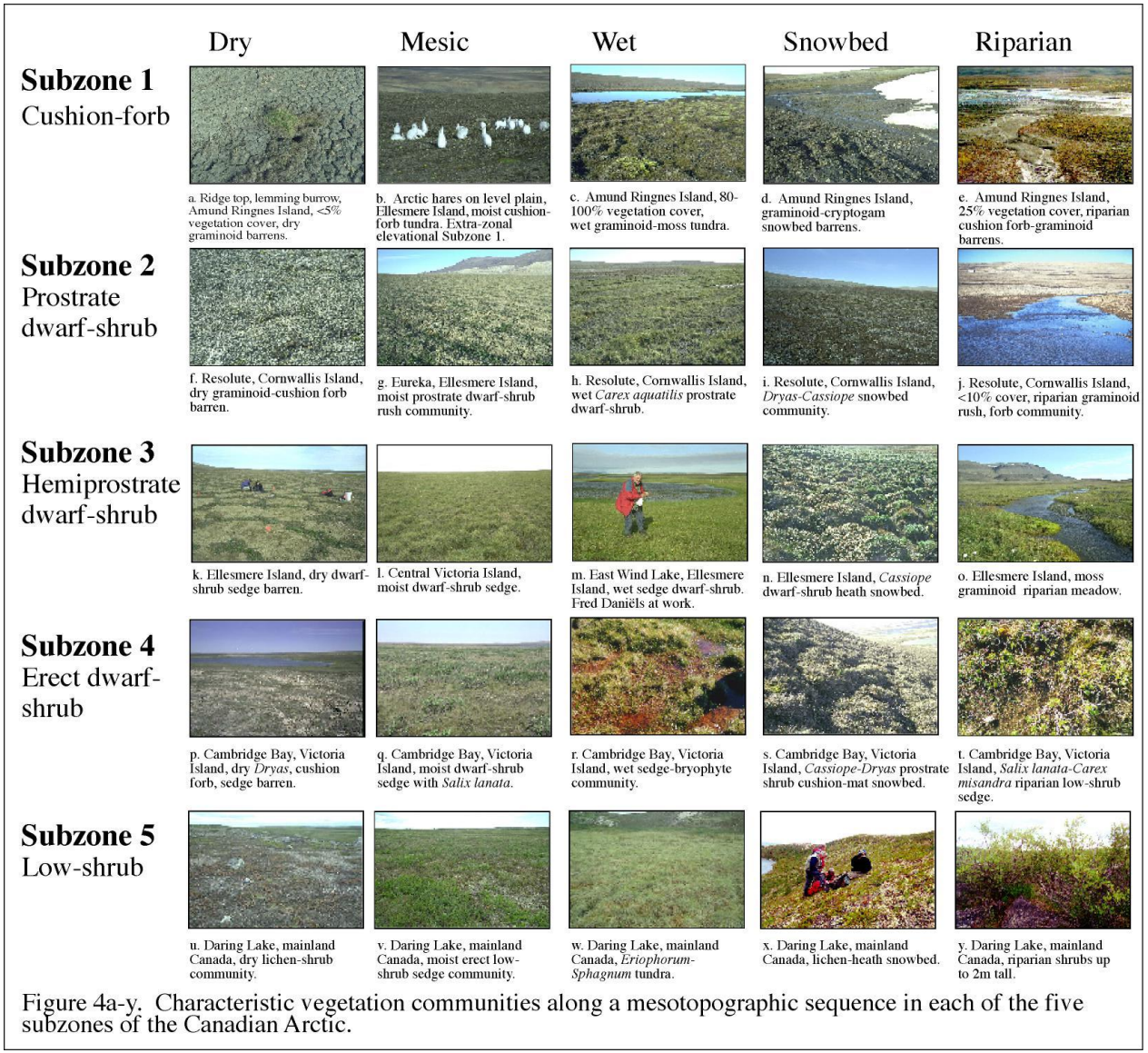


Figure 4a-y. Characteristic vegetation communities along a mesotopographic sequence in each of the five subzones of the Canadian Arctic.

Table 3. Preliminary vegetation classification of relevés

Preliminary vegetation type	Number of sites	Relevés
Dry cushion forb barren	**4**	AR-D-1, E-AHR-P-2, R-D-1, V-TR-D-1
Dry prostrate dwarf shrub tundra	**15**	R-P-1, R-P-2, R-P-3, R-P-4, E-E-P-1, E-E-P-2, E-EW-P-1, E-EW-P-3, V-HB-P-1, V-CB-01, V-CB-05, V-CB-09, V-CB-13, V-CB-17, V-CB-18
Dry prostrate dwarf shrub-lichen tundra	**4**	AH-BF-P-1, AH-BF-P-2, AH-BF-P-3, V-TR-S-1
Dry hemiprostrate dwarf shrub-lichen tundra	**5**	E-EW-S-1, V-CB-02, V-CB-10, DL-D-1, DL-D-4
Mesic graminoid-forb tundra	**9**	AR-P-1, AR-P-2, E-AHR-S-1, E-AHR-S-2, AH-BF-M-2, AH-BF-M-3, V-HB-M-1, V-TR-R-1, V-TR-R-2
Mesic prostrate dwarf shrub-graminoid tundra	**10**	AH-BF-M-1, AH-BF-W-3, E-EW-P-2, V-TR-M-1, V-TR-P-2, V-TR-P-3, V-CB-03, V-CB-06, V-CB-08, DL-S-1
Mesic hemiprostrate dwarf shrub tundra	**5**	AH-BF-S-3, E-EW-S-2, V-CB-12, V-CB-16, DL-D-2
Mesic erect dwarf shrub-graminoid tundra	**2**	V-CB-04, V-CB-07
Mesic erect dwarf shrub tundra	**1**	DL-D-3
Mesic low shrub tundra	**1**	DL-M-1
Mesic moss-lichen snowbed tundra	**7**	AH-BF-S-1, AH-BF-S-2, R-S-1, R-S-3, R-S-4, V-HB-S-1, V-TR-S-2
Wet grass-moss tundra	**11**	AR-S-1, AR-W-1, AH-BF-R-2, AH-BF-R-3, E-EW-R-1, R-R-1, R-R-2, R-S-2, R-S-5, R-W-2, V-TR-R-3
Wet sedge-moss tundra	**21**	AH-BF-R-4, AH-BF-W-1, AH-BF-W-2, R-W-1, R-W-3, E-EW-R-2, E-EW-R-4, E-EW-W-1, E-EW-W-2, E-EW-W-3, E-EW-W-4, E-EW-W-5, V-HB-R-1, V-HB-W-1, V-TR-R-4, V-TR-W-1, V-TR-W-2, V-CB-14, V-CB-R-1, DL-R-2, DL-W-1
Wet low shrub-sedge-moss tundra	**2**	V-CB-11, V-CB-15
Riparian forb-graminoid barrens	**7**	AR-R-1, AH-BF-R-1, AH-BF-R-5, R-R-3, R-R-4, E-EW-R-3, V-HB-R-2
Riparian tall shrub tundra	**1**	DL-R-1

Table 4. Subzone and preliminary community name of relevés

Relevé	Preliminary community name	Site Description
Subzone 1		
Amund Ringnes		
AR-D-1	Dry *Puccinellia angustata- Papaver dahliana* graminoid-forb barrens.	Dry ridge top on fine textured soil.
AR-P-1	Mesic *Alopecuris alpinus-Papaver dahliana* graminod-forb tundra. Papaveretum dahlianae. Dierssen 1992	Hummocky plain near coast with clayey soil, few or no frost circles.
AR-P-2	Mesic *Alopecuris alpinus-Papaver dahliana* graminod-forb tundra. Papaveretum dahlianae. Dierssen 1992	Mesic hill slope with some frost scars.
AR-R-1	Mesic *Cerastium regelii-Papaver dahliana* herb barrens.	Moderately stable stream side terrace.
AR-S-1	Wet *Alopecuris alpinus-Phippsia algida* graminoid moss tundra.	Edge of late-lying snowbed.
AR-W-1	Wet *Alopecuris alpinus-Campylium arcticum* graminoid-moss tundra.	Wet pond margin.
Ellesmere - Arctic Hare Ridge		
E-AHR-P-2	Dry *Papaver dahliana-Phippsia algida* graminoid forb barrens. Papaveri-Phippsietum algidae.	Dry gravel slope.
E-AHR-S-1	Mesic *Phippsia algida-Alopecuris alpinus* graminoid-moss tundra. Papaveri-Phippsietum algidae.	Early melting snowbank.
E-AHR-S-2	Mesic *Phippsia algida-Alopecuris alpinus* graminoid-moss tundra. Papaveri-Phippsietum algidae.	Early melting snowbank.
Subzone 2		
Axel Hieberg - Bunde Fiord		
AH-BF-M-1	Mesic *Carex misandra-Salix arctica* graminoid-moss tundra.	Discontinous vegetation on mesic side slope.
AH-BF-M-2	Mesic *Saxifraga oppositifolia-Encalypta alpina* herb-moss tundra.	Mesic side slope with discontinuous cover. Cyanobacteria dominant.
AH-BF-M-3	Mesic *Saxifraga oppositifolia-Encalypta alpina* herb-moss tundra.	Weak depression, proximate to dry creek, with discontinuous cover. Cyanobacteria dominant.
AH-BF-P-1	Mesic *Dryas integrifolia-Carex misandra* prostrate dwarf shrub tundra. Carici-Dryadetum.	Flat stony surface.
AH-BF-P-2	Mesic *Dryas integrifolia-Carex misandra* prostrate dwarf shrub tundra. Carici-Dryadetum.	Gentle side slope 300 m from fiord.
AH-BF-P-3	Mesic *Dryas integrifolia-Carex misandra* prostrate dwarf shrub tundra. Carici-Dryadetum.	Flat stony plain.
AH-BF-R-1	Mesic *Epilobium latifolium-Salix arctica* herb barrens	Gravel slope above creek. Crustose lichens abundant
AH-BF-R-2	Wet *Arctagrostis latifolium-Juncus biglumis* graminoid moss tundra.	Streamside meadow.
AH-BF-R-3	Wet emergent *Alopecuris alpinus-Phippsia algida* graminoid-moss vegetation.	Emergent vegetation in small stream. Algal film present.

Table 4. Subzone and preliminary community name of relevés

Relevé	Preliminary community name	Site Description
AH-BF-R-4	Wet *Carex aquatilis* var. *stans-Eriophorum scheuchzeri* graminoid-moss tundra.	Streamside meadow.
AH-BF-R-5	Mesic *Cerastium regelii-Salix arctica* herb barrens.	Active flood plain.
AH-BF-S-1	Mesic *Saxifraga cernua-Stereocaulon rivulorum* herb moss snowbed.	Erosion gully, late-lying snowbed
AH-BF-S-2	Mesic *Decampia hookeri* cryptogamic crust snowbed.	Erosion gully on hillslope
AH-BF-S-3	Mesic *Cassiope tetragona-Tomentypnum nitens* hemiprostrate dwarf shrub tundra. Early snowbed.	Vegetation occurs as a stripe on finely weathered rock
AH-BF-W-1	Wet *Carex aquatilis* var. *stans-Catoscopium nigritum* graminoid-moss tundra.	Graminoid-moss wetland on lacustrine deposits in valley.
AH-BF-W-2	Wet *Carex aquatilis* var. *stans-Salix arctica* graminoid-prostrate dwarf shrub tundra.	Wetland on gentle colluvium at head of small valley.
AH-BF-W-3	Mesic *Eriophorum triste-Dryas integrifolia* graminoid-prostrate dwarf shrub tundra	Moist foot slope in valley adjacent to main valley.
Cornwallis Island - Resolute		
R-D-1	Dry *Papaver dahliana-Saxifraga oppositifolia* herb barrens. Papaverion	Extrazonal (altitudinal) polar desert.
R-P-1	Dry *Dryas integrifolia-Saxifraga oppositifolia* prostrate shrub tundra. Carici-Dryadetum	Polygon center on side slope.
R-P-2	Dry *Salix arctica-Dryas integrifolia* prostrate shrub tundra. Salici(Carici)-Dryadetum.	Flat area of possible marine deposits.
R-P-3	Dry *Salix arctica-Dryas integrifolia* prostrate shrub tundra. Salici(Carici)-Dryadetum.	Flat area of possible marine deposits.
R-P-4	Dry *Salix arctica-Dryas integrifolia* prostrate shrub tundra. Salici(Carici)-Dryadetum.	Flat area of possible marine deposits.
R-R-1	Wet *Alopecuris alpinus-Juncus biglumis* graminoid-moss tundra.	Streambank meadow.
R-R-2	Wet *Alopecuris alpinus-Juncus biglumis* graminoid-moss tundra.	Streambank meadow.
R-R-3	Mesic *Cerastium regelii-Papaver dahliana* herb barrens.	Gravelly floodplain barrens.
R-R-4	Mesic *Cerastium regelii-Papaver dahliana* herb barrens.	Gravelly floodplain barrens.
R-S-1	Dry cryptogamic crust snowbed.	Gravelly snowflush area.
R-S-2	Mesic *Alopecuris alpinus-Cinclidium* spp. graminoid-moss tundra.	Late-lying snowbed
R-S-3	Mesic *Ditrichum flexicaule-Lecidea ramulosa* moss lichen tundra.	Late-lying snowbed on gravelly soil.
R-S-4	Mesic *Ditrichum flexicaule-Cetraria delisea* moss lichen tundra.	Early snowbed on stony gravel.
R-S-5	Mesic *Phippsia algida-Pseudocalliergon brevifolium* graminoid moss tundra.	Late-lying snowbed on gravelly soil.

Table 4. Subzone and preliminary community name of relevés

Relevé	Preliminary community name	Site Description
R-W-1	Wet *Carex aquatilis* var. *stans-Salix arctica* graminoid-prostrate shrub tundra (hummuck tops), wet *Carex aquatilis* var. *stans-Drepanocladus revolutum* graminoid-moss tundra (lower microsites).	Weakly aligned hummocks at foot slope.
R-W-2	Wet *Pleuropogon sabinei-Catoscopium nigritum* graminoid-moss tundra (hummuck tops), wet *Alopecuris alpinus-Catoscopium nigritum* graminoid-moss tundra (lower microsites).	Wetland - weakly aligned hummocks
R-W-3	Wet *Carex aquatilis* var. *stans-Salix arctica* graminoid-prostrate shrub tundra (hummuck tops), wet *Carex aquatilis* var. *stans-Drepanocladus revolutum* graminoid-moss tundra (lower microsites).	Wetland with moving water 5cm deep, downslope from snow accumulation. Area A - 10%hummocks, B - 90% inter-hummock
Subzone 3		
Ellesmere - Eureka		
E-E-P-1	Dry *Dryas integrifolia-Kobresia myosuroides* prostrate dwarf shrub-graminoid tundra.	Dry high-centered polygon on shoulder of hill composed of marine sediments. 1km SE of Eureka.
E-E-P-2	Dry *Salix arctica-Kobresia myosuroides* prostrate dwarf shrub-graminoid barrens.	Placor on fine grained Holocene marine sediments. Nonsorted circles cover 65% of area.
E-E-S-1	*not available*	
E-E-S-2	*not available*	
E-E-S-3	*not available*	
Ellesmere - East Wind Lake		
E-EW-P-1	Dry *Salix arctica-Dryas integrifolia* prostrate dwarf shrub tundra. Carici-Dryadetum.	Gentle NE facing slope. Placor, polygonal net 25%trough, 75%center.
E-EW-P-2	Mesic *Salix arctica-Kobresia myosuroides* prostrate dwarf shrub-graminoid tundra. Carici-Dryadetum.	Mesic plain of reworked marine sediments.
E-EW-P-3	Dry *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub-graminoid tundra. Carici-Dryadetum.	Side slope.
E-EW-R-1	Mesic *Arctagrostis latifolium-Campylium arcticum* graminoid-moss tundra.	Streamside grass-moss meadow.
E-EW-R-2	Mesic *Carex aquatilis* var. *stans-Calliergon giganteum* graminoid-moss tundra.	Streamside sedge-moss meadow.
E-EW-R-3	Mesic *Equisetum arvense-Epilobium latifolium* herb barrens	Gravelly floodplain - active.
E-EW-R-4	Wet *Carex aquatilis* var. *stans-Drepanocladus brevifolius* graminoid-moss tundra.	Streamside sedge-moss meadow
E-EW-S-1	Mesic *Cassiope tetragona-Tomentypnum nitens* hemiprostrate dwarf shrub tundra. Early snowbed.	Hummocky snowbed.

Table 4. Subzone and preliminary community name of relevés

Relevé	Preliminary community name	Site Description
E-EW-S-2	Mesic *Cassiope tetragona-Tomentypnum nitens* hemiprostrate dwarf shrub tundra. Early snowbed.	Hummocky snowbed.
E-EW-W-1	Wet *Carex aquatilis* var. *stans-Drepanocladus brevifolius* graminoid-moss tundra.	Sedge moss meadow on pond margin.
E-EW-W-2	Wet *Carex aquatilis* var. *stans-Drepanocladus brevifolius* graminoid-moss tundra.	Sedge moss meadow on pond margin.
E-EW-W-3	Wet *Carex aquatilis* var. *stans-Drepanocladus brevifolius* graminoid-moss tundra.	East Wind Lake margin (south end of lake)
E-EW-W-4	Mesic *Carex misandra-Drepanocladus brevifolius* graminoid-moss tundra.	Margin of small drained lake basin south of East Wind Lake
E-EW-W-5	Mesic *Eriophorum scheuchzerii-Dupontia fisherii* graminoid-moss tundra.	Transition between *Dryas* zones and sedge wetland.
Victoria Island - Hadley Bay		
V-HB-M-1	Mesic *Carex misandra-Epilobium latifolium* herb-graminoid tundra.	Mesic flat area near river, slightly exposed as compared to neighboring wetlands, slight flooding effects.
V-HB-P-1	Dry *Dryas integrifolia-Carex rupestris* prostrate shrub tundra. Carici-Dryadetum.	Flat outwash plain.
V-HB-R-1	Mesic *Eripohorum triste-Carex aquatilis* var. *stans* graminoid-moss tundra.	Streambank sedge meadow
V-HB-R-2	Mesic *Epilobium latifolium- Saxifraga oppositifolia* herb barrens.	Gravel bar.
V-HB-S-1	Mesic *Saxifraga oppositifolia-Parrya artica* cryptogamic crust.	Snowbed on gravel.
V-HB-W-1	Wet *Carex aquatilis* var. *stans-Salix arctica* graminoid-prostrate dwarf shrub tundra on hummocks. Wet *Carex aquatilis* var. s*tans-Drepanocladus brevifolius* graminoid moss tundra on lower microsites.	Floodplain within oxbow lake, base of marine terrace.
Victoria Island - Tuktu River		
V-TR-D-1	Dry *Puccinellia angustata-Poa abreviata* graminoid barrens.	Alkaline sitly ridge, strongly exposed, extremely well-drained, drought cracks present.
V-TR-M-1	Mesic *Dryas integrifolia-Carex misandra* prostrate dwarf shrub-graminoid tundra.	Mesic side slope between *Dryas integrifolia-Carex rupestris* dry ridge and *Eriophorum triste* wetland
V-TR-P-2	Mesic *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub tundra. Carici-Dryadetum.	Stony plain with frost scars.
V-TR-P-3	Mesic *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub tundra. Carici-Dryadetum.	Flat plain.
V-TR-R-1	Mesic *Equisetum arvense-Carex membranacea* herb graminoid tundra.	Streambank - very small stream in protected valley.
V-TR-R-2	Mesic *Carex aquatilis* var. *stans-Equisetum arvense* graminoid tundra.	Sedge meadow on sandy river terrace.

Table 4. Subzone and preliminary community name of relevés

Relevé	Preliminary community name	Site Description
V-TR-R-3	Wet *Dupontia fisheri-Deschampsia brevifolia* graminoid tundra.	Fine sands next to streambed - partially flooded.
V-TR-R-4	Wet *Eriophorum scheuchzeri-Deschampsia brevifolia* graminoid tundra.	Damp fine sand along stream in floodplain.
V-TR-S-1	Mesic *Salix polaris-Blepharostoma trichofellum* prostrate dwarf shrub-moss tundra.	Transition between river bed and loamy terrace.
V-TR-S-2	Mesic *Luzula artica* -cryptogamic crust herb barrens.	Late-lying snowbed.
V-TR-W-1	Wet *Carex aquatilis* var. s*tans-Salix arctica* graminoid-prostrate dwarf shrub tundra.	Small depression between raised glacial features.
V-TR-W-2	Wet *Carex aquatilis* var. s*tans-Campylium stellatum* graminoid-moss tundra.	Lake margin.
Victoria Island - Mount Pelly		
V-CB-01	Dry *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub-graminoid tundra.	Upper slope of Mt. Pelly.
V-CB-02	Mesic *Dryas integrifolia-Cassiope tetragona* hemiprostrate shrub tundra.	Snowbed on north side of Mount Pelly.
V-CB-03	Mesic *Dryas integrifolia-Oxytropis maydelliana* prostrate dwarf shrub-herb tundra.	Side slope on Mount Pelly.
V-CB-04	Mesic *Salix lanata* ssp. *richardsonii-Eriophorum triste* erect dwarf shrub-graminoid tundra.	Lake margin.
V-CB-05	Dry *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub-graminoid tundra.	Near top of Mount Pelly.
V-CB-06	Mesic *Dryas integrifolia-Carex misandra* prostrate dwarf shrub-graminoid tundra.	Footslope near river.
V-CB-07	Mesic *Salix lanata* ssp. *richardsonii-Carex misandra* erect dwarf shrub-graminoid tundra.	Footslope.
V-CB-08	Mesic *Dryas integrifolia-Carex scirpoidea* prostrate dwarf shrub-graminoid tundra.	Mesic side slope of *Dryas* hummocks.
V-CB-09	Dry *Dryas integrifolia-Kobresia myosuroides* prostrate dwarf shrub-graminoid tundra.	Flat centered polygons.
V-CB-10	Mesic *Dryas integrifolia-Cassiope tetragona* hemiprostrate shrub tundra.	Early melting snowbed on north side of Mount Pelly.
V-CB-11	Wet *Carex aquatilis* var. *stans-Salix lanata* ssp. *richardsonii* graminoid-erect dwarf shrub tundra.	Hummocky plain.
V-CB-12	Mesic *Dryas integrifolia-Cassiope tetragona* hemiprostrate shrub tundra.	Early melting snowbed.
V-CB-13	Dry *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub-graminoid tundra.	Level plain with frost scars.
V-CB-14	Wet *Eriophorum triste-Drepanocladus brevifolius* graminoid-moss tundra.	Wet sedge meadow, lake margin.

Table 4. Subzone and preliminary community name of relevés

Relevé	Preliminary community name	Site Description
V-CB-15	Wet *Carex aquatilis* var. *stans-Salix lanata* ssp. *richardsonii* graminoid-erect dwarf shrub tundra.	Wet sedge meadow, lake margin.
V-CB-16	Mesic *Dryas integrifolia-Cassiope tetragona* hemiprostrate shrub tundra.	Early melting snowbed.
V-CB-17	Mesic *Dryas integrifolia-Oxytropis maydelliana* prostrate dwarf shrub-herb tundra.	Mesic side slope.
V-CB-18	Dry *Dryas integrifolia-Carex rupestris* prostrate dwarf shrub-graminoid tundra.	Xeric hilltop.
V-CB-R-1	Wet *Carex aquatilis* var. s*tans-Campylium stellatum* graminoid-moss tundra.	Stream margin with prostrate and erect dwarf shrubs.
Subzone 5		
Mainland - Daring Lake		
DL-D-1	Dry *Ledum decumbens-Flavocetraria cucullata* low shrub tundra.	Low dwarf shrub vegetation with mosses and lichens on xerix side slope.
DL-D-2	Dry *Empetrum nigrum L.* ssp. *hermaphroditum-Arctous alpina* Hemiprostrate dwarf shrub tundra.	*Empetrum-Arctous* community poor in lichens between *Betula glandulosa* on upper slope of esker.
DL-D-3	Dry *Betula glandulosa-Rhytidium rugosum* low shrub tundra.	Upper slope of esker.
DL-D-4	Dry *Empetrum nigrum L. ssp. hermaphroditum-Flavocetraria cucullata* erect dwarf shrub tundra.	*Empetrum-Arctous* community rich in lichens between *Betula glandulosa* on upper slope of esker.
DL-M-1	Mesic *Betula glandulosa-Ledum decumbens* low shrub tundra.	Mesic slope.
DL-R-1	Mesic *Salix pulchra-Carex aquatilis* var. *stans* tall shrub tundra.	Occasionally flooded - slow moving creek-side tall shrub community.
DL-R-2	Wet *Carex aquatilis-C. chordorrhiza* graminoid tundra.	Flooded streamside sedge meadow.
DL-S-1	Mesic *Salix herbacea-Kiaeria glacialis* prostrate dwarf shrub-moss tundra. Salicetum herbacea.	Salicetum herbacea with *Stereocaulon,* rich in mosses on snowbed
DL-W-1	Wet *Eriophorum vaginatum-Sphagnum* graminoid-moss tundra.	Small wetland at base of esker.

Table 5. Relevé environmental data.

Releve	Date	Plot size (m)	Slope (deg)	Mean Thaw Depth (cm)1	Aspect	Landform2	Surficial Geology3	Surficial Geomorphology2	Microsite4	Site Moisture2	Soil Moisture2	Glacial Geology5	Tpographic Position2	Exposure2	Snow Duration2	Animal/human Disturbanc	Stability6	Soil Units
AH-BF-M-1	8/1/1999	**2x2**	7	66	NNE	1	6	11	13	6	6	1	3	2	6	0	1	
AH-BF-M-2	8/1/1999	**2x2**	10	69	NNE	1	6	11	13	6	6	3	2	2	5	0	1	
AH-BF-M-3	8/1/1999	**2x2**	3	999	NNE	1	6	11	13	6	6	3	2	2	6	0	2	
AH-BF-P-1	8/1/1999	**5x5**	0	888		4	2	15	12	5	3	1	4	3	3	1	1	
AH-BF-P-2	8/1/1999	**5x5**	3	888		19	1	14	12	4	2	1	2	2	4	0	1	
AH-BF-P-3	8/1/1999	**5x5**	0	888		4	2	15	12	6	5	1	4	1	4	0	1	
AH-BF-R-1	8/1/1999	**3x3**	3	999	E	11	5	15	13	4	3	2	2	2	4	0	4	0-absent, A- 2.25 inch, B-1.5, C-10+, coarse gravel
AH-BF-R-2	8/1/1999	**4x4**	0	57		11	1		13	8	7	2	3	1	5	1	5	0 - 2.5 in, A - 0, BG - 3in., C - 10+ in
AH-BF-R-3	8/1/1999	**4x4**	1	888	NW	11	4	12	13	9	10	2	5	1	5	0	5	not taken
AH-BF-R-4	8/1/1999	**4x4**	0	43	-	11		2	13	8	8	2	5	1	5	0	4	0=3.75 C=6+ no A or B
AH-BF-R-5	8/1/1999	**4x4**	0	999		6	4	15	13	4	2	2	4	2	5	1	5	
AH-BF-S-1	8/1/1999	**1X0.5**	3	999	N	3	6	18	13	8	6	colluvial basin	6	3	8	1	3	
AH-BF-S-2	8/1/1999	**1X1**	3	999	N	3	6	18	13	8	6	colluvial basin	5	3	8	1	3	Soil layers over gravel
AH-BF-S-3	8/1/1999	**1.5X1.5**	5	59	N	2	6	3	13	5.5	4	colluvial basin	3	2.5	5	1	2	
AH-BF-W-1	8/1/1999	**5x5**	4	39	NW	19	9	2	12	8	9	6	4	2	4	2	1	8
AH-BF-W-2	8/1/1999	**5x5**	5	45	W	19	7	11	13	8	9	7	3	2	4	1	1	10, 0-2cm Oi, 2-5 Oe, 5-27 Bw brown silt loam
AH-BF-W-3	8/1/1999	**2x2**	4	45	S	1	6	3	13	7	7	7	3	2	4	0	##	O-3, 5cm Oi, 3-5 Oe, 5-25 Bw, brown gravelly silt loam
AR-D-1	8/2/1999	**5x5**	2	42	NW	1	13	11	12	3	4	5	1	4	1	0	5	Pergelic Cryorthent, alkaline
AR-P-1	8/1/1999	**5x5**	2	36	NNE	19	13	3	3	6	4	5	4	2	4	0	1	
AR-P-2	8/2/1999	**5x5**	2	36	EN	1	6	1	13	6	4	5	1	2	4	0	5	
AR-R-1	8/2/1999	**5x5**	0	55		6	5	11	13	5	5	5	5	2	5	1	4	
AR-S-1	8/2/1999	**5x5**	10	35	W	1	15	14	13	8	7	5	3	1	8	0	5	
AR-W-1	8/2/1999	**2x2**	0	38		7	8	3	13	8	8	5	4	2	5	0	1	
DL-D-1	8/10/1999	**2x2**	25	888	N	23	2	11	13	3	2	2	3	3	2	1	2	
DL-D-2	8/10/1999	**2x2**	3	888	S	23	2	11	13	3	2	2	3	2	5	0	1	
DL-D-3	8/10/1999	**4x4**	5	888	S	23	2	11	13	3	2	2	3	2	5	0	1	5 cm very humic material overlaying substrate, sandy mater.w/ gravel
DL-D-4	8/10/1999	**2x2**	5	888	SE	23	2	11	13	3	2	2	3	2	5	1	1	mini podzol, upper part is organic, loamy sand w/ gravel
DL-M-1	8/10/1999	**2x2**	3	888	SE	4	2	11	13	6	5	6	2	2	5	1	1	15cm dark organic soil intermixed with some mineral soil, R5-5P homogeneous sandy/silty soils, dark coloured like the organic soils, No polzolification or other distinct profile development
DL-R-1	8/10/1999	**4x4**	0	999	-	6	3	17	13	7	5	2	5	1	5	2	4	5" organic layer over silt/sand (Bg)
DL-R-2		**5x5**	0	777	-	6	8	16	13	9	9	2	5	1	5	0	4	
DL-S-1	8/10/1999	**1x1**	5	888	SE	23	2	11	13	7	5	2	2	1	6	1	1	
DL-W-1	8/10/1999	**2x2**	0	53		7	7	11	13	8	9	1	6	2	5	1	1	sphagnist, 40cm of hemic, Sphagnum peat over sand
E-AHR-P-2	8/3/1999	**2x2**	0	888	-	20	15	11	13	3	2	3	4	2	4	0	2	
E-AHR-S-1	8/1/1999	**2x2**	7	888	ENE	20	6	1	1	5	3	3	4	1	7	1	5	
E-AHR-S-2	8/1/1999	**2x2**	3	888	SW	20	6	1	1	5	3	3	4	1	7	1	5	
E-E-P-1	8/3/1999	**5x5**	3	50	W	1	13	6	13	3	3	5	1	3	3	1	5	
E-E-P-2	8/3/1999	**5x5**	8	57	SE	5	13	1	12	3	3	5	1	3	3	2	5	
E-E-S-1	8/3/1999					5	14	18	5	3.5	2	7	2	2	4	1	2	
E-E-S-2	8/3/1999		4	75	SW	5	13	4	5	4	2	4	2	2	5	1	2	
E-E-S-3	8/3/1999					5	13	6	5	3.5	3	4	2	2	2	1	2	
E-EW-P-1	7/31/1999	**5x5**	0	888	-	4	2	15	12	2	2	1	4	3	3	1	1	
E-EW-P-2	7/31/1999	**5x5**	3	888	E	19	13	6	12	4	5	4	4	3	3	1	1	11
E-EW-P-3	7/31/1999	**5x5**	4	888	N	4	13	14	12	3	2	2	2	3	3	1	2	
E-EW-R-1	7/31/1999	**1.5x4.5**	1	68	W	11	13	12	13	6	6	3	5	1	6	1	5	A - 5-10cm, BQ - 14, C - 34, buried O - 6
E-EW-R-2	7/31/1999	**4x4**	2	58	W	11	5	12	13	6	6	3	5	2	5	1	5	
E-EW-R-3	7/31/1999	**4x4**	2	888	W	11	4	17	13	7	6	3	5	2	6	1	5	no soil pit
E-EW-R-4	7/31/1999	**1.5x5**	2	60	W	11	5	12	13	7	7	3	5	1	6	1	5	O- 6, A - 4, By 10+
E-EW-S-1	7/31/1999	**2X2**	5	35	W	3	2	18	3	6	3	4	3	2	5	0	3	
E-EW-S-2	7/31/1999	**2X2**	1.5	33	W	3	1	2	2	6	5	1	3.5	2	5.5	1	2	
E-EW-W-1	7/31/1999	**5x5**	0	37	NE	10	8	16	12	8	9	6	4	2	4	2	1	8, Oi:8cm, Oe:17cm
E-EW-W-2	7/31/1999	**5x5**	0	33		10	9	16	12	8	9	6	4	2	4	2	1	8, soil sample 16-20cm, (base of 0 layer)

Table 5. Relevé environmental data.

