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# MOUNTAIN GOAT

Susan M. Abbott, Editor



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## **Project Title: Southeast Mountain Goat Population Management**

**Overview:** Mountain goats are found in mainland southeast Alaska from Dixon Entrance to Icy Bay and on Baranof and Revillagigedo islands. Harvests throughout the region were below sustainable limits and populations are generally stable. Some Lynn Canal goat populations are at low levels and may be declining.

**Project Location:** Subunit 1A (5,000 mi<sup>2</sup>)  
Ketchikan area including mainland areas draining into Behm and Portland Canals.

**Project Objectives and Activities:** Maintain goat population densities above 20 goats per hour of survey time during fall surveys. Survey goats annually in established trend count areas throughout Subunit 1A.

**Work Accomplished During the Project Segment Period:** Inclement weather precluded any quantitative aerial goat surveys during 1991-92. Fifteen mountain goats (10 nannies, 5 billies) were captured near Smeaton Bay and transplanted to the mountain range behind Ketchikan during August 1991.

Registration permits were issued to 245 hunters during 1991-92. We tabulated and reviewed harvest data provided through the permit system.

**Progress Towards Meeting Project Objectives:** Although we conducted no formal surveys during this report period, incidental observations made during the August transplant effort from the mainland to Revillagigedo Island and those made during sporadic helicopter flights suggest that the goat population has remained stable throughout Subunit 1A. Twenty-eight goats (22 adults, 6 kids) were observed during an informal and incomplete helicopter survey near Swan Lake during October 1991.

Ten billies, 5 nannies, and 1 goat of unknown sex were harvested from Subunit 1A during the 1991-92 season. As in the past several years, this harvest level is considered inconsequential to existing population levels. Two of the 16 harvested goats were taken by nonresident hunters. Nonresident interest in goat hunting has been limited in Subunit 1A since the mandatory guide requirement went into effect three years ago.

**Project Location:** Subunit 1B (3,000 mi<sup>2</sup>)  
Southeast Alaska mainland from Lemesurier Point to Cape Fanshaw

**Project Objectives:** Maintain densities greater than 20 goats per uniform coding area.

**Work Accomplished During the Project Segment Period:** Aerial surveys were conducted to monitor populations. A total of 169 registration permits were issued, down from the 247 of the previous year. Data from the registration permits were used to make management recommendations.

**Progress Towards Meeting Project Objectives:** Goat populations have appeared stable or increasing slightly during the past few years. Survey flights were flown, and counts were comparable to recent years for the same areas.

Only 75 of the people registering for the hunt actually hunted, and 17 killed goats. Only the Cleveland Peninsula portion of Subunit 1B was open for a second goat and no hunter reported taking two goats. Federal subsistence permits were issued to 3 Wrangell hunters and 1 reported killing a goat. Inclement weather seemed to reduce hunter effort as only 205 days of hunting were reported.

**Project Location:** Subunit 1C (7,562 mi<sup>2</sup>)  
The Southeast Alaska mainland, and islands of Lynn Canal and Stephens Passage between Cape Fanshaw and Eldred Rock, including Sullivan Island and the drainages of Berners Bay

**Project Objectives and Activities:** Subunit 1C mountain goat population objectives are to maintain goat population densities resulting in the observation of at least: 1) 30 goats per hour during fall surveys in the Eagle - Antler drainages and in the Chilkat Range north of the Endicott River; 2) 50 goats per hour in the areas south of Taku Inlet; and 3) retain the existing closure of the Chilkat Range south of the Endicott River until surveys reveal at least 80 goats in the area between William Henry Mountain and Tear Drop Lake.

Subunit 1C mountain goat management activities included: a) conducting population size and composition counts; b) monitoring results from the registration permit hunt; and c) monitoring goats infected with contagious ecthyma to determine extent of outbreak.

**Work Accomplished During the Project Segment Period:** Because of nearly continuous poor weather, no surveys were flown during the report period. Infrequent telemetry flights were made in areas of potential mineral development to track radio-collared animals marked as part of a monitoring study initiated in cooperation with local mining companies. Weather limited these flights as well.

