

Res. Mgt. files

AERIAL DALL SHEEP CENSUS

Mount McKinley Park, 1975

By

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ATTACHED: Table 1 Distribution & Composition
Figure 1 Distribution map

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Introduction

An aerial sheep survey was conducted in Mount McKinley National Park during the period of July 8-11, 1975. The objective of the survey was to determine the number, distribution and composition of Dall sheep within McKinley Park. The observer was Will Troyer, NPS biologist and the pilot, Chalon Harris of Denali Flying Service. Troyer had five years previous experience censusing Dall sheep in the Kenai Peninsula and Harris had at least 10 years experience flying in the McKinley area and had previously flown sheep surveys in the park.

Methods

Aerial surveys were conducted from a Piper Supercub (PA-18) with a 150 H.P. engine. Mountain areas containing sheep habitat were searched intensively in an attempt to record all sheep. This was accomplished by dividing the park into small recognizable units between drainages or specific mountain ranges. Once an area was covered the team proceeded to the next counting unit.

Bands of sheep were located then they were tightly circled or many times a series of low sweeps were necessary until all sheep were classified. Sheep were classified from less than 200 feet whenever possible. However because of extreme precipitous slopes, rugged terrain and sometimes light turbulence not all sheep could be classified accurately. No attempt was made to separate ewes and yearlings.

Rams were classified as to those with $1/2$ curl horn or less, $3/4$ curl and full curl horns or greater.

Each band of sheep was given a number which was recorded on a map, scale 1:250,000, and the corresponding number recorded by the observer on a census form with the number and composition of the band. The pilot and observer both tabulated each band and counting continued until both were satisfied that the figures were correct.

Nearly all flying was conducted in the early morning hours between 5:00 AM and 9:30 AM. After this time wind turbulence tended to be excessive in the McKinley area.

Results and Discussion

A total of 898 sheep were counted and the distribution of the sheep during the survey is shown in Figure 1. Except for some fog in a few of the higher peaks on the outer range of mountains between Savage and the Nenana River visibility was excellent during the entire survey period. Skies were clear and only during the morning of July 8 did we encounter turbulence of any degree. This occurred along the Riley Creek drainage and resulting in listing a large segment of this population as unclassified.

Of the 898 sheep seen, 786 were classified (Table 1). Lambs constituted 16.2 percent of the total, and rams 28 percent. The remaining 55.8 percent were classified as ewes and yearlings although this classification no doubt included some young 2 year old rams which often are with the ewes and which are difficult to distinguish from the air.

If the percentages obtained were applied to the total number, then the population contained 147 lambs and 235 rams. Only 76 of the 204 rams were classified as to horn curl. Of these, 38 were classified as full curl rams or greater, 17 as 3/4 curl and 21 as 1/2 curl or less.

Areas containing the greatest concentration of sheep were the mountains between Teklanika River and the East Fork on the north side of the road (171 sheep); between the Teklanika River and Savage River on the south side of the road (286 sheep) and Riley Creek drainage (101 sheep).

From previous experience I consider the sheep in McKinley more difficult to classify than sheep on the Kenai. The primary reason is that the mountains are more precipitous and thus it became more difficult and hazardous to approach sheep close enough for accurate identification. This is particularly true in attempting to classify rams as to horn size. Lambs, on the other hand, were quite easy to classify because of their small size.

I consider the census quite thorough for the areas covered. We did not attempt a census in the south side of McKinley beyond the Bull River, but on previous surveys few or no sheep were reported in this area. We did continue the survey beyond Muldrow Glacier on the north side of the Alaska Range to Slippery Creek. This was more of a reconnaissance survey rather than a detailed census of all habitat, but we failed to find any sheep in this area although some have been reported in the past. No flights were made from Slippery Creek to the west boundary.

I'm making no estimate as to the total percentage of sheep seen or missed however I do feel the counts and coverage were as accurate as can be obtained by aerial means. In the past Haber (1975) and Whitten (1974) estimated anywhere from 70 to 90 percent of the total population were seen during their aerial counts.

According to Murie (1942) and Haber (1975) the Dall sheep population in McKinley has fluctuated greatly over a period of years; however, the 898 sheep seen compare closely to total counts made by Haber (1975) and Whitten (1974) in recent years. Thus it appears the population has been relatively stable during the past decade.

I would recommend in the future that the survey continue to be flown during this period or perhaps a little earlier with the major aim of getting a total count and a lamb count. The rest of the composition data could be obtained from a series of ground observations whenever it becomes necessary to obtain such data.

A total of 15 hours of aircraft time were used to conduct the survey at a cost of \$675.00.

Other Wildlife Observation

Wolves - Two adult and two pups were observed at the Sanctuary den on two different occasions. Two gray wolves were observed in Easy Pass on the south side of the Alaska Range on July 11, 1975.

Caribou - On July 11, 1975, approximately 615 caribou were observed in the Bull River - Foggy Pass area. The largest band contained 275 animals consisting of mostly cows, with a few calves. One band of 70 cows and calves were seen at the head of the Sanctuary River near Refuge Valley. These were the only caribou bands observed on the north side of the mountains. A separate report will cover details on caribou observations.

References Cited

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