Releve	Date	Plot size (m)	Slope (deg)	Mean Thaw Depth (cm)1	Aspect	Landform2	Surficial Geology3	Surficial Geomorphology2	Microsite4	Site Moisture2	Soil Moisture2	Glacial Geology5	Tpographic Position2	Exposure2	Snow Duration2	Animal/human Disturbanc	Stability6	Soil Units
E-EW-W-3	7/31/1999	**5x5**	0	29	-	10	9	11	12	7	7	6	4	2	4	2	1	10, Organic:8-9cm, O1:7cm, Oe: 2cm
E-EW-W-4	7/31/1999	**5x5**	0	59	-	7	8	11	12	6	6	1	4	2	4	2	1	8
E-EW-W-5	7/30/1999	**1x2**	0	40		10	9	16	11	7	7	7	7	3	3	1	2	
R-P-1	8/5/1999	**5x5**	2	888	NNE	1	6	4	5	3	2	3	2	2	4	0	2	
R-P-2	8/6/1999	**5x5**	1	888	N	1	13	11	13	2	2	4	4	2	4	1	1	
R-P-3	8/6/1999	**5x5**	1	888	W	1	13	11	13	2	2	4	4	2	4	1	1	
R-P-4	8/6/1999	**5x5**	0	888	-	19	13	11	13	2	2	4	4	2	4	1	1	
R-R-1	7/6/1999	**6x2**	1	61	E	6	14	2	13	8	7	5	5	2	6	1	4	Bg - 9cm, Cg - 20+cm, fine-grained
R-R-2	8/6/1999	**3x4**	0	53		6	14	2	13	8	8	5	5	2	5	0	4	O - 3, Cg 20+, fine material
R-R-3	8/7/1999	**5x5**	0	999		6	4	15	13	4	5	5	5	2	5	0	4	C only gravelly
R-R-4	8/7/1999	**5x5**	0	999		6	4	15	13	6	6	5	5	2	5	0	4	C gravel
R-S-1	8/6/1999	**1x1**	15	999	E	1	13	15	13	4	3	3	2	3	5	0	3	lithosol
R-S-2	8/6/1999	**1x1**	2	999	E	18	6	15	9	8	9	3	2	3	7.5	0	2	
R-S-3	8/6/1999	**1x1**	2	999	E	18	13	18	9	4	3	15	4	3	6.5	0	3	
R-S-4	8/6/1999	**1x1**	2	999	E	19	14	18	13	5	3.5	7	4	2	6	0	3	lithosol
R-S-5	8/6/1999	**1x1**	1	45	N	6	7	15	13	8	10	3	3	3	7	0	3	
R-W-1	8/6/1999	**5x5**	0	53	-	5	13	3	12	8	9	5	3	2	4	1	1	moss layer over gley silt
R-W-2	8/6/1999	**5x5**	0	53		21	7	18	12	7	7	5	4	2	4	1	1	marine deposits, fine silts with organice accumulation, Oi:0-5cm, Oe:5-10cm
R-W-3	8/6/1999	**5x5**	0	40	0	6	2	2	12	9	10	5	4	2	7	0	4	
R-D-1	8/5/1999	**10x10**	1	888	-	1	13	11	13	2	2	4	1	4	2	0	1	
V-CB-1	7/22/1999	**10x10**	6	41	NE	4	2	3	13	3	3	2	2	4	3	1	1	
V-CB-10	7/25/1999	**10x10**	5	84	NE	4	2	3	3	4	4	2	2	3	6	0	0	OM- 0-5, A - 5-10
V-CB-11	7/25/1999	**10x10**	0	72		4	2	3	13	8	8	2	2	3	6	1	1	
V-CB-12	7/25/1999	**10x10**	6	75	NE	4	2	3	3	4	4	2	2	3	5	1	1	
V-CB-13	7/25/1999	**10x10**	0	999		4	2	1	13	3	3	2	2	3	5	1	1	
V-CB-14	7/25/1999	**10x10**	0	67	-	4	2	3	13	8	8	2	2	3	5	0	1	
V-CB-15	7/25/1999	**10x10**	0	78		4	2	2	13	8	8	2	3	1	5	1	1	
V-CB-16	7/23/1999	**10x10**	1	73	W	4	2	3	13	6	3	2	3	1	6	1	1	
V-CB-17	7/23/1999	**10x10**	10	60	NE	4	6	1	13	4	3	2	2	2	6	1	2	
V-CB-18	7/25/1999	**10x10**	0	999		22	1	1	13	3	1	2	3	2	2	1	1	
V-CB-2	7/22/1999	**10x10**	15	33	NE	4	2	4	13	6	6	2	2	2	6	1	2	
V-CB-3	7/22/1999	**10x10**	9	86	NE	4	2	3	3	6	6	2	2	3	6	1	2	
V-CB-4	7/23/1999	**10x10**	3	66	NE	7	8	2	11	8	8	2	4	3	5	1	2	O - 18+
V-CB-5	7/23/1999	**10x10**	2	999	NW	4	2	7	5	3	2	2	1	4	5	999	1	1
V-CB-6	7/24/1999	**10x10**	0	999	-	6	2	3	13	6	3	2	3	3	4	1	2	
V-CB-7	7/24/1999	**10x10**	0	26	W	3	2	3	13	6	6	2	3	3	4	1	2	
V-CB-8	7/24/1999	**10x10**	3	73	W	1	2	3	13	4	5	2	2	3	4	1	3	
V-CB-9	7/24/1999	**10x10**	1	999	W	1	2	6	12	3	2	2	2	3	4	0	3	
V-CB-R-1	8/9/1999	**2x6**	0	999		6	5	11	13	7	7	2	5	2	5	3	4	river gravels
V-HB-M-1	8/8/1999	**2x2**	0	888		6	5	11	13	6	6	5	5	1	6	1	2	
V-HB-P-1	8/8/1999	**5x5**	0	888		4	2	6	12	2	2	2	4	2	4	1	1	
V-HB-R-1	8/8/1999	**4x4**	0	888		6	5	11	13	6	5	4	4	1	5	1	4	
V-HB-R-2	8/8/1999	**6x6**	0	888		6	4	15	13	6	6	4	5	2	5	0	5	
V-HB-S-1	8/8/1999	**unknown**	16	60	N				13	7	6		2		7	1		
V-HB-W-1	8/8/1999	**5x5**	1	63	-	6	5	2	12	8	7	2	4	2	5	2	1	10
V-TR-D-1	8/8/1999	**5x5**	5	888	NW	5	3	11	13	3	3	7	1	4	2	0	4	
V-TR-M-1	8/8/1999	**2x2**	1	777	SE	5	2	11	13	6	6	7	6	3	5	1	1	
V-TR-P-2	8/8/1999	**5x5**	0	888		4	2	6	1	3	3	7	4	2	5	1	1	
V-TR-P-3	8/8/1999	**5x5**	0	888		4	2	11	13	3	3	7	4	2	5	1	1	
V-TR-R-1	8/8/1999	**4x4**	0	777		6	3	11	13	7	6	2	5	1	5	3	5	2
V-TR-R-2	8/8/1999	**2x6**	0	777		6	3	11	13	6	6	2	5	1	5	3	5	2
V-TR-R-3	8/8/1999	**2x6**	0	777		6	3	11	13	7	6	2	5	1	5	3	5	2
V-TR-R-4	8/8/1999	**3x5**	0	777		6	3	11	13	6	6	2	5	1	5	2	5	2, soils filled with Collembola
V-TR-S-1	8/8/1999	**1x1**	6	60	S	18	2	4	13	6	5	1	2	1.5	7	1	2	no development of horizons
V-TR-S-2	8/8/1999	**1x1**	6	777	S	1	2	11	13	6	5	7	2	2	7	1	2	
V-TR-W-1	8/8/1999	**5x5**	1	57	-	21	7	11	13	7	6	1	4	2	4	2	1	10, moss 0-2cm OM 2cm, 2-20cm brown clay loam with 10% fine roots
V-TR-W-2	8/8/1999	**5x5**	0	51		7	8	11	13	7	7	1	4	2	4	2	1	10, OI 0-2, OE 2-4cm, OM 4-6cm clay 4-27cm

Releve	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5
Date	34911	34911	34911	34911	34911	34911	34911	34911	34911	34911	34911
Plot size (m)	2x2	2x2	2x2	5x5	5x5	5x5	3x3	4x4	4x4	4x4	4x4
Slope (deg)	7	10	3	0	3	0	3	0	1	0	0
Mean Thaw Depth (cm)1	66	69	999	888	888	888	999	56.8	888	42.8	999
Aspect	NNE	NNE	NNE				E		NW	-	
Landform2	1	1	1	4	19	4	11	11	11	11	6
Surficial Geology3	6	6	6	2	1	2	5	1	4		4
Surficial Geomorphology2	11	11	11	15	14	15	15		12	2	15
Microsite4	13	13	13	12	12	12	13	13	13	13	13
Site Moisture2	6	6	6	5	4	6	4	8	9	8	4
Soil Moisture2	6	6	6	3	2	5	3	7	10	8	2
Glacial Geology5	1	3	3	1	1	1	2	2	2	2	2
Tpographic Position2	3	2	2	4	2	4	2	3	5	5	4
Exposure2	2	2	2	3	2	1	2	1	1	1	2
Snow Duration2	6	5	6	3	4	4	4	5	5	5	5
Animal/human Disturbance6	0	0	0	1	0	0	0	1	0	0	1
Stability6	1	1	2	1	1	1	4	5	5	4	5

0=3.75 C=6+ no A or B

not taken

0 - 2.5 in, A - 0, BG - 3in., C - 10+ in

0-absent, A- 2.25 inch, B- 1.5, C-10+, coarse gravel

Soil Units

AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1
34911	34911	34911	34911	34911	34911	34912	34911	34912	34912	34912	34912
1X0.5	1X1	1.5X1.5	5x5	5x5	2x2	5x5	5x5	5x5	5x5	5x5	2x2
3	3	5	4	5	4	2	2	2	0	10	0
999	999	59	38.6	45.1	45.1	41.9	35.9	36.4	55.4	35	37.88888889
N	N	N	NW	W	S	NW	NNE	EN		W	
3	3	2	19	19	1	1	19	1	6	1	7
6	6	6	9	7	6	13	13	6	5	15	8
18	18	3	2	11	3	11	3	1	11	14	3
13	13	13	12	13	13	12	3	13	13	13	13
8	8	5.5	8	8	7	3	6	6	5	8	8
6	6	4	9	9	7	4	4	4	5	7	8
colluvial basin	colluvial basin	colluvial basin	6	7	7	5	5	5	5	5	5
6	5	3	4	3	3	1	4	1	5	3	4
3	3	2.5	2	2	2	4	2	2	2	1	2
8	8	5	4	4	4	1	4	4	5	8	5
1	1	1	2	1	0	0	0	0	1	0	0
3	3	2	1	1	999	5	1	5	4	5	1

Pergelic Cryorthent, alkaline

O-3, 5cm Oi, 3-5 Oe, 5-25 Bw, brown gravelly silt loam

10, 0-2cm Oi, 2-5 Oe, 5-27 Bw brown silt loam

8

Soil layers over gravel

DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2	E-E-S-1	E-E-S-2
34920	34920	34920	34920	34920	34920		34920	34920	34913	34911	34911	34913	34913	34913	34913
2x2	2x2	4x4	2x2	2x2	4x4	5x5	1x1	2x2	2x2	2x2	2x2	5x5	5x5		
25	3	5	5	3	0	0	5	0	0	7	3	3	8		4
888	888	888	888	888	999	777	888	53.375	888	888	888	50.4	57		75
N	S	S	SE	SE	-	-	SE		-	ENE	SW	W	SE		SW
23	23	23	23	4	6	6	23	7	20	20	20	1	5	5	5
2	2	2	2	2	3	8	2	7	15	6	6	13	13	14	13
11	11	11	11	11	17	16	11	11	11	1	1	6	1	18	4
13	13	13	13	13	13	13	13	13	13	1	1	13	12	5	5
3	3	3	3	6	7	9	7	8	3	5	5	3	3	3.5	4
2	2	2	2	5	5	9	5	9	2	3	3	3	3	2	2
2	2	2	2	6	2	2	2	1	3	3	3	5	5	7	4
3	3	3	3	2	5	5	2	6	4	4	4	1	1	2	2
3	2	2	2	2	1	1	1	2	2	1	1	3	3	2	2
2	5	5	5	5	5	5	6	5	4	7	7	3	3	4	5
1	0	0	1	1	2	0	1	1	0	1	1	1	2	1	1
2	1	1	1	1	4	4	1	1	2	5	5	5	5	2	2

sphagnist, 40cm of hemic, Sphagnum peat over sand

5" organic layer over silt/sand (Bg)

15cm dark organic soil intermixed with some mineral soil, R5-5P homogeneous sandy/silty soil

mini podzol, upper part is organic, loamy sand w/ gravel

5 cm very humic material overlaying substrate, sandy mater.w/ gravel

E-E-S-3	E-EW-P-1	E-EW-P-2	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4
34913	34910	34910	34910	34910	34910	34910	34910	34910	34910	34910	34910	34910	34910
	5x5	5x5	5x5	1.5x4.5	4x4	4x4	1.5x5	2X2	2X2	5x5	5x5	5x5	5x5
	0	3	4	1	2	2	2	5	1.5	0	0	0	0
	888	888	888	68.4	58.4	888	59.6	35	33	37.33333333	32.5	28.5	59.3
	-	E	N	W	W	W	W	W	W	NE		-	-
5	4	19	4	11	11	11	11	3	3	10	10	10	7
13	2	13	13	13	5	4	5	2	1	8	9	9	8
6	15	6	14	12	12	17	12	18	2	16	16	11	11
5	12	12	12	13	13	13	13	3	2	12	12	12	12
3.5	2	4	3	6	6	7	7	6	6	8	8	7	6
3	2	5	2	6	6	6	7	3	5	9	9	7	6
4	1	4	2	3	3	3	3	4	1	6	6	6	1
2	4	4	2	5	5	5	5	3	3.5	4	4	4	4
2	3	3	3	1	2	2	1	2	2	2	2	2	2
2	3	3	3	6	5	6	6	5	5.5	4	4	4	4
1	1	1	1	1	1	1	1	0	1	2	2	2	2
2	1	1	2	5	5	5	5	3	2	1	1	1	1

8

10, Organic:8-9cm, O1:7cm, Oe: 2cm

8, soil sample 16-20cm, (base of 0 layer)

8, Oi:8cm, Oe:17cm

O- 6, A - 4, By 10+

no soil pit

A - 5-10cm, BQ - 14, C - 34, buried O - 6

11

E-EW-W-5	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1	R-W-2
34909	34915	34916	34916	34916	34885	34916	34917	34917	34916	34916	34916	34916	34916	34916	34916
1x2	5x5	5x5	5x5	5x5	6x2	3x4	5x5	5x5	1x1	1x1	1x1	1x1	1x1	5x5	5x5
0	2	1	1	0	1	0	0	0	15	2	2	2	1	0	0
40	888	888	888	888	61	53.4	999	999	999	999	999	999	45	52.9	53.1
	NNE	N	W	-	E				E	E	E	E	N	-	
10	1	1	1	19	6	6	6	6	1	18	18	19	6	5	21
9	6	13	13	13	14	14	4	4	13	6	13	14	7	13	7
16	4	11	11	11	2	2	15	15	15	15	18	18	15	3	18
11	5	13	13	13	13	13	13	13	13	9	9	13	13	12	12
7	3	2	2	2	8	8	4	6	4	8	4	5	8	8	7
7	2	2	2	2	7	8	5	6	3	9	3	3.5	10	9	7
7	3	4	4	4	5	5	5	5	3	3	15	7	3	5	5
7	2	4	4	4	5	5	5	5	2	2	4	4	3	3	4
3	2	2	2	2	2	2	2	2	3	3	3	2	3	2	2
3	4	4	4	4	6	5	5	5	5	7.5	6.5	6	7	4	4
1	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1
2	2	1	1	1	4	4	4	4	3	1.5	3	2.5	3	1	1

marine deposits, fine silts with organice accumulation, Oi:0-5cm, Oe:5-10cm

moss layer over gley silt

lithosol

lithosol

C gravel

C only gravelly

O - 3, Cg 20+, fine material

Bg - 9cm, Cg - 20+cm, fine-grained

R-W-3	R-D-1	V-CB-1		V-CB-10	V-CB-11	V-CB-12	V-CB-13	V-CB-14	V-CB-15	V-CB-16	V-CB-17	V-CB-18	V-CB-2	V-CB-3	V-CB-4
34916	34915		34901	34904	34904	34904	34904	34904	34904	34902	34902	34904	34901	34901	34902
5x5	10x10	10x10		10x10	10x10	10x10	10x10	10x10	10x10	10x10	10x10	10x10	10x10	10x10	10x10
0	1		6	5	0	6	0	0	0	1	10	0	15	9	3
40.2	888	41.35714286		83.7	72.4	75	999	66.8	77.6	72.8	60.2	999	33.4	86.4	66.4
0	-	NE		NE		NE		-		W	NE		NE	NE	NE
6	1		4	4	4	4	4	4	4	4	4	22	4	4	7
2	13		2	2	2	2	2	2	2	2	6	1	2	2	8
2	11		3	3	3	3	1	3	2	3	1	1	4	3	2
12	13		13	3	13	3	13	13	13	13	13	13	13	3	11
9	2		3	4	8	4	3	8	8	6	4	3	6	6	8
10	2		3	4	8	4	3	8	8	3	3	1	6	6	8
5	4		2	2	2	2	2	2	2	2	2	2	2	2	2
4	1		2	2	2	2	2	2	3	3	2	3	2	2	4
2	4		4	3	3	3	3	3	1	1	2	2	2	3	3
7	2		3	6	6	5	5	5	5	6	6	2	6	6	5
0	0		1	0	1	1	1	0	1	1	1	1	1	1	1
4	1		1	0	1	1	1	1	1	1	2	1	2	2	2

O - 18+

OM- 0-5, A - 5-10

V-CB-5	V-CB-6	V-CB-7	V-CB-8	V-CB-9	V-CB-R-1	V-HB-M-1	V-HB-P-1	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-TR-D-1	V-TR-M-1
34902	34903	34903	34903	34903	34919	34918	34918	34918	34918	34918	34918	34918	34918
10x10	10x10	10x10	10x10	10x10	2x6	2x2	5x5	4x4	6x6	unknown	5x5	5x5	2x2
2	0	0	3	1	0	0	0	0	0	16	1	5	1
999	999	26.16666667	72.6	999	999	888	888	888	888	60	63.2	888	777
NW	-	W	W	W						N	-	NW	SE
4	6	3	1	1	6	6	4	6	6		6	5	5
2	2	2	2	2	5	5	2	5	4		5	3	2
7	3	3	3	6	11	11	6	11	15		2	11	11
5	13	13	13	12	13	13	12	13	13	13	12	13	13
3	6	6	4	3	7	6	2	6	6	7	8	3	6
2	3	6	5	2	7	6	2	5	6	6	7	3	6
2	2	2	2	2	2	5	2	4	4		2	7	7
1	3	3	2	2	5	5	4	4	5	2	4	1	6
4	3	3	3	3	2	1	2	1	2		2	4	3
5	4	4	4	4	5	6	4	5	5	7	5	2	5
999	1	1	1	0	3	1	1	1	0	1	2	0	1
1	2	2	3	3	4	2	1	4	5		1	4	1

10

river gravels

1

V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2
34918	34918	34918	34918	34918	34918	34918	34918	34918	34918
5x5	5x5	4x4	2x6	2x6	3x5	1x1	1x1	5x5	5x5
0	0	0	0	0	0	6	6	1	0
888	888	777	777	777	777	60	777	56.8	51.2
						S	S	-	
4	4	6	6	6	6	18	1	21	7
2	2	3	3	3	3	2	2	7	8
6	11	11	11	11	11	4	11	11	11
1	13	13	13	13	13	13	13	13	13
3	3	7	6	7	6	6	6	7	7
3	3	6	6	6	6	5	5	6	7
7	7	2	2	2	2	1	7	1	1
4	4	5	5	5	5	2	2	4	4
2	2	1	1	1	1	1.5	2	2	2
5	5	5	5	5	5	7	7	4	4
1	1	3	3	3	2	1	1	2	2
1	1	5	5	5	5	2	2	1	1

10, OI 0-2, OE 2-4cm, OM 4-6cm clay 4-27cm

10, moss 0-2cm OM 2cm, 2-20cm brown clay loam with 10% fine roots

no development of horizons

2, soils filled with Collembola

2

2

2

Table 6. Releve lifeform cover data

TRANSECT NO.		NEW ID	Site	Prostrate	Hemi-Pros. Shrubs	Low Shrubs	Dwarf	Evergreen Shrubs	Deciduous Shrubs	Forbs	Grams	Lichens	Bryo.	Rocks	Bare Soil	Water	Frost Scars	Total Standing Dead	Ht of Veg (cm) (Ave)	(Max)	Other
4		AH-BF-M-1	BF-M-1	2	0	0	0	1	1	3	10	1	30	10	2	0	0	<1	2	10	cyanobacteria - 50%
4		AH-BF-M-2	BF-M-2	5	0	0	0	2	2	10	1	2	10	<1	0	0	0	<1	3	10	cyanobacteria - 70%
4		AH-BF-M-3	BF-M-3	5	0	0	0	1	4	15	1	1	30	5	<1	0	0	<1	3	10	cyanobacteria - 30%
4		AH-BF-P-1	Nadya's	25	0	0	0	20	5	5	+	40	+								
4		AH-BF-P-2	Nadya's	25	0	0	0	25	+	5	+	40	+								
4		AH-BF-P-3	Nadya's	25	0	0	0	25	+	5	2	30	+								
4		AH-BF-R-1	CFC-R-1	2	0	0	0	0	2	5	R	25	2	70	+	0	0	+	1	3	
4		AH-BF-R-2	CFC-R-2	10	0	0	0	0	10	3	50	+	75	R	0	5	0	25	5	35	
4		AH-BF-R-3	CFC-R-3	0	0	0	0	0	0	R	5	R	5	+	0	90	0	0	10	10	algae 5
4		AH-BF-R-4	CFC-R-4	5	0	0	0	0	5	+	50	+	75	0	0	25	0	10	5	12	
4		AH-BF-R-5	CFC-R-5	+	0	0	0	0	+	+	+	0	+	75	20	0	0	0	2	5	
4		AH-BF-S-1		+	0	0	0	0	+	0	0	15	60	5	0	0	0	0	3	10	black crust 40%
4		AH-BF-S-2		0	0	0	0	0	0	3	1	3	0	0	0	0	0	0	2	7	black crust 82%
4		AH-BF-S-3		60	0	0	0	60	15	1	1	15	60	10	0	0	0	5	5	10	total cover90%, black crust <10%
4		AH-BF-W-1	BF-W-1	5	0	0	0	0	5	2	45	0	90	0	0	0	0	10	8		water table =5cm
4		AH-BF-W-2	BF-W-2	10	0	0	0	0	10	1	65	0	90	0	0	0	0	15	6	17	max height = Eri sch
4		AH-BF-W-3	BF-W-3	25	0	0	0	10	15	3	40	+	50	0	1	0	1	20	5	17	max height = Eri tri
1		AR-D-1	AR-D-1	0	0	0	0	0	0	1	1	0	0	2	98	0	0	2	2	10	flowers 10cm high
1		AR-P-1	AR-DP-1	0	0	0	0	0	0	10	10	5	15	0	10	0	0	5	1		
1		AR-P-2	AR-P-2	0	0	0	0	0	0	5	5	0	10	0	80	0	80	5	3		entire cover 20%
1		AR-R-1	AR-R-1	0	0	0	0	0	0	2	20	+	10	0	80	0	0	5	3		
1		AR-S-1	AR-S-1	0	0	0	0	0	0	1	6	1	20								
1		AR-W-1	AR-W-1	0	0	0	0	0	0	+	10	+	60	0	10	0	0	5	4		
11		DL-D-1	Nadya's	10	5	35	0	40	+	0	+	50	40								
11		DL-D-2	Nadya's	25	50	10	0	75	10	0	20	1	+								
11		DL-D-3	Nadya's	5	0	60	0	5	60	0	+	+	5								
11		DL-D-4	Nadya's	10	20	5	0	30	5	5	5	75	+								
11		DL-M-1	DL-M-1	0	0	10	70	60	20	5	2	2	30	0	0	0	0	<1	10	50	
11		DL-R-1	DL-R-1	0	0	50	+	5	55	2	35	+	60	30	2	5	-	-	200		veg cover 75%
11		DL-R-2	BG	0	0	+	0	0	+	+	60	0	20	0	0	10	0	60	10	90	total veg cover 70%
11		DL-S-1	Nadya's	20	0	0	+	1	20	0	20	10	95								
11		DL-W-1	DL-W-1	+	0	0	0	5	+	0	20	0	100	0	0	0	0	10	15		
5		E-AHR-P-2	Nadya's							4	1	+	+								total cover 5%
5		E-AHR-S-1	Nadya's							+	1	3	30								total cover 40%
5		E-AHR-S-2	Nadya's							+	4	1	1								total cover 100%
5		E-E-P-1	E-P-1	50	0	0	0	35	15	1	10	+	+	+	30	0	0	5	5		hummock ht. 10-15cm
5		E-E-P-2	E-P-2	30	0	0	0	5	25	1	5	0	+	+	65	0	65	5	5	20	max height - grasses
5		E-EW-P-1	Nadya's	50	0	0	0	20	50	+	+	+	1								
5		E-EW-P-2	Nadya's	+	0	0	0	R	+	+	+	+	R								vascular 10%, total cover 25%
5		E-EW-P-3	Nadya's	20	0	0	0	10	10	R	1	+	+								
5		E-EW-R-1	EW-R-1	5	0	0	0	0	5	+	40	R	25	R	25	0	0	5	10	20	
5		E-EW-R-2	EW-R-2	10	0	0	0	R	10	+	60	R	60	0	+	0	0	10			
5		E-EW-R-3	EW-R-3	+	0	0	0	0	+	10	+	0	1	50	10	0	0	1	6	14	
5		E-EW-R-4	EW-R-4	10	0	0	0	R	10	+	70	+	75	3	3	+	0	3	6	21	
5		E-EW-S-1	FRED	20	40	0	0	55	10	3	5	20	55	0	10	10	10	10	10	25	
5		E-EW-S-2	FRED	10	70	0	0	80	10	1	2	5	65	0	2	0	0	10	5	15	
5		E-EW-W-1	EW-W-1	5	0	0	0	0	5	2	70	0	90	0	0	+	0	10	10		
5		E-EW-W-2	EW-W-2	0	0	0	0	0	0	+	75	0	80	0	0	0	0	15	9		
5		E-EW-W-3	EW-W-3	10	0	0	0	0	10	5	75	0	80	0	0	0	0	15	7		
5		E-EW-W-4	EW-W-4	10	0	0	0	0	10	5	40	+	50	0	5	0	0	20	6		
5		E-EW-W-5	FRED	4	0	0	0	2	4	1	50	0	35	0	30	0	0	5	10	25	
6		R-D-1	Nadya's									2	3								vascular 12%
6		R-P-1	Nadya's	10	0	0	0	20	0	10	+	10	+								
6		R-P-2	Nadya's	20	0	0	0	+	20	5	r	1	10								
6		R-P-3	Nadya's	10	0	0	0	+	10	+	+	1	5								
6		R-P-4	Nadya's	10	0	0	0	+	10	2	+	2	3								
6		R-R-1	R-R-1	0	0	0	0	0	0	+	10	+	30	+	3	+	0	+	2	10	live cover 70%
6		R-R-2	R-R-2	0	0	0	0	0	0	+	30	R	75	0	0	10	0	1	4	15	veg cover 100%
6		R-R-3	R-R-3	0	0	0	0	0	0	1	1	+	+	98	0	0	0	+	4	10	3% live cover
6		R-R-4	R-R-4	0	0	0	0	0	0	1	+	R	+	98	0	0	0	+	2	15	veg cov. 2%
6		R-S-1	FRED									25	45	35				1	2	3	total cover 65%
6		R-S-2	FRED							1	15		100						5	5	
6		R-S-3	FRED							8	1	40	15						2	10	total cover 60%
6		R-S-4	FRED							5	1	30	35	25							total cover 75%
6		R-S-5	FRED							5	3	3	35	5					3	7	black crust 65%, total cover 95%
6		R-W-1A	R-W-1A	30	0	0	0	0	0	+	30	0	50	0	0	0	0	15	10		A=lower microsites
6		R-W-1B	R-W-1B	0	0	0	0	0	0	0	10	0	5	+	10	50	0	5	3		B=hummock tops, hummocks form about 20%
6		R-W-2A	R-W-2A	10	0	0	0	0	10	+	65	0	60	0	0	0	0	20	5	17	A=hummocks

Table 6. Releve lifeform cover data

																		Total	Ht of		
					Hemi-Pros.	Low		Evergreen	Deciduous						Bare		Frost	Standing	Veg (cm)		
TRANSECT NO.		NEW ID	Site	Prostrate	Shrubs	Shrubs	Dwarf	Shrubs	Shrubs	Forbs	Grams	Lichens	Bryo.	Rocks	Soil	Water	Scars	Dead	(Ave)	(Max)	Other
6		R-W-2B	R-W-2B	0	0	0	0	0		+	30	0	30	0	0	50	0	5	5	8	B=wet inter-hummock areas
6		R-W-3A	R-W-3A	0	0	0	0	0	0	1	5	0	10	0	0	100	0	0	1		A=very wet, 90%
6		R-W-3B	R-W-3B	0	0	0	0	0	0	+	10	0	90	0	0	10	0	5	2		B=hummocks, 10%, 34cm
10		V-CB-1	CAVM99-1	30	0	0	0	30	0	+	60	25	10	+	5	0	0	10	5	8	
10		V-CB-10	CAVM99-10	75	0	0	0	60	15	10	50	30	5	10	5	0	0	30	3	20	
10		V-CB-11	CAVM99-11	5	0	50	0	0	50	+	50	0	50	+	R	75	0	30	20	44	
10		V-CB-12	CAVM99-12	35	30	0	0	60	5	5	60	5	+	+	0	0	0	30	2	7	
10		V-CB-13	CAVM99-13	30	0	0	0	30	R	5	30	+	+	70	10	0	70	10	2	6	
10		V-CB-14	CAVM99-14	5	0	0	0	+	5	+	75	0	75	0	0	70	0	30	12	30	
10		V-CB-15	CAVM99-15	10	0	30	0	5	35	5	75	R	30	0	5	50	0	30	7	30	
10		V-CB-16	CAVM99-16	50	30	0	0	80	R	+	30	10	1	R	R	0	0	30	5	10	
10		V-CB-17	CAVM99-17	50	0	0	0	50	0	10	+	5	2	5	0	0	R	10	5	9	
10		V-CB-18	CAVM99-18	30	0	0	0	30	R	3	25	1	+	75	5	0	10	10	3	8	
10		V-CB-2	CAVM99-2	30	10	0	0	30	+	+	30	50	30	R	0	0	0	30	5	27	
10		V-CB-3	CAVM99-3	30	0	0	0	30	+	5	50	10	5	+	+	0	+	25	5	13	
10		V-CB-4	CAVM99-4	5	0	30	0	0	35	5	75	R	60								
10		V-CB-5	CAVM99-5	30	0	0	0	30	0	5	10	10	R	30	10	0	0	10	2	4	
10		V-CB-6	CAVM99-6	30	0	+	0	30	5	5	50	1	10	30	10	0	0	30	5	20	
10		V-CB-7	CAVM99-7	10	0	60	0	10	60	5	50	R	10	0	5	0	0	10	10	37	
10		V-CB-8	CAVM99-8	70	0	0	0	60	10	5	50	10	+	10	5	0	+	10	5	17	
10		V-CB-9	CAVM99-9	30	0	0	0	30	+	+	10	+	+	60	5	0	60	10	3	10	
10		V-CB-R-1	MP-R-1	5	0	0	10	0	15	2	25	0	80	15	2	0	0	5	5	20	
10		V-HB-M-1	HB-M-1	3	0	0	0	0	0	<1	5	0	<1	20	50	0	0	3	3	10	cyanobacteria 10
7		V-HB-P-1A	Nadya's	25	0	0	0	25	r	2	1	+	+								
7		V-HB-P-1B	Nadya's	40	0	0	0	40	0	+	10	1	20								
7		V-HB-R-1	HB-R-1	1	0	0	0	0	5	+	65	0	15	0	20	0	0	10	10	20	veg cover 80%
7		V-HB-R-2	HB-R-2	0	0	0	0	0	0	1	0	0	R	95	4	0	0	+	4	4	veg cover 1%
7		V-HB-S-1	fred										5		15						vascular plant 10-15%, organic crust 60%
7		V-HB-W-1A	HB-W-1A	10	0	0	0	0	10	2	40	0	95	0	0	0	0	20	8		A=dwarf shrub tundra - hummocks, total cover 3%
7		V-HB-W-1B	HB-W-1B	0	0	0	0	0	0	1	39	0	5	0	70	0	0	10	8		B=graminoid tundra on lower microsites, total cover 97%
8		V-TR-D-1	CV-SR-1	+	0	0	0	+	r	1	3	0	0	2	97	0	0	1	10	20	drought cracks present
8		V-TR-M-1	CV-M-1	20	0	0	1	10	11	2	30	1	30	0	5	0	0	5	5	20	Nostoc 20
8		V-TR-P-2	Nadya's	40	0	0	0	40	0	5	10	10	+								
8		V-TR-P-3	Nadya's	45	0	0	0	45	r	+	20	5	+								
8		V-TR-R-1	TR-R-1	+	0	0	0	0	+	+	15	0	+	0	50	0	0	+	5	20	veg cover 50%
8		V-TR-R-2	TR-R-2	+	0	0	0	0	+	4	86	0	+	0	10	0	0	20	20	25	veg cover 90
8		V-TR-R-3	TR-R-3	0	0	0	0	0	0	0	30	0	0	0	65	5	0	0	10	20	veg cover 30%
8		V-TR-R-4	TR-R-4	0	0	0	0	0	0	0	25	0	+	0	75	0	0				veg cover 25%
8		V-TR-S-1	FRED	20	0	0	0	1	19	1	3	25	30	5	5	0	0	25	2	5	total live 90%, organic crust 25%
8		V-TR-S-2	FRED	1	0	0	0	1	1	5	5	5	3	0	30	0	0	2	4	15	
8		V-TR-W-1	TR-W-1	10	0	0	0	0	10	2	70	0	60	0	0	0	0	30	10		total cover 100%
8		V-TR-W-2	TR-W-2	10	0	0	0	0	10	5	50	0	95	0	0	0	0	20	10		total cover 100%

Table 7. Releve soils data

Plant and Soil Test Lab
University of Alaska
533 E. Fireweed
Palmer, AK 99645

Ph: 907-746-9482
Fax: 907-745-6268

TRANSECT NO.	ID	Description	moisture (%)	pH	P	K	C	N	Sand	Silt	Clay	> 2mm
4	AH-BF-M-1	14	12.64	7.11	19	106	4.60	0.41	54.29	13.71	32.00	68.01
4	AH-BF-M-2	15	10.02	7.28	7	54	2.43	0.21	na	na	na	71.74
4	AH-BF-M-3	16	6.44	7.23	10	54	2.28	0.18	na	na	na	75.95
4	AH-BF-P-1	2	0.85	7.85	1	121	0.40	0.01	91.43	5.14	3.43	63.07
4	AH-BF-P-2	3	7.95	6.76	5	103	1.31	0.10	47.80	29.80	22.40	32.21
4	AH-BF-P-3	4	6.06	6.75	4	46	0.85	0.05	76.00	20.00	4.00	55.06
4	AH-BF-R-1	38	6.71	7.83	4	84	1.28	0.09	73.00	19.00	8.00	44.32
4	AH-BF-R-2	39	78.24	7.11	11	112	4.26	0.37	40.00	41.50	18.50	6.29
4	AH-BF-R-3	NOT AVAILABLE										
4	AH-BF-R-4	40	109.06	6.14	18	101	7.77	0.65	40.00	48.67	11.33	0.60
4	AH-BF-R-5	NOT AVAILABLE										
4	AH-BF-S-1	11	6.79	7.24	8	66	3.80	0.32	na	na	na	83.67
4	AH-BF-S-2	12	12.39	7.49	10	78	3.45	0.28	60.71	23.93	15.36	64.78
4	AH-BF-S-3	13	9.8	6.60	15	52	7.72	0.61	na	na	na	74.60
4	AH-BF-W-1	17	50.43	5.75	9	151	4.78	0.38	21.00	47.00	32.00	<.01
4	AH-BF-W-2	18	139.24	5.88	20	103	12.02	1.05	35.71	56.00	8.29	3.95
4	AH-BF-W-3	19	32.76	5.98	8	135	2.92	0.25	27.00	47.00	26.00	27.74
1	AR-D-1	5	6.25	7.90	3	349	2.65	0.13	5.60	40.00	54.40	0.17
1	AR-P-1	6	18.47	5.24	19	217	2.65	0.17	43.60	20.00	36.40	<.01
1	AR-P-2	7	19.51	6.09	17	291	2.77	0.21	15.60	30.00	54.40	4.19
1	AR-R-1	8	22.79	7.20	6	157	2.07	0.12	51.60	21.80	26.60	0.64
1	AR-S-1	9	18.15	7.39	3	238	2.92	0.13	17.60	38.00	44.40	39.75
1	AR-W-1	10	48	5.52	20	302	4.71	0.28	31.60	21.80	46.60	5.37
11	DL-D-1	45	5.8	4.03	35	31	13.76	0.55	93.56	3.78	2.67	64.53
11	DL-D-2	46	10.84	4.20	18	18	1.72	0.06	94.40	3.20	2.40	<.01
11	DL-D-3	47	160.74	3.76	194	284	38.85	1.99	na	na	na	<.01
11	DL-D-4	48	13.33	4.37	12	19	3.56	0.15	78.20	17.40	4.40	8.15
11	DL-S-1	49	27.22	3.93	68	22	3.76	0.26	92.40	5.20	2.40	15.18
11	DL-M-1A (?)	50	207	3.67	90	218	20.80	0.69	na	na	na	<.01
11	DL-M-1B (?)	51	143.67	3.74	59	101	27.66	1.21	na	na	na	13.96
11	DL-R-1	52	68.49	5.12	22	39	3.27	0.17	72.40	25.20	2.40	<.01
11	DL-R-2	53	32.06	5.68	17	19	0.72	0.02	44.20	53.40	2.40	0.47
11	DL-S-1	NOT AVAILABLE										
11	DL-W-1	96	39.63	5.46	101	12	2.61	0.17	58.40	36.00	5.60	1.37
5	E-AHR-P-2	1	1.77	7.07	11	70	3.37	0.25	na	na	na	84.42
5	E-AHR-S-1	NOT AVAILABLE										
5	E-AHR-S-2	NOT AVAILABLE										
5	E-E-P-1	54	11.71	7.04	7	164	2.84	0.18	50.20	23.40	26.40	<.01
5	E-E-P-2	55	18.46	7.84	4	254	2.12	0.12	34.00	29.60	36.40	<.01
5	E-E-S-1	NOT AVAILABLE										
5	E-E-S-2	NOT AVAILABLE										
5	E-E-S-3	NOT AVAILABLE										
5	E-EW-P-1	56	12.13	7.22	4	130	1.23	0.08	52.00	23.60	24.40	11.66
5	E-EW-P-1 (trough)	57	14.16	6.64	5	124	1.50	0.07	54.00	25.60	20.40	18.25
5	E-EW-P-2	NOT AVAILABLE										
5	E-EW-P-3	NOT AVAILABLE										
5	E-EW-R-1	58	31.11	7.78	6	75	2.20	0.12	58.00	27.60	14.40	1.53
5	E-EW-R-2	59	39.48	7.06	6	76	1.68	0.11	50.40	33.20	16.40	5.67
5	E-EW-R-3	NOT AVAILABLE										
5	E-EW-R-4	60	39.57	7.33	4	98	2.27	0.16	48.40	35.20	16.40	4.09
5	E-EW-S-1	61	39.78	5.73	20	98	3.62	0.24	62.40	25.20	12.40	11.19
5	E-EW-S-2	62	43.97	5.32	14	81	3.64	0.24	62.40	27.20	10.40	1.76
5	E-EW-W-1	63	284.82	4.99	26	218	12.30	0.81	na	na	na	<.01
5	E-EW-W-2	64	185.94	5.07	7	74	12.57	0.90	na	na	na	<.01
5	E-EW-W-3	65	61.97	4.66	11	131	4.93	0.35	22.20	45.40	32.40	<.01
5	E-EW-W-4	66	58.77	6.04	18	90	5.52	0.46	62.20	33.40	4.40	14.42
5	E-EW-W-5	67	24.77	7.11	7	142	2.15	0.15	54.00	23.60	22.40	11.39
6	R-D-1	74	8.26	7.99	<1	128	8.46	0.11	na	na	na	61.87
6	R-P-1	NOT AVAILABLE										
6	R-P-2	NOT AVAILABLE										
6	R-P-3	75	3.33	8.35	<1	74	7.12	0.03	na	na	na	64.01
6	R-P-4	NOT AVAILABLE										
6	R-R-1	76	62.18	7.54	14	140	4.83	0.26	18.80	45.60	35.60	3.67
6	R-R-2	77	163.17	7.25	29	188	6.69	0.51	29.60	47.20	23.20	<.01
6	R-R-3	78	17.54	7.93	9	104	4.45	0.16	38.67	30.67	30.67	52.04
6	R-R-4	79	22.39	8.00	9	140	4.34	0.15	na	na	na	52.03
6	R-S-1	NOT AVAILABLE										
6	R-S-2	83	37.83	8.08	10	107	5.35	0.16	10.80	59.60	29.60	2.82
6	R-S-3	84	34.68	7.98	14	109	5.35	0.30	20.80	57.60	21.60	7.64
6	R-S-4	NOT AVAILABLE										
6	R-S-5	NOT AVAILABLE										
6	R-W-1	80	18.61	8.12	<1	53	8.07	0.03	42.80	53.60	3.60	3.17
6	R-W-2	81	21.3	8.12	2	40	7.14	0.11	38.80	55.60	5.60	6.63
6	R-W-3	82	15.69	7.99	11	125	4.89	0.20	na	na	na	70.65
10	V-CB-1	20	21.74	7.60	24	19	18.95	1.01	93.20	4.80	2.00	9.87

Table 7. Releve soils data

Plant and Soil Test Lab
University of Alaska
533 E. Fireweed
Palmer, AK 99645

Ph: 907-746-9482
Fax: 907-745-6268

TRANSECT NO.	ID	Description	moisture (%)	pH	P	K	C	N	Sand	Silt	Clay	> 2mm
10	V-CB-10	28	0.66	7.71	22	14	10.77	0.41	90.44	5.78	3.78	42.89
10	V-CB-11	29	105.63	7.39	38	112	19.93	1.36	na	na	na	9.13
10	V-CB-12	30	16.91	7.78	40	22	13.39	0.58	83.40	13.80	2.80	25.99
10	V-CB-13	31	0.27	8.09	18	23	8.99	0.20	na	na	na	56.03
10	V-CB-14	32	9.05	7.82	4	79	3.89	0.03	47.60	35.60	16.80	0.10
10	V-CB-15	33	9.8	7.86	9	94	3.69	0.05	57.80	21.40	20.80	4.90
10	V-CB-16	34	13.97	7.65	27	29	8.44	0.29	88.00	9.20	2.80	30.13
10	V-CB-17	35	3.36	7.66	23	11	6.85	0.21	93.33	2.67	4.00	17.66
10	V-CB-18	36	1.35	8.12	20	14	9.90	0.14	93.80	2.60	3.60	43.53
10	V-CB-2	37	2.09	7.90	14	10	6.77	0.18	93.33	3.56	3.11	57.85
10	V-CB-3	21	18.38	7.47	50	32	12.66	0.65	85.60	12.00	2.40	39.85
10	V-CB-4	22	72.71	7.19	22	25	8.12	0.74	90.67	6.22	3.11	1.41
10	V-CB-5	23	8.38	8.12	40	18	9.04	0.14	91.60	5.40	3.00	2.46
10	V-CB-6	24	18.07	7.85	10	23	7.21	0.18	81.20	16.40	2.40	2.01
10	V-CB-7	25	68.94	7.41	14	32	10.31	0.52	51.20	44.40	4.40	<.01
10	V-CB-8	26	4.15	7.92	5	77	4.91	0.02	63.20	24.40	12.40	34.20
10	V-CB-9	27	0.37	7.81	35	32	16.51	0.71	na	na	na	66.31
10	V-CB-R-1	73	107.58	7.45	19	82	12.22	0.65	na	na	na	4.74
7	V-HB-M-1	69	5.95	8.20	3	33	4.07	0.01	84.00	13.60	2.40	66.64
7	V-HB-P-1	87	1.72	8.29	7	32	5.77	0.04	na	na	na	70.67
7	V-HB-R-1	70	31.06	7.56	9	32	6.81	0.15	66.80	31.60	1.60	<.01
7	V-HB-R-2	71	2.53	8.18	2	24	5.17	0.10	na	na	na	72.10
7	V-HB-S-1	68	5.17	8.29	2	35	5.02	0.02	na	na	na	59.14
7	V-HB-W-1	72	41.78	7.60	7	73	7.36	0.13	24.80	61.60	13.60	<.01
8	V-TR-D-1	44	9.76	8.36	3	30	3.10	<.01	58.20	35.40	6.40	<.01
8	V-TR-M-1 (FRED)	41	15.89	8.11	5	16	4.11	0.03	86.00	11.20	2.80	<.01
8	V-TR-P-2	88	14.53	8.32	2	23	8.90	0.01	50.80	39.60	9.60	<.01
8	V-TR-P-3	89	15.43	8.06	8	42	6.51	0.06	54.40	32.00	13.60	<.01
8	V-TR-R-1	90	22.41	8.05	4	27	8.69	0.01	74.40	22.00	3.60	0.18
8	V-TR-R-2	91	20.4	8.16	3	17	8.74	0.01	82.40	16.00	1.60	<.01
8	V-TR-R-3	92	21.95	8.35	3	19	8.77	0.01	94.40	4.00	1.60	<.01
8	V-TR-R-4	93	19.51	8.22	3	22	8.13	0.01	82.20	14.20	3.60	<.01
8	V-TR-S-1	42	15.65	8.25	4	58	3.19	0.02	22.00	57.20	20.80	1.44
8	V-TR-S-2	43	14.03	8.39	3	16	3.06	<.01	90.00	7.20	2.80	0.71
8	V-TR-W-1	94	31.18	7.66	12	52	6.47	0.11	26.40	50.00	23.60	<.01
8	V-TR-W-2	95	26.13	7.75	10	121	6.32	0.05	9.14	45.71	45.14	<.01
	FRED'S-DL?	97	4.54	7.16	15	329	1.60	0.13	29.33	28.89	41.78	<.01
	FRED'S-EUREKA?	98	3.04	6.65	14	206	2.52	0.18	42.40	28.00	29.60	<.01
	FRED'S-EUREKA?	99	-	5.31	12	273	2.08	0.14	20.80	39.60	39.60	<.01
	FRED'S-EUREKA?	100	2.86	5.06	17	183	5.08	0.25	30.29	38.86	30.86	<.01
	SNOWBANK (LOW)	85	8.08	8.19	9	70	4.91	0.10	na	na	na	72.11
	SNOWBED(HIGH)	86	0.21	7.83	10	124	7.13	0.23	na	na	na	89.69

Table 8. Vascular plant species cover data.

