ALASKA DEPARTMENT OF FISH AND GAME
JUNEAU, ALASKA

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ANNUAL REPORT OF SURVEY - INVENTORY ACTIVITIES
PART I. DEER, SHEEP, SMALL GAME, MOUNTAIN GOAT, ELK

Edited and compiled by
Robert A. Hinman, Deputy Director

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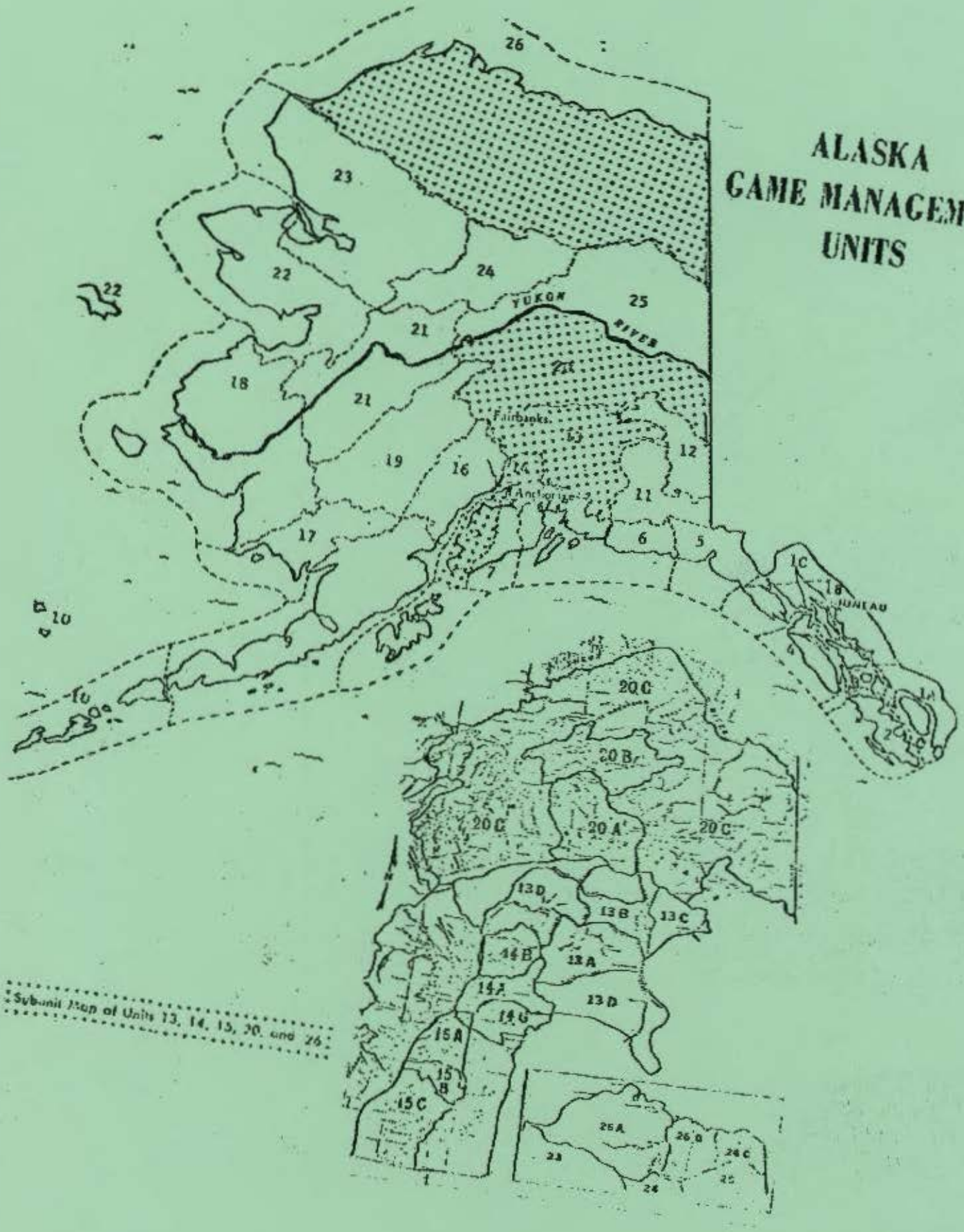
ALASKA GAME MANAGEMENT UNITS



STATEWIDE HARVESTS AND POPULATION STATUS

Sitka Black-Tailed Deer

The 1975 statewide harvest of 6496 deer was derived, for the first time, from hunter report cards, rather than the personal interview method formerly employed. Cross-checking with personal interviews in selected locations indicates that harvest data obtained by harvest report cards may be low but that such data will be valid for trend purposes. Of the total, 4247 deer were harvested in Game Management Unit 4. Other Southeastern Alaska units contributed little to the total.

The winter of 1974-75 was mild, with few losses of deer to winter mortality. Deer populations did not show significant recovery, however, in those units in Southeastern where wolves are present; Unit 3, for example, was at the lowest deer population level in recent history and was closed to hunting. Unit 4, with no wolf populations, had deer populations judged to be moderately high and increasing. Deer were also abundant in Unit 8.

Elk

The harvest of 23 elk was near the average for the past five years, though far below harvests of years prior to that time. Harvests are held to low levels by permits to allow herd increase. Reproduction and survival of young varied between areas, but appeared to be sufficient to allow for a moderate population increase.

Mountain Goat

Statewide harvest of goats was 489, the largest numbers coming from Units 6, 7, and 15. Although specific population data are often lacking, goat populations appear to be declining in much of Southeastern Alaska but stable in Units 6, 7, and 15.

Dall Sheep

The statewide harvest of sheep in 1975 was 1071, just slightly below the average of the last five years. In some areas, the harvest decreased as a result of a decrease in the number of hunters, which was apparently caused by inclement weather during the hunting season. Economic uncertainty also may have affected hunting pressure. Since inception of the harvest ticket method of harvest determination in 1962, and particularly since 1971, statewide sheep hunting pressure and sheep harvests have remained remarkably stable. Sheep populations in most areas were moderately high and stable, but there were some indications of gradual decline in the central Alaska Range and western Brooks Range.

Small Game

Grouse and ptarmigan populations remained at low levels throughout much of the state. Snowshoe Hare populations were at low levels throughout the Interior. Lynx and martens were at low population levels, while fox, muskrats, mink and others varied from moderate to low numbers.

R. A. H.

STATEWIDE DEER HARVEST - 1975

Unit	Males	Females	Unknown	Total
1A	224	96	0	320
1B	0	0	9	9
1C	128	106	4	238
2	141	37	0	178
3	0	0	0	0
4	2433	1657	157	4247
5	8	2	0	10
6	254	183	0	437
8	683	374	0	1057
Total	3871	2455	170	6496

STATEWIDE HARVEST OF GOATS - 1975

Unit	Males	Females	Unspecified	Total
1A	8	10	0	18
1B	10	5	0	15
1C	41	25	1	67
1D	21	12	1	34
4	18	10	0	28
5	10	3	0	13
6	99	62	3	164
7	37	44	2	83
8	6	5	0	11
11	11	6	0	17
12	1	0	0	1
13	14	10	0	24
14	2	0	0	2
15	48	37	0	85
Unknown	3	3	0	6
Total	329	232	7	568

STATEWIDE HARVEST OF SHEEP - 1975

Unit	No. of Rams
7	12
9	13
11	134
12	188
13	170
14	63
15	47
16	12
17	5
19	69
20	176
23	17
24	48
25	30
26	73
Unit unknown	7
Total	1071

Area	No. of Rams
Kenai Mountains (KMR)	59
Talkeetna-Chilitna-Watana (TCW)	109
Tanana-White Mountains (THW)	6
Wrangell-Mentasta-Nutzotin (WMN)	310
Alaska Range East (ARE)	184
Alaska Range West (ARW)	99
Brooks Range (BRR)	175
Chugach Range (CRR)	122
Unknown (UNK)	7
Total	1071

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EDITOR'S NOTE

1975 data for the following Game Management Units will be included in the 1976 Annual Report of Survey-Inventory Activities:

GMU 12 - Dall Sheep
GMU 12, 13, 20 - Dall Sheep
GMU 20, 25 - Dall Sheep
GMU 23, 24, 25, 26 - Dall Sheep

R. A. H.

DEER

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 1A and Unit 2 - Ketchikan and Prince of Wales Island

Seasons and Bag Limits

Aug. 1 - Nov. 30	Three deer; provided that only one deer may be antlerless and that antlerless deer may be taken only from Nov. 1 - Nov. 30.

Harvest and Hunting Pressure

In past years, harvest and hunter data were obtained by a personal hunter survey of 10 percent of the hunting license holders in Ketchikan. This method was dropped in 1975 and the information was obtained from harvest ticket report cards, required for all persons hunting deer. There were 7,736 deer harvest tickets issued in Southeastern Alaska for the 1975-76 season, 2,728 (35.3%) of which were not returned. Of those reports returned, 21.1 percent of the hunters indicated they had not hunted deer in 1975.

In Subunit 1A, 320 deer were reported taken during the 1975-76 season; 96 were females (30%). Successful hunters spent an average of 4.2 days hunting while unsuccessful hunters spent 3.6 days hunting during the season.

In Unit 2, 178 deer were reported taken, 21 percent of which was does. Hunter success was lower in Unit 2: successful hunters took 4.6 days to bag a deer while unsuccessful hunters spent 6.6 days hunting deer.

Chronology of the harvest in Subunit 1A shows 75 percent of the harvest occurred in November, the month when one antlerless deer was allowed in the bag. This period is also the peak of the rut, which improves hunter success. Only 3 percent of the kill occurred in August, 9 percent in September and 12 percent in October.

The harvest was distributed somewhat more evenly in Unit 2 with August, September, October and November accounting for 13, 18, 19 and 50 percent, respectively.

The Subunit 1A harvest occurred primarily around the Ketchikan area. Hunting effort on Gravina Island was the highest of any area. Forty-two percent of the bucks and 32 percent of the does came from Gravina Island and 29 percent of the total hunting effort occurred there.

The three inlets south of town (George, Carroll and Thorne Arms) received 16 percent of the effort and accounted for 25 percent of the bucks and 22 percent of the does taken. Carroll Inlet was the most heavily used of the three inlets.

The area accessible from the road system around Ketchikan absorbed 24 percent of the hunting effort; 11 percent of the buck harvest and 21 percent of the doe harvest came from this area. Hunter success was lowest in this area, indicating that less dedicated hunting occurred here.

Composition and Productivity

No sex and age data were collected during 1975.

Management Summary and Recommendations

Only four of the 25 deer winter mortality transects in Subunit 1A and Unit 2 were walked this year. No dead deer were found. The winter of 1975-76 was exceptionally mild, deer were not concentrated on the beaches and use of the browse on winter ranges was very light. Population levels are considered low. Even with four mild winters in a row and virtually no winter mortality other than predation, the deer population appears to be static at this low level.

With the deer population below the level the range can support, it is recommended that the antlerless portion of the season be dropped. The current harvest of females is small, but because an increase in population is desired it is suggested a bucks-only season be established. This season could be extended through December with no detrimental effect on the deer herd.

PREPARED BY:

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SUBMITTED BY:

Robert Pegau
Regional Management/Research Coordinator

DEER

SURVEY-INVENTORY PROGRESS REPORT - 1974 AND 1975

Game Management Units 1B and 3 - Petersburg, Wrangell Area.

Seasons and Bag Limits

1974	Subunit 1B, Unit 3	September 1 - November 30	One antlered deer
1975	Subunit 1B	September 1 - November 30	One antlered deer
	Unit 3		No open season

Harvest and Hunting Pressure

Deer hunting and harvest information was obtained from personal interviews and deer harvest ticket returns in 1974 and from ticket returns alone in 1975. Both techniques contain some bias; the interview tends toward overestimation because of location of interviews, while the ticket returns tend to be low because of non-compliance with reporting requirements. Both systems indicate similar trends in harvest and hunting pressure, with ticket returns showing about 38 percent lower harvest estimates.

Hunting pressure in Unit 1B has always been low. Personal interviews showed no deer taken in Unit 1B in 1974, while harvest ticket returns showed 6 deer taken in 1974 and 9 deer in 1975. In Unit 3 in 1974 only 40 deer were taken. The unit was closed to hunting in 1975.

Petersburg and Wrangell are the major towns in Units 1B and 3. Historically, a high percentage of the residents of Petersburg and Wrangell have hunted deer. Poor hunter success in 1974 and 1975 is indicative of the low status of deer populations in Units 1B and 3.

When deer are plentiful, almost all animals killed by residents of Petersburg and Wrangell are taken within Units 1B and 3. Because of current low deer populations in these units, hunters now travel to Unit 4, where populations remain good. In both 1974 and 1975 over 90 percent of the deer killed by residents of Petersburg and Wrangell were taken in Unit 4.

Appendix I shows deer harvest statistics for Unit 3 from 1960 through 1975.

Composition and Productivity

Deer populations in Units 1B and 3 were probably at their lowest level in recorded history in 1975. The estimated harvest in Unit 3 has declined from 3700 in 1961 to 40 in 1974. The season was closed in 1975. There is

no evidence that hunting has been a major factor in population decline. Even though a buck-only season was initiated on Mitkof Island in 1969, deer populations on this island continued to decline simultaneously with those on other islands in Unit 3. Winter mortality in both 1974 and 1975 was negligible.

The facts speak quite clearly, attesting to the difficulty of deer management. A series of colder than average winters commenced in 1965, culminating in the most severe winter on record in 1968. Deer populations declined gradually through 1967 and drastically in 1968. Since 1968, predation by wolves apparently exceeded the reproductive capacity of the remaining deer and populations continued to decline in spite of slight hunting pressure. State and federal statutes, combined with the force of public opinion, made adequate wolf management virtually impossible. By 1975, though wolf populations had also declined naturally to a relatively low level, wolf predation was still a significant mortality factor among the few remaining deer. Classic examples of the effect of wolf predation on deer are a few small islands in Unit 3 on which no wolves are present and deer populations have remained stable, while on neighboring larger islands on which wolves are present it is difficult to locate a single deer track.

Management Summary and Recommendations

Deer populations in Units 1B and 3 have declined so considerably that, far from being one of the best areas in Region I, as it had been in the early to mid-1960's, it was the poorest area in 1975. Severe winters initiated the decline; it was augmented by wolf predation. Unit 3 is presently closed to deer hunting.

The winters of 1973 and 1974 have been reasonably mild, but deer populations have not increased. The major factor in growth limitation - and the factor which can be most easily controlled - is wolf predation. It is recommended that current wolf populations be reduced and maintained at a low level until deer populations increase sufficiently to permit both hunting and predation.

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Submitted by:

Robert E. Pegau
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APPENDIX I

Historical deer harvest in Game Management Unit 3
by Petersburg and Wrangell residents.

	Petersburg		Wrangell		Total		
Year	Harvest	Deer/ Hunter	Harvest	Deer/ Hunter	Unit 3 Harvest	Season	Bag Limit
1960	1320	2.4	920	2.5	3350	8/20 - 12/15	4 deer
1961	1922	3.5	785	2.2	3700	8/01 - 11/30	4 deer
1962	1180	2.0	860	2.0	2310	8/01 - 12/15	4 deer
1963	1160	2.1	820	2.4	2750	8/01 - 12/31	4 deer
1964	1400	2.3	670	2.1	2490	8/01 - 12/31	4 deer
1965	1260	1.8	420	1.5	1890	8/01 - 12/31	4 deer
1966	1730	2.4	570	1.4	2710	8/01 - 12/31	4 deer
1967	1030	1.3	590	1.4	2230	8/01 - 12/31	4 deer
1968	1090	1.4	520	1.3	1990	8/01 - 12/15	4 deer
1969	310	0.5	490	0.6	800	8/01 - 12/15	4[a]
1970	300	1.4	140	0.4	350	8/01 - 12/15	4[a]
1971	506	0.8	130	0.4	190	8/01 - 11/30	3[b]
1972	132	0.3	89	0.3	60	8/01 - 11/30	2
1973	442	1.1	124	0.6	50	9/01 - 11/30	1
1974	335	0.9	116	0.6	40	9/01 - 11/30	1
1975	NO OPEN SEASON						

a 2 antlered deer on Mitkof Island.
b 2 antlered deer on Mitkof, Wrangell, Etolin and Woronkofski Islands.

DEER

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 1C - Juneau

Seasons and Bag Limits

Aug. 1 - Dec. 31	Four deer; provided that antlerless deer may be taken only from Sept. 15 - Dec. 31.

Harvest and Hunting Pressure

Harvest ticket returns for the 1975 deer season indicated that 521 hunters bagged 238 deer, giving a 30.1 percent hunter success rate. These figures are based on a 64.9 percent return of harvest report cards by Juneau residents and a 66.9 percent statewide return. A summary of harvest statistics for Subunit 1C is contained in Appendix I. Statistics on the harvest of deer by Juneau hunters in Units 1 through 4 are found in Appendix II.

Significant hunting pressure was restricted to three major areas in Subunit 1C: (1) the mainland area behind Juneau (Point Bishop to Berners Bay) where 90 hunters bagged 25 deer, with a 26.3 percent hunter success rate; (2) Douglas Island where 299 hunters bagged 136 deer for a 30.8 percent hunter success rate; and (3) the Lynn Canal islands where 68 hunters bagged 49 deer for a 38.2 percent hunter success rate.

The most popular areas utilized by Juneau residents in descending order were: (1) Admiralty Island - 707 Juneau hunters bagged 920 deer with a 63.9 percent hunter success rate, (2) Douglas Island - statistics presented above, (3) Chichagof Island - 229 hunters bagged 463 deer for 80.3 percent hunter success, (4) the mainland behind Juneau - statistics presented above, and (5) the Lynn Canal islands - statistics presented above.

Management Summary and Recommendations

Deer populations in Subunit 1C fluctuate primarily with winter weather, except for those herds occupying mainland areas where wolf predation probably has had some impact on deer numbers.

This annual report presents harvest report card data for the first time (post-season personal interview data were previously used), hence, population and hunter pressure trends are not comparable at this time.

The winters of 1974-75 and 1975-76 were mild and the deer population in Subunit 1C should be relatively high in fall 1976. Season and bag limits should remain liberal for the 1976-77 regulatory year.

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SUBMITTED BY:

Robert Pegau
Regional Management/Research Coordinator

APPENDIX I

Unit 1C

1975 Deer Harvest and Hunting Pressure
as Derived From Hunter Report Cards.[1/]

Area	Sex of Harvest			Total Harvest	Successful Hunters	Total Hunters	Percent Hunter Success
	Male	Female	Unknown				
Cape Fanshaw to Taku River	0	0	0	0	0	2	0
Taku River to Eldred Rock (Juneau Mainland)	16	9	0	25	25	95	26.3
Chilkat Range	0	2	1	3	2	4	50.0
Douglas Is.	71	63	2	136	92	299	30.8
Lynn Canal Islands	27	21	1	49	26	68	38.2
Unit 1C Unknown	14	11	0	25	12	53	-
Total Unit 1C	128	106	4	238	157	521	30.1

[1/] Based on a 66.9 percent return of report cards.

Prepared by: David A. Johnson, Game Biologist III

APPENDIX II

1975 Juneau Hunter Pressure and Deer Harvested
by Juneau Hunters in Units 1, 2, 3 and 4.[1/]

Area Hunted	Sex of Harvest Male	Female	Unknown	Total Harvest	Successful Hunters	Total Hunters	Percent Hunter Success
Unit 1A	4	2	0	6	4	12	33.3
Unit 1B	0	0	0	0	0	0	-
Unit 1C	116	98	3	217	133	450	29.6
Unit 1 Unknown	0	0	0	0	0	2	-
Unit 2	2	0	0	2	1	7	14.3
Unit 3	4	0	0	4	1	1	100.0
Unit 4							
Admiralty Is.	463	405	52	920	452	707	63.9
Chicagof Is.	264	189	10	463	184	229	80.3
Baranof Is.	24	12	1	37	20	25	80.0
Kruzof Is.	6	5	0	11	5	5	100.0
Unit 4 Unknown	39	31	0	70	27	43	-
Total	922	742	66	1730	827	1481	55.8

[1/]Based on a 64.9 percent return of hunter report cards.

Prepared by: David Johnson, Game Biologist III

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 4 - Admiralty, Baranof, Chichagof and Adjacent Islands

Seasons and Bag Limits

Unit 4, that portion of Admiralty Island including all drainages into Frederick Sound and Stephens Passage on southeast Admiralty Island between Pleasant Bay and Point Gardner	Aug. 1-Nov. 30	Four deer; provided that antlerless deer may be taken only from Nov. 1 - Nov. 30.
Remainder of Unit 4	Aug. 1-Dec. 31	Four deer; provided that antlerless deer may be taken only from Sept. 15 - Dec. 31.

Harvest and Hunting Pressure

A combination of circumstances in 1975 resulted in the most intensive sport hunting pressure and the highest sport harvest of deer ever to occur in Game Management Unit 4.

Heavy snow began falling on October 31, followed by a period of calm weather lasting until mid-December. As is normal following the first heavy snowfall, most deer migrated to the beaches. Commercial boat operators took advantage of the snow cover and calm weather to offer high success hunts which attracted many hunters. Large numbers of deer were concentrated on the beaches by deep snow, accessible to large numbers of hunters aided by calm weather. At this same time there was only a casual attempt to enforce bag limits or methods and means of take.

Harvest ticket analysis showed that 2,026 hunters successfully pursued deer in Unit 4 in 1975. These hunters expended 9,445 days of effort and took a reported 4,247 deer (2,433 bucks, 1,657 does, and 157 sex not reported). An additional 722 persons hunted unsuccessfully for a total of 1,053 days. Juneau-based hunters reported taking 1,501 deer, which was 35 percent of the Unit 4 total. Sitkans reported taking 1,422 deer (33 percent), while Petersburg, Wrangell, and Ketchikan hunters reported harvesting 315 (7 percent), 102 (3 percent), and 77 (2 percent), respectively, from Unit 4. The smaller communities of Angoon, Hoonah, Pelican, Tenakee Springs, and Kake, as well as other Alaskan communities to the north, reported taking the remaining 830 (19 percent) (Appendices I and II).

Analysis of the harvest ticket program showed that over 30 percent of those persons issued harvest tickets failed to return them, even after receiving reminder letters.

The inconsistencies between persons voluntarily submitting their harvest reports and those submitting them following the reminder letters make it difficult to generalize about success of nonrespondents. That, in turn, makes it difficult to make an accurate assessment of the total harvest when the harvest tickets are the only data available. As a general rule, there was fair agreement of the percentage of hunters taking one, two, and three deer between voluntary reporters and those reporting after reminder letters. The percentage of persons reporting taking four deer was considerably lower after the reminder letters, whereas the number of persons who did not hunt or who took no deer was considerably higher after the reminder letters. It is suspected that a large percentage of nonrespondents did not hunt or were unsuccessful.

In 1974 a program was set up to evaluate and compare harvest figures derived from harvest ticket returns and post-season hunter interviews. Traditionally, hunter interviews were conducted only in Sitka, Juneau, Ketchikan, Wrangell, and Petersburg, and harvest ticket returns from those communities were carefully examined by data processing. Only hand-tabulated data were available for harvest ticket returns for Southeastern Alaska communities other than those listed above.

To substantiate harvest ticket data, a hunter interview was conducted in Sitka after the season closed. Results from that interview showed the same patterns in the harvest with respect to chronology, location, sex ratio, and hunter effort; but the total harvest as reported by harvest tickets was only about one-fifth of the harvest determined from hunter interviews. I suspect this to be true in other communities in Southeast where deer are known to provide a substantial portion of the peoples' protein, especially in Angoon, Hoonah, Pelican, Tenakee, and Kake.

It was difficult to estimate the actual total kill due to the wide variation between local survey results and harvest ticket information. Harvest ticket reports by residents of Juneau, Wrangell, Ketchikan, Petersburg, and some other Alaskan communities are probably fairly accurate because their deer hunting trips to Unit 4 are confined to one effort per season and are primarily for sport. Bag limits are probably reasonably well observed. Residents of Sitka, Angoon, Hoonah, Pelican, Tenakee, and the logging, mining, and fish processing camps in Unit 4 who can hunt deer practically from their doorsteps, utilize deer for their primary meat primary supply. Bag limits are only casually observed. For these hunters, the harvest ticket data represent trends and general information only.

Based on the above considerations, the total deer harvest for Unit 4 was estimated to be 13,600 deer (Appendix III).

Chronologically, about half of the total harvest occurred during the month of November. As previously noted, circumstances were conducive to a large kill during that month, which was somewhat of a deviation

from past year's harvests. Typically, heavy snowfalls do not occur until late December, which is when more intensive hunting pressure usually occurs (Appendix IV).

Location of Unit 4 kills, as determined from harvest reports and substantiated by a post-season hunter interview (Sitka only), are summarized in Appendices I and II. Overall, Admiralty Island produced the largest percentage of the kill, followed closely by Chichagof, then Baranof and Kruzof Islands.

Using the Sitka hunter interview data, Sitkans hunted about 3 days per deer harvested and each hunter took about three deer. Hunter success was 84.1 percent. Successful hunters hunted an average of about 10 days each, whereas unsuccessful hunters hunted only about 3 days each. Each successful hunter saw about 64 deer during the course of the season, while each unsuccessful hunter saw about five deer during the season.

There were 1,502 Sitkans licensed to hunt deer in 1975, approximately 300 more than are normally sold (Appendix III).

Sitkans were issued 1,308 deer harvest tickets of which 834 were returned. Analysis of these tickets showed successful hunters to have expended about 4.1 days effort per hunter. The design of the harvest ticket is such that it is difficult to report the number of unsuccessful days hunted for an otherwise successful hunter. The total days hunted by successful hunters would be higher if the report form was conducive to accurate reporting.

A crude measure of hunting conditions, deer availablility, and hunter success is reflected in the number of deer taken per hunter based on harvest ticket data (Appendix V). The fact that such a high number of hunters attained the full bag limit of four deer attests to the optimum hunting conditions and deer availability that prevailed in Unit 4 during 1975.

From harvest ticket data on a regionwide basis, Unit 4 contributed 4,427 (85%) of the 5,020 deer harvested and 65 percent of the statewide harvest of 6,518 deer.

Composition and Productivity

No specific attempts were made to gather composition and productivity data during this reporting period.

Following the period of heavy hunting pressure, and throughout the winter, surveys were conducted over selected areas, especially those that were heavily hunted. Surveys were made via helicopter, aircraft, skiff, and afoot. These surveys generally showed that there was a substantial reduction of the deer population in the immediate Sitka area. However, deer were still abundant, for it was possible to observe

as many as 100 or more deer by boat or aircraft within a 30-mile radius of Sitka. Wintering deer were present in large numbers on the southern coast of Kruzof Island, on Baranof Island from Silver Bay south, and from Fish Bay north and east through Peril Straits to Kelp Bay. When snow cover permitted, dense wintering concentrations could be observed on the outer coast of Chichagof from Khaz Peninsula to Lisianski Straits, including the outer islands, and the southeastern peninsula of Chichagof Island from about False Island along Chatham Straits. High densities were observed on southeastern Admiralty, from Mole Harbor to Point Gardner. Surveys were not conducted on southern Baranof, northern Chichagof, or western Admiralty Islands. Extensive snow accumulation, which persisted at tidewater until April, could be found in upper Hoonah Sound, Tenakee Inlet, and Seymour Canal. Consequently, few deer wintered in those areas. It is noteworthy that few deer or tracks were observed on beaches below clear cuts in areas where deer were otherwise abundant below uncut areas.

Winter mortality, measured on 22, 1-mile transects scattered throughout Unit 4, indicated about one deer per mile. Winter mortality data are summarized in Appendix IV.

Baranof and Chichagof Islands showed the highest incidences of mortality with about 1.5 dead deer per mile of beach examined. Fish Bay on Baranof Island yielded the greatest number of dead deer (5), of any area examined. This was not surprising in view of the large number of deer that wintered there.

Winter 1975-76 was the fourth winter in succession in which there was not a continuous snow cover for the duration of the winter. There was, however, a heavy snow pack above about 1,000 feet elevation. That snow came in late October and persisted into July over most alpine areas. Deer were, therefore, restricted to their winter range, a band of vegetation only about 1,000 feet in elevation for as long as 8 months. Range examinations during previous years' winter mortality transects indicated most Unit 4 wintering areas to be in a chronic condition of heavy use.

Examinations of hunter-killed deer and range conditions in December 1975, after the 6-week period of deep snow, showed deer to be declining in body condition and that much of the available forage was already utilized.

Disease and Parasitism

Only three deer cascasses, other than those I personally examined while sport hunting, were available for pathological examination during this reporting period. One adult buck was a road kill. Two adult deer, a buck and a doe, were killed by dogs. All came from the immediate Sitka vicinity, where free-ranging dogs are abundant, and in accordance with past findings, all contained Taenia sp. cysts. Two of the three harbored lung worm (Dictyocaulus sp.) infestations, and all three harbored the common nematode of the abomasum.

Management Summary and Conclusions

Nothing has developed that should change the department's liberal attitude toward seasons and bag limits in Game Management Unit 4. Conditions during the 1975 season produced situations allowing a high harvest, perhaps excessive in localized situations. Overall, the harvest was only moderate, and with current hunting practices will remain so during the foreseeable future.

Through gross analysis the major winter ranges appear to be extremely heavily utilized. Consequently, any localized excessive harvests are not viewed as detrimental because deer on these heavily utilized ranges will undoubtedly sustain heavy winter losses during the first winter that has continuous snow cover during the months of December - March.

A problem which continues to confound deer management in Unit 4 is the fear by the public that overharvest, not winter severity and range conditions, controls deer abundance. That is reflected in our current regulations in which the season ends on the southern portion of Admiralty Island on November 30. That regulation was adopted as a result of the efforts of Petersburg residents who felt a December season might reduce the quality of hunting they know on southern Admiralty. Repeated heavy harvests during times of deer vulnerability, such as happened in the immediate Sitka area in 1975, could lead to additional curtailment of December seasons through efforts of conservation-minded local citizens. Therefore, careful watch must be kept over those localized situations where heavy harvests were made in 1975 should heavy snow accumulations again make deer vulnerable to high harvests. Though perhaps not biologically warranted, an emergency closure may be indicated (see Management Summary and Conclusions in 1974 Unit 4 Deer S&I Report).

Recommendations

No changes in seasons or bag limits.