Harvest data collected from returned registration permits were analyzed in-season to determine whether harvests remained within sustainable limits.

Preliminary harvest guidelines based on population estimates were used to monitor the hunt. These quotas incorporate a point system that favored the harvest of billies.

**Progress Towards Meeting Project Objectives:** We issued 145 registration permits to hunters in 1991. Of these, 63 permittees hunted and 22 were successful (35 % success rate). Fourteen billies and eight nannies were taken. Successful hunters expended an average of 2.2 days per goat harvested. The number of non-resident guided hunters decreased by 1 to 10 this year and all were successful.

**Project Location:** Subunit 1D (2,670 mi<sup>2</sup>)  
That portion of the southeast Alaska mainland lying north of the latitude of Eldred Rock, excluding Sullivan Island and the drainages of Berners Bay.

**Project Objectives and Activities:**

- 1) Subunit 1D mountain goat population objectives
  - a. Hunt area 804 (Skagway): to increase the population to 100 animals.
  - b. Hunt area 805 (Haines North): to increase estimated population from 600 to 1,000 goats. Maintain hunter success of 25%.
  - c. Hunt area 806 (Haines South): to increase estimated population from 300 to 500 goats. Maintain hunter success of 25%.
- 2) Subunit 1D mountain goat management activities include monitoring results from the registration permit hunt.

**Work Accomplished During the Project Segment Period:** Harvest data collected from registration permits were collected and analyzed. As in Subunit 1C, preliminary harvest quotas were monitored for discrete areas throughout the subunit based on population estimates.

**Progress Towards Meeting Project Objectives:** No aerial surveys were conducted this year because of poor weather conditions during much of the summer and fall.

We issued 154 registration permits to hunters in 1991. Of these, 73 hunted and 25 were successful, yielding a hunter success rate of 35%, well above management objectives. Eighteen billies, five nannies, and two goats of undetermined sex were taken. Harvest levels reached the newly established harvest guidelines in two areas, and a portion of Hunt 805 was closed by emergency order. These areas are scheduled for surveys in 1992. Harvest quotas will be adjusted if population estimates warrant.

**Project Location:** Unit 4 (5,800 mi<sup>2</sup>)  
Admiralty, Baranof, Chichagof and adjacent islands

**Project Objectives and Activities:** Unit 4 mountain goat population objectives are to maintain a population sufficient to provide: a) an annual harvest of at least 35 goats; and b) an annual hunter success rate of at least 25%.

Unit 4 mountain goat management activities include: a) conducting population size and composition counts; b) monitoring results from the registration permit hunt; and c) working to develop population objectives.

**Work Accomplished During the Project Segment Period:** Registration permits for Baranof Island were issued throughout the 1991 season. After the permit return deadline, nonrespondents were contacted for information and cited for non-compliance. Hunt report results were tabulated. Goat horns voluntarily submitted by hunters were aged. No planning meetings were held during the period.

**Progress Towards Meeting Project Objectives:** Hunters harvested 29 goats in 1991. The success rate for 114 hunters was 25%.

**Project Location:** Subunits 5A and 5B (5,770 mi<sup>2</sup>)  
Cape Fairweather to Icy Bay, eastern Gulf of Alaska coast

**Project Objectives and Activities:** Unit 5 mountain goat population objectives are to: increase the estimated population from 850 to 1,250 goats and maintain a hunter success rate of 25%.

Unit 5 mountain goat management activities include; a) conducting population size and composition counts; b) monitoring results from the registration permit hunt; and c) working on developing population objectives.

**Work Accomplished During the Project Segment Period:** No surveys were conducted during the report period because of poor weather and position vacancies.

Harvest was analyzed from the return of hunter registration permit reports. Forty two permits were issued in 1991. Seventeen permittees hunted, and eight were successful for a success rate of 47%. Four male and four female goats were killed in subunit 5A. Successful hunters averaged 2.75 days hunting, while unsuccessful hunters were afield for an average of 2.67 days.

