

Alaska Department of Fish and Game
Division of Wildlife Conservation

Federal Aid in Wildlife Restoration
Annual Performance Report of
Survey-Inventory Activities
1 July 1992 - 30 June 1993

MOUNTAIN GOAT

Susan M. Abbott, Editor



Volume XXIV, Part VII
Project W-24-1, Study 12.0
November 1993

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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 mi²) - Ketchikan area including the mainland draining into Behm and Portland Canals

Project Objectives and Activities:

- Maintain goat population densities above 20 goats per hour during fall surveys.
- Annually survey goats in established trend count areas throughout Subunit 1A.

Work Accomplished During the Project Segment Period: Because of inclement weather and time constraints, we only completed one goat survey during August 1992. We counted transplanted goats residing around Reid Mountain and Swan Lake on Revillagigedo Island. From a Bell 206 helicopter we observed 84 goats, 35% of which were kids. Our count was nearly double what it was when last surveyed in 1990. Registration permits were issued to 246 hunters for Subunit 1A or 1B south of the Bradfield Canal.

Progress Towards Meeting Project Objectives: Although we were unsuccessful in completing aerial surveys, incidental observations made during periodic helicopter flights and reports obtained from hunters suggest that the goat population has remained stable or increased slightly throughout Subunit 1A.

Of 246 hunters who received registration hunt permits, 76 Subunit 1A permittees were unsuccessful, 120 did not hunt, and 23 harvested goats; the balance targeted Subunit 1B. Similar to the past several years, the 1992 Subunit 1A harvest of 17 males and 6 females is considered inconsequential to existing population levels. Residents took 22 goats, and a nonresident hunter harvested one goat.

Project Location: Subunit 1B (3,000 mi²) - 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: We monitored populations with aerial surveys. We issued 215 registration permits, up from 169 the previous year. We used registration permit data to make management recommendations.

Progress Towards Meeting Project Objectives: Goat populations appear stable or slightly increasing. Survey data was comparable to recent years for the same areas.

Only 98 registration permit holders hunted and 28 killed goats. This is an increase from the 1991 season when effort and kill were both lower, probably because of inclement weather. Only the Cleveland Peninsula portion of Subunit 1B was open for a second goat and no hunter reported taking 2 goats. Federal subsistence permits were issued to 2 Wrangell hunters and one reported killing a goat. Hunting days increased from 205 to 235, probably because of better weather in 1992.

Project Location: Subunit 1C (7,600 mi²) - Southeast Alaska mainland and the islands of Lynn Canal and Stephens Passage lying between Cape Fanshaw and the latitude of Eldred Rock, including Sullivan Island and the drainages of Berners Bay

Project Objectives and Activities:

- Maintain goat population densities resulting in the observation of at least 30 goats per hour of flight in the Eagle-Antler river drainages and in the Chilkat Range north of the Endicott River, and 50 goats per hour south of Taku Inlet. 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.
- Conduct population size and composition counts, monitor results from the registration permit hunt, and monitor goats infected with contagious ecthyma to determine extent of outbreak.

Work Accomplished During the Project Segment Period: Because of poor weather, we flew no surveys during the report period. Telemetry flights were made in areas of potential mineral development to track radio-collared animals. Weather limited these flights as well.

We analyzed data collected from registration permit reports to determine whether harvests remained within sustainable limits.

We used guideline harvest levels based on population estimates to monitor harvests. These quotas incorporate a point system that protected nannies.

Progress Towards Meeting Project Objectives: We issued 151 registration permits to hunters in 1992. Of these, 74 permittees hunted and 39 were successful. Hunters took 27 billies and 12 nannies. Successful hunters expended an average of 3.2 days per goat harvested. The number of nonresident guided goat hunters almost doubled (from 10 to 19) from 1991; 12 of these were successful. The number of goats taken approached the guideline harvest levels by the end of the season, but no closures were instituted.

Project Location: Subunit 1D (2,700 mi²) - 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:

Increase the Skagway area goat population to 100 animals;
Increase the Haines north goat population from 600 to 1,000 goats and maintain a hunter success rate of 25%; and increase the Haines south goat population from 300 to 500 goats and maintain a hunter success rate of 25%.

Monitor the results from the registration permit hunt.