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APPENDIX I

DEER KILL BY RESIDENCE OF HUNTER BY ISLAND
GAME MANAGEMENT UNIT 4 - 1975

	Location of Kill					
Hunter Residence	Admiralty	Baranof	Chichagof	Kruzof	Unknown	Total
Juneau						
Number	920	37	463	11	70	1,501
Percent by Juneau	61	3	31	1	5	44
Percent Unit 4 Total	27	1	14	>1%	2	44
Ketchikan						
Number	6	31	25	7	8	77
Percent by Ketchikan	8	40	33	9	10	2
Percent Unit 4 Total	>1%	>1%	>1%	>1%	>1%	2
Petersburg						
Number	242	11	47	3	12	315
Percent by Petersburg	77	3	15	1	4	9
Percent Unit 4 Total	7	>1%	1	>1%	>1%	9
Sitka						
Number	7	630	463	316	33	1,422
Percent by Sitka	>1%	44	33	22	2	42
Percent Unit 4 Total	>1%	18	13	9	>1%	42
**Number	100	2,550	1,700	650		5,000
**Percent Sitka	2	51	34	13		
Wrangell						
Number	31	48	11	0	12	102
Percent by Wrangell	30	47	10	-	12	3
Percent Unit 4 Total	>1%	2	>1%	-	>1%	3
Total Number	1,206	757	982	337	135	3,417
Percent Unit 4	35	22	29	10	4	

**Sitka hunter interview data for comparative purposes

APPENDIX II

DEER HUNTER SUCCESS
GAME MANAGEMENT UNIT 4 - 1975

Area	Male	Female	Unknown	= Total	Number Successful Hunters	Number Successful Hunt Days	Number Unsuccessful Hunters	Number Unsuccessful Hunt Days
01 Admiralty Island	719	548	77	1,344	658	3,116	346	505
02 Baranof Island	526	345	32	903	458	1,607	181	209
03 Kruzof Island	240	143	20	403	226	734	39	58
04 Chichagof Island	844	553	26	1,423	611	3,437	116	170
10 Unit 4 Unknown	104	68	1	173	72	540	40	30
Total	2,433	1,657	157	4,247	2,026	9,445	772	1,053

APPENDIX III

ESTIMATED DEER HARVEST
GAME MANAGEMENT UNIT 4 - 1975

Community	License Sales	Harvest Tickets Issued	Deer Kill	Data Source
Sitka	1,502	1,308	5,000	Hunter Interview
Angoon	65	58	1,000	Local Informant
Hoonah	199	166	1,500	Estimate
Pelican	104	116	500	Estimate
Tenakee	40	52	400	Estimate
Other Southeast Communities[1]	1,194	373[2]	1,000	Estimate
Logging, mining, and fish processing plants (14)	Unknown	Unknown	2,000	Estimate
Petersburg	801	475	320	Harvest Tickets
Ketchikan	2,237	1,684	80	Harvest Tickets
Wrangell	570	340	100	Harvest Tickets
Juneau	4,028	2,760	1,500	Harvest Tickets
Other			200	Estimate
Total	10,740	7,332	13,600	

[1]Communities and reported deer kill: Elfin Cove (17), Gustavus (14), Haines (35), Kake (31), Pt. Baker (10), Skagway (13), Other (33).
[2]Not a complete listing.
[3]Residency of people from these areas is so unstable that it is difficult to break out specific data for each situation.

APPENDIX IV

CHRONOLOGY OF DEER HARVEST
GAME MANAGEMENT UNIT 4 - 1975

	Reported Kill			
	Harvest Ticket Returns[1]		Hunter Interview[2]	
Hunting Period	Number	Percent	Number	Percent
August 1 - September 4	138	3.3	585	11.7
September 5 - October 2	139	3.3	310	6.2
October 3 - October 30	395	9.3	460	9.2
October 31 - November 27	1,986	46.8	2,445	48.9
November 28 - December 31	1,277	30.1	1,200	24.0
Unknown	312	7.4	-	-
Total	4,247		5,000	

[1]All reporting hunters
[2]Sitka only

APPENDIX V

NUMBER OF HUNTERS KILLING 1, 2, 3, 4 DEER
GAME MANAGEMENT UNIT 4 - 1975

	Persons Reporting Number Kills			
Community	1	2	3	4
Juneau	185	155	116	227
Ketchikan	142	72	27	11
Petersburg	18	32	21	46
Sitka	88	97	56	249
Wrangell	14	6	7	17
Kake	3	3	2	4
Angoon	1	2	0	2
Hoonah	4	6	8	24

APPENDIX VI

WINTER MORTALITY DATA, GAME MANAGEMENT UNIT 4

Year	Admiralty			Baranof			Chichagof			Kruzof			Unit Total		
	Number Trans.	Total Mort.	Per/ Mile	Number Trans.	Total Mort.	Per/ Mile	Number Trans.	Total Mort.	Per/ Mile	Number Trans.	Total Mort.	Per/ Mile	Number Trans.	Total Mort.	Per/ Mile
1975-76	11	5	0.45	3	5	1.67	8	11	1.38	1	1	1.0	23	22	.96
1974-75	11	1	0.09	3	4	1.33	8	4	.50	-	-	-	22	9	.41
1973-74	11	11	1.00	3	2	.67	8	5	.63	1	0	0	23	18	.78
1972-73	11	8	.72	3	0	0	7	5	.71	1	1	1.0	22	14	.64
1971-72[1]	11	13	1.18	-	-	-	7	7	1.00	-	-	-	18	20	1.11
1970-71[2]	11	12	1.09	4	4	1.00	7	21	3.00	1	0	0	23	37	1.61
1969-70	10	0	0	4	0	0	5	0	0	-	-	-	19	0	0
1968-69	11	49	8.90	4	19	9.50	6	13	4.34	1	4	8.0	22	85	7.72
1967-68	11	2	.36	4	3	1.50	5	1	.40	1	0	0	21	6	.58
1966-67	11	0	0	4	1	.50	6	0	0	1	0	0	22	1	.10
1965-66	11	12	2.18	4	3	1.50	6	4	1.34	1	0	0	22	19	1.72
1964-65	11	24	4.36	4	2	1.00	6	3	1.00	1	0	0	22	29	2.64
1963-64	11	6	1.08	4	10	5.00	6	2	.66	1	0	0	22	18	1.64
1962-63	11	1	.18	4	0	0	6	2	.66	1	0	0	22	3	.28

[1]Data known to be of questionable veracity

[2]All transects prior to 1970-71 were 1/2 mile in length. Figures are expanded to represent mortality/mile. After 1971 all transects have been 1 mile long

DEER

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 5 - Yakutat

Seasons and Bag Limits

Aug. 1 - Dec. 31	Four deer; provided that antlerless deer may be taken only from Sept. 15 - Dec. 31.

Harvest and Hunting Pressure

The 1975 deer harvest ticket analysis indicated that 17 people hunted in Unit 5 and harvested 10 deer (8 males, 2 females). These data are probably inaccurate since the Fish and Wildlife Protection officer recorded only 3 deer harvested and was confident that this was the entire harvest.

Composition and Productivity

No surveys of the deer population or winter mortality transects were conducted.

Management Summary and Conclusions

The Yakutat deer population was established by introducing 12 animals in 1934. The population increased and deer colonized all islands in Yakutat Bay and the mainland from Chicago Harbor to the mouth of the Situk River. During the 1950's deer were reportedly abundant and many were harvested annually, both from the mainland and the islands. Since the early 1960's the population has decreased in both distribution and numbers, first from the mainland and most recently from Khantaak Island, one of the largest in Yakutat Bay. Conversations with long-time residents of Yakutat indicate that the decline was probably due to a combination of severe winters, predation and overharvesting. The more recent decline on Khantaak Island is possibly a result of predation. Currently a very dense coyote and possibly coyote-feral dog hybrid population exists on the island.

Deer still persist on Dolgoi, Kriwvoi, Knight, and Eleanor Islands, and to a lesser extent on several of the smaller islands. Deer are also occasionally observed on the mainland.

Recommendations

Winter ground surveys should be conducted on all islands to provide additional data on the distribution of deer and predators and the status of the deer population. It is also recommended that the bag limit be reduced to one deer.

PREPARED BY:

Roland Quimby
Game Biologist II

SUBMITTED BY:

Robert E. Pegau
Regional Management/Research Coordinator

DEER

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 6 - Prince William Sound

Season and Bag Limits

Aug. 1 - Dec. 31	Four deer; provided that antlerless deer may be taken only from Sept. 15-Dec. 31

Harvest and Hunting Pressure

Harvest information was gathered from hand-compiled (statewide) harvest report data and by interviewing 100 Cordova hunters. A comparison of data is given in Appendix I. According to harvest report data 514 hunters took 437 deer, whereas 409 Cordova hunters took 631 deer. Males comprised about 60 of the reported harvest. Hunter success was about 40 percent statewide compared to 62 percent for local hunters. The majority of the harvest occurred in November with Montague Island providing the most deer.

Composition and Productivity

Age data were obtained from 90 deer jaws taken by Cordova hunters:

	F	1	2	3	4	5+	Total
Number	14	23	11	22	9	11	90
Percent	15.6	25.6	12.2	24.4	10.0	12.2	100.0
Born in Spring of	1975	1974	1973	1972	1971	1970	
First Winter	75-76	74-75	73-74	72-73	71-72	70--	

Winter mortality was probably "average" for the 1974-1975 winter, judging by the reconnaissance surveys flown. Spring beach surveys are not walked in Prince William Sound because winter mortality along the beach is often carried off by high tides.

Management Summary and Conclusions

The 1975 deer harvest in Prince William Sound would be considered as "moderate" and winter mortality was probably "average." Due to the lack of winter range along the beach fringe, even an average winter holds the relatively low Prince William Sound deer population in check.

Discrepencies between harvest report data and the Cordova hunter interview data point out the obvious lack of compliance by hunters in returning their harvest report cards. A comparison of these two sets of harvest data reveals the indicated Prince William Sound deer harvest as extremely low. Harvest report data probably give a good overall picture of the harvest: percent of males, number of deer taken (1, 2, 3 or 4) per hunter, deer per hunter plus chronology and location of the harvest. Harvest reports do not come close in reflecting the number of deer taken nor in reflecting the hunting effort (days hunted). The Cordova hunter interview probably gives a fair picture of the deer harvest by local hunters but may give a distorted "overall" picture.

Recommendations

Retain the present season and bag limits.

PREPARED BY:

Julius Reynolds
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

1975 Deer Harvest Data

Unit 6

		Harvest Report Data		Cordova Interview*	
		No.	%	No.	%
License Buyers		UNK		743	100.0
License Buyers not hunting		UNK		334	45.0
Hunters Afield		514		409	55.0
Successful Hunters		206	40.1	252	61.6
Deer Harvested		437		631	
Males Harvested		254	58.1	379	60.1
Deer per Hunter Afield		.85		1.54	
Days per Deer		UNK		2.6	
Total days hunted		UNK		1672	
Harvested:	1 deer	85	41.3	73	29.0
	2 deer	54	26.2	68	27.0
	3 deer	24	11.6	22	8.7
	4 deer	43	20.9	89	35.3
Chronology:**	August	11	2.6	0	0
	September	29	7.0	45	7.4
	October	69	16.6	90	14.8
	November	214	51.6	390	64.0
	December	92	22.2	84	13.8
Location:	Mainland	7	1.6	22	3.5
	Hawkins	74	16.9	163	25.8
	Hinchinbrook	43	9.8	104	16.5
	Montague	242	55.4	89	14.1
	Other	51	11.7	253	40.1
	Unknown	20	4.6	0	0

* Personal interviews with 100 Cordova license holders. Harvest figures extrapolated from 13 percent sample of Cordova license buyers.

** Not all hunters reported this information.

SUBMITTED BY: Julius Reynolds, Game Biologist III

DEER

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 8 - Kodiak and adjacent Islands.

Seasons and Bag Limits

Unit 8, that portion of Kodiak Island which lies east of a line from the mouth of Saltery Creek to Crag Point.	Aug.1-Nov.1	One deer; provided that antlerless deer may be taken only from Oct.1-Nov.1.
Remainder of Unit 8.	Aug.1-Dec.31	Four deer; provided that antlerless deer may be taken only from Sept.15-Dec.31.

Harvest and Hunting Pressure

Telephone interviews were conducted with 9.37 percent of the 2,221 Kodiak hunting license purchasers to obtain information on deer harvest. Results of these interviews indicate that 1,057 deer were taken by 1,068 hunters in 1975 (Appendix I). This harvest is considerably below the 1,754 animals recorded in 1974 (Appendix II). Forty-seven percent of the hunters afield took at least one deer. More than three-fourths of the harvest occurred during November and December (Appendix III).

Afognak Island sustained 24 percent of the Unit 8 harvest in 1975 (Appendix IV) compared to only 10 percent in 1974. Unusually stormy fall weather curtailed hunting significantly and many hunters were only able to hunt nearby areas such as southern Afognak Island and Raspberry Island. Only 15 percent of the total harvest was taken in the Uganik Bay-Uyak Bay area (harvest subunits 8 and 12), although this area supports the highest densities of deer in Unit 8.

The newly implemented regulation which prohibits hunting deer the same day a hunter is airborne probably depressed harvest to some extent. Private aircraft owners complained that the regulation severely restricted their hunting as they could not afford overnight camping for fear of sustaining damage to their planes by storm winds. Numerous local hunters who charter aircraft for hunting also expressed displeasure with the regulation.

Composition and Productivity

No sex or age composition data were collected in 1975.

Winter mortality during 1974-75 was relatively high. Seventeen deer carcasses were located on approximately 22 miles of beach transects,

an average of 0.78 deer/mile. This is considerably below the 1.7 deer/mile recorded during the severe 1972 winter, however. Mortality was recorded from several areas, including Uganik Island, Whale Island, Ugak Bay and Chiniak Peninsula. Occasional sightings of dead and weak deer along Afognak Island beaches were also received from local residents. Nine of 17 (53%) carcasses examined were fawns.

Flights during early April to Afognak Island revealed snow depths to 4 feet in openings near sea level. Several deer were observed at 500-800 feet elevation where snow depths were estimated in excess of 4 feet. Crusted snow conditions sometimes allow deer to utilize willow and elderberry patches at upper elevations which would ordinarily be unavailable. One deer carcass, presumably dead from malnutrition, was observed near the 500 foot level on Duck Mountain.

Management Summary and Recommendations

Weather patterns largely determine deer hunting pressure and harvest. Severe late fall weather in 1975 resulted in a relatively low harvest. Prohibition of hunting the same day airborne may also have been a contributory factor. Relatively high densities of deer are present in the Uyak, Spiridon and Uganik Bay areas and harvests there remain well below allowable levels. Although winter mortality was recorded in several areas during the 1974-75 winter, deer population levels are high in many areas. Males comprised approximately two-thirds of the annual harvest and almost one-fourth of the hunters took the full bag limit of four deer.

Additional harvest should be directed into Uyak Bay and Spiridon Bay areas where deer populations are expanding. The regulation prohibiting hunting deer the same day airborne should not apply to Unit 8 as improved access to deer populations is desirable for optimum utilization. It is impractical to spot deer, land and shoot due to the extreme scarcity of safe landing areas in Unit 8.

PREPARED BY:

Roger B. Smith
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Unit 8 - Deer Harvest Statistics, 1975*

	No.	Percent
License Buyers	2,221	---
*License Interviews	208	9.37%
License Buyers Not Hunting	1,153	52%
Hunters Afield	1,068	48%
Females Harvested	374	35%
Males Harvested	683	65%
Total Deer Harvested	1,057	---
Hunters Successful	502	47%
Days Per Deer	4.8 days	---
Deer Per Hunter Afield	1.0 deer	---
Deer Per Successful Hunter	2.15 deer	---
Total Days Hunted	5,040	---
Number and Percent Hunters Taking:		
One deer	182	36%
Two deer	149	30%
Three deer	107	21%
Four deer	64	13%
Total	502	100%

* From telephone hunter interviews; harvest figures extrapolated from 9.37 percent sample of license buyers.

Prepared By: Roger B. Smith, Game Biologist III

APPENDIX II

Unit 8 - Deer Harvest Statistics, 1968 - 1975

	1968	1969	1970	1971	1972	1973	1974	1975
Number of Hunters:	2,300	1,441	658	925	689	1,127	1,141	1,068
Number of Deer Harvested:	2,100	1,420	870	915	587	1,166	1,754	1,057
% Hunter Success:	74%	43%	55%	45%	46%	47%	61%	47%
Number of Deer per Hunter:	.9	1.0	1.3	1.0	.85	1.0	1.5	1.0
Number of Hunting Days per Deer:	5.0	6.3	2.4	4.5	5.2	5.0	3.7	4.8

APPENDIX III

Unit 8 - Chronological Distribution of Deer Harvest, 1975*

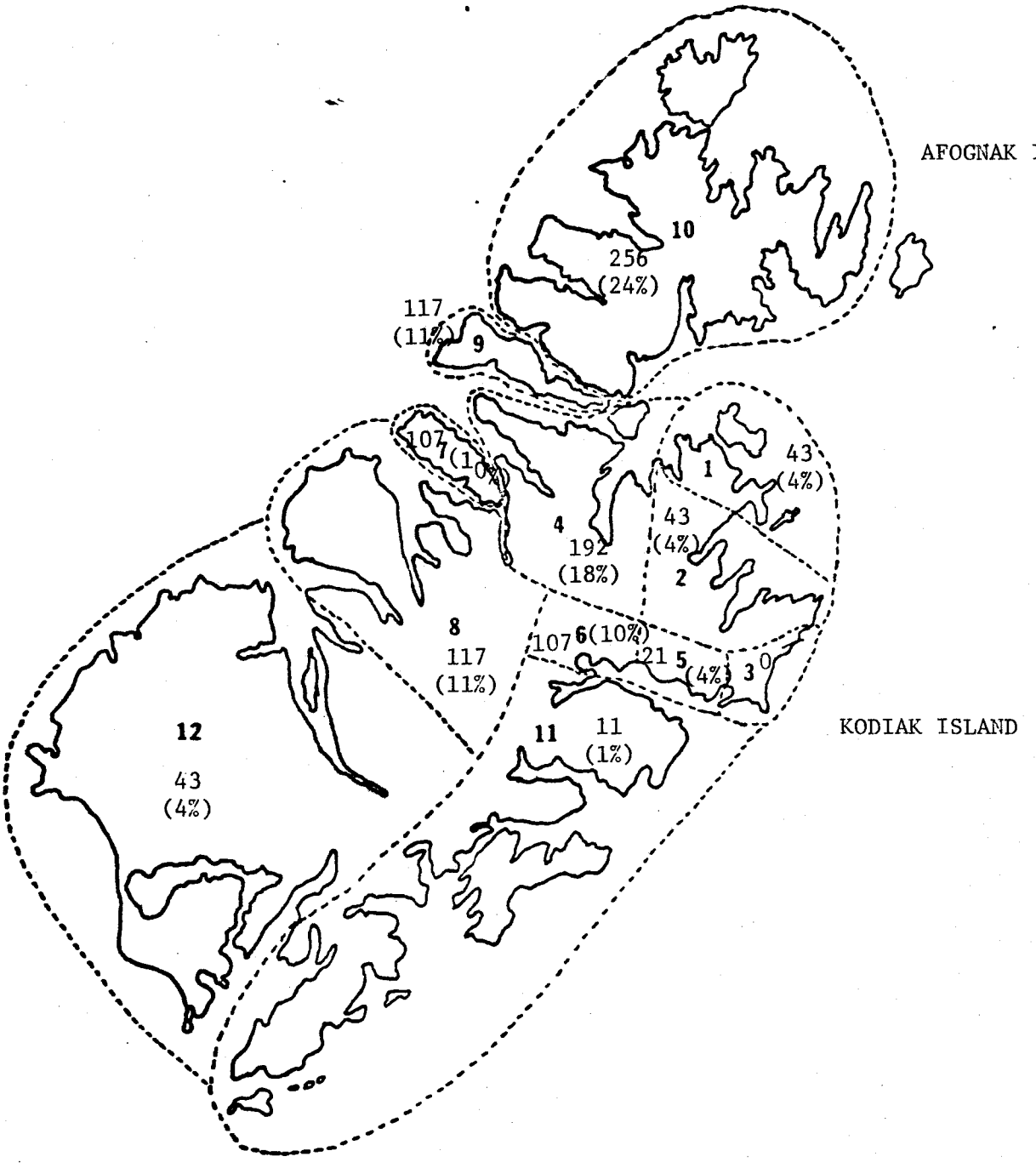
	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
Number	32	75	139	267	544	1,057
Percent	3%	7%	13%	25%	52%	100%

* From telephone hunter interviews; harvest figures extrapolated from 9.37 percent sample of license buyers.

Prepared By: Roger B. Smith, Game Biologist III

APPENDIX IV

Unit 8 - Distribution of Deer Harvest by Subunit, 1975



Prepared By: Roger B. Smith, Game Biologist III

ELK

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 8 - Kodiak and adjacent Islands

Seasons and Bag Limits

Unit 8, Raspberry Island and that portion of Afognak Island west and south of a line from the head of Malina Bay to the head of Back Bay.		One elk by permit only; dates and conditions of the hunt to be described by Commissioner's announcement.
Remainder of Unit 8	Aug. 1 - Dec. 31	One elk by permit only

Harvest and Hunting Pressure

A 37 percent harvest report return indicated 23 elk were killed during the 1975 season (Appendix I). Sixteen females (70%) and seven males (30%) comprised the harvest. August and December hunters took 70 percent of the harvest. Permit issuance increased 12 percent over that recorded in 1974 but only five more hunters were afield in 1975 (Appendix II). Hunter success was only 19 percent compared to 25 percent in 1974.

Approximately 75 percent of the harvest occurred in the area east of Discoverer and Kazakof Bays. Unusually severe fall weather reduced hunting effort and success in 1974. Several hunting parties were unable to reach Afognak Island due to unsuitable flying conditions.

Composition and Productivity

Sex and age composition surveys were flown during late July, August and early September (Appendix III). Five hundred and fifty-five animals were classified during 16.7 hours of survey time. Some animals may have been observed on more than one survey. One hundred and twenty-five calves and 383 cows were classified for a 33:100 calf/cow ratio. This is near the previous 4-year average of 36 calves per 100 cows. Bulls represented only 8 percent of the herd in 1975, slightly below the 11 percent average for the years 1971-74.

The 134 cows in the Tonki Peninsula herd were accompanied by only 27 calves, for a calf/cow ratio of 20:100, well below average. Raspberry Island and Raspberry Straits herds showed good calf production with 46:100 and 44:100 calf/cow ratios, respectively.

Eleven elk which apparently died of starvation were found in widely separated areas during April-June 1975. Four calves, two adult bulls, one female yearling and four animals of unknown sex or age were located. Winter snow accumulations were unusually heavy on Afognak and snow persisted at low elevations until late April. Winter mortalities were recorded from the Tonki Bay, Paramanof Bay, Discoverer Bay, Kitoi Bay and Raspberry Straits areas. Remains of a recent illegal kill were found on Raspberry Island in April 1975.

Management Summary and Recommendations

Although some winter mortality occurred in 1975, the elk population appears to be increasing. Calf production varied considerably between herds. Hunter harvest and hunting pressure remain at a low level.

The Raspberry Straits elk herd appears to be increasing and produced a good calf crop in 1975. A maximum harvest of ten elk is recommended for 1976.

The Raspberry Island herd has a relatively high percentage of bulls and could support a limited bull harvest.

PREPARED BY:

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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

UNIT 8 - 1975 Elk Harvest Statistics from Hunter Reports

	NO.	PERCENT
Permits Issued	869	-
Permits Returned	325	37%
Reporting Permittees Who Hunted	123	38%
Successful Hunters	23	19%
Mean Days Hunted Per Elk	25.8	-
Total Days Afield	593	-
Male Harvest	7	30%
Female Harvest	16	70%
Total Reported Harvest	23	100%

PREPARED BY: Roger B. Smith, Game Biologist III

BGDIF
C-5
Elk

APPENDIX II

UNIT 8 - Elk Harvest Statistics, 1970-1975 From Hunter Permit Reports

Year	No. Hunters	Reported Harvest	Male Harvest	Female Harvest	Hunter Success	Season Length (days)
1970	184	62	43 (69%)	19 (31%)	34%	153
1971	190	27	15 (56%)	12 (44%)	14%	153
1972	112	18	9 (50%)	9 (50%)	16%	153
1973	116	18	8 (44%)	10 (56%)	16%	153
1974	118	30	16 (53%)	14 (47%)	25%	153
1975	123	23	7 (30%)	16 (70%)	19%	153

PREPARED BY: Roger B. Smith, Game Biologist III

APPENDIX III

Unit 8 - Elk Compsoition Counts, 1975

Herd	Count Date	Bulls No.	Bulls %	Cows No.	Cows %	Calves No.	Calves %	Calves/ 100 Cows	Total No. Animals
Raspberry Island	7/21/75 9/04/75	15	27%	28	50%	13	23%	46/100	56
Tonki Peninsula	8/29/75 9/12/75	9	5%	134	79%	27	16%	20/100	170
Duck Mountain	7/30/75	6	10%	41	71%	11	19%	27/100	58
Paramanof Mountain	8/29/75	3	14%	12	54%	7	32%	58/100	22
Waterfall Lake	8/29/75	2	2%	61	71%	23	27%	38/100	86
Kitoi Lake	7/30/75	3	12%	17	71%	4	17%	24/100	24
Raspberry Straits	8/23/75 8/29/75	5	7%	48	65%	21	28%	44/100	74
Paramanof Peninsula	8/29/75	4	6%	42	65%	19	29%	45/100	65
Combined Herds		47	8%	383	69%	125	22%	33/100	555

PREPARED BY: Roger B. Smith, Game Biologist III

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 1A - Ketchikan

Seasons and Bag Limits

Aug. 1 - Dec. 31 One goat

Harvest and Hunting Pressure

Goat harvest ticket returns for the 1975 season show 93 reporting hunters took 17 goats (53% females) in Subunit 1A. The 1975 Subunit 1A harvest was down 64 percent from the 1974 harvest and 72 percent from the 1973 harvest. Data from the harvest ticket program for the 1972-75 seasons are summarized below.

Season	Goat Harvest				Hunters Taking 2 Goats	Per Cent Harvest By Non-Res.	Number Successful Hunters	Total # Hunters	Per Cent Hunter Success
	MM	FF	Unk.	Total					
1972	23	23	2	48	6	--	42	117	36
1973	36	20	4	60	10	22	50	133	38
1974	26	19	2	47	10	13	37	109	34
1975	8	9	-	17	0*	24	17	93	18

* Bag limit reduced from 2 to 1 in 1975.

The Subunit 1A kill represented 13 percent of the total Unit 1 harvest for 1975. In 1974, Subunit 1A accounted for 22 percent of the Unit 1 harvest and in 1973 it was 21 percent.

Chronology of the goat harvest for Subunit 1A indicates the latter portion of the season was more important than last year. The November 1 - December 4 period was the most productive, with 41 percent of the harvest occurring during this period.

The August, September and October periods each accounted for 18 percent of the kill and one goat (6%) was taken after December 4.

For those goats where a location was given, 47 percent came from the Walker Cove-Rudyerd Bay area. Only 20 percent came from the area south of Smeaton Bay and only one goat (7%) was reported from the Subunit 1A portion of the Cleveland Peninsula. The area of heaviest harvest corresponds closely with the highest populations as shown by aerial survey.

Transportation to the hunting area was about evenly divided between airplanes and boats for both successful and unsuccessful hunters. For all reporting hunters in Subunit 1A, 54 percent used aircraft for transportation.

Composition and Productivity

Aerial surveys were flown in August and September 1975 in areas K-4, K-5 and six new survey areas (Appendix I).

The goat population in survey area K-4 apparently suffered a further decline as only 15 adults and 3 kids were counted. Surveys in this area have indicated a steady decline from 199 goats per hour of survey time in 1968 to 23 goats per hour in 1975. Considerable mining exploration work accompanied by a great deal of helicopter flying has occurred in this area and this disturbance may account for some of the decline over the past 2 years.

Two surveys were made over the K-5 area. The first, in mid-August, showed about the same goat population (21 adults, 7 kids and 1 unidentified), as a September 21 survey in 1974, but a second survey on September 11, 1975 indicated an 83 percent increase (40 adults and 17 kids) over 1974.

Goats seem to be more visible in September than August and this probably accounts for the differences in the two 1975 surveys. The September surveys for both years should be comparable, however, and probably represent a true increase. The 1975 kid/adult ratio also improved considerably over 1974.

Generally, the best populations appeared to be in the area from the Unuk River to Rudyerd Bay. Goats/hour of survey time were only about 50 percent of highs reported for the K-4 and K-5 areas in 1968, however.

All surveys were flown in a Piper PA-12, generally in late evening (7:00-9:00 p.m.) and in the upper half of the alpine area. Contours were followed as closely as possible. Both the observer's and pilot's observations were recorded, and the same pilot and plane have been used for virtually all surveys conducted since 1968.

Management Summary and Conclusions

Both harvest and hunter success dropped considerably in 1975 and reflect the low, and probably still declining, population. In 1974, three cases of orf (contagious ecthyma) contacted by hunters from goats received considerable publicity and also may have contributed to a lessened interest in goats in 1975. No cases of orf were reported this year.

The more extensive survey work provided much better data on goat abundance and distribution and should be maintained in the future. Surveys should be concentrated on areas comparable from year to year.

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SUBMITTED BY:

Robert Pegau
Regional Management/Research Coordinator

APPENDIX I

MOUNTAIN GOAT-SUBUNIT 1A-KETCHIKAN AREA

Goat Composition Surveys, Subunit 1A, 1968 through 1975

Area K-4 (Wilson Arm to Boca de Quadra)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1968	Sept. 17	193	72	--	265	37	80 Min.	199
1971	Sept. 15	155	56	9	220	36	70 Min.	189
1973	Aug. 16	90	13	--	103	14	65 Min.	95
1974	Aug. 27	26*	8*	--	34*	31	36 Min.*	57
1975	Aug. 12	15	3	--	18	20	47 Min.	23

*Incomplete Survey.

Area K-5 (Marten Arm to Portland Canal)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1968	Sept. 18	298	73	--	371	24	115 Min.	194
1971	Sept. 16	133	34	1	168	26	83 Min.	121
1973	Aug. 20	59	22	--	81	37	85 Min.	57
1974	Sept. 21	24	6	--	30	25	74 Min.	24
1975	Aug. 13	21	7	1	29	33	87 Min.	20
	Sept.11	40	17	0	57	43	78 Min.	44

(Continued)

Appendix I (cont).

