ALASKA DEPARTMENT OF FISH AND GAME
JUNEAU, ALASKA

STATE OF ALASKA
William A. Egan, Governor

DEPARTMENT OF FISH AND GAME
James W. Brooks, Commissioner

DIVISION OF GAME
Frank Jones, Director

ANNUAL REPORT OF SURVEY-INVENTORY ACTIVITIES
PART III. FURBEARERS, SMALL GAME AND RAPTORS, WOLF, WOLVERINE AND BLACK BEAR

Edited and compiled by
Donald E. McKnight, Research Chief

Volume IV
Federal Aid in Wildlife Restoration
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(Printed May 1974)

MEMORANDUM OF TRANSMITTAL

May 1974

TO: James W. Brooks, Commissioner
Alaska Department of Fish and Game

FROM: Franklin F. Jones, Director
Division of Game
Alaska Department of Fish and Game
Juneau

SUBJECT: Annual Report of Survey-Inventory Activities

In 1969 the Game Division initiated a series of annual reports related specifically to survey and inventory activities conducted by staff biologists each year. Surveys and inventories include all routine data collections directed toward assessment of the status of game populations and toward the determination of annual game harvests. These reports include study results and conclusions and, when applicable, recommended hunting regulation changes.

Because experience has shown that these reports are of interest to citizens unfamiliar with Alaska game management unit boundaries, a map showing these boundaries is included in each report. Information in these reports is organized by game species and management units. This year a brief summary of report contents has been added.

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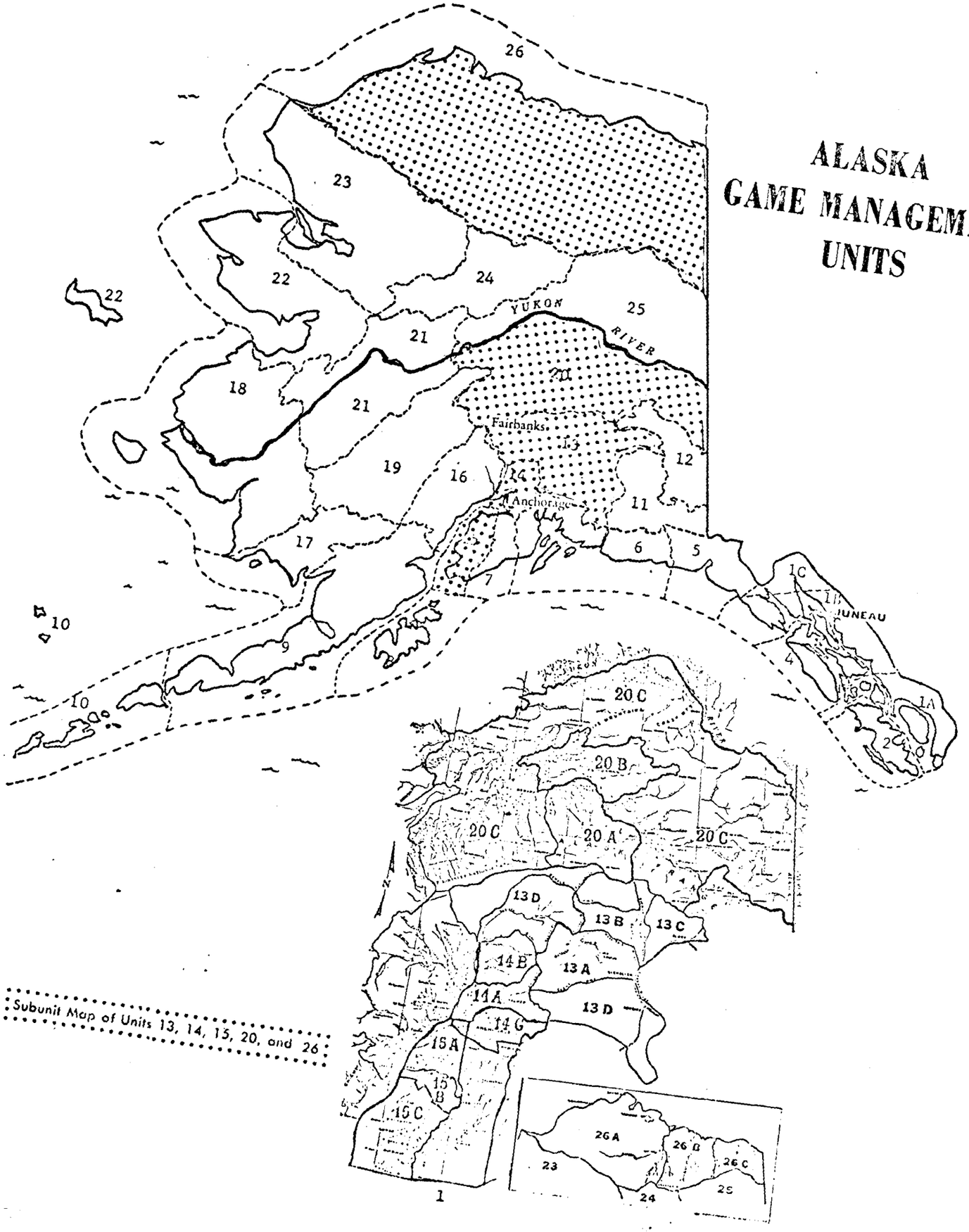
ALASKA GAME MANAGEMENT UNITS



