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Vegetation data of high Arctic lichens on Austre Brøggerbreen glacier foreland, Ny-Ålesund, Svalbard, in 1994

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Abstract: We made a detailed investigation of the occurrence and cover of lichen species near Ny-Ålesund, Svalbard, high Arctic Norway, in 1994. We identified 82 lichen species, and our data clearly show their forms, location, and microtopography and composition of lichens. This information will be useful for understanding future vegetation changes.

1. Background and Summary

Some reports have indicated that lichen vegetation in the Arctic will change as a result of climate change[1, 2, 3]. Therefore, it is important to monitor or record a "snapshot" of lichen vegetation with environmental information.

A taxonomic study from 2009 reported the existence of 748 lichen species on the Svalbard archipelago[4]. In 1994, we found 82 species in various topographies in the Austre Brøggerbreen glacier foreland (Table S1). Of these, 81 had already been reported[4]. One species was reported[5] in 2011 as new to Svalbard from specimens collected in our vegetation survey in 1994. The occurrence and cover of *Cetrariella delisei* and *Ochrolechia frigida* showed high values in our study (Table 1). These two species dominated the lichen vegetation in the study area. We observed 75 lichen species in one topographical area (ridge). Although the species differed among a number of study plots in each topographical area (ridge, slope, and wetland) (Table S2), our findings suggested that the ridge habitat may be important for maintaining higher lichen species diversity.

2. Location

We investigated lichen vegetation on the glacier foreland of Austre Brøggerbreen, Ny-Ålesund, Svalbard, in 1994. The GPS coordinates of the study site southwest of Ny-Ålesund were 78.918°–78.922°N and 11.809°–11.886°E (Figure1). According to the Norwegian Meteorological Institute, the annual mean air temperature in Ny-Ålesund was –6.0°C, the annual precipitation was 520 mm, and the snow-free period was from mid-June to end of August in 1994.

3. Methods

3.1. Vegetation survey

We conducted a lichen vegetation survey in August 1994 in different topographical areas: ridge (R; 42 plots), slope (S; 20 plots), and wetland (W; 29 plots), and also recorded the gravel/boulder surface texture (GB, 7 plots). We marked each plot on a topographical map[6]. We used the website "TopoSvalbard"[7] (Table S2) to determine the GPS position of each plot by matching the marked plot on the topographical map.

We set 20-m line transects and five quadrats at 5-m intervals on the transects in each plot. The size of the quadrat was 30 cm × 30 cm. In total, there were 98 plots and 490 quadrats. We collected 1,548 lichen specimens from the study site during the survey.

The lichen occurrence per plot (*LO*; %) was determined based on the occurrence or absence of each lichen species in each quadrat. Then lichen-occurring quadrats (*O* took from 0 (no occurrence) to 5 (a lichen species occur all quadrats)). The *LO* value was calculated using the following equation (Eqn 1) (Table S3):

$$LO(\%) = O / 5 \times 100 \quad \text{(Eqn 1)}$$

Then, the value of *LO*(%) was 0, 20, 40, 60, 80 or 100 in each plot. On the other hand, the total occurrence of each species at the study site was the average occurrence across 98 plots.

To determine percentage cover of lichen by species in each plot (*LC*; %), we tentatively identified the lichen species in each quadrat (e.g., sp1, sp2) and then visually measured total cover in the five quadrats in the field (*C*; %). The *C*(%) was defined as the lichen-cover area (cm^2) in a quadrat (30 cm x 30 cm = 900 cm^2) and was converted as a percentage. The detectable limit of the cover of lichen in each species in a quadrat was 1% (= 3 cm × 3 cm). We then calculated the cover of each lichen species in each plot by dividing by five (number of quadrats in each plot) (Eqn 2) (Table S4):

$$LC(\%) = C / 5 \times 100 \quad \text{(Eqn 2)}$$

The total cover of each lichen species at the study site was the average cover across all plots.

3.2. Identification of lichen specimens

We brought the specimens to Japan and stored them in the herbarium of the National Institute of Polar Research. We observed the external morphology of each specimen using a stereomicroscope (Nikon SMZ1500; Nikon Co., Tokyo, Japan). After slicing the apothecium or thallus, we also observed anatomical details at ×100, ×400, and ×1000 using a biological microscope (Nikon Eclipse E400; Nikon Co.). Some lichens were analyzed by color reactions[8] and thin-layer chromatography[9] when we could not identify them by their morphological characteristics.

Table 1. Dominant lichen species in the study site.

Species name	Life form	Topography and ground surface texture*	Total occurrence (%)	Total cover (%)
			Average (SD)	Average (SD)
Cetrariella delisei (Bory ex Schaer.) Kärnef. & Thell	Fruticoselichen	R, S, W, GB	62.0 (39.7)	7.5 (7.8)
Ochrolechia frigida (Sw.) Lynge	Crustoselichen	R, S, W, GB	56.1 (40.9)	5.5 (6.4)
Cetraria islandica (L.) Ach.	Fruticoselichen	R, S	39.2 (39.1)	2.0 (2.5)
Flavocetraria nivalis (L.) Kärnef. & Thell	Fruticoselichen	R, S	17.6 (29.2)	0.9 (2.4)
Stereocaulon paschale (L.) Hoffm.	Fruticoselichen	R, S, W, GB	15.5 (25.8)	0.5 (1.2)
Lecanora epibryon (Ach.) Ach.	Crustoselichen	R, S, GB	12.4 (22.9)	0.4 (1.2)

*Topography and ground surface texture show R; Ridge, S; Slope, W; Wetland, and GB; Gravel/Boulder surface texture.