In August 1989 the Unit 5 goat population was estimated at a minimum of 1,000 animals. The hunter success rate in 1991 was well above the objective of 25%.

**Progress Towards Meeting Project Objectives:** The management objective for mountain goat hunter success rate is being exceeded throughout the subunit, but we do not believe that the desired population has been achieved. However, the desired population size is based on a rough estimate and should be refined in the future. Populations appear to be growing, based on high kid:adult ratios and strong percentages of kids observed during aerial surveys in 1989. Furthermore, hunter effort has been down since 1983, thus the legal kill has been well below the maximum allowable harvest.

The changing nature of moose hunts on the Yakutat Forelands may be one explanation for reduced effort and take of mountain goats in the area since 1985. Between 1985 and 1990, a subsistence preference regulation caused a shorter moose hunting season for nonlocal Alaskans and nonresidents. This may have caused hunters who might otherwise have pursued a mixed-bag hunt near Yakutat to hunt elsewhere. A high proportion of goat hunters are not Alaska residents.

**Segment Period Project Costs:**

	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	\$32.8	\$32.4	\$65.2
Actual	\$32.8	\$32.4	\$65.2
Difference	0.0	0.0	0.0

Submitted by:

W. Bruce Dinneford  
Management Coordinator

**Project Title: Southcentral Alaska Mountain Goat Management**

**Project Location:** Unit 6 (10,150 mi<sup>2</sup>)  
Prince William Sound and north Gulf of Alaska Coast

**Project Objectives and Activities:** Increase the goat population in Unit 6 to a minimum of 4,500 goats by the year 2000.

Activities include surveying goats in established trend count areas, identifying important goat habitat, and monitoring the results of permit hunts.

**Work Accomplished During the Project Segment Period:** Population surveys were not completed in Unit 6. Maximum allowable harvest of 73 goats was estimated from conservative interpretation of the most recent survey data available from each hunt area.

Hunters were issued 250 registration permits for 9 different hunt areas. One hundred twenty-seven hunters reported taking 50 goats. Harvest composition was 43 males (86%) and 7 females (14%). Five hunt areas were closed by emergency order when the maximum allowable harvest was reached.

**Progress Toward Meeting Project Objectives:** The population objective will probably not be achieved and should be reconsidered. The population was estimated between 2,700 and 3,300 in fall 1990 and it may have been declining. Increasing wolf predation, expanding timber harvest, and hard winters in the late-1980s may be important factors depressing the population. Response to these factors has been to manage harvest on the basis of small subpopulations, minimizing the potential for overharvest; to document habitat use and discourage habitat degradation by timber cutting or development; and to document and consider wolf predation. These actions probably have not reversed the downward population trend.

A progress report on work completed during previous report periods, to identify winter range characteristics and population identity for goats in eastern Subunit 6D, is being prepared. Continuation and expansion of this project should be considered. Surveys of all hunt areas should be a high priority for the next report period.

**Project Location:** Unit 7 and 15 (8,400 mi<sup>2</sup>)  
Kenai Peninsula

**Project Objectives and Activities:** Maintain a pre hunting population of at least 3,000 goats on the Kenai Peninsula.



Activities include surveying goats in established trend count areas, identifying important goat habitat, and monitoring the results of permit hunts.

**Work Accomplished During the Project Segment Period:** We conducted aerial surveys in 16 count areas and counted 1,711 mountain goats. Kids comprised 19% (22.7 kids/100 adults) of the population.

Hunters reported taking a total of 134 goats on the Kenai Peninsula in 1991: 62 goats (44 males, 17 females, and 1 unidentified) from 23 hunt areas during the 10 August to 30 September drawing permit hunt; 59 goats (42 males and 17 females) from 13 hunt areas during the 15 October to 30 November registration permit hunt; and 13 billy goats in the lower-Kenai Peninsula Tier II subsistence hunts.

**Progress Toward Meeting Project Objectives:** Population estimates suggested stable to slightly increasing goat numbers. Extensive surveys revealed 3,619 goats on the Kenai Peninsula. There were an estimated 4,000-5,200 goats on the Kenai Peninsula including Kenai Fjords National Park. The current management objective was met.