Subunit Map of Units 13, 14, 15, 20, and 26

STATEWIDE HARVESTS AND POPULATION STATUS

Wolf

Hunters and trappers harvested 1,069 wolves during the 1972-73 seasons. Shooting from the ground and trapping were the prevalent methods of taking wolves during this period (41.8% and 40.0% of the total harvest, respectively), and snares accounted for another 16.3 percent of the harvest. Of 1,028 wolves of known sex, 572 were males and 456 were females. The bulk of this harvest (61.2%) occurred during January, February and March 1973, with March being the most productive month (272 animals or 25.4 % of total harvest). Game Management Unit 20 supported a harvest of 296 wolves during this period.

With no aerial permits being issued during this period, the wolf harvest declined considerably from that of the previous year (1971-72 harvest was 1,335 animals). Although there were apparently slight declines in wolf populations in Southeastern Alaska, related to diminished deer herds, wolves increased in numbers or remained stable over much of the state.

Wolverine

The reported 1972-73 wolverine harvest in Alaska was 946 animals. Trapping was the prevalent method of taking this species, accounting for 757 animals or 80 percent of the total harvest. Most wolverine (85.6%) were taken during the months of December, January, February and March. Of 898 animals of known sex 583 were males and 315 were females.

Although little is known of Alaska's wolverine populations it appears that, with a few local exceptions, exploitation rates have had little effect on them.

Black bear

A total of 501 black bear hides were sealed during this period. Because this was the first year of broadened sealing requirements for this species, and because sealing is still not required in many units, this harvest figure is very low.

Black bear populations remained essentially stable statewide.

Small Game and Furbearers

Grouse and ptarmigan populations remained low in much of the state. Snowshoe hare populations were moderate and decreasing in the Interior and on the Alaska Peninsula but remained fairly high in Gulf areas (Kenai Peninsula and Matanuska-Susitna area). Harvest figures for most furbearer species are, as yet, unavailable on a statewide basis for this period. Increased fur prices resulted in considerably more trapping pressure than during past years, however.

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 1 - Southeast Mainland

Seasons and Bag Limits

Hunting	No closed season	No limit
Trapping	Nov. 1 - April 30	No limit

Harvest and Hunting Pressure

Southeast Alaska is heavily forested and this eliminates almost all hunting directed specifically toward wolves. Almost all wolves taken by shooting are taken incidental to other activities or while hunting other species. During the previous year (1971-72), 31 percent of the 97 wolf taken in Unit 1 were taken by ground shooting, and during this report period (1972-73), 49 percent of the 35 wolves taken were shot from the ground. The increase in percent of wolves shot is mainly a result of reduced trapping effort this past year.

Trapping accounts for the bulk of the wolf harvest in Unit 1. Beach sets are used almost exclusively and trap lines are operated from boats and airplanes, with the pilot-trappers accounting for most of the total take. Snares are rarely used.

The ground shooting portion of the harvest probably remains fairly constant from year to year while the trapping take fluctuates with fur prices and bounty payments. The few pilot-trappers who take most of the wolves are trapping for money and the loss of the $50.00 bounty during the 1972-73 season substantially reduced the wolf harvest by making the monetary return less attractive to these few persons.

Wolf populations are undoubtedly reduced from previous years because of low deer numbers and this reduction in animals is reflected in the lowered wolf harvest.

The harvest from 1971-72, when bounty payments were being made, may be biased in favor of Unit 1. Only those wolves taken in the unit in which the hunter or trapper resided were eligible for the bounty payment. Certainly some wolves taken in Unit 2 were reported taken in Unit 1 by persons residing in Ketchikan which is in Unit 1. During 1972-73 no bounty payments were made and no reason existed for falsely reporting the unit taken.

Recording of pelage color varies greatly between recorders, particularly for the brown and gray catagories and consequently the color tabulation should probably be used only to separate blacks from other color phases.

Finally, the total harvest figure for 1972-73 may be artificially low.

While no bounty was paid this year, money was appropriated for 1973-74, and some hides are possibly being held in hope of being bountied during the coming year.

Appendices I and II provide the breakdown of the wolf harvest for fiscal years 1972-73 and 1971-72. Past annual wolf harvests by unit are presented in Appendix III.

