



BLUENOSE EAST CARIBOU HERD SPRING SAMPLING
URINE AND FECALS
MAY 2007

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**BLUENOSE EAST CARIBOU HERD SPRING SAMPLING
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Department of Environment
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Kugluktuk

2007



Field Report

Objective of the sampling:

Fecal and urine samples were collected during the spring migration of the Bluenose East (BNE) Caribou herd in order to provide these samples to Dr. Perry Barboza and Dave Gustin, Institute of Arctic Biology, University of Alaska, Fairbanks (Alaska). These samples will be used for diet, energy balance, pregnancy rate and genetic analysis. Extra fecal samples were collected for Dr. Susan Kutz, University of Calgary, Calgary (Canada) to extract parasites.

Study area:

Sampling was conducted between 25 and 75 km south-southeast of Kugluktuk (Figure 1).

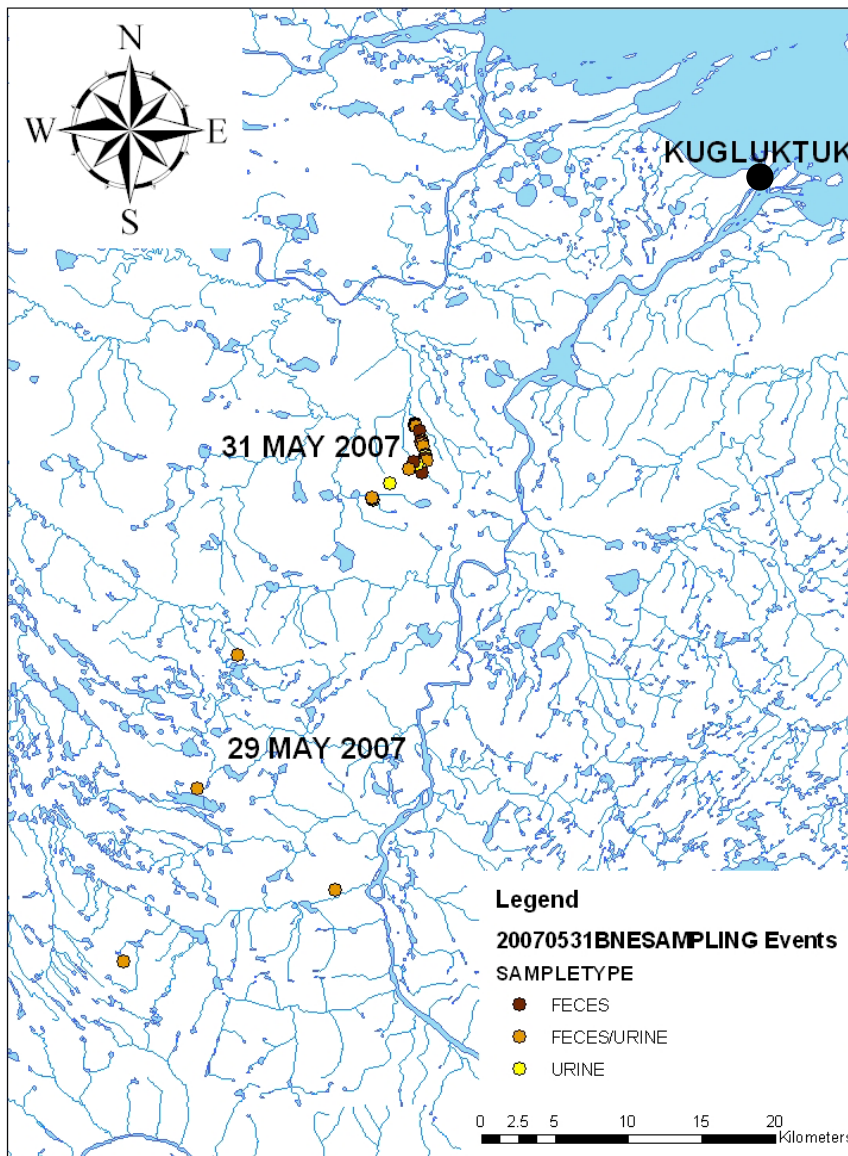


Figure 1: BNE caribou fecal and urine sampling sites, May 2007.

