

Date : Sept. 1988

ANNUAL PROGRESS REPORT SHEEP SURVEY AND INVENTORY ACTIVITIES

STUDY AREA

GAME MANAGEMENT UNIT: 24 -24,150 mi².

GEOGRAPHICAL DESCRIPTION: Koyukuk River drainage above Dulbi River (Brooks Range within Gates of the Arctic National Park).

BACKGROUND

Dall Sheep occur only in the Brooks Range within the Unit. They are found in low to high numbers throughout the range, with higher numbers closer to the the headwaters of the tributary rivers. This report covers only the area within Gates of the Arctic National Park. Sheep found in the remainder of the Unit but east of the park boundary and in the preserve are covered in the GMU 25 report. Before creation of the park in 1981, the area was subject to extensive sport hunting with an average annual harvest of 50 rams. Sport hunting within the park is prohibited but qualified subsistence residents are still allowed to hunt within the park. Sheep populations are assumed to be stable or slowly increasing with low annual harvests less than 40 sheep per year.

POPULATION OBJECTIVES

To manage a stable or increasing sheep population which will sustain an annual subsistence harvest of 50 sheep within the Gates of the Arctic National Park.

METHODS

The harvest was monitored through a registration hunt and aerial population estimates were conducted in prior years by the National Park Service and the ADF&G.

RESULTS AND DISCUSSION

Population Status and Trend

Sheep numbers in the area should be stable or increasing since the amount of human harvest has decreased since 1981. Wolf predation may be increasing, however, since the number of ~~trappers~~ ^{trappers} who were able to operate with the park has decreased.

Population Size:

Extensive surveys were conducted in 1974, 1976 and 1982-1984 by the ADF&G and USNPS (Singer 1984). Unit 24 was divided

into 19 survey blocks and 5600 sheep were counted in those blocks. No recent surveys have been conducted in the area.

Population Composition:

Singer (1984) conducted composition surveys and found 15% lambs, 8% yearlings, 51% ewes, 23% rams and 3% unclassified which indicates that for the area as a whole the population is healthy.

Mortality

Season and Bag Limit:

Only qualified subsistence residents (i.e. residents of Anaktuvuk Pass, Bettles/Evansville, Wisemen, Alatna, Allakaket, Ambler, Hughes, Kobuk, Nuiqsut and Shungnak) are allowed to participate in this hunt.

Unit 24, and 26A, those portions within Gates of the Arctic National Park August 1-April 30 Three sheep by registration permit

Harvest

Human Induced Mortality: The annual harvest within the Gates of the Arctic National Park runs between 25-30 sheep. Most of the sheep are reported as rams and adults (Table 1). Approximately 25 sheep are harvested by Anaktuvuk Pass residents and 1-5 sheep by residents from the other nine eligible villages.

Permit hunts: Due to confusion within the Department no one individual has had management responsibility for the registration permit hunt and thus the issuance, collection and analysis of permits has only infrequently occurred. Because we do not have Department personnel living in and around the park the registration permits are issued by vendors and agents. I have contacted all the personnel who may have had access to the harvest and I tried to summarize the data but unfortunately most of the permits and overlays have been lost (Table 1).

Hunter residency and transportation methods: In April 1988 I went to Anaktuvuk Pass and conducted a door to door harvest survey of all the people who received registration permits in 1987. From that survey the following information on hunting patterns is derived. Most residents do not set out to solely hunt sheep but rather they are on a trip where caribou hunting, fishing or trapping is the primary purpose. If they spot some accessible sheep then they will hunt them. Most people get permits so they will be legal if a sheep presents itself in that opportunistic situation. Hunting occurs when sheep are in the best condition from August to

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December. Residents prefer to have the season open until April to provide emergency food in case they have snow machine trouble but sheep are thought to be too thin to be good that time of the year. Because of the opportunistic nature of the hunt one mountain or sheep subpopulation does not provide the majority of the harvest. Sheep are hunted in GMU 26A north of the Anaktuvuk River, on Contact Creek west of the village and in the Chandler Lake area. In GMU 24 they hunted on the John River and its tributaries: Kollutarak, Ekokpuk and Inukpasugruk Creeks. Occasionally during the trapping season 1-2 unreported sheep may be taken during the winter and used more for trapping bait than food. Residents used Argos until snowfall, then snow machines for transportation. NPS regulations severely restrict the use of Argos thus many of the best sheep hunting areas are not accessible before snowfall.

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I sent harvest survey letters to permit holders of Wiseman and Bettles. Bettles residents use the permits to document subsistence activities within the park but very few of the people actually hunted sheep. In Wiseman only full curl rams in the fall are taken by residents who walk into the park. Residents of Allakaket have an interest in hunting sheep but the Alatna River conditions have to be good to allow boat access to the sheep hunting area and only two sheep have been taken in the past five years.

Natural Mortality: According to Robert Stephenson (pers. comm.) wolves are the main predator on sheep within the park. The area has approximately 130 wolves in 10-12 packs. There were less than the normal numbers of caribou in the Brooks Range near Anaktuvuk Pass during the winter of 1987/88 and wolf predation on sheep was probably higher.

Game Board Actions and Emergency Orders

In the years prior to the 1981/1982 hunting season, the sheep season was from 10 August-20 September and the bag limit was one ram of 7/8 curl. After the Gates of the Arctic National Park was created, the residents of Anaktuvuk Pass asked for a special season to allow subsistence hunting of sheep. The Game Board established in 1982/83, for residents of the park, a registration permit hunt with an upper harvest limit of 50 sheep. That regulation was in effect until the 1984/85 regulatory year when the hunt was extended to include residents of all villages which qualify under ANILCA (see Seasons and bag limits).

CONCLUSIONS AND RECOMMENDATIONS

The objective within the Unit for sheep is to produce a maximum harvest of 50 sheep annually for qualified subsistence residents. Based on a sustainable harvest rate

of 1.5-2.5% elsewhere in interior Alaska the estimated annual reported and unreported harvest 30 sheep, (0.5% harvest rate) is well below the sustainable harvest and below the Board's guideline harvest level.

To ensure that future harvest information is accurate and current I plan to change the registration harvest report card to a questionnaire letter during February which will be sent to all permit holders. Since the whole registration permit process is expensive and the harvest does not warrant the in-season monitoring of a permit, I recommend that the current system be changed and a less expensive alternate system be instituted with cooperation with USNPS.

LITERATURE CITED

Singer, F. J. 1984. Aerial Dall Sheep count, 1982, 1983 and 1984 Gates of the Arctic National Park and Preserve. U. S. Dept. of Int., Nat. Park Serv., Survey and Inventory Rept. AR-84-2. Anchorage. 15pp.

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Table 1. Gates of the Arctic National Park sheep harvest and hunter residency

	1982	1983	1984	1985	1986	1987
Permits issued	49	no data	41	16	16	36
Permits returned	15	-	6	5	4	2
Successful hunters	14	-	2	1	1	12*
Permits by village						
Anaktuvuk	49	no data	26	1	5	30
Bettles	0	-	10	6	9	0
Allakaket	0	-	2	2	0	1
Wiseman	0	-	3	4	2	5
Sex of harvest						
males	18	-	4	2	1	22
females	7	-	-	-	-	3
lambs	1	-	-	-	-	-

* number of sheep taken are based on oral survey not returned permits