Composition and Productivity

No data available.

Management Summary and Recommendations

No change in seasons and bag limits is recommended.

Submitted by: Robert E. Wood, Game Biologist III

APPENDIX I.

WOLF 1972-73

Unit 1

Harvest

Males - 14 Females - 17 Unknown - 4 Total - 35

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	5	14.3
August	2	5.7	February	5	14.3
September	1	2.9	March	0	0.0
October	2	5.7	April	5	14.3
November	5	14.3	May	3	8.6
December	7	20.0	June	0	0.0
			Unknown	0	0.0
			Total	35	100.1

Method of Take	Number	Percent
Ground Shooting	17	48.6
Trapping	18	51.4
Total	35	100.0

Color of Wolves Taken	Number	Percent
White	0	0.0
Brown	9	25.7
Gray	14	40.0
Black	12	34.3
Total	35	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

Appendix II

WOLF 1971-72

UNIT 1

Harvest

Males - 58 Females - 35 Unknown - 4 Total - 97

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	February	20	20.6
August	1	1.0	March	18	18.6
September	4	4.1	April	20	20.6
October	7	7.2	May	2	2.1
November	8	8.2	June	1	1.0
December	6	6.2	Unknown	0	0.0
January	10	10.3	Total	97	99.9

Method of Take	Number	Percent
Ground Shooting	30	30.9
Trapping	65	67.0
Snaring	1	1.0
Unknown	1	1.0
Total	97	99.9

Submitted by: Kenneth W. Pitcher, Game Biologist III

APPENDIX III

Alaska Wolf Harvest

X Bounty Records * Through June 1, 1966 **From Aerial Permits & Bounty Records
*** Mandatory Sealing

	YEAR													
Unit	X 59-60	X 60-61	X 61-62	X 62-63	X 63-64	X 64-65	X* 65-66	X 66-67	X 67-68	X 68-69	** 69-70	** 70-71	*** 71-72	*** 72-73
1			67	23	36	36	17	24	53	41	53	67	97	35
2			12	43	53	57	50	66	78	113	83	59	42	29
3			18	26	37	27	52	40	82	15	72	38	57	24
5					1	4	7	3	6	8	2	10	2	5

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 2 - Prince of Wales Island

Seasons and Bag Limits

Hunting	No closed season	No limit
Trapping	Nov. 1 - April 30	No limit

Harvest and Hunting Pressure

Twenty-nine wolves were reported taken in Unit 2 during fiscal year 1972-73. There has been a steady decline in the Unit 2 wolf harvest since the high of 113 taken in 1968-69.

Composition and Productivity

No data available.

Management Summary and Recommendations

No change in seasons and bag limits is recommended.

Submitted by: Robert E. Wood, Game Biologist III

Appendix I

WOLF 1972-73

Unit 2

Harvest

Males - 13 Females - 15 Unknown - 1 Total - 29

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	8	27.6
August	0	0.0	February	2	6.9
September	0	0.0	March	1	3.4
October	0	0.0	April	7	24.1
November	2	6.9	May	0	0.0
December	9	31.0	June	0	0.0
			Unknown	0	0.0
			Total	29	99.9

Method of Take	Number	Percent
Ground Shooting	3	10.3
Trapping	18	62.1
Unknown	8	27.6
Total	29	100.0

Color of Wolves Taken	Number	Percent
White	0	0.0
Brown	3	10.3
Gray	24	82.8
Black	2	6.9
Total	29	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

Appendix II

WOLF 1971-72

UNIT 2

Harvest

Males - 19 Females - 18 Unknown - 5 Total - 42

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	February	6	14.3
August	1	2.4	March	3	7.1
September	2	4.8	April	2	4.8
October	3	7.1	May	1	2.4
November	7	16.7	June	1	2.4
December	4	9.5	Unknown	8	19.0
January	4	9.5	Total	42	100.0

Method of Take	Number	Percent
Ground Shooting	15	35.7
Trapping	27	64.3
Total	42	100.0

Submitted by: Kenneth W. Pitcher, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 3 - Petersburg, Wrangell area

Seasons and Bag Limits

Hunting	No closed season	No limit
Trapping	Nov. 1 - April 30	No limit

Harvest and Hunting Pressure

The wolf harvest in Unit 3 as well as those of Units 1 and 2 is essentially dependant upon the trapping efforts of a few individuals. Large fluctuations occur simply because one or two individuals may trap one year and not the next. It is quite possible the elimination of the bounty last year was the primary cause of the 58 percent drop in harvest.

Appendices I and II contain harvest data for 1972-73 and 1971-72.

Composition and Productivity

No data available.

Recommendations

No changes in seasons or bag limits are recommended.

