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Appendix 1

Table A1. Plant species occurring in soil seed bank samples and in the vegetation above. The species are ordered after their presence in the soil seed bank and alphabetically.

Species name	Species without seed bank = 0 Species with seed bank = 1	Non-clonal = 0 Clonal = 1	Seed without appendages = 0 Seed with appendages = 1	Woody = 0 Herbaceous = 1	Seed weight (mg)
<i>Arabis alpina</i>	1	0	0	1	0.24 a
<i>Arnica angustifolia</i>	1	1	1	1	0.72 a
<i>Cardamine bellidiflora</i>	1	0	0	1	0.17 b
<i>Cerastium alpinum</i>	1	1	0	1	0.24 c
<i>Draba arctogena</i>	1	0	0	1	
<i>Draba nivalis</i>	1	0	0	1	0.03 a
<i>Draba subcapitata</i>	1	0	0	1	0.23 c
<i>Festuca bracyphylla</i>	1	0	0	1	0.71 c
<i>Luzula confusa</i>	1	1	0	1	0.22 a
<i>Minuartia rubella</i>	1	0	0	1	0.06 c
<i>Papaver radicum</i>	1	0	0	1	0.12 c
<i>Poa alpina</i>	1	1	0	1	0.40 d
<i>Poa glauca</i>	1	0	0	1	0.15 a
<i>Polygonum viviparum</i> (bulbil)	1	1	0	1	0.85 c
<i>Potentilla vahliana</i>	1	0	0	1	0.52 a
<i>Rumex acetosella</i>	1	1	0	1	0.73 d
<i>Sagina saginoides</i>	1	0	0	1	0.02 d
<i>Saxifraga cespitosa</i>	1	0	0	1	0.05 a
<i>Saxifraga cernua</i> (bulbil)	1	1	0	1	0.34 c
<i>Saxifraga nivalis</i>	1	0	0	1	0.04 a
<i>Saxifraga oppositifolia</i>	1	0	0	1	0.09 d
<i>Saxifraga rivularis</i>	1	1	0	1	0.03 a
<i>Saxifraga tricuspidata</i>	1	0	0	1	0.05 a
<i>Sibbaldia procumbens</i>	1	1	0	1	0.45 a
<i>Stellaria longipes</i>	1	1	0	1	0.17 a
<i>Taraxacum</i> sp.	1	0	1	1	0.77 a
<i>Trisetum spicatum</i>	1	0	0	1	0.23 a
<i>Veronica alpina</i>	1	1	1	1	0.47 a
<i>Antennaria canescens</i>	0	1	1	1	
<i>Bartsia alpina</i>	0	1	0	1	0.21 a
<i>Betula nana</i>	0	0	1	0	0.15 a
<i>Campanula giesikiana</i>	0	1	0	1	0.06 a
<i>Campanula uniflora</i>	0	1	0	1	0.10 a
<i>Carex alpina</i>	0	1	0	1	0.42