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1A	E-EW-P-1B
Nomenclature according to PLANTS database (USDA)	BF-M-1	BF-M-2	BF-M-3				CFC-R-1	CFC-R-2	CFC-R-3	CFC-R-4	CFC-R-5				BF-W-1	BF-W-2	BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1					DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	AHR-P-2	AHR-S-1	AHR-S-2	E-D-1	E-P-2A	E-P-2B				EW-P-1A	EW-P-1B
Agrostis mertensii Trin.																													r													
Alopecurus alpinus Sm.									1			+							1	2	r	2											+	+	1								
Andromeda polifolia L.																													+	+		2										
Arctagrostis+A62 latifolia (R.Br.) Griseb. ssp. latifolia								2		+					+	+	+																										
Arctostaphylos alpina (L.) Spreng.																									2a	+	1	1															
Arctostaphylos rubra (Rehd. & Wils.) Fern.																																											
Astragalus australis (L.) Lam. = [A. richardsonii Sheldon]																																										
Betula glandulosa Michx.																									+	4		4	+		+											
Braya glabella Richards. ssp. purpurascens (R.Br.) Cody						r																																				
Braya humilis (C.A. Mey.) B.L. Robins.																																										
Braya thorild-wulffii Ostenf.																																										
Calamagrostis canadensis (Michx.) Beauv. var canadensis																													1													
Calamagrostis lapponica (Wahlenb.) Hartm. var nearctica Porsild																												+														
Calamagrostis sp. Adams																										+																
Caltha palustris L. var. palustris																																										
Cardamine bellidiflora L.	r	+	+									r	+						+	+													+	+	+							
Cardamine digitata Richards.																																										
Cardamine pratensis L. s. lat																																										
Carex aquatilis Wahlenb. var. stans (Drej.) Boot										3					3	4													2	3													
Carex atrofusca Schk.																															2a											
Carex bigelowii Torr. ex Schwein.																														3		1										
Carex chordorrhiza Ehrh. ex. L. f.																																										
Carex glacialis Mackenzie																																1										
Carex lapponica O.F. Lang																																										
Carex membranacea Hook.																																										
Carex misandra R. Br.	2	[P]		+	+	1		2								+	+																									
Carex nardina Fries				r	+		r																																			
Carex rupestris All.																																				+	+	+			+	+
Carex scirpoidea Michx.																																										
Carex ursina Dewey																																										
Carex vaginata Tausch																			+	+																						
Cassiope tetragona (L.) D.Don ssp. tetragona														4																												
Cerastium beeringianum Cham. & Schlecht. =[Cerastium alpin	+	+	+								+										+															+	+				
Cerastium arcticum Lange				r	r							+							+	+												+	+	+						+	r
Cerastium regelii Ostf.	+		+							+	+	+	+			+				+	+	+																			
Chamerion angustifolium (L.) Holub =[Epilobium angustifolium L.]																													1													
Chamerion latifolium (L.) Holub =[Epilobium arcticum Samuelss.]			r				2																																		
Cochlearia groenlandica L. =[C. officinalis L. s.lat.]	+		+																		+																				
Comarum palustris L. =[Potentilla palustris]																														+												
Deschampsia borealis																																										
Deschampsia brevifolia R.Br.																																										
Draba alpina L.																																										
Draba alpina L. =[D. micropetala]					r																	+											+	+	+							
Draba corymbosa R.Br. ex DC	+	+	+			r						+	+																													r	
Draba lactea Adams	+	+								r						r																										
Draba minuta																																										

Table 8. Vascular plant species cover data.

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1
Draba nunavutica	+	+	+																+	+	+	+	+																			
Draba parvisiliquosa																																									+ cf	+ cf
Draba pauciflora R.Br.		+	+																																						
Draba pseudopilosa Pohle				+	+																																				
Draba sp. L.												+	+				+																	+	+	+					
Draba subcapitata Simm.		r		r	r						+							r		+													r							r
Dryas integrifolia Vahl	1	1	1	2	2	2								2			2																		3	1	+				+	3
Dupontia fisheri R.Br.																																										
Elymus alaskanus (Scribn. & Merr.) A.Love ssp. latiglumis (Scribn.& J.G.Sm.) A.Love =[Agropyron violaceum (Hornem.) Lange]																																			+	+					
Empetrum nigrum L. ssp. hermaphroditum (Lge.) Bocher																							1	3a		2a	2	+													
Equisetum arvense L.																												+													
Equisetum variegatum Schleich. ex Weber & Mahr								+		+																															
Eriophorum angustifolium Honck.																																									
Eriophorum angustifolium Honck. ssp. triste (T.Fries)Hulten	+							1		+					+	1	3																								
Eriophorum scheuchzeri Hoppe								1		2					+	1																									
Eriophorum vaginatum L.																											+				3										
Eutrema edwardsii R. Br.																																									
Festuca baffinensis Polunin																																									
Festuca brachyphylla Schultes											r	+																		+										+	+
Festuca edlundii+A33 S.Aiken, Consaul & Lefkovitch																				+	+																			
Festuca hyperborea Holmen.																																+		+							
Festuca richardsonii Hook. = [F. rubra L. ssp. richarsonii (Hook) Hulten]																																			+?	+?	+?				
Geum rossii R.Br. Ser.	[P]																																								
Hedysarum boreale Nutt. ssp. mackenzii (Richards.) Welsh																																									
Hierochloe alpina (Sw.) R.&S.																							+	+	+	1				+						+?	+?				
Hierochloe pauciflora R.Br.																																									
Hippuris vulgaris L.																																									
Juncus albescens (Lange) Fern.																																									
Juncus biglumis L.	+	+	r			+		2		2		+	+		+	+	+		+		+		+												+						
Juncus edlundii		+																																							
Kobresia myosuroides (Vill.) Fiori																																			2	1	1				+	+
Ledum palustre L. ssp. decumbens (Ait.) Hulten																							3	1	+	1	3	+													
Lesquerella arctica (Wormskj.) S.Wats.																																								r	
Leucanthemum integrifolium (Richards.) DC =[Chrysanthemum integrifolium Richards.]																																									
Loiseluria procumbens (L.) Desv.																										1		+													
Luzula arctica Blytt					r							1	+	+					+																						
Luzula arctica Blytt ssp. arctica =[L. nivalis (Laest.) Beurl.]	+	1	1												+	+	+			+			+										+		+					
Luzula confusa Lindeb.												+		+					+	+			+							+										+
Lycopodium annotinum L.																												+													
Minuartia arctica Stev.																			+																						
Minuartia rossii (R.Br.) Graebn	+	r				r					+																														
Minuartia rubella (Wahlenb.) Hiern.	+	+	+		r	+	r				+									+		+											+		+	+	+			+	+
Minuartia sp. L.													+																												
Oxyria digyna (L.) Hill	+			+	r	1						+		r			+				+														+	+				r
Oxytropis arctica R.Br.																																									
Oxytropis arctobia Bunge																																									
Oxytropis maydelliana Trautv.																																									
Papaver dahliana	+		1	r	r													1	1	1	+	+										1	+	+						+	+
Papaver polare												1	+	+																											
Papaver radicatum Rottb. s.lat.		1									+																								+	+	+				
Parrya arctica R.Br.																																									

Table 8. Vascular plant species cover data.

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1
Pedicularis capitata Adams																																											
Pedicularis kanei Dur. =[P. lanata Cham. & Schlecht.]						1		r									+																		[+]	r						r
Pedicularis labradorica Wirsing																											r															
Pedicularis langsdorfii Fisch. Ex Stev. Ssp. Arctica (R.Br.) Pennell =[P.arctica R.Br.]																																										
Pedicularis sudetica Willd.																																										
Phippsia algida (C.J.Phipps) R.Br.									+				+								+	1											1	+								
Pleuropogon sabinei R.Br.																																										
Poa abbreviata R.Br.											+							+															+								r	
Poa glauca Vahl																																				1	+				+	+
Poa hartzii Gandog.																																										
Poa pratensis L. ssp. alpigena (Fries ex Blytt) =[Poa alpigena]																																									+	+
Poa sp. L.																																				+	+					
Polygonum viviparum L.	+	1	+	+	1	+	+	1		+					1	1	1																			+						r
Potentilla hookeriana Lehm. ssp. chamissonis (Hulten) Hulten		r																																								
Potentilla nana Willd. ex Schechlt. =[P. hyparctica Malte var. elatior (Abrom.) Fern.]																																				+	+					
Puccinellia angustata (R. Br.) Rand & Redf.																		1																		+	1					r	
Puccinellia arctica (Hook.) Fern. & Weath.																																											
Puccinellia vahliana (Liebm.) Scribn. & Merr.	+	P	+																																								
Pyrola grandiflora Radius																													+														
Ranunculus hyperboreus Rottb.																																											
Ranunculus sabinei R.Br.																			+	+	+																						
Ranunculus sulphureus Soland. ex C.J. Phipps	[P]														+	+					+		+																				
Rubus chamaemorus L.																												2	+														
Sagina nivalis (Lindbl.) Fries =[Sagina intermedia Fnzl]	+										+																									+							
Salix arctica Pall. s. lat	1	1	1	1	+	+	1	2		1	+	+	+	2	2	2	2														2a				2	3	+				+	4
Salix herbacea L.																														2a												
Salix planifolia Pursh																												3														
Salix polaris Wahlenb.																																											
Salix pulchra Cham.																													+														
Salix reticulata L.																																											
Salix richardsonii Hook.																																											
Salix sp. L.																															P												
Saxifraga aizoides L.																																											
Saxifraga caespitosa L. s.lat.	+	+	+									+	+						+	+	+	+																					
Saxifraga cernua L.	+	+	+		r					+	+	1	+		+	+			+	+	+	+	+									+	+									
Saxifraga flagellaris Willd. ssp. flagellaris	[P]	+	+									+	+							+		+																					
Saxifraga foliolosa R.Br.	+									r						r																											
Saxifraga hieracifolia Waldst. & Kit. ex Willd.								r							r																											
Saxifraga hirculus L. ssp. propinqua (R.Br.) A.&D. Love										+					+	+																										
Saxifraga hyperborea R.Br.																																	1										
Saxifraga nivalis L.			+									+	+		r			r	1	+		+	+										1										
Saxifraga oppositifolia L.	+	2	2	1	1	+	1				+	+		1								+											1								r	r
Saxifraga platysepala (Trautv.) Tolm.																																											
Saxifraga tenuis (Wahlenb.) H.Sm.																			+														1										
Saxifraga tricuspidata Rottb.																																				+	+						
Silene acaulis (L.) Jacq. ssp. acaulis	+				r																																						
Silene involucrata (Cham. & Schlecht.) Bocquet ssp. involucrata =[Melandrium affine J. Vahl]	r																																			+	+	+			+	+
Silene uralensis (Rupr.) Bocquet ssp. uralensis =[Melandrium a	+	+	+							+					+	+																										
Stellaria edwardsii R.Br.																																											
Stellaria laeta Richards.																																											
Stellaria longipes Goldie s.l.						+		+		+		+	+	+		+																+	+	+	+	+	+					

Table 8. Vascular plant species cover data.

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1
Stellaria longipes Goldie s.str.	+	+	+								+								+	+	+																					
Stellaria monantha Hult.																																										
Stellaria sp. L.																																										
Taraxacum holmenignum																																										
Tofieldia pusilla (Michx.) Pers.																												+														
Vaccinium uliginosum L.																							+	+		1		+														
Vaccinium vitis-idaea L. var minus Lodd. Hulten																							2b	2b	1	1	2	+		1	r											
Vahlodea atropurpurea (Wahlenb) Fries ex Hartman																												+														
unknown																																										
Species richness	**30**	**25**	**23**	**11**	**16**	**13**	**6**	**12**	**2**	**15**	**13**	**19**	**15**	**9**	**14**	**17**	**11**	**5**	**16**	**18**	**15**	**12**	**8**	**5**	**7**	**6**	**7**	**9**	**18**	**5**	**7**	**6**	**9**	**15**	**15**	**12**	**21**	**18**	**0**	**0**	**0**	**17**	**18**

Table 8. Vascular plant species cover data.

New ID	E-EW-P-2	E-EW-P-3A	E-EW-P-3B	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009
Nomenclature according to PLANTS database (USDA)	EW-P-2	EW-P-3A	EW-P-3B	EW-R-1	EW-R-2	EW-R-3	EW-R-4			EW-W-1	EW-W-2	EW-W-3	EW-W-4	R-X-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4						R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	CAVM99-1	CAVM99-2	CAVM99-3	CAVM99-4	CAVM99-5	CAVM99-6	CAVM99-7	CAVM99-8	CAVM99-9
Agrostis mertensii Trin.																																										
Alopecurus alpinus Sm.					+						P outside of plot			+					1	2	+	+		2			1				+	2						r	
Andromeda polifolia L.																																										
Arctagrostis+A62 latifolia (R.Br.) Griseb. ssp. latifolia				2	2	+	2	1	+	+	P ou	+	1	+														+		+					+		r			r	
Arctostaphylos alpina (L.) Spreng.																																										
Arctostaphylos rubra (Rehd. & Wils.) Fern.																																										
Astragalus australis (L.) Lam. = [A. richardsonii Sheldon]																																					r					
Betula glandulosa Michx.																																										
Braya glabella Richards. ssp. purpurascens (R.Br.) Cody																																			r				P	+		
Braya humilis (C.A. Mey.) B.L. Robins.																																										
Braya thorild-wulffii Ostenf.																																										
Calamagrostis canadensis (Michx.) Beauv. var canadensis																																										
Calamagrostis lapponica (Wahlenb.) Hartm. var nearctica Pors																																										
Calamagrostis sp. Adams																																										
Caltha palustris L. var. palustris																																										
Cardamine bellidiflora L.									r					+	+					+	+	+	+			+	1														
Cardamine digitata Richards.																																						+			r		
Cardamine pratensis L. s. lat																																										
Carex aquatilis Wahlenb. var. stans (Drej.) Boot				2	3		3			4	4	4	2	+														3	2	3	3						4				
Carex atrofusca Schk.																																						2				
Carex bigelowii Torr. ex Schwein.																																				+						
Carex chordorrhiza Ehrh. ex. L. f.																																										
Carex glacialis Mackenzie																																										
Carex lapponica O.F. Lang																																										
Carex membranacea Hook.													2															1	1	1							+				
Carex misandra R. Br.				r				r					2															+							1	1			3	4		+
Carex nardina Fries																																										
Carex rupestris All.	r		1																															4	+	3		3	2	+		
Carex scirpoidea Michx.																																			1	+			2	2	3	+
Carex ursina Dewey																																									r	
Carex vaginata Tausch																																										
Cassiope tetragona (L.) D.Don ssp. tetragona								3	5																										2							
Cerastium beeringianum Cham. & Schlecht. =[Cerastium alpin				r	r	+															+	+																			
Cerastium arcticum Lange		r													+	+	r		+																							
Cerastium regelii Ostf.				r	r	r									+					+	+	+	1		1	+		1			r			+							
Chamerion angustifolium (L.) Holub =[Epilobium angustifolium																																										
Chamerion latifolium (L.) Holub =[Epilobium arcticum Samuels						1						r																													
Cochlearia groenlandica L. =[C. officinalis L. s.lat.]																											1														
Comarum palustris L. =[Potentilla palustris]																																										
Deschampsia borealis														+																												
Deschampsia brevifolia R.Br.				P ou	+																																				
Draba alpina L.																																					r					
Draba alpina L. =[D. micropetala]															+		+	+																								
Draba corymbosa R.Br. ex DC															r	+		r		+	+	+	+		+	+	+	+														
Draba lactea Adams																												+		+												
Draba minuta															+																												

Table 8. Vascular plant species cover data.

New ID	E-EW-P-2	E-EW-P-3	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009
Draba nunavutica															r																												
Draba parvisiliquosa		+	+																																								
Draba pauciflora R.Br.																																											
Draba pseudopilosa Pohle																																											
Draba sp. L.								r																																			
Draba subcapitata Simm.															r	r	+		r				+																				
Dryas integrifolia Vahl	r	2	2		r	r	r	2	1				1	1		2a	+	+	+																3	3	3	+	3	3	2	4	3
Dupontia fisheri R.Br.					1		+			1	1			2														+	+	+	+											
Elymus alaskanus (Scribn. & Merr.) A.Love ssp. latiglumis (Scr																																										
Empetrum nigrum L. ssp. hermaphroditum (Lge.) Bocher																																										
Equisetum arvense L.				1	1	2	1																																			
Equisetum variegatum Schleich. ex Weber & Mahr				+	r							+																								P		r	r		
Eriophorum angustifolium Honck.											1																															
Eriophorum angustifolium Honck. ssp. triste (T.Fries)Hulten				+	+		r			1		+	1															1		1	4						1		r			
Eriophorum scheuchzeri Hoppe				+	r						1			3															+													
Eriophorum vaginatum L.																																						+				
Eutrema edwardsii R. Br.							r							r																												
Festuca baffinensis Polunin																																										
Festuca brachyphylla Schultes																																										
Festuca edlundii+A33 S.Aiken, Consaul & Lefkovitch															r																											
Festuca hyperborea Holmen.																																										
Festuca richardsonii Hook. = [F. rubra L. ssp. richarsonii (Hook																																										
Geum rossii R.Br. Ser.																																										
Hedysarum boreale Nutt. ssp. mackenzii (Richards.) Welsh																																										
Hierochloe alpina (Sw.) R.&S.																																										
Hierochloe pauciflora R.Br.																																										
Hippuris vulgaris L.											2																															
Juncus albescens (Lange) Fern.																																										
Juncus biglumis L.				+	+	+	1			+			+	2	r					1	2	+	+						+		+	+		+								
Juncus edlundii																																										
Kobresia myosuroides (Vill.) Fiori	+	+	+	r				+																													+	P			1	1	1
Ledum palustre L. ssp. decumbens (Ait.) Hulten																																										
Lesquerella arctica (Wormskj.) S.Wats.	r																																		P				r	r			
Leucanthemum integrifolium (Richards.) DC =[Chrysanthemum																																					r			r			r
Loiseluria procumbens (L.) Desv.																																											
Luzula arctica Blytt								+	1																																		
Luzula arctica Blytt ssp. arctica =[L. nivalis (Laest.) Beurl.]							r								+																												
Luzula confusa Lindeb.								1	+																																		
Lycopodium annotinum L.																																											
Minuartia arctica Stev.																																											
Minuartia rossii (R.Br.) Graebn																	+				+	+	+																				
Minuartia rubella (Wahlenb.) Hiern.			r	P	r										+	+	+	r	r																								
Minuartia sp. L.																																											
Oxyria digyna (L.) Hill	r		r					+	+																	1																	
Oxytropis arctica R.Br.																																							r				
Oxytropis arctobia Bunge																																			r			2				+
Oxytropis maydelliana Trautv.															+	+	r																			r	1		r	r		+	r
Papaver dahliana																																											
Papaver polare																										1	+																
Papaver radicatum Rottb. s.lat.								+	+													+	+			+																
Parrya arctica R.Br.															r		+	+	+																								

Table 8. Vascular plant species cover data.

New ID	E-EW-P-2	E-EW-P-3	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009
Pedicularis capitata Adams																																		+		r	r				r	r
Pedicularis kanei Dur. =[P. lanata Cham. & Schlecht.]									+																									r	r	r		r	+		+	
Pedicularis labradorica Wirsing																																										
Pedicularis langsdorfii Fisch. Ex Stev. Ssp. Arctica (R.Br.) Pen				r	r		r	r		P		+																									r		+			
Pedicularis sudetica Willd.										+	P o	P	+	+																										+			
Phippsia algida (C.J.Phipps) R.Br.															+					+	+	+	+			+		1														
Pleuropogon sabinei R.Br.																				+	1												2	+								
Poa abbreviata R.Br.	r		r												r	+										+																
Poa glauca Vahl																																										
Poa hartzii Gandog.																																										
Poa pratensis L. ssp. alpigena (Fries ex Blytt) =[Poa alpigena]								+																																	
Poa sp. L.																										+																
Polygonum viviparum L.				+	+	1	+	+		+		1	+															1		+				r		+			r		+	r
Potentilla hookeriana Lehm. ssp. chamissonis (Hulten) Hulten																																										
Potentilla nana Willd. ex Schechlt. =[P. hyparctica Malte var. el																																										
Puccinellia angustata (R. Br.) Rand & Redf.															r																											
Puccinellia arctica (Hook.) Fern. & Weath.																						+																				
Puccinellia vahliana (Liebm.) Scribn. & Merr.															+	r	r	+	+																							
Pyrola grandiflora Radius																																										
Ranunculus hyperboreus Rottb.																																	1	+								
Ranunculus sabinei R.Br.																																										
Ranunculus sulphureus Soland. ex C.J. Phipps																																										
Rubus chamaemorus L.																																										
Sagina nivalis (Lindbl.) Fries =[Sagina intermedia Fnzl]																																										
Salix arctica Pall. s. lat	+	+	2	1	2	+	2	2	2	2		2	2	1	r		2	2	2										3		2					+	r			1	+	2	+
Salix herbacea L.																																										
Salix planifolia Pursh																																										
Salix polaris Wahlenb.																																										
Salix pulchra Cham.																																										
Salix reticulata L.																																								1		1	+	+	
Salix richardsonii Hook.																																								3		+	4		
Salix sp. L.																																											
Saxifraga aizoides L.																																										
Saxifraga caespitosa L. s.lat.															r	+						+	+			+																
Saxifraga cernua L.			(r)	r	r		r	r		+	+	+			+	+				+	+	+	+		+	+	+	+			+			(+)								
Saxifraga flagellaris Willd. ssp. flagellaris																						+					1															
Saxifraga foliolosa R.Br.																					+										+											
Saxifraga hieracifolia Waldst. & Kit. ex Willd.																																										
Saxifraga hirculus L. ssp. propinqua (R.Br.) A.&D. Love							+			+	P o	1	+							+	+								+		+											
Saxifraga hyperborea R.Br.																																										
Saxifraga nivalis L.									r						+							+				+	+	+														
Saxifraga oppositifolia L.	+		r					r							+	1a	1	+	1			+	+			1	1								1	+	1		2	1	r	+	1
Saxifraga platysepala (Trautv.) Tolm.															r																												
Saxifraga tenuis (Wahlenb.) H.Sm.																																										
Saxifraga tricuspidata Rottb.			r																																							
Silene acaulis (L.) Jacq. ssp. acaulis																																								r			
Silene involucrata (Cham. & Schlecht.) Bocquet ssp. involucrat	r	r	r		+																																					
Silene uralensis (Rupr.) Bocquet ssp. uralensis =[Melandrium a					r		r			+		+																+		+											
Stellaria edwardsii R.Br.				r	+		+					+												+	+		+														
Stellaria laeta Richards.																																										
Stellaria longipes Goldie s.l.									+						+			+		+			+											(+)								

Table 8. Vascular plant species cover data.

New ID	E-EW-P-2	E-EW-P-3,	E-EW-P-3)	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009
Stellaria longipes Goldie s.str.																																										
Stellaria monantha Hult.																					+	+																					
Stellaria sp. L.								+																																			
Taraxacum holmenignum																																										
Tofieldia pusilla (Michx.) Pers.																																							r			
Vaccinium uliginosum L.																																										
Vaccinium vitis-idaea L. var minus Lodd. Hulten																																										
Vahlodea atropurpurea (Wahlenb) Fries ex Hartman																																										
unknown																																										
Species richness	**9**	**6**	**12**	**18**	**21**	**9**	**16**	**17**	**12**	**12**	**10**	**13**	**11**	**11**	**26**	**11**	**11**	**9**	**8**	**10**	**12**	**16**	**14**	**0**	**5**	**13**	**6**	**10**	**12**	**4**	**14**	**5**	**3**	**7**	**8**	**12**	**14**	**15**	**9**	**18**	**13**	**13**	**11**

Table 8. Vascular plant species cover data.

New ID	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CR-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1A	V-HB-W-1B	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Nomenclature according to PLANTS database (USDA)	CAVM99-10	CAVM99-11	CAVM99-12	CAVM99-13	CAVM99-14	CAVM99-15	CAVM99-16	CAVM99-17	CAVM99-18	MP-R-1	HB-M-1			HB-R-1	HB-R-2		HB-W-1A	HB-W-1B	CV-SR-1	CV-M-1			TR-R-1	TR-R-2	TR-R-3	TR-R-4			TR-W-1	TR-W-2	**Frequency (#/116 plots)**
Agrostis mertensii Trin.																															**1**
Alopecurus alpinus Sm.																										r				+	**24**
Andromeda polifolia L.																															**3**
Arctagrostis+A62 latifolia (R.Br.) Griseb. ssp. latifolia					1	+										[P]										+			[P]	+	**27**
Arctostaphylos alpina (L.) Spreng.																															**4**
Arctostaphylos rubra (Rehd. & Wils.) Fern.	+																														**1**
Astragalus australis (L.) Lam. = [A. richardsonii Sheldon]									+																						**2**
Betula glandulosa Michx.																															**5**
Braya glabella Richards. ssp. purpurascens (R.Br.) Cody	+										+								+		+	+									**9**
Braya humilis (C.A. Mey.) B.L. Robins.																					+										**1**
Braya thorild-wulffii Ostenf.																			+		r										**2**
Calamagrostis canadensis (Michx.) Beauv. var canadensis																															**1**
Calamagrostis lapponica (Wahlenb.) Hartm. var nearctica Pors																															**1**
Calamagrostis sp. Adams																															**1**
Caltha palustris L. var. palustris																	[P]	[P]													**2**
Cardamine bellidiflora L.																												1			**20**
Cardamine digitata Richards.						+				+																				+	**5**
Cardamine pratensis L. s. lat																													+	1	**2**
Carex aquatilis Wahlenb. var. stans (Drej.) Boot		3			2	4				3				3			3	3					+	4	+	+			4	4	**31**
Carex atrofusca Schk.		2			2	+																									**4**
Carex bigelowii Torr. ex Schwein.					1																										**3**
Carex chordorrhiza Ehrh. ex. L. f.																															**2**
Carex glacialis Mackenzie																					r										**1**
Carex lapponica O.F. Lang																															**1**
Carex membranacea Hook.					1												+	+					1	1					P	+	**12**
Carex misandra R. Br.	2		2			+					2			+		[P]	1			2								+				**26**
Carex nardina Fries																															**3**
Carex rupestris All.	+		2	2			1	4	3			1	2	P						[+]	2	2									**25**
Carex scirpoidea Michx.	2		2	1			2	+												2							+				**13**
Carex ursina Dewey																															**1**
Carex vaginata Tausch						+																									**3**
Cassiope tetragona (L.) D.Don ssp. tetragona	2		3				3																								**7**
Cerastium beeringianum Cham. & Schlecht. =[Cerastium alpin																							r								**13**
Cerastium arcticum Lange																[P]															**16**
Cerastium regelii Ostf.																[P]												+			**25**
Chamerion angustifolium (L.) Holub =[Epilobium angustifolium																															**1**
Chamerion latifolium (L.) Holub =[Epilobium arcticum Samuels											1				+																**6**
Cochlearia groenlandica L. =[C. officinalis L. s.lat.]																															**4**
Comarum palustris L. =[Potentilla palustris]																															**1**
Deschampsia borealis																															**1**
Deschampsia brevifolia R.Br.																							+		+	1					**5**
Draba alpina L.			r																												**2**
Draba alpina L. =[D. micropetala]																															**8**
Draba corymbosa R.Br. ex DC																[P]											+	+		+	**22**
Draba lactea Adams																															**6**
Draba minuta																															**1**

Table 8. Vascular plant species cover data.

New ID	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Draba nunavutica																[P]															**9**
Draba parvisiliquosa																															**4**
Draba pauciflora R.Br.																															**2**
Draba pseudopilosa Pohle																															**2**
Draba sp. L.																[P]															**8**
Draba subcapitata Simm.																			r												**14**
Dryas integrifolia Vahl	4	+	3	3	+	1	4	4	3		1	2	3	+		[P]	1		[+]	2	3	3					+	+	[P]	+	**59**
Dupontia fisheri R.Br.										+								+							3						**12**
Elymus alaskanus (Scribn. & Merr.) A.Love ssp. latiglumis (Scr																														r?	**3**
Empetrum nigrum L. ssp. hermaphroditum (Lge.) Bocher																															**5**
Equisetum arvense L.																							2	2						1	**8**
Equisetum variegatum Schleich. ex Weber & Mahr		r				+				+				+			+			+								+	+		**16**
Eriophorum angustifolium Honck.																															**1**
Eriophorum angustifolium Honck. ssp. triste (T.Fries)Hulten		2			3	1								3			1	1		+			+			+			1	1	**28**
Eriophorum scheuchzeri Hoppe					2																					1					**11**
Eriophorum vaginatum L.		1			1																										**5**
Eutrema edwardsii R. Br.										+																				+	**4**
Festuca baffinensis Polunin																														[P]	**1**
Festuca brachyphylla Schultes																															**5**
Festuca edlundii+A33 S.Aiken, Consaul & Lefkovitch																															**3**
Festuca hyperborea Holmen.																															**2**
Festuca richardsonii Hook. = [F. rubra L. ssp. richarsonii (Hook																															**3**
Geum rossii R.Br. Ser.																															**1**
Hedysarum boreale Nutt. ssp. mackenzii (Richards.) Welsh							r	1																							**2**
Hierochloe alpina (Sw.) R.&S.																															**7**
Hierochloe pauciflora R.Br.						+																									**1**
Hippuris vulgaris L.																															**1**
Juncus albescens (Lange) Fern.					1																										**1**
Juncus biglumis L.														+		[P]	+	+		r			+			+		+	+		**40**
Juncus edlundii																															**1**
Kobresia myosuroides (Vill.) Fiori	1			P																											**17**
Ledum palustre L. ssp. decumbens (Ait.) Hulten																															**6**
Lesquerella arctica (Wormskj.) S.Wats.	+			r			r	1				+	r								+	+									**13**
Leucanthemum integrifolium (Richards.) DC =[Chrysanthemum	+										+									+											**6**
Loiseluria procumbens (L.) Desv.																															**2**
Luzula arctica Blytt																												1			**8**
Luzula arctica Blytt ssp. arctica =[L. nivalis (Laest.) Beurl.]																															**13**
Luzula confusa Lindeb.																															**9**
Lycopodium annotinum L.																															**1**
Minuartia arctica Stev.																															**1**
Minuartia rossii (R.Br.) Graebn																				+								+			**10**
Minuartia rubella (Wahlenb.) Hiern.												r	r															+			**26**
Minuartia sp. L.																[P]															**2**
Oxyria digyna (L.) Hill												+	+		+	[P]															**20**
Oxytropis arctica R.Br.			1				r	r																							**4**
Oxytropis arctobia Bunge				2				1	1			1	r																		**8**
Oxytropis maydelliana Trautv.	1		1	1			+	1	+																						**12**
Papaver dahliana																			r									+			**19**
Papaver polare																															**5**
Papaver radicatum Rottb. s.lat.																[P]															**11**
Parrya arctica R.Br.	r											r				[P]			+			r					+				**10**

Table 8. Vascular plant species cover data.

New ID	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Pedicularis capitata Adams	+		+		r	+	r													+											**11**
Pedicularis kanei Dur. =[P. lanata Cham. & Schlecht.]	+		+	r			r	r				r	r								r	r									**22**
Pedicularis labradorica Wirsing																															**1**
Pedicularis langsdorfii Fisch. Ex Stev. Ssp. Arctica (R.Br.) Pen						+								r																	**10**
Pedicularis sudetica Willd.		1			+	1								+			1	+											+	+	**14**
Phippsia algida (C.J.Phipps) R.Br.																[P]															**14**
Pleuropogon sabinei R.Br.																	[P]	[P]													**6**
Poa abbreviata R.Br.																			1												**10**
Poa glauca Vahl																															**4**
Poa hartzii Gandog.																			[+]												**1**
Poa pratensis L. ssp. alpigena (Fries ex Blytt) =[Poa alpigena]																															**3**
Poa sp. L.																															**3**
Polygonum viviparum L.	+		+	r		r				+	+			+		[P]	+			+		+	+				+	+	+		**44**
Potentilla hookeriana Lehm. ssp. chamissonis (Hulten) Hulten																															**1**
Potentilla nana Willd. ex Schechlt. =[P. hyparctica Malte var. el																															**2**
Puccinellia angustata (R. Br.) Rand & Redf.																			1												**6**
Puccinellia arctica (Hook.) Fern. & Weath.																															**1**
Puccinellia vahliana (Liebm.) Scribn. & Merr.																															**8**
Pyrola grandiflora Radius																															**1**
Ranunculus hyperboreus Rottb.																															**2**
Ranunculus sabinei R.Br.																															**3**
Ranunculus sulphureus Soland. ex C.J. Phipps																															**5**
Rubus chamaemorus L.																															**2**
Sagina nivalis (Lindbl.) Fries =[Sagina intermedia Fnzl]																															**3**
Salix arctica Pall. s. lat	1		1	r					r	+	+	r		1		[P]	2		r	2		r	+	+			1	+	2	2	**65**
Salix herbacea L.																															**1**
Salix planifolia Pursh																															**1**
Salix polaris Wahlenb.										2										r			+								**3**
Salix pulchra Cham.																															**1**
Salix reticulata L.	1	1	+		1	1	+			+										1											**13**
Salix richardsonii Hook.		3			+	3				1				+						1											**9**
Salix sp. L.																										2?	+				**3**
Saxifraga aizoides L.	1						r																								**2**
Saxifraga caespitosa L. s.lat.																															**14**
Saxifraga cernua L.																[P]												+			**39**
Saxifraga flagellaris Willd. ssp. flagellaris																															**9**
Saxifraga foliolosa R.Br.																															**5**
Saxifraga hieracifolia Waldst. & Kit. ex Willd.																															**2**
Saxifraga hirculus L. ssp. propinqua (R.Br.) A.&D. Love										+							+												+	+	**16**
Saxifraga hyperborea R.Br.																															**2**
Saxifraga nivalis L.																[P]												1			**19**
Saxifraga oppositifolia L.	+		2	2			1	1	+		+	1	+		+	[P]			+	1	1	+					+	1			**52**
Saxifraga platysepala (Trautv.) Tolm.																															**1**
Saxifraga tenuis (Wahlenb.) H.Sm.																															**3**
Saxifraga tricuspidata Rottb.									r																						**4**
Silene acaulis (L.) Jacq. ssp. acaulis																															**3**
Silene involucrata (Cham. & Schlecht.) Bocquet ssp. involucrat																															**10**
Silene uralensis (Rupr.) Bocquet ssp. uralensis =[Melandrium a										+														+					+		**15**
Stellaria edwardsii R.Br.																							+							+	**9**
Stellaria laeta Richards.																													+		**1**
Stellaria longipes Goldie s.l.																															**19**

Table 8. Vascular plant species cover data.

New ID	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-HB-W-1J	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Stellaria longipes Goldie s.str.																															**7**
Stellaria monantha Hult.				r																											**3**
Stellaria sp. L.																															**1**
Taraxacum holmenignum																			+												**1**
Tofieldia pusilla (Michx.) Pers.																															**2**
Vaccinium uliginosum L.																															**4**
Vaccinium vitis-idaea L. var minus Lodd. Hulten																															**8**
Vahlodea atropurpurea (Wahlenb) Fries ex Hartman																															**1**
unknown																									+ gram						**1**
Species richness	**19**	**9**	**14**	**12**	**14**	**16**	**13**	**10**	**8**	**12**	**8**	**10**	**8**	**12**	**3**	**18**	**13**	**8**	**12**	**16**	**9**	**9**	**11**	**5**	**3**	**7**	**9**	**16**	**14**	**17**	

Table 9. Bryophyte species cover data.