Area K-6 (Cleveland Peninsula-Caamano Pt. to Vixen Inlet)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1975	August 7	7	3	0	10	43	76 Min.	8

Area K-7 (Yes Bay to Eagle River)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1975	August 22	37	11	0	48	30	111 Min.	26

Area K-8 (Grant Creek along Unuk River)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1975	August 23	34	6	0	40	18	64 Min.	38

Area K-9 (Klahini River to Chickamin River)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1975	August 28	52	11	0	63	21	79 Min.	48

Area K-10 (Chickamin River to Walker Cove)

Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1975	September 10	74	31	0	105	42	65 Min.	97

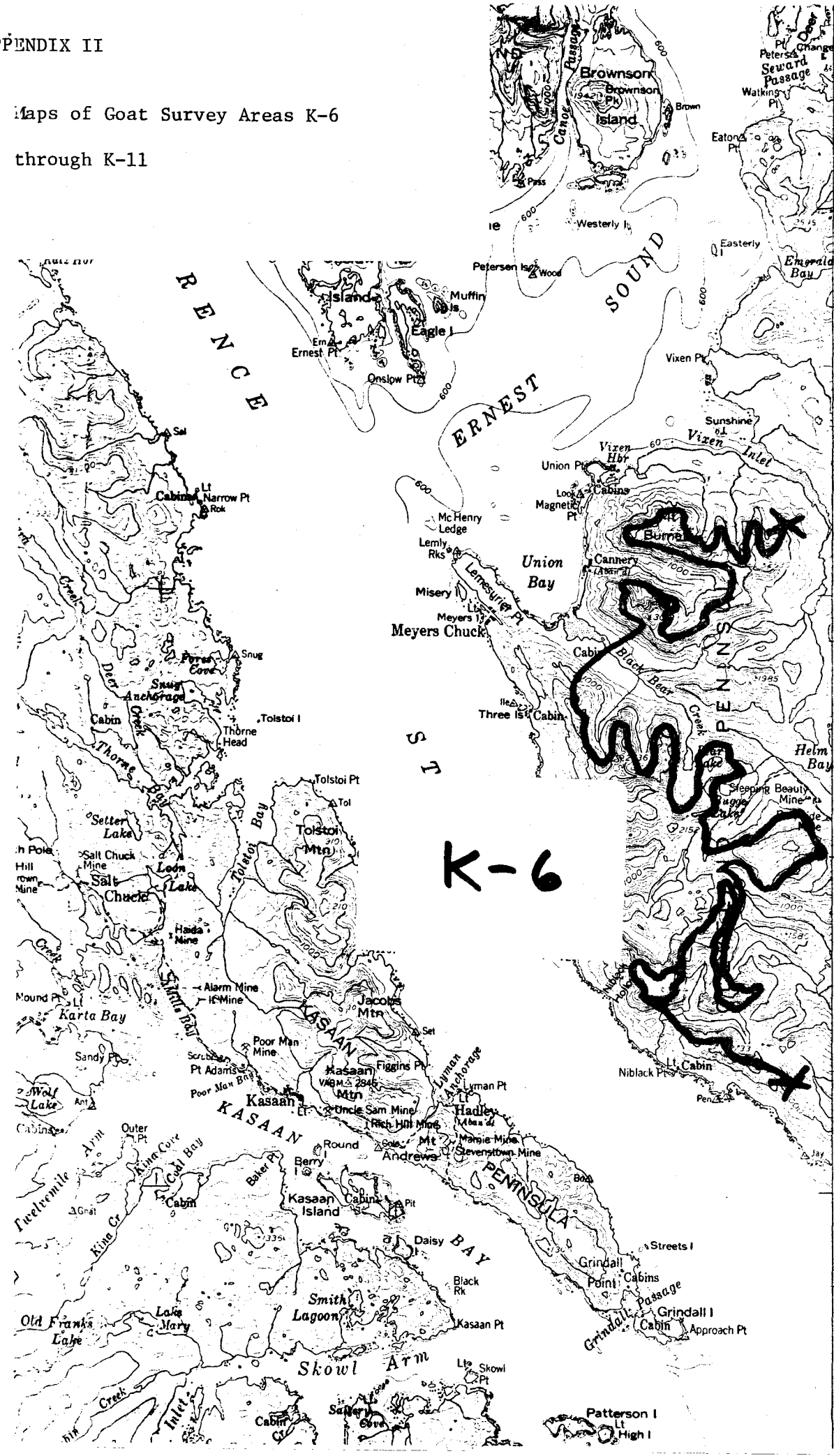
Area K-11 (Walker Cove to Rudyerd Bay)

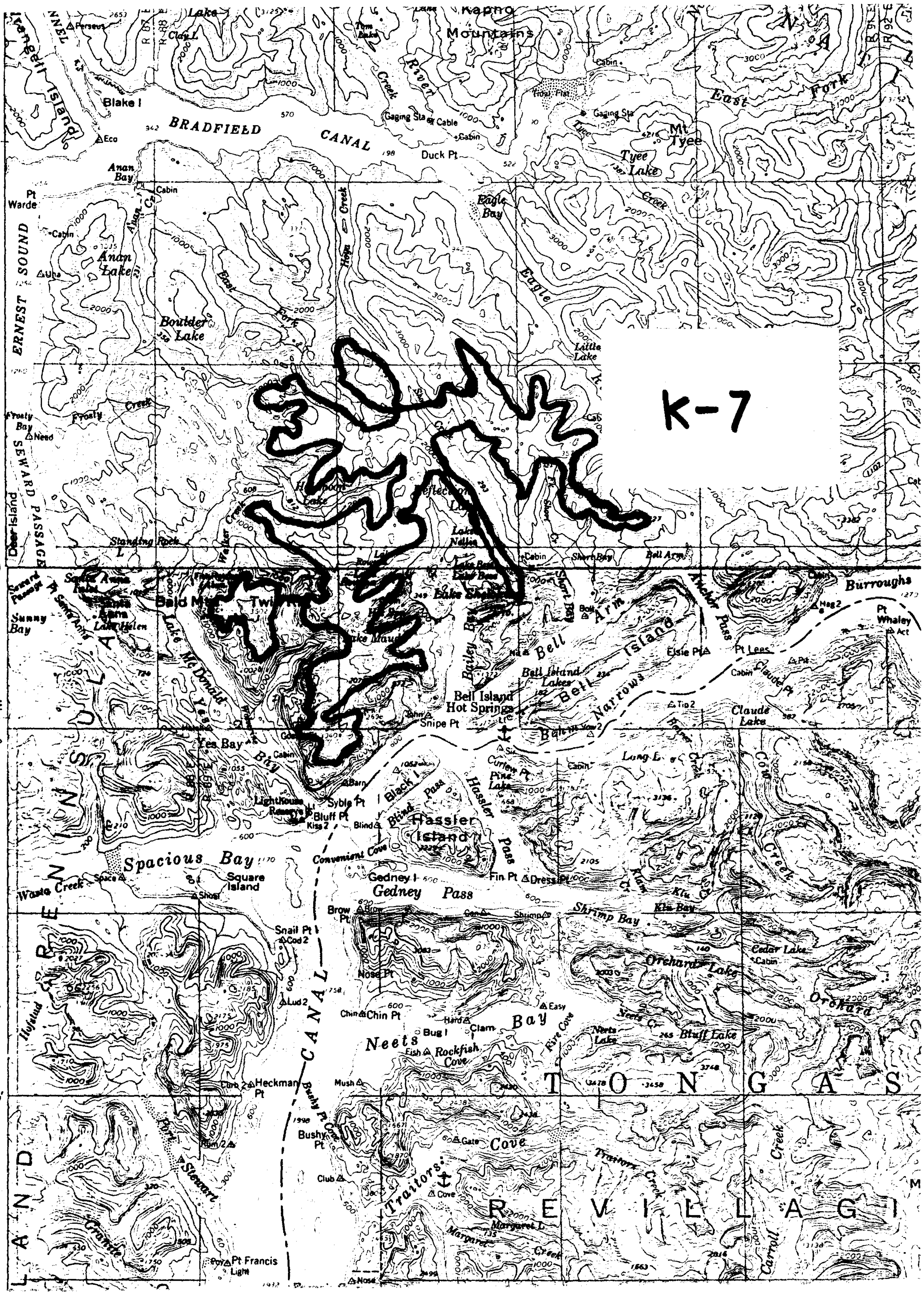
Year	Survey Date	Adults	Kids	Unknown	Total	Kids Per 100 Adults	Survey Time	Goats/Hour
1975	September 10	18	5	0	23	28	14 Min.	99

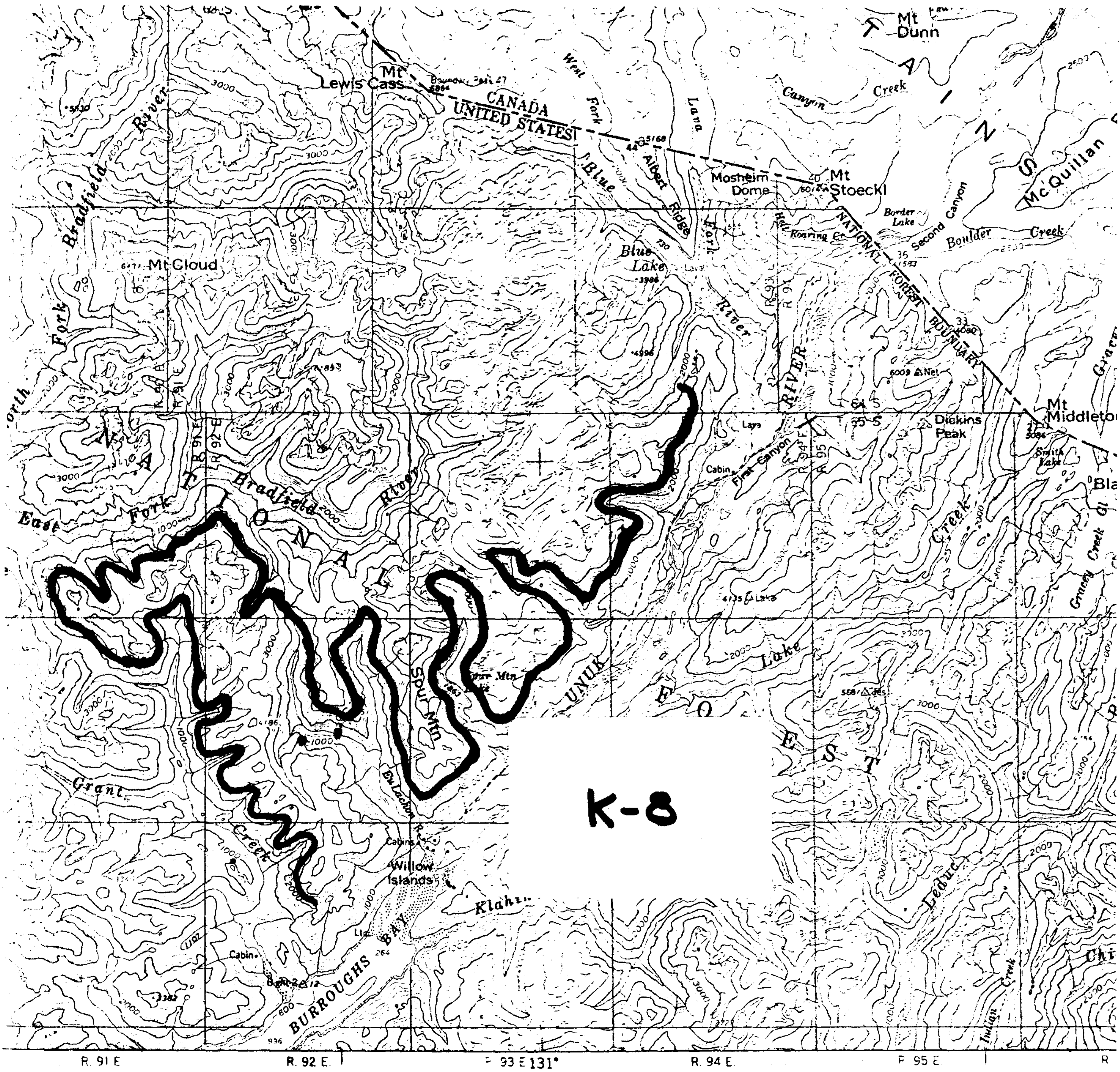
APPENDIX II

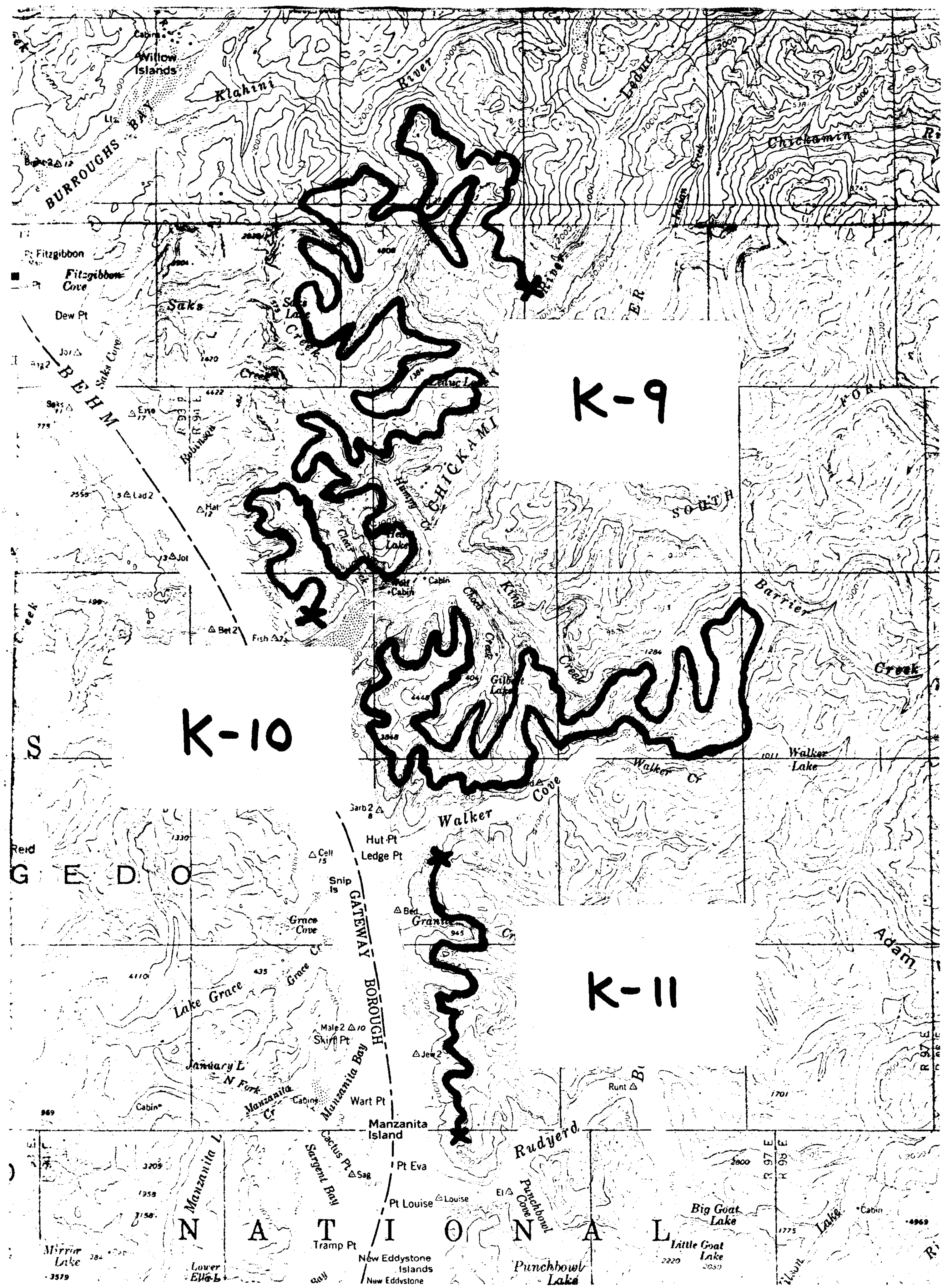
Maps of Goat Survey Areas K-6

through K-11




K-7
BRADFIELD CANAL
ERNEST SOUND
SEWARD PASSAGE
Blake I
Anan Bay
Anan Lake
Boulder Lake
Frosty Bay
Mt Tyee
Tyee Lake
Eagle Bay
Duck Pt
Deer Island
Bell Island
Bell Island Hot Springs
Bell Arm
Short Bay
Anchor Pass
Burroughs
Pt Whaley
Elsie Pt
Pt Lees
Claude Lake
Snipe Pt
Yes Bay
Lake McDonald
Black I
Hassler Island
Hassler Pass
Blind Pass
Convenient Cove
Spacious Bay
Square Island
Gedney I
Gedney Pass
Fin Pt
Shrimp Bay
Klu Bay
Orchard Lake
Cedar Lake
Bluff Lake
Snail Pt
Brow Pt
Nose Pt
Chin Pt
Bug I
Neets Bay
Rockfish Cove
Heckman Pt
Bushy Pt
Traitors Cove
Margaret L
Pt Francis Light
CANAL
T O N G A S S
R E V I L L A G I
Spit Lake
Sybil Pt
Bluff Pt
Waste Creek
Stewart
Granite


Mt Dunn
Mt Lewis Cass
CANADA
UNITED STATES
West Fork
Lava
Canyon Creek
Bradfield River
Mosheim Dome
Mt Stoeckl
Border Lake
Second Canyon
McQuillan
Boulder Creek
Blue River
Albert Ridge
Mt Gloud
Blue Lake
NATIONAL FOREST BOUNDARY
Fork
RIVER
Dickins Peak
Mt Middleton
Smith Lake
East Fork Bradfield River
NATIONAL
Cabin
First Canyon
Creek
Grant Creek
Spur Mtn
UNUK
Lake
FOREST
K-8
Cabins
Willow Islands
Klahini
Leduc
BURROUGHS BAY
Cabin
Indian Creek
R. 91 E.
R. 92 E.
R. 93 E.
131°
R. 94 E.
R. 95 E.



K-9
K-10
K-11
Willow Islands
BURROUGHS BAY
Klahini
River
Leduc
Chickamin
Pt Fitzgibbon
Fitzgibbon Cove
Dew Pt
Saks
BEHM
Walker Cove
Walker
Hut Pt
Ledge Pt
Snip Is
Grace Cove
Lake Grace
GATEWAY BOROUGH
Manzanita Bay
Wart Pt
Manzanita Island
Rudyerd
Pt Eva
Pt Louise
Punchbowl Cove
Punchbowl Lake
Big Goat Lake
Little Goat Lake
Tramp Pt
New Eddystone Islands
Walker Lake
Gilbert Lake
Barrier
SOUTH
G E D O
N A T I O N A L

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 1B - Southeast Mainland, Cape Fanshaw to Lemesurier Point

Seasons and Bag Limits

Aug. 1 - Dec. 31 — One goat

Harvest and Hunting Pressure

The 1975-76 season was the first year with a reduced bag limit of one goat. However, one hunter reported taking two goats.

Harvest ticket returns for the 1975 season indicated 49 people hunted goats in Subunit 1B, 14 of whom were successful (29%). Ten male and five female goats were taken. Of the 14 successful hunters only one was a nonresident.

In 1975 five successful hunters used aircraft and nine used boats for transportation to their hunting areas. In 1974, 11 of the successful hunters used aircraft, four used boats, one used a highway vehicle and one did not specify transportation method.

Chronology of the 1975-76 harvest compared to the 1974-75 season is listed below.

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Unspecified	Total Kill
1974-75	6	7	2	4	0	1	20
1975-76	3	5	5	2	0	0	15

Composition and Productivity

Aerial composition surveys were conducted over selected areas throughout most of Subunit 1B in August and September 1975. A total of 209 adults and 57 kids was observed. Survey results by area are listed in Appendix I. The 154 goats counted in the area north of the Stikine River compared closely with the 164 seen there in 1974 (Note: for comparison, the 1974 survey area was slightly adjusted). Productivity, as indicated by kid/adult ratios, dropped from 51/100 recorded in 1974 to 23/100 in 1975.

Management Summary and Conclusions

Since 1972 the harvest and hunting pressure have steadily declined (1974 Survey-Inventory Progress Report, Part I). Although survey results of comparable areas indicated lower productivity levels, the general condition of the goat herds appears to be stable.

The reported harvest level from all areas in Subunit 1B should not adversely effect goat populations.

PREPARED BY:

David Zimmerman
Game Biologist II

SUBMITTED BY:

Robert Pegau
Regional Management/Research Coordinator

APPENDIX I

Mountain goat composition counts, Subunit 1B, 1975.

Survey Date	Location	No. Kids	No. Adults	Kids/100 Adults	Survey Time (minutes)	Goats/hr.	Total Count
9-10-75	Stikine R. to LeConte Bay (Wilkes Range only)	11	33	33	n/a	n/a	44
9-10-75	LeConte Bay to Patterson Glacier	6	35	17	n/a	n/a	41
9-11-75	Patterson Glacier to N. Baird Glacier (Preble Pk. only)	0	2	0	n/a	n/a	2
9-11-75	N. Baird Glacier to Farragut Bay (Hamilton, Jefferson, Pierce, Hancock and Fulton Pks. only)	8	26	31	n/a	n/a	34
9-11-75	Farragut R. to Port Houghton (Washington, Lincoln, Grant and Stanton Pks. only)	4	29	14	n/a	n/a	33
	Stikine River to Cleveland Peninsula						
8-13-75	Crittenden Ck. to Aaron Ck.	2	11	18	138	20	47
8-13-75	Aaron Ck. to Tom Ck.	11	23	48			
8-14-75	Tom Ck. to N. Bradfield R.	7	23	30	123	14	30
9-18-75	Eagle R. to Grant Ck.	8	27	30	140	15	35

Prepared by: David Zimmerman, Game Biologist II

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 1D - Haines

Seasons and Bag Limits

That portion of Subunit 1D lying east of Taiya Inlet and River between Chilkoot Trail and White Pass and Yukon Railroad.	No open season	
That portion of Subunit 1D lying between Chilkoot Inlet and Katzehin River on the east, and Chilkat Inlet and River and Klehini River on the west.	Sept. 15 - Nov. 30	One goat
Remainder of Subunit 1D	Aug. 1 - Dec. 31	One goat

Harvest and Hunting Pressure

The 1975 harvest of 35 goats was 34 percent less than the 53 animals taken in 1974 (Appendices I, II and III). Hunting pressure was down from 90 to 77 hunters, while hunter success decreased from 52.2 percent in 1974 to 45.5 percent in 1975.

The 1975 hunting season differed from previous seasons by the change in bag limit from two goats to one. In addition, the season was shortened in those areas adjoining transportation corridors near Haines and Skagway, and an area near Skagway, which is being bisected by the new Skagway-Carcross Highway, was closed.

Goat herds east of Taiya Inlet near Skagway experienced reduced harvests, and hunting pressure was minimal. In this area in 1974, 22 hunters took 17 goats while in 1975, 4 hunters took 3 goats.

No goats were harvested west of Taiya Inlet near Skagway in 1975 and only one was taken there in 1974.

East of the Haines Highway, the goat season was shortened in 1975 and the bag limit was reduced. Nine goats (44 percent less than the 16 goats in 1974) were reported taken in this area by 20 hunters (38 percent fewer than the 32 hunters in 1974) with a hunter success rate of 45 percent (44 percent in 1974).

Goat herds west of the Haines Highway and north of the Kicking Horse drainage sustained a harvest similar to 1974 (1975 - 6 goats, 1974 - 5 goats) with about the same number of hunters (1975 - 9 hunters, 1974 - 10 hunters).

Goat harvests below Haines, on either side of Lynn Canal, were similar to those for the preceding 4 years (1972 - 12 goats, 1973 - 18 goats, 1974 - 12 goats and 1975 - 15 goats) and hunting pressure was also similar for all years (1972 - 19 hunters, 1973 - 17 hunters, 1974 - 14 hunters and 1975 - 23 hunters).

Composition and Productivity

No surveys were made after June 14, 1975. Population counts on areas surveyed prior to June 15, 1975 can be found in Appendix II, 1974 Annual Report of S&I Activities, Part I, Goat, Page 123. An aerial survey of Takshanuk Mountain in September 1965 revealed a total of 157 goats. Two surveys, one made on March 15, 1975 and another on March 25, 1975 actually represent one survey because half of Takshanuk Mountain was in the clouds during the first survey; the second survey on March 25, 1975 completed the area. During these two surveys a total of 133 goats was counted, similar to the 1965 count of 157 goats. Another point of interest in these March surveys was the fact that most of the animals observed were found in that portion of Takshanuk Mountain beyond Wells Bridge with very few animals observed adjoining the Haines Highway. Habitat appears similar for the entire length of Takshanuk Mountain.

Management Summary and Conclusions

Data from harvest report cards and aerial surveys generally indicate that where goat populations are low, hunting pressure and harvest are low.

Certain areas receive little hunting pressure but at the same time contain a moderate to high number of goats. Some of the underutilized goats herds have been needlessly placed within the restricted seasons of September 15 - November 30 or closed entirely. These lightly hunted goat herds should be placed within the August 1 - December 30 season.

PREPARED BY:

David A. Johnson
Game Biologist III

SUBMITTED BY:

Robert E. Pegau
Regional Management/Research Coordinator

APPENDIX I

Skagway Area of Unit 1D Goat Harvest as Derived From Hunter Harvest Tickets.[1/]

Area	Year	Chronology of Harvest A	S	O	N	D	J	Unk	Tot	Sex Composition M	F	U	% Male	Number of Hunters	Hunter Success
East of Taiya	1972	3	3	0	0	0	2	0	8	5	2	1	71.4	10	50.0
(from Katzehin	1973	2	3	2	4	0	NA	0	11	6	5	0	54.6	13	53.8
Drainage to Taiya	1974	6	4	3	1	3	NA	0	17	7	10	0	41.2	22	68.2
River Drainage)	1975	NA	0	3	0	NA	NA	0	3	2	1	0	66.7	4	75.0
West of Taiya	1972	0	0	0	0	2	0	0	2	0	2	0	0.0	5	40.0
(Taiya River	1973	0	1	2	1	3	NA	0	7	5	1	1	83.3	5	100.0
Drainage to Pt.	1974	0	0	0	0	1	NA	0	1	0	1	0	0.0	2	50.0
Taiya)	1975	NA	0	0	0	NA	NA	0	0	0	0	0	-	1	0.0
Skagway	1972	0	0	0	0	0	0	0	0	0	0	0	-	5	NA
Unknown	1973	0	1	0	0	0	NA	0	1	1	0	0	100.0	2	NA
	1974	0	0	0	0	1	NA	0	1	1	0	0	100.0	2	NA
	1975	NA	0	0	0	NA	NA	0	0	0	0	0	-	5	NA
Total	1972	3	3	0	0	2	2	0	10	5	4	1	55.6	20	35.0
Skagway	1973	2	5	4	5	3	NA	0	19	12	6	1	66.7	20	65.8
	1974	6	4	3	1	5	NA	0	19	8	11	0	42.1	26	65.4
	1975	NA	0	3	0	NA	NA	0	3	2	1	0	66.7	10	30.0

[1/] Statewide return of harvest tickets: 1972-73.4%, 1973-71.7%, 1974-60.8% and 1975-72.6%.

Prepared by: David A. Johnson, Game Biologist III

APPENDIX II

Haines Area of Unit 1D Goat Harvest as Derived From Hunter Harvest Tickets.

Area	Year	Chronology of Harvest A	S	O	N	D	J	Unk	Tot	Sex Composition M	F	U	% Male	Number of Hunters	Hunter Success
East of Haines	1972	2	7	3	2	0	0	2	16	10	6	0	50.0	28	46.4
Highway (Taiya	1973	8	8	3	1	1	NA	2	23	13	9	1	56.5	32	59.3
Pt. to Pleasant	1974	8	3	3	1	1	NA	0	16	10	6	0	62.5	32	43.8
Camp)	1975	NA	2	4	2	NA	NA	1	9	6	3	0	66.7	20	45.0
West of Haines	1972	1	1	0	1	0	0	1	4	4	0	0	100.0	11	36.4
Highway (Pleasant	1973	9	6	0	0	8	NA	0	23	10	12	1	43.5	24	75.0
Camp to Kicking	1974	4	1	0	0	0	NA	0	5	4	1	0	80.0	10	50.0
Horse Drainage)	1975	4	2	0	0	0	NA	0	6	5	1	0	83.3	9	66.7
Haines	1972	2	1	0	1	2	2	4	12	5	5	2	41.7	19	52.6
Lynn Canal	1973	4	7	6	0	0	NA	1	18	9	9	0	50.0	17	76.5
(Kicking Horse	1974	8	0	0	0	4	NA	0	12	3	9	0	25.0	14	71.4
Drainage and	1975	8	0	2	5	0	NA	0	15	8	6	1	57.1	23	65.2
Katzehin Drainage Eldred Rock)															
Haines	1972	0	1	0	0	0	0	0	1	0	1	0	-	16	-
Unknown	1973	2	1	0	0	2	NA	0	5	1	4	0	-	16	-
	1974	0	0	1	0	0	NA	0	1	1	0	0	-	7	-
	1975	1	0	1	0	0	NA	0	2	1	1	0	-	15	-
Total	1972	5	10	3	4	2	2	7	33	19	12	2	61.3	74	36.5
Haines	1973	23	22	9	1	11	NA	3	69	33	34	2	49.3	89	61.8
	1974	20	4	4	1	5	NA	0	34	18	16	0	52.9	63	46.9
	1975	13	4	7	7	0	NA	1	32	20	11	1	64.5	67	47.8

Prepared by: David A. Johnson, Game Biologist III

APPENDIX III

Total Unit 1D Harvest as Derived From Hunter Harvest Tickets.