<i>Carex bigelowii</i>	0	1	0	1	0.70 c
<i>Carex capitata</i> spp.					
<i>arctogena</i>	0	1	0	1	0.50 a
<i>Carex lachenalii</i>	0	1	0	1	0.30 a
<i>Carex nardina</i>	0	1	0	1	0.61 a
<i>Carex rupestris</i>	0	1	0	1	0.85 c
<i>Carex scirpoidea</i>	0	1	0	1	
<i>Cassiope tetragona</i>	0	0	0	0	0.01 c
<i>Chamaenerion latifolium</i>	0	1	1	1	0.22 c
<i>Diapensia lapponica</i>	0	0	0	1	0.03 a
<i>Draba glabella</i>	0	0	0	1	0.14 c
<i>Draba lactea</i>	0	0	0	1	0.16 c
<i>Dryas integrifolia</i>	0	0	1	0	0.43 a
<i>Empetrum nigrum</i> ssp.					
<i>hermaphroditum</i>	0	0	1	0	1.28 c
<i>Epilobium lactiflorum</i>	0	1	1	1	0.08 a
<i>Erigeron humilis</i>	0	0	1	1	0.16 c
<i>Gnaphalium supinum</i>	0	0	1	1	0.10
<i>Harrimanella hypnoides</i>	0	1	0	0	0.01 a
<i>Ledum palustre</i> ssp.					
<i>decumbens</i>	0	0	0	0	
<i>Luzula arctica</i>	0	0	0	1	0.27 c
<i>Luzula multiflora</i> ssp.					
<i>frigida</i>	0	0	0	1	0.40 a
<i>Pedicularis flammula</i>	0	0	0	1	0.50 a
<i>Pedicularis hirsuta</i>	0	0	0	1	0.37 a
<i>Pedicularis lapponica</i>	0	1	0	1	0.44
<i>Pedicularis lanata</i>	0	0	0	1	0.94
<i>Phyllodoce coerulea</i>	0	0	0	0	0.01 a
<i>Poa arctica</i>	0	1	0	1	0.27 c
<i>Poa pratensis</i>	0	1	0	1	0.25 e
<i>Potentilla crantzii</i>	0	1	0	1	0.39 a
<i>Potentilla hookeriana</i>					
ssp. <i>chamissonis</i>	0	1	0	1	
<i>Pyrola grandiflora</i>	0	1	0	1	0.002 a
<i>Salix arctica</i>	0	0	1	0	0.17 c
<i>Salix herbacea</i>	0	1	1	0	0.15 c
<i>Silene acaulis</i>	0	0	0	1	0.28 c
<i>Thalictrum alpinum</i>	0	0	0	1	0.40 a
<i>Tofieldia pusilla</i>	0	1	0	1	0.03 a
<i>Vaccinium uliginosum</i>					
ssp. <i>microphyllum</i>	0	1	1	0	0.10 c

a: (Porsild 1920), b: Seed Information Database (<www.rbgekew.org.uk/data/sid>), c: (Bruun et al. 2008), d: Ecological Flora of the British Isles (<www.ecoflora.co.uk>)

References

- Porsild, A. E. 1920. Sur le poids et les dimensions des graines arctiques. – *Rev. Gén. Bot.* 32: 97–120.
- Bruun, H. H. et al. 2008. Enhancement of local species richness in tundra by seed dispersal through guts of muskox and barnacle goose. – *Oecologia* 155: 101–110.

Appendix 2

Table A2. Species occurring in seed bank and in vegetation above in Greenland. The species are arranged according to families. The figures in the seed bank columns are number of seeds per square meter, Oslo and Copenhagen germinations combined. Figures in vegetation columns are the percentages with which the species are found in the 75 plots of 0.1 m² recorded at each vegetation type. Species recorded in the sample area but not within the 0.1-m² plots are marked with an 'X'. In the two last columns to the right information on the place and season of germination is given. All species names refer to <<http://nhm2.uio.no/paf/>>.

Family	Species	Dwarf shrub heath	Herb slope	Fell-field	Dwarf shrub heath	Herb slope	Fell-field	Germinated in	Germinated
		Seed bank			Vegetation			O=Oslo C=Copenhagen	1. or 2. season
Asteraceae	<i>Antennaria alpina</i> ssp. <i>canescens</i>					5.3			
	<i>Arnica angustifolia</i>		3.4			36.0		O	1
	<i>Erigeron humilis</i>					1.3			
	<i>Omalotheca supina</i>					5.3			
	<i>Taraxacum</i> sp.		3.4			60.0		O	1
Betulaceae	<i>Betula nana</i>				69.3		X		
Brassicaceae	<i>Arabis alpina</i>		16.9					O	1
	<i>Cardamine bellidifolia</i>	3.4						O	1
	<i>Draba arctogena</i>			10.2			1.3	O+C	2
	<i>Draba glabella</i>					X			
	<i>Draba lactea</i>			6.8				C	1
	<i>Draba nivalis</i>			20.4		1.3	1.3	O+C	2
	<i>Draba</i> sp.			10.2				C	1+2
Campanulaceae	<i>Campanula rotundifolia</i> ssp. <i>giesikiana</i>					12.0			
	<i>Campanula uniflora</i>						X		
Caryophyllaceae	<i>Cerastium alpinum</i>	47.5	16.9	16.9		22.7	1.3	O+C	1+2
	<i>Minuartia rubella</i>	3.4		13.6		18.7	1.3	O	1+2
	<i>Sagina saginoides</i>	37.4	13.5					O	1+2
	<i>Silene acaulis</i>				4.0	4.0	X		
	<i>Stellaria longipes</i>		3.4			10.7		O	1
Cyperaceae	<i>Carex arctogena</i>				1.3				
	<i>Carex bigelowii</i>				8.0	30.7			
	<i>Carex lachenalii</i>					8.0			
	<i>Carex nardina</i>						1.3		
	<i>Carex norvegica</i>					1.3			
	<i>Carex rupestris</i>				20.0		24.0		
	<i>Carex scirpoidea</i>						4.0		
	<i>Carex</i> sp.					1.3			
Diapensiaceae	<i>Diapensia lapponica</i>				1.3				
Equisetaceae	<i>Equisetum arvense</i>				8.0	40.0			
Ericaceae	<i>Cassiope tetragona</i>				82.7				
	<i>Empetrum nigrum</i>				94.7	25.3			
	<i>Harrimanella hypnoides</i>				4.0	14.7			
	<i>Phyllodoce caerulea</i>				8.0				
	<i>Rhododendron tomentosum</i> ssp. <i>decumbens</i>				4.0				
	<i>Vaccinium uliginosum</i> ssp. <i>microphyllum</i>				53.3	6.7	5.3		