			New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B
			MOSS SPECIES nomenclature Anderson, Crum & Buck 1990 (Bryologist 93(4):448-499)	BF-M-1	BF-M-2	BF-M-3				CFC-R-1	CFC-R-2	CFC-R-3	CFC-R-4	CFC-R-5			BF-W-1	BF-W-2	BF-W-3		AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1				DL-M-1	DL-R-1			DL-W-1	AHR-P-2	AHR-S-1	AHR-S-2	E-D-1	E-P-2A	E-P-2B
Abiabi	Abi	abi	Abietinella abietina (Hedw.)Fleisch. [= Thuidium abietinum (Hedw.) B.S.G.]																																				
Amplap	Amp	lap	Amphidium cf. lapponicum (Hedw.) Schimp.																		+																		
Ampsp	Amp	sp	Amphidium sp. Schimp.																																				
Ancsp	Anc	sp	Anc. sp. (ref?)																																				
Anupin	Anu	pin	Anura pinguis (ref?)	+																																			
Aplwor	Apl	wor	Aplodon wormskjoldii (Hornem.) Kindb. [=Haplodon worskjoldii (Hornem.)Hag.]																																				
Aulacu	Aul	acu	Aulacomnium acuminatum (Lindb. & Arnell) Kindb.																																				
Aultur	Aul	tur	Aulacomnium turgidum (Wahlenb.) Schwaegr.				+										1	+		1		+	2		+	2				1					+				
Aulpal	Aul	pal	Aulacomnium palustre (Hedw.) Schwaegr.														+																						
Bacsp	Bac	sp	Bachlophosis sp. (ref?)																											r									
Barith	Bar	ith	Bartramia ithyphylla Brid.																						+											+	+		
Bliacu	Bli	acu	Blindia acuta (Hedw.) Bruch & Schimp.									+																									r		
Brasp	Bra	sp	Brachythecium sp. Schimp.																																				
Bratur	Bra	tur	Brachythecium turgidum (Hartm.) Kindb.																																				
Bryrec	Bry	rec	Bryoerythrophyllum recurvirostre (Hedw.) Chen		+	+		r		+	+			+																					+	+		+	
Bryaen	Bry	aen	Bryum aeneum Blytt ex B.S.G. [= B. rutilans Brid.]																																				
Bryarg	Bry	arg	Bryum argenteum Hedw.																																	+				
Brycae	Bry	cae	Bryum caespiticium Hedw.																																				
Brycal	Bry	cal	Bryum calophyllum R.Br.																																				
Brycyc	Bry	cyc	Bryum cyclophyllum (Schwaegr.) B.S.G. [= B. cryophilum O.Maert., B. tortifolium Funck ex Brid.]																																				
Brypse	Bry	pse	Bryum pseudotriquetrum (Hedw.) Gaertn et al.				+			+	+		+											+		+										+	+		
Bryrut	Bry	rut	Bryum rutilans Brid.																																		+		
Brysp	Bry	sp	Bryum sp. Hedw.	+	+	+			r	+			+	+			1	1	2					+	+												r		
Brysub	Bry	sub	Bryum subneodamense Kindb.										+																										
Bryter	Bry	ter	Bryum teres Lindb.																																		+	+	
Brywri	Bry	wri	Bryum wrightii Sull. & Lesq.																																				
Calcur	Cal	cur	Callialaria curvicaulis (Jur.) Ochyra											+																									
Calgig	Cal	gig	Calliergon giganteum (Schimp.) Kindb. [=Cratoneuron curvicaule (Jur.) G.Roth]										+													1													
Calric	Cal	ric	Calliergon richardsonii (Mitt.) Kindb.																																				
Calsp	Cal	sp	Calliergon sp. (Sull.) Kindb.															+	+																				
Calstr	Cal	str	Calliergon stramineum (Brid.) Kindb.																																+				
Camarc	Cam	arc	Campylium arcticum (Williams) Broth.																		+	+	+	+	3														
Camlon	Cam	lon	Campylium longicuspis (Lindb. & H. Arnell) Hedenaes																																				
Campol	Cam	pol	Campylium polygamum (B.S.G.) C.Jens																																				
Camste	Cam	ste	Campylium stellatum (Hedw.) C.Jens.		+						+																												
Camsp	Cam	sp	Campylium sp. (Sull.) Mitt.			+				+																													
Catnig	Cat	nig	Catoscopium nigritum (Hedw.) Brid.	+		+					+		+					3	3	3																			
Cerpur	Cer	pur	Ceratodon purpureus (Hedw.) Brid.																																				
Cinarc	Cin	arc	Cinclidium arcticum B.S.G.		+						+		+					3	2	2																			
Cinlat	Cin	lat	Cinclidium latifolium Lindb.																																				
Cinsp	Cin	sp	Cinclidium sp. Sw.	+															+																				
Circir	Cir	cir	Cirriphyllum cirrosum (Schwaegr. ex Schultes) Grout																			+			+														
Ctepro	Cte	pro	Ctenidium procerrimum (Molendo) Lindb. [= Pseudostereodon procerrimus (Mol.) Fleisch.]																																			+	
Cynsp	Cyn	sp	Cynodontium sp. Bruch & Schimp.																							r			r										
Cyrhymen	Cyr	hymen	Cyrtomnium hymenophylloides (Hueb.) Nyh. ex T.Kop.	+	+	+				+							+																						
Cyrhymen	Cyr	hymen	Cyrtomnium hymenophyllum (B.S.G.) Holm.				r	r	r	+																													
Deshym	Des	hym	Desmatodon sp. Brid.	+																																			
Dicpel	Dic	pel	Dichodontium pellucidum (Hedw.) Schimp.																					+															
Dicsp	Dic	sp	Dicranowiesia sp. Lindb. ex Milde																	2																			
Dicacu	Dic	acu	Dicranum acutifolium (Lind. & Arnell) C.Jens ex Weinm.																															+					
Dicelo	Dic	elo	Dicranum elongatum Schleich. ex Schwaegr.																							2b													
Dicund	Dic	und	Dicranum undulatum Brid. [=Dicranum bergeri Bland ex Sturm]																											2cf									
Dicfus	Dic	fus	Dicranum fuscescens Turn.														1									2b													
Dicspa	Dic	spa	Dicranum spadiceum Zett.																							+													
Dicsp	Dic	sp	Dicranum sp. Hedw.																																				
Didasp	Did	asp	Didymodon asperifolius (Mitt.) Crum, Steere et Anderson var. gorodkivii (A.Abr.etl.Abr.) Afonina																																				
Didrig	Did	rig	Didymodon rigidulus var. icmadophilus (Schinmp. ex C.Mull.) Zand. [=D. icmadophillus (Schimp. ex C				+		r	+																												+		

Table 9. Bryophyte species cover data.

New ID				AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B
Didsp	Did	sp	Didymodon sp. Hedw.											+																										
Discap	Dis	cap	Distichium capillaceum (Hedw.) B.S.G.								+		+	+	+	+	1	1	2	1		+		+	+	+														
Disinc	Dis	inc	Distichium inclinatum (Hedw.) B.S.G.	+	+	2	+	+	+	+			+										+												+	2	2	+		
Dissp	Dis	sp	Distichium sp. B.S.G.																																					
Ditfle	Dit	fle	Ditrichum flexicaule (Schwaegr.) Hampe			+	+	+	+	+	+		+							1		+	+		+		1									+	+	+			
Dreadu	Dre	adu	Drepanocladus aduncus (Hedw.) Warnst.										+																											
Drebre	Dre	bre	Drepanocladus brevifolius (Lindb.) Warnst.								+	+	+									+				+											+		
Dresp	Dre	sp	Drepanocladus sp. (C.Mull.) G.Roth															1	+	1																			
Encalp	Enc	alp	Encalypta alpina Sm.	1	2	1	+	+		+																											+		
Encmut	Enc	mut	Encalypta mutica Hag.																																					
Encpro	Enc	pro	Encalypta procera Bruch							+				+										+											+					
Encrha	Enc	rha	Encalypta rhaptocarpa Schwaegr.																																					
Encsp	Enc	sp	Encalypta sp. Hedw.																																			+	+	
Eurpul	Eur	pul	Eurhynchium pulchellum (Hedw.) Jenn.																																					
Fisadi	Fis	adi	Fissidens adianthoides Hedw.								+		+																											
Fissp	Fis	sp	Fissidens sp. Hedw.																+																					
Funhyg	Fun	hyg	Funaria hygrometrica Hedw.																																					
Grifun	Gri	fun	Grimmia cf. funalis (Schwaegr.) Bruch & Schimp.																			+																		
Hamver	Ham	ver	Hamatocaulis vernicosus (Mitt.) Hedenas [= Drepanocladus vernicosus (Mitt.)Warnst.]																																					
Henhei	Hen	hei	Hennediella heimii (Hedw.) Zander var. arctica (Lindb.) Zander [=Pottia heimii (Hedw.) Fuernr. var. obtusifolia (C.Muell.) Hag.]											+										+	+															
Hygpol	Hyg	pol	Hygrohypnum polare (Lindb.) Loeske																																		+	+		
Hylspl	Hyl	spl	Hylocomium splendens (Hedw.) B.S.G.														1																							
Hymrec	Hym	rec	Hymenostylium recurvirostre (Hedw.) Dixon							+																														
Hypbam	Hyp	bam	Hypnum bambergeri Schimp.				+		+	+							1					+																	
Hyprec	Hyp	rec	Hypnum recurvatum (Lindb. & Arnell) Kindb.																																					
Hyprev	Hyp	rev	Hypnum revolutum (Mitt.) Lindb.																			+	1															+		
Hypvau	Hyp	vau	Hypnum vaucheri Lesq.					+																														+	+	
Isopul	Iso	pul	Isopterygiopsis pulchella (Hedw.) Iwats.																																					
Kiagla	Kia	gla	Kiaeria glacialis (Berggr.) Hag.																															4						
Kiasp	Kia	sp	Kiaeria sp. Hag.												2	1	1																							
Leppyr	Lep	pyr	Leptobryum pyriforme (Hedw.) Wils.																																					
Limlim	Lim	lim	Limprichtia revolvens (Sw.) Loeske [= Drepanocladus revolvens (Sw.) Warnst.]									+													+															
Loebad	Loe	bad	Loeskypnum badium (Hartm.) Paul [= Drepanocladus badius (Hartm.) G.Rhot]																						+															
Meetri	Mee	tri	Meesia triquetra (Richt.) Angstr.								+		+					1	1	+																				
Meeuli	Mee	uli	Meesia uliginosa Hedw.	2	+	1							+				+																							
Mnisp	Mni	sp	Mnium sp. Hedw.																																					
Molsen	Mol	sen	Molendoa sendtneriana (B.S.G.) Limpr.				r			+																													
Molten	Mol	ten	Molendoa tenuinervis Limpr.							+																													
Myuapi	Myu	api	Myurella apiculata (ref?)														+																							
Myujul	Myu	jul	Myurella julacea (Schwaegr.) B.S.G.	+	+	+	r	r		+				+								+																r		
Myuten	Myu	ten	Myurella tenerrima (Brid.) Lindb.																																					
Oliher	Oli	her	Oligotrichum hercynicum Hedw. DC																																	P?				
Oncwah	Onc	wah	Oncophorus wahlenbergii Brid.	+														+	1																					
Ortchr	Ort	chr	Orthothecium chryseum (Schwaegr. ex Schult.) Schimp.				+		r	+	+		+	+	1	1	1	2	2	2		+			+	1													
Ortstr	Ort	str	Orthothecium strictum Lor.	+			+			+	+						1							+												+				
Ortsp	Ort	sp	Orthothecium sp. Schimp.	+	+	2																																		
Phifon	Phi	fon	Philonotis fontana (Hedw.) Brid.																				+		+	+											r			
Phitom	Phi	tom	Philonotis tomentella Molendo			r																																		
Phisp	Phi	sp	Philonotis sp. Brid.																																					
Pladem	Pla	dem	Plagiobryum demissum (Hook.) Lindb.																																					
Plaell	Pla	ell	Plagiomnium ellipticum (Brid.) T.Kop.																																					
Plajug	Pla	jug	Platydictya jugermannioides (Brid.) Crum																																					
Pohcru	Poh	cru	Pohlia cruda (Hedw.) Lindb.							+												+	+		+															
Pohnut	Poh	nut	Pohlia nutans (Hedw.) Lindb.		+	+												2								+	r	+	+				+							
Pohsp	Poh	sp	Pohlia sp. Hedw.											+										+							+									
Polalp	Pol	alp	Polytrichastrum alpinum (Hedw.) G.L.Sm.		P	+									2	1	+		+	+		+	1		+	+											1	1			
Polcom	Pol	com	Polytrichum commune Hedw.																												3									
Polhyp	Pol	hyp	Polytrichum hyperboreum R. Br.																							1	+		+		3		2a							
Poljun	Pol	jun	Polytrichum juniperinum Hedw.																																					
Polpil	Pol	pil	Polytrichum piliferum Hedw.																							+			+											
Polsp	Pol	sp	Polytrichum sp. Hedw.															+		+																				
Polstr	Pol	str	Polytrichum strictum Brid.																									1						1						

Table 9. Bryophyte species cover data.

New ID				AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-	AH-BF-W-	AH-BF-W-	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B
Psebre	Pse	bre	Pseudocalliergon brevifolium (ref?)																																					
Psetri	Pse	tri	Pseudocalliergon trifarium (Web. Et Mohr) Loeske [= Calliergon trifarium (Web. etMohr) Kindb.								+		+																											
Psetur	Pse	tur	Pseudocalliergon turgescens (T.Jens.) Loeske [= Calliergon turgescens (T.Jens.)Kindb.]																																		+			
Raccan	Rac	can	Racomitrium canescens s.l. (Hedw.) Brid.																																+	+				
Raceri	Rac	eri	Racomitrium ericoides (Web. ex Brid.) Brid.																																					
Raclan	Rac	lan	Racomitrium lanuginosum (Hedw.) Brid.				+										+					+																		
Racpan	Rac	pan	Racomitrium panshii (C.Mull.) Kindb.																			+	+																	
Rhiand	Rhi	and	Rhizomnium andrewsianum (Steere) T.Kop.																																					
Rhyrug	Rhy	rug	Rhytidium rugosum (Hedw.) Kindb.																									1												
Sanunc	San	unc	Sanoinia uncinata (Hedw.) Loeske [= Drepanocladus uncinatus (Hedw.) Warnst.]																			+	+			+							1							
Schapo	Sch	apo	Schistidium apocarpum (Hedw.) B.S.G.																																+					
Schand	Sch	and	Schistidium andreaeopsis (C.Mull) Laz. [=Schistidium holmenianum Steere et Brassard]																			+																		
Schpap	Sch	pap	Schistidium papillosum																			2																		
Schrac	Sch	rac	Schistidium rac (ref?)																																					
Schsp	Sch	sp	Schistidium sp. Brid.																																		+			
Limcos	Lim	cos	Limprichtia cossonii (Schimp.) Anderson et al.			+																																	
Selpol	Sel	pol	Seligeria polaris Berggr.	+								+																												
Selsp	Sel	sp	Seligeria sp. B.S.G.																																					
Solalp	Sol	alp	Solteria alpina (ref?)		+																																		
Splvas	Spl	vas	Splachnum vasculosum Hedw.																																					
Sphaon	Sph	aon	Sphagnum aongsroemii Hartm.																															1						
Sphbal	Sph	bal	Sphagnum balticum (Russ.) C.Jens																															1						
Sphfim	Sph	fim	Sphagnum fimbriatum Wilson																												1									
Sphgir	Sph	gir	Sphagnum girgensohnii Russ.																											1cf										
Sphimb	Sph	imb	Sphagnum imbricatum Hornsch. ex Russow																															1						
Sphlin	Sph	lin	Sphagnum lindbergii Schimp. ex Lindb.																															1						
Sphsp	Sph	sp	Sphagnum sp. L.																														+							
Splsph	Spl	sph	Splachnum sphaericum Hedw.																																					
Splsp	Spl	sp	Splachnum sp. Hedw.																																					
Synmuc	Syn	muc	Syntrichia mucronifolia (ref?)																																					
Torrur	Tor	rur	Tortula ruralis (Hedw.) Gaertn. et al. [=Syntrichia ruralis (Hedw.) Web. & Mohr]						r														+												+	+				
Taylig	Tay	lig	Tayloria ligulata (Dicks.) Lindb.																																					
Tetmni	Tet	mni	Tetraplodon mnioides (Hedw.) B.S.G.																																					
Tetsp	Tet	sp	Tetraplodon sp. B.S.G.																																					
Timaus	Tim	aus	Timmia austriaca Hedw.							+																														
Timsib	Tim	sib	Timmia sibirica Lindb. & Arnell											+																										
Timsp	Tim	sp	Timmia sp. Hedw.																																					
Tomnit	Tom	nit	Tomentypnum nitens (Hedw.) Loeske							+							2			+		+	+			+														
Torarc	Tor	arc	Tortella arctica (Arnell) Crundw.& Nyh.																																					
Torfra	Tor	fra	Tortella fragilis (Hook. & Wilson) Limpr.																																			+		
Tortor	Tor	tor	Tortella tortuosa (Hedw.) Limpr.																																					
Torrur	Tor	rur	Tortula ruralis (Hedw.) Gaertn. et al.																																					
Torsp	Tor	sp	Tortula sp. Hedw.			r													+																				
Warexa	War	exa	Warnstorfia exannulata (B.S.G.) Loeske																															1						
Warsar	War	sar	Warnstorfia sarmentosa (Wahlenb.) Hedenaes																							+														
Liv	Liv		**Liverworts nomenclature Stotler & Crandall-Stotler 1977 (Bryologist 80(3):405-428)**																																					
Anamin	Ana	min	Anastrophyllum minutus (Schreb.) Schust.				r											+	+											1										
Antjur	Ant	jur	Anthelia juratzkana (Limpr.) Trev.																										r											
Arnfen	Arn	fen	Arnellia fennica (Gott.) Lindb.						r																															
Barhyp	Bar	hyp	Barbilophozia hyperborea (Schust.) R.&B.Stotl.						r																		2a													
Barqua	Bar	qua	Barbilophozia quadriloba (Lindb.) Loeske																			+														6	+			
Bletri	Ble	tri	Blepharostoma trichophyllum (Dumb. Emend. Lindb.) Dum.	+	+										+		+																							
Ceparc	Cep	arc	Cephaloziella arctica Bruhn & Douin																																					
Cepdiv	Cep	div	Cephaloziella divarcata (Sm.) Schiffn.																								+													
Cepgri	Cep	gri	Cephaloziella grimsulana (Jack) Lacouture																			+			+											+	+	+		
Cepsp	Cep	sp	Cephaloziella sp. (Spruce) Steph.																																					
Gymcon	Gym	con	Gymnomitrion concinnatum (Lightf.) Corda																																			+		
Gymcor	Gym	cor	Gymnomitrion corralloides Nees														2					+								1										
Jamsp	Jam	sp	Jamsoniella sp. (Spruce) Carring.		+																																			
Juncae	Jun	cae	Jungermannia caespiticia Lindenb.														+																							
Junpol	Jun	pol	Jungermannia polaris Lindb.																			+															+			

Table 9. Bryophyte species cover data.

			New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2A	E-E-P-2B
Lopbad	Lop	bad	Lophozia badensis (Gott. ex Rabenh.) Schiffn.					r																																
Lopbic	Lop	bic	Lophozia bicrenata (Schmid. ex Hoffm.) Dum.																									r											
Lopexc	Lop	exc	Lophozia excisa (Dicks.) Dum. Var. succulenta Schust & Damsh.																									r											
Lophet	Lop	het	Lophozia heterocolpos (Thed.) M.A. Howe																																	+			
Lopmaj	Lop	maj	Lophozia major (ref?)																			+																	
Lopnod	Lop	nod	Lophozia nodia (ref?)														+																						
Lopsp	Lop	sp	Lophozia sp. (Dum.) Dum.		+												1																						
Lopven	Lop	ven	Lophozia ventricosa (Dicks.) Dum.																							+													
Narsp	Nar	sp	Nardia sp. S.Gray																																				
Pelqua	Pel	qua	Peltolipus quadrata (Saut.) K.Mull.	+	+	+																																	
Plaarc	Pla	arc	Plagiochila arctica Bryhn & Kaal.				r																																
Prasue	Pra	sue	Prasanthus suecicus (Gott.) Lindb.																										r										
Prequa	Pre	qua	Preissia quadrata (Scop.) Nees						r																											+			
Pticil	Pti	cil	Ptilidium ciliare (L.) Hampe																								+		r			1							
Scacal	Sca	cal	Scapania calcicola (H.Arnell & J.Perss.) Ingham																		+																		
Scagym	Sca	gym	Scapania gymnostomophila Kaal.					r																													+		
Scairr	Sca	irr	Scapania irrigua (Nees) Gott. et al.																																				
Scasp	Sca	sp	Scapania sp. (Dum.) Dum.																																				
Thabid	Tha	bid	Thal bid																																				
Othliv	Oth	liv	Other liverwort, Hepaticea																												+								
Nossp	Nos	sp	Nostoc commune															+	2	1					P	+									+	+	3			
blacru	bla	cru	black cyanobacteria																1																					
			Species richness	**16**	**17**	**17**	**15**	**9**	**11**	**21**	**13**	**4**	**16**	**11**	**5**	**4**	**22**	**14**	**16**	**13**	**0**	**24**	**14**	**6**	**14**	**18**	**11**	**2**	**4**	**9**	**6**	**5**	**1**	**6**	**7**	**13**	**19**	**19**	**6**	**3**	**0**

Table 9. Bryophyte species cover data.

New ID	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1A	E-EW-P-1B	E-EW-P-2	E-EW-P-3B	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008
MOSS SPECIES nomenclature Anderson, Crum & Buck 1990 (Bryologist 93(4):448-499)				EW-P-1A	EW-P-1B	EW-P-2	EW-P-3B	EW-R-1	EW-R-2	EW-R-3	EW-R-4			EW-W-1	EW-W-2	EW-W-3	EW-W-4	EW-W-5	R-X-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4		R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	CAVM99-1	CAVM99-2	CAVM99-3	CAVM99-4	CAVM99-5	CAVM99-6	CAVM99-7	CAVM99-8
Abietinella abietina (Hedw.)Fleisch. [= Thuidium abietinum (Hedw.) B.S.G.]																																							r						
Amphidium cf. lapponicum (Hedw.) Schimp.																																													
Amphidium sp. Schimp.																	P																												
Anc. sp. (ref?)																																													
Anura pinguis (ref?)																																													
Aplodon wormskjoldii (Hornem.) Kindb. [=Haplodon worskjoldii (Hornem.)Hag.]														+(fr.)		P(fr.)																Pfr												
Aulacomnium acuminatum (Lindb. & Arnell) Kindb.																																							+						
Aulacomnium turgidum (Wahlenb.) Schwaegr.				+	+							1	1																																
Aulacomnium palustre (Hedw.) Schwaegr.																																													
Bachlophosis sp. (ref?)																																													
Bartramia ithyphylla Brid.																																								r					
Blindia acuta (Hedw.) Bruch & Schimp.																																													
Brachythecium sp. Schimp.																P																							+	r	2			r	
Brachythecium turgidum (Hartm.) Kindb.								+																																				+	
Bryoerythrophyllum recurvirostre (Hedw.) Chen				r	r			2	+					+		P					r	r	r	+																r				
Bryum aeneum Blytt ex B.S.G. [= B. rutilans Brid.]								+																	+																			
Bryum argenteum Hedw.																																													
Bryum caespiticium Hedw.																	Pcf																												??
Bryum calophyllum R.Br.																		2																												
Bryum cyclophyllum (Schwaegr.) B.S.G. [= B. cryophilum O.Maert., B. tortifolium Funck &									3														+					2																
Bryum pseudotriquetrum (Hedw.) Gaertn et al.								2	3	+	1					P	P			+	r			+	2				2	+			P		P						3			r	
Bryum rutilans Brid.																																													
Bryum sp. Hedw.					+			+	1							1	Pfr	2	+			r	r								+		+	+	+	+		2		+	r			1		
Bryum subneodamense Kindb.														+	+									1	1											P					3				
Bryum teres Lindb.								+																																	r				
Bryum wrightii Sull. & Lesq.																																							+						
Callialaria curvicaulis (Jur.) Ochyra					+			2	3	+	1					P			+					1		+	+														3				
Calliergon giganteum (Schimp.) Kindb. [=Cratoneuron curvicaule (Jur.) G.Roth]								2	3						+	P	P							1	+		+							P							3		+		
Calliergon richardsonii (Mitt.) Kindb.																								1	1	+	1					+		1	1	+	1								
Calliergon sp. (Sull.) Kindb.																+																														
Calliergon stramineum (Brid.) Kindb.																																														
Campylium arcticum (Williams) Broth.								2	3	+	+			+		P	P															P				P								
Campylium longicuspis (Lindb. & H. Arnell) Hedenaes																	P				r	r																					r		
Campylium polygamum (B.S.G.) C.Jens																	P																												
Campylium stellatum (Hedw.) C.Jens.														+	+	+																+		+	+				+		3				
Campylium sp. (Sull.) Mitt.								+			3																																	1	r	
Catoscopium nigritum (Hedw.) Brid.								+	+		+							2						+	+							2		2	1		4				3				
Ceratodon purpureus (Hedw.) Brid.																															2													
Cinclidium arcticum B.S.G.											1			1	+	2								1	2			2			+	2		2	1	+	2		+		3				
Cinclidium latifolium Lindb.														1	+	+	P																												
Cinclidium sp. Sw.																																													
Cirriphyllum cirrosum (Schwaegr. ex Schultes) Grout																																							+				+		
Ctenidium procerrimum (Molendo) Lindb. [= Pseudostereodon procerrimus (Mol.) Fleisch				+	+														+		T	r	r																					
Cynodontium sp. Bruch & Schimp.																																													
Cyrtomnium hymenophylloides (Hueb.) Nyh. ex T.Kop.																																													
Cyrtomnium hymenophyllum (B.S.G.) Holm.																																							+	r					
Desmatodon sp. Brid.																																													
Dichodontium pellucidum (Hedw.) Schimp.																																													
Dicranowiesia sp. Lindb. ex Milde																																													
Dicranum acutifolium (Lind. & Arnell) C.Jens ex Weinm.																																												
Dicranum elongatum Schleich. ex Schwaegr.																																												
Dicranum undulatum Brid. [=Dicranum bergeri Bland ex Sturm]																																												
Dicranum fuscescens Turn.													+																																
Dicranum spadiceum Zett.																																													
Dicranum sp. Hedw.																	+																												
Didymodon asperifolius (Mitt.) Crum, Steere et Anderson var. gorodkivii (A.Abr.etl.Abr.)																			+	r	r	r	r																	+				+		
Didymodon rigidulus var. icmadophilus (Schinmp. ex C.Mull.) Zand. [=D. icmadophillus (S				+	+														+	r	r	r	r																						

Table 9. Bryophyte species cover data.

New ID	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1	E-EW-P-2	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008
Didymodon sp. Hedw.																																													
Distichium capillaceum (Hedw.) B.S.G.											3	+		1		+		+		+	+								+		+	+	+	+	+		+						r		
Distichium inclinatum (Hedw.) B.S.G.					+		+	+	+		+						P		+?			r	+	+		+					+	+						+	+	r		r	1		+
Distichium sp. B.S.G.																											+																			
Ditrichum flexicaule (Schwaegr.) Hampe					+	r						+				P			1	+	2	1	1	1	+	+	+	1	1	2		+	2		1		P		+	+	r	+		1	2	
Drepanocladus aduncus (Hedw.) Warnst.																																													
Drepanocladus brevifolius (Lindb.) Warnst.								+			2			5	5	4	3	1	+			r		+	1	+	+							P		P								+	
Drepanocladus sp. (C.Mull.) G.Roth																																1	1												
Encalypta alpina Sm.					r														+							+												+	+	r			1		
Encalypta mutica Hag.					r cf.																																									
Encalypta procera Bruch					+															r																										
Encalypta rhaptocarpa Schwaegr.					r	r																																							
Encalypta sp. Hedw.																																								r					
Eurhynchium pulchellum (Hedw.) Jenn.																																													
Fissidens adianthoides Hedw.																	P																												
Fissidens sp. Hedw.																																													
Funaria hygrometrica Hedw.														+																															
Grimmia cf. funalis (Schwaegr.) Bruch & Schimp.																																													
Hamatocaulis vernicosus (Mitt.) Hedenas [= Drepanocladus vernicosus (Mitt.)Warnst.]														+																															
Hennediella heimii (Hedw.) Zander var. arctica (Lindb.) Zander [=Pottia heimii (Hedw.) Fu																																													
Hygrohypnum polare (Lindb.) Loeske																																													
Hylocomium splendens (Hedw.) B.S.G.												1	2																																
Hymenostylium recurvirostre (Hedw.) Dixon																																P													
Hypnum bambergeri Schimp.																			1			+	+			+		1		1	1		+		+					+	r	3		1	2	+
Hypnum recurvatum (Lindb. & Arnell) Kindb.																					r																								
Hypnum revolutum (Mitt.) Lindb.							+					1								+	+	+	1																						
Hypnum vaucheri Lesq.					+	r	+														r																								
Isopterygiopsis pulchella (Hedw.) Iwats.																																								+					
Kiaeria glacialis (Berggr.) Hag.																																													
Kiaeria sp. Hag.																																													
Leptobryum pyriforme (Hedw.) Wils.														+		Pfr																														
Limprichtia revolvens (Sw.) Loeske [= Drepanocladus revolvens (Sw.) Warnst.]					+			+	3								P							1	2		+		2				P		+	2	2	1				3				
Loeskypnum badium (Hartm.) Paul [= Drepanocladus badius (Hartm.) G.Rhot]					r																														P										
Meesia triquetra (Richt.) Angstr.														+		P								+											P							3				
Meesia uliginosa Hedw.														+		+																														
Mnium sp. Hedw.																+																														
Molendoa sendtneriana (B.S.G.) Limpr.																																														
Molendoa tenuinervis Limpr.																						r	r																						
Myurella apiculata (ref?)																															+														
Myurella julacea (Schwaegr.) B.S.G.					+						+			+			P			+	T	r	r																	+					
Myurella tenerrima (Brid.) Lindb.																						r	r																	+					
Oligotrichum hercynicum Hedw. DC																																													
Oncophorus wahlenbergii Brid.																	2																							+					
Orthothecium chryseum (Schwaegr. ex Schult.) Schimp.								2	+		3	1	+			P			+	r		r	r	1	1	+	+		2	+		+	2		2			1	+	+		3				
Orthothecium strictum Lor.								+								P			+	r		r	+									P												
Orthothecium sp. Schimp.																																													
Philonotis fontana (Hedw.) Brid.																												1																	
Philonotis tomentella Molendo									3		+													+																					
Philonotis sp. Brid.																								1																					
Plagiobryum demissum (Hook.) Lindb.																																									r				
Plagiomnium ellipticum (Brid.) T.Kop.					r																																								
Platydictya jugermannioides (Brid.) Crum																																													
Pohlia cruda (Hedw.) Lindb.									+	+		+																																	
Pohlia nutans (Hedw.) Lindb.					r																																								
Pohlia sp. Hedw.								+																																					
Polytrichastrum alpinum (Hedw.) G.L.Sm.					r				+	+			+	+			+fr																		P											
Polytrichum commune Hedw.													+																																
Polytrichum hyperboreum R. Br.																																													
Polytrichum juniperinum Hedw.												+	+																																
Polytrichum piliferum Hedw.					r																																								
Polytrichum sp. Hedw.																																		+											
Polytrichum strictum Brid.																																													

Table 9. Bryophyte species cover data.

New ID	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1	E-EW-P-2	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008
Pseudocalliergon brevifolium (ref?)																															2														
Pseudocalliergon trifarium (Web. Et Mohr) Loeske [= Calliergon trifarium (Web. etMohr) l																																													
Pseudocalliergon turgescens (T.Jens.) Loeske [= Calliergon turgescens (T.Jens.)Kindb.]														+		P		+					+			+							P										r	
Racomitrium canescens s.l. (Hedw.) Brid.																																													
Racomitrium ericoides (Web. ex Brid.) Brid.													+																																
Racomitrium lanuginosum (Hedw.) Brid.																																													
Racomitrium panshii (C.Mull.) Kindb.																																													
Rhizomnium andrewsianum (Steere) T.Kop.																P																													
Rhytidium rugosum (Hedw.) Kindb.																																													
Sanoinia uncinata (Hedw.) Loeske [= Drepanocladus uncinatus (Hedw.) Warnst.]												1	2																											+						
Schistidium apocarpum (Hedw.) B.S.G.																																													
Schistidium andreaeopsis (C.Mull) Laz. [=Schistidium holmenianum Steere et Brassard]																	P																												
Schistidium papillosum																																													
Schistidium rac (ref?)																											3			1															
Schistidium sp. Brid.																			+																											
Limprichtia cossonii (Schimp.) Anderson et al.																																														
Seligeria polaris Berggr.																										+																				
Seligeria sp. B.S.G.																													1																
Solteria alpina (ref?)																																													
Splachnum vasculosum Hedw.																																													
Sphagnum aongsroemii Hartm.																																													
Sphagnum balticum (Russ.) C.Jens																																													
Sphagnum fimbriatum Wilson																																													
Sphagnum girgensohnii Russ.																																													
Sphagnum imbricatum Hornsch. ex Russow																																													
Sphagnum lindbergii Schimp. ex Lindb.																																													
Sphagnum sp. L.																																													
Splachnum sphaericum Hedw.																																											2		
Splachnum sp. Hedw.																																													
Syntrichia mucronifolia (ref?)																			+																										
Tortula ruralis (Hedw.) Gaertn. et al. [=Syntrichia ruralis (Hedw.) Web. & Mohr]					+		+												1	+	2	1	1																					
Tayloria ligulata (Dicks.) Lindb.					r																											Pfr													
Tetraplodon mnioides (Hedw.) B.S.G.																+	Pfr															+							+					
Tetraplodon sp. B.S.G.																																									r				
Timmia austriaca Hedw.																				+		r	r						1	+			+		+									
Timmia sibirica Lindb. & Arnell																																													
Timmia sp. Hedw.											+													+																				
Tomentypnum nitens (Hedw.) Loeske												2	2							+		1	1									2		2				+	+		3		+		
Tortella arctica (Arnell) Crundw.& Nyh.																	P																												
Tortella fragilis (Hook. & Wilson) Limpr.																																													
Tortella tortuosa (Hedw.) Limpr.												+																													+				
Tortula ruralis (Hedw.) Gaertn. et al.																													+																
Tortula sp. Hedw.																																													
Warnstorfia exannulata (B.S.G.) Loeske																																													
Warnstorfia sarmentosa (Wahlenb.) Hedenaes																																													
Liverworts nomenclature Stotler & Crandall-Stotler 1977 (Bryologist 80(3):405-428)																																													
Anastrophyllum minutus (Schreb.) Schust.														+		+																+	+	+	+									
Anthelia juratzkana (Limpr.) Trev.												+	+																																
Arnellia fennica (Gott.) Lindb.																																													
Barbilophozia hyperborea (Schust.) R.&B.Stotl.																																													
Barbilophozia quadriloba (Lindb.) Loeske																																													
Blepharostoma trichophyllum (Dumb. Emend. Lindb.) Dum.													+																	+	+													
Cephaloziella arctica Bruhn & Douin																											+																		
Cephaloziella divarcata (Sm.) Schiffn.																																													
Cephaloziella grimsulana (Jack) Lacouture																																													
Cephaloziella sp. (Spruce) Steph.												+																																	
Gymnomitrion concinnatum (Lightf.) Corda																																													
Gymnomitrion corallioides Nees																																													
Jamsoniella sp. (Spruce) Carring.																																													
Jungermannia caespiticia Lindenb.																																													
Jungermannia polaris Lindb.																																													

Table 9. Bryophyte species cover data.

New ID	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1	E-EW-P-2	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008
Lophozia badensis (Gott. ex Rabenh.) Schiffn.																																												
Lophozia bicrenata (Schmid. ex Hoffm.) Dum.																																												
Lophozia excisa (Dicks.) Dum. Var. succulenta Schust & Damsh.																																												
Lophozia heterocolpos (Thed.) M.A. Howe																																												
Lophozia major (ref?)																																												
Lophozia nodia (ref?)																																												
Lophozia sp. (Dum.) Dum.												+	2																	+															
Lophozia ventricosa (Dicks.) Dum.																																												
Nardia sp. S.Gray												+	+																															
Peltolipus quadrata (Saut.) K.Mull.																																												
Plagiochila arctica Bryhn & Kaal.																						r																						
Prasanthus suecicus (Gott.) Lindb.																																												
Preissia quadrata (Scop.) Nees																																												
Ptilidium ciliare (L.) Hampe																																												
Scapania calcicola (H.Arnell & J.Perss.) Ingham																																												
Scapania gymnostomophila Kaal.																																												
Scapania irrigua (Nees) Gott. et al.												+																																
Scapania sp. (Dum.) Dum.												+																		+														
Thal bid																																												
Other liverwort, Hepaticea																																									+			
Nostoc commune															+		+													+	4		1		1	2								
black cyanobacteria													1																															
Species richness	**0**	**0**	**0**	**4**	**22**	**3**	**4**	**17**	**14**	**5**	**13**	**17**	**15**	**18**	**7**	**25**	**21**	**6**	**15**	**13**	**12**	**20**	**18**	**17**	**11**	**8**	**7**	**5**	**8**	**10**	**7**	**7**	**21**	**6**	**21**	**9**	**8**	**7**	**7**	**23**	**13**	**14**	**1**	**11**	**9**	**3**

Table 9. Bryophyte species cover data.