Area	Year	Chronology of Harvest A	S	O	N	D	J	Unk	Tot	M	F	U	% Male	Number of Hunters	Hunter Success
Skagway	1972	3	3	0	0	2	2	0	10	5	4	1	55.6	20	35.0
	1973	2	5	4	5	3	NA	0	19	12	6	1	66.7	20	65.8
	1974	6	4	3	1	5	NA	0	19	8	11	0	42.1	26	65.4
	1975	NA	0	3	0	NA	NA	0	3	2	1	0	66.7	10	30.0
Haines	1972	5	10	3	4	2	2	7	33	19	12	2	61.3	74	36.5
	1973	23	22	9	1	11	NA	3	69	33	34	2	49.3	89	61.8
	1974	20	4	4	1	5	NA	0	34	18	16	0	52.9	64	46.9
	1975	13	4	7	7	0	NA	1	32	20	11	1	64.5	67	47.8
1D Unknown	1972	0	0	0	0	0	0	0	0	-	-	-	-	8	-
	1973	0	0	0	0	0	NA	0	0	-	-	-	-	0	-
	1974	0	0	0	0	0	NA	0	0	-	-	-	-	0	-
	1975	0	0	0	0	0	NA	0	0	-	-	-	-	0	-
Total Unit 1D	1972	8	13	3	4	4	4	7	43	24	16	3	60.0	102	33.3
	1973	25	27	13	6	14	NA	3	88	45	40	3	52.9	109	62.4
	1974	26	8	7	2	10	NA	0	53	26	27	0	49.6	90	52.2
	1975	13	4	10	7	0	NA	1	35	22	12	1	64.7	77	45.5

Prepared by: David A. Johnson, Game Biologist III

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 4 - Admiralty, Baranof, Chichagof and Adjacent Islands

Seasons and Bag Limits

Aug. 1 - Dec. 31	One goat by permit only; conditions of permit shall be described by Commissioner's announcement.

Harvest and Hunting Pressure

Twenty-eight goats, 18 males and 10 females, were reported taken during the 1975 hunting season. All but one were taken by Alaskan residents, 25 of which were from Sitka. Six goats were taken in August, 13 in September and 9 in October. Extremely heavy snowfall and accumulations probably accounted for the lack of hunting during November and December.

Aircraft were used for transportation to hunting areas by 16 of the successful hunters, 11 used boats, and 1 hunter hiked in off the road system. Twenty-six of the goats were taken from that portion of Baranof Island north of the drainage into the head of Silver Bay. Successful hunters reported hunting an average of 2.5 days each.

Thirty-seven hunters, 33 from Sitka, reported hunting unsuccessfully in Unit 4 in 1975. Seven of these utilized aircraft, eight used boats and three walked from the road system. The remaining 19 did not report their means of transportation. Each unsuccessful hunter reported an average of 4.75 days spent afield hunting goats.

Composition and Productivity

No data were gathered during the reporting period.

Management Summary and Conclusions

The reported harvest of 28 goats from Unit 4 represents a slight increase over the average for previous years' harvests (Appendix I). Discussions with local hunters suggest that the reported harvest was considerably below the actual harvest. Review of previous harvest data and local information shows that virtually all the harvest has been taken from the northern portion of Baranof Island, roughly north of the Vodopad River, the major drainage into Silver Bay. Recent experience with goat populations in other parts of Alaska suggests that goats are more vulnerable to hunting pressure than was previously thought. In view of the concentrated nature of Unit 4 goat harvests, lack of current population data, and because of the responses goat populations have shown to hunting pressures elsewhere in Alaska, a conservative approach appeared appropriate. A staff proposal was adopted by the Alaska Board of Game which would limit the kill, through a permit hunt, to 25 or

fewer animals on northern Baranof Island, commencing with the 1976 hunting season. Prior to the 1976 hunting season, an intensive survey was conducted over northern Baranof Island. In that survey I observed numbers of goats far in excess of those suspected to be inhabiting the area. Those data, which will be reported fully in the 1976 S&I report, allayed any fears of possible over-exploitation, at least with current hunting practices. The conservative regulation is, therefore, unnecessary.

Recommendation

The regulation in effect for regulatory year 1976-77 is overly conservative. It is recommended that the permit requirement with a limited kill provision be abolished. A season of August 1 - December 31 with a bag limit of one goat is recommended.

PREPARED BY:

Loyal Johnson
Game Biologist III

SUBMITTED BY:

Robert Pegau
Regional Management/Research Coordinator

APPENDIX I

Mountain Goat Survey and Harvest Data - Game Management Unit 4.

	Survey Data						Harvest Data				
Date	Total Goats	Goats/ Hour	Number Kids	Number Adults	Kids/100 Adults	Data Source (Aircraft Type)	Total Kill	Males	Females	Total Number Hunters	Data Source
1954	263	--	41	222	18.5	USF&WS (------)					
9/1/1960	116	38.4	26	90	29.0	Merriam-ADF&G (------)			No data available		
9/11/1961	118	--	20	98	20.0	Merriam-ADF&G (------)					
9/3/1970*	154	--	15	139	10.8	Courtright-ADF&G (Cessna 180)	16			48	Hunter Interview
9/29/1970	121	--	13	108	12.0	Courtright-ADF&G (Helio Courier)	20			75	Hunter Interview
1971	--	--	--	--	--	--					
1972	--	--	--	--	--	--	9	5	5	50	Harvest Ticket
9/12-13/1973	253	36.1	50	203	24.6	Johnson-ADF&G (Piper PA-18)	24	11	13	45	Harvest Ticket
1974	--	--	--	--	--	--	10	7	3	39	Harvest Ticket
1975	--	--	--	--	--	--	28	18	10	65	Harvest Ticket
8/24-25/1976**	242	62.0	47	195	24.1	Johnson-ADF&G (Piper PA-18)					

*Incomplete coverage
**North of Vodopad River only

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 5 - Yakutat

Seasons and Bag Limits

Aug. 1 - Dec. 31 — One goat

Harvest and Hunting Pressure

Harvest ticket returns (72.5% response) indicated that 8 of 22 hunters (36.4%) were successful during the 1975-76 season. In 1974-75, 78.9 percent of 19 hunters were successful bagging at least one goat. The variation in hunter success was probably due to weather conditions and their influences on hunting effort and goat availability during various portions of the season, rather than a decrease in the goat population.

The composition of the harvest was 62.5 percent male and 37.5 percent female. Two goats were taken during August, three during October, one during November and two during December.

Composition and Productivity

Aerial surveys were conducted with a Cessna 180 from Beasley Creek to Awke Lake during October 1975. A total of 103 goats was observed (78 adults, 15 kids, 10 unidentified age) in 101 minutes of survey time (61.2 goats/hour). In the same area during October 1974, 77 goats were observed (57 adults, 20 kids) in 70 minutes of survey time (66 goats/hr). Although a larger number of goats were observed in 1975, the observations per hour indicate no significant population increase over 1974.

Management Summary and Recommendations

Hunter harvest is not a significant mortality factor at this time. No changes in season or bag limit are recommended.

PREPARED BY:

Roland Quimby
Game Biologist II

SUBMITTED BY:

Robert E. Pegau
Regional Management/Research Coordinator

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 6 - Prince William Sound

Season and Bag Limits

Aug. 1 - Jan. 31* 2 goats*

*The Board of Game recently reduced the season by one month (December) and the bag limit to one goat at the public's request. Judging by previous harvest data, the reductions will have minimal affect upon the goat harvest.

Harvest and Hunting Pressure

During the 1975-76 goat season in Unit 6, 164 goats were taken: 99 males (60.4%), 62 females (37.8%) and 3 (1.8%) of unknown sex. The 1975-76 harvest was the largest since the initiation of the goat harvest report program in 1972 (Appendix I), and possibly the largest harvest ever taken out of Unit 6.

The area from Valdez Arm to the Copper River produced the most goats (Appendix II) and was the most heavily hunted (Appendix III). Nearly 50 percent of the harvest (80 goats) and 43 percent of the hunting pressure (120 hunters) occurred within this area. The area east of the Copper River received about half as much hunting pressure (65 hunters) but accounted for 52 goats, roughly 32 percent of the total harvest. Thus, hunter success east of the Copper river was 80 percent compared to 67 percent for the Valdez Arm to Copper River area. The overall hunter success for the unit was 55 percent with 10 percent of the hunters taking 2 goats (Appendix IV).

Resident hunters took 125 goats or 76 percent of the harvest; by contrast, nonresidents took only 39 goats or 24 percent.

Chronology of the harvest (Appendix V) revealed that August and October were the 2 months when most goats were taken and that more than 70 percent of the harvest occurred during the first half of the season.

Composition and Productivity

Only one goat survey was flown in 1975. Conditions were too windy for counting, but 50 goats (14% kids) were observed on Don Miller Hill.

Management Summary and Conclusions

Analysis of harvest data for the past 3 years (Appendix VI) does not indicate any adverse affects of the current hunting regulations.

The 1975 harvest was roughly 20 percent greater than the previous 2 years. Improved hunter success, rather than increased hunting pressure, appears to have accounted for the greater harvest. Favorable weather during August and October may have enhanced hunter success.

The only alarming factor is that goat populations in nearby areas (Kenai and Yakutat) are depressed and considerable hunting pressure may be shifted from Units 7, 14 and 5 to Unit 6.

Recommendations

Retain the current season and bag limit.

PREPARED BY:

Julius Reynolds
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Unit 6

Mt. Goat Harvest by Year and Sex

	MALE		FEMALE		UNKNOWN		TOTAL	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
1972	49	63.6	27	35.1	1	1.3	77	100.0
1973	93	67.4	43	31.2	2	1.4	138	100.0
1974	88	70.4	35	28.0	2	1.6	125	100.0
1975	99	60.4	62	37.8	3	1.8	164	100.0

PREPARED BY: Julius Reynolds

APPENDIX II

Unit 6

1975-1976 Mt. Goat Harvest by Sub Unit & Sex

Sub Unit	AREA	Male	Female	Unknown	Total	Percent
6-01	East of Suckling Hills to Icy Bay	7	7	0	14	8.5
6-02	Bering Lake-Burg Lake Area	7	5	0	12	7.3
6-03	Suckling Hills	2	2	1	5	3.0
6-04	Ragged Mountain	10	11	0	21	12.8
6-05	Goat Mountain	--	--	-	--	---
6-06	Rude River to Copper River	26	6	0	32	19.5
6-07	Valdez Arm to Rude River	32	16	0	48	29.3
6-08	Valdez Area	6	5	0	11	6.7
6-09	Port Wells - Columbia Glacier	2	0	0	2	1.2
6-10	Unit 6 - Unknown	2	5	2	9	5.5
6-11	Whittier - Port Wells	2	0	0	2	1.2
6-12	Kings Bay - Puget Bay	3	4	0	7	4.3
6-13	Prince William Sound - General	0	1	0	1	.6
	UNIT 6	99	62	3	164	100.0
		(60.4)	(37.8)	(1.8)	(100.0)	

PREPARED BY: Julius Reynolds

APPENDIX III

Unit 6

1975-1976 Mt. Goat Hunting Pressure by Class of Hunter

Sub Unit	AREA	Successful Hunters*	Unsuccessful Hunters	Total Hunters*	Percent Success
6-01	East of Suckling to Icy Bay	14	4	18	77.8
6-02	Bering Lake - Burg Lake Area	12	0	12	100.0
6-03	Suckling Hills	5	1	6	83.3
6-04	Ragged Mountains	21	8	29	72.4
6-05	Goat Mountain	--	-	--	----
6-06	Rude River - Copper River	32	27	59	54.2
6-07	Valdez Arm - Rude River	48	13	61	78.7
6-08	Valdez Area	11	18	29	37.9
6-09	Port Wells - Columbia Glacier	2	0	2	100.0
6-10	Unit 6 - Unknown	9	21	30	30.0
6-11	Whittier - Port Wells	2	4	6	33.3
6-12	Kings Bay - Puget Bay	7	12	19	36.8
6-13	Prince William Sound - General	1	5	6	16.7
		164*	113	277*	

* A hunter that took 2 goats is recorded as 2 hunters. Actual total number of hunters was 251 of which 138 were successful.

PREPARED BY: Julius Reynolds

APPENDIX IV

Mt. Goat - Unit 6

Goat Hunter Distribution of Success

		Number	Percent
Hunters Killed	0	113	45.0
Hunters Killed	1	112	44.6
Hunters Killed	2	26	10.4
Total Hunters		251	100.0

55.0 % hunter success

PREPARED BY: Julius Reynolds

APPENDIX V

Mt. Goat - Unit 6

Chronology of Harvest 1975 - 1976

Year	Month	Number	Percent
1975	August	47	28.6
	September	22	13.4
	October	48	29.3
	November	14	8.5
	December	12	7.3
1976	January	6	3.6
	Unknown	15	9.1
Total		164	100.0

PREPARED BY: Julius Reynolds

APPENDIX VI

Mt. Goat - Unit 6

IBM Harvest Ticket Data

ITEM	1973-74	1974-75	1975-76
1. Total Harvest	138	125	164
2. % Males in Harvest	67.4	70.4	60.4
3. Total Hunters	280	238	251
4. % Hunter Success	41.1	46.2	55.0
5. % Hunters taking 2 goats	8.2	6.3	10.4
6. % Harvest: Aug., Sept., Oct.	68.2	72.8	71.4
7. Valdez Arm to Copper River			
% Harvest	42.8	39.2	48.8
% Hunters	38.6	34.8	43.3

PREPARED BY: Julius Reynolds

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 7 - Seward

Seasons and Bag Limits

Unit 7, that portion draining into saltwater south and east of Fourth of July Creek.	Aug. 10 - Dec. 31	Two goats
Unit 7, that portion west of a line along Sixmile Creek from its mouth near Hope to the Seward Highway; along the Seward Highway to Ptarmigan Creek; north of a straight line from Ptarmigan Creek bridge to Porcupine Island in Kenai Lake, then a straight line from Porcupine Island to the head of Upper Russian Lake; east of the Russian River from Upper Russian Lake to Kenai River and north of the Kenai River from the confluence of Russian River to the Unit 15 boundary.	No open season	
Remainder of Unit 7	Aug. 10 - Nov. 15	One goat

Harvest and Hunting Pressure

Two hundred thirty-six hunters reported a total harvest of 83 mountain goats during the 1975 season with a hunter success rate of 35 percent (Appendix I). The number of hunters afield declined 8 percent, while the success rate increased by 40 percent. Nonresident hunters accounted for 21 percent of the harvest.

The harvest was composed of 37 males, 44 females, and 2 animals of unknown sex. Females comprised 53 percent of the harvest compared to 39 percent in 1974 and an average of 42 percent for the previous 3 years. Successful hunters averaged 2.4 days hunting, while unsuccessful hunters averaged 3.3 days.

A comparison of the 1975 harvest by count areas to the number of goats observed on the most recent survey indicated that harvest levels were below the sustained yield level in all but 3 count areas (Appendix II). The harvest in count areas 5, 8 and 26 exceeded 10 percent of the total number of goats observed. Count area 5 sustained the highest level of harvest at 16 percent.

Composition and Productivity

Count areas 4, 5 and 6 were surveyed in 1975 (Appendix III). The numbers of goats observed in count areas 5 and 6 was down 63 and 19 percent, respectively, from 1974. Goats move freely in and out of count area 5 and the large decline was attributed primarily to movements. The number of goats observed in count area 4 in 1975 was unchanged from the number observed in the previous survey in 1972.

Management Summary and Conclusions

The shorter and later goat season in most of Unit 7 reduced the harvest to an acceptable level in most areas. However, hunting pressure on goats will probably increase in Unit 7. Further restrictive measures may be necessary to limit the harvest in future years.

Surveys conducted in three areas in 1975 indicated that numbers were down in two areas and unchanged in the third. In count area 5, where the number of goats observed was 63 percent lower than in 1974, the difference was attributed to goat movements rather than decline.

Recommendations

Goat hunting in Unit 7 should be placed on an unlimited permit basis. The Unit should be divided into hunt areas conforming to the present survey areas. A harvest quota should be established for each area and the season closed by field announcement when the quota has been taken.

PREPARED BY:

Paul A. LeRoux
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Mountain Goat - GMU 7 - Seward

Appendix I

Goat Harvest Unit 7 Total

Year	Males	%	Females	%	Unk.	%	Total	Hunters	Percent Success
1969[1]	52	67	24	31	2	2	78	-	-
1972[2]	68	54	57	45	2	2	127	305	44
1973	93	56	71	43	2	1	166	501	33
1974	36	56	25	39	3	5	64	256	25
1975	37	42	44	53	2	2	83	236	35

[1] Based upon multi-species questionnaire on harvest report packet; believed to be low total.

[2] Harvest tickets and reports for goats were initiated July 1, 1972. Harvest questionnaires were discontinued in 1971 and hunter response was so poor in 1970 data were not tabulated.

Prepared by: Paul A. LeRoux, Game Biologist III

Mountain Goat - GMU 7 - Seward

Appendix II

Reported harvest by year, data of latest surveys, number of adults and kids observed by count area.

Count Area	Reported Harvest 1973	1974	1975	Goats Observed Adults	Kids	Survey Date	1975 harvest as Percent of Numbers Observed
1	0	4	2	0	0	1974	-
2	7	2	2	22	5	1974	7
3	4	5	1	62	18	1973	1
4	2	7	1	47	12	1975	2
5	15	9	7	35	8	1975	16
6	12	2	2	19	2	1975	10
7	10	4	1	54	19	1973	1
8	64	10	21	115	41	1974	13
9	6	1	7	46	16	1972	11
10	6	5	3	34	8	1974	7
11	3	4	1	29	11	1968	2
12	1	0	0	44	13	1973	0
13[1]	3	0	1	0	0	1974	-[2]
14[1]	0	0	0	2	0	1974	0
15[1]	1	0	0	11	4	1974	0
17	2	9	5	72	30	1974	5
19	1	0	0	8	1	1968	0
20[1]	0	0	0	5	3	1974	0
26	1	0	2	12	4	1974	12
27	2	1	5	61	26	1969	6
28	2	0	0	23	3	1973	0
30	2	3	8	Unsurveyed		-	-
31	0	0	3	Unsurveyed		-	-
Unk.	12	1	10	-	-	-	-
Total	156	67	82	701	224		

[1] No open season
[2] This area has been surveyed annually since 1968 and no goats have been observed. Goats reported killed in this area are most likely misreported.

Prepared by: Paul LeRoux, Game Biologist III

Mountain Goat - GMU 7

Appendix III

Mountain Goat Numbers and Age Ratios, 1968-1975.

Year	Count Area 4		Count Area 5		Count Area 6		Count Area 8	
	Total Animals	Kids/ 100 Ad.	Total Animals	Kids/ 100 Ad.	Total Animals	Kids/ 100 Ad.	Total Animals	Kids/ 100 Ad.
1968	207	35	60	22	48	0*	170	38
1969	144	29	102	38	NC	NC	NC	NC
1970	155	27	105	23	NC	NC	217	32
1971	90	27	64	31	33	38	147	19
1972	86	18	80	38	36	28	150	25
1973	NC	NC	-	-	NC	NC	NC	NC
1974	NC	NC	117	39	26	30	156	36
1975	87	22	43	23	21	10	NC	NC

* 6 of 48 animals classified, all adults

Prepared By: Paul A. LeRoux, Game Biologist III

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 8 - Kodiak and Adjacent Islands.

Seasons and Bag Limits

Sept.1-Oct.30	One goat; up to 15 goats by permit only. Conditions of the permit to be described by Commissioner's announcement.

Harvest and Hunting Pressure

Eleven goats were reported killed during the 2-month hunting season (Appendix I). Six males and five females were taken by 36 hunters who were afield. Permit issuance increased from 58 in 1974 to 66 in 1975 (Appendix II). Hunter success dropped from 57 percent in 1974 to 28 percent in 1975. One of the eleven goats was taken by a hunter who failed to obtain a permit. Nine goats were taken by hunters using Hidden Basin for access. Hunters using Terror Lake took two goats.

On opening day, September 1, a total of 12 hunters were observed hunting within a 4-mile square area on Crown Mountain. These hunters took six goats before noon that day. Eight goats were taken in September and three were killed in October. Severe weather conditions restricted hunting considerably during much of the season. No wounding loss was reported.

Four of the females harvested were yearlings and one was 2 years old. Males included two 6-year-olds, two 4-year-olds, one 3-year-old and one yearling. The goats were aged by horn ring count.

Composition and Productivity

A survey to determine herd composition was conducted on August 18 and 19, 1975, along the south slope of Crown Mountain. Five separate sightings were made totaling 47 animals. A spotting scope was used to determine composition of each group. Up to a distance of 1.5 miles, kids could be easily identified. Six kids and 41 adults (includes subadults) were counted. The kid/adult ratio of 14.6 was the lowest recorded since surveys were begun in 1956 (Appendix III).

The apparent decline in productivity in this area may be a response to excessive harvest of adult females there. Eight of 10 females killed in 1974 were 3.5 years or older. Approximately 85 percent of the 42 goats taken in Unit 8 from 1973 through 1975 were reported killed on Crown Mountain in an area roughly 12-miles square.

Kid production may well have been higher in less accessible areas usually surveyed by air. Winter severity may also have been a factor in the low kid crop. Although no winter related mortality in goats was observed during the 1974-75 winter, moderate mortality of black-tailed deer was documented in Ugak Bay adjacent to goat wintering areas.

Management Summary and Recommendations

Goat hunters in Unit 8 exercise little selectivity and often take the first goat available. Most of the hunting pressure and subsequent harvest occurs in a relatively limited and easily accessible area between the Wild Creek and Hidden Basin Creek drainages in Ugak Bay. Excessive harvest is suspected to be limiting productivity in this area.

Hunting pressure should be directed into less easily accessible areas. The Crown Mountain area should be closed to hunting until productivity improves there.

PREPARED BY:

Roger B. Smith
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Unit 8 - Mountain Goat Harvest Statistics, 1975*

	No.	Percent
Permits Issued	66	100%
Permit Holders Reporting	64	97%
Reporting Permit Holders Who Hunted	36	56%
Successful Hunters	10	44%
Mean Days Hunted Per Successful Hunter	1.3	--
Males Harvested	5	50%
Females Harvested	5	50%
Total Harvest	10**	100%
Mean No. Goats Sighted By Hunters	6.6	--

* From hunter interviews

** One additional male was taken by a hunter without a permit

Prepared By: Roger B. Smith, Game Biologist III

APPENDIX II

UNIT 8 - MOUNTAIN GOAT HARVEST STATISTICS, 1968 - 1975

Date	Season Dates	Number Permits Issued	Number Hunters Afield	Percent Hunter Success	Number Goats Harvested	Conditions of the Hunt
1968	Sept. 1-30	10*	9	67%	6 (3 M, 3 F)	10 goats by permit; public drawing
1969	Sept. 1-30	10*	11	55%	6 (5 M, 1 F)	10 goats by permit; public drawing
1970	Sept. 1-30	15	8	63%	5 (4 F, 1 UKN)	15 goats by permit; public drawing
1971	Sept. 1 - Oct. 30	25	8	50%	4 (1 M, 3 F)	15 goats by permit; public drawing
1972	Sept. 1 - Oct. 30	40	21	48%	10 (3 M, 4 F, 3 UKN)	15 goats by permit; To be closed by field announcemen
1973	Sept. 1 - Oct. 30	32	26	58%	15 (7 M, 8 F)	15 goats by permit; To be closed by field announcemen
1974	Sept. 1 - Oct. 30	58	28	57%	16 (5 M, 10 F, 1 UKN)	15 goats by permit; To be closed by field announcemen
1975	Sept. 1- Oct. 30	64	36	28%	10 (5 M, 5 F)**	15 goats by permit; To be closed by field announcement

* 5 additional alternate permits issued
** One additional male killed by hunter without permit

Prepared By: Roger B. Smith, Game Biologist III

APPENDIX III

Unit 8 - Mountain Goat Sex and Age Composition Counts, 1952-1975

Date	Adult (may include sub-adults)	Kid	Total	Kid/100 Adult	% Kids in Total Count	Observer	Flight Time (Hrs)
1952-1953	7 males and 11 females, total 18 animals transplanted to Crown Mountain.						
1954			Zero Data				
1955			Zero Data				
1956	-	-	5			Unsigned, undated report.	
1957	2	2	4	100.0	50.0	"	
1958	4	2	6	50.0	33.3	"	
9-19-1959	5	2	7	40.0	28.6	Will Troyer	--
1960			Zero Data				
1961			Zero Data				
1962	14	8	22	57.1	36.3	Will Troyer	--
1963	18	8	26	44.4	30.7	Will Troyer	--
1964	13	13	26	100.0	50.0	Will Troyer	--
1965	22	13	35	59.0	37.1	Will Troyer	--
9-20-1966	38	16	54	42.1	29.6	B. Ballenger	--
9-05-1967	39	19	58	48.8	32.7	B. Ballenger	--
12-20-1968	57	14	71	24.5	19.7	B. Ballenger	2.2
8-05-1969	73	15	88	20.5	17.0	B. Ballenger	2.4
8-22-1970	61	20	81*	32.7	24.7	B. Ballenger	--
1971			Zero Data*				
7-27-1972	64	27	91	42.1	29.7	B. Ballenger	2.3
9-18-1973	88	24	112	27.3	21.4	R. B. Smith	1.9
8-18/19-1974	37	12	49	32.4	24.5	R. B. Smith	5.3
8-18/19-1975	41	6	47	14.6	12.8	R. B. Smith	Foot Survey

*"Much snow cover on high elevations, goats hard to spot." - B. Ballenger

Prepared By: Roger B. Smith, Game Biologist III

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 11 - South side of Wrangell Mountains and eastern portion of Chugach Mountains.

Seasons and Bag Limits

Sept. 1 - Dec. 31 — One goat

Harvest and Hunting Pressure

Seventeen mountain goats (11 males - 65 percent, 6 females - 35 percent) were reported taken during the 1975 season by 49 hunters. Harvest report data for Unit 11 from 1972 through 1975 are compared in Appendices I and II. The goat harvest increased during 1973 and 1974 when compared to 1972, but the 1975 harvest declined by 61 percent from the seasonal average of the 3 previous years.

With one exception (1974 - 3.7 days, Appendix I), the average number of days hunted to harvest a goat has steadily increased since 1972. The average number of days spent in the field by unsuccessful hunters has increased each year, reaching an average 7.3 days during 1975 (Appendix I). Also, in 1973, 1974 and 1975, a greater percentage of the hunters harvested goats later in the season compared to 1972 (Appendix II).

A comparison of the harvest by subunits (not shown) suggests the distribution of the goat harvest correlated more with areas receiving heavy sheep hunting pressure than with areas containing more abundant goat populations. It could be that goats serve as an alternate game species for many sheep hunters.

Composition and Productivity

MacColl Ridge was selected as a sheep and goat trend count area. Twenty-eight goats were counted on MacColl Ridge during 1970, while 43 goats (33 adults, 10 kids) were counted there during 1973. On April 19, 1974, 44 goats were counted there with a composition of 41 adults and 3 kids. The ratio of kids/100 adults was 7.3, with the percentage of kids in the total population being 6.8 percent. Donohoe Peak was flown during the 1975 November moose composition counts; 11 adults and 3 kids were seen.

Management Summary and Conclusions

The harvest of 17 goats was light considering the large areas of goat range in Unit 11. However, certain areas, such as McCarthy Creek to McCarthy Glacier and MacColl Ridge, may be supporting a substantial

amount of hunting pressure. Two guides who have hunted this area were interviewed, and they expressed concern about excessive goat harvesting. Surveys during 1970 and 1973 indicated that the herd could support the harvest, however, recent surveys have not been conducted to substantiate conclusions concerning population trends.

An inherent problem with harvest data on goats is the unrecorded kill by cripple-loss and irretrievable animals which may constitute a significant addition to known harvest mortality. The higher percentage of males in the harvest for the past 3 years may indicate that hunters are able to select males from a lightly hunted population.

The 61 percent decline in the 1975 harvest compared to the average harvest from 1972 through 1974 was primarily attributed to the delay in the opening of the season and the reduced bag limit.

Recommendations

No change in season or bag limit is recommended. Aerial surveys are recommended for the MacColl Ridge as a trend area and for McCarthy Creek.

PREPARED BY:

Ted Spraker
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

A Comparison of Mountain Goat Harvest Data for Unit 11 from 1972 through 1975.

	1972	1973	1974	1975
Total Hunters:	64	94	105	49
Number Successful Hunters (%):	32(50%)	55(58%)	44(42%)	17(35%)
Mean Number Days Hunted,				
Successful (sample size):	3.2(32)	4.5(49)	3.7(41)	6.5(15)
Unsuccessful (sample size):	5.2(32)	5.8(38)	6.7(47)	7.3(6)
Number Goats Killed:	37	59	52	17
Male Goats Harvested (%):*	13(35%)	36(61%)	27(52%)	11(65%)
No. Hunters Killing 2 Goats				
(% of successful):**	5(16%)	4(7%)	8(18%)	0
Unknown Sex (%):	0	0	1(2%)	0

* Percentage male goats = (MM/MM+FF) x 100.
** Bag limit reduced to one during 1975 season.

Prepared by: Ted Spraker, Game Biologist II.

APPENDIX II

A comparison of the chronologies of the Unit 11 mountain goat harvests from 1972 through 1975 when specified on harvest report.

Period	1972 Harvest No.	1972 Harvest Percent	1973 Harvest No.	1973 Harvest Percent
Aug. 10-20	13	35%	7	12%
Aug. 21-31	10	27%	9	15%
Sept. 1-10	8	22%	16	27%
Sept. 11-20	4	11%	11	19%
Sept. 21-30	0	0%	9	15%
After Sept. 30	2	5%	3	5%
Date Unknown	0	0%	4	7%
Total	37		59	

Period*	1974 Harvest No.	1974 Harvest Percent	1975 Harvest** No.	1975 Harvest** Percent
Aug. 8-21	12	24%	0	0%
Aug. 22-Sept. 4	3	6%	1	6%
Sept. 5-18	13	25%	5	29%
Sept. 19-Oct. 2	9	18%	5	29%
After Oct. 2	14	27%	4	24%
Date Unknown	0	0%	2	12%
Total	51		17	

* Recording periods were changed to follow the recording system of IBM printout.

** Opening date was changed to September 1.

PREPARED BY: Ted Spraker, Game Biologist II

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 13 - Upper Nelchina, Upper Susitna, and western half upper Copper River Basin

Seasons and Bag Limits

Aug. 10 - Dec. 31 — One goat

Harvest and Hunting Pressure

Twenty-four mountain goats (14 males - 58 percent, 10 females - 42 percent) were taken by 67 reporting hunters during the 1975 season in Unit 13. Harvest report data were available for mountain goats from 1972 through 1975 (Appendix I). The average number of days spent in the field by successful hunters was 3.9 days (sample of 24). Data collected from 43 unsuccessful returns indicated that unsuccessful hunters spent an average of 6.4 days pursuing mountain goats (Appendix I).