Methods:

Sampling was conducted on May 29 and May 31, 2007 during the peak of the migration of the BNE caribou herd in the proximity of Kugluktuk (mainly adult females and yearlings). On May 29, 2007, sampling was conducted by Allen Niptanatiak and Mathieu Dumond by helicopter. We were landing in the proximity of caribou groups and walked to where the caribou were to find fresh fecal and urine samples (The waypoint was taken at the landing location). On May 31, 2007, sampling was conducted by Mathieu Dumond by snowmachine. Fecals and urine were collected by driving more or less perpendicular to the migration direction and from a group of trails to the next to limit the risk of double sampling one individual. For urine, “yellow snow” was collected. Because trails were crossing each other and overlapping, no attempt was made to collect urine and fecal samples from a same individual.

On June 14, 2007, Gerry Atatahak (Conservation Officer Trainee) collected 8 extra caribou fecal samples for Dr Susan Kutz (University of Calgary). Samples were collected by ATV within 6 km of Kugluktuk, west and south (4 mile Bay to S-Lake, to the Coppermine River).

During the field work, samples were kept in a cooler and then transferred in the lab freezer except for the fecal samples collected for the University of Calgary that were transferred to the refrigerator to keep parasites active.



Results:

Table 1: Number of fecal and urine samples collected from the BNE caribou herd in May 2007, SSE from Kugluktuk.

	University of Alaska		University of Calgary	Total
	urine	feces	feces	feces
20070529	28	38		38
20070531	19	17	26	43
Total	47	55	26	81

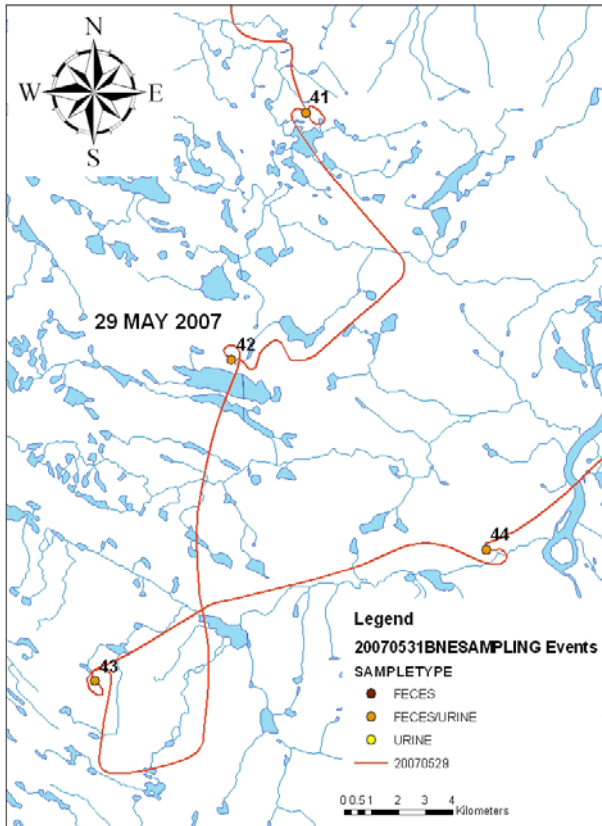


Figure 2: Helicopter track (red line) and BNE caribou fecal and urine sampling locations of May 29, 2007 with the waypoint number