Liliaceae	<i>Luzula confusa</i>	3.4	6.8	3.4	6.7	9.3	X	O	1+2
	<i>Luzula multiflora</i> ssp. <i>frigida</i>				4.0		X		
	<i>Luzula nivalis</i>		3.4		1.3	2.7	X	O	1
	<i>Tofieldia pusilla</i>				5.3	1.3			
Lycopodiaceae	<i>Diphasiastrum alpinum</i>						X		
	<i>Huperzia selago</i>				8.0				
Onagraceae	<i>Chamerion latifolium</i>					2.7			
	<i>Epilobium lactiflorum</i>					1.3			
Papaveraceae	<i>Papaver radicum</i>	3.4	179.4				X	O+C	1+2
Poaceae	<i>Festuca brachyphylla</i>		3.4				4.0	O	1
	<i>Poa arctica</i>					22.7	X		
	<i>Poa alpina</i>		3.4	10.2		5.3	X	O+C	1
	<i>Poa glauca</i>		16.9	98.5			5.3	O+C	1+2
	<i>Poa pratensis</i>				X	5.3			
	<i>Poa</i> sp.					2.7			
	<i>Trisetum spicatum</i>		3.4			24.0		O	1
Polygonaceae	<i>Bistorta vivipara</i>		3.4	42.7	69.3	14.7		O	1
	<i>Rumex acetosella</i>		3.4					O	1
Pyrolaceae	<i>Pyrola grandiflora</i>			38.7	5.3	X			
Ranunculaceae	<i>Thalictrum alpinum</i>				26.7				
Rosaceae	<i>Dryas integrifolia</i>					18.7			
	<i>Potentilla arenosa</i> ssp. <i>chamissonis</i>		3.4			2.7		C	1
	<i>Potentilla crantzii</i>				4.0				
	<i>Potentilla vahliana</i>			13.6				O+C	1+2
	<i>Sibbaldia procumbens</i>		44.1			60.0		O+C	1+2
Salicaceae	<i>Salix arctica</i>			14.7	40.0	14.7			
	<i>Salix herbacea</i>			53.3	94.7				
Saxifragaceae	<i>Micranthes nivalis</i>		10.2	10.2				O	1+2
	<i>Saxifraga cespitosa</i>	13.6	13.6	842.1		2.7		O+C	1+2
	<i>Saxifraga cernua</i>		40.7	95.1				O+C	1+2
	<i>Saxifraga oppositifolia</i>			13.6		1.3		O	1
	<i>Saxifraga rivularis</i>	13.6						O	1+2
	<i>Saxifraga tricuspida</i>		54.3	499.2		10.7		O+C	1+2
Scrophulariaceae	<i>Bartsia alpina</i>					X			
	<i>Pedicularis flammula</i>					10.7			
	<i>Pedicularis hirsuta</i>			2.7	1.3				
	<i>Pedicularis lanata</i>			1.3	1.3	X			
	<i>Pedicularis lapponica</i>			10.7					
	<i>Veronica alpina</i>		57.7			24.0		O	1+2