Chronology of harvest data indicates two peak periods of harvest (Appendix II). The first peak, Aug. 15-21, correlates with the early part of the sheep season whereas the second peak from Sept. 5-11, represents part of the most popular period for hunting in the fall (Sept. 1-14).

The goat harvest appeared low and well dispersed over known goat habitat (Appendix III). Low hunter success was expected because past inventory surveys have shown that goats were dispersed and not abundant in the Chugach Mountains and scarce in the Talkeetna Mountains. The slightly higher percentage of males (58 percent - males, 42 percent - females) may be indicative of hunter selection and lightly hunted goat populations in which males are available to hunters.

Composition and Productivity

Recent goat composition counts have not been made in Unit 13. Past inventory counts are summarized below.

Area	Date of Survey	Adults	Kid	Total
Tazlina to Klutina Lake:	Aug. 1959	14	1	15
Coal Creek to Nelchina Glacier:	July-Aug. 1968	--	-	23
Tazlina to Klutina Lakes:	Aug. 1969	--	-	71
Nelchina Glacier to Chitina:	Aug. 1969	100	10	110

These data illustrate the low goat density in the Chuguch Mountains.

Management Summary and Conclusions

Harvest data for 1972 through 1975 indicated that mountain goats in Unit 13 were lightly hunted. The harvest appeared low and well dispersed. Although goat populations were greater in the Chugach than in the Talkeetna Mountains and served as an alternate game species to sheep hunters, the relatively low densities of both species found cohabiting the same areas probably resulted in low harvests of goats by sheep hunters. It is anticipated that goat populations will not be greatly influenced by continued hunting at the present level.

Recommendations

No change in season or bag limit is recommended. An aerial survey is recommended to monitor goat population trends in the Chugach Mountains.

PREPARED BY:

Ted Spraker
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

A Comparison of Mountain Goat Harvest Data in Unit 13 from 1972 through 1975.

Hunting Pressure and Goat Harvest

	1972	1973
Total Hunters:	43	34
Successful Hunters (%):	16(37%)	12(35%)
Mean Days Hunted-Successful (sample size):	2.7(Unk.)	4.4(11)
Mean Days Hunted-Unsuccessful (sample size):	3.4(unk.)	4.5(11)
Hunters Killing 1 Goat (%):	14(88%)	12(100%)
Hunters Killing 2 Goats (%):*	2(12%)	0
Number of Goats Killed	18	12
Number (%) Males Killed:	13(72%)	9(75%)

	1974	1975
Total Hunters:	62	67
Successful Hunters (%):	15(26%)	24(36%)
Mean Days Hunted-Successful (sample size):	4.4(14)	3.9(24)
Mean Days Hunted-Unsuccessful (sample size):	4.8(40	6.4(43)
Hunters Killing 1 goat (%):	15(94%)	24(100%)
Hunters Killing 2 Goats (%):	1(6%)	0(0%)
Number of Goats Killed	16	24
Number (%) Males Killed:	9(56%)	14(58%)

* The 1974 season was the last year for a 2 goat bag limit.

PREPARED BY: Ted Spraker, Game Biologist II

APPENDIX II

A Comparison of Mountain-Goat Harvest Data in Unit 13 from 1972 through 1975.

Chronology of the Harvest When Specified

Period	1974 Harvest				1973 Harvest*	
	Number		Percent		Number	Percent
Aug. 10-20	8	44%	2	18%		
Aug. 21-31	2	11%	0	--		
Sept. 1-10	1	6%	3	27%		
Sept. 11-20	3	17%	1	9%		
Sept. 21-30	1	6%	0	--		
After Sept. 30	0	--	5	45%		
Unk. Date	3	17%	0	--		
Total	18		11			

Period	1974 Harvest				1975 Harvest	
	Number		Percent		Number	Percent
Aug. 10-14	0	--	0	--		
Aug. 15-21	1	6%	5	21%		
Aug. 22-28	5	31%	2	8%		
Aug. 29-Sept. 4	5	31%	1	4%		
Sept. 5-11	0	--	6	25%		
Sept. 12-18	3	19%	2	8%		
Sept. 19-25	0	--	2	8%		
Sept. 25-30	0	--	2	8%		
After Sept. 30	2	12%	1	4%		
Unk. Date	0	--	3	12%		
Total	16		24			

* One goat (8%) was reported taken before season on Aug. 9.

PREPARED BY: Ted Spraker, Game Biologist II

APPENDIX III

Harvest Location (When Specified) of Mountain Goats in Unit 13

	1972 Harvest		1973 Harvest	
	Number	Percent	Number	Percent
Chugach Mountains,				
Tiekel River-Kimball Pass:	2	11%	0	0%
Klutina-Tonsina:	2	11%	0	0%
Tazlina-Nelchina:	6	33%	4	33%
S. Fork Matanuska-Coal Cr.	6	33%	1	8%
Talkeetna Mountains:	0	0%	0	0%
Chulitna Hills:	0	0%	1	8%
Unknown Kill Location:	2	11%	6	50%
Totals	18		12	
Chugach Mountains,				
Tiekel River-Kimball Pass:	1	6%	0	0%
Klutina-Tonsina:	8	50%	8	33%
Tazlina-Nelchina:	0	0%	2	8%
S. Fork Matanuska-Coal Cr.	5	31%	8	33%
Talkeetna Mountains:	0	0%	0	0%
Chulitna Hills:	0	0%	0	0%
Unknown Kill Location:	2	12%	6	25%
Totals	16		24	

PREPARED BY: Ted Spraker, Game Biologist II

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 14 - Palmer and Anchorage

Seasons and Bag Limits

Subunit 14A north of the Matanuska River	No open season	
Remainder of Subunit 14A	Sept. 21-Nov. 15	One goat
Subunit 14B	Aug. 10-Nov. 15	
Subunit 14C within Chugach State Park	No open season	
Remainder of Subunit 14C	Day after Labor Day November 15	One goat

Harvest and Hunting Pressure

During 1975 only two goats were harvested within Game Management Unit 14 (Appendix I). Both goats were males. In 1974, 3 goats were taken. Season lengths remained the same as in 1974 except that the portion of Subunit 14A north of the Matanuska River was closed to goat hunting. Numbers of hunters declined to 23 in 1975 compared to 36 in 1974 and 46 and 50 in 1973 and 1972, respectively. The success ratio was 8.7 percent in 1975 compared to 8.3 percent in 1974. Successful hunters spent an average of 4 days afield while unsuccessful hunters averaged 2.5 days.

Composition and Productivity

No aerial surveys were flown in 14A and 14B during 1975. During surveys in 1974 a total of 28 goats were observed in Subunit 14B and 14A north of the Matanuska River. The last survey in 14A south of the Matanuska River was flown in June 1973, and 30 goats were observed. A limited survey in the Lake George area of 14C was flown in August of 1975 and a total of 52 goats were seen, 8 of which were kids. A minimum of 150 goats are believed to occupy the Lake George-Hunter Creek areas. Extensive surveys are scheduled for all subunits in the summer of 1976.

Management Summary and Conclusions

Hunter pressure has been declining since 1972 when such information first became available. The decreasing pressure is primarily a function of shortened seasons and closing all of Chugach State Park to goat

hunting beginning in fall 1973. Consequently, areas presently open to goat hunting are either very inaccessible and/or contain few goats. Although goats are very abundant in the Lake George region of 14C, it is doubtful that the harvest will ever exceed 4 or 5 animals unless access is improved.

Recommendations

Season lengths in 14A and 14B should remain the same. The season in 14C should open August 20 to allow hunters greater opportunity to harvest more of the goats in the inaccessible Lake George area.

PREPARED BY:

David B. Harkness
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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Goat Hunter Success in Alaska's Game Management Unit 14, 1972-75.

	1972	1973	1974	1975
Total Hunters:	50	47	36	23
Successful Hunters	6-12%	11-23%	3-8%	2-9%
Unsuccessful Hunters	44-88%	36-77%	33-92%	21-91%
Mean Days Hunted*:				
Successful Hunters	1.7(6)	2.6(11)	2.5(2)**	4.0(2)
Unsuccessful Hunters	4.2(41)	3.6(29)	3.7(28)**	2.5(7)

* Sample size in parentheses.

Appendix II. Mountain Goat Harvest by Subunit and Sex in Alaska's Game Management Unit 14, 1972-1975.

Subunit	Year	Male (%)	Female (%)	Total
14(A)	1972	0 (0.0%)	1 (100.0%)	1
	1973	2 (40.0%)	3 (60.0%)	5
	1974	1 (50.0%)	1 (50.0%)	2
	1975	1 (100.0%)	0 (0.0%)	1
14(B)	1972	1 (100.0%)	0 (0.0%)	1
	1973	0 (0.0%)	0 (0.0%)	0
	1974	0 (0.0%)	0 (0.0%)	0
	1975	0 (0.0%)	0 (0.0%)	0
14(C)	1972	3 (75.0%)	1 (25.0%)	4
	1973	2 (33.3%)	4 (66.7%)	6
	1974	1 (100.0%)	0 (0.0%)	1
	1975	1 (100.0%)	0 (0.0%)	1
Total Unit 14	1972	4 (66.7%)	2 (33.3%)	6
	1973	4 (36.4%)	7 (63.6%)	11
	1974	2 (66.7%)	1 (33.3%)	3
	1975	2 (100.0%)	0 (0.0%)	2

PREPARED BY: David B. Harkness, Game Biologist II

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 15 - Western Kenai Peninsula

Seasons and Bag Limits

Aug. 10 - Dec. 31 — One goat

Harvest and Hunting Pressure

Harvest report returns for the 1975-76 mountain goat season indicate that 198 hunters bagged 85 goats, 56 percent males and 44 percent females. Harvest data for the past four seasons and the 1969 season are summarized in Appendices I and II. The extent of crippling and irretrievable kills was unknown. Hunter effort, hunting success and total harvest were lower in 1975 than in 1974. In 1975 successful hunters expended an average of 3.9 hunting days whereas unsuccessful hunters expended only 1.5 days.

Composition and Productivity

A summary of all Unit 15 goat census data is presented in Appendix III. During 1975 six count areas were surveyed. Count areas 21 and 22 continue to show low populations. Goat populations in count areas 23C and 29 declined 79 and 51 percent, respectively, from 1972 counts. Count area 23B was the only area that exhibited a slight increase in goat numbers, but this may have been the result of goat movements from summer to winter range rather than an actual increase. Count area 32 had not been previously surveyed, but the low count in relation to the size of the area is of concern. Unit 15 goat populations have apparently declined similar to the coastal populations of Southeastern Alaska (Ballard 1975, Wood 1975, and Zimmerman 1975).

Management Summary and Conclusions

Goat populations in Unit 15 appear to have declined since 1968-72. Reasons for the decline are probably related to severe winter weather. Areas which receive an insignificant amount of hunting pressure, such as Unit 5, have also exhibited declines (Ballard 1976).

Average, annual harvests in relation to population levels from 1968 through 1974 may have been within sustained yield levels. However, current harvest levels may be in excess of current annual recruitment. The 1975 harvest of 85, even though a decrease from previous years, represents 17 percent of observed goats on the most recently conducted

surveys. When unit-wide harvests are considered within sustained yield levels, localized overharvests may have occurred in areas with relatively easy hunter access. Areas which have repeatedly represented a large portion of the unit harvest are Goat and Iceberg Lakes in Count Area 21, Green and Tustumena Lakes in Count Area 22, Fox River in Count Area 23B, Bradley Lake in Count Area 23C, and the Seldovia to Rocky Bay road in Count Area 32.

Game Department personnel in Washington State noticed that goat harvests continually concentrated in areas where access was relatively easy. The concentrated pressure usually resulted in localized overharvest and reductions in local goat populations (E. Read Brown, pers. comm). This same tendency was identified as a major factor leading to the decline of some populations in Montana (Quaedvlieg 1973 cited in Chadwick 1973). A survey of goat management systems indicates that most, if not all, employ permits limited to relatively small management areas to reduce excess harvests of localized populations.

Few studies have been conducted to determine the relationships between sport hunting and goat population dynamics. Preliminary results of a 6-year study in Idaho indicate that annual harvests averaging 16 percent of the population resulted in a 49 percent decrease in the population (Lonn Kuck, pers. comm.). Until further research is conducted, annual harvest levels should be conservative and possibly should not exceed 10 percent of the post-kidding population.

Recommendations

Management-oriented research should be initiated to determine the following: accuracy and reliability of various census techniques, kid mortality both with and without the nanny, magnitude of crippling and irretrievable kills, and desirable levels of annual harvest.

Goat hunting on the Kenai Peninsula should be on a permit basis. Unlimited numbers of permits can be issued, but harvest quotas not to exceed 10 percent of the post-kidding population should be established on a count area basis. When harvest quotas are attained, individual count areas should be closed by field announcement. This system will reduce local overharvests and more evenly distribute hunting effort. Count areas 21, 22, and 25 should be closed to goat hunting until populations increase.

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SUBMITTED BY:

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Mountain Goat - GMU 15 - Western Kenai Peninsula

Appendix I

Reported Goat Harvests and Survey Data Per Count Area for GMU 15, 1972 through 1975.

Count Area	Survey Data	No. of Adults	No. of Kids	Total Count	Harvest by Year 72	73	74	75	1975-percent Harvest of Total obs. pop.	1975-percent Harvest of obs. Kid population
16	1974	20	9	29	2	0	0	0	0	0
21	1975	1	1	2	2	11	1	6	300	600
22	1975	1	0	1	10	6	9	8	800	-
23[1/]	1975	87	32	119	14	1	17	24	20	75
24	1968	134	54	188	21	16	22	11	6	20
25	No Surveys				0	0	0	0	0	0
29	1975	83	12	95	28	16	17	4	4	33
32	1975	54	19	73	9	20	23	25	34	132
Unspecified	N.A.	-	-	N.A.	10	8	10	7	N.A.	N.A.
Totals or mean -		380	127	507	96	78	99	85	17	67

1/ Count includes 1972 data for count area 23A.

PREPARED BY: Warren Ballard, Game Biologist II.

MOUNTAIN GOAT - GMU 15 - WESTERN KENAI PENINSULA

APPENDIX II

Goat harvest and hunting pressure by Subunit for 1969 and 1972 through 1975.

Year	15(A)			15(B)			15(C)			Unit 15 Total			Number of Hunters	Percent Success
	MM	FF	All	MM	FF	All	MM	FF	All[3]	MM	FF	All[3]		
1969	*	*	*	*	*	*	*	*	*	31	38	69	*	*
1972	0	0	0	11	5	16	41	38	79	52	44	96	160[1]	50
1973	0	0	0	10	7	17	32	23	56	46	31	78	144[2]	46
1974	0	0	0	3	5	9	47	35	83	56	41	99	222	44
1975	0	0	0	9	7	16	36	30	66	48	37	85	198	43

* Data not available.
1/ 16 hunters reported taking two goats each.
2/ 12 hunters reported taking two goats each.
3/ Includes animals of unknown sex.

PREPARED BY: Warren Ballard, Game Biologist II

APPENDIX III. Summary of goat surveys conducted in GMU 15 by individual count area.

Count Area	Survey Date	No. Adults	No. Kids	Total Number	Kids/100 Adults	Survey Time (Hrs.)	Goats/ Hour	Observer
16	8/17/68	14	4	18	28.6	1.0	18	Perkins
	6/28/73	24	6	30	25.0	1.4	21	LeRoux
	7/24/74	20	9	29	45.0	1.0	29	LeRoux
21	7/16/68	0	0	0	0	---	--	Nichols
	7/10/75	1	1	2	100.0	1.3	2	LeRoux
22	6/20/68	7	4	11	57.1	---	--	Nichols
	8/8/72	12	2	14	16.7	---	--	LeRoux
	7/9-10/75	1	0	1	0.0	1.3	1	LeRoux
23A	7/17/68	18	7	25	38.9	---	--	Nichols-Smith
	7/27/72	33	14	47	42.4	1.9	24	Davis
23B	7/18/68	24	14	38	58.3	---	--	Nichols-Smith
	7/26/72	42	16	58	38.1	3.9	15	Davis
	11/4/75	46	14	60	30.4	1.1	54	Ballard
23C	7/18/68	45	18	63	40.0	---	--	Nichols-Smith
	7/28/72	42	14	56	33.3	1.2	47	Davis
	11/4/75	8	4	12	50.0	1.5	8	Ballard
24	7/18/68	134	54	188	40.3	---	--	Nichols
25	No Surveys Conducted							
29	7/8/72	146	47	193	32.2	5.5	35	Davis
	10/7/75	83	12	95	14.4	4.3	22	Ballard
32	10/9/75	54	19	73	35.2	3.4	21	Ballard

PREPARED BY: Warren Ballard, Game Biologist II.

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 7 - Seward - Kenai Mountains

Seasons and Bag Limits

Unit 7, that portion bounded on the northwest by the Sterling Highway, on the northeast and east by the Anchorage-Seward Highway, on the south and southwest by Kenai Lake.	To be announced	Closed except that one sheep with 1/2 curl horn or less, or one ram with full curl (4/4 curl) horn or larger may be taken by permit only. Dates and conditions of the hunt to be described by Commissioner's announcement.
Remainder of Unit 7	Aug.10-Sept.20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

The harvest of rams in GMU 7 since 1962 (obtained from harvest report returns) has been as follows:

1962 - 15*	1969 - 42
1963 - 25	1970 - 25
1964 - 8	1971 - 9
1965 - 22	1972 - 18
1966 - 18	1973 - 26
1967 - 21	1974 - 18**
1968 - 52	1975 - 12

* 1962 was the first year of the harvest ticket regulation. Coverage is known to be incomplete.
** Does not include rams taken on the special Crescent Mountain hunt.

Eighty-five hunters reported hunting sheep in Unit 7 during the general hunting season. Twelve resident hunters (12.9 percent) were successful. Both the number of hunters afield and the harvest declined by 33.1 and 33.3 percent, respectively, while hunter success remained the same from 1974 to 1975.

Average horn length for 10 of the harvested rams was 31.6 inches.

The special Crescent Lake Mountains hunt was not held in 1975.

Composition and Productivity

One hundred and fifty-three sheep were observed in the Crescent Lake Mountains count area during 1975 (Appendix II). This represents a decline of of 38.8 percent from 1974. The low count resulted in cancellation of the special Crescent Lake hunt. Later surveys revealed that many of the sheep which normally occupy the Crescent Lake area had simply moved to another count area, thus accounting for the low counts.

Sheep numbers in the Grant Lake Mountains count area have remained fairly stable from 1968 through 1975 except for the low 1974 count. During 1975 a total of 48 sheep was observed, which was comparable to counts made from 1968 through 1972.

Management Summary and Conclusions

Both hunting effort and total harvest decreased by 33 percent from 1974 to 1975. Percent hunter success, however, remained the same.

Survey information indicated that sheep populations in Unit 7 increased from the early 1960's through 1968. Most sheep populations have remained essentially stable since 1968.

Recommendations

The Crescent Mountain experimental harvest study should be continued. No changes in regulations are warranted at this time.

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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Harvest and Hunter Success, Unit 7 - Kenai Mountains

Year	Mountain Range	Number Successful	Percent Successful	Number Unsuccessful	Percent Unsuccessful	Total Sample	Ave. Horn Length (N)
1969	Kenai	42	15.7	226	84.3	268	32.7 (36)
	Chugach	0	0	18	100.0	18	
1970	Kenai	23	13.8	143	86.1	166	31.1 (20)
	Chugach	2	15.4	11	84.6	13	
1971	Kenai	9	7.8	107	92.2	116	31.2 (6)
	Chugach	0	0	13	100.0	13	
1972	Kenai	18	17.3	86	82.6	104	31.2
	Chugach	0	0	9	100.0	9	
1973	Kenai	25	16.1	130	83.9	155	30.6
	Chugach	1	5.3	18	94.7	19	36.0
1974	Kenai	18	14.1	110	85.9	128	32.2
	Chugach	0	0.0	11	100.0	11	
1975	Kenai	12	14.1	73	85.9	85	
	Chugach	0	0.0	8	100.0	8	31.6(10)

Prepared by: Warren Ballard, Game Biologist II.

APPENDIX II

Sheep trend count data, portions of Unit 7 - Kenai Mountains

COOPER MOUNTAIN

Date	Total Adults	Lambs	Total Sheep
7/56	39	11	50
6/63	47	10	57
5/68	97	20	117
9/72	70	12	82
7/73	--	--	87
6/74	65	11	76

CRESCENT LAKE MOUNTAINS

Date	Total Adults	Lambs	Total Sheep
6/56	101	35	136
6/68	228	68	296
7/70	243	44	287
6/71	208	20	228
6/72	194	30	224
6/73	218	50	268
6/74	221	29	250
6/75	130	23	153

GRANT LAKE MOUNTAINS

Date	Total Adults	Lambs	Total Sheep
8/68	30	13	43
8/69	41	16	57
8/70	48	14	62
9/71	43	8	51
7/72	49	4	53
/73	No Survey Conducted		
6/74	19	2	21
8/75	--	--	48

Prepared by: Warren Ballard, Game Biologist II.

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 9 - Alaska Peninsula

Seasons and Bag Limits

August 10-September 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

Harvest reports by 28 hunters (14 residents, 13 nonresidents and one unspecified) indicated 13 rams were taken during the 1975 season. Of these successful hunters, three were residents, nine nonresidents and one unspecified. This is the highest known ram harvest since the harvest report program was initiated in 1962 (Appendix I).

Composition and Productivity

No work was accomplished during this reporting period.

Management Summary and Conclusions

The sheep range in this unit consists of the southern tip of the Alaska Range, primarily north and east of Lake Clark. Occasional reports are received of sheep in the mountains along the east shore of Lake Clark south to Lake Iliamna. Reports of sheep in this area may be the results of seasonal movements and it is doubtful that sheep permanently occupy the area.

Recommendations

No changes in season or bag limit are recommended at this time.

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SUBMITTED BY:

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Regional Management Coordinator

APPENDIX I

Reported Dall Sheep Ram Harvest for GMU 9, 1962 through 1975.

Year	Harvest	Year	Harvest
1962	0	1969	7
1963	1	1970	2
1964	2	1971	2
1965	0	1972	3
1966	0	1973	3
1967	6	1974	8
1968	10	1975	13

Prepared By: Nick Steen, Game Biologist, King Salmon, Alaska.

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 11 - South and west portions of the Wrangell Mountains and the northern portion of the eastern Chugach Range.

Seasons and Bag Limits

August 10 - September 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

Ram harvests from Unit 11, statewide ram harvests, and the percentage of statewide harvests from Unit 11 are given in Appendix I. Ram harvests from Unit 11 have fluctuated parallel to other areas in the state, with roughly 16 percent of the statewide harvest coming from Unit 11. During 1975, however, the harvest from Unit 11 fell to 12.5 percent of the statewide total.

Comparisons of hunter success between statewide hunters and hunters within the Wrangell-Mentasta-Nutzotin (WMN) Mountains during 1974 and 1975 are made in Appendix II. Hunter success decreased among both Wrangell Mountain and statewide hunters but decreased to a greater extent among Wrangell Mountain hunters. The decreased hunter success affected both resident and guided nonresident hunters. Although only 29 percent of the hunters were nonresidents in the WMN Mountains, they killed 48 percent of the sheep. The success ratio of guided nonresidents was more than twice that of resident hunters.

A comparison of transportation means used by successful hunters showed that aircraft was the most popular transportation means and was used by 78 percent of the successful hunters. Next in popularity were horses (used by 12% of successful hunters), highway vehicles (7%) and off-road vehicles (3%).

Harvest and hunting pressure data for these two mountain ranges within Unit 11 are illustrated in Appendix III. Sample sizes for the eastern Chugach Range are small, accounting for much of the fluctuation seen in the annual harvest data. Harvests, hunting pressure, and percentage of resident hunters were generally low in the eastern Chugach Mountains. The mean horn lengths of harvested rams have been surprisingly low considering the low harvests from that area. Ram harvests and numbers of hunters from the Wrangell Mountains have generally increased from 1967 through 1973.

The reduction in the 1974 harvest was apparently due to an unexplained reduction in hunting pressure, possibly associated with economic uncertainty throughout the country. The reduced harvest during 1975

in the Chitistone Canyon-Chitina Glacier area (Appendix IV) was mainly atributed to reduced numbers of hunters for one high volume guide. A guide operating in the Copper Glacier vicinity attributed the reduced harvest there to reduced numbers of hunters, a week of steady rain at the start of the season, and mid-August snowfall ending the season early. None of four major guides interviewed thought that the sheep population was decreasing, although all of them said that trophy class rams were increasingly scarce. The take from unspecified locations was allocated to the Chitistone Canyon-Chitina Glacier vicinity and to the remainder of the Unit 11 portion of the Wrangell Mountains proportionate to the known annual harvest distribution (calculations are not shown). The results showed gradually declining harvests in the western Wrangell Mountains during the late 1960's and an increase and subsequent decrease of harvests from the eastern Wrangell Mountains during the early 1970's. The gradually decreasing horn lengths from the eastern Wrangell Mountains suggest that shifts of hunting pressure have occurred to eliminate differences in regional trophy quality.

Composition and Productivity

Composition data obtained from various areas in the southern Wrangell Mountains are shown in Appendix V. These data illustrate stable or increasing percentages of legal rams found within specified areas during sequential counts. Where boundaries of specific areas were the same during sequential counts, sample sizes have fluctuated without apparent upward or downward trend. In some cases, however, larger counts were possibly due to chance or improved counting conditions.

Management Summary and Conclusions

Harvest data from Unit 11, primarily obtained from the southern Wrangell Mountain sheep populations, indicate a top quality hunting area. Decreases in Wrangell Mountain sheep harvests during the past 2 years are cause for concern and close future monitoring. Current information indicates that these decreases were caused by reduced hunting pressure and adverse weather conditions. No evidence connecting decreased harvests and decreases in sheep numbers was apparent from sheep survey trend data or from guide reports.

Sheep hunters in the Wrangell Mountains had a higher success ratio than hunters statwide and, in addition, a larger percentage of hunters in the Wrangell Mountains were nonresidents. Individually, nonresidents had a 2.2 times greater probability of killing a sheep than resident hunters, and collectively, they killed 48 percent of the sheep although they composed only 29 percent of the hunters. Aircraft was the main transportation means used, and all other types of transportation combined were used by only 22 percent of the hunters. Harvest data and reports by guides suggest an increase in hunting pressure in the eastern

end of the Chitina Valley with a consequent reduction in trophy ram size. Composition data covering various areas in the southern Wrangell Mountains, however, suggest that the percentage of legal rams has been stable or increasing. The combined information indicates that hunting pressure has been shifting to reduce differences of trophy quality presently found in the Wrangell Mountains, although production of legal rams in most areas has equaled or exceeded losses.

Recommendations

1. Plans should be prepared in the near future to preserve and enhance quality hunting in selected areas of the Wrangell Mountains. The eastern portion of the Chitina Valley is a potential area for selection.

2. Composition counts to obtain lamb and yearling survival data should be made annually in selected areas. Harvest data coupled with field reports and annual composition counts in selected areas are minimal sources of information necessary to formulate management plans and manage populations.

3. No changes in season or bag limit are recommended at this time.

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SUBMITTED BY:

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APPENDIX I

A Comparison of Unit 11 and Statewide Annual Ram Harvests and the Percentage of Statewide Ram Harvests from Unit 11.

	Ram Harvests				Ram Harvests		
Year	Statewide	Unit 11	Percent	Year	Statewide	Unit 11	Percent
1962*	667	117	17.5	1969	955	157	16.4
1963	970	131	13.5	1970	998	171	17.1
1964	919	151	16.4	1971	1079	178	16.5
1965	885	131	14.8	1972	1170	173	14.8
1966	955	125	13.1	1973	1119	194	17.3
1967**	922	149	16.2	1974	1243	173	13.9
1968	1122	215	19.2	1975	1071	134	12.5

* 1962 was the first year of harvest ticket report. Coverage may have been incomplete.

** Reported kill by 15 January 1968.

Prepared by: Carl W. McIlroy, Game Biologist III

APPENDIX II

A Comparison of Hunter Success between Statewide Hunters and Hunters in the Wrangell-Mentasta-Nutzotin Mountains during 1974 and 1975.

	Statewide		Wrangell-Mentasta-Nutzotin Mountains	
	1974	1975	1974	1975
Percent Hunter Success:	42%	37%	55%	44%
Total Successful Hunters:	1243	1071	352	310
Total Hunters:	2949	2881	644	697
Percent Success Among Residents:	32%	29%	40%	33%
Successful Residents:	713	660	160	157
Total Residents:	2215	2288	401	482
Percent Success Among Nonresidents:	77%	75%	83%	74%
Successful Nonresidents:	484	379	182	146
Total Nonresidents:	626	507	220	197
Ratio Nonresident/Resident Percent Success	2.4/1	2.6/1	2.1/1	2.2/1
Percent of Nonresidents Among All Hunters:	22%	18%	35%	29%
Total Nonresidents	626	507	220	197
Total Residents & Nonresidents:	2841	2795	621	679
Percent of Sheep Killed by Nonresidents:	40%	36%	53%	48%
Nonresident Kill:	484	379	182	146
Resident & Nonresident Kill:	1197	1039	342	303

Prepared by: Carl W. McIlroy, Game Biologist III

APPENDIX III

A Comparison of Annual Harvest Data from Portions of Mountain Ranges within Unit 11.

	1967	1968	1969	1970	1971	1972	1973	1974	1975
Unit 11 Portion of Eastern Chugach Range									
Ram Harvest*:	0	8	7	10	4	1	9	19	10
Number of Resident and Non-resident Hunters:	0	12	12	22	7	3	22	27	21
Percent Hunter Success:	-	67%	58%	45%	57%	33%	41%	70%	48%
Percent of All Hunters that were Residents:	-	66%	42%	52%	29%	33%	28%	42%	62%
Mean Horn Length, Inches**:	-	31.6	37.4	33.9	30.9	30.0	34.8	33.7	36.2
Unit 11 Portion of Wrangell Mountains									
Ram Harvest*:	149	199	150	161	174	171	185	154	123
Number of Resident and Non-resident Hunters:	246	303	329	308	376	344	418	319	343
Percent Hunter Success:	61%	66%	46%	52%	46%	50%	44%	48%	36%
Percent of All Hunters that were Residents:	63%	69%	71%	75%	69%	64%	65%	65%	68%
Mean Horn Length, Inches**:	34.6	34.1	34.6	35.1	35.1	35.3	34.9	33.7	34.5

* The summed ram harvests from the eastern Chugach Range and the Wrangell Mountains do not equal the Unit 11 total harvest because of rams not included in this table whose specific kill location is unknown.