New ID	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1A	V-HB-W-1B	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
MOSS SPECIES nomenclature Anderson, Crum & Buck 1990 (Bryologist 93(4):448-499)	CAVM99-9	CAVM99-10	CAVM99-11	CAVM99-12	CAVM99-13	CAVM99-14	CAVM99-15	CAVM99-16	CAVM99-17	CAVM99-18	MP-R-1	HB-M-1			HB-R-1	HB-R-2		HB-W-1A	HB-W-1B	CV-SR-1	CV-M-1			TR-R-1	TR-R-2	TR-R-3	TR-R-4			TR-W-1	TR-W-2	**Frequency (#/115 plots)**
Abietinella abietina (Hedw.)Fleisch. [= Thuidium abietinum (Hedw.) B.S.G.]	+																															**3**
Amphidium cf. lapponicum (Hedw.) Schimp.																																**1**
Amphidium sp. Schimp.																																**1**
Anc. sp. (ref?)																													+			**1**
Anura pinguis (ref?)																					+											**2**
Aplodon wormskjoldii (Hornem.) Kindb. [=Haplodon worskjoldii (Hornem.)Hag.]																																**3**
Aulacomnium acuminatum (Lindb. & Arnell) Kindb.							+																									**2**
Aulacomnium turgidum (Wahlenb.) Schwaegr.																																**14**
Aulacomnium palustre (Hedw.) Schwaegr.																																**1**
Bachlophosis sp. (ref?)																																**1**
Bartramia ithyphylla Brid.																																**4**
Blindia acuta (Hedw.) Bruch & Schimp.																																**2**
Brachythecium sp. Schimp.																					r											**6**
Brachythecium turgidum (Hartm.) Kindb.	+																															**3**
Bryoerythrophyllum recurvirostre (Hedw.) Chen					+						P							P						+						P		**25**
Bryum aeneum Blytt ex B.S.G. [= B. rutilans Brid.]							+																									**3**
Bryum argenteum Hedw.										r																						**2**
Bryum caespiticium Hedw.					+																											**3**
Bryum calophyllum R.Br.																																**1**
Bryum cyclophyllum (Schwaegr.) B.S.G. [= B. cryophilum O.Maert., B. tortifolium Funck																																**3**
Bryum pseudotriquetrum (Hedw.) Gaertn et al.	+		2				+				P													+	+							**30**
Bryum rutilans Brid.																																**1**
Bryum sp. Hedw.	+		+		+		+	+	+		+				+			1			1			+fr	+fr			+		+	+	**46**
Bryum subneodamense Kindb.			3			3	1																							P	P	**12**
Bryum teres Lindb.																											+cf					**5**
Bryum wrightii Sull. & Lesq.			+									+	+	+								r	r									**7**
Callialaria curvicaulis (Jur.) Ochyra											P																				P	**13**
Calliergon giganteum (Schimp.) Kindb. [=Cratoneuron curvicaule (Jur.) G.Roth]			+															P												P	P	**17**
Calliergon richardsonii (Mitt.) Kindb.											+							+	+											1	3	**10**
Calliergon sp. (Sull.) Kindb.																																**3**
Calliergon stramineum (Brid.) Kindb.																																**1**
Campylium arcticum (Williams) Broth.											P													+						P	P	**18**
Campylium longicuspis (Lindb. & H. Arnell) Hedenaes																																**4**
Campylium polygamum (B.S.G.) C.Jens																																**1**
Campylium stellatum (Hedw.) C.Jens.	+		2			3	+				3				+			P												4	3	**19**
Campylium sp. (Sull.) Mitt.							+														2											**8**
Catoscopium nigritum (Hedw.) Brid.			3			1					1				+			2	+		1									1		**26**
Ceratodon purpureus (Hedw.) Brid.																																**1**
Cinclidium arcticum B.S.G.			3								P							2	+											P	+	**27**
Cinclidium latifolium Lindb.			+															+	+											+	+	**9**
Cinclidium sp. Sw.											2																					**3**
Cirriphyllum cirrosum (Schwaegr. ex Schultes) Grout	+					1	+											P					r							P		**10**
Ctenidium procerrimum (Molendo) Lindb. [= Pseudostereodon procerrimus (Mol.) Fleisch													+	r								+	+									**11**
Cynodontium sp. Bruch & Schimp.																																**2**
Cyrtomnium hymenophylloides (Hueb.) Nyh. ex T.Kop.																																**5**
Cyrtomnium hymenophyllum (B.S.G.) Holm.											P																					**7**
Desmatodon sp. Brid.																																**1**
Dichodontium pellucidum (Hedw.) Schimp.																																**1**
Dicranowiesia sp. Lindb. ex Milde																																**1**
Dicranum acutifolium (Lind. & Arnell) C.Jens ex Weinm.																																**1**
Dicranum elongatum Schleich. ex Schwaegr.																																**1**
Dicranum undulatum Brid. [=Dicranum bergeri Bland ex Sturm]																																**1**
Dicranum fuscescens Turn.																																**3**
Dicranum spadiceum Zett.																																**1**
Dicranum sp. Hedw.																		+														**2**
Didymodon asperifolius (Mitt.) Crum, Steere et Anderson var. gorodkivii (A.Abr.etl.Abr.)																																**7**
Didymodon rigidulus var. icmadophilus (Schinmp. ex C.Mull.) Zand. [=D. icmadophillus (													+	r																		**14**

Table 9. Bryophyte species cover data.

New ID	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-HB-W-1]	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Didymodon sp. Hedw.																															P	**2**
Distichium capillaceum (Hedw.) B.S.G.			2	P							2							P												P	+	**34**
Distichium inclinatum (Hedw.) B.S.G.	+				+fr	1		+	+		P		+	+							2	+						2				**41**
Distichium sp. B.S.G.																									+				+			**3**
Ditrichum flexicaule (Schwaegr.) Hampe	+	1	3	2	+	1	1	+	+		P			3	+			P				+	+							P	+	**58**
Drepanocladus aduncus (Hedw.) Warnst.																																**1**
Drepanocladus brevifolius (Lindb.) Warnst.			2			3	3				P							+	1											P	3	**30**
Drepanocladus sp. (C.Mull.) G.Roth																																**5**
Encalypta alpina Sm.					+						P										+											**17**
Encalypta mutica Hag.																																**1**
Encalypta procera Bruch																																**6**
Encalypta rhaptocarpa Schwaegr.										r																						**3**
Encalypta sp. Hedw.																																**3**
Eurhynchium pulchellum (Hedw.) Jenn.				P																												**1**
Fissidens adianthoides Hedw.											P																					**4**
Fissidens sp. Hedw.																																**1**
Funaria hygrometrica Hedw.																																**1**
Grimmia cf. funalis (Schwaegr.) Bruch & Schimp.																																**1**
Hamatocaulis vernicosus (Mitt.) Hedenas [= Drepanocladus vernicosus (Mitt.)Warnst.]																																**1**
Hennediella heimii (Hedw.) Zander var. arctica (Lindb.) Zander [=Pottia heimii (Hedw.) Fu																																**3**
Hygrohypnum polare (Lindb.) Loeske																																**2**
Hylocomium splendens (Hedw.) B.S.G.																																**3**
Hymenostylium recurvirostre (Hedw.) Dixon																																**2**
Hypnum bambergeri Schimp.		1		2		1	+		+				+	r	+			P				r	+								P	**32**
Hypnum recurvatum (Lindb. & Arnell) Kindb.																																**1**
Hypnum revolutum (Mitt.) Lindb.								+	+	r																						**12**
Hypnum vaucheri Lesq.														+																		**8**
Isopterygiopsis pulchella (Hedw.) Iwats.																																**1**
Kiaeria glacialis (Berggr.) Hag.																																**1**
Kiaeria sp. Hag.																																**3**
Leptobryum pyriforme (Hedw.) Wils.																																**2**
Limprichtia revolvens (Sw.) Loeske [= Drepanocladus revolvens (Sw.) Warnst.]			2			1	1				3										2									2	P	**23**
Loeskypnum badium (Hartm.) Paul [= Drepanocladus badius (Hartm.) G.Rhot]																					+											**4**
Meesia triquetra (Richt.) Angstr.			+															+														**13**
Meesia uliginosa Hedw.			2				+fr				P	+									2	r								+fr	+	**15**
Mnium sp. Hedw.											+							+														**3**
Molendoa sendtneriana (B.S.G.) Limpr.																																**2**
Molendoa tenuinervis Limpr.																																**3**
Myurella apiculata (ref?)																																**2**
Myurella julacea (Schwaegr.) B.S.G.	+												+	r							+											**22**
Myurella tenerrima (Brid.) Lindb.																																**3**
Oligotrichum hercynicum Hedw. DC																																**1**
Oncophorus wahlenbergii Brid.				P																												**6**
Orthothecium chryseum (Schwaegr. ex Schult.) Schimp.			2			1							+	r	+			2			+		r	+				+		1	1	**50**
Orthothecium strictum Lor.				2																	+							2		P	P	**19**
Orthothecium sp. Schimp.																																**3**
Philonotis fontana (Hedw.) Brid.																								+	+					+		**8**
Philonotis tomentella Molendo																		+												P		**6**
Philonotis sp. Brid.																																**1**
Plagiobryum demissum (Hook.) Lindb.																																**1**
Plagiomnium ellipticum (Brid.) T.Kop.																																**1**
Platydictya jugermannioides (Brid.) Crum						1																										**1**
Pohlia cruda (Hedw.) Lindb.															+																	**8**
Pohlia nutans (Hedw.) Lindb.																																**9**
Pohlia sp. Hedw.																		P														**6**
Polytrichastrum alpinum (Hedw.) G.L.Sm.																																**20**
Polytrichum commune Hedw.																																**2**
Polytrichum hyperboreum R. Br.																																**5**
Polytrichum juniperinum Hedw.																																**2**
Polytrichum piliferum Hedw.																																**3**
Polytrichum sp. Hedw.																																**3**
Polytrichum strictum Brid.																																**2**

Table 9. Bryophyte species cover data.

New ID	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Pseudocalliergon brevifolium (ref?)																																**1**
Pseudocalliergon trifarium (Web. Et Mohr) Loeske [= Calliergon trifarium (Web. etMohr) l						+	1																									**4**
Pseudocalliergon turgescens (T.Jens.) Loeske [= Calliergon turgescens (T.Jens.)Kindb.]						3	3								+						+								P	P	**14**
Racomitrium canescens s.l. (Hedw.) Brid.																																**2**
Racomitrium ericoides (Web. ex Brid.) Brid.																																**1**
Racomitrium lanuginosum (Hedw.) Brid.																																**3**
Racomitrium panshii (C.Mull.) Kindb.																																**2**
Rhizomnium andrewsianum (Steere) T.Kop.																																**1**
Rhytidium rugosum (Hedw.) Kindb.																																**1**
Sanoinia uncinata (Hedw.) Loeske [= Drepanocladus uncinatus (Hedw.) Warnst.]	+							+																				+				**10**
Schistidium apocarpum (Hedw.) B.S.G.																																**1**
Schistidium andreaeopsis (C.Mull) Laz. [=Schistidium holmenianum Steere et Brassard]																																**2**
Schistidium papillosum																																**1**
Schistidium rac (ref?)																																**2**
Schistidium sp. Brid.																																**2**
Limprichtia cossonii (Schimp.) Anderson et al.																																**1**
Seligeria polaris Berggr.																																**3**
Seligeria sp. B.S.G.																																**1**
Solteria alpina (ref?)																																**1**
Splachnum vasculosum Hedw.																			+													**1**
Sphagnum aongsroemii Hartm.																																**1**
Sphagnum balticum (Russ.) C.Jens																																**1**
Sphagnum fimbriatum Wilson																																**1**
Sphagnum girgensohnii Russ.																																**1**
Sphagnum imbricatum Hornsch. ex Russow																																**1**
Sphagnum lindbergii Schimp. ex Lindb.																																**1**
Sphagnum sp. L.																																**1**
Splachnum sphaericum Hedw.							1fr											P							+							**4**
Splachnum sp. Hedw.																										+					+?	**2**
Syntrichia mucronifolia (ref?)																																**1**
Tortula ruralis (Hedw.) Gaertn. et al. [=Syntrichia ruralis (Hedw.) Web. & Mohr]	+				+									+																		**14**
Tayloria ligulata (Dicks.) Lindb.											P										+											**4**
Tetraplodon mnioides (Hedw.) B.S.G.				2																												**5**
Tetraplodon sp. B.S.G.																																**1**
Timmia austriaca Hedw.																		+														**9**
Timmia sibirica Lindb. & Arnell																																**1**
Timmia sp. Hedw.											P																					**3**
Tomentypnum nitens (Hedw.) Loeske	+						+	+										+												+	P	**23**
Tortella arctica (Arnell) Crundw.& Nyh.																																**1**
Tortella fragilis (Hook. & Wilson) Limpr.								+	+																							**3**
Tortella tortuosa (Hedw.) Limpr.						1																										**3**
Tortula ruralis (Hedw.) Gaertn. et al.																																**1**
Tortula sp. Hedw.								+				r																				**4**
Warnstorfia exannulata (B.S.G.) Loeske																																**1**
Warnstorfia sarmentosa (Wahlenb.) Hedenaes							1																									**2**
																																0
Liverworts nomenclature Stotler & Crandall-Stotler 1977 (Bryologist 80(3):405-428)																																**0**
Anastrophyllum minutus (Schreb.) Schust.											+							+											1			**13**
Anthelia juratzkana (Limpr.) Trev.																																**3**
Arnellia fennica (Gott.) Lindb.																																**1**
Barbilophozia hyperborea (Schust.) R.&B.Stotl.																																**2**
Barbilophozia quadriloba (Lindb.) Loeske																																**3**
Blepharostoma trichophyllum (Dumb. Emend. Lindb.) Dum.																					1							3				**9**
Cephaloziella arctica Bruhn & Douin														r																		**2**
Cephaloziella divarcata (Sm.) Schiffn.																																**1**
Cephaloziella grimsulana (Jack) Lacouture																																**5**
Cephaloziella sp. (Spruce) Steph.																																**1**
Gymnomitrion concinnatum (Lightf.) Corda																																**1**
Gymnomitrion corallioides Nees																																**3**
Jamsoniella sp. (Spruce) Carring.																																**1**
Jungermannia caespiticia Lindenb.																																**1**
Jungermannia polaris Lindb.																							r									**3**

Table 9. Bryophyte species cover data.

New ID	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-HB-W-1J	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Lophozia badensis (Gott. ex Rabenh.) Schiffn.																							r									**2**
Lophozia bicrenata (Schmid. ex Hoffm.) Dum.																																**1**
Lophozia excisa (Dicks.) Dum. Var. succulenta Schust & Damsh.																																**1**
Lophozia heterocolpos (Thed.) M.A. Howe																																**1**
Lophozia major (ref?)																																**1**
Lophozia nodia (ref?)																																**1**
Lophozia sp. (Dum.) Dum.																					+											**6**
Lophozia ventricosa (Dicks.) Dum.																																**1**
Nardia sp. S.Gray																																**2**
Peltolipus quadrata (Saut.) K.Mull.																																**3**
Plagiochila arctica Bryhn & Kaal.																																**2**
Prasanthus suecicus (Gott.) Lindb.																																**1**
Preissia quadrata (Scop.) Nees																																**2**
Ptilidium ciliare (L.) Hampe																																**3**
Scapania calcicola (H.Arnell & J.Perss.) Ingham																																**1**
Scapania gymnostomophila Kaal.																							r									**3**
Scapania irrigua (Nees) Gott. et al.																																**1**
Scapania sp. (Dum.) Dum.																																**2**
Thal bid																									+							**1**
Other liverwort, Hepaticea																																**2**
																																0
Nostoc commune												2						+	+													**18**
black cyanobacteria																																**2**
Species richness	**12**	**2**	**16**	**7**	**7**	**14**	**18**	**9**	**6**	**3**	**23**	**4**	**7**	**11**	**8**	**0**	**0**	**24**	**7**	**0**	**17**	**6**	**9**	**6**	**6**	**0**	**2**	**6**	**3**	**22**	**21**	

		1	2	4	5	6	7	8	9
		Abiabi	Amplap	Ancsp	Anupin	Aplwor	Aulacu	Aultur	Aulpal
1	**AH-B**				0.6				
2	**AH-B**								
3	**AH-B**								
4	**AH-B**							0.6	
5	**AH-B**								
6	**AH-B**								
7	**AH-B**								
8	**AH-B**								
9	**AH-B**								
10	**AH-B**								
11	**AH-B**								
12	**AH-B**								
13	**AH-B**								
14	**AH-B**							1	0.6
15	**AH-B**							0.6	
16	**AH-B**								
17	**AH-B**							1	
18	**AR-D-1**								
19	**AR-P-1**		0.6					0.6	
20	**AR-P-2**							2	
21	**AR-R-1**								
22	**AR-S-1**							0.6	
23	**AR-W-1**							2	
24	**DL-D-1**								
25	**DL-D-2**								
26	**DL-D-3**								
27	**DL-D-4**								
28	**DL-M-1**							1	
29	**DL-R-1**								
30	**DL-R-2**								
31	**DL-S-1**								
32	**DL-W-1**								
33	**E-AHR-P-2**							0.6	
34	**E-AHR-S-1**								
35	**E-AHR-S-2**								
36	**E-E-P-1**								
37	**E-E-P-2A**								
38	**E-E-P-2B**								
39	**E-E-S-1**								
40	**E-E-S-2**								
41	**E-E-S-3**								
42	**E-EW-P-1A**							0.6	
43	**E-EW-P-1B**							0.6	
44	**E-EW-P-2**								
45	**E-EW-P-3B**								
46	**E-EW-R-1**								
47	**E-EW-R-2**								
48	**E-EW-R-3**								
49	**E-EW-R-4**								
50	**E-EW-S-1**							1	
51	**E-EW-S-2**							1	
52	**E-EW-W-1**					0.6(			
53	**E-EW-W-2**								
54	**E-EW-W-3**					(			

55	**E-EW-W-4**				
56	**E-EW-W-5**				
57	**R-D-1**				
58	**R-P-1**				
59	**R-P-2**				
60	**R-P-3**				
61	**R-P-4**				
62	**R-R-1**				
63	**R-R-2**				
64	**R-R-3**				
65	**R-R-4**				
66	**R-S-1**				
67	**R-S-2**				
68	**R-S-3**				
69	**R-S-4**				
70	**R-S-5**				
71	**R-W-1A**				
72	**R-W-1B**				
73	**R-W-2A**				
74	**R-W-2B**				
75	**R-W-3A**				
76	**R-W-3B**				
77	**V-CB-001**				
78	**V-CB-002**	0.4			0.6
79	**V-CB-003**				
80	**V-CB-004**				
81	**V-CB-005**				
82	**V-CB-006**				
83	**V-CB-007**				
84	**V-CB-008**				
85	**V-CB-009**	0.6			
86	**V-CB-010**				
87	**V-CB-011**				
88	**V-CB-012**				
89	**V-CB-013**				
90	**V-CB-014**				
91	**V-CB-015**				0.6
92	**V-CB-016**	0.6			
93	**V-CB-017**				
94	**V-CB-018**				
95	**V-CB-R-1**				
96	**V-HB-M-1**				
97	**V-HB-P-1a**				
98	**V-HB-P-1b**				
99	**V-HB-R-1**				
100	**V-HB-R-2**				
101	**V-HB-S-1**				
102	**V-HB-W-1A**				
103	**V-HB-W-1B**				
104	**V-TR-D-1**				
105	**V-TR-M-1**		0.6		
106	**V-TR-P-2**				
107	**V-TR-P-3**				
108	**V-TR-R-1**				
109	**V-TR-R-2**				
110	**V-TR-R-3**				
111	**V-TR-R-4**				

112	**V-TR-S-1**	
113	**V-TR-S-2**	0.6
114	**V-TR-W-1**	
115	**V-TR-W-2**	

	10	11	12	13	14	15	16	17	18	19
	Bacsp	Barith	Bliacu	Brasp	Bratur	Bryrec	Bryaen	Bryarg	Brycae	Brycal
						0.6				
						0.6				
						0.4				
						0.6				
						0.6				
			0.6							
						0.6				
		0.6								
	0.4									
						0.6		0.6		
		0.6				0.6				
		0.6	0.4							
						0.6				
						0.4				
						0.4				
				0.6		2	0.6			
						0.6				
						0.6				

2

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0.4 0.4 0.4
2

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20	21	22	23	24	25	26	27	28	29
Brycyc	Brypse	Bryrut	Brysp	Brysub	Bryter	Brywri	Calcur	Calgig	Calric
			0.6						
			0.6						
			0.6						
	0.6								
			0.4						
	0.6		0.6						
	0.6								
	0.6		0.6	0.6				0.6	
			0.6				0.6		
			1						
			1						
			2						
	0.6								
			0.6						
	0.6		0.6					1	
	0.6								
	0.6	0.6			0.6				
			0.4		0.6				
			0.6				0.6		
	2		0.6		0.6		2	2	
3	3		1				3	3	
	0.6						0.6		
	1						1		
				0.6					
				0.6				0.6	
			1						

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0.4
0.4
0.6
0.6
1
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1
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30	31	32	33	35	36	37	38	39	40
Calsp	Calstr	Camarc	Camlon	Camste	Camsp	Catnig	Cerpur	Cinarc	Cinlat
						0.6			
				0.6				0.6	
					0.6	0.6			
					0.6				
				0.6		0.6		0.6	
						0.6		0.6	
0.6						3		3	
0.6						3		2	
						3		2	
		0.6							
		0.6							
		0.6							
		0.6							
		3							
	0.6								
		2			0.6	0.6			
		3				0.6			
		0.6							
		0.6			3	0.6		1	
		0.6		0.6				1	1
				0.6				0.6	0.6
0.6				0.6				2	0.6

2

0.4
0.4
0.6 1
0.6 2

2

2 0.6
0.6 2 2

0.6 2 2
0.6 1 1
0.6
4 2

0.6 0.6

3 3 3

0.4 1
0.4

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3 1
0.6 0.6

3 1

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2 2 0.6
0.6 0.6 0.6

2 1

0.6

4	1		0.6
3		0.6	0.6

41	42	43	44	45	46	47	48	49	50
Cinsp	Circir	Ctepro	Cynsp	Cyrhymen	Cyrhymen	Deshym	Dicpel	Dicsp	Dicacu
0.6				0.6		0.6			
				0.6					
				0.6					
					0.4				
					0.4				
					0.4				
				0.6	0.6				
				0.6					
0.6									
								2	
	0.6								
							0.6		
	0.6								
			0.4						
			0.4						
									0.6
		0.6							
		0.6							
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51	52	53	54	55	56	57	58	59	60
Dicelo	Dicund	Dic	Dicspa	Dicsp	Didasp	Didrig	Didsp	Discap	Disinc
									0.6
									0.6
									2
						0.6			0.6
									0.6
						0.4			0.6
						0.6			0.6
								0.6	
								0.6	0.6
							0.6	0.6	
								0.6	
								0.6	
		1						1	
								1	
								2	
								1	
								0.6	
									0.6
								0.6	
								0.6	
								0.6	
2b		2b	0.6						
	2								
									0.6
									2
									2
						0.6			0.6
						0.6			0.6
									0.6
									0.6
									0.6
								3	0.6
								0.6	
		0.6							
								1	
								0.6	

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2

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1

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0.6

2

0.6 0.6

0.4 0.6

0.6

2

0.6

2

0.6

61	62	63	64	65	66	67	68	69	70
Dissp	Dit	Dreadu	Drebre	Dresp	Encalp	Encmut	Encpro	Encrha	Encsp
					1				
					2				
	0.6				1				
	0.6				0.6				
	0.6				0.6				
	0.6								
	0.6				0.6		0.6		
	0.6		0.6						
			0.6						
	0.6	0.6	0.6						
							0.6		
				1					
				0.6					
	1			1					
	0.6		0.6						
	0.6								
	0.6						0.6		
			0.6						
	1								
	0.6						0.6		
	0.6								
	0.6		0.6		0.6				
									0.6
									0.6
	0.6				0.4	0.4	0.6	0.4	
	0.4							0.4	
			0.6						
			2						
	0.6								
			5						
			5						
			4						

3
1
1 0.6 0.6
0.6 0.4
2
1 0.4
1
1 0.6
0.6 1
0.6 0.6 0.6
0.6 0.6
0.6 1
1
2

0.6
2 1
1
1

0.6 0.6
0.6 0.6
0.4 0.4 0.4
0.6

1 1
2 0.6

0.6
1
3 2
2
0.6 0.6
1 3
1 3
0.6
0.6
0.4

3
0.6

0.6
1

0.6
0.6
0.6

0.6

0.6

0.6 3

72	73	74	75	76	77	78	79	80	81
		Gri	Hamver	Henhei	Hygpol	Hylspl	Hymrec	Hypbam	
								0.6	
								0.6	
							0.6	0.6	
0.6									
0.6									
				0.6					
						1		1	
	0.6								
		0.6						0.6	
				0.6					
				0.6					
					0.6				
					0.6				
						1			
						2			
		0.6	0.6						

1

0.6
0.6

0.6

1

1
1

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0.6

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0.4
3

1
2
0.6

1

2

1
0.6

0.6

0.6
0.4
0.6

0.4
0.6

82	83	84	85	86	87	88	89	90	91
Hyprec	Hyprev	Hypvau	Isopul	Kiagla	Kiasp	Leppyr	Limlim	Loebad	Meetri
		0.6							
									0.6
							0.6		
									0.6
					2				
					1				
					1				
									1
									1
									0.6
	0.6								
	1								
							0.6	0.6	
				4					
	0.6	0.6							
		0.6							
		0.6					0.6	0.4	
		0.4							
	0.6	0.6							
							0.6		
							3		
	1								
						0.6			0.6

0.6
0.4 0.6 0.4
0.6
1

1 0.6
2

0.6

2

0.6

0.6
2
2
1

0.6

3 3

2 0.6

1
1

0.6
0.6
0.4

3

0.6

0.6

2 0.6

92	93	94	95	96	97	98	99	100	101
Meeuli	Mnisp	Molsen	Molten	Myuapi	Myujul	Myuten	Oliher	Oncwah	Ortchr
2					0.6			0.6	
0.6					0.6				
1					0.6				
		0.4			0.4				0.6
					0.4				
									0.4
		0.6	0.6		0.6				0.6
									0.6
0.6									0.6
					0.6				0.6
									1
									1
0.6				0.6					1
								0.6	2
								1	2
									2
					0.6				0.6
									0.6
									1
						?			
					0.4				
					0.6				
									2
									0.6
					0.6				3
									1
									0.6
0.6					0.6				
0.6	0.6								

2

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0.6 0.4
T
0.4 0.4 0.4 0.4
0.4 0.4 0.4 0.4
1
1
0.6
0.6
2
0.6
0.6
0.6
2
2
1
0.6
0.6 0.6 0.6 0.6
3
0.6
2 2
1
0.6
0.6
0.6 0.6
0.4 0.4
0.6
+ 2
2 0.6 0.6
0.4
0.4
0.6

0.6

0.6 1
0.6 1

102	103	104	105	106	107	108	109	110	111
Ortstr	Ortsp	Phi	Phitom	Phisp	Pladem	Plaell	Plajug	Pohcru	Pohnut
0.6	0.6								
	0.6								0.6
	2		0.4						0.6
0.6									
0.6								0.6	
0.6									
1									
									2
								0.6	
		0.6						0.6	
0.6									
		0.6						0.6	
		0.6							
									0.6
									0.4
									0.6
									0.6
									0.6
0.6		0.4							
						0.4			0.4
0.6									
			3					0.6	
								0.6	
			0.6						
								0.6	

0.6
0.4

0.4
0.6
0.6 1

1

0.4

2

1

0.6

+

0.6

0.6
0.6

2

0.6

112	113	114	115	116	117	118	119	120	121
Pohsp	Polalp	Polcom	Polhyp	Poljun	Polpil	Polsp	Polstr	Psebre	Psetri
	0.6								
									0.6
									0.6
0.6									
	2								
	1								
0.6	0.6								
						0.6			
	0.6								
	0.6					0.6			
	0.6								
	1								
0.6									
	0.6								
	0.6								
			1		0.6				
			0.6						
							1		
			0.6		0.6				
0.6		3	3						
			2a						
							1		
	1								
	1								
	0.4				0.4				
0.6									
	0.6								
	0.6								
				0.6					
	0.6	0.6		0.6					
	0.6								

0.6

2

0.6

0.6
1

122	123	124	125	126	128	129	130	131	132
Psetur	Raccan	Raceri	Raclan	Racpan	Rhyrug	Sanunc	Schapo	Schand	Schpap
			0.6						
			0.6						
			0.6	0.6		0.6		0.6	2
				0.6		0.6			
						0.6			
					1				
						1			
	0.6						0.6		
	0.6								
0.6									
						1			
		0.6				2			
0.6									

0.6

0.6

0.6

0.6

0.4

0.6

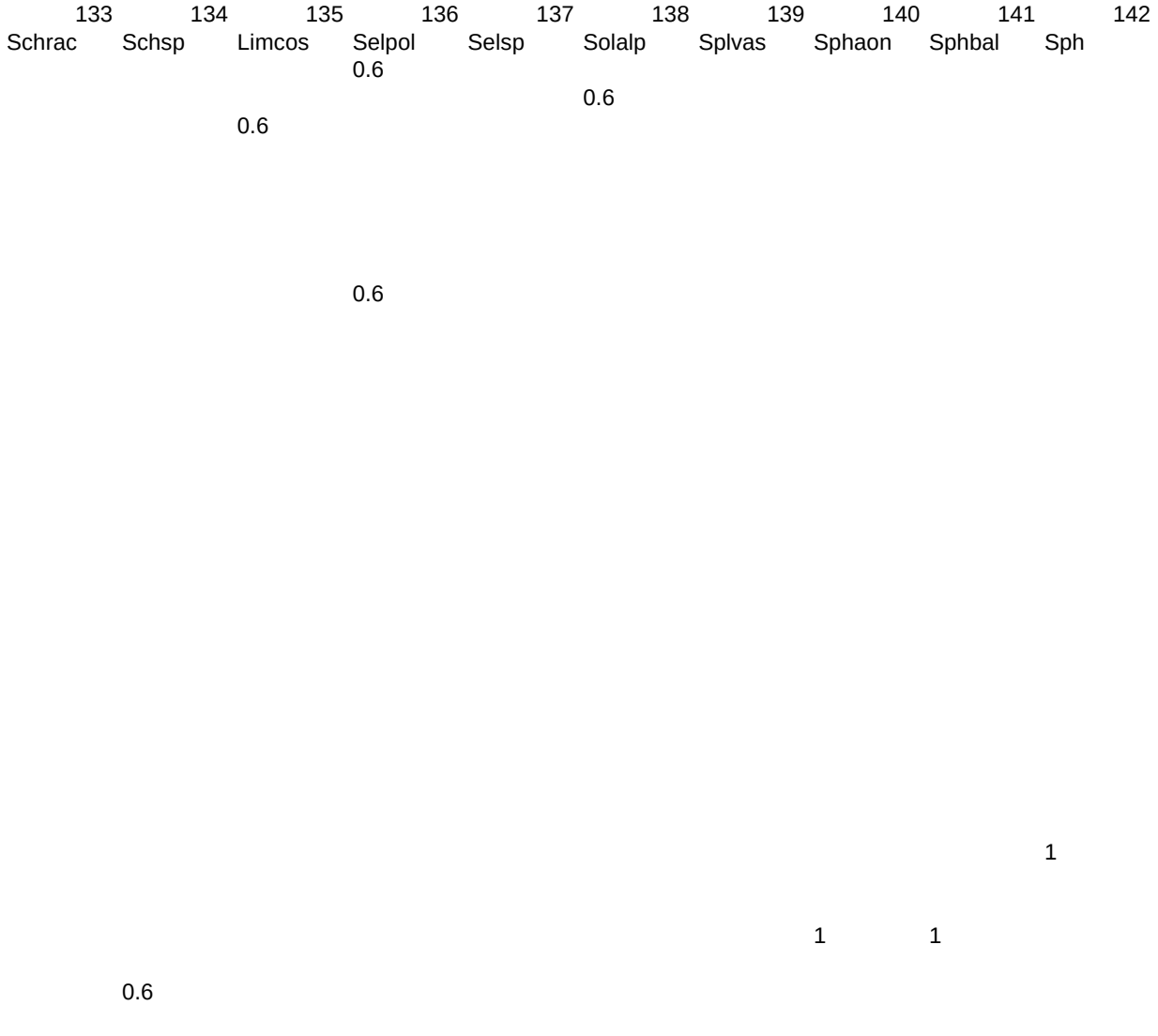
3
3

0.6

0.6

0.6

0.6


133
134
135
136
137
138
139
140
141
142
Schrac
Schsp
Limcos
Selpol
Selsp
Solalp
Splvas
Sphaon
Sphbal
Sph
0.6
0.6
0.6
0.6
1
1
1
0.6

0.6

0.6

3

1

1

0.6

143	144	145	146	147	148	149	150	151	152
Sphgir	Sphimb	Sphlin	Sphsp	Splsph	Splsp	Synmuc	Torrur	Taylig	Tetmni
							0.4		
							0.6		
1									
			0.6						
	1	1							
							0.6		
							0.6		
							0.6	0.4	
							0.6		
									0.6

0.6 1
0.6
2
1
1

0.6

0.6

2

0.6

2
0.6

1

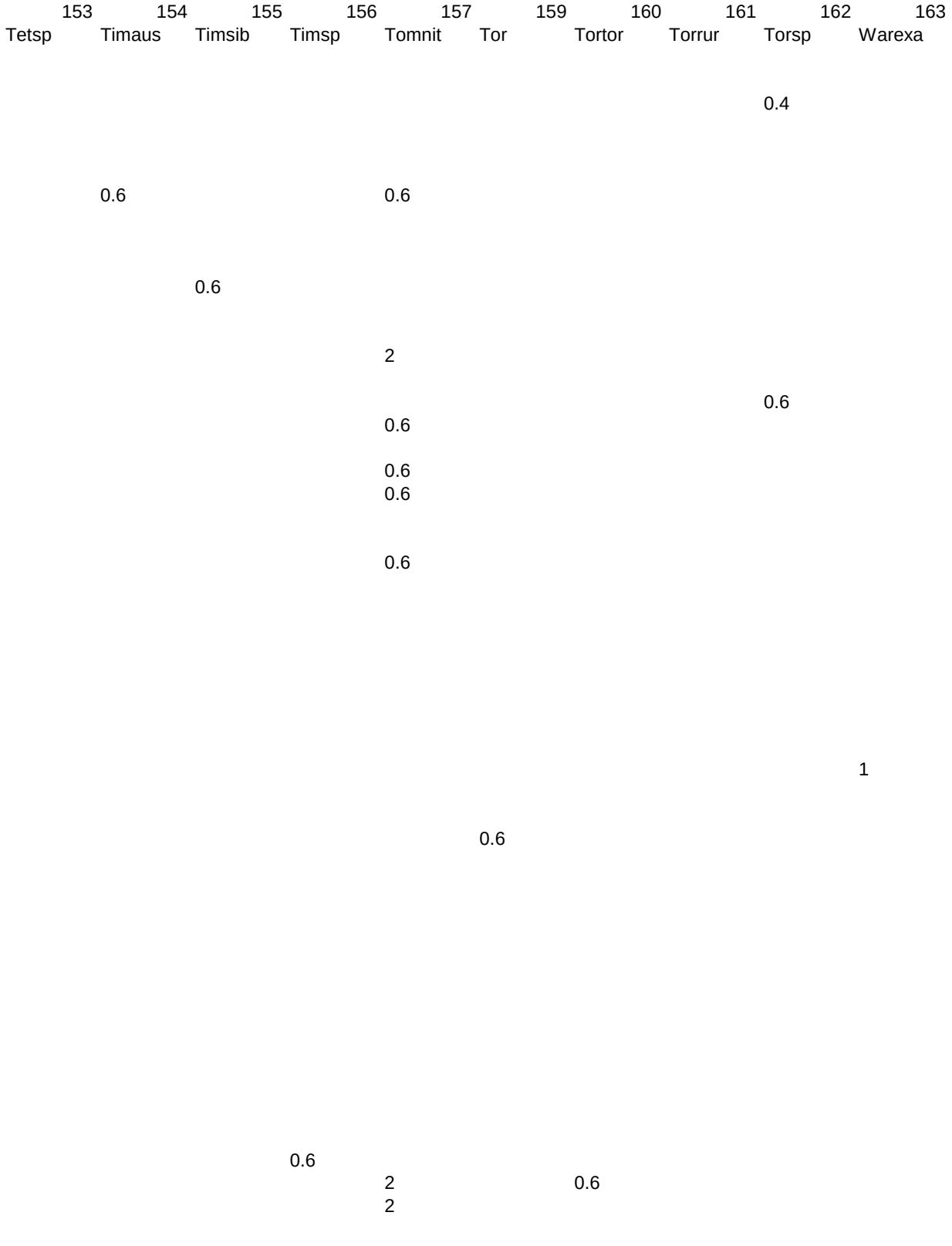
0.6

0.6

0.6

0.6

0.6?