Submitted by: Robert E. Wood, Game Biologist III

Appendix I

WOLF 1972-73

Unit 3

Harvest

Males - 13 Females - 11 Unknown - 0 Total - 24

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	6	25.0
August	0	0.0	February	3	12.5
September	0	0.0	March	4	16.7
October	1	4.2	April	8	33.3
November	0	0.0	May	0	0.0
December	2	8.3	June	0	0.0
			Unknown	0	0.0
			Total	24	100.0

Method of Take	Number	Percent
Ground Shooting	5	20.8
Trapping	18	75.0
Snaring	1	4.2
Total	24	100.0

Color of Wolves Taken	Number	Percent
White	0	0.0
Brown	1	4.2
Gray	17	70.8
Black	6	25.0
Total	24	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

Appendix II

WOLF 1971-72

UNIT 3

Harvest

Males - 32 Females - 25 Unknown - 0 Total - 57

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	February	5	8.8
August	2	3.5	March	5	8.8
September	1	1.8	April	16	28.1
October	3	5.3	May	9	15.8
November	4	7.0	June	6	10.5
December	4	7.0	Unknown	0	0.0
January	2	3.5	Total	57	100.1

Method of Take	Number	Percent
Ground Shooting	34	59.6
Trapping	18	31.6
Snaring	4	7.0
Unknown	1	1.8
Total	57	100.0

Submitted by: Kenneth W. Pitcher, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT- 1972

Game Management Unit 6 - Prince William Sound

Seasons and Bag Limits

Hunting	September 1 - April 30	Two Wolves
Trapping	October 1 - April 30	No Limit

Harvest and Hunting Pressure

A total of 3 wolves were taken in Unit 6 during the 1972-73 seasons (Appendix I). All 3 were taken by ground shooting after being sighted from an aircraft. No known trapping effort was exerted on wolves in Unit 6.

Composition and Productivity

In Unit 6 wolves have never been common or plentiful as compared to other sections of the state. Occasionally a wolf or several wolves have been taken in Unit 6 (Appendix II) but they were considered to be transitory due to the lack of large prey species.

During the 1950's moose were transplanted to the Copper River Delta. The moose population increased and dispersed throughout the Copper River Delta during the 1960's; thus providing a source of food for wolves to utilize by the early 1970's. It is believed that the moose population peaked in 1971. A severe winter (1971-72) coupled with a large harvest (1972) has reduced the herd east of the Copper River to half of the desired level.

During the winter of 1971-72 there were an estimated 6-8 wolves east of the Copper River. The following winter (1972-73) an estimate of the wolf population indicated that there might have been 15-20 animals, based on wolf observations. The extent of moose predation by wolves during the winter of 1972-73 is unknown, but 6 kills were reported to the Cordova Fish and Game office. Wolf predation on moose may have approached the annual increment of the moose herd east of the Copper River last winter.

Management Summary and Conclusions

The wolf population east of the Copper River has increased during the past year probably by immigration from other areas. At least a portion of their food source in this area has been moose.

The suspected predation on moose by wolves may be detrimental to the growth of the Copper River moose population even with the severe hunting restrictions now in effect. Achievement of moose management goals for Unit 6 as outlined in the 1971 Survey and Inventory report may be impossible since moose populations east of the Copper River may not be able to increase with the present level of wolf predation.

Recommendations

Further assessment of both the wolf population and the growth rate of the Copper River moose herd is necessary to determine the effect of the recent increases in wolf populations east of the Copper River.

Management decisions to either designate a portion of the moose population as wolf prey or to control wolves will be controversial and should be supported by sound data.

Submitted by: Julius Reynolds, Game Biologist III

APPENDIX I

Wolf Sealing Data 1972 - 73

Unit 6

Harvest

Males	Females	Total
1	2	3

Chronology by Month

Month	Number	Percent
November	1	33.3
December	1	33.3
January	1	33.3
Total	3	99.9

Method of Take	Number	Percent
Ground shooting	3	100.0

Color of Wolves	Number	Percent
Gray	3	100.0

Submitted by: Julius Reynolds, Game Biologist III
Jerome J. Sexton, Game Biologist II

APPENDIX II

Wolf Harvest Data

Unit 6

Year	Number
1963-64*	1
1964-65*	1
1965-66**	5
1966-67*	0
1967-68*	0
1968-69*	0
1969-70**	1
1970-71**	0
1971-72***	0
1972-73***	3
Total	11 Average 1.1

* Bounty records.

** Bounty records and aerial permits.

*** Mandatory sealing.

Submitted by: Julius Reynolds, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 9 - Alaska Peninsula

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two Wolves
Trapping	Oct. 1 - April 30	No Limit

Harvest and Hunting Pressure

The reported harvest for the 1972-73 season was 24 wolves (Appendix I). Fourteen of the wolves were males and ground shooting accounted for 62.5 percent of the kill. The historical harvest for the unit is presented in Appendix II.

