

A BRIEF RESUME OF THE STATUS, MANAGEMENT, RESEARCH EFFORTS ON
AND PROBLEMS OF DALL SHEEP IN ALASKA - 1974

By
Wayne E. Heimer
Department of Fish and Game
Fairbanks, Alaska

The abundance and distribution of Dall sheep in Alaska has received much attention throughout the brief history of sheep investigations in the state. The general distribution is well understood, and is presented in the Alaska Department of Fish and Game publication, Alaska's Wildlife and Habitat. Dall sheep in Alaska occur in seven mountain ranges throughout the state; the Brooks Range, Tanana Hills-White Mountains, Alaska Range, Talkeetna Mountains, Wrangell Mountains, Chugach Mountains and the Kenai Mountains (Fig. 1).

Information on abundance is currently lacking in many areas of Alaska where sheep are known to occur. The information which exists is largely the product of aerial surveys. Areas which have been systematically surveyed have been the Alaska Range, the Wrangell Mountains, the Tanana Hills-White Mountains, the Kenai Mountains and portions of the Chugach and Talkeetna Mountains. Table 1 gives the current estimates of numbers of Dall sheep in each of the seven mountain ranges of Alaska as well as a qualitative expression of the confidence which can be placed in each estimate.

Table 1. Dall sheep numbers in the mountain ranges of Alaska - 1974.

<u>Mountain Range</u>	<u>Estimated Number</u>	<u>Qualitative Confidence Level</u>
Brooks Range	20 - 25,000	Low
Tanana Hills- White Mountains	700	High
Alaska Range	10,000	High
Wrangell Mountains	10,000	High
Talkeetna Mountains	3,000	Low
Chugach Mountains	3,000	Medium
Kenai Mountains	3,000	High

It can be seen that the current estimate of Dall sheep numbers in Alaska is 50 - 55,000. This is thought to be a conservative estimate by most members of the Alaska Department of Fish and Game staff.

It is impossible to state whether there is a trend in the numbers of sheep throughout the state. Some populations are known to be quite high, and others are lower than they have been in the recorded past. It is not known whether Dall sheep in Alaska follow cyclic population fluctuations. It does, however, appear that in total there are as many sheep present throughout the state as there have ever been in recorded history.

MANAGEMENT: Management of Dall sheep in Alaska has consisted of a limited fall season and a 3/4 curl regulation for the last 25 years. Hunting throughout this period was generally light until recent years. The combinations of weather influences in the hunting season, difficulty of access and low human populations regulated the harvest at low levels in the past. However, within the last five years increases in affluence, human population and hunting technology have resulted in localized hunting pressures which are capable of producing overharvest. For this reason the "voluntary" system of harvest rotation from accessible area to accessible area has become insufficient to perpetuate reasonable harvests of trophy rams in all areas of Alaska.

In an effort to cope with increasing hunting pressure and the increasing number of dissatisfied hunters, the Alaska Department of Fish and Game has established special management areas for Dall sheep throughout the state. Areas exist which are zoned for limited access and transportation types. In addition to these areas, a management area was recently established in the eastern Alaska Range which allows harvest of full curl rams and an equal number of ewes by permit only. Future trends of hunting pressure and harvest will dictate whether further restrictive regulations are necessary.

HARVEST: For the last five years Alaska has harvested about 1,000 sheep and supported about 4,000 hunters each fall. This has been a fairly stable number, but an upward trend is evident in both hunter numbers and harvest. About 40 percent of the annual Dall sheep harvest is attributable to nonresidents, and about 60 percent to resident hunters. In the past, and at the present time, there have been no restrictions on non-resident hunters. The cost to nonresident hunters is approximately \$200 in fees and licenses, and the additional expense of engaging a registered guide. Alaska law dictates that a nonresident sheep hunter must be accompanied either by a relative within the second degree of kindred or a registered guide. A guide will cost from \$100 to \$200 per day depending on accommodations and location.

RESEARCH: Research on Dall sheep is currently being carried out by the Alaska Department of Fish and Game, the Cooperative Wildlife Research Unit at the University of Alaska, and some members of the Biology Department at the University of Alaska. Efforts of the Department of Fish and Game are centered in the Alaska Range and the Kenai Peninsula.

Lyman Nichols, sheep biologist for the Southcentral Region of Alaska, is conducting a study on the Kenai Peninsula which is designed to determine the effects of non-trophy sheep harvest on population parameters and forage production on winter range. His study area contains three discrete sheep populations which are subjected to differing hunting schemes. One receives ram-only hunting in accordance with statewide management practice, one non-trophy hunting, and one no hunting at all. Results are not conclusive at this time, but much information has been gathered on food habits, breeding biology and the effects of weather on Dall sheep of the Kenai Peninsula.

In the Interior Region of Alaska, I work in the Alaska Range. My work has centered around Dall sheep population definition, the importance of mineral licks to Dall sheep, and movement patterns. Some of this work will be presented during later sections of this symposium. A study of the dynamics of horn growth has also been undertaken of sheep throughout the state. Future plans call for assessment of the environmental determinates of population quality.

The Cooperative Wildlife Research Unit at the University of Alaska is conducting a study relating to pipeline construction and the effects of disturbance on Dall sheep in the Brooks Range. The Biology Department at the University of Alaska has a study of population dynamics, age structure and range ecology underway in Mt. McKinley National Park. A consulting firm, Renewable Resources Ltd., is persuing a pipeline-related investigation of the population composition, numbers and mineral licks of the sheep on the Canning River in the Eastern Brooks Range.

