

## Appendix A.

Mean wet weight (g) and mean dry weight (g) of parts of different species of plants collected for nutrient analysis of the calving ground of the Porcupine Caribou Herd in Yukon in 1980.

Species	Range type	Unit collected* (phenological stage)**	Date	n	Mean wet weight (g)	Mean dry weight (g)
<i>Thamnolia vermicularis</i>	alpine barren	whole plant				
<i>Cetraria cucullata</i>	alpine barren	whole plant				
<i>Equisetum variegatum</i>	alluvial willow	whole plant				
<i>Equisetum scirpoides</i>	tussock meadow	whole plant				
<i>Equisetum arvense</i>	sedge heath	whole plant				
<i>Eriophorum angustifolium</i>	wet sedge meadow	shoot	June 6	76	0.54	0.131
			June 14	85	0.68	0.158
			June 24	108	1.44	0.336
			July 3	114	1.63	0.425
			July 12	110	3.33	0.822
<i>Eriophorum vaginatum</i>	tussock meadow	flower	(B) May 24	876	0.11	0.029
			(F) June 4	840	0.14	0.037
			(P) June 14	260	0.40	0.093
			(S) June 23	200	0.50	0.146
			(S) July 2	150	0.69	0.218
			(S) July 12	210	0.54	0.176
<i>Carex aquatilis</i>	wet sedge meadow	shoot	June 6	111	0.63	0.180
			June 14	120	0.75	0.184
			June 24	81	1.33	0.312
			July 3	73	1.36	0.404
			July 12	79	1.62	0.538
<i>Salix glauca</i>	wet sedge meadow	leaf				
<i>Salix lanata</i>	dwarf shrub heath	leaf				
<i>Salix pulchra</i>	wet sedge meadow	leaf				
<i>Betula glandulosa</i>	wet sedge meadow	leaf				
<i>Vaccinium uliginosum</i>	tussock tundra	leaf				
<i>Dryas integrifolia</i>	alluvial heath	flower	(F) June 23	1500	0.08	0.016
			(P) July 3	1400	0.09	0.030
			(S) July 12	1500	0.10	0.039
<i>Polygonum bistorta</i>	tussock meadow	flower	(B-F) June 23	168	0.81	0.116
			(F) July 2	66	1.52	0.264
<i>Boykinia richardsoni</i>	dwarf shrub heath	inflor.	(F) July 12	114	2.28	0.385
<i>Geum glaciale</i>	alluvial heath	flower	(B-F) June 6	190	0.47	0.078
			(F-P) June 14	190	0.53	0.120
			(S) June 23	95	1.26	0.285
			(S) July 3	130	0.73	0.233
<i>Lupinus arcticus</i>	alluvial heath	inflor.	(B) June 14	210	0.48	0.058
			(F) June 23	85	2.04	0.221
			(F-S) July 3	52	3.17	0.439
			(S) July 12	25	5.48	0.822
<i>Oxytropis maydelliana</i>	alluvial heath	inflor.	(B-F) June 24	332	0.32	0.054
			(F-P) July 3	275	0.39	0.082
			(S) July 12	250	0.45	0.108

Appendix A (cont).

Species	Range type	Unit collected* (phenological stage)**	Date	n	Mean wet weight (g)	Mean dry weight (g)
<i>Oxytropis borealis</i>	alluvial gravel	inflor.	(B-F) June 24	240	0.40	0.093
			(F-P) July 3	310	0.34	0.056
			(S) July 12	300	0.44	0.126
<i>Epilobium latifolium</i>	alluvial gravel	whole plant	June 14	190	0.47	0.079
			June 24	55	1.93	0.266
			July 3	68	1.91	0.361
			July 12	40	3.48	0.604
			inflor.	(B-F) July 3	91	1.16
<i>Pedicularis kanei</i>	alluvial heath	flower	(F-S) July 12	75	1.49	0.309
			(B) June 6	122	1.20	0.109
			(B-F) June 14	90	1.08	0.178
			(F-P) June 23	70	0.65	0.270
			(P-S) July 3	45	0.34	0.634
<i>Artemesia arctica</i>	alluvial gravel	inflor.	(B) June 14	-	-	-
			(B) June 24	75	1.49	0.215
			(F) July 3	45	2.67	0.475
			(F) July 12	57	2.24	0.461

\* - unit collected: whole plant - entire above ground plant,  
shoot - leaves and stem plucked from basal sheath,  
flower - flower head and pedicel,  
inflorescence - flower head, upper stem and leaves

\*\* - phenological stage; B - flower bud; F - flower open; P - flower past or senescent; S - seed or fruit.