5. Figure

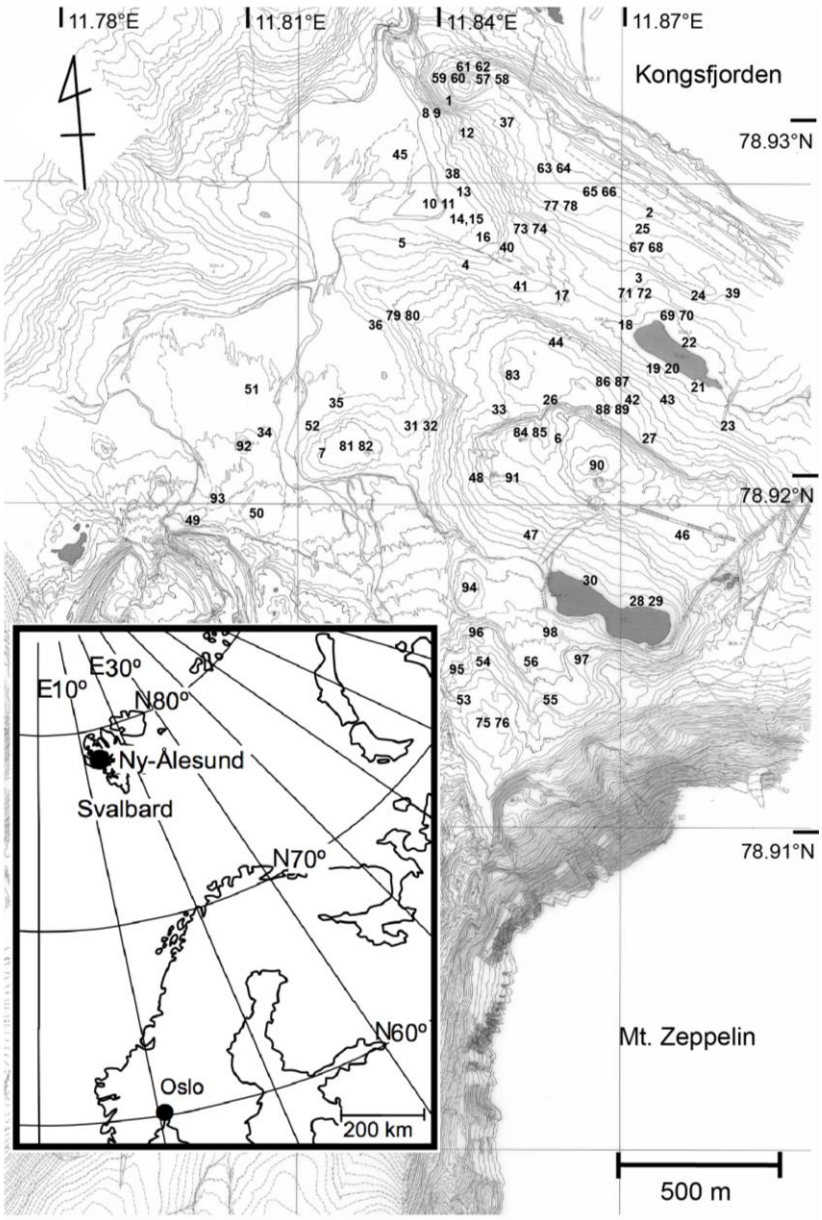

Figure 1. Vegetation survey points. The numbers on the map show “plot number” in Table S2.

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Author Contributions

Inoue, T. and Inoue, M. identified lichen specimens. Kanda, H. and Minami, Y. conducted the lichen vegetation survey and tentatively identified species in the field. Uchida, M., Kaneko, R., and Kudoh, S. wrote the manuscript and compiled the data.

Competing interests

The authors declare no competing financial interests.

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Data Citation

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Supplemental tables

Table S1. Catalog of lichen species, lifeform, and topography on the glacier foreland of Austre Brøggerbreen, southwest of Ny-Ålesund, Svalbard. The topography and ground surface texture divisions show Ridge (R), Slope (S), Wetland (W), and Gravel/Boulder area (GB), respectively.

