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Home Range Use, Social Structure and Habitat Selection of the Western Arctic Caribou Herd

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QUARTERLY REPORT

Contract No.:	CX 9100-8-0032
Contract Title:	Home Range Use, Social Structure, and Habitat Selection of the Western Arctic Caribou Herd
Contractor:	State of Alaska, Department of Fish and Game
Principal Investigators:	James L. Davis and John W. Coady
Research Associate:	Patrick Valkenburg
Project:	To provide a study and report of the Home Range Use, Social Structure, and Habitat Selection of the Western Arctic Caribou Herd, Northwestern Alaska
Reporting Period:	1 January 1980 through 31 March 1980

METHODS

We monitored radio-collared caribou in the central Brooks Range and the Selawik/Kobuk/Buckland area from October 1979 through late March 1980 using a Bellanca Scout, Cessna 185, and Piper PA-18 aircraft. Bureau of Land Management personnel also assisted with tracking during their research activities in the Selawik and Buckland Hills. We spent 17 hours tracking from the Cessna 185, 14 hours from the Piper PA-18, and 25 hours from the Scout. In the central Brooks Range we spent 10 hours in the Cessna 185 and 5 hours in the Scout. Also, we monitored some collared caribou from the Western Arctic Herd during surveys of the Central Arctic Herd in early February. We made no attempt to determine if there were collared caribou wintering north of the Colville River.

Much of the time we flew at 10 to 13 thousand feet to maximize radio reception, especially over the Brooks Range. Consequently, although we covered a very large area, our knowledge of the winter distribution of the herd is still not complete. More information on winter distribution, including distribution of caribou north of the Brooks Range, will be obtained in April.

RESULTS

Of the 31 caribou collared to date, 28 have been relocated a total of 71 times. Table 1 summarizes the status of each radio-collared caribou. Most caribou that crossed the Kobuk River in late September turned east and moved to the vicinity of Selby Lake, then turned west or southwest and spread out between the Kobuk River and the hills east of Koyuk. Major concentrations were in the lowlands around Ambler, the middle Kobuk valley, along the Kugarak and upper Selawik Rivers, and in the Selawik and Buckland Hills.

We placed radio collars on more than one caribou in each of 10 groups. In four instances, missing or nonfunctioning collars prevented us from determining whether animals collared from the same group remained together during the winter. In only one of the other six instances did animals collared in the same group remain in the same general wintering area. Caribou collared in the other groups separated widely, and no collared caribou were found in the same group during winter.

Seven collars were relocated after they began emitting mortality signals. Two were verified as being dropped from small males, 3 were suspected of being dropped, and 2 were on caribou illegally shot by hunters.

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Table 1. Status of radio-collared caribou in the Western Arctic Herd as of 16 March 1980 and location of 1979-1980 wintering areas.

Collar Number[a]	Age[b]/Sex	Date Collared	Location of Collaring	Winter Range	Radio-collar Animal Status
69	young/male	4/19/79	Kevuk Cr., John R.	Unknown	Unknown
67	young/male	4/19/79	Kevuk Cr., John R.	Upper Itkillik R.	Functioning
64	adult/male	4/19/79	Kevuk Cr., John R.	Unknown	Unknown
68	young/male	5/1/79	Selawik Hills	Anaktuvuk Pass	Functioning
63	young/male	5/2/79	Mouth Hunt R.	Unknown	Dropped
34	adult/female	5/2/79	Mouth Hunt R.	Buckland R.	Functioning
9	adult/female	5/2/79	Driftwood, Utukok R.	Selawik Flats	Functioning
1	adult/female	5/9/79	Driftwood, Utukok R.	Unknown	Unknown
33	adult/female	5/9/79	Driftwood, Utukok R.	Upper Killik R.	Functioning
76	young/male	9/28/79	Ambler, Kobuk R.	Buckland Hills	Dead or Dropped
73	young/male	9/28/79	Ambler, Kobuk R.	Unknown	Unknown
32	young/male	9/28/79	Ambler, Kobuk R.	Selawik Hills	Functioning
78	young/male	9/28/79	Ambler, Kobuk R.	Kobuk Valley	Functioning
77	young/male	9/28/79	Ambler, Kobuk R.	Selawik Hills	Functioning
61	adult/female	9/29/79	Ambler, Kobuk R.	Selawik Hills	Functioning
74	young/male	9/29/79	Ambler, Kobuk R.	East of Koyuk	Functioning
36	adult/female	9/29/79	Ambler, Kobuk R.	Buckland Hills	Functioning
37	adult/female	9/29/79	Ambler, Kobuk R.	Purcell Mtn.	Functioning
75	adult/male	9/29/79	Ambler, Kobuk R.	Buckland Hills	Unknown
38	adult/female	9/29/79	Ambler, Kobuk R.	Unknown	Unknown
72	adult/male	9/30/79	Ambler, Kobuk R.	Unknown	Dropped Collar
66	adult/male	9/30/79	Ambler, Kobuk R.	East of Koyuk	Shot 3/1/80
65	adult/male	9/30/79	Ambler, Kobuk R.	Selawik Hills?	Unknown
71	adult/male	9/30/79	Ambler, Kobuk R.	Buckland Hills	Dead or Dropped
6	adult/female	10/1/79	Ambler, Kobuk R.	Purcell Mtn.	Functioning
0	adult/female	10/1/79	Ambler, Kobuk R.	Ambler Lowland	Functioning
2	young/male	10/1/79	Ambler, Kobuk R.	----	Shot 10/25/79
4	adult/female	10/2/79	Ambler, Kobuk R.	Kobuk Valley	Functioning
62	young/male	10/2/79	Ambler, Kobuk R.	Buckland Hills	Functioning
79	adult/male	10/2/79	Ambler, Kobuk R.	Selawik Flats	Dead or Dropped
80 (no radio)	adult/male	10/2/79	Ambler, Kobuk R.	Unknown	Unknown

a All collars are yellow with black numbers unless otherwise noted.
b Young means an estimated age of less than 4 years. Adult means an estimated age of 4 years or older.