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

Progress Towards Meeting Project Objectives: We conducted only one aerial survey covering the eastern portion of the subunit this year because of poor weather conditions. Moderate numbers of goats were seen along the eastern side of Lynn Canal and Taiya Inlet, but numbers remained low within the closed Skagway area.

We issued 130 registration permits to hunters in 1992, a decrease from the previous year. Of these, 70 hunted and 23 were successful. Nine billies, 11 nannies, and 3 goats of undetermined sex were taken. The heavy toll of females north of Haines caused harvest levels there to surpass the established guidelines, and a portion of Hunt 025 was closed by emergency order. Successful hunters averaged 1.5 days afield while unsuccessful hunts lasted one day longer. These areas are scheduled for surveys in 1993. We will adjust harvest quotas if population estimates warrant. No nonresidents registered for this hunt.

Project Location: Unit 4 (5,800 mi²) - Admiralty, Baranof, Chichagof and adjacent islands

Project Objectives and Activities:

Maintain a population sufficient to provide an annual harvest of at least 35 goats and an annual hunter success rate of at least 25%.

Conduct population size and composition counts, monitor results from the registration permit hunt, and develop population objectives.

Work Accomplished During the Project Segment Period: We issued 290 registration permits for the August 1-December 31 hunt on Baranof Island during the 1992 season. After the permit return deadline, we contacted nonrespondents for information and cited them for non-compliance. We tabulated hunt report results. Goat horns voluntarily submitted by hunters were aged. We held no planning meetings during the period.

Progress Towards Meeting Project Objectives: Hunters harvested 50 goats in 1992. The success rate for 144 hunters was 35%. Thirty male, 19 female, and 1 goat of unknown sex were killed. Successful hunters were afield for an average of 2.4 days. Most goats (56%) were taken in August and December.

Project Location: Unit 5 (5,800 mi²) - Cape Fairweather to Icy Bay, eastern Gulf of Alaska coast

Project Objectives and Activities:

Increase the estimated population from 850 to 1,250 goats and maintain a hunter success rate of 25%.

Conduct population size and composition counts, monitor results from the registration permit hunt, and develop population objectives.

Work Accomplished During the Project Segment Period: We conducted no surveys during the report period because of poor weather, funding levels, and other priorities.

Mountain goat harvest was analyzed from returned registration permit reports. We issued 35 permits in 1992. Thirteen permittees hunted, and four were successful. Two male and two female goats were killed in Subunit 5A for a success rate of 31%. Successful hunters averaged 3.3 days hunting, while unsuccessful hunters averaged 4.1 days afield.

In August 1989 we estimated the Unit 5 goat population was at a minimum of 1,000 animals. This is a crude estimate and should be refined over time. The hunter success rate in 1992 was above the objective of 25%.

Progress Towards Meeting Project Objectives: The management objective for mountain goat hunter success rate is being exceeded throughout Subunit 5A, but we do not believe that the desired population has been achieved. However, the desired population size is based on an approximation and should be upgraded in the future. Populations appear to be growing, based on high kid to adult ratios and strong percentages of kids observed during aerial surveys in 1989. Furthermore, hunter effort has been down since 1983, thus the harvest has been well below the allowable harvest.

The changing nature of moose hunts on the Yakutat Forelands may be one explanation for reduced effort and take since 1985. Since 1985 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	\$31.1	\$32.4	\$63.5
Actual	\$31.1	\$22.6	\$53.7
Difference	0.0	9.8	9.8

Submitted by:

Bruce Dinneford
Management Coordinator

Project Title: Southcentral Alaska Mountain Goat Management

Project Location: Unit 6 (10,150 mi²)
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.

Work Accomplished During the Project Segment Period: Biologists surveyed 20 mountain goat count areas in a cooperative effort with the U.S. Forest Service. A total of 1,298 goats was tallied and 259 (20%) were kids. Maximum allowable harvest was 80 goats for the 1992-93 season.

We issued 270 registration permits to hunters for 9 different hunt areas. One hundred twenty-one hunters harvested a total of 51 goats. Harvest composition was 40 males (78%), 10 females (20%), and 1 animal of undetermined sex. Five hunt areas were closed by emergency order when the maximum allowable harvest was reached.