Species name	Life form	Topography and ground surface texture
Alectoria nigricans (Ach.) Nyl.	Fruticoselichen	R
Amandinea coniops (Wahlenb. in Ach.)	Crustoselichen	R
Arthrorhaphis alpina (Schaer.) R. Sant.	Crustoselichen	R
Bacidia trachona (Ach.) Lett.	Crustoselichen	R
Biatora cf. *cuprea* (Sommerf.) Fr.	Crustoselichen	R, GB
Biatora cf. *vernalis* (L.) Fr.	Crustoselichen	R, S, GB
Biatora subduplex (Nyl.)	Crustoselichen	R, S, GB
Buellia geophila (Florke ex Somm.) Lynge.	Crustoselichen	R
Buellia papillata (Sommerf.) Tuck.	Crustoselichen	R, GB
Caloplaca cf. *ammiospila* (Wahlenb. in Ach.)	Crustoselichen	S, GB
Caloplaca cf. *cerina* (Ach.) Th. Fr.	Crustoselichen	R
Caloplaca tetraspora (Nyl.) Oliv.	Crustoselichen	R, GB
Candelariella cf. *vitellina* (Hoffm.) Müll.Arg.	Crustoselichen	R, S
Carbonea vorticosa (Flörke) Hertel	Crustoselichen	R, S
Cetraria aculeata (Schreb.) Fr.	Fruticoselichen	R
Cetraria islandica (L.) Ach.	Fruticoselichen	R, S
Cetrariella delisei (Bory ex Schaer.) Kärnef. & Thell	Fruticoselichen	R, S, W, GB
Cetrariella fastigiata (Delise ex Nyl.) Kärnefelt & A.Thell	Fruticoselichen	W
Cladonia arbuscula ssp. *mitis* (Sandst.) Ruoss	Fruticoselichen	R, S, GB
Cladonia cf. *chlorophaea* (Sommerf.) Spreng.	Fruticoselichen	R, S
Cladonia cf. *cornuta* (L.) Hoffm.	Fruticoselichen	R, GB
Cladonia cf. *merochlorophaea* Asahina	Fruticoselichen	R, S
Cladonia crispata (Ach.) Flot.	Fruticoselichen	R, S, GB
Cladonia luteoalba Wheldon & A. Wilson	Fruticoselichen	R
Cladonia pyxidata (L.) Hoffm.	Fruticoselichen	R, S
Cladonia symphycarpa (Flörke) Schaer.	Fruticoselichen	R, S
Cladonia uncialis (L.) F.H.Wigg.	Fruticoselichen	R, GB
Collema ceraniscum Nyl.	Crustoselichen	R, S, GB
Cystocoleus cf. *ebeneus* (Dillw.) Thwaites.	Crustoselichen	R
Flavocetraria cucullata (Bellardi) Kärnefelt & A. Thell	Fruticoselichen	R
Flavocetraria nivalis (L.) Kärnef. & Thell	Fruticoselichen	R, S
Fuscidea sp.1	Crustoselichen	R
Lecanora epibryon (Ach.) Ach.	Crustoselichen	R, S, GB
Lecanora hagenii (Ach.) Ach.	Crustoselichen	R, S, GB
Lecidea apochroeella Nyl.	Crustoselichen	R, S, GB
Lecidea cf. *plana* (J.Lahm.) Nyl.	Crustoselichen	R
Lecidoma demissum (Rutstr.) Gotth.Schneid. & Hertel	Crustoselichen	S
Leciophysma cf. *finmarkicum* Th. Fr.	Crustoselichen	R, S, GB
Lopadium coralloideum (Nyl.) Lynge	Crustoselichen	R, S
Megaspora verrucosa (Ach.) Hafellner & V.Wirth	Crustoselichen	R, S, W, GB
Melanelia stygia (L.) Essl.	Crustoselichen	R
Micarea assimilata (Nyl.) Coppins	Crustoselichen	R, S, GB
Micarea incrassata Hedl.	Crustoselichen	S
V.Wirth	Crustoselichen	R, S
Mycobilimbia sabuletorum (Schreb.) Hafellner	Crustoselichen	R
Ochrolechia androgyna (Hoffm.) Arnold	Crustoselichen	R, GB
Ochrolechia frigida (Sw.) Lynge	Crustoselichen	R, S, W, GB
Pannaria pezizoides (Weber)Trevis.	Folioselichen	R
Parmelia cf. *omphalodes* (L.) Ach.	Folioselichen	R
Peltigera cf. *rufescens* (Weiss) Humb.	Folioselichen	R
Peltigera venosa (L.) Hoffm.	Folioselichen	R, S
Physcia cf. *tenella* (Scop.) Nyl.	Folioselichen	R
Physconia muscigena (Ach.) Poelt	Folioselichen	R
Polyblastia sp.1	Crustoselichen	R, S
Polyblastia sp.2	Crustoselichen	W, GB
Porpidia cf. *speirea* (Ach.) Kremp.	Crustoselichen	R
Porpidia flavocaerulescens (Hornem.) Hertel & A.J.Schwab	Crustoselichen	R
Pseudephebe pubescens (L.) M.Choisy	Fruticoselichen	R
Psoroma hypnorum (Vahl) Gray	Folioselichen	R, S, GB
Rhizocarpon cf. *obscuratum* (Ach.) Massal.	Crustoselichen	R
Rhizocarpon cinereovirens (Müll. Arg.) Vain.	Crustoselichen	R
Rhizocarpon geminatum Körb.	Crustoselichen	R
Rhizocarpon geographicum (L.) DC.	Crustoselichen	R, S
Rhizocarpon intermediellum Räsänen	Crustoselichen	R
Rhizocarpon sp.1	Crustoselichen	R
Rhizocarpon sp.2	Crustoselichen	R
Rhizocarpon sp.3	Crustoselichen	R
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt	Crustoselichen	R, GB
Rinodina cf. *conradii* Korb.	Crustoselichen	R
Rinodina cf. *olivaceobrunnea* Dodge & Baker	Crustoselichen	R, GB
Solorina crocea (L.) Ach.	Folioselichen	R
Solorina saccata Ach.	Folioselichen	R, S, GB
Sphaerophorus fragilis (L.) Pers.	Fruticoselichen	R
Sphaerophorus globosus (Huds.) Vain.	Fruticoselichen	R, S
Staurothele areolata (Ach.) Lettau.	Crustoselichen	S
Stereocaulon arcticum Lynge	Fruticoselichen	S
Stereocaulon cf. *botryosum* Ach.	Fruticoselichen	R
Stereocaulon grande (Magn.) Magn.	Fruticoselichen	R, S GB
Stereocaulon paschale (L.) Hoffm.	Fruticoselichen	R, S, W, GB
Thamnolia subliformis (Ehrh.) W.L.Culb.	Fruticoselichen	R
Tremolecia atrata (Ach.) Hertel	Crustoselichen	R, S
Umbilicaria hyperborea (Ach.) Hoffm.	Folioselichen	R

Table S2. Topography, microtopography, ground surface condition, and GPS data in each plot.

