

FOXES FERTILIZE THE SUBARCTIC FOREST AND MODIFY VEGETATION THROUGH DENNING

Electronic Supplemental Material

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Supplementary Table 1. Relative abundance (percent cover, mean $\pm$ SE) and indicator analysis

results (indicator values and p-values) for plant species on dens and control sites (ctrl).

Significant indicator values are bolded ($p < 0.05$).

Plant species	Ctrl % cover	Den % cover	Ctrl indicator	Den indicator	p
Prostrate shrubs					
<i>Andromeda polifolia</i>	0.5 $\pm$ 0.4	0.0 $\pm$ 0.0	0.250	0.000	0.462
<i>Arctostaphylos</i> sp ^a	2.2 $\pm$ 1.1	5.6 $\pm$ 2.0	0.210	0.630	0.185
<i>Dryas integrifolia</i>	3.0 $\pm$ 1.4	0.0 $\pm$ 0.0	0.625	0.000	0.025
<i>Empetrum nigrum</i>	27.9 $\pm$ 4.3	10.5 $\pm$ 2.8	0.727	0.273	0.004
<i>Kalmia procumbens</i>	1.4 $\pm$ 1.4	0.0 $\pm$ 0.0	0.125	0.000	1.000
<i>Rhododendron tomentosum</i>	4.6 $\pm$ 3.0	1.9 $\pm$ 1.5	0.353	0.074	0.360
<i>Rubus arcticus</i> subsp. <i>acaulis</i>	0.0 $\pm$ 0.0	0.8 $\pm$ 0.6	0.000	0.375	0.204
<i>Salix reticulata</i>	0.2 $\pm$ 0.1	1.8 $\pm$ 1.3	0.041	0.556	0.269
<i>Shepherdia canadensis</i>	5.5 $\pm$ 2.4	3.0 $\pm$ 2.2	0.565	0.177	0.244
<i>Vaccinium uliginosum</i>	14.4 $\pm$ 1.8	6.9 $\pm$ 2.7	0.678	0.322	0.040
<i>Vaccinium vitis-idaea</i>	2.0 $\pm$ 0.4	4.1 $\pm$ 1.2	0.327	0.673	0.113
Erect shrubs					
<i>Betula glandulosa</i>	0.9 $\pm$ 0.6	4.7 $\pm$ 1.8	0.062	0.627	0.063
<i>Juniperus communis</i>	0.1 $\pm$ 0.1	1.6 $\pm$ 1.6	0.009	0.116	1.000
<i>Salix</i> ^b	0.5 $\pm$ 0.5	23.2 $\pm$ 3.4	0.003	0.979	0.000
<i>Ribes hudsonianum</i>	0.0 $\pm$ 0.0	0.4 $\pm$ 0.3	0.000	0.250	0.467
Forbs					
<i>Achillea millefolium</i>	0.0 $\pm$ 0.0	0.3 $\pm$ 0.2	0.000	0.375	0.203
<i>Anemone richardsonii</i>	0.0 $\pm$ 0.0	0.5 $\pm$ 0.3	0.000	0.375	0.204
<i>Bartsia alpina</i>	< 0.1 $\pm$ 0.0	0.0 $\pm$ 0.0	0.125	0.000	1.000
<i>Bistorta vivipara</i>	0.3 $\pm$ 0.3	0.0 $\pm$ 0.0	0.125	0.000	1.000
<i>Chamaenerion angustifolium</i>	< 0.1 $\pm$ 0.0	0.7 $\pm$ 0.2	0.005	0.843	0.004
<i>Fragaria virginiana</i>	0.0 $\pm$ 0.0	0.7 $\pm$ 0.4	0.000	0.500	0.078
<i>Geocaulon lividum</i>	0.1 $\pm$ 0.1	0.8 $\pm$ 0.5	0.008	0.352	0.205
<i>Moneses uniflora</i>	0.0 $\pm$ 0.0	0.3 $\pm$ 0.3	0.000	0.125	1.000
<i>Mitella nuda</i>	0.0 $\pm$ 0.0	0.2 $\pm$ 0.1	0.000	0.375	0.201
<i>Pedicularis flammea</i>	< 0.1 $\pm$ 0.0	< 0.1 $\pm$ 0.0	0.063	0.063	1.000
<i>Pyrola grandiflora</i>	< 0.1 $\pm$ 0.0	1.7 $\pm$ 0.7	0.002	0.739	0.011
<i>Solidago multiradiata</i>	0.0 $\pm$ 0.0	1.2 $\pm$ 1.0	0.000	0.500	0.072
<i>Stellaria longipes</i>	< 0.1 $\pm$ 0.0	< 0.1 $\pm$ 0.0	0.063	0.063	1.000

Plant species	Ctrl % cover	Den % cover	Ctrl indicator	Den indicator	P
Graminoids					
<i>Carex concinna</i>	0.5 ± 0.5	0.0 ± 0.0	0.125	0.000	1.000
<i>Carex scirpoidea</i>	0.6 ± 0.6	0.3 ± 0.2	0.171	0.157	1.000
<i>Carex vaginata</i>	0.0 ± 0.0	0.3 ± 0.3	0.000	0.125	1.000
<i>Leymus mollis</i>	0.0 ± 0.0	10.1 ± 5.4	0.000	0.625	0.025
<i>Poa arctica</i>	0.0 ± 0.0	0.1 ± 0.1	0.000	0.375	0.199
Seedless plants (Bryophyta, Lycopodiophyta and Marchantiophyta)					
<i>Dicranum</i> spp.	2.0 ± 1.3	1.4 ± 1.0	0.221	0.309	0.892
<i>Lycopodium annotinum</i>	0.0 ± 0.0	0.3 ± 0.3	0.000	0.125	1.000
<i>Moss</i> sp.	< 0.1 ± 0.0	2.0 ± 2.0	0.002	0.123	1.000
<i>Plagiochila</i> spp.	0.0 ± 0.0	< 0.1 ± 0.0	0.000	0.125	1.000
<i>Pleurozium schreberi</i>	7.8 ± 2.3	12.3 ± 1.7	0.340	0.611	0.131
Lichens					
<i>Cladonia</i> ^c sp	0.1 ± 0.1	0.0 ± 0.0	0.250	0.000	0.454
<i>Cladonia bacilliformis</i>	< 0.1 ± 0.0	0.0 ± 0.0	0.125	0.000	1.000
<i>Cladonia stellaris</i>	12.3 ± 4.3	0.2 ± 0.1	0.988	0.003	0.001
<i>Flavocetraria nivalis</i>	0.3 ± 0.2	0.0 ± 0.0	0.500	0.000	0.076
<i>Lichen</i> spp.	0.5 ± 0.5	0.0 ± 0.0	0.125	0.000	1.000
<i>Peltigera</i> spp.	0.0 ± 0.0	0.1 ± 0.1	0.000	0.250	0.475
Trees					
<i>Larix laricina</i>	1.0 ± 0.5	0.0 ± 0.0	0.375	0.000	0.200
<i>Picea glauca</i>	3.3 ± 1.8	1.2 ± 0.4	0.461	0.164	0.472

^a Given the absence of berries, we could not distinguish between *Arctostaphylous rubra* and

Arctostaphylous alpina.

^b Both *Salix glauca* and *Salix athabescensis* were found on dens. Their cover was grouped

together as they were often mixed together or indistinguishable in the field.

^c *Cladonia fimbriata* and *Cladonia chlorophaea*.