Progress Toward Meeting Project Objectives: The population objective apparently will not be achieved and should be reconsidered. The population was estimated at 2,700 to 3,300 in fall 1990, and it appeared to be declining. Wolf predation, timber harvests, and hard winters in the late 1980s may have been important factors depressing the population. In responding to these factors, we have managed harvests on the basis of small subpopulations, to minimize the potential for overharvests. We have also documented habitat use, discouraged habitat degradation by logging or development, and documented wolf predation.

A progress report on work completed in eastern Subunit 6D, to identify goat winter range characteristics and population identity, is being prepared. The department should consider continuing and expanding this project. Surveys of all hunt areas should be a high priority for the next report period.

Project Location: Unit 7 and 15 (8,400 mi²)
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: ADF&G and USFWS biologists conducted a goat population census on the Kenai National Wildlife Refuge and adjacent areas. We flew surveys in 18 count areas and tallied 1,888 goats; 24% of the goats observed were kids (31 kids:100 adults).

Hunters harvested 182 goats on the Kenai Peninsula in 1992. The department issued 347 drawing permits, 432 registration permits, and 94 Tier II drawing permits. Drawing permittees killed 78 goats (54 males, 23 females, and 1 unspecified sex) throughout 24 hunt areas during the 10 August to 30 September drawing permit hunt. Registration permittees harvested 75 goats (52 males and 22 females and 1 unspecified sex) from 14 hunt areas during the 15 October to 30 November registration permit hunt. Subsistence hunters harvested 29 goats (19 males, 5 females and 5 unspecified sex) in the lower Kenai Peninsula, Tier II hunts.

Progress Toward Meeting Project Objectives: Population estimates suggested stable to slightly increasing goat numbers. An estimated 4,500 (90% observability) to 5,800 (70% observability) goats were on the Kenai Peninsula including Kenai Fjords National Park (KFNP). Latest counts revealed 3,291 goats on the Kenai Peninsula excluding KFNP, and 800-1,000 goats in KFNP.

The West Slope and Kachemak Bay trend areas were surveyed during 1992. Goat numbers increased but the percentage of kids in the population decreased slightly in these areas. A decline in the kid ratio may indicate habitat-related limitations and the need to examine goat ranges.

The population objective for the unit should be revised from 3,000 to 4,000 goats to reflect the increase in the population.

Our guidelines allow for a harvest rate of 6% of the goats observed during surveys. The harvest rate in 1992 was 5.5%. The harvest rate should be increased to 7%, with an evenly distributed harvest, to curtail any increase in the goat population. The number of goats should be gradually reduced in those areas with continuing low productivity.

Project Location: Unit 8 (8,750 mi²)
Kodiak and adjacent islands

Project Objectives and Activities: Maintain a pre hunting population of at least 400-500 goats with a harvest composed of at least 50% males.

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 surveyed approximately 40% of the mountain goat habitat on Kodiak Island in August; we counted 428 goats (345 adults, 83 kids). This was a kid:adult ratio of 24:100. Incidental observations of goats outside the survey area were mapped.

The harvest was monitored from mandatory hunter reports and by examining horns of goats killed. Hunters harvested 39 goats (22 males, 16 females and 1 undetermined sex). From horn annuli, mean ages of males and females were 3.8 and 4.7 years, respectively. A total of 111 permits was issued, 63 hunters (64%) reported going afield, and hunter success was 62%. Hunters harvested 6 and 8 goats, respectively, in newly opened Permit Hunts 875 and 877.

Progress Toward Meeting Project Objectives: The composition surveys in 1992 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. Population objectives were increased from 200 goats to a pre hunting season objective of 400-500 goats to sustain an annual harvest composed of more than 50% males.

Project Location: Unit 11 (12,800 mi²)
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: Biologists tallied 52 mountain goats during an aerial survey of the MacColl Ridge trend count area on 18 June. Kids comprised 14% of the observed population. I estimated the goat population in Unit 11 included 400 animals north of the Chitina River and 300 goats south into the Chugach Mountains.

Department personnel issued 53 registration permits in 1992 and hunters killed 17 goats (8 males and 9 females). Hunter success rate for the 26 permittees that hunted was 65%. Nonresidents took 12 goats (70%), nonlocal residents 3 animals (18%), and local residents 2 (12%). Eleven successful hunters (65%) used aircraft, 4 permittees (24%) used highway vehicles, while a boat and a horse were each used in one instance by successful hunters to access areas hunted. Successful hunters averaged 3 days hunting compared to 3.8 days afield for unsuccessful hunters. Most of the harvest occurred in early September, presumably by hunters on a combination sheep/goat hunt. Deep snowfall in mid-September may have prevented residents from goat hunting.