Appendix B.

Fibre, ash and nutrient content (% dry weight) of vegetation collected in 1980.

Species	Date	Fibre				Ash			Nutrients	
		Ndf	Adf	Lignin	Cellulose	Residual	Total	Nitrogen	Phosphorus	
<b>Lichens</b>										
<i>Thamnochloa vermicularis</i>	June 9	52.2	16.7	12.6	3.3	0.8	13.1	0.6	0.1	
	June 18	49.6	12.6	7.8	4.4	0.3	17.5	0.5	0.1	
	June 27	57.2	13.2	8.0	4.7	0.4	13.3	0.6	0.1	
	July 6	53.4	11.9	9.0	1.8	1.1	13.8	0.5	0.1	
	July 13	53.6	13.0	10.1	2.0	0.4	14.9	0.6	0.1	
<i>Cetraria cucullata</i>	June 8	31.8	5.2	4.0	1.2	0.0	11.7	0.4	0.1	
	June 17	28.5	4.5	2.0	2.0	0.4	14.0	0.4	0.0	
	June 26	28.9	5.6	3.0	2.0	0.9	13.1	0.4	0.0	
	July 5	30.9	6.4	5.0	1.0	0.4	12.8	0.4	0.0	
	July 12	30.5	4.4	1.7	1.8	0.9	13.0	0.4	0.0	
<b>Horsetails</b>										
<i>Equisetum variegatum</i>	June 6	43.3	35.6	6.5	22.5	6.5	11.4	1.2	0.1	
	July 12	37.9	31.0	4.4	20.9	5.6	10.7	1.8	0.1	
<i>Equisetum scirpoides</i>	June 7	46.8	34.6	6.5	23.6	4.5	9.7	1.0	0.1	
	July 12	46.4	35.2	6.1	22.9	6.1	10.7	1.0	0.1	
<i>Equisetum arvense</i>	June 23	27.2	18.4	3.8	14.2	0.5	11.1	3.2	0.4	
	July 2	26.9	18.2	3.1	13.1	2.1	10.7	2.2	0.2	
	July 12	27.9	20.7	3.0	15.3	2.4	12.2	2.1	0.2	
<b>Graminoids</b>										
<i>Eriophorum angustifolium</i>	June 6	60.3	25.2	2.8	21.5	0.9	4.0	1.8	0.3	
	June 14	60.2	25.8	3.4	21.7	0.7	4.4	2.4	0.3	
	June 24	62.1	26.8	3.2	23.4	0.3	4.1	2.2	0.3	
	July 3	64.2	28.1	3.6	23.6	1.0	3.2	1.7	0.2	
	July 12	60.1	26.5	4.1	21.7	0.8	3.1	1.4	0.2	
	May 24	56.6	19.2	1.6	17.1	0.4	4.1	3.1	0.5	
<i>Eriophorum vaginatum</i>	June 4	58.2	19.6	1.7	17.1	0.8	4.2	2.5	0.4	
	June 14	64.3	23.6	1.3	22.2	0.0	3.4	2.1	0.3	
	June 25	64.1	25.4	2.1	23.0	0.4	3.3	2.2	0.3	
	July 2	63.3	27.6	3.5	23.8	0.3	3.4	1.9	0.3	