Plot number		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Plot ID		GB101	GB102	GB103	GB201	GB202	GB301	GB401	W101a	W101b	W102a	W102b	W103	W104	W105a	W105b	W106	W107	W108	W109a	W109b
Topographycal type		Ridge	Ridge	Slope	Slope	Slope	Slope	Ridge	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland
Microtopography		Flat	Flat	South	Northwest	Northwest	Northwest	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Ground surface condition (Gravel/Boulder)		+	+	+	+	+	+	+								10,11					
GPS coordinates	Latitude (^{o}N)	78.930	78.927	78.925	78.926	78.927	78.921	78.921	78.930	78.930	78.928	78.927	78.929	78.929	78.927	78.927	78.926	78.925	78.924	78.924	78.923
	Longitude (^{o}E)	11.849	11.875	11.875	11.848	11.842	11.866	11.828	11.841	11.840	11.837	11.846	11.846	11.854	11.846	11.847	11.853	11.866	11.871	11.877	11.878

Plot number		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Plot ID		W110	W111	W112	W113	W114	W201	W202	W301a	W301b	W302	W303a	W303b	W304	W401	W402	W403	S101	S102	S103	S201
Topographycal type		Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Wetland	Slope	Slope	Slope	Slope	Slope
Microtopography		Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Southwest	South	Southwest	Northeast	Northeast
Ground surface condition (Gravel/Boulder)																					
GPS coordinates	Latitude (^{o}N)	78.923	78.924	78.923	78.922	78.927	78.922	78.921	78.917	78.917	78.917	78.922	78.923	78.929	78.923	78.924	78.929	78.928	78.925	78.925	78.924
	Longitude (^{o}E)	11.881	11.879	11.890	11.892	11.873	11.863	11.876	11.875	11.877	11.863	11.838	11.840	11.826	11.837	11.835	11.853	11.848	11.893	11.862	11.866

Plot number		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Plot ID		S202	S203	S204	S205	S206	S301	S302	S303	S401	S402	S403	S404	S501	S502	S503	S504	R1a	R1b	R2a	R2b
Topographycal type		Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Slope	Ridge	Ridge	Ridge	Ridge	Ridge
Microtopography		Northeast	Northeast	Northeast	Northeast	Southeast	South	East	South	Southeast	East	West	North	North	North	North	Flat	Flat	Flat	Flat	Flat
Ground surface condition (Gravel/Boulder)																					
GPS coordinates	Latitude (^{o}N)	78.923	78.923	78.923	78.928	78.918	78.919	78.920	78.919	78.919	78.922	78.923	78.912	78.915	78.914	78.915	78.931	78.931	78.931	78.931	78.931
	Longitude (^{o}E)	11.871	11.874	11.868	11.837	11.879	11.859	11.851	11.811	11.818	11.817	11.826	11.852	11.853	11.865	11.861	11.849	11.849	11.846	11.846	11.848

Plot number		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Plot ID		R3a	R3b	R4a	R4b	R5a	R5b	R6a	R6b	R7a	R7b	R8a	R8b	R9a	R9b	R10a	R10b	R11a	R11b	R12a	R12b
Topographycal type		Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge
Microtopography		Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Ground surface condition (Gravel/Boulder)																					
GPS coordinates	Latitude (^{o}N)	78.931	78.928	78.928	78.929	78.928	78.928	78.926	78.927	78.925	78.925	78.925	78.925	78.926	78.927	78.930	78.914	78.927	78.927	78.924	78.924
	Longitude (^{o}E)	11.846	11.855	11.855	11.857	11.867	11.861	11.878	11.870	11.881	11.881	11.872	11.871	11.860	11.853	11.849	11.857	11.860	11.857	11.841	11.838

Plot number		81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
Plot ID		R13a	R13b	R14	R15a	R15b	R16a	R16b	R17a	R17b	R18	R19	R20	R21	R22	R23	R24	R25	R26
Topographycal type		Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge	Ridge
Microtopography		Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
Ground surface condition (Gravel/Boulder)																			
GPS coordinates	Latitude (^{o}N)	78.921	78.921	78.924	78.922	78.922	78.923	78.923	78.922	78.922	78.921	78.920	78.929	78.919	78.917	78.913	78.916	78.915	78.916
	Longitude (^{o}E)	11.834	11.834	11.855	11.862	11.858	11.870	11.870	11.870	11.869	11.887	11.854	11.824	11.814	11.851	11.850	11.853	11.872	11.865		

Microtopography shows ground surface direction. "+" of ground surface condition shows "Gravel/Boulder" area.

Table S3. Occurrence of each lichen species.

Occurrence (%)