*** Mean horn length from the 1967 harvest is based on rams harvested by resident hunters only. Mean horn length data during subsequent years is based on rams harvested by both resident and nonresident hunters.

Prepared by: Carl McIlroy, Game Biologist III

APPENDIX IV

A Comparison of Annual Harvest Data from Selected Areas in the Unit 11 Portion of the Wrangell Mountains.

	1968	1969	1970	1971	1972	1973	1974	1975
Chitistone Canyon-Chitina Glacier Vicinity								
Ram Harvest:	20	18	26	44	48	85	54	37
Number of Hunters:	35	34	62	86	97	154	98	118
Percent Hunter Success:	57%	53%	42%	51%	49%	55%	55%	31%
Percent Resident Hunters	89%	72%	91%	82%	74%	59%	66%	73%
Mean Horn Length, Inches*:	37.7	36.7	36.2	36.5	36.2	35.8	35.1	35.1
Remainder of Unit 11 Portion of Wrangell Mtns.								
Ram Harvest:	64	57	69	66	55	78	76	58
Number of Hunters:	83	107	99	122	108	177	160	133
Percent Hunter Success:	77%	53%	70%	54%	51%	44%	48%	44%
Percent Resident Hunters:	67%	74%	66%	58%	59%	73%	79%	75%
Mean Horn Length, inches*:	33.2	34.5	33.8	35.2	34.8	33.5	32.8	33.9
Unknown Drainages within the Wrangell Mountains.**								
Ram Harvest:	122	71	55	47	65	31	45	37
Number of Hunters:	253	174	122	137	122	131	87	142
Percent Hunter Success:	48%	41%	45%	34%	53%	24%	52%	26%
Percent Resident Hunters:	66%	66%	71%	75%	60%	65%	50%	44%
Mean Horn Length, inches*:	33.9	34.0	35.3	34.9	35.6	35.3	34.8	34.9

* Mean Horn Length data is based on rams harvested by both resident and non-resident hunters.

* Includes IBM coding units 1128, 1133, and 1218.

Prepared by: Carl W. McIlroy, Game Biologist III

APPENDIX V

A Comparison of Composition Data Obtained from Various Areas in the Southern Wrangell Mountains.*

Year	Area	Legal Rams	Lambs	Unid.	Total	Percent Legal Rams	Percent Lambs
1962	Nadina River to Kennicott Glacier	87	109	445	641	13.6	17.0
1963	Nadina River to Kennicott Glacier	91	149	527	767	11.9	19.4
1967	Nadina River to Kennicott Glacier	62	127	469	658	9.4	19.3
1973	Dadina River to Kennicott Glacier	141	160	756	1,057	13.3	15.1
1967	Dadina River to Kluvesna River	48	--	254	302	15.8	--
1973	Dadina River to Cheshnina River	35	23	150	208	16.8	11.1
1970	MacColl Ridge	26	60	134	220	11.8	27.3
1973	MacColl Ridge	28	45	171	244	11.5	18.4
1974	MacColl Ridge	25	31	124	180	13.9	17.2
1975	MacColl Ridge	27	33	145	205	13.2	16.1
1970	Chitistone River to Canyon Creek	14	35	94	143	9.8	24.5
1973	Chitistone River to Canyon Creek	17	28	105	150	11.3	18.7

* The following data are grouped into areas with the same or similar boundaries. Counting conditions were dissimilar between surveys, and comparisons of data obtained from these surveys, as shown, should be made with caution.

PREPARED BY: Carl W. McIlroy, Game Biologist III

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 13 - Central portion of the Chugach Mountains and the eastern portion of the Talkeetna Mountains

Seasons and Bag Limits

Aug. 10 - Sept. 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

Ram harvests from Unit 13, ram harvests statewide, and the percentages of statewide harvests from Unit 13 are presented in Appendix I. Harvests from Unit 13 were relatively stable during the late 1960's, declined gradually during the early 1970's, and reached peak levels during the last 2 years. By contrast, statewide harvests were higher during the 1970's compared to the 1960's. These relative changes are reflected by the decreasing percentages of statewide harvests from Unit 13 prior to 1974 with a recovery to mid-1960's levels during the past 2 years.

Most hunters used aircraft (52%) as transportation although highway vehicle-afoot hunters (22%) and horses (20%) were also major means of transportation.

Harvest data for two mountain ranges in Unit 13 are illustrated in Appendix II. Ram harvests from the Unit 13 portion of the Talkeetna Mountains reached a peak from 1968 through 1970, declined from 1971 through 1973, then regained former levels during 1974 and 1975. Numbers of hunters fluctuated without apparent trend, and hunter success declined during 1972 and 1973, then increased to former levels during 1974 and 1975. These changes show no correlation with the percentage of residents among hunters. Mean horn length of harvested rams has not changed substantially, suggesting that mean horn lengths have approached minimum values for legal rams. These data suggest a scarcity of legal rams from 1971 through 1973. Conversations with local guides and hunters participating in the 1973 harvest indicated that they generally saw many sheep, few legal rams, but many young rams.

Ram harvests, hunting pressure, hunter success, percentage of resident hunters, and mean horn length in the central Chugach Range (Appendix II) have fluctuated without apparent trend.

Composition and Productivity

Sheep composition data for trend count areas in Unit 13 are given in Appendix III. Data from these count areas suggest that sheep numbers increased rapidly during the early 1950's (as they did in McKinley Park) and reached high levels in the late 1960's. These data suggest a decline in sheep numbers since the late 1960's, again in parallel with Mt.

McKinley Park sheep data. April surveys are mainly of value for yearling recruitment; June surveys are of value for total numbers and initial lamb production. Percentages of legal rams suggest moderate hunting pressure.

An aerial survey of Sheep Mountain, Horn Mountain, and Flume Creek on June 30, 1976 revealed 463 sheep of which 14.3 percent was lambs and 7.6 percent was legal rams. The area of this survey is adjacent to the Boulder Creek drainages, and the percentages of lambs and legal rams are similar. However, Sheep Mountain is closed to legal hunting, although there probably is movement between Sheep Mountain and nearby drainages open to hunting.

Management Summary and Conclusions

Harvest data indicated that fewer rams were available for harvesting from Unit 13 during the early 1970's. This was suggested by the combination of declining harvests, declining hunter success, and small or declining horn size of harvested rams. However, a recovery has become evident during the past 2 years. The cause(s) of the reduced availability of rams was unknown. Poor lamb survival several years ago resulting in small cohorts entering the legal ram age classes or poor ram survival during the 1970's are possibilities. The poor ram crops seen in recent years are cause for concern.

Harvest data, coupled with guide and hunter interviews, indicated that changes have been occurring in Unit 13 sheep populations. However, our knowledge of the nature and magnitude of these changes is imprecise because we have not been using population monitoring techniques for Unit 13 sheep during recent years.

Recommendations

Trend count areas such as the Watana Creek Hills and Boulder Creek drainages should be surveyed annually for trend information on sheep abundance and composition. April surveys should be discontinued in lieu of a combination of sheep lick observations (for lamb:ewe and yearling:ewe ratios) coupled with summer aerial surveys (for total number, lamb:ewe, and ram:ewe ratios).

No changes in seasons or bag limits are recommended at this time.

PREPARED BY:

Carl W. McIlroy
Game Biologist III

SUBMITTED BY:

John Vania
Regional Management Coordinator

APPENDIX I

A Comparison of Unit 13 and Statewide Annual Ram Harvest and the Percentage of Statewide Ram Harvests from Unit 13.

	Ram Harvests				Ram Harvests		
Year	Statewide	Unit 13	Percent	Year	Statewide	Unit 13	Percent
1962*	667	107	16.0	1969	955	155	16.2
1963	970	132	13.6	1970	998	134	13.4
1964	919	156	17.0	1971	1079	139	12.9
1965	885	143	16.2	1972	1170	125	10.7
1966	955	154	16.1	1973	1119	101	9.0
1967	922	152	16.5	1974	1243	176	14.2
1968	1122	159	14.2	1975	1071	170	15.9

* 1962 was the first year of harvest ticket reporting. Coverage may have been incomplete.

Prepared by: Carl W. McIlroy, Game Biologist III

APPENDIX II

A Comparison of Harvest Data from Portions of Mountain Ranges within Unit 13.

Unit 13 Portion of the Eastern Talkeetna Mountains	1967	1968	1969	1970	1971	1972	1973	1974	1975
Ram Harvest*:	71	87	95	91	71	64	52	93	95
Number of Hunters:	218	221	267	229	193	248	217	237	241
Percent Hunter Success:	33%	39%	36%	40%	37%	26%	24%	39%	39%
Percent Resident Hunters:	83%	77%	77%	72%	74%	84%	88%	90%	81%
Mean Horn Length, inches**:	31.1	31.9	31.5	32.3	31.4	30.2	31.0	29.9	30.1
Unit 13 Portion of the Central Chugach Range									
Ram Harvest*:	60	58	60	41	60	54	45	79	56
Number of Hunters	121	112	158	124	156	128	163	179	192
Percent Hunter Success:	50%	52%	38%	33%	38%	42%	28%	44%	29%
Percent Resident Hunters:	64%	74%	79%	81%	74%	78%	79%	75%	81%
Mean Horn Length, inches**:	33.1	35.5	36.2	34.1	35.1	33.8	33.8	34.1	34.2

* The summed ram harvests from the eastern Talkeetna Mountains and the central Chugach Range do not equal the Unit 13 Total harvest because of rams not included whose specific kill location is unknown and because of small number of rams killed in Unit 13 from the Alaska Range east of McKinley Park.

** Mean horn length for the 1967 harvest is based on rams harvested by resident hunters only. Mean horn length data during subsequent years is based on rams harvested by both resident and nonresident hunters.

Prepared by: Carl W. McIlroy, Game Biologist III

APPENDIX III

A Comparison of Sheep Composition Data for Selected Areas in Unit 13.

Trend Count Area		Legal Rams	Lambs	Total
Boulder Creek drainages:	1949	--	--	45
	1951	--	--	115
	Sept. 1967	--	--	430
	May/June 1968	6%	10%	404
	July 1968	--	--	460
	April 1974	8%	18%	112
	June 1974	8%	16%	287
Watana Hills vicinity:	1950	--	--	0
	Sept. 1967	--	--	220
	Aug. 1968	--	18%	183
	Aug. 1973	6%	23%	176
	April 1974	8%	24%	76

Prepared by: Carl W. McIlroy, Game Biologist III

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunits 14A and 14B - Upper Cook Inlet

Seasons and Bag Limits

Aug. 10 - Sept. 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

The total harvest in 1975 for Subunits 14A and 14B was 38 rams, 33 from Subunit 14A and 5 from 14B (Appendix I). This exceeded the previous 7-year average harvest of 27.3 for this area.

In comparison, the total Unit 14 harvest in 1975, including Subunit 14C, was 63 rams (Appendix II). This was similar to the previous 10 year average of 64.4 rams for the entire Unit.

In the Chugach Mountains portion of Subunit 14A, the take of 24 rams was more than the 1968-1974 average of 11.6 rams per year. In the Talkeetna Mountains portion of 14A, the take of nine rams was below the 1968-1974 average of 11.4, while in the Subunit 14B portion of the Talkeetna Mountains the harvest of five rams slightly exceeded the previous 7-year average of 4.3 rams per year.

To obtain an index of hunter success, data for the entire Chugach Mountain Range and the entire Talkeetna Mountain Range were utilized. This was necessary because of the IBM harvest program design.

The Chugach Mountain data include portions of the mountain range in Units 7, 11, 13 and 14A, 14B and 14C. In the entire Chugach Range, 415 hunters took 122 sheep for a 29 percent success ratio (Appendix III). This was the second highest success ratio in the years for which data were collected. Success ratios from 1967 through 1973 have varied from 19 percent to 34 percent with numbers of hunters ranging from 403 to 655. Twenty-four percent of 352 resident hunters and 65 percent of 46 nonresident hunters were successful.

In the Talkeetna Mountains, including the Chulitna Mountains and the Watana Creek Hills, the sheep range includes portions of Units 13 and 14A and 14B. Two hundred and eighty-one hunters harvested 109 sheep for a 39 percent success ratio, the highest on record for this area (Appendix IV). Success ratios from 1967 through 1974 varied between 27 and 37 percent while the number of hunters varied from 240 to 343. Success ratios for resident (32%) and nonresident (75%) hunters equalled previous high recorded success ratios.

Composition and Productivity

The second sheep sex and age composition survey on record was flown in the portion of Subunit 14A between the Matanuska and Knik Rivers (Appendix V). A total of 709 sheep was tallied representing a 49 percent increase over the 1973 survey. The percentages of legal rams (14.2%) and lambs (16.6%) were similar to the 1973 figures.

Management Summary and Conclusions

The total Subunit 14A and 14B sheep harvest was the highest since 1968 when a subunit breakdown of harvests first became available. The Chugach Mountain portion of the subunit experienced a significant increase in harvest while in the Talkeetna Mountains the 14A harvest was below average and the take from 14B was average.

Overall hunter success ratios in both the Talkeetna and Chugach Mountains were at high levels.

Survey data for the portion of Subunit 14A between the Matanuska and Knik Rivers indicated a minimum of 101 legal rams may be available for hunters during the 1976 season.

The 1976 percentage of legal rams and lambs in the population is similar to the 1973 level but the population appeared to have increased. A change in survey vehicle and time of year of the survey made it difficult to make a definitive statement concerning the growth of this population.

Recommendations

No changes in season or bag limit are recommended at this time.

The portion of Subunit 14A north of the Matanuska River and 14B should be surveyed in 1977.

PREPARED BY:

Jack C. Didrickson and Don Cornelius
Game Biologist III and Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Reported Harvest of Dall Sheep Rams in Portions of the Two Mountain Ranges in Alaska's Game Management Unit 14 for the Years 1968 through 1975.

	1968	1969	1970	1971	1972	1973	1974	1975	Average 1968-1974
Chugach Mtns. Portion in GMU 14A (between Knik R. Glacier and Matanuska R.)	16	11	9	8	14	10	13	24	11.6
Talkeetna Mtns. Portion in GMU 14A (South-East slope of Talkeetna Mtns.)	13	22	3	11	13	5	13	9	11.4
Talkeetna Mtns. Portion in GMU 14B (Western slope of Talkeetna Mtns.)	3	1	5	3	7	3	8	5	4.3
Total reported sheep harvest for GMU Subunits 14A and B	32	34	17	22	34	18	34	38	27.3
GMU 14, Matanuska River drainage or Chugach Mtns., unknown specific locality-could be Subunit 14A or C.	13	20	2	3	8	3	4	0	7.6

PREPARED BY: Jack C. Didrickson, Game Biologist III
Don Cornelius, Game Biologist II

Appendix II. Reported Harvest of Dall Sheep Rams in Alaska's Game Management Unit 14 for the Years 1965 through 1975*.

1965	1966	1967[1]	1968	1969	1970	1971	1972	1973	1974	1975	Average 1965-1974
62	49	72	76	94	63	59	77	32	60	63	64.4

* In a few cases hunters only report mountain range in which they hunted. When they fail to indicate the Game Management Unit, they are arbitrarily placed in certain Game Management Units.

[1] Reported kill as of January 15, 1968.

PREPARED BY: Jack C. Didrickson, Game Biologist III
Don Cornelius, Game Biologist II

Appendix III. Reported Harvest of Dall Sheep Rams, Numbers of Hunters, and Success of Hunters for Alaska's Chugach Mountain Range, in Game Management Units 7, 11, 13 and 14, 1967 through 1975.

Year	All Hunters*			Residents			Non-residents		
	Kill No.	Hunters	Success	Kill No.	Hunters	Success	Kill No.	Hunters	Success
1967	115	521	22%	67	455	15%	48	66	73%
1968	113	630	17.9%	99	570	17%	34	60	57%
1969	138	655	21%	102	593	17%	33	51	65%
1970	108	503	21%	67	404	17%	22	37	59%
1971	109	586	19%	70	518	14%	35	53	66%
1972	112	470	24%	79	378	21%	25	43	58%
1973	81	426	19%	49	362	14%	26	50	52%
1974	137	403	34%	89	333	27%	45	61	74%
1975	122	415	29%	84	352	24%	30	46	65%

* All Hunters category is higher than resident plus non-resident categories combined. This is due to the inclusion of reports from hunters who did not note residency.

PREPARED BY: Jack C. Didrickson, Game Biologist III
Don Cornelius, Game Biologist II

Appendix IV. Reported Kill of Dall Sheep Rams, Numbers of Hunters, and Success of Hunters for Alaska's Talkeetna Mountain Range, Chulitna Mountains, and Watana Creek Hills, 1967 through 1975.

	All Hunters*			Residents			Non-residents		
Year	Kill No.	Hunters	Success	Kill No.	Hunters	Success	Kill No.	Hunters	Success
1967	84	272	31%	50	224	22%	34	48	71%
1968	110	343	32%	64	273	23%	46	70	66%
1969	118	318	37%	64	235	27%	51	76	67%
1970	99	268	37%	45	175	26%	43	62	69%
1971	85	240	35%	39	178	22%	44	59	75%
1972	81	304	27%	41	227	18%	34	61	56%
1973	61	277	22.0%	39	232	17%	21	31	68%
1974	114	312	37%	83	259	32%	26	40	65%
1975	109	281	39%	75	231	32%	30	40	75%

* All Hunters category is higher than resident plus non-resident categories combined. This is due to the inclusion of reports from hunters who did not note residency.

PREPARED BY: Jack C. Didrickson, Game Biologist III
Don Cornlius, Game Biologist II

Appendix V. Sex and Age Composition of Sheep in that Portion of Alaska's Game Management Subunit 14A Between the Matanuska and Knik Rivers, 1973 and 1976.

Date	Legal Males	Distinguishable Sublegal Males	Mixed Females and Indistinguishable Males	Lambs	Total	Percent Lambs	Percent Legal Males	Count Time
6/29/73	71	66	257	81	475	17.1%	14.9%	13.2 hrs.
7/27 - 29/76	101	100	390	118	709	16.6%	14.2%	15.3 hrs.

Survey Vehicle: 1973 - All areas via Super Cub
1976 - Area B-F via Jet Ranger Helicopter, area A via Super Cub.

PREPARED BY: Jack C. Didrickson, Game Biologist III
Don Cornelius, Game Biologist II

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 14C - Anchorage

Seasons and Bag Limits

Day after Labor Day - September 20	One ram with 3/4 curl horn or larger.

Harvests and Hunting Pressure

The entire Eklutna drainage, excluding Thunderbird Creek, was closed to sheep hunting during 1975.

During 1975, 29 rams were harvested in Subunit 14C. This compares well with the 1968-1974 average of 31 (Appendix I). As in former years, the great majority of the harvest (93 percent) came from the drainages of Eagle River, Peters Creek, Thunderbird Creek, and the Knik River. No sheep were taken in Bird, Campbell, McHugh or Indian Creeks, and only 2 were taken in Ship Creek. One hundred and nine hunters participated and 27.4 percent were successful, compared to the 1974 success rate of 19.6 percent and the 1968-1973 average of 12.0 percent (Appendix I). The increased success probably reflects participation by more experienced sheep hunters who are willing to wait for the late opening season. All successful hunters were residents and only 3 of 77 unsuccessful hunters were nonresidents. The 1975 average horn size was 30.9 inches; nearly identical to the 1971-1974 average of 30.8 inches, but less than the 1968-70 average of 32.0 inches.

Composition and Productivity

No extensive sheep surveys were conducted in 1975, but during a late August goat survey 274 sheep were observed in Ship Creek, upper Eagle River, and portions of Peters and Thunderbird Creeks. The survey showed 4 percent legal rams in the herd and 6 percent lambs. The ram percentage is not felt to be representative of the total population although the lamb percent is, and indicates very poor production. Further surveys will be conducted in 1976.

Management Summary and Conclusions

With the exception of 1973 when confusion over firearm discharge regulations within Chugach State Park resulted in a reduced harvest, the number of rams taken over the past 8 years has remained fairly constant. With the 1976 opening of a portion of the Eklutna drainage the potential for harvesting 69 additional sheep exists.

Average horn size over the past 5 years in 14C (30.8 inches) is comparable to horn sizes from similar readily accessible large sheep

populations on the Kenai Peninsula and the southeastern Talkeetna Mountains (Appendix II). Despite reduced hunter pressure in recent years, a late, short season, access restrictions, and the precipitous terrain of some of the area in 14C, most rams are apparently being harvested shortly after they become legal.

Recommendations

If older and larger sheep are to be available in Subunit 14C the harvest must be reduced to approximately 25 annually or the minimum legal horn curl must be elevated to 7/8 (eye level) or full curl. Such regulations will only be implemented if public input into forthcoming management plans favors them. Regulations providing for a limited harvest of ewes should also be considered.

PREPARED BY:

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Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Harvest and Hunter Success 1968-1975; Game Management Subunit 14C.

Year	Harvest	Hunters	Percent Success
1968	31	282	10.9
1969	40	380	10.5
1970	44	244	18.0
1971	34	330	10.3
1972	35	256	13.7
1973	11	135	8.1
1974	22	112	19.6
1975	29	109	27.4

Appendix II. Average Horn Size in Inches for Three Areas 1971-1975. Resident Hunters Only.

Year	Kenai Peninsula	Southeast Talkeetna Mountains	14C
1971	29.9	31.2	30.9
1972	30.6	29.6	31.7
1973	30.8	30.6	28.9
1974	30.8	29.9	30.3
1975	30.8	29.9	30.9

SUBMITTED BY:

David Harkness
Game Biologist II

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 15 - Kenai Mountains

Seasons and Bag Limits

Aug. 10 - Sept. 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

Based on harvest report returns, the take of rams since 1962 has been as follows:

1962 - 35*	1969 - 31
1963 - 43	1970 - 42
1964 - 26	1971 - 25
1965 - 35	1972 - 18
1966 - 48	1973 - 34
1967 - 47	1974 - 50
1968 - 52	1975 - 47

* Harvest report coverage is known to have been incomplete.

One hundred and seventy-four hunters reported hunting sheep in Unit 15 during the 1975 season (Appendix I). Forty-seven hunters (27%) were successful. Hunters afield increased 14 percent over 1975 to reach a 7-year high.

Hunter success dropped from 33 to 27 percent, resulting in a total kill that dropped 6 percent (50-47) from 1974. The average horn length of harvested sheep (30.5 inches) was unchanged from 1974 and very close to the 1973 average.

Composition and Productivity

The area between Skilak Glacier and Tustumena Glacier was surveyed in 1974 and 1975. The number of sheep observed between Skilak Glacier and the Killey River decreased 43 percent (76-43) between 1972 and 1974, then increased by 37 percent (43-59) from 1974 to 1975 (Appendix II). The percentage of lambs in the population remained relatively stable in 1974 and 1975 (9.3%-8.4%) but was below the 1968 and 1972 levels of 16 and 13 percent, respectively.

Numbers of sheep counted in the area between Killey River and Tustumena Glacier declined by 38 percent (756-470) from 1968 to 1974, then rose 11 percent (470-520) by 1975. At the same time the lamb

percentage in the herd decreased from 21 percent in 1968 and 1972 to 12 percent in 1974 and 10 percent in 1975. The population increase in 1975 occurred mostly in the small male and ewe categories.

The observed fluctuations appear related to habitat and, to a lesser extent, weather. The current low lamb percentage in the population presents strong evidence that range problems exist in the area between Skilak and Tustumena Glaciers. With the exception of Surprise Mountain, the remaining Unit 15 sheep populations did not demonstrate signs of imbalance with their ranges.

Management Summary and Conclusions

The ram harvest from Unit 15 over the past 10 years has fluctuated but has not followed a trend. The 1971 and 1972 harvests were low, probably as a result of poor hunting conditions.

There are very few rams over full curl in Unit 15 and, therefore, very few live long enough to succumb to old age. Apparently the harvest closely follows recruitment into the legal ram cohort. This idea was buttressed by the consistent average horn length of 30.5 to 30.8 inches for the past 3 years.

The sheep population in the area between Skilak Glacier and Tustumena Glacier declined between 1968 and 1974, then increased slightly in 1975. Lamb crops in 1974 and 1975 were well below those observed in 1968 and 1972.

Recommendations

No changes in seasons or bag limits are recommended at this time.

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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Sheep harvest and hunting pressure, Unit 15 - Kenai Mountains

Year	Mountain Range	Number Successful	Percent Successful	Number Unsuccessful	Percent Nonresident Hunters	Total Hunters[1/]	Average Horn Length
1969	Kenai	31	27	84	3	115	
1970	Kenai	42	32	91	5	133	
1971	Kenai	25	16	131	7	156	
1972	Kenai	18	15	99	9	117	
1973	Kenai	34	25	103	7	137	30.8
1974	Kenai	50	33	102	11	152	30.5
1975	Kenai	47	27	127	2	174	30.5

1/ Does not include hunters who did not give zip code (less than 1 percent).

PREPARED BY: Paul A. LeRoux and David M. Hardy, Game Biologist III and Game Biologist II

APPENDIX II

Sheep trend count data Unit 15, 1950-1975

Date	Area	Total Adults	Lambs	% Lambs	Total Sheep
7/16/68	Skilak Glacier to Killey River	46	9	16%	55
8/8/72	Skilak Glacier to Killey river	66	10	13%	76
6/6/74	Skilak Glacier to Killey River	39	4	9%	43
7/10/75	Skilak Glacier to Killey River	54	5	8%	59
1950	Killey River to Tustumena Glacier				123
1951	Killey River to Tustumena Glacier				157
1962	Killey River to Tustumena Glacier	251	38	13%	289
1966	Killey River to Tustumena Glacier	426	100	19%	526
7/68	Killey River to Tustumena Glacier	594	162	21%	756
8/7-8/72	Killey River to Tustumena Glacier	444	127	21%	597*
6/6/74	Killey River to Tustumena Glacier	412	58	12%	470
7/9-10/75	Killey River to Tustumena Glacier	468	52	10%	520

* Includes 26 unclassified sheep.

PREPARED BY: Paul A. LeRoux and David M. Hardy, Game Biologist III and Game Biologist II

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 16 - West Side of Cook Inlet

Seasons and Bag Limits

Aug. 10 - Sept. 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

Based on harvest report returns, the ram take from 1965 through 1975 is presented below:

1965	1966	1967*	1968	1969	1970	1971	1972	1973	1974	1975
16	6	4	9	14	11	8	11	29	21	12

* Reported kill by January 16, 1968.

In 1975, a total of 12 rams was harvested in Unit 16 which was a 43 percent reduction from the 1974 harvest of 21. The Rainy Pass area harvest increased from 5 in 1974 to 8 in 1975 (Appendix I), and was the only area in Unit 16 exhibiting an increased harvest. The Skwentna River area, which increased from a one ram harvest in 1973 to 10 rams in 1974, decreased once again to a single ram in 1975. While the 10 successful hunters in the Skwentna area in 1974 were residents, the single sheep harvested in 1975 was taken by a nonresident.

In the Kichatna River area the two successful hunters were both residents. The single sheep taken in the Yentna River area was harvested by a resident.

Appendix II reveals hunting pressure trends in the Alaska Range west of Mt. McKinley Park; portions of Game Management Units 9, 16, 17 and 19 are included in this area. From 1967 to 1974 an average of 171 hunters utilized this area annually. In 1975, 190 hunters reported hunting in the Alaska Range west of McKinley Park, a decrease of 23 hunters from 1974. The 1975 harvest was 99 animals, 20 less than 1973 or 1974. Overall success ratios for the last 3 years have ranged from 56 percent in 1973 and 1974 to 52 percent in 1975.

Composition and Productivity

No sheep population composition data were collected in Unit 16 during 1974.

Management Summary and Conclusions

The 1975 sheep harvest in Game Management Unit 16 was 12, which is less than one-half the number (29) harvested in 1973 and less than 60 percent of the 21 rams taken in 1974 in the same area. In the previous 10 years (1965 through 1974), the average number of rams harvested was 12.9, this places the 1975 sheep harvest slightly below the 10-year average.

The Rainy Pass area produced eight rams, with the majority taken in Unit 16 and an increase of three rams from 1974. The Kichatna River area harvest also increased, from one ram in 1974 to two in 1975. All other areas had decreased harvests, most notably the Skwentna River area which decreased from 10 rams in 1974 to one in 1975. It must be noted, however, that in the years from 1968 to 1972, no rams were taken in that area and only one was shot in 1973. It is probable that animal movements and/or weather conditions play a major role in the harvest of sheep in these areas rather than the size of the sheep population.

Hunter success from that portion of the Alaska Range west of Mt. McKinley Park indicates that pressure decreased slightly from the previous 3 years. Overall success ratios west of McKinley Park were below the previous 7-year average and nonresident success ratios increased from 75 percent in 1974 to 82 percent in 1975 in the same area.

Recommendations

An aerial survey of that portion of Unit 16 which may sustain sheep populations should be conducted.

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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Sheep Harvest by IBM Coded Area in Alaska's Game Management Unit 16, 1968 through 1975.

Area	Year							
	1968	1969	1970	1971	1972	1973	1974	1975
Yentna River to Fourth of July Creek	2	1	3	4	3	8	4	1
Skwentna River	0	0	0	0	0	1	10	1
Kichatna River	0	0	0	0	0	3	1	2
Rainy Pass, Rainy Pass Lodge Area	7	12	8	4	8	13	5	8
Alaska Range West, within Unit 16	0	0	0	0	0	4	1	0
TOTALS	9	13	11	8	11	29	21	12

PREPARED BY: Jack C. Didrickson, Game Biologist III
Don Cornelius, Game Biologist II

Appendix II. Reported Kill of Dall Sheep Rams, Number of Hunters, and Success of Hunters for the Alaska Range West of McKinley Park, 1967 through 1975, as Derived from Harvest Reports.

Year	All Hunters*			Residents			Non-residents		
	Kill No.	Hunters	Success	Kill No.	Hunters	Success	Kill No.	Hunters	Success
1967	65	97	67%	27	47	57%	38	50	76%
1968	95	151	63%	52	99	53%	43	52	83%
1969	104	154	68%	53	93	57%	45	55	82%
1970	84	162	52%	34	80	43%	26	38	68%
1971	71	156	46%	28	80	35%	39	69	57%
1972	71	124	57%	32	68	47%	34	50	68%
1973	119	211	56%	53	112	47%	63	94	67%
1974	119	213	56%	43	110	39%	70	93	75%
1975	99	190	52%	43	122	35%	53	65	82%

* All Hunters category is higher than resident/non-resident added. This is due to inclusion of reports from hunters who did not note residency.