<i>Carex aquatilis</i>	June 6	60.1	28.5	4.0	23.2	1.3	4.2	1.7	0.2
	June 14	63.1	27.7	3.6	23.1	1.0	4.5	2.3	0.4
	June 24	64.6	27.6	3.5	23.4	0.7	5.3	2.3	0.4
	July 3	65.9	29.0	3.2	25.3	0.5	4.5	2.1	0.3
	July 12	70.5	33.8	4.5	28.7	0.6	3.9	1.4	0.2
Deciduous shrubs									
<i>Salix glauca</i>	June 23	31.2	20.5	7.0	12.7	0.9	4.6	3.4	0.4
	July 2	23.2	17.6	5.7	11.3	0.6	4.4	2.8	0.2
	July 12	23.0	17.4	6.1	10.8	0.5	4.5	2.5	0.2
	June 14	20.4	15.2	5.0	12.1	0.1	7.2	4.9	0.6
<i>Salix lanata</i>	June 23	21.6	17.4	4.3	12.9	0.2	6.6	3.9	0.4
	July 3	19.6	16.6	4.4	12.2	0.1	6.2	2.8	0.2
	July 12	17.4	14.0	4.2	9.2	0.0	6.8	2.6	0.2
	June 14	12.9	12.6	4.5	6.4	1.7	5.0	4.8	0.7
<i>Salix pulchra</i>	June 24	16.6	14.8	6.3	7.3	1.2	4.2	3.9	0.4
	July 3	19.4	15.0	5.7	9.3	0.0	3.6	2.5	0.2
	July 12	19.9	15.2	4.6	10.4	0.2	3.8	2.2	0.2
	June 14	21.4	16.8	5.6	10.6	0.5	3.5	3.6	0.4
<i>Betula glandulosa</i>	June 24	21.9	18.4	6.3	12.1	0.0	3.0	3.0	0.3
	July 3	24.1	19.4	6.5	12.9	0.0	2.4	2.4	0.2
	July 12	25.3	17.4	3.2	13.9	0.3	3.0	2.2	0.2
Evergreen shrubs									
<i>Vaccinium vitis-idaea</i>	May 24	28.6	20.8	4.4	15.8	0.6	2.7	0.9	0.1
	June 7	30.0	20.4	6.4	13.7	0.3	2.4	0.9	0.1
	June 14	30.7	18.7	5.4	13.3	0.1	2.6	0.9	0.1
	June 25	31.3	18.6	5.5	13.4	0.0	2.5	0.9	0.1
	July 5	33.7	21.1	6.3	14.8	0.0	2.6	0.9	0.1
	July 12	31.4	22.0	6.4	14.8	0.8	2.8	0.8	0.1
	June 23	25.3	17.1	3.9	13.2	0.0	3.2	1.8	0.3
<i>Dryas integrifolia</i>	July 3	40.1	30.0	7.1	22.8	0.2	3.1	1.5	0.2
	July 12	46.1	34.0	10.4	22.4	1.2	3.4	1.6	0.2
Forbs									
<i>Polygonum bistorta</i>	June 23	23.9	22.4	4.1	16.1	2.2	5.6	3.1	0.4
	July 2	32.1	26.2	7.8	18.1	0.4	4.6	2.2	0.4
	July 12	36.2	31.0	9.0	21.2	0.8	4.9	1.8	0.2

Appendix B (cont.). Fibre, ash and nutrient content (% dry weight) of vegetation collected in 1980.