Composition and Productivity

Unit 9 has a healthy wolf population that is at present only lightly harvested. Additional harvest may be stimulated by recently improved fur prices. Aircraft are a necessary transportation tool in the harvest of the species in this area. The loss of permits allowing aerial shooting, however, has not affected the level of harvest because winter conditions on the peninsula are seldom favorable for effective utilization of this technique.

Recommendations

No changes in seasons or bag limits are recommended.

Submitted by: James B. Faro, Game Biologist III

Wolf -- G.M.U. 9 -- Alaska Peninsula
Appendix I
1972-73 Wolf Harvest*

Harvest

Males - 14 Females - 9 Unknown - 1 Total - 24

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	2	8.3
August	0	0.0	February	8	33.3
September	0	0.0	March	4	16.7
October	3	12.5	April	1	4.2
November	1	4.2	May	0	0.0
December	4	16.7	June	0	0.0
			Unknown	1	4.2
			Total	24	100.1

Method of Take	Number	Percent
Ground Shooting	15	62.5
Trapping	8	33.3
Unknown	1	4.2
Total	24	100.0

Color of Wolves Taken	Number	Percent
White	1	4.2
Brown	0	0.0
Gray	19	79.2
Black	4	16.7
Total	24	100.1

*Data from sealing records

Submitted by: James B. Faro, Game Biologist III
Jerome J. Sexton, Game Biologist II

Wolf - G.M.U. 9 - Alaska Peninsula
Appendix II
Historical Wolf Harvest, 1961-1973

Year	Harvest
1961-62[1/]	4
1962-63[1/]	9
1963-64[1/]	16
1964-65[1/]	44
1965-66[1/]	27
1966-67[1/]	51
1967-68[1/]	24
1968-69[1/]	22
1969-70[2/]	26
1970-71[2/]	7
1971-72[3/]	24
1972-73[3/]	24

1/ Data from bounty analysis
2/ Data from aerial permits--should be considered incomplete
3/ Data from hide sealing program

Submitted by James B. Faro, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 10 - Aleutian Islands

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two Wolves
Trapping	Oct. 1 - April 30	No Limit

Harvest and Hunting Pressure

During the 1972-73 season, one wolf, a male, was reported harvested in Unit 10.

Composition and Productivity

No information is available.

Management Summary and Conclusions

Wolves are restricted to Unimak Island in Unit 10. Harvest pressure on the species is light.

Recommendations

No changes in seasons and bag limits are recommended.

Submitted by: James B. Faro, Game Biologist III

WOLF

SURVEY- INVENTORY PROGRESS REPORT 1972

Game Management Unit 11 - Wrangell Mountains - Chitina River

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

The annual wolf harvests during the period 1961-62 through 1972-73 are listed in Appendix I. These data reveal wide variations in total wolf harvests that may be partially explained. Predator control efforts during the early 1950's included the Mentasta and Slana River drainages, and predator control was also practiced in the Chitina Valley in 1951 to 1955 period. These efforts may have reduced wolf numbers in portions of Unit 11, although Harley King, a former predator control agent, believed that wolves residing in Unit 11 were largely unaffected. Caribou were reported to be in the Nabesna Road-Mt. Sanford vicinity during 1963-64 and 1964-65, presumably from the Mentasta herd, and there was considerable aerial hunting for wolves by a few local residents. The Nelchina caribou herd wintered in the Nabesna Road vicinity from 1965 through at least 1968, and many wolves apparently followed them into the area and were subjected to additional aerial hunting from another fulltime aerial wolf hunter. The decreasing harvests in 1966-67 and 1967-68 may reflect decreasing wolf abundance due to harvesting, to the fact that one of the two principal aerial wolf hunters who was active in Unit 11 in 1965-66 spent little time hunting wolves during subsequent years, or both. The low kills during 1967-68 and especially 1968-69 were apparently due mainly to a partial snow cover which made sighting and tracking of wolves difficult. Average snow depths at Gulkana and Mankoman Lake during the winter of 1969-70 indicate a mild winter and this may have contributed to the low wolf harvest during 1969-70 relative to 1970-71. The bounty law effective July 1968, which required that claimants for wolf bounty must be residents of the unit in which wolves were taken, possibly caused a reduction in the harvest, but I've been informed that most wolf hunting in Unit 11 during those years was done by local residents.

A comparison of wolf harvest data for the years 1966-67 through 1972-73 is given in Appendix II. Trends in harvest data, if present, are not obvious at this time. The discontinuity of harvest reporting systems probably accounts for some of the fluctuations that are seen. Additional information obtained during subsequent years may make these values meaningful. Data from the 1972-73 harvest are listed in Appendix III.

Composition and Productivity

Comparisons of data derived from pack observations are made for the years 1971-72 and 1972-73 in Appendix IV. Mean pack size has been hypothesized to be proportional to wolf abundance and these data suggest a declining wolf abundance.