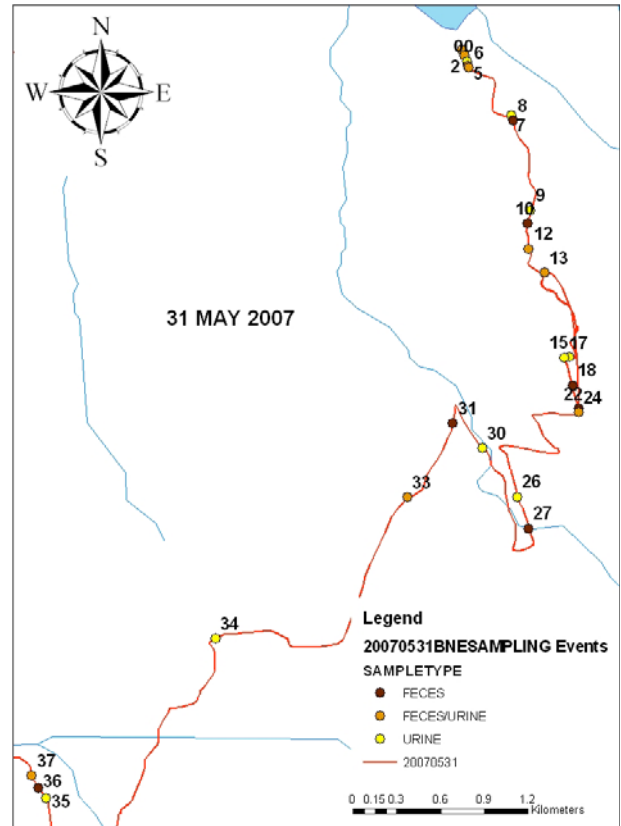


Figure 3: Snow-machine track (red line) and BNE caribou fecal and urine sampling locations of May 31, 2007 with the waypoint number.

At this time the records for the samples collected in June 2007 are not available but could be obtained through Dr. Susan Kutz (University of Calgary).

Deliverables:

University of Alaska:

- Copy of the results of the analysis of these samples.
- Collaboration on selected reports and publications using these samples.
- Copy of any report, publication or communication using these samples
- Acknowledgement of the Nunavut Wildlife Division, Department of Environment (Gov of Nunavut) contribution on any report, publication or communication using these samples.

University of Calgary:

- Copy of the results of the analysis of these samples (floatation results provided in Appendix 2).
- Collaboration on selected reports and publications using these samples.
- Copy of any report, publication or communication using these samples
- Acknowledgement of the contribution of the Nunavut Wildlife Division, Department of Environment (Gov of Nunavut) contribution on any report, publication or communication using these samples.

Government of Nunavut:

- Samples and collection information
- Collaboration on selected reports and publications using these samples.
- Copy of any report, publication or communication using these samples
- Acknowledgement of the contribution of the University of Alaska and University of Calgary on any report, publication or communication using the results of the analysis of these samples.

APPENDIX 1: BNE Caribou fecal and urine sampling, May 2007.

