Ecography

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Supplementary material

Appendix 1

Table A1. The locations, elevation range and vegetation characteristics of sampled sites. The vegetation cover of tundra types is often continuous, whereas that of polar semi-deserts is often discontinuous.

Locality (site abbreviation and decimal coordinates)	Elevation range (m a.s.l.)	Nr. of transects	Nr. of plots	Main types of vegetation with characteristic species
Kola Peninsula (kola) N 67.27 E 41.02	90–135	4	32	*Arctostaphylos alpina-Alectoria ochroleuca* tundra, *Empetrum-Dicranum-Lichenes* tundra, *Betula nana* tundra
Kanin Peninsula (kani) N 68.44 E 45.40	20–70	4	32	*Empetrum-Dicranum-Lichenes*, *Betula nana* tundra, *Vaccinium myrtillus-Dicranum-Lichenes* tundra, *Salix* tundra
Kolguyev Island (kolg) N 69.17 E 49.39	30–80	4	32	*Festuca ovina-Vaccinium vitis-idaea* tundra, *Aulacomnium palustre-Tomentypnum nitens*, *Salix lanata* tundra
Pechora River (pech) N 68.50 E 52.79	10–20	4	32	*Arctostaphylos alpina-Alectoria* tundra, *Empetrum-Dicranum-Lichenes* tundra, *Betula nana* tundra
W Yamal Peninsula (wyam) N 69.95 E 67.58	10–20	4	32	*Salix nummularia-Salix polaris* tundra, *Vaccinium uliginosum* tundra
N Yamal Peninsula (nyam) N 72.71 E 70.74	10–20	4	32	*Salix polaris-Lichenes* tundra, *Eriophorum angustifolium-Warnstorfia* tundra
Chelyuskin Peninsula low elevation (chel1) N 77.04 E 102.46	25–75	3	24	*Salix polaris-Papaver polare-Thamnolia vermicularis* tundra and semi-desert
Chelyuskin Peninsula high elevation (chel2) N 77.05 E 102.50	125–200	5	27	*Racomitrium lanuginosum-Scapania simmonsii-Thamnolia vermicularis* polar semi-desert
NE Taimyr Peninsula low elevation (neta1) N 76.46 E 111.26	10–70	4	32	*Papaver polare-Dactylina arctica* tundra
NE Taimyr Peninsula high elevation (neta2) N 76.44 E 111.17	90–150	4	32	*Saxifraga hyperborea-Dactylina arctica-Racomitrium lanuginosum* polar semi-desert
Oloneskiy Bay (olon) N 73.29 E 116.92	150–225	4	32	*Dryas punctata-Salix polaris* tundra
Yana River low elevation (yana1) N 72.31 E 140.97	100–175	4	32	*Cassiope tetragona-Dryas punctata* tundra
Yana River high elevation (yana2) N 72.31 E 140.99	250–325	4	29	*Salix polaris* tundra
Kotelny Island low elevation (kote1) N 74.83 E 138.69	75–150	4	31	*Oxyria digyna-Orthothecium chryseon-Tomentypnum nitens* tundra

Kotelny Island middle elevation (kote2) N 74.85 E 138.75	175–250	4	30	moss-dominated*(Schistidium* spp.*)* tundra
Kotelny Island high elevation (kote3) N 74.87 E 138.75	300–350	3	24	*Saxifraga hyperborea-Racomitrium* polar semi-desert
Faddeyevskiy Island (fadd) N 75.16 E 143.51	10–20	4	32	*Alopecurus borealis*,*-Parmelia skultii-Salix polaris* – moss-richtundra
Lopatka (lopa) N 72.14 E 148.38	10–25	4	26	graminoids-rich *(Alopecurus borealis*, *Arctagrostis arundinacea*) tundra
Kolyma low elevation (koly1) N 69.26 E 162.86	325–400	4	32	*Salix tundra,* dwarf shrubtundra
Kolyma middle elevation (koly2) N 69.26 E 162.88	425–500	4	29	*Alectoria ochroleuca-Dryas punctata* tundra
Kolyma high elevation (koly3) N 69.26 E 162.92	650–725	4	30	Lichen-rich(*Alectoria ochroleuca*, *Bryocaulon divergens*, *Flavocetraria nivalis*) tundra
Wrangel Island low elevation (wran1) N 71.12 E 179.40	100–175	4	32	*Dryas octopetala-D. integrifolia* tundra
Wrangel Island middle elevation (wran2) N 71.13 E 179.57	325–400	4	29	*Salix rotundifolia-Saxifraga oppositifolia* tundra
Wrangel Island high elevation (wran3) N 71.14 E 179.58	450–525	4	29	*Papaver* polar semi-desert
Svalbard low elevation (sval1) N 78.28 E 15.58	15–75	3	24	*Cassiope tetragona-Hylocomium* tundra, *Dryas octopetala-Salix polaris* tundra
Svalbard middle elevation (sval2) N 78.29 E 15.63	200–275	4	32	*Saxifraga oppositifolia-Hypnum revolutum* tundra, *Hylocomium-Tomentypnum-Sanionia* mosstundra
Svalbard high elevation (sval3) N 78.30 E 15.66	400–470	4	25	*Luzula confusa* polar semi-desert