The West Slope and Blying Sound areas were surveyed during 1991. Goat numbers increased and the percentage of kids in the population decreased slightly in the West Slope area. In Blying Sound, survey conditions were poor, which may account for a decrease in the number of goats observed and lower percentage of kids. Increasing populations had 30-40 kids/100 adults, 23-32% kids, and benefitted from favorable weather and limited harvests. Stable populations contained 25-30 kids/100 adults and 20-23% kids. Declining goat populations were composed of less than 20% kids and possibly were an indication of habitat related limitations.

**Project Location:** Unit 8 (8,750 mi<sup>2</sup>)  
Kodiak Island and adjacent islands

**Project Objectives and Activities:** Maintain a pre hunting population of at least 200 goats.

Activities include surveying goats in established trend count areas, identifying important goat habitat, and monitoring the results of permit hunts.

**Work Accomplished During the Project Segment Period:** Approximately 40% of the mountain goat habitat on Kodiak Island was surveyed in August; 269 goats (211 adults, 58 kids) were counted. This was a kid:adult ratio of 27:100. Incidental observations of goats outside the survey area were mapped.

We monitored the harvest through mandatory hunter reports and by examining horns of goats killed. Hunters harvested 32 goats (17 males, 15 females). Analysis of horn annuli

indicated mean ages of males and females were 3.0 and 4.0 years, respectively. One hundred twenty-five permits were issued, 64 hunters (51%) reported going afield, and hunter success was 50%. In newly opened Permit Hunts 875 and 877, hunters harvested 3 and 7 goats, respectively.

**Progress Toward Meeting Project Objectives:** The composition surveys in 1991 indicated the goat population was stable in northern and central Kodiak Island. A more comprehensive survey completed in 1990 indicated the total population exceeded 500 goats. Management objectives were submitted recommending a pre hunting population of 400-500 goats to sustain an annual harvest composed of more than 50% males. Additional areas in southern Kodiak Island were opened to hunting in 1991, which resulted in a slight increase from 29 goats harvested in 1990 to 32 goats taken in 1992.

**Project Location:** Unit 11 (12,800 mi<sup>2</sup>)  
Wrangell Mountains

**Project Objectives and Activities:** Maintain a pre hunting population of at least 500 goats.

Activities include surveying goats in established trend count areas, identifying important goat habitat, and monitoring the results of permit hunts.

**Work Accomplished During the Project Segment Period:** We counted 54 mountain goats on an aerial survey of the MacColl Ridge trend count area on 10 June. Kids comprised 17% of the observed population. This was the second highest count from the MacColl area since 1985, when 63 goats were tallied. Goat population estimates include 400 animals north of the Chitina River and 300 to the south in the Chugach Mountains.

Registration permits were issued to 69 hunters in 1991 and 25 goats were killed. Hunter success rate for the 42 permittees that hunted was 60%. Harvest composition included 13 billies (52%) and 12 nannies (48%). Nonresidents took 16 goats (64%) and nonlocal residents 7 animals (28%). Twenty successful hunters (80%) used aircraft, 2 permittees (8%) used horses, while a boat, 4-wheeler, and highway vehicle were each used in one instance by successful hunters to access areas hunted. Successful hunters averaged 2.4 days hunting and the majority of the harvest occurred in early September, presumably by hunters on a combination sheep/goat hunt.

**Progress Toward Meeting Project Objectives:** Mountain goat numbers in Unit 11 are considered stable. Overall, densities in the unit are much lower than in areas with more favorable habitat, such as the Kenai Peninsula or Unit 6. The unitwide population estimate of 700 goats exceeded the population objective.

The 1991 harvest increased by 9 goats over the previous year with nannies ( $n = 8$ ) comprising the majority of the increase. The harvest was less dispersed, and harvests were high on Hawkins Glacier and MacColl Ridge. In 1991, the goat harvest rate north of the Chitina River (where all of the harvest occurs) was 6%. Harvest rates will continue to be monitored to assure overharvesting does not occur.

