



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

Gates of the Arctic National Park and Preserve

P.O. Box 74680

Fairbanks, Alaska 99707

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N1627

September 29, 1989

Memorandum

To: Files, GAAR

From: Resource Management Specialist, GAAR

Subject: Beaver survey, 1989

FIELD NOTES

Sept. 24

Don Glaser (4627Y) and I arrived in BTT late afternoon to be ready to fly on Monday AM.

Sept. 25

Departed BTT at 0945 for the North Fork Koyukuk. The wind was absolutely calm, high overcast (8000') and good visibility, temperatures in the 40's. Survey conditions are ideal with no leaves, no glare from sun, and only a skim of ice on the edges of smaller ponds. We began the unit at the south end and flew it to the north. A few ducks are still paddling around, and a lone Canada goose was seen at Florence Lake. The beavers seemed to prefer the backwater creeks or sloughs to the lakes and ponds. I started out mapping dams as well as lodges but rapidly tired of that. The sky became broken with occasional sun after 1200. Returned to Bettles at 1300 (about 2 hrs 45 mins flight time for N. Fork unit), refueled and departed for the Alatna R. The ceiling and visibility decreased at Bettles during our absence, and did not improve towards the Alatna. Poor visibility made us decide to begin at Takahula Lake and work south. Ceilings were 1500-2000' but visibility remained good. We completed the survey and returned to BTT at 1710. We saw several bull moose with cows today and it appears the breeding season is just beginning. One bull threatened the cub by shaking his head and running towards us. Two swans were seen on the Alatna at the park boundary.

A clean-up note: 3 (at least) drums and one wood box were seen south of Takahula Lake scattered out in the flat swampy area. A helicopter would be best to collect the barrels and sling them in

or put them at the lake shore for a floatplane.

Sept. 26

Stayed on the ground due to weather and my marginal head and stomach conditions. After reviewing our survey results last night and comparing them to Howard Golden's survey in 1987, I felt we had seen far fewer river or bank dens this year. (I purposely did not take or review Howard's maps prior to the survey to make the results independent and statistically valid.) Both Don and I felt that in the heavy current of the main river it would be difficult to anchor a food cache, so we had not expected to find very many bank dens. I called Howard this morning to discuss this discrepancy. He indicated that it was difficult to see bank dens because the only thing visible is the food cache, and that they would indeed den on the main river, almost always in the cut banks. He recommended taking the old survey maps along while conducting the new survey to help get a sight picture of the river dens, and also to compare use between years on all of the dens. He did not seem to feel that it was too important to have an independent survey. He felt that much of the data such as lodge use over time, dispersal data for young beavers that may misplace lodges or food caches and not survive, etc., was as important as the actual count. He said this survey will only give trend data over time.

Sept. 27

No flights possible due to IFR conditions again this AM. By 1230 the skies were lifting so Don flew to Coldfoot to pick up Donia. We departed at 1500 for the John River unit. Worked from south to north. The John River has more gravel cutbanks than soil, so not many bank dens, but the sloughs and ponds had several lodges. Ice had formed solidly in 1 or 2 of the very shallow sloughs and several small ponds were half covered by ice. Flight time for this unit is about 2 hours 45 mins (3.3 total). We dropped a message for Bill Fickus but he was up at the mine so didn't see him. Returned to Bettles at 1830.

Sept. 28

We departed at 0900 for the Kobuk River units. The weather was good VFR with lower ceilings (3000') to the west. We flew direct to the upper Kobuk Canyon and completed the upper unit. We spotted many bank dens today, so now have our sight picture in mind. After a break we continued down river and completed the lower Kobuk unit near Bear Island. Visited with Gary and Linda Bamford on the Hogatza River, then flew to the Alatna to complete the survey. We reflew the main river of the southern portion of the unit to pick up bank dens we had missed on Monday. Finished the northern half of the unit about 1930. We saw many moose today, almost always bulls with cows. There were a number of very large bulls on the Kobuk and the Alatna; one group of 18 moose was seen on the Alatna near Unakserak Creek. Two pairs of swans were seen on the Kobuk, and mergansers and some ducks are still present. There was

essentially no ice along the Kobuk; some of the small ponds in the upper Alatna were 1/2 to 3/4 covered with a skim of ice.

Sept. 29

Released Don this morning to return to DENA. The one portion of the survey that is weak is the main river on the North Fork, but I could not justify keeping him to refly such a small area.

Recommendations:

A new survey team should take an old set of maps and spend an hour on one of the units familiarizing themselves with the appearance of dens, food caches, old lodges, and the relative location of lodges to dams, especially on creeks or sloughs. Patterns become apparent, and having a good sight picture makes the survey work more thorough.

We found it most efficient to fly the main river for a long segment, then return down the east side to pick up sloughs and ponds, and return up the west side for the same. Doing transects across the units did not give us the consistent altitude and speed necessary along the rivers to adequately spot bank dens.

If weather permits, this survey can be flown in three long days. Since this year's fall weather has been exceptionally warm, we may have been lucky on the ice conditions. The survey should be planned between September 18 and 30 with flexibility to conduct it as late as possible to allow food caches to become as large as possible. Weather conditions at this time of year do not usually allow three consecutive days of flying, so plan pilot and aircraft availability for at least 5 days.

Judy Alderson

BEAUFORT RIVER--GATES OF THE ARCTIC--1989

DRAINAGE	AREA km2	LENGTH km	LAKES, SLOUGHS, CRKS			RIVERS			TOTALS			PERCENTS		
			act	inact	a/km2	l/km2	act	a/km	act	inact	a/km2	l/km2	lsc/r	act/i
Upper Kobuk	46	22	3	8	0.07	0.17	8	0.36	11	8	0.24	0.17	27/73	58/42
Lower Kobuk	87	26	28	8	0.32	0.09	5	0.19	33	8	0.38	0.09	85/15	80/20
Alatna	153	106	22	13	0.14	0.08	13	0.12	35	13	0.23	0.08	63/37	73/27
John	91	56	7	4	0.08	0.04	1	0.02	8	4	0.09	0.04	88/12	67/33
N. Fork Koyukuk	234	57	10	2	0.04	0.01	3	0.05	13	2	0.06	0.01	77/23	87/13
OVERALL	611	267	70	35	0.13	0.08	30	0.15	100	35	0.20	0.08	68/32	73/27

BEAVER SURVEY--GATES OF THE ARCTIC--1989

BEAVER SURVEY--GATES OF THE ARCTIC--1967

DRAINAGE	AREA km2	LENGTH km	LAKES, SLOUGHS, CRKS				RIVERS		TOTALS			PERCENTS		
			act	inact	a/km2	l/km2	act	a/km	act	inact	a/km2	l/km2	lsc/r	act/l
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