GPSWGS84	WP	LAT	LON	SAMPLETYPE	FECES	URINE	DATETIME
1	1	67.67813	-115.65080	FECES/URINE	2	1	31/05/2007 9:41
2	2	67.67778	-115.65032	FECES/URINE	2	1	31/05/2007 9:50
3	3	67.67760	-115.65000	FECES	2		31/05/2007 10:01
4	4	67.67741	-115.64991	FECES/URINE	2	2	31/05/2007 10:08
5	5	67.67711	-115.64978	FECES/URINE	1	1	31/05/2007 10:15
6	6	67.67700	-115.64967	FECES/URINE	2	1	31/05/2007 10:19
7	7	67.67405	-115.64300	URINE		1	31/05/2007 10:28
8	8	67.67372	-115.64277	FECES	1		31/05/2007 10:30
9	9	67.66814	-115.64021	URINE		1	31/05/2007 10:36
10	10	67.66733	-115.64078	FECES	1		31/05/2007 10:38
11	11	67.66587	-115.64065	FECES	1		31/05/2007 10:42
12	12	67.66578	-115.64064	FECES/URINE	2	1	31/05/2007 10:48
13	13	67.66427	-115.63812	FECES/URINE	2	1	31/05/2007 10:54
15	15	67.65906	-115.63449	URINE		1	31/05/2007 11:04
17	17	67.65901	-115.63528	URINE		1	31/05/2007 11:07
18	18	67.65728	-115.63404	FECES	1		31/05/2007 11:10
20	20	67.65636	-115.63355	FECES	1		31/05/2007 11:12
21	21	67.65602	-115.63329	FECES	2		31/05/2007 11:15
22	22	67.65584	-115.63318	FECES	1		31/05/2007 11:19
23	23	67.65572	-115.63305	FECES	1		31/05/2007 11:27
24	24	67.65563	-115.63310	FECES/URINE	1	1	31/05/2007 11:30
25	25	67.65180	-115.64412	FECES	1		31/05/2007 11:39
26	26	67.65048	-115.64337	URINE		1	31/05/2007 11:42
27	27	67.64853	-115.64170	FECES	2		31/05/2007 11:44
28	28	67.64770	-115.64093	FECES	1		31/05/2007 11:51
29	29	67.65179	-115.64562	FECES	1		31/05/2007 11:55
30	30	67.65355	-115.64884	URINE		1	31/05/2007 11:58
31	31	67.65511	-115.65353	FECES	1		31/05/2007 12:01
32	32	67.65275	-115.65656	FECES	1		31/05/2007 12:04
33	33	67.65060	-115.66112	FECES/URINE	1	1	31/05/2007 12:07
34	34	67.64214	-115.69268	URINE		1	31/05/2007 12:19
35	35	67.63251	-115.72053	URINE		1	31/05/2007 13:15
36	36	67.63317	-115.72186	FECES	1		31/05/2007 13:17
37	37	67.63393	-115.72281	FECES/URINE	1	1	31/05/2007 13:20
38	38	67.62859	-115.74383	FECES	3		31/05/2007 13:46
40	40	67.68313	-115.69200	FECES	1		31/05/2007 16:24
NA	42	xxxx	xxxx	FECES	1		31/05/2007
NA	43	xxxx	xxxx	FECES	1		31/05/2007
NA	BNE XXX	67.66453	-115.78983	FECES	1		31/05/2007 15:14
NA	BNE XX	67.62859	-115.74383	FECES	1		31/05/2007 13:46
41	41	67.53951	-115.94173	FECES/URINE	10	4	29/05/2007 10:14
42	42	67.45880	-116.00932	FECES/URINE	10	9	29/05/2007 11:10
43	43	67.35397	-116.13112	FECES/URINE	9	7	29/05/2007 12:12
44	44	67.39492	-115.79322	FECES/URINE	9	8	29/05/2007 13:06
NA	NA	NA	NA	FECES	8		14/06/2007
148	KUGLUKTUK	67.81690	-115.13545				

APPENDIX 2: Wisconsin flotation raw results of 26 BNE caribou fecal samples collected on May 31, 2007 SSE of Kugluktuk, Nunavut