**Project Location:** Unit 13 (23,400  $\text{mi}^2$ )  
Nelchina Basin

**Project Objectives and Activities:** Maintain a pre hunting population of at least 100 goats.

Activities include surveying goats in established trend count areas, identifying important goat habitat, and monitoring the results of permit hunts.

**Work Accomplished During the Project Segment Period:** Mountain goat surveys were not conducted in the unit in 1991. The most recent surveys were during 1989 when 111 goats were counted. Kids comprised 23% of the goats observed.

Drawing permits were issued to 35 hunters and 8 goats were taken in 1991. Seventeen permittees (49%) hunted and the success rate was 47%. The harvest included 6 billies (75%) and 2 nannies (25%). Three goats (38%) were harvested in Hunt 818, west of the Klutina River, while 5 goats (62%) were taken in Hunt 819, east of the Klutina River. Four of the successful hunters (50%) used aircraft and 4 used highway vehicles as transportation. The successful hunters were all residents and averaged 3 days to harvest a goat while unsuccessful permittees hunted 4.2 days. The harvest occurred in August (4) and September (4).

**Progress Toward Meeting Project Objectives:** The number of mountain goats counted during late-August surveys exceeded the stated population objective in Unit 13, even though all known available goat habitat has not been surveyed. Surveys were situated in favorable habitat and where hunting pressure was heaviest to reflect population changes most accurately.

The goat harvest was low and well dispersed, having little adverse impacts on the goat population. The number of permits issued was limited to prevent overharvesting goats near popular airstrips. There are few airstrips close to goat habitat east of the Klutina River (Hunt 819) and goat harvests have been low in this area. Consequently, the number of permits issued for Hunt 819 was increased from 16 to 25 in 1991.

**Project Location:** Unit 14 (6,600  $\text{mi}^2$ )  
Upper Cook Inlet

**Project Objectives and Activities:** In Subunits 14A and 14B, maintain a pre hunting population of at least 60 goats. In Subunit 14C, maintain a pre hunting population of at least 400 goats.

Activities include surveying goats in established trend count areas, identifying important goat habitat, and monitoring the results of permit hunts.

**Work Accomplished During The Project Segment Period:** No surveys were conducted in Subunit 14A during 1991. In Subunit 14B, 30 goats (7% kids) were observed on aerial surveys compared to 15 and 24 in 1987 and 1986. Given the size of the subunit and the relative low density of goats, some animals could have been missed. In Subunit 14C, 524 goats (21% kids) were counted. The number of goats observed in Subunit 14C was identical to that seen during 1990, however, Twentymile River drainage was not surveyed during 1991. The number of goats observed in the Twentymile river drainage in 1988, 1989 and 1990 was 54, 137 and 96 respectively.

In Subunit 14A, 4 goats (3 males, 1 female) were killed by the 11 hunters who reported hunting. In Subunit 14B, goat hunting was not allowed. In Subunit 14C, 2 registration permit hunt areas are available for hunting goats, the Twentymile River area and Lake George area. Thirty-four permits were issued for the Twentymile River area and 5 male and 6 female goats were taken (21% hunter success). In the Lake George area, 54 permits were issued and 27 goats (19 males, 8 females) were killed (50% hunter success).

**Progress Towards Meeting Project Objectives:** Survey and harvest results indicate objectives were met. We observed 524 goats which probably represent a population of about 630 goats, well above the minimum objective of 400. The harvest in Subunit 14C was 6.0% of the goats counted, and should have little effect on the population.

Project objectives for Subunits 14A and 14B should be changed to reflect management actions. Registration permits were not issued for Subunit 14B because of the low number of goats observed in the unit. Minimum pre hunting season objectives should be established for each unit and hunt area and a maximum allowable harvest adopted, based upon the number of goats observed.