Progress Toward Meeting Project Objectives: Mountain goat numbers in Unit 11 were 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 1992 harvest decreased by 8 goats over the previous year with only one-half of the permittees hunting. Similarly to last year, the harvest was less dispersed than previous years, and harvests were high on Hawkins and Barnard glaciers and MacColl Ridge. Overharvesting in specific areas could become a problem if this trend continues. The harvest rate in 1992 was approximately 4%. The goat population in Unit 11 can apparently sustain this harvest level if the harvests are dispersed over more than 1 or 2 areas.

The U.S. Park Service eliminated subsistence hunting for goats in "hard park" areas in the unit. Goat harvests in other areas will need to be monitored closely to assure that subsistence harvests do not exceed desirable harvest rates.

Project Location: Unit 13 (23,400 mi²)
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: We surveyed five trend count areas during 1992. Biologists surveyed Count Areas 3, 5, and 6 (south and west of Klutina Lake on 27 and 29 July and tallied 36 goats (7 kids). Department personnel surveyed Count Areas 11 and 12 on 31 July and 28 August and observed 48 goats (11 kids). Poor weather prevented surveying Count Areas 16 and 17.

Department personnel issued 35 drawing permits and hunters harvested 5 goats (2 males and 3 females) in 1992. Permittees killed 2 goats, west of the Klutina River (Hunt 818) and 3 animals, east of the Klutina River (Hunt 819). Fourteen permittees hunted and their success rate was 36%. Three (60%) of the successful hunters used aircraft and 2 (40%) used highway vehicles as transportation. The successful hunters were residents and averaged 4 days to harvest a goat while unsuccessful permittees hunted 4.1 days. The harvest occurred in August (3) and September (2).

Progress Toward Meeting Project Objectives: The population objective was achieved in Unit 13 during 1992. We counted 84 goats during surveys and reliable information indicated at least 60 goats inhabited unsurveyed count areas. Surveys were situated in

favorable habitat and where hunting pressure was heaviest to most accurately reflect population changes.

The goat harvest was low and well dispersed; having little adverse affects on the goat population. The number of permits issued has been limited to prevent overharvesting goats near popular airstrips. However, there were few airstrips near 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 mi²)
Upper Cook Inlet

Project Objectives and Activities:

Subunits 14A and 14B: maintain a pre hunting population of at least 60 goats.
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: Surveys were not conducted in Subunit 14B during 1992. Biologists tallied 99 goats (24% kids) during aerial surveys in Subunit 14A compared to 42 goats (12% kids) in 1990. Given the size of the subunit, and relatively low density of goats, some animals could have been missed. In Subunit 14C, biologists counted 593 goats (16% kids). The number of goats observed in Subunit 14C was similar to that seen during 1991, however, the Twentymile River drainage was not surveyed during 1991, and we observed 111 goats in this drainage in 1992. These figures indicated there may have been a 10% population decline between 1991 and 1992.

In Subunit 14A, 11 hunters went afield and 1 female goat was harvested. Goat hunting was not allowed in Subunit 14B. In Subunit 14C, 2 registration permit hunt areas were available for hunting goats, the Twentymile River area and Lake George area. Fifty two hunters participated in the Twentymile River area and harvested 5 males and 7 females (23% hunter success). In the Lake George area, department personnel issued 54 permits and permittees (50% hunter success) killed 27 goats (19 males, 8 females).

Progress Towards Meeting Project Objectives: Survey and harvest results indicated management objectives were met. We observed 528 goats, probably representing a population of about 630 goats, well above the minimum objective of 400. The harvest in Subunit 14C was 5% 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 subunit in past years. Minimum pre hunting season objectives should be established for each subunit 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	38.8	23.1	61.9
Actual	38.8	12.6	53.4
Difference	0	-5.6	5.6

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

Submitted by:

Jeff Hughes
Wildlife Biologist

Federal Aid in Wildlife Restoration

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sales of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a for-

each state's area and of paid censehold- s t a t e . ceives 5% enues col- year, the lowed. The



ment of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible hunters. Seventy-five percent of the funds for this project are from Federal Aid.

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Alaska's Game Management Units