Only one wolf den was reported to biologists during 1972. Ground observation of this den during 1973 revealed that it was not active. Unconfirmed reports by local sources indicate that wolves may be less abundant this year as compared to previous years.

Management Summary and Conclusions

Much of the information available for wolves in Unit 11 is biased by small sample size, discontinuities in harvest reporting systems and the need for data interpretation. In addition, there apparently has been a movement of wolves between Units 11 and 13 following caribou movements. Interpretation of wolf data may be improved by considering the Nelchina Basin and the northern portion of Unit 11 as one reporting unit. Wolf abundance may have reached a peak during the 1960's, but available information indicates that wolves are still relatively common.

Recommendations

No changes in seasons or bag limits are recommended.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX I

Annual Wolf Harvests - 1961-62 through 1972-73 - GMU 11

Period	Wolves Killed	Period	Wolves Killed
1961-62	8*	1967-68	40*
1962-63	21*	1968-69	7*
1963-64	24*	1969-70	10**
1964-65	30*	1970-71	23**
1965-66	117*	1971-72	56***
1966-67	70*	1972-73	48***

* Harvest figures are based on the number of wolves submitted for bounty.
** Harvest figures are based on aerial wolf hunting permits alone. The bounty was discontinued during 1970 and mandatory sealing of wolf pelts was not required until July 1971.
*** Harvest figures are based on mandatory wolf sealing records.

APPENDIX II

Wolf Harvest Data from 1965-66 through 1972-73 - GMU 11

	1966-67[a]	1967-68[a]	1968-69[a]	1969-70[b]	1970-71[b]	1971-72[c]	1972-73[c]
Total Wolf Harvest:	70	40	7	10	23	56	48
Males in Harvest: Number (%)	36(51)	21(53)	6(86)	5(50)	14(61)	32(57)	20(42)
Unknown Sex, Number:	0	1	0	0	0	1	1
Ratio Blacks to 100 Grays:	43	29	17	-	-	59	26
Method of Kill: Number (%)							
Aerial Shooting	56(80)	22(55)	0(0)	10(100)	23(100)	17(30)	0(0)
Ground Shooting	5(7)	12(30)	0(0)	-	-	10(18)	4(8)
Trapping/Snaring	9(13)	6(15)	7(100)	-	-	29(52)	44(92)

a. Harvest figures are based on the number of wolves submitted for bounty.
b. Harvest figures are based on aerial wolf hunting permits alone. The bounty was discontinued during 1970 and mandatory sealing of wolf pelts was not required until July 1971.
c. Harvest figures are based on mandatory wolf sealing records.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX III

WOLF 1972-73

Unit 11

Harvest

Males - 20 Females - 27 Unknown - 1 TOTAL - 48

Cronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	17	35.4
August	0	0.0	February	5	10.4
September	3	6.3	March	1	2.1
October	0	0.0	April	0	0.0
November	7	14.6	May	0	0.0
December	15	31.3	June	0	0.0
			Unknown	0	0.0
			TOTAL	48	100.1

Method of Take	Number	Percent
Ground Shooting	4	8.3
Trapping	40	83.3
Snaring	4	8.3
TOTAL	48	99.9

Color of Wolves Taken	Number	Percent
White	0	0.0
Brown	0	0.0
Gray	38	79.2
Black	10	20.8
TOTAL	48	100.0

Submitted by: Jerome J. Sexton, Game Biologist

APPENDIX IV

Comparison of Data Derived from Pack Observations

for the years 1971-72 and 1972-73 - GMU 11.*

	1971-72	1972-73
Number of Wolf Packs Sighted:	10	9
Mean Pack Size:	7.6	3.8
Range of Pack Sizes:	2-15	1-13
Ratio of Blacks to 100 Grays:	52	26

* These compilations are based primarily on observations by Department of Fish & Game employees, and they exclude aerial permit and sealing information.

Submitted by: Carl McIlroy, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 12 - Upper Tanana, White River

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Aerial shooting permits not issued, effective July 1, 1972

Harvest and Hunting Pressure

Wolf harvests from 1960 through 1973 are shown below:

Period	Harvest	Period	Harvest
1960-61	1*	1966-67	38*
1961-62	8*	1967-68	57*
1962-63	-	1968-69	31*
1963-64	17*	1969-70	60**
1964-65	24*	1970-71	30**
1965-66	47*	1971-72	94***
		1972-73	66***

* bounty records
** extrapolated from aerial shooting permits
*** sealing data

The average reported pack size during the 1972-73 trapping season was 5.5 wolves. This figure is probably not accurate because of the difficulty of determining the pack size from the number of tracks seen. Experience has shown that when the pack size exceeds about six animals, it is extremely difficult to accurately judge pack size by observing only the tracks.

