Supplementary material 2

Table S1. Structure, plant and lichen species composition across *urochisches* and plant community types in winter pastures of southern Yamal

Group of *urochisches*	**Periodically flooded by surface waters**			**Modern mires**	**Peatlands**	**Tundra plains and terraces**				**Tundra floodplains**
Urochische	**2б**	**2б**	**2в**	**3б/3г/3д**	**4б/4в/4д**	**6а/6б/6в**	**6г/6з**	**6а/6б/6г**	**6а**	**6и/6н/6к**
Plant communities	**sh-g Fp**	**sh-f-m Fp**	**g-m Fp**	**g-m M**	**g-m Pl**	**dsh-m T**	**g-m T**	**m-l T**	**g-dsh T**	**sh-f T**
Shrub species	**2**	**10-30**	**0-3**	**1-3**	**1**	**1-20**	**1-15**	**0-5**	**1**	**70-100**
Alnus alnobetula subsp. *fruticosa* (Rupr.) Raus	–	–	–	–	–	–	–	–	–	0-95
Betula nana L.	1	10-25	1-2	0-2	0-1	1-15	1-3	0-5	1	0-70
Salix glauca L.	1	3	<1	–	–	0-3	<1	–	–	0-60
Salix hastata L.	–	–	–	–	–	0-3	–	–	–	0-15
Salix lanata L.	–	–	–	–	–	0-2	0-10	–	–	0-10
Salix myrtilloides L.	–	<1	<1	<1	<1	–	<1	<1	–	–
Salix phylicifolia L.	–	–	<1	–	–	0-3	<1	–	–	<1
Dwarf shrub species	**10**	**2-20**	**5**	**3-7**	**5-15**	**10-30**	**0-10**	**5-20**	**50**	**0**
Andromeda polifolia L.	–	<1	0-3	0-2	0-2	–	0-2	<1	–	–
Arctous alpina (L.) Nied.	1	–	<1	–	–	0-5	<1	<1	10	–
Diapensia lapponica L.	–	–	–	–	–	<1	–	<1	<1	–
Dryas octopetala L.	–	–	–	–	–	–	–	–	10	–
Empetrum nigrum L.	–	3	1	<1	0-3	3-15	0-10	1-5	10	<1
Rhododendron tomentosum subsp. *subarcticum* (Harmaja) G.D. Wallace	2	7	1	0-4	2-7	0-5	0-5	1-7	5	0-2
Salix polaris Wahlenb.	–	1	–	–	–	<1	–	0-2	10	<1
Vaccinium oxycoccos L.	–	–	<1	–	–	–	–	–	–	–
Vaccinium uliginosum L.	7	0-10	1	<1	0-3	1-7	<1	0-5	10	0-10
Vaccinium vitis-idaea L.	–	–	<1	1	0-5	1-10	0-5	0-7	<1	<1
Grass and herb species	**65**	**10-25**	**15-50**	**10-35**	**15-35**	**7-20**	**20-75**	**5-20**	**20**	**25-70**
Antennaria villifera Boriss.	–	–	–	–	–	–	–	–	<1	–
Anthoxanthum monticola (Bigelow) Veldkamp	–	–	–	–	–	0-10	–	0-2	1	0-3
Angelica archangelica L.	–	–	–	–	–	–	–	–	–	0-5
Aquilegia sibirica Lam.	–	–	–	–	–	–	–	–	–	0-5
Arctagrostis latifolia (R.Br.) Griseb.	–	1	–	–	–	–	–	–	–	–
Artemisia tilesii Ledeb.	<1	–	–	–	–	–	–	–	–	–
Bistorta vivipara (L.) Delarbre	1	–	<1	–	–	<1	–	0-3	<1	<1
Calamagrostis stricta (Timm) Koeler	10	<1	–	<1	–	<1	<1	<1	<1	0-7
Campanula rotundifolia L.	–	–	–	–	–	–	–	–	<1	–
Carex aquatilis Wahlenb.	40	0-15	0-10	1	–	0-10	0-15	0-3	–	0-30
Carex bigelowii Torr. ex Schwein.	–	–	<1	–	–	0-7	<1	0-5	2	–
Carex chordorrhiza L.f.	–	<1	–	0-2	–	–	–	–	–	0-5
Carex rariflora (Wahlenb.) Sm.	–	1	0-10	0-3	0-3	<1	<1	0-10	–	<1

Supplementary materials 2. Table 1. Continuation.