UC	Agency	Individual	Lab #	Animal	Lat	Lon	Date collected	Location	Date analyzed	Grams	Trichostrongylid	Eggs /gram	Moniezia	Eggs/gram	Total feces + bag for egg extraction	Comments
37	Gov NU	M Dumond	1	WP01	67.67813	-115.65080	31/05/2007 9:41	Blue Nose East Herd	07-Jun-07	2	181	90.5			61.9	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	2	WP02	67.67778	-115.65032	31/05/2007 9:50	Blue Nose East Herd	07-Jun-07	2	73	36.5			125.01	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	3	WP03	67.67760	-115.65000	31/05/2007 10:01	Blue Nose East Herd	07-Jun-07	2	51	25.5			97.8	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	4	WP3b	67.67760	-115.65000	31/05/2007 10:01	Blue Nose East Herd	07-Jun-07	2	121	60.5			119.49	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	5	WP04	67.67741	-115.64991	31/05/2007 10:08	Blue Nose East Herd	07-Jun-07	2	103	51.5			102.55	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	6	WP06	67.67700	-115.64967	31/05/2007 10:19	Blue Nose East Herd	07-Jun-07	2	86	43			81.11	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	7	WP11	67.66587	-115.64065	31/05/2007 10:42	Blue Nose East Herd	07-Jun-07	2	142	71			89.15	
37	Gov NU	M Dumond	8	WP12	67.66578	-115.64064	31/05/2007 10:48	Blue Nose East Herd	07-Jun-07	2	119	59.5			71.96	
37	Gov NU	M Dumond	9	WP13	67.66427	-115.63812	31/05/2007 10:54	Blue Nose East Herd	07-Jun-07	2	58	29			57.85	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	10	WP20	67.65636	-115.63355	31/05/2007 11:12	Blue Nose East Herd	07-Jun-07	2	26	13			105.02	
37	Gov NU	M Dumond	11	WP21	67.65602	-115.63329	31/05/2007 11:15	Blue Nose East Herd	07-Jun-07	2	287	143.5			91.48	
37	Gov NU	M Dumond	12	WP21b	67.65602	-115.63329	31/05/2007 11:15	Blue Nose East Herd	07-Jun-07	2	105	52.5			41.54	
37	Gov NU	M Dumond	13	WP23	67.65572	-115.63305	31/05/2007 11:27	Blue Nose East Herd	07-Jun-07	2	264	132			84.33	
37	Gov NU	M Dumond	14	WP25	67.65180	-115.64412	31/05/2007 11:39	Blue Nose East Herd	07-Jun-07	2	67	33.5			37.12	
37	Gov NU	M Dumond	15	WP27	67.64853	-115.64170	31/05/2007 11:44	Blue Nose East Herd	07-Jun-07	2	27	13.5			49.34	
37	Gov NU	M Dumond	16	WP28	67.64770	-115.64093	31/05/2007 11:51	Blue Nose East Herd	07-Jun-07	2	36	18	6	3	48.29	
37	Gov NU	M Dumond	17	WP29	67.65179	-115.64562	31/05/2007 11:55	Blue Nose East Herd	07-Jun-07	2	319	159.5			77.97	
37	Gov NU	M Dumond	18	WP32	67.65275	-115.65656	31/05/2007 12:04	Blue Nose East Herd	07-Jun-07	2	137	68.5			58.84	
37	Gov NU	M Dumond	19	WP38	67.62859	-115.74383	31/05/2007 13:46	Blue Nose East Herd	07-Jun-07	2	35	17.5			97.56	
37	Gov NU	M Dumond	20	WP38c	67.62859	-115.74383	31/05/2007 13:46	Blue Nose East Herd	07-Jun-07	2	58	29	2	1	79.02	slide also contained 1 Dictyocaulus larva
37	Gov NU	M Dumond	21	WP38b	67.62859	-115.74383	31/05/2007 13:46	Blue Nose East Herd	07-Jun-07	2	63	31.5			172.51	
37	Gov NU	M Dumond	22	WP40	67.68313	-115.69200	31/05/2007 16:24	Blue Nose East Herd	07-Jun-07	2	92	46			94.41	slide also contained Dorsal Spine Larvae (DSL)
37	Gov NU	M Dumond	23	WP42			31/05/2007	Blue Nose East Herd	07-Jun-07	2	172	86			59.18	
37	Gov NU	M Dumond	24	WP43			31/05/2007	Blue Nose East Herd	07-Jun-07	2	0				62.25	
37	Gov NU	M Dumond	25	BNE XXX	67.66453	-115.78983	31/05/2007 15:14	Blue Nose East Herd	07-Jun-07	2	80	40			62.7	animal were harvested and fecals were pulled directly from colon
37	Gov NU	M Dumond	26	BNE XX	67.62859	-115.74383	31/05/2007 13:46	Blue Nose East Herd	07-Jun-07	2	175	87.5			82.31	animal were harvested and fecals were pulled directly from colon

Samples were taken with snow, therefore samples were wet

Egg extraction were done on all feces June 9, 2007

	Trichostrongylid	Moniezia
Prevalance	96.2%	7.7%
Intensity	57.54	2.00