Species name \ Plot number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
Alectoria nigricans (Ach.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	20	20	0	0	0	0	0	0	0	0	0	0
Amandinea coniops (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arthrorhaphis alpina (Schaer.) R. Sant.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
Bacidia trachona (Ach.) Lett.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0
Biatora cf. *cuprea* (Sommerf.) Fr.	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora cf. *vernalis* (L.) Fr.	20	0	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora subduplex (Nyl.)	20	40	40	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	0	0	0	0	20	0	0	0	0	0	0	0	20	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia geophila (Florke ex Somm.) Lynge.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
Buellia papillata (Sommerf.) Tuck.	0	0	0	0	40	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca cf. *ammiospila* (Wahlenb. in Ach.)	0	20	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca cf. *cerina* (Ach.) Th. Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0
Caloplaca tetraspora (Nyl.) Oliv.	0	0	20	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0
Candelariella cf. *vitellina* (Hoffm.) Müll.Arg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0
Carbonea vorticosa (Flörke) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria aculeata (Schreb.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria islandica (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100	100	100	20	100	20	60	0	80	40	20	0	60	80	40	60	100	0	20	20	60	20	80	60	60	60	40	0	100	100	80	60	100	60	80	40	60	20	60	80	80	40	0	20	80	100	80	80	60	100	60	60	60	80	80	80	80	100	60	100
Cetrariella delisei (Bory ex Schaer.) Kärnef. & Thell	0	100	100	80	100	100	40	80	40	0	100	20	0	20	20	20	0	0	0	0	0	0	0	0	0	80	0	0	20	40	0	0	0	40	20	60	100	100	100	100	100	100	100	100	100	100	100	60	60	0	100	100	100	100	100	20	80	40	20	40	40	80	60	100	40	20	100	80	100	80	100	100	80	100	100	80	80	100	100	80	20	20	80	100	80	80	80	100	100	100	60	80	80	100	100	100	80	100
Cetrariella fastigiata (Delise ex Nyl.) Kärnefelt & A.Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia arbuscula ssp. *mitis* (Sandst.) Ruoss	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. *chlorophaea* (Sommerf.) Spreng.	0	0	0	20	60	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	60	0	20	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. *cornuta* (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	100	0	0	0	0	0	0	0	0	0	80	60	0	0	0	20	40	0	0	40	20	0	0	0	0	20	0	20	40	0	0	0	0	20	0	20	0	0	0	20	60	20	0	0	0	0	0	0	0	0	0	60	0	60	60
Cladonia cf. *merochlorophaea* Asahina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	20	0	0	20	20	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	20	0	20	0	0	0	60	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	40	0	60
Cladonia crispata (Ach.) Flot.	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0	40	60	0	20	0	0	0	0	0	0	0	0	0	0	0	20	0	0	40	0	40	0	60	0	20	20	0	0	0	0	0	20	0	0	0	0	0	20	0	0
Cladonia luteoalba Wheldon & A. Wilson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	0
Cladonia pyxidata (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia symphycarpa (Flörke) Schaer.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia uncialis (L.) F.H.Wigg.	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
Collema ceraniscum Nyl.	20	20	40	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
Cystocoleus cf. *ebeneus* (Dillw.) Thwaites.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20	0
Flavocetraria cucullata (Bellardi) Kärnefelt & A. Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flavocetraria nivalis (L.) Kärnef. & Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	60	0	40	40	20	0	0	0	0	0	0	40	20	20	40	0	60	60	40	40	0	0	60	20	20	40	0	0	40	100	60	60	80	80	100	100	20	40	0	80	80	60	40	100
Fuscidea sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecanora epibryon (Ach.) Ach.	60	80	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	20	0	0	0	0	0	20	0	0	0	0	20	0	0	0	0	0	0	20	0	20	0	20	20	80	0	0	20	60	20	40	80	40	0	0	20	20	40	0	0	0	0	0	40	40	40	60	20	0	0	60	20	60	20	0	0	0	0	0
Lecanora hagenii (Ach.) Ach.	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
Lecidea apochroeella Nyl.	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Lecidea cf. *plana* (J.Lahm.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
Lecidoma demissum (Rutstr.) Gotth.Schneid. & Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leciophysma cf. *finmarkicum* Th. Fr.	40	80	40	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	40	0	0	0	0	0	0	0	0	20	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	0	80	0	0	20	40	0	0	20	40	0	0	0	0	0	0	20	40	20	0	0	20	0	0	0	0	0	0
Lopadium coralloideum (Nyl.) Lynge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	60	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megaspora verrucosa (Ach.) Hafellner & V.Wirth	0	0	20	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	60	0	0	0	20	0	20	0	0	0	0	20	0	0	0	20	60	0	0	80	0	0	0	0	0	0	80	80	0	40	0	20	0	80	0	0	0	0	0	0	0	0	0	20	40	0	0	0	60	40	80	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	20	20	20	0	0	0	0	0	20	0
Melanelia stygia (L.) Essl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
Micarea assimilata (Nyl.) Coppins	20	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	40	0	0	0	0	0	0	0	20	0	20	0	0	0	0	0	0	40	0	0	0	40	0	20	0	0	0	0	0	0	0	0	0	20	0	20	0	0	40	0	0	0	0	0	0
Micarea incrassata Hedl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia berengeriana (A.Massal.) Hafellner & V.Wirth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia sabuletorum (Schreb.) Hafellner	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia androgyna (Hoffm.) Arnold	0	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia frigida (Sw.) Lynge	100	80	100	60	80	100	80	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	80	100	60	60	80	40	100	80	100	100	60	80	0	80	80	80	100	100	20	80	60	80	60	100	100	80	100	60	20	100	40	100	60	100	60	40	60	100	100	100	80	60	60	40	100	100	100	100	100	100	100	80	100	60	100	80	100	80	100	80	80
Pannaria pezizoides (Weber)Trevis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parmelia cf. *omphalodes* (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera cf. *rufescens* (Weiss) Humb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera venosa (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0
Physcia cf. *tenella* (Scop.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physconia muscigena (Ach.) Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.1	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.2	0	20	0	0	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia cf. *speirea* (Ach.) Kremp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia flavocaerulescens (Hornem.) Hertel & A.J.Schwab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudephebe pubescens (L.) M.Choisy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0
Psoroma hypnorum (Vahl) Gray	60	0	0	20	60	60	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	40	0	0	0	0	20	0	0	0	0	0	20	20	0	0	0	80	0	40	100	0	0	0	0	0	0	20	0	0	0	0	0	20	0	40	20	0	20	0	0	60	0	20	0	0	20	60	20	0	20	0	20	20	20	20	20
Rhizocarpon cf. *obscuratum* (Ach.) Massal.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon cinereovirens (Müll. Arg.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geminatum Körb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geographicum (L.) DC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon intermediellum Räsänen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	60	20	0	0	0	20	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. *conradii* Korb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. *olivaceobrunnea* Dodge & Baker	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	0
Solorina crocea (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solorina saccata Ach.	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	20	0	0	40	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0
Sphaerophorus fragilis (L.) Pers.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
Sphaerophorus globosus (Huds.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	20	0	20	20
Staurothele areolata (Ach.) Lettau.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon arcticum Lynge	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon cf. *botryosum* Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon grande (Magn.) Magn.	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	40	0	0	0	0	0	0	0	0	0	0	100	60	0	20	0	0	60	60	0	0	0	0	0	0	0	0	20	60	0	0	20	20	0	0	40	40	60	0	0	60	40	0	0	60	0	0	0	0	0	40	0	0
Stereocaulon paschale (L.) Hoffm.	100	80	0	80	80	0	60	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	80	0	0	0	60	0	80	60	20	20	0	40	40	0	0	0	20	40	0	0	0	0	0	40	0	20	20	20	40	0	0	0	0	0	60	0	20	0	60	60	0	0	40	60	0	60	0	0	0	0	0	40	0	0	0	0	40	0	0	20	20	0
Thamnolia subliformis (Ehrh.) W.L.Culb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	0	0	0	0	0	40	0	0	0	0	0	0
Tremolecia atrata (Ach.) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
Umbilicaria hyperborea (Ach.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	0