Gray (65%) was the predominant color of the wolves taken. Black wolves totaled 30 percent while 5 percent were unclassified as to color. Of the 61 wolves of known sex, 56 percent were females and 44 percent were males.

Chronology of the harvest was as follows:

Month	Number	Percent	Month	Number	Percent
Sept.	3	4	Jan.	12	18
Oct.	5	7	Feb.	15	23
Nov.	7	11	March	13	20
Dec.	10	15	April	1	2

Percentages of wolves taken by various methods are listed below:

Harvest Method	Percent of Harvest
ground shooting	14
trapping	51
snaring	30
digging out	0
other	5

A breakdown of pack size and harvest by specific drainages of Unit 12 is given as follows:

Drainage	Harvest	Percent of Total	Ave. Pack Size
Tanana River	22	33	5.3
Scotty Creek	3	4	2
Tok River	21	32	7
Chisana River	2	3	3.6
Nabesna River	6	10	4
Robertson River	3	4	3.6
Jacksina Creek	2	3	6
Tetlin River	1	2	6
Beaver Creek	3	4	3
Bear Valley	2	3	6
Unknown	1	2	-

Composition and Productivity

From a sample of 61 of the reported harvest of 66 it could be concluded the population was composed of 56 percent females and 44 percent males (sex was not determined for 5 wolves). Since the bounty was discontinued in 1970 productivity, survival or age composition have not been determined.

Management Summary and Recommendations

With the current generally favorable market situation for furs, considerable trapping effort was noted in Unit 12 during the 1972-73 season. This effort is expected to continue, barring the possibility of a depressed fur market or other presently unforeseen situations which would tend to reduce the present amount of trapping effort.

Unit 12 wolf populations appear generally high and trapping seems to have little effect on numbers.

Efforts should be made to measure the effects of wolf predation on ungulate populations in this area particularly caribou and moose. Because of the generally abundant wolf population throughout Unit 12 and the minor effect that trapping appears to have on population size, no changes in seasons or bag limits are recommended.

PREPARED BY:

Larry B. Jennings
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 13 - Nelchina Basin

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

Available wolf harvest data for the period 1965-66 through 1972-73 are presented in Appendix I. Variations in harvest reporting systems and legal methods of taking wolves from 1965 to the present make it very difficult to interpret these data. The percentage of males in the harvest has fluctuated around 50 percent, however. Examination of the harvest data by drainage since 1970-71 revealed that harvesting has been well dispersed throughout the Nelchina Basin. Data on the 1972-73 harvest are attached as Appendix II.

Composition and Productivity

Comparisons of the available data derived from pack observations are made for the years 1960-61 through 1972-73 in Appendix III. Mean pack size has been hypothesized to be proportional to wolf density. No abundance index is theoretically completely reliable. However, all indices indicate that wolves were most abundant between 1964 and 1972.

Five wolf dens in Unit 13 were checked by ADF&G personnel in 1973, and all were inactive, however tracks of at least one adult wolf and a least one pup were found near one den site.

Management Summary and Conclusions

History seems to be repeating itself in wolf vs. big game abundance in the Nelchina Basin. Review of the historical data reveals gaps and conflicting information. In many ways, however, the situation seems similar to that of the late 1930's and early 1940's when wolves and grizzly bears were reported abundant and sheep, caribou, and moose populations were stable or declining. The subsequent history consisted of a sharp decline in wolves during the mid-to-late 1940's (helped by a predator control program) followed by an increasing abundance of sheep, caribou, and moose during the late 1940's and 1950's. Moose and caribou apparently reached peak abundance in the late 1950's to early 1960's and wolves have apparently reached peak abundance in the late 1960's, after moose and caribou populations started to decline.

Calf survival to November among most of Unit 13 moose populations has been low for almost a decade. This low calf survival does not appear to correlate with relative

moose density, annual snow depths, available forage or proportions of bulls to cows. The correlation of low moose calf crops and peak wolf abundance is suggestive and the historical pattern is also suggestive. The evidence to date indicates that a wolf research program is warranted that would field-test the hypothesis that wolves are the limiting factor to moose calf survival. It seems possible that ungulate management in the future may consist primarily of balancing wolf numbers and game harvests by humans against calf or lamb survival to achieve game herds stabilized at a relatively high level.

Recommendations

Institute a wolf research program that would field-test the hypothesis that wolf predation is presently the limiting factor to moose calf survival.