153 154 155 156 157 159 160 161 162 163
Tetsp Timaus Timsib Timsp Tomnit Tor Tortor Torrur Torsp Warexa
0.4
0.6
0.6
0.6
2
0.6
0.6
0.6
0.6
0.6
1
0.6
0.6
2
0.6
2

0.6 0.6

0.4 1
0.4 1

0.6

1
0.6 0.6

0.6 2

0.6 2

0.6
0.6 0.6
0.4
3

0.6

0.6

1
0.6
0.6 0.6 0.6
0.6

0.4

+ +

0.6

164	167	168	169	170	171	172	173	174	175
Warsar	Anamin	Antjur	Arn	Barhyp	Barqua	Bletri	Ceparc	Cepdiv	Cepgri
						0.6			
						0.6			
	0.4								
			0.4	0.4					
						0.6			
						0.6			
	0.6								
	0.6								
					0.6				0.6
									0.6
0.6									
				2a				0.6	
		0.4							
	1								
									0.6
					6				0.6
					0.6				0.6
		0.6							
		0.6				0.6			
	0.6								
	0.6								

0.6

0.6
0.6

0.6
0.6
0.6
0.6

1

0.6

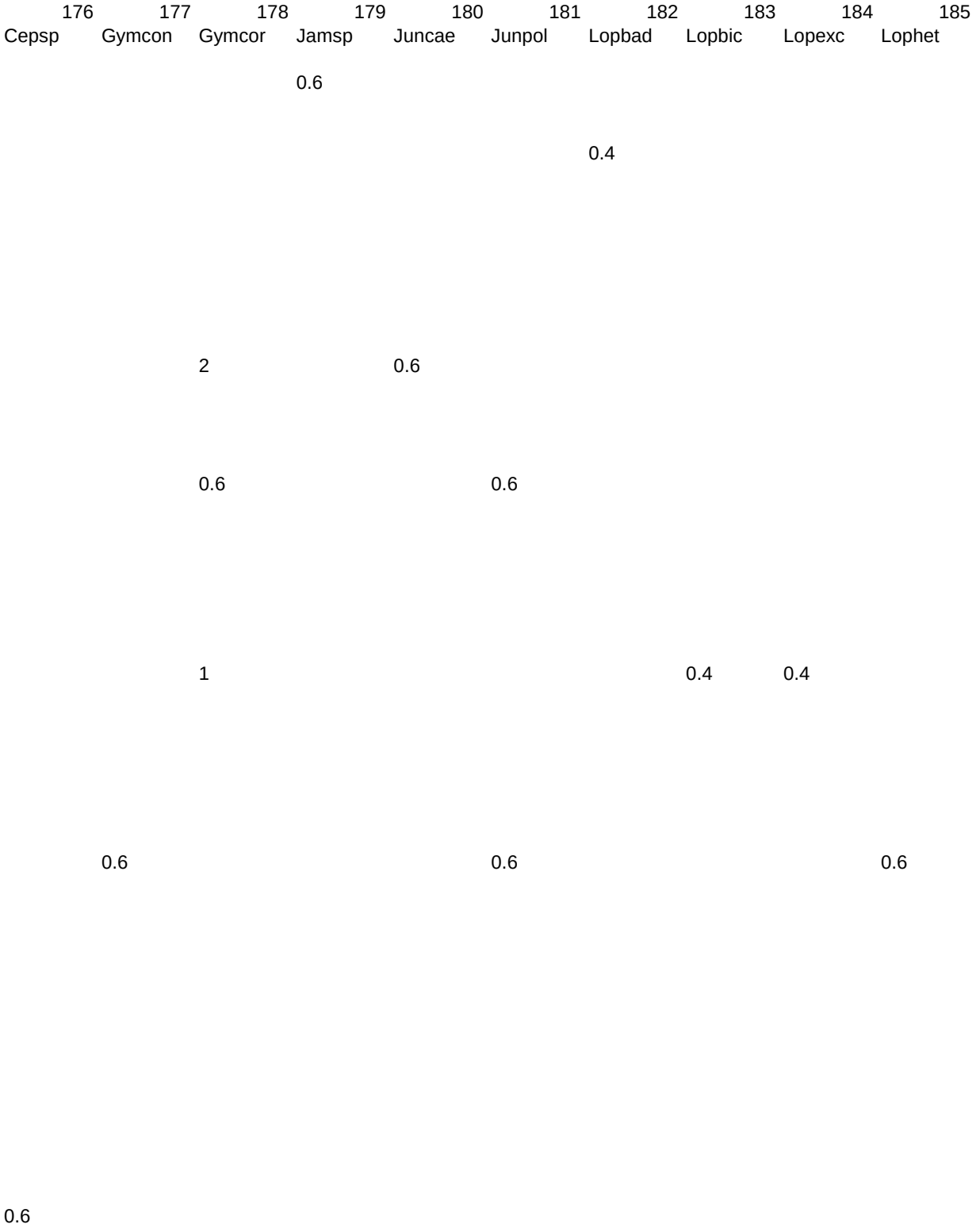
0.4

+

1

3

1


176 177 178 179 180 181 182 183 184 185
Cepsp Gymcon Gymcor Jamsp Juncae Junpol Lopbad Lopbic Lopexc Lophet
0.6
0.4
2
0.6
0.6
0.6
1
0.4
0.4
0.6
0.6
0.6
0.6

0.4 0.4

186	187	188	189	190	191	192	193	194	195
Lopmaj	Lopnod	Lopsp	Lopven	Narsp	Pelqua	Plaarc	Prasue	Prequa	Pticil
					0.6				
		0.6			0.6				
					0.6				
						0.4			
								0.4	
	0.6	1							
0.6									
			0.6						
									0.6
							0.4		
									0.4
									1
								0.6	
		0.6		0.6					
		2		0.6					

0.4

0.6

0.6

	196	197	198	199	200	201	203	204
	Scacal	Scagym	Scairr	Scasp	Thabid	Othliv	Nossp	blacru
		0.4						
							0.6	
							2	1
							1	
	0.6							
							0.6	
						0.6		
							0.6	
							0.6	
		0.6					3	
			0.6	0.6				
								1
							0.6	

0.6

0.6

0.6
4

1

1
2

0.6

2

+
0.6

0.4

0.6

	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3
Abiabi									
Amplap									
Ampsp									
Ancsp									
Anupin	0.6								
Aplwor									
Aulacu									
Aultur				0.6					
Aulpal									
Bacsp									
Barith									
Bliacu									0.6
Brasp									
Bratur									
Bryrec		0.6	0.6		0.4		0.6	0.6	
Bryaen									
Bryarg									
Brycae									
Brycal									
Brycyc									
Brypse				0.6			0.6	0.6	
Bryrut									
Brysp	0.6	0.6	0.6			0.4	0.6		
Brysub									
Bryter									
Brywri									
Calcur									
Calgig									
Calric									
Calsp									
Calstr									
Camarc									
Camlon									
Campol									
Camste		0.6						0.6	
Camsp			0.6				0.6		
Catnig	0.6		0.6					0.6	
Cerpur									
Cinarc		0.6						0.6	
Cinlat									
Cinsp	0.6								
Circir									
Ctepro									
Cynsp									
Cyrhymen	0.6	0.6	0.6				0.6		
Cyrhymen				0.4	0.4	0.4	0.6		
Deshym	0.6								
Dicpel									
Dicsp									
Dicacu									
Dicelo									
Dicund									
Dicfus									

Dicspa									
Dicsp									
Didasp									
Didrig				0.6		0.4	0.6		
Didsp									
Discap								0.6	
Disinc	0.6	0.6	2	0.6	0.6	0.6	0.6		
Dissp									
Ditfle			0.6	0.6	0.6	0.6	0.6	0.6	
Dreadu									
Drebre								0.6	0.6
Dresp									
Encalp	1	2	1	0.6	0.6		0.6		
Encmut									
Encpro							0.6		
Encrha									
Encsp									
Eurpul									
Fisadi								0.6	
Fissp									
Funhyg									
Grifun									
Hamver									
Henhei									
Hygpol									
Hylspl									
Hymrec							0.6		
Hypbam				0.6		0.6	0.6		
Hyprec									
Hyprev									
Hypvau					0.6				
Isopul									
Kiagla									
Kiasp									
Leppyr									
Limlim									0.6
Loebad									
Meetri								0.6	
Meeuli	2	0.6	1						
Mnisp									
Molsen				0.4			0.6		
Molten							0.6		
Myuapi									
Myujul	0.6	0.6	0.6	0.4	0.4		0.6		
Myuten									
Oliher									
Oncwah	0.6								
Ortchr				0.6		0.4	0.6	0.6	
Ortstr	0.6			0.6			0.6	0.6	
Ortsp	0.6	0.6	2						
Phifon									
Phitom			0.4						
Phisp									
Pladem									
Plaell									
Plajug									
Pohcru							0.6		

Pohnut		0.6	0.6						
Pohsp									
Polalp			0.6						
Polcom									
Polhyp									
Poljun									
Polpil									
Polsp									
Polstr									
Psebre									
Psetri								0.6	
Psetur									
Raccan									
Raceri									
Raclan				0.6					
Racpan									
Rhiand									
Rhyrug									
Sanunc									
Schapo									
Schand									
Schpap									
Schrac									
Schsp									
Limcos			0.6						
Selpol	0.6								0.6
Selsp									
Solalp		0.6							
Splvas									
Sphaon									
Sphbal									
Sphfim									
Sphgir									
Sphimb									
Sphlin									
Sphsp									
Splsph									
Splsp									
Synmuc									
Torrur						0.4			
Taylig									
Tetmni									
Tetsp									
Timaus							0.6		
Timsib									
Timsp									
Tomnit							0.6		
Torarc									
Torfra									
Tortor									
Torrur									
Torsp			0.4						
Warexa									
Warsar									
Liv									
Anamin				0.4					

Antjur						
Arnfen						0.4
Barhyp						0.4
Barqua						
Bletri	0.6	0.6				
Ceparc						
Cepdiv						
Cepgri						
Cepsp						
Gymcon						
Gymcor						
Jamsp		0.6				
Juncae						
Junpol						
Lopbad					0.4	
Lopbic						
Lopexc						
Lophet						
Lopmaj						
Lopnod						
Lopsp		0.6				
Lopven						
Narsp						
Pelqua	0.6	0.6	0.6			
Plaarc				0.4		
Prasue						
Prequa						0.4
Pticil						
Scacal						
Scagym					0.4	
Scairr						
Scasp						
Thabid						
Othliv						
Nossp						
blacru						

AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1
									0.6
				1	0.6		1		0.6
				0.6					
	0.6								
0.6									
0.6	0.6			1	1	2			
0.6									
	0.6								
0.6									
					0.6	0.6			
									0.6
0.6					3	3	3		
0.6					3	2	2		
						0.6			
				0.6					
							2		
				1					

	0.6							
0.6	0.6	0.6	0.6	1	1	2	1	0.6
0.6								
0.6							1	0.6
0.6								
0.6								0.6
					1	0.6	1	
	0.6							
0.6								
						0.6		
								0.6
	0.6							
				1				
				1				0.6
								0.6
		2	1	1				
0.6					1	1	0.6	
0.6				0.6				
				0.6				
	0.6							0.6
					0.6	1		
0.6	0.6	1	1	1	2	2	2	0.6
				1				
								0.6

2

0.6 0.6

2 1 0.6 0.6 0.6 0.6

0.6 0.6

0.6

0.6 0.6
0.6

0.6

0.6
2

0.6

2 0.6 0.6

0.6

0.6 0.6

0.6

0.6

0.6

0.6

2

0.6

0.6

0.6

1

0.6

0.6

2

1

1

AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1
2		0.6	2					1	
			0.6					0.4	
	0.6		0.6						
		0.6	0.6						
			1						
0.6	0.6	0.6	3						
0.6			0.6						
				0.4			0.4		
		0.6							
				2b				2	
				2b					

0.6

0.6 0.6 0.6
0.6

0.6 0.6 1

0.6

0.6

0.6 0.6

1

0.6
0.6

0.6 1
0.6

0.6 0.6 0.6

0.6 0.6

0.6 0.4 0.6 0.6

0.6 0.6

1 0.6 0.6

3

1 0.6 0.6 3

0.6 0.6

1

0.6

1

0.6 0.6

1

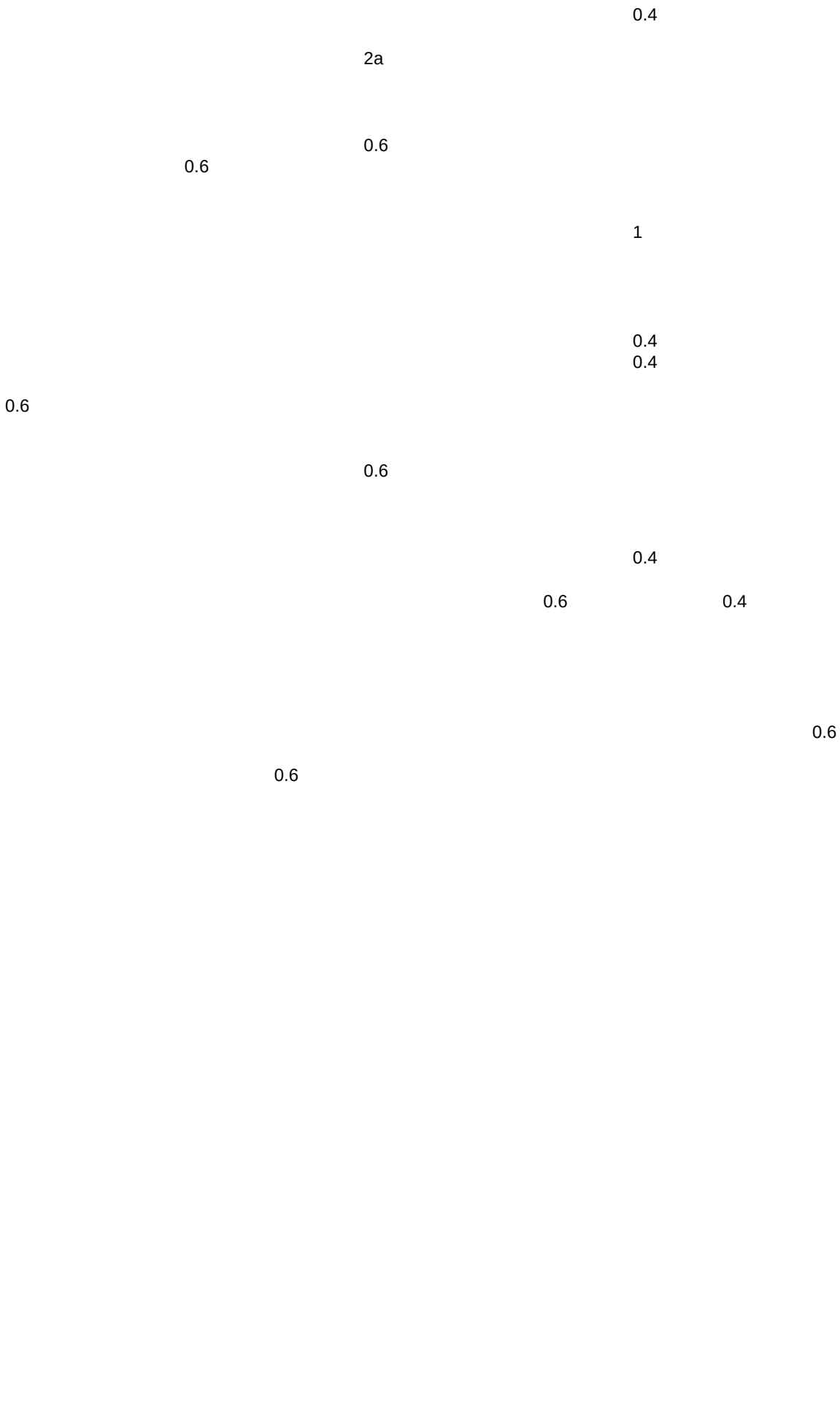
1

0.6

0.6 0.6

0.6

1


0.4
2a
0.6
0.6
1
0.4
0.4
0.6
0.6
0.4
0.6
0.4
0.6
0.6

	E-E-S-1	E-E-P-2B	E-E-P-2A	E-E-P-1	E-AHR-S-2	E-AHR-S-1	E-AHR-P-2	DL-W-1	DL-S-1	DL-R-2
E-AHR-P-2							0.6			
E-AHR-S-1					0.6 0.4	0.6				
E-AHR-S-2			0.6			0.6	0.6 0.6			
E-E-P-1						0.6 0.6	0.6			
E-E-P-2A										
E-E-P-2B										
E-E-S-1										
DL-W-1				0.6						
DL-S-1								0.6		
DL-R-2									0.6	

0.6

0.6 2 2 0.6

0.6 0.6 0.6

0.6

0.6

0.6

0.6 0.6

0.6 0.6

0.6

0.6
0.6 0.6

4

0.4

0.6

0.4

0.6

1 1

2a

1

0.6

0.6 0.6

1

0.6

0.6

1

1

1

1

0.6

0.6 0.6

0.6

1

		6	0.6
	0.6	0.6	0.6
			0.6
			0.6
			0.6
		0.6	
1			
			0.6
	0.6	0.6	3

	E-E-S-2	E-E-S-3	E-EW-P-1A	E-EW-P-1B	E-EW-P-2	E-EW-P-3B	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4
			0.6	0.6						
			0.4	0.4			0.62 0.6	0.6		
							2	33	0.6	1
				0.6			0.6	1		
							0.6			
				0.6			2 2	3 3	0.6	1
							2	3	0.6	0.6
							0.6 0.6	0.6		3 0.6
										1
			0.6	0.6						

0.6 0.6

3
0.6 0.6 0.6 0.6 0.6

0.6 0.4

0.6 2

0.4
0.4
0.6
0.4 0.4

0.6
0.6 0.4 0.6

0.6 0.6 3
0.4

0.6 0.6

2 0.6 3
0.6

3 0.6

0.4

0.6 0.6

0.4

0.6

0.4 0.6 0.6

0.4

0.6 0.6

0.4

0.6

E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2
		0.6(							
1	1								
		0.6							0.4
						2			
								0.6	0.4
				1		2	0.6		
		0.6	0.6						
							0.6		
			0.6						
				0.6					
		0.6							
		0.6	0.6	0.6					
						2			
		1	0.6	2					
		1	0.6	0.6					
							0.6		T
	0.6								

0.6

0.6 0.4 0.4
0.6 0.4 0.4

0.6 1 0.6 0.6 0.6 0.6
0.6?

0.6 1 0.6 2

5 5 4 3 1 0.6

0.6

0.4

0.6

0.6

1 2

1

1
0.4
1 0.6 0.6
0.4

0.6

0.6
0.6 0.6
0.6

0.6 0.6 T

2
1 0.6 0.6 0.4
0.6 0.4

0.6

0.6 0.6 0.6
0.6

0.6 0.6

0.6 0.6

0.6

1 2

0.6

0.6
1 0.6 2

0.6

0.6

2 2 0.6

0.6

0.6 0.6

0.6 0.6

0.6

0.6

0.6 2

0.6 0.6

0.6
0.6

0.6 0.6
1

R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4
0.4	0.4	0.6	0.6						
		0.6					2		
		0.6	2				2	0.6	
0.4	0.4	1	1						0.6
		1		0.6	0.6				
		1	0.6		0.6				
0.4	0.4								
		0.6	0.6						
		1	2				2		
0.4	0.4								

0.4	0.4								
0.4	0.4								
								0.6	
0.4	0.6	0.6		0.6					
						0.6			
1	1	1	0.6	0.6	0.6	1	1	2	
0.4		0.6	1	0.6	0.6				
				0.6					

0.6	0.6			0.6		1		1	1
0.6	1								

		1	2		0.6		2		
		0.6							

0.4	0.4								
									0.6
0.4	0.4								
0.4	0.4								

0.4	0.4	1	1	0.6	0.6		2	0.6	
0.4	0.6								
							1		
		0.6							
		1							

0.6 0.6

3 1

0.6

1

1 1

0.4 0.4 1 0.6

0.6

1 1

0.6

0.6 0.6

0.6

0.6

0.4

0.6

0.6

R-S-5	R-W-1A	R-W-1B	R-W-2A	R-W-2B	R-W-3A	R-W-3B	V-CB-001	V-CB-002	V-CB-003
								0.4	
								0.6	
									0.4
								0.6	0.4
									0.4
	0.6	0.6	0.6	0.6		2		0.6	0.4
							0.6		0.4
	0.6		1	1	0.6	1			
	0.6		0.6	0.6				0.6	
	2		2	1		4			
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0.6	2		2	1	0.6	2		0.6	
								0.6	
								0.6	0.4

							0.6			
						0.6				
0.6	0.6	0.6	0.6	0.6		0.6				
							0.6	0.6	0.4	
0.6	2		1				0.6	0.6	0.4	
	1	1					0.6	0.6	0.4	
									0.4	
	0.6		0.6					0.6	0.4	
								0.6		
			0.6	2	2	1				
	0.6									
								0.6		
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0.6	2		2			1	0.6	0.6		
									0.4	

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V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013
					0.6				
2			0.4 0.6		0.6				0.6
				??					0.6
3			0.4		0.6		2		
3		1			0.6		0.6 3		0.6
							0.6		
3		0.6					0.6		
		0.4							
3		1	0.4		0.6		2		
3							3		
3							3 0.6		
		0.6			0.6				

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V-CB-014	V-CB-015	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1
		0.6							
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	0.6			0.4					
	0.6								
	0.6	0.6	0.6		0.6				0.6
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						0.6	0.6	0.6	
					0.6				
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	0.6								
1					1				0.6
					2				
1	0.6								
							0.6	0.4	

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V-HB-R-2	V-HB-S-1	V-HB-W-1A	V-HB-W-1B	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2
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					0.4				
								0.6	
								0.6	0.6
		1			1			0.6	0.6
						0.4	0.4		
		0.6	0.6						
								0.6	
					2				
		2	0.6		1				
		2	0.6						
		0.6	0.6						
							0.4		
						0.6	0.6		

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V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2
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		0.6		0.6	0.6
	0.6				
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				4	3
				1	
					0.6
				0.6	0.6

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		AH-BF-M-1	AH-BF-M-2	AH-BF-M-3
New ID		BF-M-1	BF-M-2	BF-M-3
	MOSS SPECIES nomenclature Anderson, Crum & Buck 1990 (Bryologist 93(4):448-499)			
Abiabi	Abietinella abietina (Hedw.)Fleisch. [= Thuidium abietinum (Hedw.) B.S.G.]			
Amplap	Amphidium cf. lapponicum (Hedw.) Schimp.			
Ampsp	Amphidium sp. Schimp.			
Ancsp	Anc. sp. (ref?)			
Anupin	Anura pinguis (ref?)	+		
Aplwor	Aplodon wormskjoldii (Hornem.) Kindb. [=Haplodon worskjoldii (Hornem.)Hag.]			
Aulacu	Aulacomnium acuminatum (Lindb. & Arnell) Kindb.			
Aultur	Aulacomnium turgidum (Wahlenb.) Schwaegr.			
Aulpal	Aulacomnium palustre (Hedw.) Schwaegr.			
Bacsp	Bachlophosis sp. (ref?)			
Barith	Bartramia ithyphylla Brid.			
Bliacu	Blindia acuta (Hedw.) Bruch & Schimp.			
Brasp	Brachythecium sp. Schimp.			
Bratur	Brachythecium turgidum (Hartm.) Kindb.			
Bryrec	Bryoerythrophyllum recurvirostre (Hedw.) Chen		+	+
Bryaen	Bryum aeneum Blytt ex B.S.G. [= B. rutilans Brid.]			
Bryarg	Bryum argenteum Hedw.			
Brycae	Bryum caespiticium Hedw.			
Brycal	Bryum calophyllum R.Br.			
Brycyc	Bryum cyclophyllum (Schwaegr.) B.S.G. [= B. cryophilum O.Maert., B. tortifolium Funck ex Brid.]			
Brypse	Bryum pseudotriquetrum (Hedw.) Gaertn et al.			
Bryrut	Bryum rutilans Brid.			
Brysp	Bryum sp. Hedw.	+	+	+
Brysub	Bryum subneodamense Kindb.			
Bryter	Bryum teres Lindb.			
Brywri	Bryum wrightii Sull. & Lesq.			
Calcur	Callialaria curvicaulis (Jur.) Ochyra			
Calgig	Calliergon giganteum (Schimp.) Kindb. [=Cratoneuron curvicaule (Jur.) G.Roth]			
Calric	Calliergon richardsonii (Mitt.) Kindb.			
Calsp	Calliergon sp. (Sull.) Kindb.			
Calstr	Calliergon stramineum (Brid.) Kindb.			
Camarc	Campylium arcticum (Williams) Broth.			
Camlon	Campylium longicuspis (Lindb. & H. Arnell) Hedenaes			
Campol	Campylium polygamum (B.S.G.) C.Jens			
Camste	Campylium stellatum (Hedw.) C.Jens.		+	
Camsp	Campylium sp. (Sull.) Mitt.			+
Catnig	Catoscopium nigritum (Hedw.) Brid.	+		+
Cerpur	Ceratodon purpureus (Hedw.) Brid.			
Cinarc	Cinclidium arcticum B.S.G.		+	
Cinlat	Cinclidium latifolium Lindb.			
Cinsp	Cinclidium sp. Sw.	+		
Circir	Cirriphyllum cirrosum (Schwaegr. ex Schultes) Grout			
Ctepro	Ctenidium procerrimum (Molendo) Lindb. [= Pseudostereodon procerrimus (Mol.) Fleisch.]			
Cynsp	Cynodontium sp. Bruch & Schimp.			
Cyrhymen	Cyrtomnium hymenophylloides (Hueb.) Nyh. ex T.Kop.	+	+	+
Cyrhymen	Cyrtomnium hymenophyllum (B.S.G.) Holm.			
Deshym	Desmatodon sp. Brid.	+		

Dicpel	Dichodontium pellucidum (Hedw.) Schimp.			
Dicsp	Dicranowiesia sp. Lindb. ex Milde			
Dicacu	Dicranum acutifolium (Lind. & Arnell) C.Jens ex Weinm.			
Dicelo	Dicranum elongatum Schleich. ex Schwaegr.			
Dicund	Dicranum undulatum Brid. [=Dicranum bergeri Bland ex Sturm]			
Dicfus	Dicranum fuscescens Turn.			
Dicspa	Dicranum spadiceum Zett.			
Dicsp	Dicranum sp. Hedw.			
Didasp	Didymodon asperifolius (Mitt.) Crum, Steere et Anderson var. gorodkivii (A.Abr.etI.Abr.) Afonina			
Didrig	Didymodon rigidulus var. icmadophilus (Schinmp. ex C.Mull.) Zand. [=D. icmadophillus (Schimp. ex C. Muell.) S			
Didsp	Didymodon sp. Hedw.			
Discap	Distichium capillaceum (Hedw.) B.S.G.			
Disinc	Distichium inclinatum (Hedw.) B.S.G.	+	+	2
Dissp	Distichium sp. B.S.G.			
Ditfle	Ditrichum flexicaule (Schwaegr.) Hampe			+
Dreadu	Drepanocladus aduncus (Hedw.) Warnst.			
Drebre	Drepanocladus brevifolius (Lindb.) Warnst.			
Dresp	Drepanocladus sp. (C.Mull.) G.Roth			
Encalp	Encalypta alpina Sm.	1	2	1
Encmut	Encalypta mutica Hag.			
Encpro	Encalypta procera Bruch			
Encrha	Encalypta rhaptocarpa Schwaegr.			
Encsp	Encalypta sp. Hedw.			
Eurpul	Eurhynchium pulchellum (Hedw.) Jenn.			
Fisadi	Fissidens adianthoides Hedw.			
Fissp	Fissidens sp. Hedw.			
Funhyg	Funaria hygrometrica Hedw.			
Grifun	Grimmia cf. funalis (Schwaegr.) Bruch & Schimp.			
Hamver	Hamatocaulis vernicosus (Mitt.) Hedenas [= Drepanocladus vernicosus (Mitt.)Warnst.]			
Henhei	Hennediella heimii (Hedw.) Zander var. arctica (Lindb.) Zander [=Pottia heimii (Hedw.) Fuernr. var. obtusifolia (C			
Hygpol	Hygrohypnum polare (Lindb.) Loeske			
Hylspl	Hylocomium splendens (Hedw.) B.S.G.			
Hymrec	Hymenostylium recurvirostre (Hedw.) Dixon			
Hypbam	Hypnum bambergeri Schimp.			
Hyprec	Hypnum recurvatum (Lindb. & Arnell) Kindb.			
Hyprev	Hypnum revolutum (Mitt.) Lindb.			
Hypvau	Hypnum vaucheri Lesq.			
Isopul	Isopterygiopsis pulchella (Hedw.) Iwats.			
Kiagla	Kiaeria glacialis (Berggr.) Hag.			
Kiasp	Kiaeria sp. Hag.			
Leppyr	Leptobryum pyriforme (Hedw.) Wils.			
Limlim	Limprichtia revolvens (Sw.) Loeske [= Drepanocladus revolvens (Sw.) Warnst.]			
Loebad	Loeskypnum badium (Hartm.) Paul [= Drepanocladus badius (Hartm.) G.Rhot]			
Meetri	Meesia triquetra (Richt.) Angstr.			
Meeuli	Meesia uliginosa Hedw.	2	+	1
Mnisp	Mnium sp. Hedw.			
Molsen	Molendoa sendtneriana (B.S.G.) Limpr.			
Molten	Molendoa tenuinervis Limpr.			
Myuapi	Myurella apiculata (ref?)			
Myujul	Myurella julacea (Schwaegr.) B.S.G.	+	+	+
Myuten	Myurella tenerrima (Brid.) Lindb.			
Oliher	Oligotrichum hercynicum Hedw. DC			
Oncwah	Oncophorus wahlenbergii Brid.	+		
Ortchr	Orthothecium chryseum (Schwaegr. ex Schult.) Schimp.			
Ortstr	Orthothecium strictum Lor.	+		
Ortsp	Orthothecium sp. Schimp.	+	+	2
Phifon	Philonotis fontana (Hedw.) Brid.			

Phitom	Philonotis tomentella Molendo			r
Phisp	Philonotis sp. Brid.			
Pladem	Plagiobryum demissum (Hook.) Lindb.			
Plaell	Plagiomnium ellipticum (Brid.) T.Kop.			
Plajug	Platydictya jugermannioides (Brid.) Crum			
Pohcru	Pohlia cruda (Hedw.) Lindb.			
Pohnut	Pohlia nutans (Hedw.) Lindb.		+	+
Pohsp	Pohlia sp. Hedw.			
Polalp	Polytrichastrum alpinum (Hedw.) G.L.Sm.		P	+
Polcom	Polytrichum commune Hedw.			
Polhyp	Polytrichum hyperboreum R. Br.			
Poljun	Polytrichum juniperinum Hedw.			
Polpil	Polytrichum piliferum Hedw.			
Polsp	Polytrichum sp. Hedw.			
Polstr	Polytrichum strictum Brid.			
Psebre	Pseudocalliergon brevifolium (ref?)			
Psetri	Pseudocalliergon trifarium (Web. Et Mohr) Loeske [= Calliergon trifarium (Web. etMohr) Kindb.			
Psetur	Pseudocalliergon turgescens (T.Jens.) Loeske [= Calliergon turgescens (T.Jens.)Kindb.]			
Raccan	Racomitrium canescens s.l. (Hedw.) Brid.			
Raceri	Racomitrium ericoides (Web. ex Brid.) Brid.			
Raclan	Racomitrium lanuginosum (Hedw.) Brid.			
Racpan	Racomitrium panshii (C.Mull.) Kindb.			
Rhiand	Rhizomnium andrewsianum (Steere) T.Kop.			
Rhyrug	Rhytidium rugosum (Hedw.) Kindb.			
Sanunc	Sanoinia uncinata (Hedw.) Loeske [= Drepanocladus uncinatus (Hedw.) Warnst.]			
Schapo	Schistidium apocarpum (Hedw.) B.S.G.			
Schand	Schistidium andreaeopsis (C.Mull) Laz. [=Schistidium holmenianum Steere et Brassard]			
Schpap	Schistidium papillosum			
Schrac	Schistidium rac (ref?)			
Schsp	Schistidium sp. Brid.			
Limcos	Limprichtia cossonii (Schimp.) Anderson et al.			+
Selpol	Seligeria polaris Berggr.	+		
Selsp	Seligeria sp. B.S.G.			
Solalp	Solteria alpina (ref?)		+	
Splvas	Splachnum vasculosum Hedw.			
Sphaon	Sphagnum aongsroemii Hartm.			
Sphbal	Sphagnum balticum (Russ.) C.Jens			
Sphfim	Sphagnum fimbriatum Wilson			
Sphgir	Sphagnum girgensohnii Russ.			
Sphimb	Sphagnum imbricatum Hornsch. ex Russow			
Sphlin	Sphagnum lindbergii Schimp. ex Lindb.			
Sphsp	Sphagnum sp. L.			
Splsph	Splachnum sphaericum Hedw.			
Splsp	Splachnum sp. Hedw.			
Synmuc	Syntrichia mucronifolia (ref?)			
Torrur	Tortula ruralis (Hedw.) Gaertn. et al. [=Syntrichia ruralis (Hedw.) Web. & Mohr]			
Taylig	Tayloria ligulata (Dicks.) Lindb.			
Tetmni	Tetraplodon mnioides (Hedw.) B.S.G.			
Tetsp	Tetraplodon sp. B.S.G.			
Timaus	Timmia austriaca Hedw.			
Timsib	Timmia sibirica Lindb. & Arnell			
Timsp	Timmia sp. Hedw.			
Tomnit	Tomentypnum nitens (Hedw.) Loeske			
Torarc	Tortella arctica (Arnell) Crundw.& Nyh.			
Torfra	Tortella fragilis (Hook. & Wilson) Limpr.			
Tortor	Tortella tortuosa (Hedw.) Limpr.			
Torrur	Tortula ruralis (Hedw.) Gaertn. et al.			

Torsp	Tortula sp. Hedw.			r
Warexa	Warnstorfia exannulata (B.S.G.) Loeske			
Warsar	Warnstorfia sarmentosa (Wahlenb.) Hedenaes			
Liv	**Liverworts nomenclature Stotler & Crandall-Stotler 1977 (Bryologist 80(3):405-428)**			
Anamin	Anastrophyllum minutus (Schreb.) Schust.			
Antjur	Anthelia juratzkana (Limpr.) Trev.			
Arnfen	Arnellia fennica (Gott.) Lindb.			
Barhyp	Barbilophozia hyperborea (Schust.) R.&B.Stotl.			
Barqua	Barbilophozia quadriloba (Lindb.) Loeske			
Bletri	Blepharostoma trichophyllum (Dumb. Emend. Lindb.) Dum.	+	+	
Ceparc	Cephaloziella arctica Bruhn & Douin			
Cepdiv	Cephaloziella divarcata (Sm.) Schiffn.			
Cepgri	Cephaloziella grimsulana (Jack) Lacouture			
Cepsp	Cephaloziella sp. (Spruce) Steph.			
Gymcon	Gymnomitrion concinnatum (Lightf.) Corda			
Gymcor	Gymnomitrion corallioides Nees			
Jamsp	Jamsoniella sp. (Spruce) Carring.		+	
Juncae	Jungermannia caespiticia Lindenb.			
Junpol	Jungermannia polaris Lindb.			
Lopbad	Lophozia badensis (Gott. ex Rabenh.) Schiffn.			
Lopbic	Lophozia bicrenata (Schmid. ex Hoffm.) Dum.			
Lopexc	Lophozia excisa (Dicks.) Dum. Var. succulenta Schust & Damsh.			
Lophet	Lophozia heterocolpos (Thed.) M.A. Howe			
Lopmaj	Lophozia major (ref?)			
Lopnod	Lophozia nodia (ref?)			
Lopsp	Lophozia sp. (Dum.) Dum.		+	
Lopven	Lophozia ventricosa (Dicks.) Dum.			
Narsp	Nardia sp. S.Gray			
Pelqua	Peltolipus quadrata (Saut.) K.Mull.	+	+	+
Plaarc	Plagiochila arctica Bryhn & Kaal.			
Prasue	Prasanthus suecicus (Gott.) Lindb.			
Prequa	Preissia quadrata (Scop.) Nees			
Pticil	Ptilidium ciliare (L.) Hampe			
Scacal	Scapania calcicola (H.Arnell & J.Perss.) Ingham			
Scagym	Scapania gymnostomophila Kaal.			
Scairr	Scapania irrigua (Nees) Gott. et al.			
Scasp	Scapania sp. (Dum.) Dum.			
Thabid	Thal bid			
Othliv	Other liverwort, Hepaticea			
Nossp	Nostoc commune			
blacru	black cyanobacteria			