Table S4. Cover of each lichen species.

Cover (%)

Species name \ Plot number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Alectoria nigricans (Ach.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amandinea coniops (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arthrorhaphis alpina (Schaer.) R. Sant.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bacidia trachona (Ach.) Lett.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora cf. cuprea (Sommerf.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora cf. vernalis (L.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora subduplex (Nyl.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia geophila (Florke ex Somm.) Lynge.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia papillata (Sommerf.) Tuck.	0	0	0	0	0	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca cf. ammiospila (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca cf. cerina (Ach.) Th. Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca tetraspora (Nyl.) Oliv.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candelariella cf. vitellina (Hoffm.) Müll.Arg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbonea vorticosa (Flörke) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria aculeata (Schreb.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria islandica (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetrariella delisei (Bory ex Schaer.) Kärnef. & Thell	6.4	12.8	10.6	6.8	9.6	15.6	2.6	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Cetrariella fastigiata (Delise ex Nyl.) Kärnefelt & A.Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia arbuscula ssp. mitis (Sandst.) Ruoss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. chlorophaea (Sommerf.) Spreng.	0	0	0	1	1	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. cornuta (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. merochlorophaea Asahina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia crispata (Ach.) Flot.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia luteoalba Wheldon & A. Wilson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia pyxidata (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia symphycarpa (Flörke) Schaer.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia uncialis (L.) F.H.Wigg.	0	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Collema ceraniscum Nyl.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cystocoleus cf. ebeneus (Dillw.) Thwaites.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flavocetraria cucullata (Bellardi) Kärnefelt & A. Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flavocetraria nivalis (L.) Kärnef. & Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuscidea sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecanora epibryon (Ach.) Ach.	0.2	1.4	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecanora hagenii (Ach.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidea apochroeella Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidea cf. plana (J.Lahm.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidoma demissum (Rutstr.) Gotth.Schneid. & Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leciophysma cf. finmarkicum Th. Fr.	2.6	0.6	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lopadium coralloideum (Nyl.) Lynge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megaspora verrucosa (Ach.) Hafellner & V.Wirth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Melanelia stygia (L.) Essl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micarea assimilata (Nyl.) Coppins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micarea incrassata Hedl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia berengeriana (A.Massal.) Hafellner & V.Wirth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia sabuletorum (Schreb.) Hafellner	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia androgyna (Hoffm.) Arnold	0	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia frigida (Sw.) Lynge	2.4	9.4	9.8	1.2	0.8	6.8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pannaria pezizoides (Weber)Trevis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parmelia cf. omphalodes (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera cf. rufescens (Weiss) Humb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera venosa (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physcia cf. tenella (Scop.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physconia muscigena (Ach.) Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia cf. speirea (Ach.) Kremp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia flavocaerulescens (Hornem.) Hertel & A.J.Schwab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudephebe pubescens (L.) M.Choisy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psoroma hypnorum (Vahl) Gray	0.2	0	0	0	1	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon cf. obscuratum (Ach.) Massal.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon cinereovirens (Müll. Arg.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geminatum Körb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geographicum (L.) DC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon intermediellum Räsänen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. conradii Korb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. olivaceobrunnea Dodge & Baker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solorina crocea (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solorina saccata Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerophorus fragilis (L.) Pers.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerophorus globosus (Huds.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staurothele areolata (Ach.) Lettau.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon arcticum Lynge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon cf. botryosum Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon grande (Magn.) Magn.	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon paschale (L.) Hoffm.	2	2.2	0	6.6	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thamnolia subliformis (Ehrh.) W.L.Culb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tremolecia atrata (Ach.) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Umbilicaria hyperborea (Ach.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Species name \ Plot number	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Alectoria nigricans (Ach.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amandinea coniops (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arthrorhaphis alpina (Schaer.) R. Sant.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bacidia trachona (Ach.) Lett.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora cf. cuprea (Sommerf.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0