PREPARED BY: Jack C. Didrickson, Game Biologist III and Don Cornelius, Game Biologist II.

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 17 - Bristol Bay

Season and Bag Limit

Aug. 10 - Sept. 20	One ram with 3/4 curl horn or larger.

Harvest and Hunting Pressure

Harvest reports by 17 hunters (15 residents and 2 nonresidents) indicate a harvest of five rams in 1975 (Appendix I).

Composition and Productivity

No work was accomplished during this reporting period.

Management Summary and Conclusions

The GMU 17 sheep harvest has stabilized at a low level in the past 3 years (Appendix I). This follows 10 years of widely fluctuating harvests, but at no time did this unit produce a significant portion of the statewide harvest.

Recommendations

No changes in season or bag limit are recommended at this time.

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APPENDIX I

Reported Dall Sheep Ram Harvest for GMU 17, 1962 through 1975.

Year	Harvest	Year	Harvest	Year	Harvest
1962	9	1967	7	1972	2
1963	1	1968	17	1973	5
1964	12	1969	9	1974	4
1965	11	1970	6	1975	5
1966	9	1971	6		

Prepared By: Nick Steen, Game Biologist, King Salmon, Alaska.

SHEEP

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 23 - Western Brooks Range

Seasons and Bag Limits

Unit 23	Aug. 10-Sept. 20	One ram with 3/4 curl horn or larger

Harvest and Hunting Pressure

The reported harvest of sheep from Unit 23 during 1975 was 17 rams. The average harvest for the last 8 years was 15 sheep. The largest kill occurred in 1972 when 26 animals were taken, and the lowest recorded harvest was 12 rams in 1973.

Nonresidents took 5 sheep and residents took 11. One sheep was taken by an alien. Twenty-two resident hunters harvested the remaining 11 animals for a success ratio of 50 percent. Among residents hunting in Unit 23, 12 resided permanently in northwestern Alaska, and the other 10 came from the metropolitan areas of Anchorage and Fairbanks. Resident and nonresident hunters were 50 and 100 percent successful, respectively.

Compared to other portions of the Brooks Range, hunting pressure in Unit 23 was relatively light. From 1968 through 1974 Unit 23 averaged only 9 percent of the sheep harvested north of the Yukon River. Sheep density in Unit 23 is low and distribution is spotty. As a result of these factors plus problems associated with hunter access, Unit 23 traditionally has attracted relatively few sheep hunters.

Harvest tickets indicated that only 28 individuals hunted sheep in Unit 23, but the number of hunters was actually much higher. Residents from some of the villages in Unit 23 continued to use sheep as a subsistence food source. Animals taken for this purpose were not reported. It is estimated that 10 to 20 sheep of both sexes and various ages were taken illegally.

Composition and Productivity

Since 1974 data have been obtained on composition and productivity of sheep in Unit 23. Aerial surveys were conducted primarily in the upper Noatak drainage. As a result, only about one-third of the sheep in the unit were surveyed.

The composition and the total number of sheep observed during summer surveys in 1974 and 1975 are listed below.

	Legal M	Sublegal M	Unclass M	Total M	Ewes	Lamb	Unid.	Total
1974	39	46	0	85	193	63	13	354
1975	42	42	20	104	282	53	0	439

Surveys yielded lamb:ewe ratios of 33:100 and 19:100 for 1974 and 1975, respectively. These ratios are probably low; some lambs were overlooked and some young rams were mistakenly placed in the ewe category. These data suggest that productivity in 1974 was near the statewide average but that in 1975 it was considerably lower. The minimum sheep population in the eastern portion of Unit 23 is estimated to be 1000 animals.

Management Summary and Recommendations

Even with the illegal kill, hunting pressure in Unit 23 has been low. Despite this fact, reports from long-time residents of the area indicate that sheep numbers have undergone a slow decline over the years and that sheep no longer occupy some of their former range. Factors responsible for this decline are not known, but low rates of sheep recruitment and the increase in wolf numbers may have been partially responsible.

Intermittent distribution and composition counts should be conducted throughout the entire unit. Annual composition counts should be continued in the upper Noatak area. Unit 23 sheep populations should be studied in detail to determine whether or not a significant decline is occurring and, if so, what factors are responsible.

No changes in seasons or bag limits are recommended.

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Game Management Units 12, 20 and 25

Trapper Questionnaire

The trapper questionnaire was revised slightly from the form used previously (see Appendix A) and was sent to about 120 trappers in Units 12, 20 and 25. With a goal of improving the rate of return, the 1975 questionnaire was sent only to those trappers who had responded in 1974. About 35 percent of the questionnaires were returned initially, but response increased to 69 percent following the mailing of reminder letters. Fifteen trappers indicated they had not trapped; hence, data presented here are based on a sample of 68 completed questionnaires in which trappers contributed their impressions of furbearer abundance during the 1975-76 season.

Questionnaire Results - Harvest and Population Levels

Lynx - The average number of lynx harvested in the Fairbanks area was 8.3 lynx per trapper. This is a marked decline from the 18.7 lynx taken per trapper during the 1974-75 season. Fort Yukon area trappers averaged 7.3 lynx each during the 1975-76 season.

During the 1975-76 season lynx populations were considered low throughout the Interior. Cooperators indicated that numbers had declined from the previous season.

Red Fox (including silver and cross phases) - Trappers in the Interior reported an average harvest of 8 fox per trapper. The average take per trapper among Fort Yukon and Fairbanks trappers was 5.8 and 9.3, respectively, during the 1975-76 season. This was a decline from the 1974-75 season, when the take per trapper averaged 12 (Interior) and 10 (Fairbanks area).

The moderate to moderately low fox populations reported over most of the Interior were thought to have declined since the 1974-75 season. Trappers in the Fort Yukon area reported that the moderately low density was about the same as in 1974-75, while Fairbanks area trappers reported that the moderately low abundance marked a decline from 1974-75.

Marten - The marten harvest in the Interior during 1975-76 averaged 20.3 per trapper. This represented an increase from 18.8 martens per trapper in 1974-75. Fairbanks trappers took an average of 25.2 martens per trapper in 1975-76 compared to 27.0 per trapper during 1974-75.

Martens were generally at moderate to moderately low levels in the Interior, with little change in abundance from the 1974-75 season. In the Fairbanks area trappers felt there had been a slight decline in numbers of martens. Several trappers in the Lake Minchumina area reported

that the moderately high marten populations in that area represented an increase from the previous season.

Muskrat - Harvest figures for muskrats are incomplete, but trappers indicated that muskrat populations were generally at moderate levels throughout most of the Interior. High populations were reported in the Yukon Flats. Populations were moderate in the Tok and Northway areas. In these areas muskrat populations had increased since the 1974-75 season.

Mink - Mink were reported to be at moderate levels with little or no change from the previous season. Many Fairbanks trappers concentrated on lynx, fox and marten during the last few years; consequently, relatively few mink were taken. The best mink harvest figures are available from the Fur Export-Fur Dealer Reports.

Beaver - The beaver sealing program gives much better data on beaver harvest than the trapper questionnaire (see beaver Survey and Inventory Report). Most trappers considered beaver populations to be stable and dependent on wise harvest practices.

Land Otter - Land otter populations in the Interior were reported to be at moderately low levels during the 1975-76 season. This marked a slight decrease in abundance from that of the previous season. Otters are not taken as frequently as fox, lynx, and martens by trappers in the Interior. Better harvest figures can be obtained from the Fur Export-Fur Dealer Reports than from the trapper questionnaires.

Wolverine - Wolverine sealing forms provide fair harvest information, although many wolverine hides are never sealed. While the trapper questionnaires probably do not provide as much harvest information as the sealing forms, they do yield some indications of wolverine abundance. During the 1975-76 season wolverine populations were considered to be at moderate to low levels and little changed from the 1974-75 season.

Coyote - This is the first year in which trappers were asked to comment on coyotes. Few trappers reported catching coyotes, and most felt that populations were low and had changed little from last year. Additional harvest information is available from the Fur Dealer-Fur Export Reports.

Wolf - Wolf sealing forms provide more information on wolf harvests than do trapper questionnaires. Trappers reported that wolf populations were at moderately high levels and that wolves were somewhat more abundant than in 1974-75. However, none seemed to feel that wolf numbers were extremely high or that a great increase had occurred since the previous year.

Squirrel - Red squirrel populations were reported to be at moderate levels and little changed from 1974-75, except in areas along the Tanana River, where the reported high abundance was thought to have represented an increase from the previous year.

Snowshoe Hare - Snowshoe hare populations were generally low in the Interior, and trappers felt that there were fewer in 1975-76 than in 1974-75. However, in the Fort Yukon region populations were thought to have remained the same or even to have increased slightly in some areas. The hare population should remain fairly low for several years before commencing a gradual increase. Numbers are expected to peak in the early 1980's.

Grouse - Trappers in interior Alaska reported generally low grouse populations during the 1975-76 season. This was thought to represent little change from the previous season. Fort Yukon trappers, however, reported an increase in grouse abundance and felt that populations were at a moderate level in 1975-76. A slight increase from the 1974-75 level was reported in the Tanana Valley near Fairbanks.

Ptarmigan - The low ptarmigan abundance reported for the Interior was thought to represent a decrease from 1974-75 in some areas. In other areas populations were thought to have remained the same.

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Submitted By:

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Table 1. Summary of replies to the trapper questionnaire, 1975-76.

Area	No. of Trappers*	Average Trapline Length	Lynx Harvested	Lynx/ Trapper	Fox Harvested	Fox/ Trapper	Marten Harvested	Marten/ Trapper
Ft. Yukon Circle, Central, Eagle, etc.	9 (10)	76	58	7.25	46	5.8	188	26.9
Fairbanks (Unit 20B)	22	39	134	8.3	179	12	266	17.7
Delta	8	59	82	11.7	65	16.3	35	17.5
Clear Healy, Mt. McKinley Area	8 (10)	41	62	8.9	39	4.9	63	21
Manley Tanana, etc.	3	34	0	-	1	1	8	8
Tok Northway	3	56	24	(24)	16	8	37	12.3
Total (Interior)	50		360	9.2	346	12	597	19.3

*Not all trappers trapped for lynx, fox and marten.

Table 2. Interior Alaska furbearer population abundance and trend indices by species based on trapper questionnaire.

SPECIES/ Area	Abundance in 1975-76 Season				Compared with 1974-75			
	Low	Med.	High	Index	Fewer	Same	More	Index
LYNX								
Ft. Yukon Circle, Central, Eagle, etc.	8	2	0	1.8	7	2	6	1.9
Fairbanks	15	2	0	1.5	19	5	0	1.2
Delta	5	2	0	2.1	6	1	0	1.6
Clear Nenana, McKinley Area	8	2	0	2.6	6	3	0	3.0
Manley Tanana, etc.	1	1	0	3	2	0	0	1.0
Tok Gakona, Copper Center, Northway	4	1	0	1.8	3	1	1	4.0
Total Interior	40	8	0	1.7	41	12	0	1.9
RED FOX (all color phases)								
Ft. Yukon Circle, Central, Eagle, etc.	3	6	0	3.7	4	2	2	4.0
Fairbanks	10	9	2	3.5	12	6	1	2.7
Delta	2	3	2	5.0	1	5	0	4.3
Clear Nenana, McKinley Area	3	4	2	4.6	3	4	2	4.6
Manley Tanana, etc.	0	2	0	5.0	1	1	1	5.0
Tok Gakona, Copper Center, Northway	2	3	0	3.6	3	1	0	2.0
Total Interior	20	20	12	4.4	23	18	6	3.6

SPECIES/ Area	Abundance in 1975-76 Season				Compared with 1974-75			
	Low	Med.	High	Index	Fewer	Same	More	Index
MARTEN								
Ft. Yukon Circle, Central, Eagle, etc.	1	5	2	5.5	1	3	3	6.1
Fairbanks	5	12	1	4.1	6	9	3	4.3
Delta	1	1	1	5.0	0	2	1	6.3
Clear Nenana, McKinley Area	3	2	3	5.0	1	3	1	5.0
Manley Tanana, etc.	1	1	0	3.0	2	-	1	3.7
Tok Gakona, Copper Center, Northway	2	2	0	3.0	2	2	1	4.2
Total Interior	9	12	5	4.4	9	15	11	5.5
MINK								
Ft. Yukon Circle, Central, Eagle, etc.	5	1	0	1.7	0	3	2	6.6
Fairbanks	8	3	1	2.7	5	5	-	3.0
Delta	1	2	1	5.0	1	2	1	5.0
Clear Nenana, McKinley Area	2	5	0	3.9	1	5	0	4.3
Manley Tanana, etc.	1	1	0	3.0	0	2	0	5.0
Tok Gakona, Copper Center, Northway	2	1	0	2.3	2	2	0	3.0
Total Interior	19	10	6	3.5	8	15	3	4.2

SPECIES/ Area	Abundance in 1975-76 Season				Compared with 1974-75			
	Low	Med.	High	Index	Fewer	Same	More	Index
MUSKRAT								
Ft. Yukon Circle, Central, Eagle, etc.	0	2	4	7.7	0	2	3	7.4
Fairbanks	3	6	1	4.2	2	7	1	4.6
Delta	2	0	0	1.0	2	-	-	1.0
Clear Nenana, McKinley Area	2	1	2	5.0	1	1	2	6.0
Manley Tanana, etc.	1	0	1	5.0	1	0	2	6.3
Tok Gakona, Copper Center, Northway	2	0	2	5.0	0	0	3	9.0
Total Interior	10	9	10	5.0	6	11	10	5.6
BEAVER								
Ft. Yukon Circle, Central, Eagle, etc.	3	2	2	4.4	0	4	2	6.3
Fairbanks	1	10	3	5.6	1	9	4	5.9
Delta	1	0	2	6.3	1	-	0	5.0
Clear Nenana, McKinley Area	2	1	2	5.0	1	1	2	6.0
Manley Tanana, etc.	1	0	1	5.0	1	1	0	3.0
Tok Gakona, Copper Center, Northway	1	1	0	3.0	1	1	0	3.0
Total Interior	9	21	10	5.1	6	21	10	5.4

SPECIES/ Area	Abundance in 1975-76 Season				Compared with 1974-75			
	Low	Med.	High	Index	Fewer	Same	More	Index
LAND OTTER								
Ft. Yukon Circle, Central, Eagle, etc.	3	0	0	1.0	0	2	0	5.0
Fairbanks	5	7	0	3.3	2	9	1	4.7
Delta	1	2	5	3.7	1	2	0	3.6
Clear Nenana, McKinley Area	4	2	0	2.3	1	4	1	5.0
Manley Tanana, etc.	1	0	2	3.0	1	1	0	3.0
Tok Gakona, Copper Center, Northway	2	1	0	2.3	1	2	0	3.3
Total Interior	16	13	5	3.7	6	20	2	4.4
WOLVERINE								
Ft. Yukon Circle, Central, Eagle, etc.	2	5	0	3.9	1	5	0	4.3
Fairbanks	9	3	3	3.4	4	7	4	5.0
Delta	3	4	0	3.3	2	5	0	3.9
Clear Nenana, McKinley Area	1	6	1	5.0	2	4	1	4.4
Manley Tanana, etc.	0	2	0	5.0	0	2	0	5.0
Tok Gakona, Copper Center, Northway	2	2	0	3.0	0	3	0	5.0
Total Interior	16	21	4	3.8	11	29	3	4.3

SPECIES/ Area	Abundance in 1975-76 Season Low	Med.	High	Index	Compared with 1974-75 Fewer	Same	More	Index
COYOTE								
Ft. Yukon Circle, Central, Eagle, etc.	1	0	0	1.0	1	0	0	1.0
Fairbanks	10	5	0	2.3	2	10	0	4.3
Delta	1	4	2	5.6	1	6	0	4.4
Clear Nenana, McKinley Area	3	1	1	3.4	1	1	2	6.0
Manley Tanana, etc.	2	0	0	1.0	1	1	0	3.0
Tok Gakona, Copper Center, Northway	2	3	0	3.4	0	3	0	5.0
Total Interior	19	13	3	2.9	5	21	2	4.6
WOLF								
Ft. Yukon Circle, Central, Eagle, etc.	4	2	2	4.0	2	5	1	4.5
Fairbanks	4	9	8	5.8	4	11	4	5.0
Delta	0	3	4	7.3	1	5	1	5.0
Clear Nenana, McKinley Area	2	5	0	3.9	2	3	3	6.5
Manley Tanana, etc.	0	1	1	7.0	0	2	0	5.0
Tok Gakona, Copper Center, Northway	0	2	2	7.0	0	2	0	5.0
Total Interior	10	21	18	5.7	9	27	9	5.0

SPECIES/ Area	Abundance in 1975-76 Season Low	Med.	High	Index	Compared with 1974-75 Fewer	Same	More	Index
RED SQUIRREL								
Ft. Yukon Circle, Central, Eagle, etc.	1	3	0	4.0	0	3	0	5.0
Fairbanks	2	12	3	5.2	3	14	2	4.8
Delta	1	3	2	5.7	1	5	0	4.3
Clear Nenana, McKinley Area	1	3	2	6.0	1	3	2	5.7
Manley Tanana, etc.	0	1	1	7.0	1	1	0	3.0
Tok Gakona, Copper Center, Northway	0	3	1	6.0	1	3	0	4.0
Total Interior	5	23	8	5.3	3	28	3	5.0
SNOWSHOE HARE								
Ft. Yukon Circle, Central, Eagle, etc.	6	2	0	2	3	1	3	5.0
Fairbanks	23	0	0	1.0	13	6	3	3.2
Delta	7	0	0	1.0	6	1	0	1.6
Clear Nenana, McKinley Area	7	1	0	1.5	5	1	1	2.7
Manley Tanana, etc.	2	0	0	1.0	2	0	0	1.0
Tok Gakona, Copper Center, Northway	5	0	0	1.0	4	0	0	1.0
Total Interior	48	1	0	1.1	31	9	7	3

Table 3. Interior Alaska grouse, ptarmigan and snowshoe hare population abundance and trend indices based on trapper questionnaire.

SPECIES/ Area	Abundance in 1975-76 Season				Compared with 1974-75			
	Low	Med.	High	Index	Fewer	Same	More	Index
GROUSE								
Ft. Yukon Circle, Central, Eagle, etc.	3	3	2	4.5	0	5	2	6.1
Fairbanks	13	7	0	2.4	4	7	7	5.7
Delta	5	1	0	1.7	2	2	2	5.0
Clear Nenana, McKinley Area	6	1	0	1.6	4	1	1	3.0
Manley Tanana, etc.	1	1	0	3.0	0	2	0	5.0
Tok Gakona, Copper Center, Northway	5	0	0	1.0	3	1	0	2.0
Total Interior	32	12	2	2.4	14	15	12	4.8
PTARMIGAN								
Ft. Yukon Circle, Central, Eagle, etc.	4	3	0	2.7	0	6	0	5.0
Fairbanks	15	6	0	2.1	7	10	3	4.2
Delta	5	1	0	1.7	2	2	2	5.0
Clear Nenana, McKinley Area	3	1	1	3.4	3	2	1	3.7
Manley Tanana, etc.	1	1	0	3.0	0	1	1	7.0
Tok Gakona, Copper Center, Northway	4	0	0	1.0	2	1	0	3.0
Total Interior	29	14	1	2.5	15	21	7	4.3

PTARMIGAN

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Seasons and Bag Limits

Unit 20	Aug. 10 - Apr. 30	20 per day 40 in possession

Harvest and Hunting Pressure

No systems were in operation to determine harvest or hunting pressure in Unit 20 during the 1974-75 season.

Abundance, Composition and Productivity

The annual count of breeding rock ptarmigan (May 19-23) revealed 34 territorial males on the 15 square mile (65km^2) Eagle Summit Study Area. This is the lowest number of ptarmigan recorded at Eagle Summit since annual spring counts were commenced in 1959. The 1975 counts indicated a 47 percent decline from the previous spring density, and an 80 percent decline from that recorded during the peak spring of 1969.

On August 7, 1975 autumn abundance was assessed by hiking along the ridge system from Eagle Summit proper to the headwaters of the west fork of Cripple Creek via Mastodon Dome. Although this procedure has not been used in the past, it provides the most feasible method for obtaining an impression of fall abundance in view of time and manpower constraints. Hence, the findings presented below are not directly comparable with fall brood counts conducted in previous years, but will serve as a basis for comparing autumn abundance in the future.

On August 7, 1975 the fall survey as described above was conducted employing two observers and one dog. A total of 48 ptarmigan were observed, including only 2 broods, which contained 9 and 4 chicks each.

Management Summary and Recommendations

See Ptarmigan Survey and Inventory Report for 1973.

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RAPTORS

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 26 - Arctic Slope

Seasons and Bag Limits

Raptors are protected throughout Alaska, with the exception of snowy owls, which may be taken when utilized for food. However, the use of raptors for falconry is permitted under the terms of a permit issued by the Commissioner; permits are issued only for gyrfalcons or goshawks.

Distribution and Abundance

The five most important raptor species on the Arctic Slope are peregrine falcons, gyrfalcons, rough-legged hawks, golden eagles and snowy owls. Peregrine falcons, an endangered species of international concern, showed poor nesting success in recent years on the eastern Arctic Slope. In 1974 and 1975 four pairs of peregrines made seven nesting attempts, of which only three were successful. The fledging rate for the two nesting seasons combined was 0.7 young per eyrie started. Studies conducted in the central and western Arctic Slope showed similar low production and nesting success. The primary cause of this low productivity was believed to be contamination of prey species by pesticides.

During the same period gyrfalcons, rough-legged hawks and golden eagles were generally productive and relatively abundant throughout the foothill and mountainous portions of the unit. During 1975 surveys conducted in the western portion of the unit, observations included 14 nesting pairs of gyrfalcons, 39 pairs of rough-legged hawks, and 7 pairs of golden eagles. Nesting success was not determined, but nesting densities of these species indicated that their populations were in relatively good condition.

Snowy owls were abundant during 1975, a year of moderately high lemming numbers. Since nesting success of snowy owls depends largely upon the availability of lemmings, production of young was high, particularly in coastal areas.

Management Summary and Recommendations

With the exception of the endangered peregrine falcon, raptor populations in the unit were productive and relatively abundant. Management efforts should be directed towards insuring maintenance of adequate peregrine falcon nesting and foraging habitat and protecting nesting areas from human disturbance.

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SPRUCE GROUSE

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Seasons and Bag Limits

Unit 20	Aug. 10 - 20	15 per day 30 in possession

Harvest and Hunting Pressure

There were no systems in effect to gather information on grouse harvest or hunting pressure in Unit 20.

Abundance, Composition and Productivity

Standard road counts for spruce grouse were made on the Steese Highway between September 15 and 19, 1975. During this period only three "valid" counts were completed. Results of these counts are summarized below:

Location	No. of counts	Range in number of grouse seen per count	Grouse per mile driven
Steese Highway	3	4-10	0.33

Because of the small sample size, statistical treatment of the data, as in the past, was not appropriate. The average of 0.30 grouse per mile in 1975 suggests little change from abundance that was recorded in 1974. Responses to the Small Game Abundance Questionnaire indicated that the cooperators felt spruce grouse populations in the Interior were at low levels in 1975, and that little change had occurred since 1974. The count data further indicated that grouse populations in the region were relatively low compared to the 0.8 grouse recorded per mile during the fall of 1969.

Management Summary and Recommendations

See Spruce Grouse Survey and Inventory Report for 1973.

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UPLAND GAME ABUNDANCE

SURVEY -INVENTORY PROGRESS REPORT - 1975

Statewide

Techniques

The standard small game abundance questionnaire was mailed in mid-October 1975 to 258 people throughout the state, and by the end of January 1976 about 150 replies had been received. As in the past, the bulk of replies came from the Interior and Gulf regions. Replies were tabulated and analyzed as in previous years (see Game Bird Report, Vol. 5, 1965, pp. 2 and 3). A summary of responses was mailed to cooperators in March 1976.

Findings

Replies to the questionnaire are summarized in Appendix A.

Grouse populations were fairly low statewide, with moderate levels of abundance in the Alaska Peninsula and Southeastern Alaska. The highest grouse abundance was reported in Western Alaska, where moderately high numbers were reported.

Ptarmigan populations were reported at low levels and on the decline in the Interior, Southeast, and Gulf regions, moderately low in the Brooks Range with occasional large flocks in some areas, and in moderate to high levels in the Western region, the Alaska Peninsula, and on Kodiak Island. Cooperators reported an increase in numbers of ptarmigan on the Alaska Peninsula and in Western Alaska, while numbers remained about the same in the Brooks Range and on Kodiak Island.

Snowshoe hares were low everywhere but in Western Alaska and on the Alaska Peninsula. Western Alaska reported moderately high numbers of hares and an increasing population. Hares were apparently increasing in the Alaska Peninsula also, but their numbers declined in most other areas.

Management Summary and Conclusions

The standard small game questionnaire has, over the years, indicated that grouse, ptarmigan, and hare populations fluctuate considerably throughout the state, and it is felt that present hunting pressure has little effect on such fluctuations. No changes in seasons or bag limits are recommended at this time.

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Appendix A. Summary of replies to questionnaire on grouse, ptarmigan, and hare populations, 1975.

Area and Species	Present Abundance				Comparison with 1974			
	High	Mod.	Low	Index	More	Same	Fewer	Index
Brooks Range (8)								
Grouse (general)	0	0	3	1.0	0	2	0	5.0
Spruce Grouse	0	0	3	1.0	0	2	0	5.0
Ptarmigan	0	2	2	3.0	0	3	0	5.0
Rock Ptarmigan	0	0	2	1.0	0	1	0	5.0
Willow Ptarmigan	1	3	2	4.3	2	3	0	4.6
Snowshoe Hare	0	0	3	1.0	0	1	1	3.0
Western (12)								
Grouse (general)	1	2	0	6.3	2	2	0	7.0
Ruffed Grouse	2	1	0	7.7	3	1	0	8.0
Spruce Grouse	0	3	0	5.0	1	2	0	6.3
Ptarmigan (general)	4	3	2	5.9	4	0	2	6.3
Willow Ptarmigan	3	2	1	6.2	2	2	2	5.0
Snowshoe Hare	5	5	0	7.0	7	1	0	8.5
Alaska Peninsula								
Spruce Grouse	0	5	1	4.7	3	2	1	6.7
Ptarmigan (general)	3	4	1	6.0	3	3	2	5.5
Willow Ptarmigan	3	6	1	5.8	5	5	0	7.0
Snowshoe Hare	3	2	3	5.0	5	0	3	6.0
Kodiak (6)								
Ptarmigan (general)	3	2	1	6.3	2	1	2	5.0
Snowshoe Hare	1	1	2	4.0	1	0	2	3.7
Southeastern (15)								
Grouse (general)	0	5	1	4.3	2	0	2	5.0
Ruffed Grouse	0	0	2	1.0	0	1	1	3.0
Spruce Grouse	0	1	1	3.0	0	0	1	1.0
Blue Grouse	2	7	3	4.7	0	7	3	3.8
Ptarmigan (general)	0	1	7	1.5	0	4	3	3.3
Snowshoe Hare	0	0	4	1.0	0	1	2	2.3
Gulf (43)								
Grouse (general)	0	5	23	1.7	4	7	15	3.3
Ruffed Grouse	0	2	10	1.7	1	3	6	3.3
Spruce Grouse	0	9	23	3.1	7	12	13	4.3
Sharptail Grouse	0	2	9	1.7	2	2	6	3.4
Ptarmigan (general)	0	10	23	2.1	0	16	17	2.9
Rock Ptarmigan	0	2	11	1.6	1	7	7	3.4
Willow Ptarmigan	1	10	15	2.8	6	9	14	3.9
Whitetail Ptarmigan	0	1	6	1.6	1	4	3	4.0
Snowshoe Hare	0	7	32	1.7	4	10	25	2.8

Area and Species	Present Abundance				Comparison with 1974			
	High	Mod.	Low	Index	More	Same	Fewer	Index
Interior (47)								
Grouse (general)	0	10	33	1.9	12	15	11	5.1
Ruffed Grouse	0	7	31	1.7	13	12	6	5.9
Spruce Grouse	0	11	24	2.3	13	11	7	5.8
Sharptail Grouse	0	4	22	1.7	4	13	5	4.8
Ptarmigan (general)	0	11	27	2.2	3	18	13	3.8
Rock Ptarmigan	0	6	14	2.2	1	8	10	3.1
Willow Ptarmigan	0	6	15	2.1	3	8	9	3.8
Whitetail Ptarmigan	0	2	7	1.9	1	2	5	3.0
Snowshoe Hare	0	3	43	1.3	4	11	26	2.9
Statewide								
Grouse (general)	1	25	60	2.3	21	27	28	4.6
Ruffed Grouse	2	11	44	2.1	18	17	13	5.4
Spruce Grouse	0	29	52	2.4	24	29	22	5.1
Sharptail Grouse	0	8	32	1.8	6	18	11	4.4
Blue Grouse	2	7	3	4.7	0	7	3	3.8
Ptarmigan (general)	9	32	63	2.9	11	61	38	4.0
Rock Ptarmigan	2	10	28	2.4	2	20	17	3.5
Willow Ptarmigan	11	28	35	3.7	19	28	45	3.9
Whitetail Ptarmigan	2	5	13	2.8	3	10	8	4.0
Snowshoe Hare	9	18	87	2.3	21	24	59	3.5

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1974

Game Management Unit 11 - South side of Wrangell Mountains and eastern portion of Chugach Mountains

Seasons and Bag Limits

Unit 11	Aug. 10 - Dec. 31	Two goats

Harvest and Hunting Pressure

Fifty-two mountain goats (27 males, 24 females, 1 unknown sex) were reported taken during the 1974 season. Harvest report data for Unit 11 during 1972, 1973 and 1974 are compared in Appendices I and II. The goat harvest substantially increased during 1973 and 1974 when compared with the harvest of 1972. The total man days spent by successful hunters were 102 in 1972 (ave. 3.2 days) as compared to 252 in 1973 (ave. 4.5), an increase of 60 percent. In 1974 the number harvested remained nearly as large (declined 13 percent) and the hunting pressure decreased by 34 percent from 1973. Also, in 1973 and 1974 a greater percentage of the hunters took goats later in the season compared to 1972 (Appendix II).

A comparison of the harvest by subunits (not shown) suggests the distribution of the goat harvest correlated more with areas receiving heavy sheep hunting pressure than with areas containing more abundant goat populations. This reinforces an assumption that goats may serve as an alternate game species for many hunters who are primarily after sheep.