AH-BF-R-5
CFC-R-5
AH-BF-R-4
CFC-R-4
AH-BF-R-3
CFC-R-3
AH-BF-R-2
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CFC-R-1
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			BF-W-1	BF-W-2	BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1
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E-AHR-P-2	AHR-P-2	+				+	+	+					
DL-W-1	DL-W-1											+	
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DL-R-1	DL-R-1												
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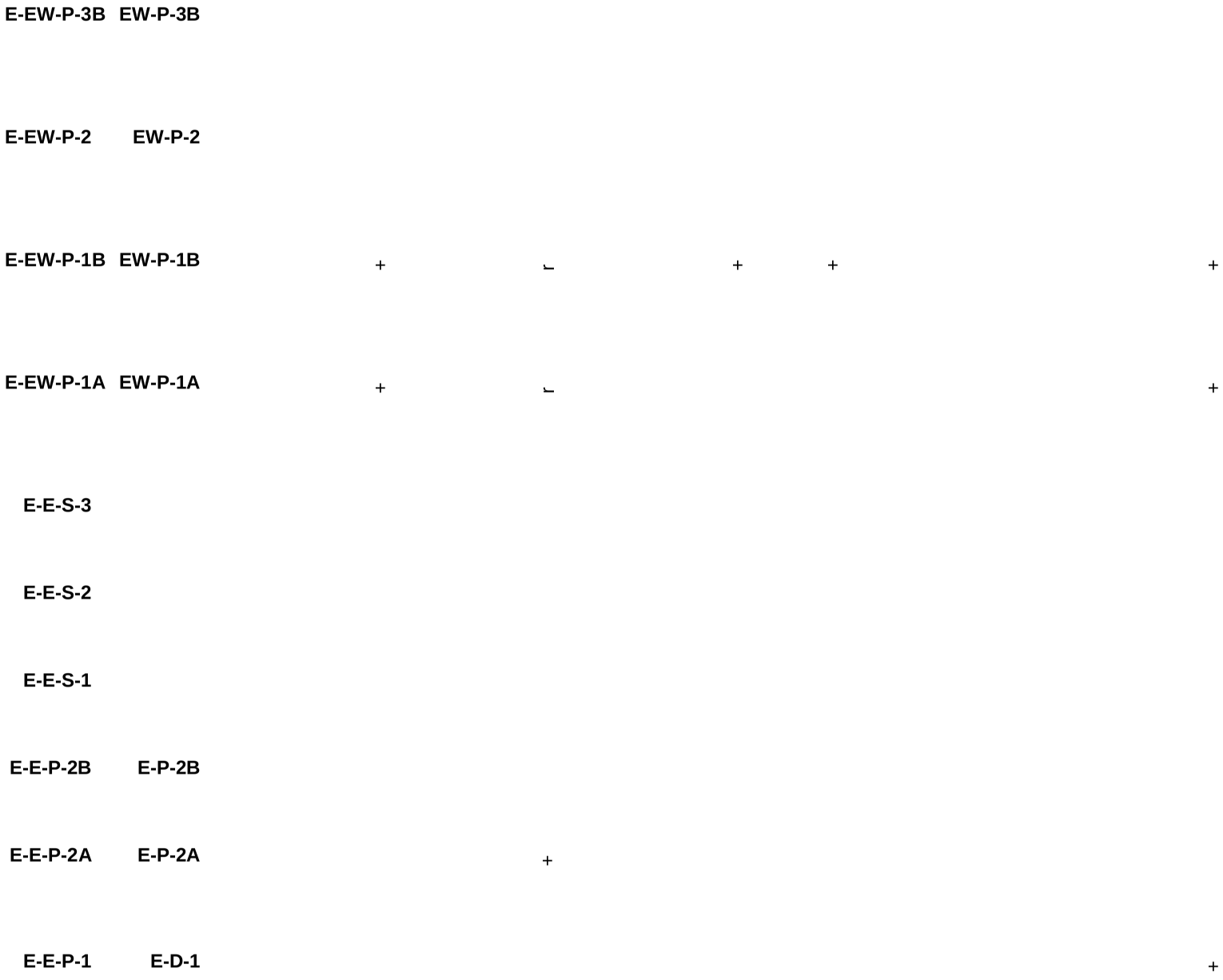
E-EW-P-3B
EW-P-3B
E-EW-P-2
EW-P-2
E-EW-P-1B
EW-P-1B
E-EW-P-1A
EW-P-1A
E-E-S-3
E-E-S-2
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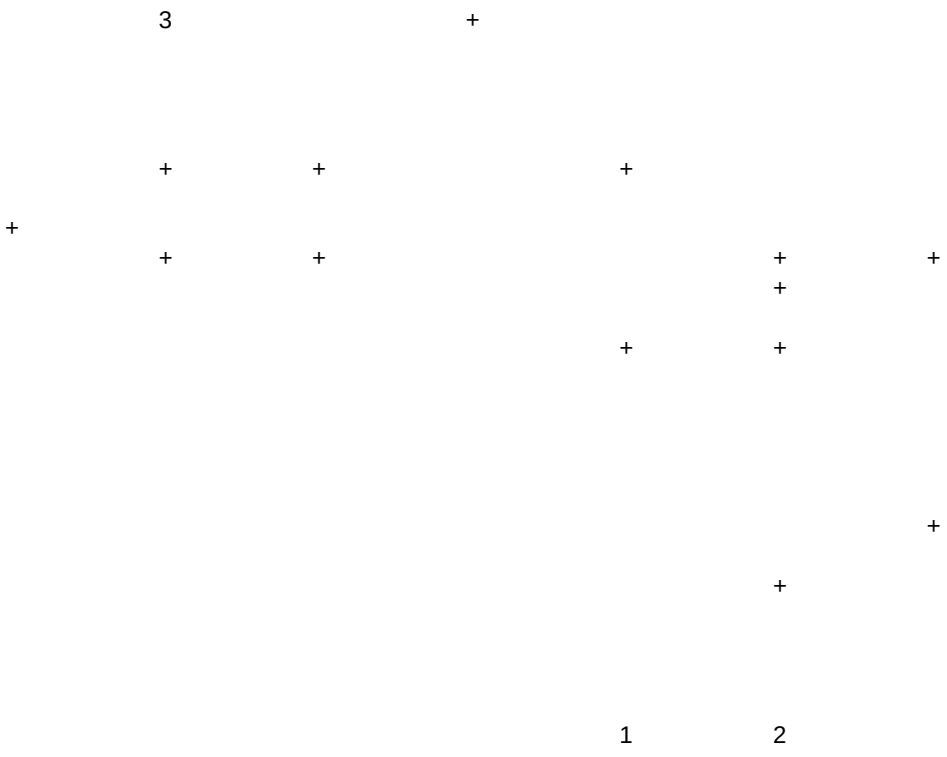
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R-S-5	R-W-1A R-W-1A	R-W-1B R-W-1B	R-W-2A R-W-2A	R-W-2B R-W-2B	R-W-3A R-W-3A	R-W-3B R-W-3B	V-CB-001 CAVM99-1
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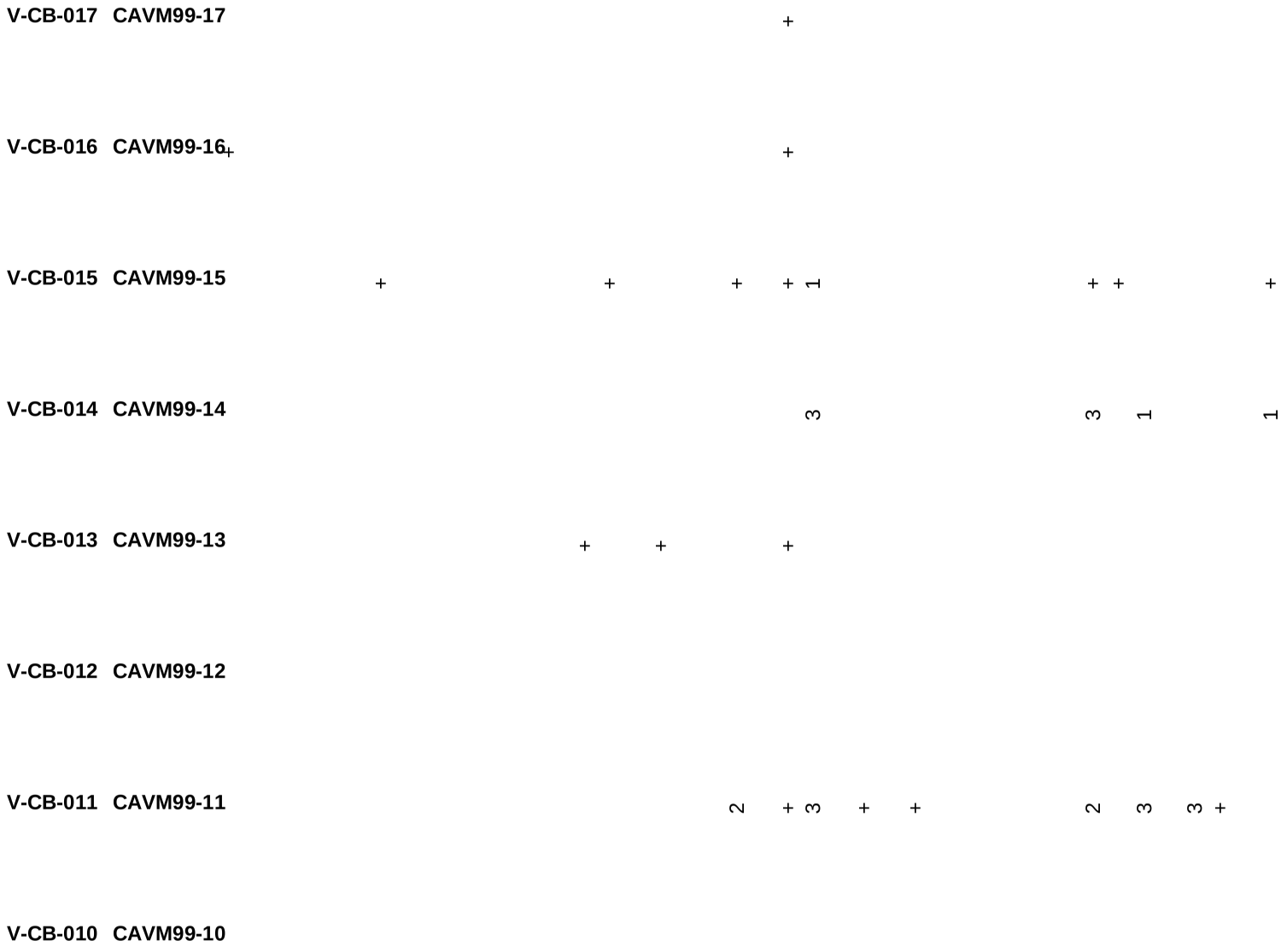
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V-CB-016 CAVM99-16
V-CB-015 CAVM99-15
V-CB-014 CAVM99-14
V-CB-013 CAVM99-13
V-CB-012 CAVM99-12
V-CB-011 CAVM99-11
V-CB-010 CAVM99-10

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V-HB-P-1a						+								+	
V-HB-M-1	**HB-M-1**					+									
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V-HB-W-1A HB-W-1A	V-HB-W-1B HB-W-1B	V-TR-D-1 CV-SR-1	V-TR-M-1 CV-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1 TR-R-1	V-TR-R-2 TR-R-2
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V-TR-W-2	**TR-W-2**			+	P		P	P	3	P	3		+	+	
V-TR-W-1	**TR-W-1**		P	+	P			P	1	P	4	1	P	+	P
V-TR-S-2		+													
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V-TR-R-4	**TR-R-4**					+cf									
V-TR-R-3	**TR-R-3**														

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Table 10. Lichen species cover data

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-2	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1A	E-EW-P-1B	E-EW-P-2	E-EW-P-3A
Lichen Identification (nomenclature according to Egan 1987 (B	BF-M-1	BF-M-2	BF-M-3				CFC-R-1	CFC-R-2	CFC-R-3	CFC-R-4	CFC-R-5	AX-S-1	AX-S-2	AX-S-3	BF-W-1	BF-W-2	BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1						DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	AHR-P-2	AHR-S-1	AHR-S-2	E-D-1	E-P-2				EW-P-1A	EW-P-1B	EW-P-2	EW-P-3A
Alectoria nigricans (Ach.) Nyl.					r																																						
Alectoria ochroleuca (Hoffm.) Massal.														+										1	+		+																+	
Alectoria sarmentosa (Ach.) Ach. ssp. vexillifera (Nyl.) D. Hawksw.																																											
Arthrorhaphis sp. Th.Fr.																																	P										
Bacidia bagliettoana (Massal. & de Not)																																											
Baeomyces carneus Florke				r															+																								
Baeomyces placophyllus Ach.																																			+								
Baeomyces rufus (Huds.) Rebent.		+ cf.			+																																			+			+
Biatora subduplex (ref?)																			+																									
Brigantiaea fuscolutea (Dickson) R. Sant.																			+																									
Bryocaulon divergens (Ach.) Karnef.																								1	+		+				r												r	
Bryoria sp. (Brodo & D.Hawksw.)																										r																	
Buellia geophila (Florke ex Sommerf.) Lynge																																											
Buellia insignis (Naeg. Ex Hepp) Th. Fr.																				+																								
Buellia papillata (Sommerf.) Tuck.					+														+								+														r		
Caloplaca ammiospila (Wahlenb. in Ach.) H.Olivier																			+																								+	
Caloplaca cerina (Ehrh.) Th.Fr.					+		+										P		+																P								
Caloplaca epiphyta Lynge					+	+																																					
Caloplaca jungermanniae (Vahl) Th.Fr.																			+																								r	
Caloplaca saxifragarum Poelt				r																																							
Caloplaca tetraspora (Nyl.) H.Olivier																			+																									
Caloplaca tiroliensis Zahlbr.				r	+	+													+	+															P						+		
Candelariella aurella (Hoffm.) Zahlbr.					+														+																					+		r	
Candelariella placodizans (Nyl.) Magnusson																			+																									
Candelariella sp. Mull. Arg.																																											
Catapyrenium sp. Flotow																																										r	
Cetraria cucullata (Bellardi) Ach.																																											
Cetraria cucullata (Bellardi) Ach.				+	+	+								+										2a	1	+	1	1														r	
Cetraria delisei (Bory ex Schaerer) Nyl.				+		+						1		1					+											1		+	+										
Cetraria ericetorum Opiz																								+	+																		
Cetraria nivalis (L.) Ach.																	+							1	+	+	+		P														
Cetraria tilesii Ach.																	+																											
Cladina mitis (Sandst.) Hustich																								+	+	+	+		+		+												
Cladina rangiferina (L.) Nyl.																								+	+		+																
Cladina stellaris (Opiz) Brodo																								+							r												
Cladina stygia (Fr.) Ahti																								+		+																	
Cladonia chlorophaea (Florke ex Sommerf.) Sprengel																								+			+																
Cladonia amaurocraea (Florke) Schaerer																									+	+	+																
Cladonia cf. stricta Nyl.																						+	+																				
Cladonia coccifera (L.) Willd.																			+					1	+		+		P		+												
Cladonia cornuta (L.) Hoffm.																								+																			
Cladonia deformis (L.) Hoffm.																								+							r												
Cladonia gracilis (L.) Willd.																								+	+	+	+	+															
Cladonia macrophylla (Schaerer) Stenh.																								+																			

Table 10. Lichen species cover data

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-R-6	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-1	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1J	E-EW-P-2	E-EW-P-3
Cladonia pleurota (Florke) Schaerer																											+			+		+													
Cladonia pocillum (Ach.) O.Rich.	+	+		+		r	+											+																+	+	+	P						+		
Cladonia pyxidata (L.) Hoffm.													+							+	+				+	+		1				r											+		
Cladonia sobresium (ref?)																													+																
Cladonia sp. Hill ex Browne																																													
Cladonia subcervicornus (Vainio) Kernst.																									1																				
Cladonia uncialis (L.) Weber ex Wigg.																									+	+	+	+				+													
Coelocaulon aculeata (Shchreber) Link						+																			+	+		+																r	
Collema ceraniscum Nyl.				+	+	+														+																								
Collema sp. Wigg.																																													
Collema tenax (Swartz) Ach.																																				P						+	r	P
Dacampia hookeri (ref?)				r										1																														
Dactylina arctica (Richardson) Nyl.																									+																				
Dactylina madreporiformis (Ach.) Tuck.																																													
Dactylina ramulosa (Hook.) Tuck.															+					+																									
Evernia perfragilis Llano																																													
Fulgensia bracteata Poelt	+	+	r	r	+	+	+																													+						+			
Fulgensia sp. Massal & de Not.																																													
Gyalecta foveolaris (Ach.) Schaerer						r																																							
Hypogymnia physodes (L.) Nyl.																											+																		
Hypogymnia subobscura (Vainio) Poelt				+	+																																							+	
Imshaugia aleuritis (Ach.) S.F.Meyer																											+																		
Japewia tornoensis (Nyl.) Tonsber																									+			+																	
Lecanora behringii Nyl.																																													
Lecanora circumborealis Brodo & Vitik.																											+																		
Lecanora epibryon (Ach.) Ach.		1	+	2	3	3	2											+																		P						+	+	
Lecanora leptacina Sommerf.																												r																
Lecanora luteovernalis Brodo				+	+	+																																						
Lecanora zosterae (Ach.) Nyl.				+	+	+														+																							r	r	
Lecidea ramulosa Th.Fr.	+	+	+	+	+																														+	+								
Lecidella wulfenii (Hepp) Korber.					+															+								r																
Leproloma vouauxii (Hue) Laundon				r																																						r		
Lepraria frigida ? (ref?)																																													
Lepraria sp. Ach.						r																													P		P							r
Leprocaulon subalbicans (Lamb) Lamb & Ward					+															+				+																				
Leptogium gelatinosum (With.) Laundon																					+																								
Leptogium minutissimum (Florke) Fr.																																			+										
Leptogium sp. (Ach.) Gray								+		+																																			
Lopadium coralloideum (Nyl.) Lynge																									+																				
Lopadium pezizoideum (Ach.) Korber																												r																
Masonhalea richardsonii (Hook.) Karnef																									1		+		+		+														
Megaspora verrucosa (Ach.) Hafellner & V.Wirth				+	r	+														+	+																						+	
Micarea assimilata (Nyl.) Coppins																				+																								
Mycobilimbia lobulata (Sommerf.) Hafellner					+																																							
Nephroma arcticum (L.) Torss.																																													
Ochrolechia frigida (Swartz) Lynge	+				+		+													+				+	+			+							+		P						+	
Ochrolechia sp. Massal.																																													
Ochrolechia upsaliensis (L.) Massal.							+																																					r	
Pannaria pezizoides (Weber) Trevisan																				+				+												+								

Table 10. Lichen species cover data

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-R-6	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-1	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1J	E-EW-P-2	E-EW-P-3
Pannaria praetermissa Nyl.																				+																									
Parmelia omphalodes (L.) Ach.																				+							+																		
Parmeliopsis ambigua (Wulfen in Jacq.) Nyl.																											+																		
Parmeliopsis hyperopta (Ach.) Arnold																											+																		
Peltigera aphthosa (L.) Willd.																				+				+																					
Peltigera canina (L.) Willd.																																													
Peltigera didactyla With.) Laundon																				+	+							+		+														
Peltigera lepidophora (Nyl. ex Vainio) Bitter																																			+										
Peltigera leucophlebia (Nyl.) Gyelnik																				+																									
Peltigera malacea (Ach.) Funck																												+																	
Peltigera membranacea (Ach.) Nyl.																												+																	
Peltigera rufescens Weis) Humb.													+		+								1	+				+							+										
Peltigera venosa (L.) Hoffm.																				+																									
Pertusaria dactylina (Ach.) Nyl.				+	+																																							
Pertusaria glomerata (Ach.) Schaerer					r															+																								
Pertusaria oculata (Dickson) Th.Fr.																				+																								
Phaeorrhiza nimbosa (Fr.) Mayrh. & Poelt				r	r	r																																					r
Physcia caesia (Hoffm.) Furnr.																																												
Physcia dubia (Hoffm.) Lettau																																												
Physcia sp. (Schreber) Michaux																																												
Physconia muscigena (Ach.) Poelt					r															+														+							+	+	+	
Pleospora hookeris (ref?)	+	+																																										
Polyblastia gelatinosa (Ach.) Th.Fr.																																			+										
Polyblastia sendtneri Krempelh.				r	r	r																											+										
Polyblastia theleodes (Sommerf.) Th.Fr.				r	r																																						
Protoblastenia terricola (Anzi) Lynge																																										r		
Psora decipiens (Hedwig) Hoffm.				r																																								
Psoroma hypnorum (Vahl) Gray																				+	+																								
Ramalina almquistii Vainio																																												
Rinodina roscida (Sommerf.) Arnold				r	+	+														+																						+	+		+
Rinodina turfacea (Wahlenb.) Korber				1																1	+							r																
Solorina bispora Nyl.	+	+	+										+	+						+				+										+	+										
Solorina crocea (L.) Ach.																												+																
Solorina saccata (L.) Ach.																																												
Solorina sp. Ach.																																												
Solorina spongiosa (Ach.) Anzi				+	r	+									+					+			+													+							
Sphaerophorus globosus (Huds.) Vainio																												+																
Stereocaulon alpinum Laurer ex Funck				+	+	+									1					+					+	+																		
Stereocaulon glareosum (Savicz) Magnusson	+	+	+															+					+				+																	
Stereocaulon paschale (L.) Hoffm.																											+				1													
Stereocaulon rivulorum Magnusson					+		+						2	+	+						+		+	r											1	1								
Ter dac (ref?)																																												
Thamnolia sp. Ach. ex Schaerer																																												
Thamnolia subuliformis (Ehrh.) Culb.	+	+			+										1			+		+	+															+	+					+	+	+
Thamnolia vermicularis (Swartz) Ach ex Schaerer				+		+	+																		+			1															
Toninia sedifolia (ref?)				r																																								r
Tuckermannopsis pinastri (Scop.) Hale																											+																	
Tuckermannopsis sepincola (Ehrh.) Hale																											+																	
White crust															1																						+								

Table 10. Lichen species cover data

New ID	AH-BF-M-1	AH-BF-M-2	AH-BF-M-3	AH-BF-P-1	AH-BF-P-2	AH-BF-P-3	AH-BF-R-1	AH-BF-R-2	AH-BF-R-3	AH-BF-R-4	AH-BF-R-5	AH-BF-S-1	AH-BF-S-2	AH-BF-S-3	AH-BF-W-1	AH-BF-W-2	AH-BF-W-3	AR-D-1	AR-P-1	AR-P-2	AR-R-1	AR-S-1	AR-W-1	DL-D-1	DL-D-2	DL-D-3	DL-D-4	DL-M-1	DL-R-1	DL-R-2	DL-S-1	DL-W-1	E-AHR-P-1	E-AHR-S-1	E-AHR-S-2	E-E-P-1	E-E-P-2	E-E-S-1	E-E-S-2	E-E-S-3	E-EW-P-1	E-EW-P-1J	E-EW-P-2	E-EW-P-3
Unknown crust																																												
Black crust												3	5																																
Grey crust													+																															
Species richness	**8**	**9**	**5**	**27**	**31**	**20**	**8**	**1**	**0**	**1**	**0**	**6**	**5**	**10**	**0**	**0**	**7**	**0**	**39**	**10**	**0**	**4**	**9**	**26**	**14**	**18**	**27**	**6**	**5**	**0**	**11**	**0**	**5**	**10**	**9**	**11**	**0**	**0**	**0**	**0**	**4**	**13**	**17**	**7**

Table 10. Lichen species cover data

New ID	E-EW-P-3B	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1	R-W-2	R-W-3	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015
Lichen Identification (nomenclature according to Egan 1987 (B	EW-P-3B	EW-R-1	EW-R-2	EW-R-3	EW-R-4			EW-W-1					R-X-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4						R-W-1	R-W-2	R-W-3	CAVM99-1	CAVM99-2	CAVM99-3	CAVM99-4	CAVM99-5	CAVM99-6	CAVM99-7	CAVM99-8	CAVM99-9	CAVM99-10	CAVM99-11	CAVM99-12	CAVM99-13	CAVM99-14	CAVM99-15
Alectoria nigricans (Ach.) Nyl.														+															P	r			r										
Alectoria ochroleuca (Hoffm.) Massal.													+																															
Alectoria sarmentosa (Ach.) Ach. ssp. vexillifera (Nyl.) D. Hawksw.																													r				P										
Arthrorhaphis sp. Th.Fr.																																												
Bacidia bagliettoana (Massal. & de Not)																+																												
Baeomyces carneus Florke																																												
Baeomyces placophyllus Ach.																																												
Baeomyces rufus (Huds.) Rebent.	+																																											
Biatora subduplex (ref?)																																												
Brigantiaea fuscolutea (Dickson) R. Sant.																																												
Bryocaulon divergens (Ach.) Karnef.																													+				P										
Bryoria sp. (Brodo & D.Hawksw.)																																												
Buellia geophila (Florke ex Sommerf.) Lynge																																												
Buellia insignis (Naeg. Ex Hepp) Th. Fr.																																												
Buellia papillata (Sommerf.) Tuck.														+																														
Caloplaca ammiospila (Wahlenb. in Ach.) H.Olivier																																												
Caloplaca cerina (Ehrh.) Th.Fr.																																										P			
Caloplaca epiphyta Lynge														+																														
Caloplaca jungermanniae (Vahl) Th.Fr.														+																														
Caloplaca saxifragarum Poelt																																												
Caloplaca tetraspora (Nyl.) H.Olivier																																												
Caloplaca tiroliensis Zahlbr.	+													+	r	r																												
Candelariella aurella (Hoffm.) Zahlbr.													+																															
Candelariella placodizans (Nyl.) Magnusson																																												
Candelariella sp. Mull. Arg.																																+												
Catapyrenium sp. Flotow																+																												
Cetraria cucullata (Bellardi) Ach.																							+	+					+	+			r			+							
Cetraria cucullata (Bellardi) Ach.	+												+	+		r	+							+	+					+	+			r			+							
Cetraria delisei (Bory ex Schaerer) Nyl.													+						r	+				1	2						P										r			r
Cetraria ericetorum Opiz																																												
Cetraria nivalis (L.) Ach.																													+	2	+	r				+	+	2		+	+		r
Cetraria tilesii Ach.														+															+	+	r		+			+	+	2		+	+		r
Cladina mitis (Sandst.) Hustich																																												
Cladina rangiferina (L.) Nyl.																																												
Cladina stellaris (Opiz) Brodo																																												
Cladina stygia (Fr.) Ahti																																												
Cladonia chlorophaea (Florke ex Sommerf.) Sprengel																																												
Cladonia amaurocraea (Florke) Schaerer																																												
Cladonia cf. stricta Nyl.																																												
Cladonia coccifera (L.) Willd.																																												
Cladonia cornuta (L.) Hoffm.																																												
Cladonia deformis (L.) Hoffm.																																												
Cladonia gracilis (L.) Willd.																																												
Cladonia macrophylla (Schaerer) Stenh.																																												

Table 10. Lichen species cover data

New ID	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1	R-W-2	R-W-3	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015
Cladonia pleurota (Florke) Schaerer																																											
Cladonia pocillum (Ach.) O.Rich.											+					+	+	+							+					r	r			r	r	r	r			r			r
Cladonia pyxidata (L.) Hoffm.							+																	+		+																	
Cladonia sobresium (ref?)																																											
Cladonia sp. Hill ex Browne						+																																					
Cladonia subcervicornus (Vainio) Kernst.																																											
Cladonia uncialis (L.) Weber ex Wigg.																																											
Coelocaulon aculeata (Shchreber) Link													+	+																													
Collema ceraniscum Nyl.													+	+	+	+	+																										
Collema sp. Wigg.																																											
Collema tenax (Swartz) Ach.	P												+		+ cf.	+	+																										
Dacampia hookeri (ref?)																+																											
Dactylina arctica (Richardson) Nyl.																															+							1		+			
Dactylina madreporiformis (Ach.) Tuck.																																											
Dactylina ramulosa (Hook.) Tuck.													+	+																	+									+			
Evernia perfragilis Llano													+																P				+				+			r		
Fulgensia bracteata Poelt														+	r		+																				+						
Fulgensia sp. Massal & de Not.						+																																					
Gyalecta foveolaris (Ach.) Schaerer																																											
Hypogymnia physodes (L.) Nyl.																																											
Hypogymnia subobscura (Vainio) Poelt	+													+																+		+		r									
Imshaugia aleuritis (Ach.) S.F.Meyer																																											
Japewia tornoensis (Nyl.) Tonsber																																											
Lecanora behringii Nyl.																															P												
Lecanora circumborealis Brodo & Vitik.																																											
Lecanora epibryon (Ach.) Ach.	+					1								+	+	+	+	+												2	+	P			2	r	+	P			P	+		
Lecanora leptacina Sommerf.																																											
Lecanora luteovernalis Brodo																																											
Lecanora zosterae (Ach.) Nyl.													+	+	+	+																											
Lecidea ramulosa Th.Fr.														+	+	+	+	P		P		1		2	1	1									P								
Lecidella wulfenii (Hepp) Korber.																																											
Leproloma vouauxii (Hue) Laundon																																											
Lepraria frigida ? (ref?)																										+																	
Lepraria sp. Ach.						1																																					
Leprocaulon subalbicans (Lamb) Lamb & Ward																																											
Leptogium gelatinosum (With.) Laundon													+	+6	+	+																											
Leptogium minutissimum (Florke) Fr.																																											
Leptogium sp. (Ach.) Gray		P?	r		+																																					
Lopadium coralloideum (Nyl.) Lynge																																											
Lopadium pezizoideum (Ach.) Korber																																											
Masonhalea richardsonii (Hook.) Karnef																																											
Megaspora verrucosa (Ach.) Hafellner & V.Wirth	+												+	+	+	+	+																										
Micarea assimilata (Nyl.) Coppins																																											
Mycobilimbia lobulata (Sommerf.) Hafellner															+	r																											
Nephroma arcticum (L.) Torss.																																											
Ochrolechia frigida (Swartz) Lynge														+		r																					+		3					
Ochrolechia sp. Massal.																									+						r		+										
Ochrolechia upsaliensis (L.) Massal.																														P	P		P			P							
Pannaria pezizoides (Weber) Trevisan																	+																										

Table 10. Lichen species cover data

New ID	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1	R-W-2	R-W-3	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015
Pannaria praetermissa Nyl.																																											
Parmelia omphalodes (L.) Ach.																																	r										
Parmeliopsis ambigua (Wulfen in Jacq.) Nyl.																																											
Parmeliopsis hyperopta (Ach.) Arnold																																											
Peltigera aphthosa (L.) Willd.						1	1																																				
Peltigera canina (L.) Willd.							+																																				
Peltigera didactyla With.) Laundon																																											
Peltigera lepidophora (Nyl. ex Vainio) Bitter																								+																				
Peltigera leucophlebia (Nyl.) Gyelnik																																											
Peltigera malacea (Ach.) Funck																																											
Peltigera membranacea (Ach.) Nyl.																																											
Peltigera rufescens Weis) Humb.														+			+						+																				
Peltigera venosa (L.) Hoffm.																																											
Pertusaria dactylina (Ach.) Nyl.																		+																										
Pertusaria glomerata (Ach.) Schaerer																																											
Pertusaria oculata (Dickson) Th.Fr.																																											
Phaeorrhiza nimbosa (Fr.) Mayrh. & Poelt																																											
Physcia caesia (Hoffm.) Furnr.																																											
Physcia dubia (Hoffm.) Lettau																																											
Physcia sp. (Schreber) Michaux						+																																					
Physconia muscigena (Ach.) Poelt	+													+	+	r	r							+																r				
Pleospora hookeris (ref?)																																											
Polyblastia gelatinosa (Ach.) Th.Fr.													+																														
Polyblastia sendtneri Krempelh.													+			r	+			P																							
Polyblastia theleodes (Sommerf.) Th.Fr.																																											
Protoblastenia terricola (Anzi) Lynge																	+							+																				
Psora decipiens (Hedwig) Hoffm.																																											
Psoroma hypnorum (Vahl) Gray																																											
Ramalina almquistii Vainio																																	P								P		
Rinodina roscida (Sommerf.) Arnold	+												+	+	1	1	1																										
Rinodina turfacea (Wahlenb.) Korber														+																													
Solorina bispora Nyl.																				+																							
Solorina crocea (L.) Ach.																																											
Solorina saccata (L.) Ach.																															+	r											r
Solorina sp. Ach.						+	+																																r				
Solorina spongiosa (Ach.) Anzi														+	+	r	+																										
Sphaerophorus globosus (Huds.) Vainio																																											
Stereocaulon alpinum Laurer ex Funck						1	1							+										+																			
Stereocaulon glareosum (Savicz) Magnusson																																											
Stereocaulon paschale (L.) Hoffm.																																											
Stereocaulon rivulorum Magnusson						1																1			+																		
Ter dac (ref?)																																											
Thamnolia sp. Ach. ex Schaerer						+	r																										r								+		
Thamnolia subuliformis (Ehrh.) Culb.	+												+	+	+	+	+				r			1	+					+	+	+		2			1	1	2		+			
Thamnolia vermicularis (Swartz) Ach ex Schaerer																						+				+																	
Toninia sedifolia (ref?)																						+																					
Tuckermannopsis pinastri (Scop.) Hale																																											
Tuckermannopsis sepincola (Ehrh.) Hale																																											
White crust							+													+		+																1					

Table 10. Lichen species cover data

New ID	E-EW-P-3	E-EW-R-1	E-EW-R-2	E-EW-R-3	E-EW-R-4	E-EW-S-1	E-EW-S-2	E-EW-W-1	E-EW-W-2	E-EW-W-3	E-EW-W-4	E-EW-W-5	R-D-1	R-P-1	R-P-2	R-P-3	R-P-4	R-R-1	R-R-2	R-R-3	R-R-4	R-S-1	R-S-2	R-S-3	R-S-4	R-S-5	R-W-1	R-W-2	R-W-3	V-CB-001	V-CB-002	V-CB-003	V-CB-004	V-CB-005	V-CB-006	V-CB-007	V-CB-008	V-CB-009	V-CB-010	V-CB-011	V-CB-012	V-CB-013	V-CB-014	V-CB-015
Unknown crust							+															+																						
Black crust						2																2		2	1																			
Grey crust																																											
Species richness	**10**	**1**	**1**	**0**	**1**	**11**	**8**	**0**	**0**	**0**	**1**	**0**	**16**	**25**	**14**	**20**	**16**	**4**	**1**	**5**	**1**	**7**	**0**	**11**	**10**	**4**	**0**	**0**	**0**	**11**	**14**	**10**	**2**	**13**	**3**	**2**	**10**	**8**	**6**	**0**	**9**	**6**	**0**	**5**

Table 10. Lichen species cover data

New ID	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Lichen Identification (nomenclature according to Egan 1987 (B	**CAVM99-16**	**CAVM99-17**	**CAVM99-18**	**MP-R-1**	**HB-M-1**			**HB-R-1**	**HB-R-2**		**HB-W-1**	**CV-SR-1**	**CV-M-1**			**TR-R-1**	**TR-R-2**	**TR-R-3**	**TR-R-4**			**TR-W-1**	**TR-W-2**	**Frequency (#/111 plots)**
Alectoria nigricans (Ach.) Nyl.		+																						6
Alectoria ochroleuca (Hoffm.) Massal.																								6
Alectoria sarmentosa (Ach.) Ach. ssp. vexillifera (Nyl.) D. Hawksw.																								2
Arthrorhaphis sp. Th.Fr.																								1
Bacidia bagliettoana (Massal. & de Not)							r																	2
Baeomyces carneus Florke																								2
Baeomyces placophyllus Ach.																								1
Baeomyces rufus (Huds.) Rebent.																								5
Biatora subduplex (ref?)																								1
Brigantiaea fuscolutea (Dickson) R. Sant.																								1
Bryocaulon divergens (Ach.) Karnef.																								7
Bryoria sp. (Brodo & D.Hawksw.)																								1
Buellia geophila (Florke ex Sommerf.) Lynge																				2	1			2
Buellia insignis (Naeg. Ex Hepp) Th. Fr.																								1
Buellia papillata (Sommerf.) Tuck.																								5
Caloplaca ammiospila (Wahlenb. in Ach.) H.Olivier																								2
Caloplaca cerina (Ehrh.) Th.Fr.																								6
Caloplaca epiphyta Lynge			P																					4
Caloplaca jungermanniae (Vahl) Th.Fr.																								3
Caloplaca saxifragarum Poelt																								1
Caloplaca tetraspora (Nyl.) H.Olivier																								1
Caloplaca tiroliensis Zahlbr.							r							r										13
Candelariella aurella (Hoffm.) Zahlbr.																								5
Candelariella placodizans (Nyl.) Magnusson																								1
Candelariella sp. Mull. Arg.																								1
Catapyrenium sp. Flotow																								2
Cetraria cucullata (Bellardi) Ach.		+	+																					8
Cetraria cucullata (Bellardi) Ach.		+	+																					23
Cetraria delisei (Bory ex Schaerer) Nyl.	+	+																						18
Cetraria ericetorum Opiz																								2
Cetraria nivalis (L.) Ach.	1	+	+																					19
Cetraria tilesii Ach.	+	+	+				1																	16
Cladina mitis (Sandst.) Hustich																								6
Cladina rangiferina (L.) Nyl.																								3
Cladina stellaris (Opiz) Brodo																								2
Cladina stygia (Fr.) Ahti																								2
Cladonia chlorophaea (Florke ex Sommerf.) Sprengel																								2
Cladonia amaurocraea (Florke) Schaerer																								3
Cladonia cf. stricta Nyl.																								2
Cladonia coccifera (L.) Willd.																								6
Cladonia cornuta (L.) Hoffm.																								1
Cladonia deformis (L.) Hoffm.																								2
Cladonia gracilis (L.) Willd.																								5
Cladonia macrophylla (Schaerer) Stenh.																								1

Table 10. Lichen species cover data

New ID	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Cladonia pleurota (Florke) Schaerer																								3
Cladonia pocillum (Ach.) O.Rich.	r	+													r									27
Cladonia pyxidata (L.) Hoffm.																								11
Cladonia sobresium (ref?)																								1
Cladonia sp. Hill ex Browne			+																					2
Cladonia subcervicornus (Vainio) Kernst.																								1
Cladonia uncialis (L.) Weber ex Wigg.																								5
Coelocaulon aculeata (Shchreber) Link																								7
Collema ceraniscum Nyl.																								9
Collema sp. Wigg.														r							+			2
Collema tenax (Swartz) Ach.																								9
Dacampia hookeri (ref?)														1	1									5
Dactylina arctica (Richardson) Nyl.																								4
Dactylina madreporiformis (Ach.) Tuck.		+											+	r	r									4
Dactylina ramulosa (Hook.) Tuck.	r	+					r																	9
Evernia perfragilis Llano		+	+				r																	8
Fulgensia bracteata Poelt														+	+									15
Fulgensia sp. Massal & de Not.																								1
Gyalecta foveolaris (Ach.) Schaerer																								1
Hypogymnia physodes (L.) Nyl.																								1
Hypogymnia subobscura (Vainio) Poelt			P																					9
Imshaugia aleuritis (Ach.) S.F.Meyer																								1
Japewia tornoensis (Nyl.) Tonsber																								2
Lecanora behringii Nyl.		P																						2
Lecanora circumborealis Brodo & Vitik.																								1
Lecanora epibryon (Ach.) Ach.		+	P				r							+	1									31
Lecanora leptacina Sommerf.																								1
Lecanora luteovernalis Brodo																								3
Lecanora zosterae (Ach.) Nyl.							r																	11
Lecidea ramulosa Th.Fr.															+									19
Lecidella wulfenii (Hepp) Korber.																								3
Leproloma vouauxii (Hue) Laundon																								2
Lepraria frigida ? (ref?)																								1
Lepraria sp. Ach.																								5
Leprocaulon subalbicans (Lamb) Lamb & Ward															+									4
Leptogium gelatinosum (With.) Laundon																								5
Leptogium minutissimum (Florke) Fr.																								1
Leptogium sp. (Ach.) Gray																								5
Lopadium coralloideum (Nyl.) Lynge																								1
Lopadium pezizoideum (Ach.) Korber																								1
Masonhalea richardsonii (Hook.) Karnef																								4
Megaspora verrucosa (Ach.) Hafellner & V.Wirth														+	+									14
Micarea assimilata (Nyl.) Coppins																								1
Mycobilimbia lobulata (Sommerf.) Hafellner																								3
Nephroma arcticum (L.) Torss.		+																						1
Ochrolechia frigida (Swartz) Lynge																								14
Ochrolechia sp. Massal.																								3
Ochrolechia upsaliensis (L.) Massal.																								6
Pannaria pezizoides (Weber) Trevisan																								4

Table 10. Lichen species cover data

New ID	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Pannaria praetermissa Nyl.																								1
Parmelia omphalodes (L.) Ach.		1																						4
Parmeliopsis ambigua (Wulfen in Jacq.) Nyl.																								1
Parmeliopsis hyperopta (Ach.) Arnold																								1
Peltigera aphthosa (L.) Willd.																								4
Peltigera canina (L.) Willd.																								1
Peltigera didactyla With.) Laundon																								4
Peltigera lepidophora (Nyl. ex Vainio) Bitter																								2
Peltigera leucophlebia (Nyl.) Gyelnik																								1
Peltigera malacea (Ach.) Funck																								1
Peltigera membranacea (Ach.) Nyl.																								1
Peltigera rufescens Weis) Humb.																								9
Peltigera venosa (L.) Hoffm.																								1
Pertusaria dactylina (Ach.) Nyl.		P																						4
Pertusaria glomerata (Ach.) Schaerer																								2
Pertusaria oculata (Dickson) Th.Fr.																								1
Phaeorrhiza nimbosa (Fr.) Mayrh. & Poelt																								4
Physcia caesia (Hoffm.) Furnr.			P																					1
Physcia dubia (Hoffm.) Lettau			P																					1
Physcia sp. (Schreber) Michaux																								1
Physconia muscigena (Ach.) Poelt		P	P												+									17
Pleospora hookeris (ref?)																								2
Polyblastia gelatinosa (Ach.) Th.Fr.																								2
Polyblastia sendtneri Krempelh.													1											9
Polyblastia theleodes (Sommerf.) Th.Fr.																								2
Protoblastenia terricola (Anzi) Lynge																								3
Psora decipiens (Hedwig) Hoffm.																								1
Psoroma hypnorum (Vahl) Gray																								2
Ramalina almquistii Vainio			P																					3
Rinodina roscida (Sommerf.) Arnold						+	+							+	1									17
Rinodina turfacea (Wahlenb.) Korber																								5
Solorina bispora Nyl.														+	+									12
Solorina crocea (L.) Ach.																								1
Solorina saccata (L.) Ach.																								3
Solorina sp. Ach.										[P]														4
Solorina spongiosa (Ach.) Anzi		r				r																		13
Sphaerophorus globosus (Huds.) Vainio																								1
Stereocaulon alpinum Laurer ex Funck																								11
Stereocaulon glareosum (Savicz) Magnusson																								6
Stereocaulon paschale (L.) Hoffm.																								2
Stereocaulon rivulorum Magnusson																								13
Ter dac (ref?)		+																						1
Thamnolia sp. Ach. ex Schaerer	+	+																						6
Thamnolia subuliformis (Ehrh.) Culb.			+				1							r										32
Thamnolia vermicularis (Swartz) Ach ex Schaerer															+									8
Toninia sedifolia (ref?)																								3
Tuckermannopsis pinastri (Scop.) Hale																								1
Tuckermannopsis sepincola (Ehrh.) Hale																								1
White crust																				2				7

Table 10. Lichen species cover data

New ID	V-CB-016	V-CB-017	V-CB-018	V-CB-R-1	V-HB-M-1	V-HB-P-1a	V-HB-P-1b	V-HB-R-1	V-HB-R-2	V-HB-S-1	V-HB-W-1	V-TR-D-1	V-TR-M-1	V-TR-P-2	V-TR-P-3	V-TR-R-1	V-TR-R-2	V-TR-R-3	V-TR-R-4	V-TR-S-1	V-TR-S-2	V-TR-W-1	V-TR-W-2	
Unknown crust																								2
Black crust																					2			7
Grey crust																								1
Species richness	**6**	**19**	**14**	**0**	**0**	**2**	**9**	**0**	**0**	**1**	**0**	**0**	**2**	**10**	**12**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	

Table 11. Relevé site description data sheet.