**Segment Period Project Costs:**

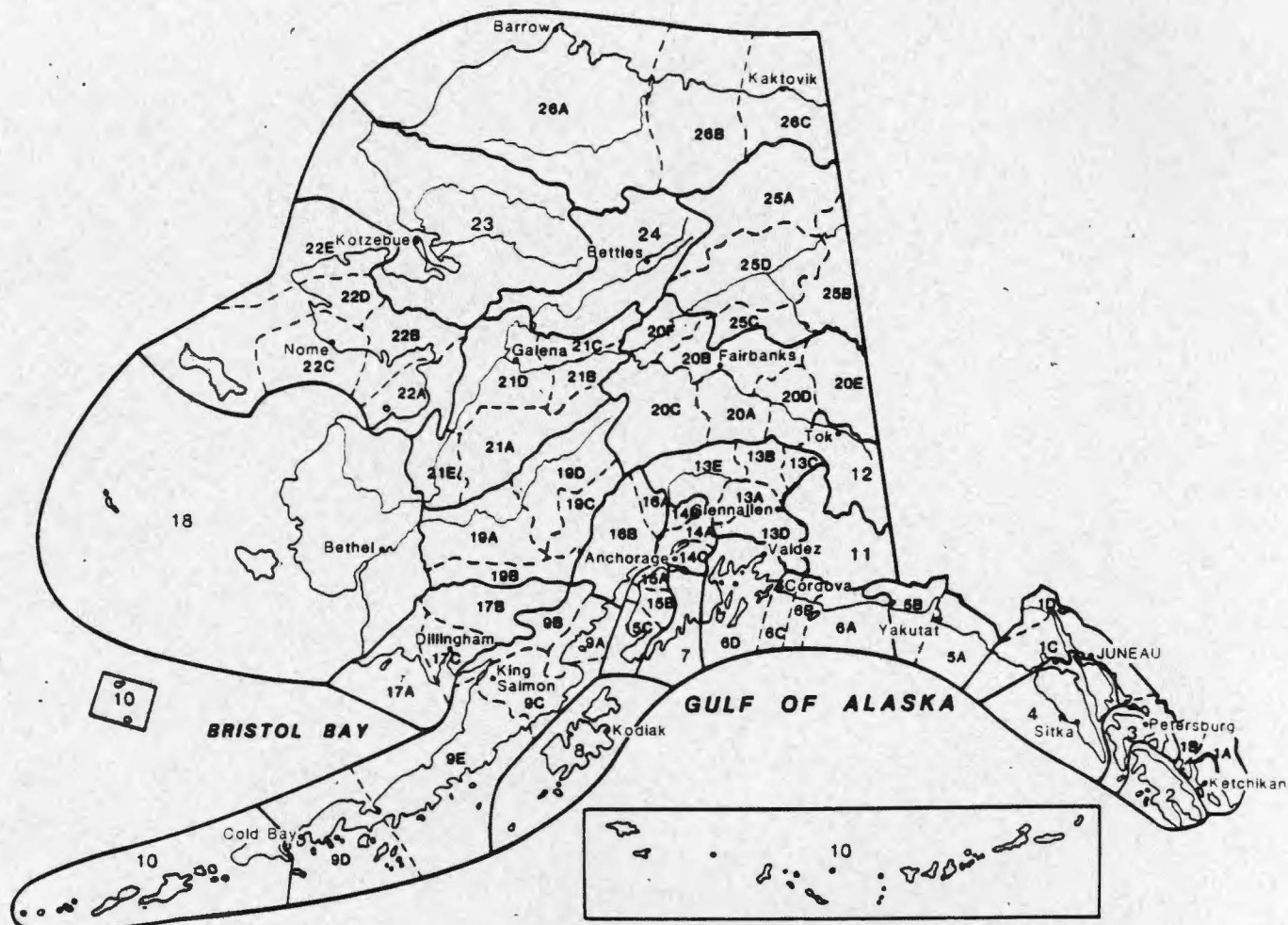
	<u>Personnel</u>	<u>Operating</u>	<u>Total</u>
Planned	40.8	24.4	65.2
Actual	40.8	12.6	53.4
Difference	0	-5.6	-5.6

Weather, timing, personnel changes, and reallocations accounted for underspending the operational budget in Region II.

Submitted by:

Kenneth W. Pitcher and John N. Trent  
Regional Management Coordinators

# Alaska's Game Management Units



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