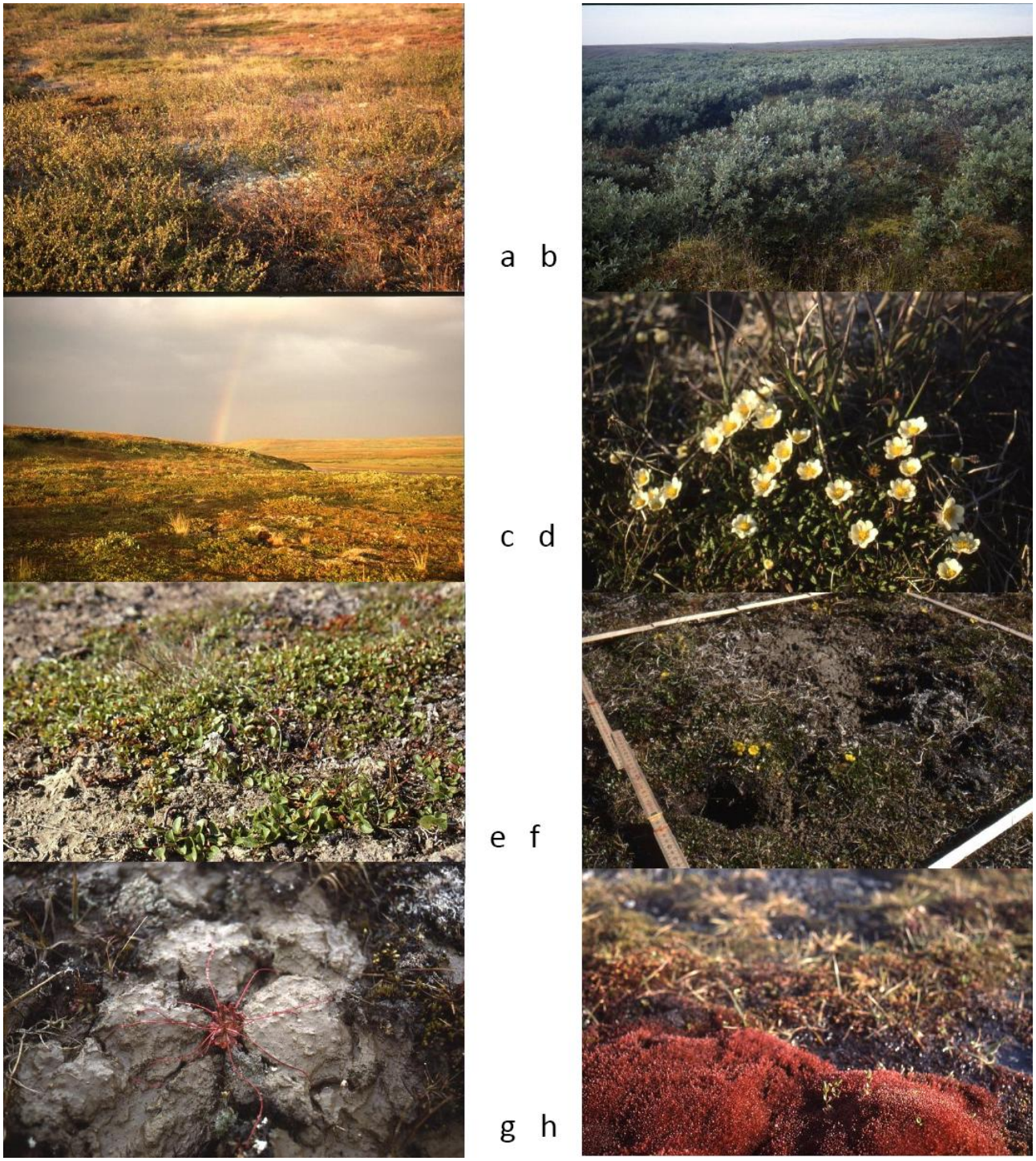

Fig. A1. An overview of plant communities of some of the study sites. a) *Betula nana* dominated tundra shrub-lichen communities (Kola Peninsula), b) willow (*Salix* spp.) shrub communities (Kolguyev Island), c) dwarf shrub tundra communities (Kanin Peninsula), d) herb-graminoid tundra (Lopatka), e) prostrate shrub tundra with *Salix nummularia* (Yamal Peninsula), f) moss-rich tundra with lemming burrows (Faddeyevskiy Island), g) polar semi desert with cryoturbation surface (*Saxifraga flagellaris*) (Taimyr Peninsula), and h) moss rich tundra communities with *Bryum cryophilum* (NE Taimyr Peninsula). Photos Risto Virtanen.