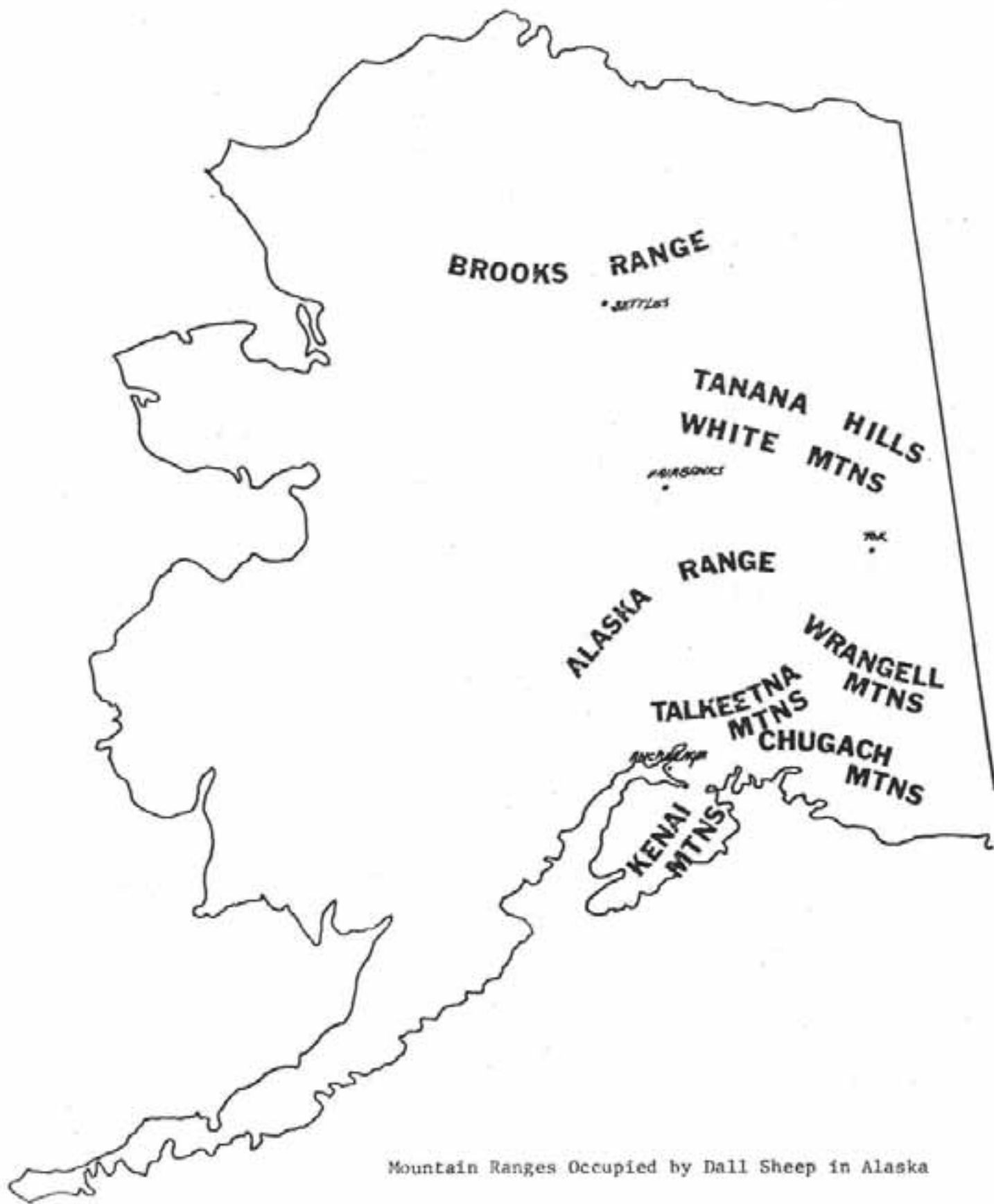
PROBLEMS AND FUTURE OUTLOOK: Alaska is facing a period of rapid and intense development which is currently manifest in the construction of the Trans-Alaska Oil Pipeline. This development seems certain to result in habitat destruction to at least some degree. In an effort to head off the wholesale destruction of wildlife habitat the Department of Fish and Game has recommended to the legislature (as provided for by state law) certain areas as "critical wildlife habitat." In the case of Dall sheep this recommendation consists of numerous important mineral licks. If so designated by the legislature these lands would be protected from development because of their wildlife value.

Further problems result from the political development which is occurring in Alaska. As a result of the Alaska Native Claims Settlement Act of 1968 the Federal Government may select and withdraw 80,000,000 acres in Alaska as National Interest (d-2) Lands. These tentative selections, if they are approved, would provide preservation of much Dall sheep habitat, but may result in the loss of hunting on areas which now support about 35 percent of the statewide harvest of Dall sheep.

These two problems in concert may not spell doom for the Dall sheep of Alaska, but they are sufficient to evoke great concern from Alaska sportsmen and the resource management personnel of the State of Alaska.

LITERATURE CITED:

LeResche, R. E. and R. A. Hirman, eds. 1973. Alaska's Wildlife and Habitat. Alaska Department of Fish and Game. Juneau, Alaska.



Mountain Ranges Occupied by Dall Sheep in Alaska