Biatora cf. vernalis (L.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora subduplex (Nyl.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia geophila (Florke ex Somm.) Lynge.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia papillata (Sommerf.) Tuck.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.6	0	0
Caloplaca cf. ammiospila (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0
Caloplaca cf. cerina (Ach.) Th. Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca tetraspora (Nyl.) Oliv.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candelariella cf. vitellina (Hoffm.) Müll.Arg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbonea vorticosa (Flörke) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria aculeata (Schreb.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0	2	0	0
Cetraria islandica (L.) Ach.	0	0	0	0	0	0	0	0	0	4.2	0.8	1	6	3.2	1	3	1	3.6	0	3	0.4	1.6	0	0.4	2.8	0.2	1	2.4	0	0	0	0	1	5.8	4	2.2	1
Cetrariella delisei (Bory ex Schaer.) Kärnef. & Thell	0	0	1	0	0	6	1	8	2	18.6	7.6	9.8	9.8	7	28.4	2.8	2.6	13.2	17	16.2	4.2	2.4	0	6	41.4	3.8	10	13	1	7	5	0.4	0.2	0	4	3.4	7.8
Cetrariella fastigiata (Delise ex Nyl.) Kärnefelt & A.Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia arbuscula ssp. mitis (Sandst.) Ruoss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. chlorophaea (Sommerf.) Spreng.	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0
Cladonia cf. cornuta (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. merochlorophaea Asahina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	1.4	0	3	0	0
Cladonia crispata (Ach.) Flot.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia luteoalba Wheldon & A. Wilson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.2	0	0	0	0	0	0	0	0	0	1.4	0.2	0	0	0	1.6	0.2	0	0	0	0
Cladonia pyxidata (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia symphycarpa (Flörke) Schaer.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0
Cladonia uncialis (L.) F.H.Wigg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Collema ceraniscum Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cystocoleus cf. ebeneus (Dillw.) Thwaites.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flavocetraria cucullata (Bellardi) Kärnefelt & A. Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Flavocetraria nivalis (L.) Kärnef. & Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	0	0	0	0
Fuscidea sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecanora epibryon (Ach.) Ach.	0	0	0	0	0	0	0	0	0	0	0	1.2	1	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	4
Lecanora hagenii (Ach.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8	0	0	0	0	0	0	0	0
Lecidea apochroeella Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidea cf. plana (J.Lahm.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidoma demissum (Rutstr.) Gotth.Schneid. & Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leciophysma cf. finmarkicum Th. Fr.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0
Lopadium coralloideum (Nyl.) Lynge	0	0	0	0	0	0	0	0	0	0	0	1	0	2.2	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megaspora verrucosa (Ach.) Hafellner & V.Wirth	0	0	0	1.2	0	0	0	0	0	0	0	2.6	0	0	0	0	0	0	3	6.6	0	2.6	0	0	0	0.8	0	0	0	0	0	0	0	0	0	5	0
Melanelia stygia (L.) Essl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8	0	0	0	0	0
Micarea assimilata (Nyl.) Coppins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0
Micarea incrassata Hedl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia berengeriana (A.Massal.) Hafellner & V.Wirth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia sabuletorum (Schreb.) Hafellner	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia androgyna (Hoffm.) Arnold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Ochrolechia frigida (Sw.) Lynge	0	0	0	0	0	0	0	0	0	5.6	2.4	2.2	2	1.6	4.4	0.4	15	0.2	7	3.2	2.2	5.8	0	2.6	2.8	5.2	4.6	16.6	0	5.4	0.2	7.2	3.4	5.4	22	14.6	9.6
Pannaria pezizoides (Weber)Trevis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parmelia cf. omphalodes (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
Peltigera cf. rufescens (Weiss) Humb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.2	0
Peltigera venosa (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physcia cf. tenella (Scop.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physconia muscigena (Ach.) Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia cf. speirea (Ach.) Kremp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia flavocaerulescens (Hornem.) Hertel & A.J.Schwab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudephebe pubescens (L.) M.Choisy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.4	0	0	0	0	0
Psoroma hypnorum (Vahl) Gray	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0	0	1	0	0	0	0	0	0.6	0	0	0	0	3	0	1.2	0.4	0	0
Rhizocarpon cf. obscuratum (Ach.) Massal.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon cinereovirens (Müll. Arg.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geminatum Körb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Rhizocarpon geographicum (L.) DC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	1.8	0	0	1.4	0	0
Rhizocarpon intermediellum Räsänen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11.6	0	0	0	0	0.2	0.2
Rhizocarpon sp.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. conradii Korb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. olivaceobrunnea Dodge & Baker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8	0	0
Solorina crocea (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solorina saccata Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerophorus fragilis (L.) Pers.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.2	5.4	0	0	0	0
Sphaerophorus globosus (Huds.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Staurothele areolata (Ach.) Lettau.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	1	0	0	0	0	0	0	0	0
Stereocaulon arcticum Lynge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon cf. botryosum Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon grande (Magn.) Magn.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	1.8	0	0	0	0	0	0	0	0	0	0	3.6	1.8	0	0.6	0	0	0.4	1.4
Stereocaulon paschale (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0.2	0	0	0	1.8	0	1.8	2.4	0	0	0	1	0.4	0	0	0	0.2	1.6	0	0	0	0	0	1	0	0	0.2	0
Thamnolia subliformis (Ehrh.) W.L.Culb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tremolecia atrata (Ach.) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Umbilicaria hyperborea (Ach.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Species name \ Plot number	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
Alectoria nigricans (Ach.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0