Subunit reporting data shows that about 50 goats were harvested in the Wrangell Mountains during 1973, and about 30 of these goats were taken in the McCarthy vicinity. Assuming a maximum sustained harvest level of 15 percent, a herd size of 200 goats would be required to sustain a harvest of 30 goats. Extrapolations from the number of goats counted during the 1973 sheep-goat survey (McIlroy 1974) indicates that there may be fewer than 200 goats in the area from Nikolai Butte to the Lakina River.

Of 46 reported kill locations, 43 (93 percent) were taken in the Wrangell Mountains. Of the 43 reported in the Wrangell Mountains, 25 (58 percent) were reported from the McCarthy vicinity.

Composition and Productivity

MacColl Ridge was selected as a sheep and goat trend count area. Twenty-eight goats were counted on MacColl Ridge during 1970, while 43

goats (33 adults, 10 kids) were counted there during 1973. On April 19, 1974, 44 goats were counted there with a composition of 41 adults and 3 kids. The ratio of kids/100 adults was 7.3 with percentage of kids in the total population being 6.8.

Management Summary and Conclusions

Overall, the goat harvest is light for the large area in which goats can be found in Unit 11. Goat herds are relatively small in certain areas within the Wrangell Mountains, however, and there is a possibility some of these areas are being overharvested by hunters who are primarily after sheep. Because of the difficulty anticipated in obtaining compliance by guides with subunit harvest restrictions, unit-wide restrictions will probably be more enforceable.

Recommendations

It is recommended that the bag limit on mountain goats be reduced from two to one and that the opening date of the season be delayed to September 1.

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APPENDIX I

A Comparison of Mountain Goat Harvest Data for Unit 11 During 1972, 1973 and 1974.

	1972	1973	1974
Total Hunters:	64	94	105
Number Successful Hunters (%):	32(50%)	55(60%)	44(42%)
Mean Number Days Hunted,			
Successful (sample size):	3.2(32)	4.5(49)	3.7(41)
Unsuccessful (sample size):	5.2(32)	5.8(38)	6.7(47)
Number Goats Killed:	37	59	52
Male Goats Harvestd (%)[a]:	13(35%)	36(61%)	27(52%)
No. Hunters Killing			
2 Goats (% of successful):	5(16%)	4(7%)	8(18%)
Unknown Sex (%):	0	0	1(2%)

a. Percentage male goats = (MM/MM+FF) x 100.

Prepared by: Ted Spraker, Game Biologist II and Carl McIlroy, Game Biologist III

APPENDIX II

A Comparison of the Chronologies of the Unit 11 Mountain Goat Harvests During 1972, 1973 and 1974 When Specified on Harvest Report.

	1972 Harvest		1973 Harvest	
Period	No.	Percent	No.	Percent
Aug. 10-20	13	35%	7	12%
Aug. 21-31	10	27%	9	15%
Sept. 1-10	8	22%	16	27%
Sept. 11-20	4	11%	11	18%
Sept. 21-30	0	-	9	15%
After Sept. 30	2	5%	3	5%
Date Unknown	0	-	4	8%
Total	37		59	

	1974 Harvest*	
Period	No.	Percent
Aug. 8-21	12	24%
Aug. 22-Sept. 4	3	6%
Sept. 5-18	13	25%
Sept. 19-Oct. 2	9	18%
After Oct. 2	14	27%
Total	51	

* Recording periods were changed to follow the recording system of IBM printout.

MOUNTAIN GOAT

SURVEY-INVENTORY PROGRESS REPORT - 1974

Game Management Unit 13 - Upper Nelchina, Upper Susitna, and Western half Upper Copper River Basins.

Seasons and Bag Limits

Unit 13	Aug. 10 - Dec. 31	Two goats

Harvest and Hunting Pressure

Sixteen mountain goats (9 males, 7 females) were reported taken during the 1974 season. Harvest data from harvest report returns are available for mountain goats for the 1972, 1973, and 1974 seasons (Appendix I).

The harvest of goats appears low and well-dispersed over the goat habitat. The low hunter success is expected because past inventory surveys have shown goats to be dispersed and not abundant in the Chugach Mountains and scarce in the Talkeetna Mountains. The high percentage of males in the harvest may be indicative of hunter selection and lightly-hunted goat populations in which males are available to hunters. It should be noted, however, that the sample size is very small.

Composition and Productivity

No recent goat composition counts have been made in Unit 13. Past inventory counts are summarized below.

Area	Date of Survey	Adults	Kid	Total
Tazlina to Klutina Lake:	Aug. 1959	14	1	15
Coal Creek to Nelchina Glacier:	July-Aug. 1968	--	-	23
Tazlina to Klutina Lakes:	Aug. 1969	--	-	71
Nelchina Glacier to Chitina:	Aug. 1969	100	10	110

These data illustrate the low goat density in the Chugach Mountains.

Management Summary and Conclusions

Harvest data for 1972, 1973 and 1974 indicate that mountain goats in Unit 13 are lightly hunted. The harvest appears low and well dispersed.

Although goat populations are greater in the Chugach than in the Talkeetna Mountains and do serve as an alternate game species to the sheep hunter, the relatively low densities of both species that are found cohabiting the same areas probably results in a low harvest of goats by sheep hunters. It is anticipated that goat populations will not be greatly influenced by continued hunting at the present level.

Recommendations

No change in season or bag limit is recommended.

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APPENDIX I

A COMPARISON OF MOUNTAIN GOAT HARVEST DATA IN UNIT 13 DURING 1972, 1973, AND 1974

HUNTING PRESSURE AND GOAT HARVEST

	1972	1973	1974
Total Hunters:	43	34	62
Successful Hunters (%):	16(37%)	12(35%)	16(26%)
Mean Days Hunted-Successful (sample size):	2.7(Unk.)	4.4(11)	4.4(14)
Mean Days Hunted-Unsuccessful (sample size):	3.4(Unk.)	4.5(11)	4.8(40)
Hunters Killing 1 Goat (%):	14(87.5%)	12(100%)	15(94%)
Hunters Killing 2 Goats (%):	2(12.5%)	0	1(6%)
Number of Goats Killed	18	12	16
Number (%) Males Killed:	13(72%)	9(75%)	9(56%)

CHRONOLOGY OF THE HARVEST WHEN SPECIFIED

Period	1972 Harvest		1973 Harvest*	
	Number	Percent	Number	Percent
Aug. 10-20	8	44%	2	17%
Aug. 21-31	2	11%	0	-
Sept. 1-10	1	6%	3	25%
Sept. 11-20	3	17%	1	8%
Sept. 21-30	1	6%	0	-
After Sept. 30	0	-	5	42%
Unk. Date	3	17%	0	-
Total	18		11	

Period	1974 Harvest	
	Number	Percent
Aug. 15-21	1	6%
Aug. 22-28	5	31%
Aug. 29-Sept. 4	5	31%
Sept. 5-11	0	0
Sept. 12-18	3	19%
After Sept. 30	2	13%
Unk. Date	0	-
Total	16	

* One goat (8%) was reported taken before season on Aug. 9.

Submitted by: Ted Spraker, Game Biologist II

APPENDIX II

HARVEST LOCATION (WHEN SPECIFIED) OF MOUNTAIN GOATS IN UNIT 13

	1972 Harvest		1973 Harvest		1974 Harvest	
	Number	Percent	Number	Percent	Number	Percent
Chugach Mountains,						
Tiekel River-Kimball Pass:	2	11%	0	--	1	6%
Klutina-Tonsina:	2	11%	0	--	8	50%
Tazlina-Nelchina:	6	33%	4	33%	0	-
S. Fork Matanuska-Coal Cr.	6	33%	1	8%	5	31%
Talkeetna Mountains:	0	-	0	-	0	-
Chulitna Hills:	0	-	1	8%	0	-
Unknown Kill Location:	2	11%	6	50%	2	13%
Totals	18		12		16	

Prepared by: Ted Spraker, Game Biologist II and Carl McIlroy, Game Biologist III

SURVEY-INVENTORY PROGRESS REPORT - 1974

Game Management Units 18-26 - Coastal Waters

Harvest and Hunting Pressure

Under the Federal Marine Mammal Protection Act passed October 21, 1972, marine mammals in Alaska may be harvested only by Alaskan Natives. No hunting restrictions are imposed on Natives as long as they do not harvest the animals in a wasteful manner and use the animals for subsistence or arts and crafts.

Along the coast in Units 18 through 26 there are 42 settlements. In each settlement 50 or more individuals spend considerable time seal hunting. Manpower constraints precluded monitoring harvests at each village, so certain villages were selected as sampling bases from which harvests could be estimated for the entire Unit 18-26 area. Because of their position along the coast and their advantageous working conditions, Hooper Bay, Shishmaref, Savoonga, and Point Hope were selected as sample villages. During the years when harvest statistics, based on bounty records, were most reliable, hunters from these villages took an average of 49 percent of the annual reported kill of hair seals.

In early 1973 through 1974 a resident Native was employed in each of the four villages to record seal harvests and collect specimen material. At the end of each month collectors submitted appropriately tagged specimens and reports detailing the harvest during that period. Occasional visits were made to each village to check the accuracy of harvest data being collected and to make noted corrections when necessary.

During calendar year 1974 the four village recorders tabulated a known harvest of 1805 hair seals. Monthly harvests showing sex and species composition are summarized for Hooper Bay, Appendix I; Savoonga, Appendix II; Shishmaref, Appendix III; Point Hope, Appendix IV; and the total for all villages in Appendix V.

Contributions of village recorders varied considerably; some did an excellent job and tabulated a high percentage of the village take, while others were less thorough. Interviews were conducted to determine the approximated number of seals killed in excess of those reported by village recorders. The total harvest at the four villages was, therefore, recalculated and estimated at 2655 hair seals (Table 1).

Table 1. Estimated hair seal harvest per village sampled, 1974.

Village	Actual recorded harvest	Estimated additional animals taken	Total estimated harvest
Hooper Bay	348	100	448
Point Hope	377	350	727
Shishmaref	645	50	695
Savoonga	435	350	785
Total	1805	850	2655

Throughout the 1960's harvests from the sample villages accounted for approximately 50 percent of the annual harvests for the Unit 18-26 area. This may no longer be the case. To interpret the corrected harvest levels from the sample villages, a survey was conducted at other villages in the Yukon Delta, and a biologist was stationed at Diomede (May through June) to make careful observations on numbers of seals killed.

The harvest at Little Diomede through June 30 was 129 seals (108 ringed, 2 spotted and 19 bearded). Because few seals are taken during the remainder of the year, the projected yearly kill at Diomede was estimated to be 150 animals. The average annual 1962-1967 harvest was 249 seals. Although weather, ice conditions and other environmental factors have considerable influence on the success during any given year, it appeared that seal hunting effort at Diomede is roughly half of that recorded for the 1960's. Discussions with local hunters at Diomede further substantiated the decline in annual harvests. Interviews conducted in other villages (Scammon Bay, Alakanuk and Emmonak) revealed similar declines in harvests from those of the 1960's. On the average, each household took 3 to 6 seals (mostly in the spring) in 1974, compared to a harvest of 9 to 18 per household during the early 1960's.

Although a more comprehensive coastal survey is needed, it appeared that harvests from the sample villages represented approximately 25-33 percent of the total annual seal harvest for Units 18-26 during 1974. Assuming this is the case, the total kill during 1974 was on the order of 7,000 to 10,000 seals. Burns (1973) estimated the annual seal kill during 1972 of 13,525 animals. Grauvogel (unpublished data) estimated the annual seal kill in 1973 to be approximately 7,000 seals. Even a maximum harvest estimate for 1974 (10,000) seems a significant decrease from the early 1970's.

Of the known harvest of 1,805 hair seals recorded in the 4 sample villages, ringed seals comprised 65 percent of the harvest (1,173); bearded seals 20 percent (362); spotted seals 14 percent (255); and ribbon seals 0.8 percent (15). These results were similar to the 1973 harvest with respect to species composition. The species composition of the kill reflects seasonal availability rather than hunter preference. Ringed seals are hunted year round with the exception of a few summer months; bearded and spotted seals are available on a regular basis only during a few months in the spring and fall. As a general rule ringed seals are killed predominately from September through June, bearded seals from April through July, and spotted seals from June through October.

Males comprised 56 percent of the ringed seal harvest, 53 percent of the spotted seal harvest, and 48 percent of the bearded seal harvest. A similar sex composition was recorded for these species harvested during 1973. Males of these species may in fact constitute a slightly larger proportion of the population, but the sex composition of the harvest may also be influenced by the relatively greater mobility among males as reported by Burns (1967).

Management Summary and Recommendations

Data collected during 1973 and 1974 indicated that the seal harvest in northwestern Alaska numbered less than 10,000 each year. Burns (1973) estimated the ringed seal population in the Bering-Chukchi Sea to be 250,000, the bearded seal population to be 300,000 and the spotted seal population to be 200,000; thus the total population for the three species is estimated at 750,000 animals. McLaren (1962) found that a safe annual sustainable kill for ringed seals on Baffin Island was eight percent of the total population. The eight percent figure is considered a safe harvest level for other seal species with similar reproductive potential. Harvest in Alaska represented a small percentage of the estimated total population, and even with Russia's kill of approximately 10,000 animals, the total Bering-Chukchi Sea harvest of 20,000 annually was well within the limits recommended by McLaren.

Yearly harvests in northwestern Alaska were maintained at a level near 15,000 during the 1960's with no apparent detrimental effects to any of the four resident seal species. Since the current harvest has decreased at least a third, it is unnecessary to maintain the present Federal restrictions on hunting practices. All Alaskan residents should be allowed to take seals with the same restrictions as Alaskan Natives. Barter of seal skins and seal products within the state should be legalized. Until the harvest exceeds 25,000 seals annually, or eight percent of the estimated population, restrictions on the taking of seals in Alaska are unwarranted.

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APPENDIX II

SEAL HARVEST BY SPECIES AT SAVOONGA, 1974

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Ring Seal M	15	8	7	4	14	9				3	24	95	179
Ring Seal F	3	4	4	3	6	20				8	35	38	121
Ring Seal Unk										1			1
Total Ring Seal	18	12	11	7	20	29				12	59	133	301
Bearded M										1		1	2
Bearded F										2	1		3
Bearded Unk										3			3
Total Bearded Seal	0	0	0	0	0	0	0	0	0	6	1	1	8
Spotted M			2	1	6	1	11	6		31	9	1	68
Spotted F			2	1	9	1	4			15	2		34
Spotted Unk									16	8			24
Total Spotted Seal	0	0	4	2	15	2	15	6	16	54	11	1	126
Ribbon Seal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Seals Killed (all species)	18	12	15	9	35	31	15	6	16	72	71	135	435

APPENDIX I

SEAL HARVEST BY SPECIES AT HOOPER BAY, 1974

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Ring Seal M		1	8	20	19	2	1		1	5	10		67
Ring Seal F		3	5	20	14			1	1	14	9		67
Ring Seal Unk											4		4
Total Ring Seal	0	4	13	40	33	2	1	1	2	19	23	0	138
Bearded M			1	39	17		1	2	6	12	2		80
Bearded F				30	9		1	4	16	6	7		73
Bearded Unk											1		1
Total Bearded Seal	0	0	1	69	26	0	2	6	22	18	10	0	154
Spotted M	1			1				1		8	3		14
Spotted F	2	1			1			3	2	14	3		26
Spotted Unk											2		2
Total Spotted Seal	3	1	0	1	1	0	0	4	2	22	8	0	42
Ribbon Seal	0	0	0	0	0	0	0	0	0	2	12	0	14
Total Number of Seals Killed (all species)	3	5	14	110	60	2	3	11	26	61	53	0	348

APPENDIX III

SEAL HARVEST BY SPECIES AT SHISHMAREF, 1974

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Ring Seal M						68				40	19		127
Ring Seal F					10	49				50	15		124
Ring Seal Unk						186				12	5		203
Total Ring Seal	0	0	0	0	10	303	0	0	0	102	39	0	454
Bearded M										19			19
Bearded F										37			37
Bearded Unk						36				11			47
Total Bearded Seal	0	0	0	0	0	36	0	0	0	67	0	0	103
Spotted M						1				23			24
Spotted F						5				30			35
Spotted Unk									22	6			28
Total Spotted Seal	0	0	0	0	0	6	0	0	22	59	0	0	87
Ribbon Seal	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Number of Seals Killed (all species)	0	0	0	0	10	345	0	0	22	228	39	0	645

APPENDIX IV

SEAL HARVEST BY SPECIES AT POINT HOPE, 1974

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Ring Seal M	42	6				3							51
Ring Seal F	18					9							27
Ring Seal Unk		5	60	25	15	92				5			202
Total Ring Seal	60	11	60	25	15	104	0	0	0	5	Unk	Unk	280
Bearded M						5							5
Bearded F						4							4
Bearded Unk						88							88
Total Bearded Seal	0	0	0	0	0	97	0	0	0	0	Unk	Unk	97
Spotted M													
Spotted F													
Spotted Unk													
Total Spotted Seal	0	0	0	0	0	0	0	0	0	0	Unk	Unk	0
Ribbon Seal	0	0	0	0	0	0	0	0	0	0	Unk	Unk	0
Total Number of Seals Killed (all species)	60	11	60	25	15	201	0	0	0	5	Unk	Unk	377

APPENDIX V

SEAL HARVEST BY SPECIES AT ALL VILLAGES MONITORED, 1974

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Ring Seal M	57	15	15	24	33	82	1		1	48	53	95	424
Ring Seal F	21	7	9	23	30	78		1	1	72	59	38	339
Ring Seal Unk		5	60	25	15	278				18	9		410
Total Ring Seal	78	27	84	72	78	434	1	1	2	138	121	133	1173
Bearded M			1	39	17	5	1	2	6	32	2	1	106
Bearded F				30	9	4	1	4	16	45	8		117
Bearded Unk						124				14	1		139
Total Bearded Seal	0	0	1	69	26	133	2	6	22	91	11	1	362
Spotted M	1		2	2	6	2	11	7		62	12	1	106
Spotted F	2	1	2	1	10	6	4	3	2	59	5		95
Spotted Unk									38	14	2		54
Total Spotted Seal	3	1	4	3	16	8	15	10	40	135	19	1	255
Ribbon	0	0	0	0	0	0	0	0	0	3	12	0	15
Total Number of Seals Killed (all species)	81	28	89	144	120	579	18	17	64	367	163	135	1805

Game Management Units 17-26 - Coastal Waters

Harvest and Hunting Pressure

On October 21, 1972, Congress enacted the Marine Mammal Protection Act which limited the right to harvest marine mammals to Alaskan Natives. There were no hunting restrictions imposed on the Natives provided that: 1) take was not accomplished in a wasteful manner, and 2) the animals were used for subsistence or their raw products for production of articles for the arts and crafts industry.

With few exceptions the passage of the Marine Mammal Act has had little effect on Native hunting methods. In fact, the Act allows Natives to be less selective in taking walruses. Whereas former State statutes had restricted hunters to five female walruses per year, Federal law now permits Natives to kill an unlimited number of walruses of any age or sex.

In Units 17 through 26 there are 42 coastal villages with resident Natives who have taken walruses in the past. A high percent of the annual kill occurs at 15 coastal sites, and hunters from 4 villages usually account for more than 70 percent of the total harvest.

The 1974 harvest was determined by stationing investigators at the major hunting sites of Diomede, Savoonga, Gambell, Nome (King Island), Brevig Mission, Wales and Shishmaref. Harvest information was obtained from other areas by correspondence with selected village residents.

During 1974 the number of walruses returned to the village was estimated to be 1410; the actual kill, however, was much higher. Most hunters attempted to take walruses while the animals rested on the pack ice. This requires a well placed shot to immobilize the animal immediately and prevent its escape into the sea. Loss of animals crippled under these circumstances was high. Walruses were also hunted in the water when ice was scarce or lacking. This technique also results in a high loss from crippling, particularly of large bulls. Loss varies according to the experience of the crew and hunting conditions, but it usually represents 1.5 to 2.5 times the retrieved kill. Hence, the annual harvest (retrieved and lost) was estimated to be 2549 walrus in 1974.

Although the rate of loss appeared high, considering the circumstances under which the walruses were taken, it was not excessive. In the last few years there has been significant improvement in hunting techniques, particularly at villages where annual harvests exceed 100 walruses. Hunters used rifles of larger caliber and there has been a sincere effort to reduce lossess from crippling. When pods consisted of 15 walruses or less, it was easier for shooters to concentrate on specific individuals

and a higher percentage of animals were killed outright. Furthermore, wounded animals from small groups are easier to follow and dispatch than wounded individuals from large groups.

In recent years considerable attention has been given to the number of walrus carcasses found on Alaskan beaches. Now that the Marine Mammal Act specifically prohibits wanton waste, the problem has become more sensitive and has attracted national attention. In July representatives from the U. S. Fish and Wildlife Service conducted an aerial beach survey from Nome to Point Hope. They located at least 111 fresh carcasses, most of which were found along the Seward Peninsula from Wales to Cape Espenberg. Although a significant number were headless, beachcombing by plane and boat is popular, and it is likely that a majority of the heads were removed for ivory after the walruses had washed onto the beach. In view of the high rate of loss, the 100 carcasses on the beach are not considered excessive. Regardless of efficiency among hunters, walruses will continue to be lost and carcasses of these animals will be evident along the shoreline. This situation is unavoidable as long as this species is taken by subsistence hunters.

In 1974, as in past years, a majority of the walruses retrieved were bulls. The 1974 harvest (retrieved animals) was comprised of 1097 males (78%), 263 females (19%) and 50 calves (3%).

Composition of the retrieved harvest was not representative of the true composition of the population. Parturient females and those supporting young calves (designated as nursery herds) migrate north as a distinct entity and are first to pass the major hunting areas. For the most part this segment of the population is available only to hunters in the Bering Strait. Most hunters in this area are not particularly interested in taking a large number of cows or calves. The majority of the male population follows the nursery herd usually one to four weeks later, and typically the male migration occurs over a longer period of time. At this time hunting conditions are usually favorable; therefore, relatively large numbers of bulls are harvested.

The 1974 retrieved harvest at each major hunting site is summarized in Appendix I. In addition to hunter-induced mortality, accidents cause a considerable number of walrus deaths. In 1973, 80 to 130 walrus carcasses were found on the beach at Punuk Islands (south of St. Lawrence Island). In 1974 Natives from the village of Savoonga found approximately 20 walrus carcasses. The cause of these losses remains unknown, but it is almost certain they did not die from bullet wounds. Since walruses haul out on the beach in thousands at this location, death may have been caused by trampling when the herds became frightened. Other investigators have suggested the animals may have died as a result of wounds inflicted from natural predators, such as killer whales. While this type of mortality presently has an insignificant impact on total population, the phenomenon certainly warrants further study.

Within the last decade the Eskimo's life style has changed from a subsistence to a cash-oriented economy. As this change has taken place, utilization of traditional Native food has declined, and lower

annual harvests of most species of marine mammals have resulted. The annual kill of walruses, however, has not followed this pattern because Natives have met their increasing demands for cash by marketing ivory. Ivory carving has evolved into a profitable business, and as the demand for ivory has continued to exceed the supply, walrus harvests have remained high.

Changing weather and ice conditions during the last 16 years have caused fluctuation in the annual kill from a low of 882 to a high of 2300, but such extremes are the exception. Since 1959 annual harvests have varied little from the 16-year average of 1612 animals. Furthermore, annual harvests at individual villages have also remained relatively constant.

The majority of the annual retrieved harvest (93%) occurred during the period May-July (Appendix II). Fall and winter hunting accounted for only three and four percent, respectively, of the annual harvest.

Residents of Gambell, Savoonga, King Island (Nome) and Little Diomede are usually responsible for more than 50 percent of the total yearly kill. In 1974 the combined harvest from these 4 villages accounted for 73 percent (1029) of the harvest and, during the spring migration alone, these villages took 67 percent (945) of the total 1974 harvest.

Most walruses are taken in a relatively short time span (usually six weeks or less). During this period detailed harvest statistics were maintained at three villages: Gambell, Savoonga, and Little Diomede (Appendix III).

At Gambell the spring harvest commenced on April 21, and the last animal was taken on June 1. However, 77 percent of the total spring kill (228 walruses) was taken during a 10-day period (May 13 to 23). Of the 55 possible hunting days during the season, crews had favorable hunting conditions on only 23 days. Even when hunting conditions were good only 8-10 of the 18 crews operating at Gambell normally went out to hunt. Their combined crews expended 8569 man-hours in the field, and their boats were used for 1665 hours in the pursuit of walruses. Therefore, crews spent an average of 7.3 hours hunting for each walrus retrieved.

Compared to other years, the winter and spring harvest at Savoonga was poor because of poor hunting conditions. There were only eight good hunting days during the season. This resulted in a meager harvest of 173 walruses. The first walrus was taken on May 19. Crews expended approximately 4034 man-hours and 804 boat-hours. Thus, crews spent 4.6 hours hunting per walrus retrieved.

Despite poor weather conditions early in the season, 414 walruses were taken by hunters residing at Little Diomede. Crews expended 5971 man hours and 804 boat hours during the season. Therefore, 1.6 hours of hunting were spent per walrus retrieved.

At Nome conditions were such that hunters could operate 20 to 40 miles offshore. At those distances hunters were within range of walrus pods migrating north, and during May approximately 130 animals were harvested and retrieved. During June only three walruses were taken by Nome hunters.

Composition and Productivity

Although there were no formal surveys to determine sex and age composition of walruses migrating during 1974, investigators working at the principal hunting sites during spring made general observations on herd composition.

For the past few years there has been an apparent decrease in walrus productivity. This was again true in 1974; both Native hunters and Department biologists saw a significant number of barren or single cows in most nursery herd pods. Hunters at Savoonga thought the low number of calves was a product of high mortality resulting from cold north winds during April and May. These conditions have existed in the past without a corresponding high occurrence of barren cows. Therefore, other factors were probably responsible. Current estimates place the walrus population between 110,000 and 150,000 animals. Preliminary information indicates the herd is approaching the carrying capacity of the Bering and Chukchi Seas. Reproduction may have declined as a result of increased competition for the available food.

Management Summary and Recommendations

Historical evidence indicates that the walrus population has steadily increased during the twentieth century. Since the harvest of walruses by Natives is well below the biological productivity of the species and the walrus population is currently near its carrying capacity, there is no biological justification for limiting the kill to Alaskan Natives. All Alaskan residents should have equal opportunity to utilize this game resource. Guided hunting of walruses by residents and nonresidents once provided needed cash resources to the local economies. This could again be the case without adversely affecting the walrus population if a properly controlled sport harvest were initiated.

If the statewide harvest exceeds 2500 animals in any year, the bag limit should be reduced or an area quota established to insure an acceptable level of harvest.

Efforts should be made to minimize loss from crippling. This should be accomplished through educational programs in rural areas, establishing minimum caliber size for rifles, and requiring at least two serviceable harpoons per hunting boat.

Potential and established walrus hauling grounds should be set aside as State sanctuaries to provide sites where walrus may be viewed in their natural habitat.

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Appendix I. Retrieved and total kill of walrus in Alaska, 1974.

Location	Walrus Retrieved	Composition of Harvest*						Estimated Percent Hunting Loss	Estimated Total Kill
		Males		Females		Calves			
		No.	%	No.	%	No.	%		
Yukon-Kuskokwim	70	50	71	15	21	5	8	40	116
Hooper Bay	3	3	100	0	0	0	0	30	4
Nome	130	94	72	31	24	5	4	60	325
King Island	5	5	100	0	0	0	0	40	7
Gambell	261	180	69	59	23	22	8	40	431
Savoonga	204	152	75	49	24	3	1	50	408
Little Diomede	434	377	87	52	12	5	1	30	621
Wales	16	14	88	1	6	1	6	50	32
Teller	2	2	100	0	0	0	0	50	4
Brevig Mission	13	13	100	0	0	0	0	50	26
Shishmaref	105	99	94	6	6	0	0	60	263
Kivalina	5	5	100	0	0	0	0	40	8
Pt. Hope	69	17	25	43	62	9	13	50	138
Wainwright	38	36	95	2	5	0	0	40	63
Barrow	35	35	100	0	0	0	0	50	70
Other Areas	20	15	75	5	24	0	0	40	33
TOTALS	1410	1097	78	263	19	50	3	44.7	2549

*The columns "males" and "females" include all age groups with the exception of calves of the year.

Appendix II. Retrieved kill of walrus in Alaska by season, 1974.

LOCATION	WINTER			SPRING AND SUMMER				FALL			1974 YEARLY
	M	F	TOTAL	M	F	CALF	TOTAL	M	F	TOTAL	TOTAL
Yukon-Kuskokwim	3	2	5	47	13	5	65	0	0	0	70
Hooper Bay	0	0	0	3	0	0	3	0	0	0	3
Nome	0	0	0	94	31	5	130	0	0	0	130
King Island	0	0	0	5	0	0	5	0	0	0	5
Gambell	15	2	17	150	56	22	228	13	3	16	261
Savoonga	12	3	15	127	43	3	173	13	3	16	204
Little Diomede	3	0	3	364	45	5	414	10	7	17	434
Wales	0	0	0	10	1	1	12	4	0	4	16
Teller	0	0	0	2	0	0	2	0	0	0	2
Brevig Mission	0	0	0	13	0	0	13	0	0	0	13
Shishmaref	0	0	0	99	6	0	105	0	0	0	105
Kivalina	0	0	0	5	0	0	5	0	0	0	5
Pt. Hope	0	0	0	16	39	9	64	1	4	5	69
Wainwright	0	0	0	36	2	0	38	0	0	0	38
Barrow	0	0	0	35	0	0	35	0	0	0	35
Other Areas	0	0	0	15	5	0	20	0	0	0	20
TOTAL	33	7	40	1021	241	50	1312	41	17	58	1410

% OF YEARLY HARVEST	WINTER	SPRING AND SUMMER	FALL	TOTAL
	2.9%	93.0%	4.1%	100%

Appendix III. Spring walrus harvest, 1974.

Location	Boat Hours	Man Hours	Harvest				Man Hours/ Walrus	Boat Hours/ Walrus
			M	F	Calves	Total		
Gambell	1,665	8,569	150	56	22	228	37.6	7.3
Savoonga	804	4,034	127	43	3	173	23.3	4.6
Little Diomede	674	5,971	362	46	6	414	14.4	1.6
TOTALS	3,166	18,574	639	145	31	815		