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Carex rotundata Wahlenb.	–	<1	<1	3-10	0-10	–	0-7	0-2	–	–
Cerastium regelii Ostenf.	–	<1	–	–	–	–	<1	–	–	–
Chrysosplenium alternifolium subsp. *sibiricum* (Ser.) Hultén	–	<1	–	–	–	–	<1	–	–	–
Comarum palustre L.	5	3	1	1	–	–	<1	–	–	<1
Equisetum arvense L.	–	–	–	–	–	–	–	–	5	1-30
Eriophorum angustifolium Honck.	–	<1	–	0-10	–	–	<1	0-3	–	–
Eriophorum scheuchzeri Hoppe.	–	<1	0-7	0-5	0-10	1	0-10	0-10	–	–
Eriophorum vaginatum L.	–	1-3	0-15	0-12	0-10	0-15	0-15	0-15	–	–
Euphrasia frigida L.	–	–	–	–	–	<1	–	–	<1	–
Festuca ovina L.	<1	–	–	–	–	0-3	–	–	7	<1
Gagea serotina (L.) Ker Gawl.	–	–	–	–	–	<1	–	<1	<1	–
Hedysarum hedysaroides (L.) Schinz & Thell.	–	–	–	–	–	<1	–	–	2	–
Juncus castaneus Sm.	–	–	–	–	–	–	–	–	–	<1
Lolium pratense (Huds.) Darbysh.	–	–	–	–	–	–	–	–	–	<1
Luzula confusa Lindeb.	–	<1	–	–	–	–	–	–	–	<1
Luzula parviflora (Ehrh.) Desv.	–	2	<1	<1	–	–	<1	–	–	<1
Luzula wahlenbergii Rupr.	–	–	–	–	–	–	–	–	–	<1
Lycopodium annotinum L.	–	–	–	–	–	–	–	–	–	0-3
Oxytropis sordida (Willd.) Pers.	–	–	–	–	–	<1	–	–	3	–
Pedicularis sp.	–	<1	<1	<1	–	<1	<1	<1	<1	<1
Persicaria minor (Huds.) Opiz	–	–	–	–	–	<1	–	–	–	0-3
Petasites frigidus (L.) Fr.	–	–	–	–	–	<1	–	–	–	–
Pinguicula villosa L.	–	–	–	<1	–	–	–	–	–	–
Poa alpigena Lindm.	–	<1	–	–	–	–	<1	–	–	–
Polemonium acutiflorum Willd. ex Roem. & Schult.	<1	<1	–	–	–	–	–	–	–	<1
Polemonium boreale Adams	–	–	–	–	–	–	<1	–	–	–
Pyrola minor L.	–	–	–	–	–	–	–	–	–	<1
Rubus arcticus L.	3	0-3	–	–	–	–	0-3	–	–	0-30
Rubus chamaemorus L.	5	5-10	0-30	1-3	1-30	<1	0-65	<1	–	0-5
Solidago virgaurea L.	–	–	–	–	–	–	–	–	–	<1
Stellaria sp.	<1	<1	–	–	–	–	<1	–	–	<1
Tanacetum bipinnatum (L.) Sch.Bip.	1	–	–	–	–	–	–	–	–	–
Veratrum lobelianum Bernh.	5	–	–	–	–	–	–	–	–	0-25
Viola epipsiloides Á.Löve & D.Löve	<1	<1	–	–	–	–	–	–	–	<1

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Moss species	**1**	**40-100**	**70-90**	**75-100**	**80-95**	**50-95**	**40-95**	**10-40**	**10**	**0-85**
Sphagnum sp.	–	35-100	10-80	0-40	20-90	–	5-80	0-10	–	0-15
Green forest mosses	1	0-10	10-80	45-75	5-75	50-90	10-80	10-30	10	0-70
Lichen species	**0**	**<1**	**<1**	**0-15**	**3-15**	**0-40**	**0-10**	**40-90**	**<1**	**0-10**
Cladonia stellaris (Opiz) Pouzar & Vězda	–	–	–	<1	<1	–	0-2	<1	–	–
Cladonia rangiferina (L.) Weber ex F.H. Wigg.	–	–	–	0-10	1-10	0-10	0-3	5-40	<1	0-3
Cladonia arbuscula (Wallr.) Flot.	–	–	–	0-5	0-5	0-10	0-2	5-30	–	0-2
Cladonia gracilis (L.) Willd.	–	–	–	<1	<1	<1	<1	<1	–	–
Cetraria islandica (L.) Ach.	–	–	–	<1	<1	0-2	<1	0-2	<1	0-3
Flavocetraria cucullata (Bellardi) Kärnefelt & A. Thell	–	–	–	<1	<1	0-2	0-2	0-2	<1	0-2
Thamnolia vermicularis (Sw.) Schaer.	–	–	–	<1	–	<1	<1	–	–	–
Stereocaulon sp.	–	–	–	–	–	<1	–	–	–	–
Other lichen species	**–**	**–**	**–**	**–**	**–**	**0-20**	**–**	**0-50**	**–**	**–**

Note: Values represent the range of projective cover (%).

The symbol "–" indicates species absence; "<1" indicates species presence as single instances (cover < 1%).

Plant community abbreviations: sh-g Fp – shrub–grass floodplain; sh-f-m Fp – shrub–forb–moss floodplain; g-m Fp – grass–moss floodplain without a shrub layer; g-m M – grass–moss mires; g-m Pl – grass–moss peatlands; dsh-m T – dwarf shrub–moss tundra; g-m T – grass–moss tundra; m-l T – moss–lichen tundra; g-dsh T – grass–dwarf shrub tundra; sh-f T – shrub–forb tundra.

Vascular plant species important as winter forage are highlighted (Andreev 1934).