Amandinea coniops (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arthrorhaphis alpina (Schaer.) R. Sant.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Bacidia trachona (Ach.) Lett.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Biatora cf. cuprea (Sommerf.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora cf. vernalis (L.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biatora subduplex (Nyl.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia geophila (Florke ex Somm.) Lynge.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buellia papillata (Sommerf.) Tuck.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca cf. ammiospila (Wahlenb. in Ach.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caloplaca cf. cerina (Ach.) Th. Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	0	0	0	0	0
Caloplaca tetraspora (Nyl.) Oliv.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4	0	0	0
Candelariella cf. vitellina (Hoffm.) Müll.Arg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbonea vorticosa (Flörke) Hertel	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria aculeata (Schreb.) Fr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cetraria islandica (L.) Ach.	0.4	0	5	8.2	1	3	2.2	5.6	4	4	7	1	3.6	5	2.8	2.6	0	0.4	5.2	5.8	7	7.4	1.2	10	2	2.4	6	7	5	6	3.4	7	2.4	8
Cetrariella delisei (Bory ex Schaer.) Kärnef. & Thell	0.4	0.2	20	10	7.8	12	13	14	7.6	6.6	29.6	13.4	7	20.2	6	11.6	0.2	1.6	14	11.4	15	14.6	10.6	20.6	15	15.6	6	8	11.2	20	9	16.2	6.6	23.6
Cetrariella fastigiata (Delise ex Nyl.) Kärnefelt & A.Thell	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia arbuscula ssp. mitis (Sandst.) Ruoss	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. chlorophaea (Sommerf.) Spreng.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia cf. cornuta (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.2	0	0	1.6	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	2
Cladonia cf. merochlorophaea Asahina	0	0	0	0	0	0	0	0	0	1	0	0	0.2	0	2.4	0	4	0	0	0.6	0	0	0	0	0	1	0	0	0	0	0	2.4	0	0
Cladonia crispata (Ach.) Flot.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia luteoalba Wheldon & A. Wilson	0	0	0	0	1.6	0	0	0.4	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0.8	0	1.6	0
Cladonia pyxidata (L.) Hoffm.	0	0	0	0	0	0	0	0	1.6	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia symphycarpa (Flörke) Schaer.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cladonia uncialis (L.) F.H.Wigg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Collema ceraniscum Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cystocoleus cf. ebeneus (Dillw.) Thwaites.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.2	0
Flavocetraria cucullata (Bellardi) Kärnefelt & A. Thell	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flavocetraria nivalis (L.) Kärnef. & Thell	0	0	0	0	0.6	0	12.4	5.6	1.2	2.4	0	0	1	0	0	1	0	0	0	3.8	1.8	6	4.4	7	4.2	14.2	0	2.8	0	4.4	7.8	0.6	0	5.4
Fuscidea sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecanora epibryon (Ach.) Ach.	0	0	0	8	0	2.6	6.6	1.6	0	0	0	3	0.2	0	0	0	0	0	1	0	0	2	1	0	0	0.8	1	1	1	0	0	0	0	0
Lecanora hagenii (Ach.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidea apochroeella Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lecidea cf. plana (J.Lahm.) Nyl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0
Lecidoma demissum (Rutstr.) Gotth.Schneid. & Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leciophysma cf. finmarkicum Th. Fr.	0	0	0	0	0	0	0	0.6	0	0	0	1.4	0	0	0	0.4	0	0	0	0	0	0	0	0.6	0	0	0	1	0	0	0	0	0	0
Lopadium coralloideum (Nyl.) Lynge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megaspora verrucosa (Ach.) Hafellner & V.Wirth	0	0	0	1	0.2	2	2.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1.6	0.6	0	0.4	0	0	0	0	0	1	0
Melanelia stygia (L.) Essl.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0
Micarea assimilata (Nyl.) Coppins	0	0	0	0	0	0	0	0	0	0	2.2	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	0	0	0	0	0	0
Micarea incrassata Hedl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia berengeriana (A.Massal.) Hafellner & V.Wirth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mycobilimbia sabuletorum (Schreb.) Hafellner	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia androgyna (Hoffm.) Arnold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ochrolechia frigida (Sw.) Lynge	3.2	0.2	10.2	0.4	14.8	1.4	10.6	4.6	3.6	1	17.6	17.2	12	15.8	10.2	6.2	5.6	10	6.4	18.6	3.4	18.2	21.6	18	17.6	18.2	6	15	11.8	7.6	14.6	13	13.2	8.6
Pannaria pezizoides (Weber)Trevis.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parmelia cf. omphalodes (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera cf. rufescens (Weiss) Humb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peltigera venosa (L.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1.2	0	0	0
Physcia cf. tenella (Scop.) Nyl.	0	0	0	0	0	0	0	0	3.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physconia muscigena (Ach.) Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyblastia sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia cf. speirea (Ach.) Kremp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Porpidia flavocaerulescens (Hornem.) Hertel & A.J.Schwab	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudephebe pubescens (L.) M.Choisy	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psoroma hypnorum (Vahl) Gray	0	0	0	0	0	0	0	0	0	0	1.2	0	0.4	0	0	0	0	0	2.6	0	1.6	0	0	1.6	2.4	1.2	0	1	0	0	1.2	0	0.6	0.4
Rhizocarpon cf. obscuratum (Ach.) Massal.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon cinereovirens (Müll. Arg.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geminatum Körb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon geographicum (L.) DC.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon intermediellum Räsänen	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizocarpon sp.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. conradii Korb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rinodina cf. olivaceobrunnea Dodge & Baker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solorina crocea (L.) Ach.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solorina saccata Ach.	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerophorus fragilis (L.) Pers.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Sphaerophorus globosus (Huds.) Vain.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0
Staurothele areolata (Ach.) Lettau.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon arcticum Lynge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon cf. botryosum Ach.	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stereocaulon grande (Magn.) Magn.	0	0	0	0	0	0	0	0	1	3.2	0	0	1	0.2	0	0	0.6	3	4	0	0	2.4	2	0	0	1	0	0	0	0	0	2.8	0	0
Stereocaulon paschale (L.) Hoffm.	0.2	0	0	0	0	0	4.6	0	0	0	1	1.4	0	0	0.2	4	0	6	0	0	0	0	0	1.4	0	0	0	0	1.4	0	0	1	0.4	0
Thamnolia subliformis (Ehrh.) W.L.Culb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	1.6	0	0	0	0	0	1.4	0	0	0	0	0	0
Tremolecia atrata (Ach.) Hertel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Umbilicaria hyperborea (Ach.) Hoffm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0