Species	Date	Fibre			Ash		Nutrients		
		Ndf	Adf	Lignin	Cellulose	Residual	Total	Nitrogen	Phosphorus
<i>Boyleinia richardsonii</i>	July 12	18.8	16.4	3.8	12.2	0.9	4.0	2.0	0.4
	June 6	31.7	23.4	3.6	18.5	1.2	6.3	3.1	0.4
<i>Geum glaciale</i>	June 14	30.7	22.7	4.3	17.5	1.0	6.2	2.5	0.3
	June 23	34.7	27.6	6.2	20.0	1.4	6.2	2.0	0.3
<i>Lupinus arcticus</i>	July 3	45.8	35.1	10.0	22.2	2.9	6.2	1.1	0.1
	June 14	21.2	18.4	1.8	16.1	0.6	3.1	5.4	0.7
<i>Oxytropis maydelliana</i>	June 23	30.0	23.5	2.6	20.8	0.0	6.9	2.9	0.4
	July 3	24.0	19.3	2.3	17.0	0.0	5.6	3.3	0.4
<i>Oxytropis borealis</i>	July 12	34.9	25.4	4.1	21.2	0.0	5.4	2.1	0.2
	June 24	24.5	18.0	2.3	15.5	0.2	5.9	4.1	0.4
<i>Epilobium latifolium</i>	July 3	31.0	22.5	2.5	19.4	0.6	6.1	3.8	0.4
	July 12	38.1	27.1	7.4	17.7	2.0	5.8	1.9	0.3
<i>Epilobium latifolium</i>	June 24	25.9	21.1	3.4	16.8	0.9	5.6	3.6	0.4
	July 3	27.6	20.8	2.4	17.0	0.8	5.5	3.1	0.3
<i>Pedicularis borealis</i>	July 12	39.2	27.0	4.4	21.5	0.2	6.0	3.6	0.3
	June 14	13.0	11.0	2.0	8.5	0.5	9.6	4.2	0.5
<i>Pedicularis borealis</i>	June 24	17.2	15.5	3.0	11.5	1.0	10.3	4.1	0.4
	July 3	17.2	14.4	3.4	10.8	0.2	12.9	2.8	0.2
<i>Pedicularis borealis</i>	July 12	18.8	16.6	3.9	12.5	0.2	12.7	2.6	0.2
	July 3	14.9	12.1	2.5	9.0	0.5	8.9	2.5	0.3
<i>Pedicularis borealis</i>	July 12	16.2	13.2	2.7	10.1	0.3	9.2	1.8	0.3
	June 6	17.5	14.1	2.5	11.3	0.4	7.1	3.5	0.5
<i>Artemisia arctica</i>	June 14	19.8	13.7	6.7	7.0	0.0	6.7	3.2	0.4
	June 23	20.2	15.7	3.8	11.5	0.4	6.6	2.7	0.4
<i>Artemisia arctica</i>	July 5	37.5	23.0	3.0	19.7	0.2	5.1	3.6	0.3
	June 14	39.3	18.3	4.9	8.7	4.7	16.2	4.3	0.5
<i>Artemisia arctica</i>	June 24	25.6	19.1	6.6	11.6	0.9	13.3	3.6	0.4
	July 3	26.3	20.4	7.0	12.7	0.7	12.0	2.6	0.3
<i>Artemisia arctica</i>	July 12	32.9	24.8	7.8	15.1	1.9	11.4	2.0	0.2

Ndf: Neutral detergent fibre. Adf: Acid detergent fibre.

Appendix C.

Percent of caribou observed in each range type by physiographic characteristics. (Sample size).

	Alluvial gravel (2,030)	Alluvial willow (610)	Alluvial heath (26,382)	Wet sedge meadow (28,810)	Tussock meadow (89,056)	Sedge heath (25,841)	Dwarf shrub (4,963)	Alpine barren (1,526)
<i>Slope</i>								
none	100.0	72.6	99.8	73.4	17.0	3.6	3.4	2.1
slight (< 10%)	-	17.9	0.2	13.2	22.1	31.5	30.9	9.3
moderate	-	9.5	-	13.4	60.9	63.8	19.3	67.0
steep (> 30%)	-	-	-	0.<1	<0.1	1.2	46.4	21.6
<i>Aspect</i>								
north	-	12.1	-	1.6	5.6	17.3	1.7	2.6
north-east	-	-	-	4.8	0.6	12.2	20.3	3.7
east	-	4.6	-	11.4	29.4	55.5	59.8	58.4
south-east	-	-	-	-	2.3	1.1	2.6	16.3
south	-	-	-	2.7	1.4	1.8	0.1	12.6
south-west	-	-	-	-	1.3	0.1	3.7	-
west	-	10.7	0.2	6.1	37.9	6.6	6.6	0.9
north-west	-	-	-	-	4.4	1.9	1.7	3.5
<i>Topographic position</i>								
crest	-	-	-	-	0.4	0.2	0.2	2.1
upper slope	-	-	-	3.1	13.1	7.1	9.7	51.8
middle slope	-	21.6	-	17.3	46.0	72.4	76.9	38.3
lower slope	-	5.7	0.1	6.0	21.4	15.6	6.3	7.5
apron	-	-	0.1	0.1	0.6	0.6	2.7	0.4
valley floor	81.0	62.6	82.0	36.0	9.7	2.9	3.0	-
plain	19.0	10.0	17.8	37.4	8.8	0.9	0.2	-
terrace	-	-	-	-	-	0.4	0.9	-
<i>Land form</i>								
level	5.4	72.6	99.8	73.0	12.3	3.2	5.8	-
fan-pediment	-	-	-	0.3	-	-	-	0.1
rolling	-	27.4	0.2	26.7	87.7	96.4	93.0	93.2
ridged	-	-	-	-	0.1	-	0.3	3.1
terraced	-	-	-	-	-	0.4	0.9	3.7
recent fluvial	94.6	-	-	-	-	-	-	-