Study Site: ***Site Description***

Relevé No.: _____ Date: _____ Recording personnel: _____ Weather: _____

Study area description: _____

Slope (deg): _____ Thaw depth (cm): A: _____ _____ _____ _____ _____ _____ _____ _____ _____ _

Aspect: _____ B: _____ _____ _____ _____ _____ _____ _____ _____ _____ _

Elevation: _____ C: _____ _____ _____ _____ _____ _____ _____ _____ _____ _

Record numbers for all microsites.

Landforms

1 Hills (including kames and mor
2 Talus slope
3 Colluvial basin
4 Glaciofluvial and other fluvial t
5 Marine terrace
6 Floodplains
7 Drained lakes and flat lake mar
8 Abandoned point bars and sloug
9 Estuary
10 Lake or pond
11 Stream
12 Sea bluff
13 Lake bluff
14 Stream bluff
15 Sand dunes
16 Beach
17 Disturbed
18 _____
19 _____
20 _____
21 _____

Surficial Geology (Parent Materia

1 Glacial tills
2 Glaciofluvial deposits
3 Active alluvial sands
4 Active alluvial gravels
5 Stabilized alluvium (sands & gr
6 Undifferentiated hill slope collu
7 Basin colluvium and organic de
8 Drained lake or lacustrine organ deposits
9 Lake or pond organic, sand, or s
10 Undifferentiated sands
11 Undifferentiated clay
12 Roads and gravel pads
13 _____
14 _____
15 _____
16 _____

Surficial Geomorphology

1 Frost scars
2 Wetland hummocks
3 Turf hummocks
4 Gelifluction features
5 Strangmoor or aligned hummoc
6 High- or flat-centered polygons
7 Mixed high- and low-centered p
8 Sorted and non-sorted stripes
9 Palsas
10 Thermokarst pits
11 Featureless or with less 20% frost scars
12 Well-developed hillslope water tracks and small streams > 50 cm deep
13 Poorly developed hillslope wate < 50 cm deep
14 Gently rolling or irregular micro
15 Stoney surface
16 Lakes and ponds
17 Disturbed
18 _____
19 _____

Microsites

1 Frost-scar element
2 Inter-frost scar element
3 Strang or hummock
4 Flark, interstrang, or interhummock area
5 Polygon center
6 Polygon trough
7 Polygon rim
8 Stripe element
9 Inter-stripe element
10 Point bar (raised element)
11 Slough (wet element)
12 _____
13 _____
14 _____
15 _____

Site Moisture (modified from Komárková 1983)

1 Extremely xeric - almost no moisture; no plant gro
2 Very xeric - very little moisture; dry sand dunes
3 Xeric - little moisture; stabilized sand dunes, dry ri
4 Subxeric - noticeable moisture; well-drained slopes, ridges
5 Subxeric to mesic - very noticeable moisture; flat t gently sloping
6 Mesic-moderate moisture; flat or shallow depressi
7 Mesic to subhygric - considerable moisture; depres
8 Subhygric - very considerable moisture; saturated l < 5% standing water < 10 cm deep
9 Hygric - much moisture; up to 100% of surface un 10 to 50 cm deep; lake margins, shallow ponds, str
10 Hydric - very much moisture; 100% of surface und 50 to 150 cm deep; lakes, streams

Soil Moisture (from Komárková 1983)

1 Very dry - very little moisture; soil does not stick t
2 Dry - little moisture; soil somewhat sticks together
3 Damp - noticeable moisture; soil sticks together bu
4 Damp to moist - very noticeable moisture; soil clu
5 Moist - moderate moisture; soil binds but can be broken apart
6 Moist to wet - considerable moisture; soil binds an to fingers
7 Wet - very considerable moisture; water drops can be squeezed out of soil
8 Very wet - much moisture can be squeezed out of s
9 Saturated - very much moisture; water drips out of
10 Very saturated - extreme moisture; soil is more liqu than solid

Glacial Geology

1 Till
2 Outwash
3 Bedrock
4 _____
5 _____
6 _____
7 _____

Topographic Position

1 Hill crest or shou
2 Side slope
3 Footslope or toes
4 Flat
5 Drainage channel
6 Depression
7 Lake or pond

Other notes:

_____

_____

Soil Units

1 Pergelic Cryorthent, acid
2 Pergelic Cryopsamment
3 Pergelic Cryohemist, euic
4 Pergelic Cryosaprist, euic
5 Lithic Pergelic Cryosaprist
6 Pergelic Cryofibrist, euic
7 Histic Pergelic Cryaquept, acid
8 Histic Pergelic Cryaquept, nonacid
9 Pergelic Cryaquept, acid
10 Pergelic Cryaquept, nonacid
11 Pergelic Cryochrept
12 Pergelic Cryumbrept
13 Ruptic-Lithic Cryumbrept
14 Pergelic Cryaquoll
15 Histic Pergelic Cryaquoll
16 Pergelic Cryoboroll
17 _____
18 _____
19 _____
20 _____

Exposure Scale

1 Protected from winds
2 Moderate exposure to winds
3 Exposed to winds
4 Very exposed to winds

Estimated Snow Duration

1 Snow free all year
2 Snow free most of winter; some snov persistsafter storm but is blown free afterward
3 Snow free prior to melt out but with most of winter
4 Snow free immediately after melt ou
5 Snow bank persists 1-2 weeks after n
6 Snow bank persists 3-4 weeks after n
7 Snow bank persists 4-8 weeks after n
8 Snow bank persists 8-12 weeks after
9 Very short snow free period
10 Deep snow all year

Animal and Human Disturbance

0 No sign present
1 Some sign present; no disturbance
2 Minor disturbance or extensive sign
3 Moderate disturbance; small dens or grazing
4 Major disturbance; multiple dens or noticeable trampling
5 Very major disturbance; very extens tunneling or large pit

Stability

1 Stable
2 Subject to occasional disturbance
3 Subject to prolonged but slow disturbance such as solifluction
4 Annually disturbed
5 Disturbed more than once annually

Table 12. Relevé vegetation data sheet.

Study Site: ***Relevé Data***

Relevé No.: _______________ Date: __________________ Recording personnel: ________________________ Photo #: ____________

Vegetation (describe moisture status, dominant species in each layer, dominant growth forms, and physiognomic unit): Plot size (m): __________

Site Description:

Braun Blanquet Cover Estimate Scale:

- r = rare
- + = common, but < 1% cover
- 1 = 1 - 5%
- 2 = 6 - 25%
- 3 = 25 - 50%
- 4 = 51 - 75 %
- 5 = 76 - 100%

Live cover (%)		**Non-Living cover (%)**	
Low Shrubs:	____	Rocks:	____
Dwarf Shrubs:	____	Bare soil:	____
Evergreen shrubs:	____	Water:	____
Deciduous shrubs:	____	Frost scars:	____
Forbs:	____	Total dead:	____
Graminoids:	____	Ht. of veg. canopy (cm):	____
Lichens:	____		
Bryophytes:	____		

Species Cover Estimates:

Vascular plants		*Bryophytes*		*Lichens*	
Species	*Cover*	*Species*	*Cover*	*Species*	*Cover*

_____

Acknowledgements

This project was assisted by funding from the Arctic Transitions in the Land-Atmosphere System (ATLAS) project (OPP-9732076), an NSF PFSMETE - postdoctoral fellowship integrating research and field education, and the University of Minnesota Itasca Field Biology Program and Summer Session office. We thank the Polar Continental Shelf Project, Nunavut Research Institute, Steve Matthews of RWED, George Hakongak, Nunavut Arctic College, and the Hamlet office in Cambridge Bay for assistance with logistics, meetings, and transportation. Special thanks to members of the CAVM project and the students of Arctic Field Ecology.

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Appendix I – Photos


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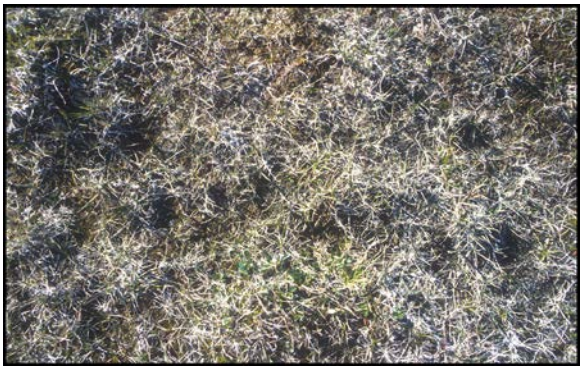
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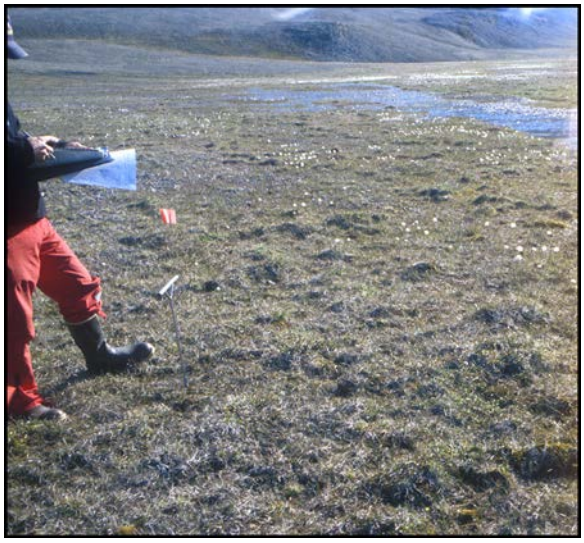
AH-BF-R1B


AH-BF-R3A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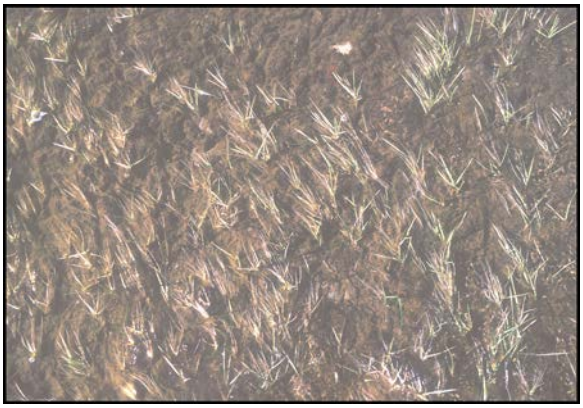
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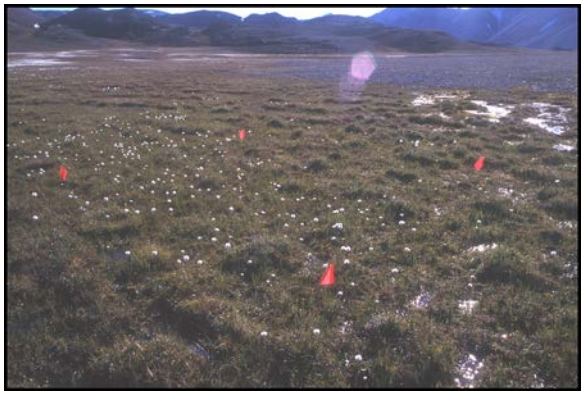
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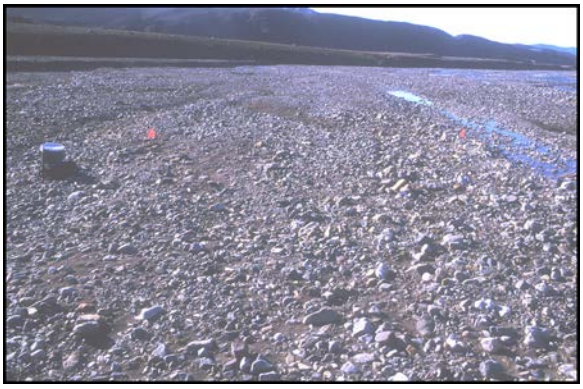
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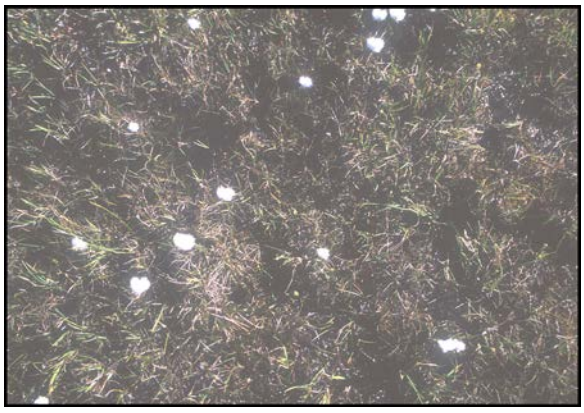
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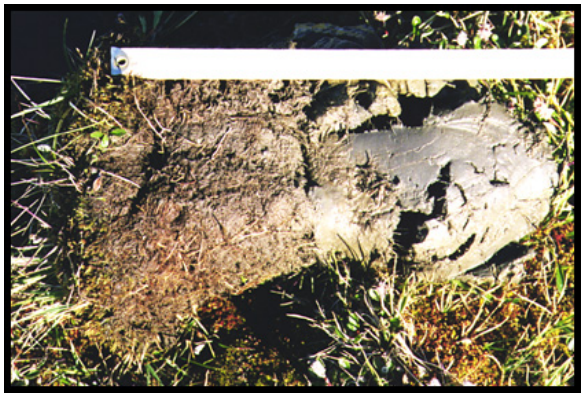
AH-BF-R5B


AH-BF-R4C


AH-BF-W1A


AH-BF-W1B


AH-BF-W2B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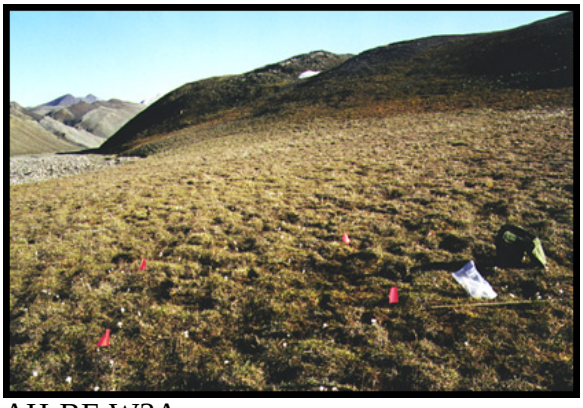
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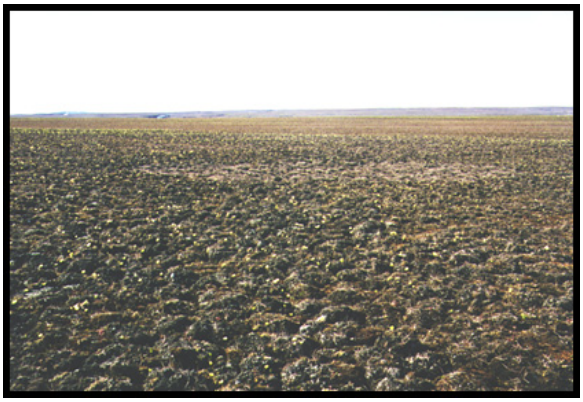
AH-BF-W3B


AR-D-1B


AH-BF-W3C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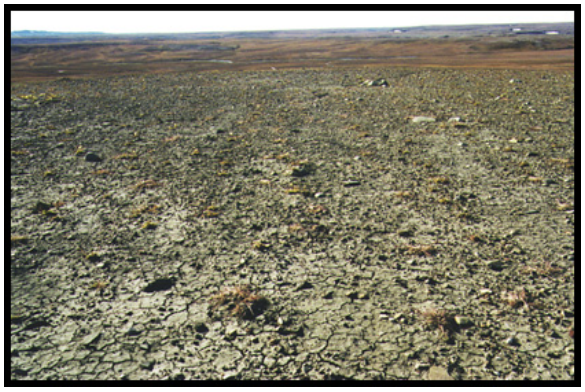
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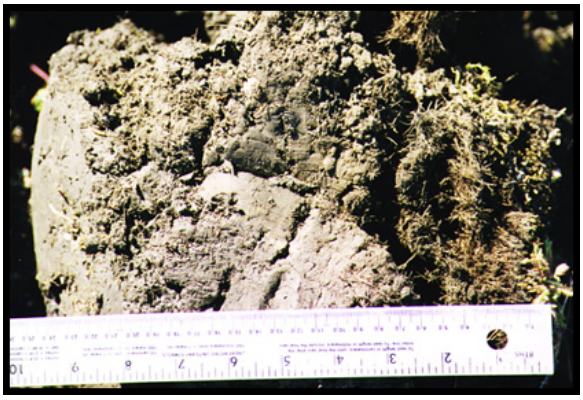
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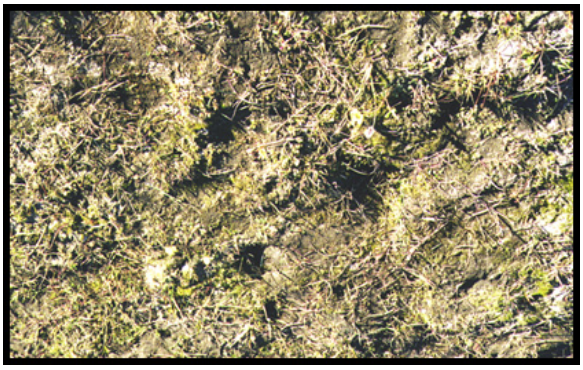
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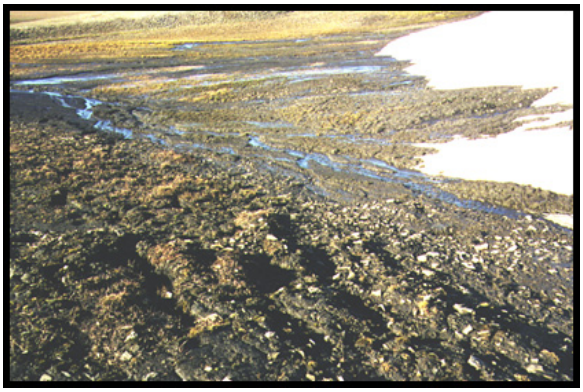
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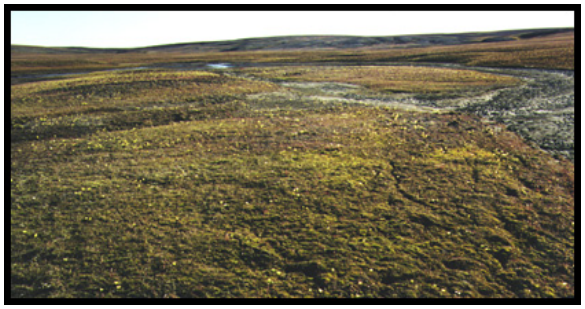
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AR-S-1B


AR-W-1A


DL-R-1B


AR-W-1B


DL-R-2A


DL-R-1A


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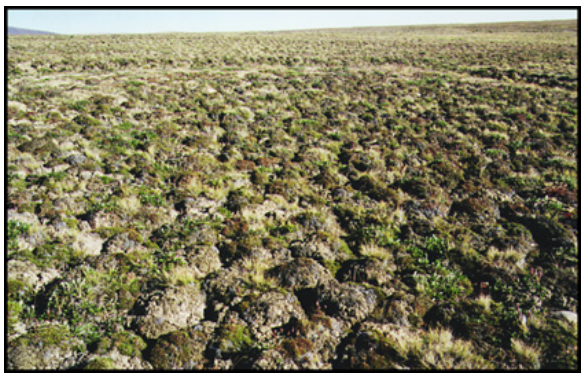
E-E-P-2A


DL-W-1B


E-E-P-2B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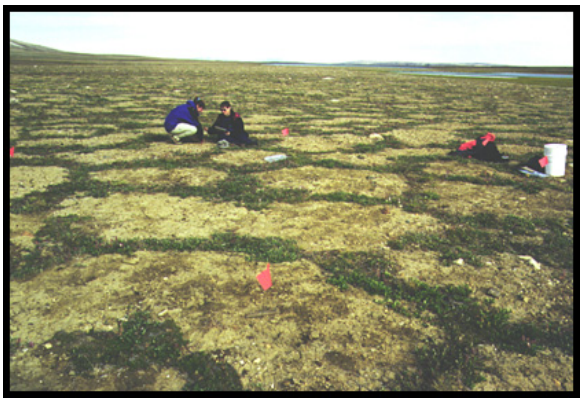
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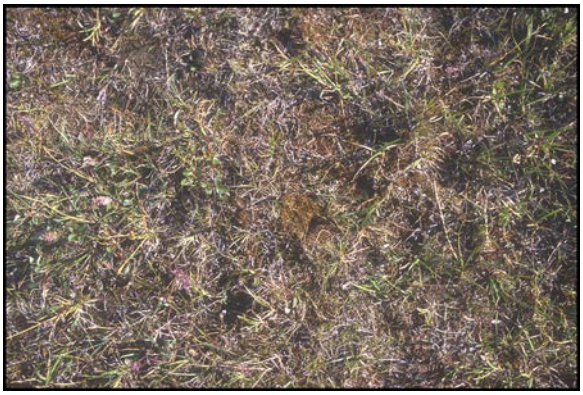
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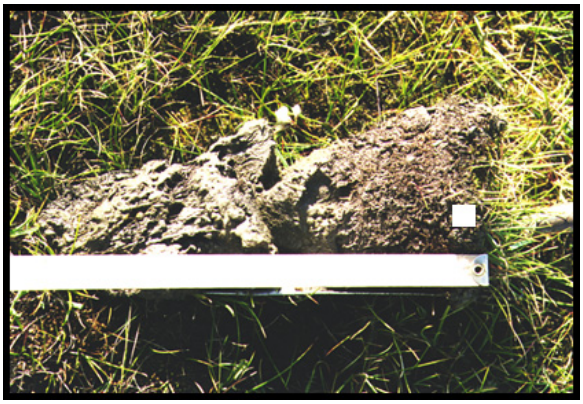
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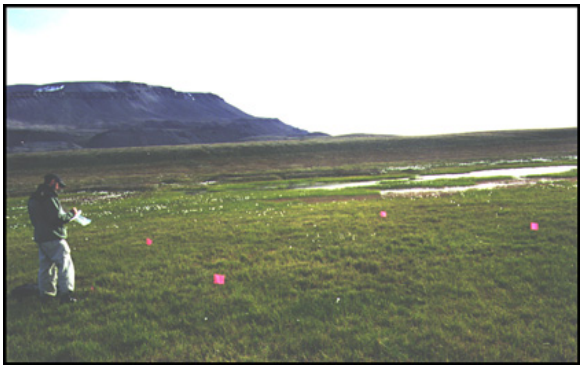
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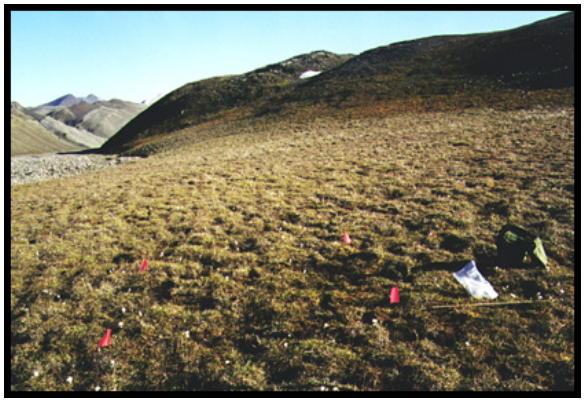
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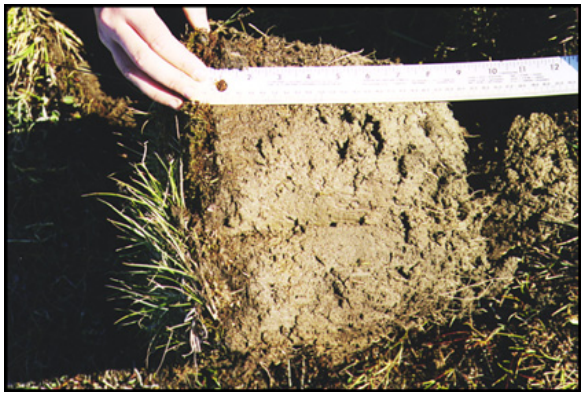
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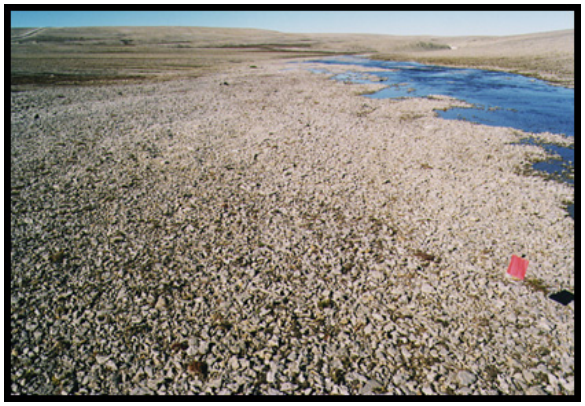
R-R-2A


R-R-1A


R-R-2B


R-R-1B


R-R-2C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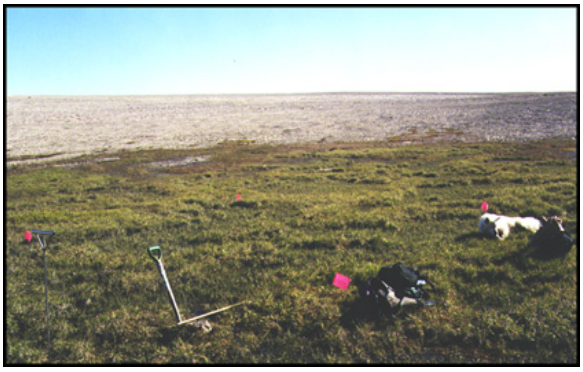
R-R-4B


R-R-3B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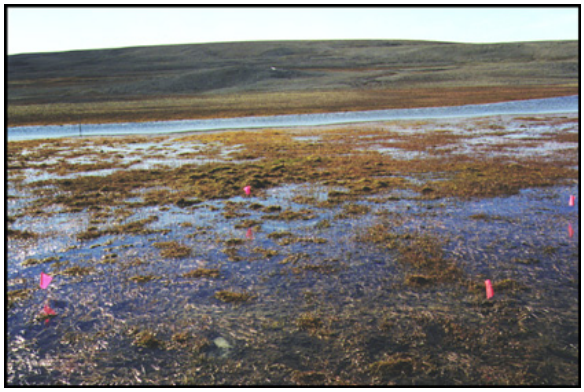
R-R-4A


R-W-2B


R-W-2C


V-CB-1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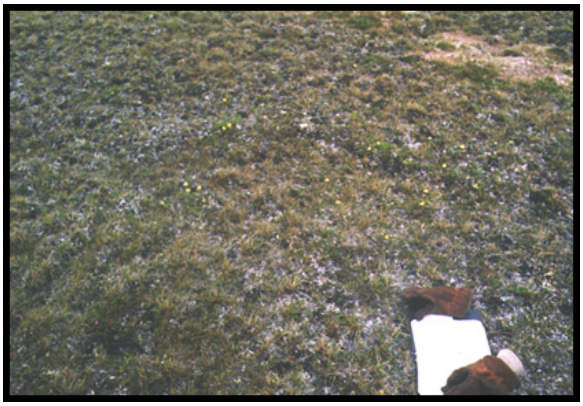
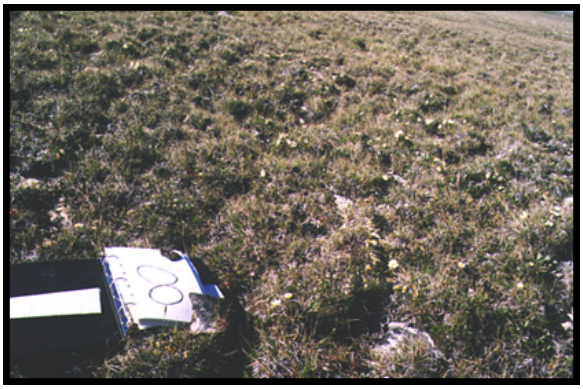
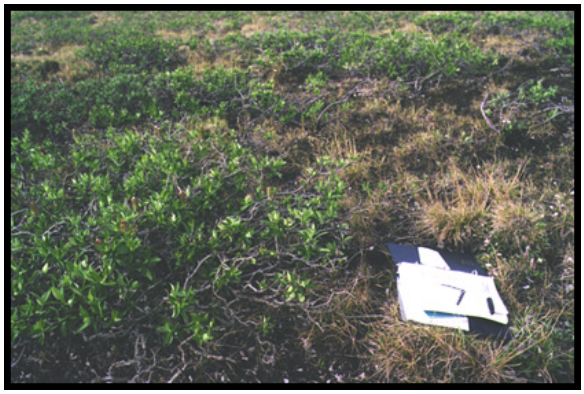
V-CB-2


R-W-3B

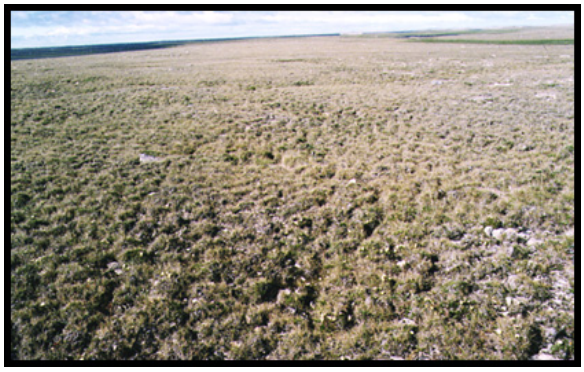

V-CB-3


V-CB-6


V-CB-8B


V-CB-7


V-CB-9A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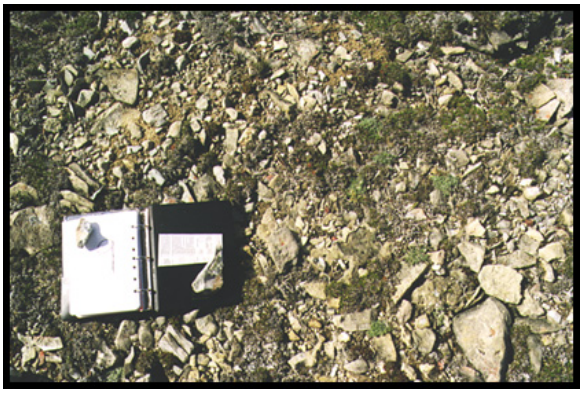
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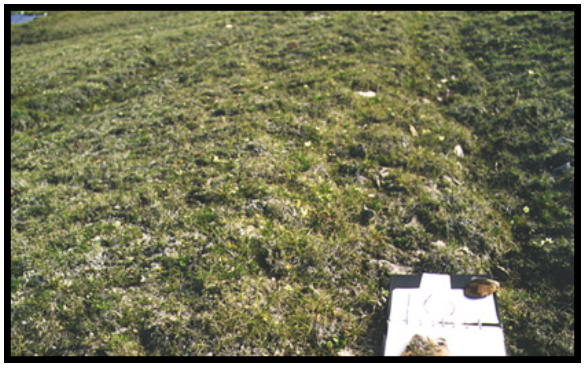

V-CB-10A


V-CB-12A


V-CB-10B

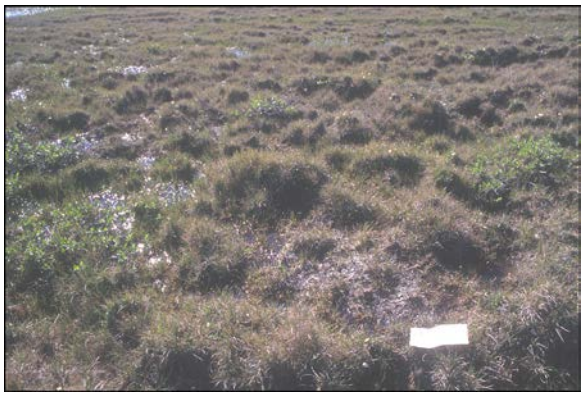

V-CB-12B


V-CB-11


V-CB-13

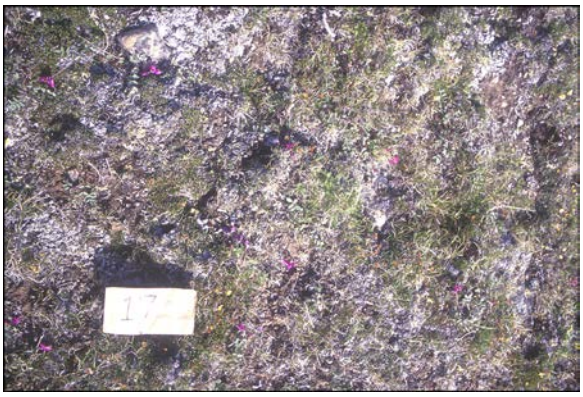

V-CB-14


V-CB-16

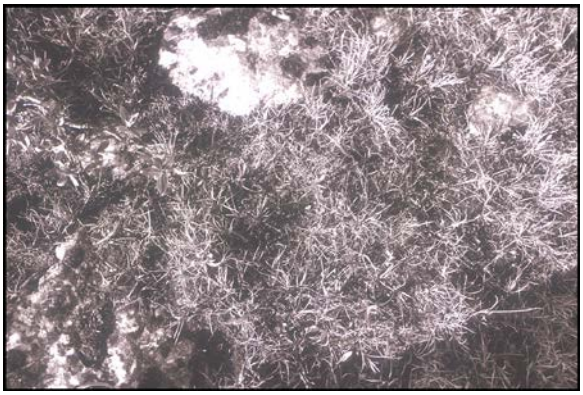

V-CB-15A


V-CB-17A


V-CB-15B


V-CB-17B

V-CB-18A



V-CB-R-1B

V-CB-18B

V-HB-R-1A

V-CB-R-1A

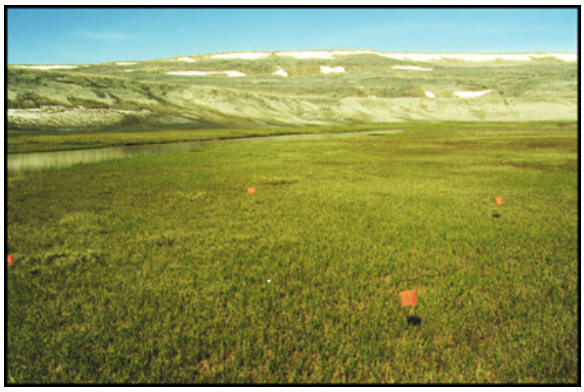
V-HB-R-1B

V-HB-R-2A

V-HB-W1B

V-HB-R-2B

V-TR-R-1A



V-HB-W1A

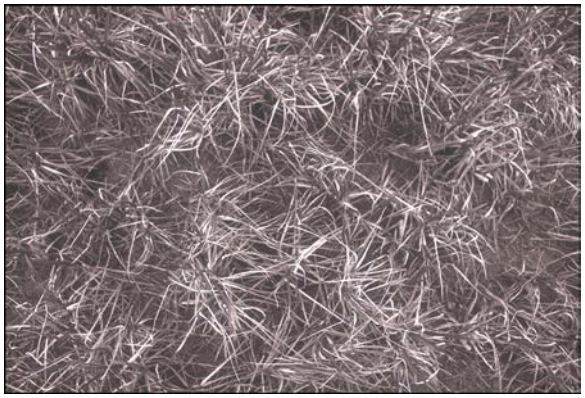
V-TR-R-1B


V-TR-R-1C

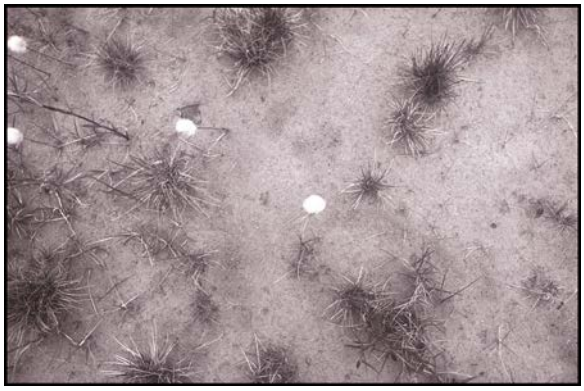

V-TR-R-3A


V-TR-R-2A

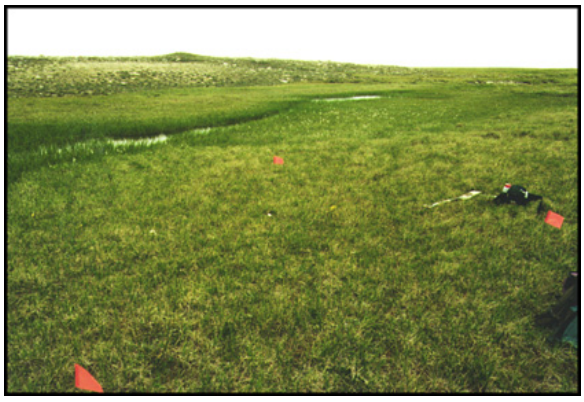

V-TR-R-3B


V-TR-R-2B


V-TR-R-4A


V-TR-R-4B


V-TR-W1C


V-TR-W1A


V-TR-W2A


V-TR-W1B


V-TR-W2A