No change in wolf seasons or bag limits are recommended.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX I

Wolf Harvest Data from 1965-66 through 1972-73 - GMU 13

	1965-66[a]	1966-67[a]	1967-68[b]	1968-69[c]	1969-70[d]	1970-71[d]	1971-72[e]	1972-73[f]
Total Wolf Harvest:	64	31	120	1	41	91	111	80
Males in Harvest: Number (%)	43(67)	20(65)	67(56)	0(0)	16(39)	44(48)	61(55)	35(44)
Unknown Sex:	1	0	1	0	0	1	5	1
Number Blks/Number Grays:	32/26	16/15	45/69	-	-	-	11/68	16/58
Ratio Blks to 100 Grays:	123	107	65	-	-	-	16	28
Method of Kill: Number (%)								
Aerial Shooting	0	0	70(63)	-	41(100)	91(100)	46(41)	0
Ground Shooting	2(3)	4(13)	9(8)	-	0	0	22(20)	20(26)
Trapping/Snaring	62(97)	26(87)	33(29)	-	0	0	43(39)	57(74)

a. Harvest figures are based on the number of wolves submitted for bounty. Only ground hunting and trapping was authorized. The reported method of kill was probably incorrect.
b. Harvest figures are based on the number of wolves submitted for bounty. A limited aerial hunt, in addition to ground hunting and trapping, was authorized.
c. No bounty was authorized during this period.
d. Harvest figures are based on returned aerial wolf permits only.
e. Harvest figures are based on mandatory wolf sealing records.
f. Harvest figures are based on mandatory wolf sealing records. No aerial wolf permits were issued during this period.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX II

WOLF 1972-73

Unit 13, All subunits and unreported subunits

Harvest

Males - 35 Females - 44 Unknown - 1 TOTAL - 80

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	11	13.8
August	1	1.3	February	21	26.3
September	6	7.5	March	16	20.0
October	1	1.3	April	1	1.3
November	8	10.0	May	0	0.0
December	14	17.5	June	1	0.0
			Unknown	1	1.3
			TOTAL	80	100.3

Method of Take	Number	Percent
Ground Shooting	20	25.0
Trapping	54	67.5
Snaring	3	3.8
Unknown *	3	3.8
TOTAL	80	100.1

* Two wolves listed as method of take unknown were actually hit by a car.

Color of Wolves Taken	Number	Percent
White	1	1.3
Brown	1	1.3
Gray	58	72.5
Black	16	20.0
Unknown	4	5.0
TOTAL	80	100.1

Submitted by: Jerome J. Sexton, Game Biologist

APPENDIX III

Comparisons of the Available Data from Pack Observations in GMU 13, 1960-61 through 1972-73*

	1960-61	1961-62	1965-66	1966-67	1970-71	1971-72	1972-73
Mean Pack Size:	4.8	3.9	9.7	4.7	7.0	5.0	2.6
Range of Pack Sizes:	-	1-10	2-36	1-15	1-23	1-16	1-7
Ratio Blacks to 100 Grays:	-	136	133	131	64	17	43
Total Blacks/Total Grays:	-	19/14	-	47/36	78/121	10/60	16/37
Sample Size, Packs:	18	27	22	21	29	14	21
Hours per Wolf Sighting:	2.0	1.7	-	0.7	0.5	8.4	3.6
Total Hours/Total Wolves:	38/19	57/33	-	36.5/52	43.6/89	58.5/7	61.7/17
Population Estimate:	79 min.	135 min.	400-450	300	Abundant	Reduced Abundance	Reduced Abundance

*These compilations are based primarily on observations by Department of Fish & Game employees, and they exclude aerial permit and sealing information.

Submitted by: Carl McIlroy, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 14 - Upper Cook Inlet

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

Sixteen wolves were reported taken in Game Management Unit 14 during the 1972-73 season (Appendix I). Of these, nine were reported to have been taken by ground shooting and seven by trapping or snaring (Appendix II). During the 1971-72 season a total of six were taken by aerial shooting, three by ground shooting, and three by trapping. Historical data from bounty records for 1962-63 through 1968-69 indicate wolf harvests in Unit 14 have ranged as low as one (effective July 21, 1968 no bounty was paid on wolves in Unit 14) in 1968-69 to 30 in 1966-67. The average harvest from bounty records during this period was 12.7 wolves per year.

In 1972-73, fifteen wolves were taken for which the area harvest is known. Eleven of these came from Subunit 14A (seven from the Knik River drainage, three from Kings River drainage, and one in the Little Susitna drainage). Two wolves were taken in Subunit 14B, two from 14C, and one from an unknown area.

One additional male wolf was destroyed by the Alaska Department of Public Safety when it wandered into downtown Palmer. The wolf was acting strangely and was destroyed because it was thought to have possibly been rabid. Tests revealed the wolf was not rabid. An autopsy revealed that it was in an extremely emaciated condition.

Composition and Productivity

Pack sizes in 1972-73 were reported by successful hunters and trappers in 14 instances. The pack sizes ranged from 1 to 10 with an average of 2.64 wolves per pack. In 1971-72 nine packs for which pack sizes were recorded ranged in size from 1 to 8 wolves, with an average of 2.89 wolves per pack. In the 1971 wolf report, pack sizes were calculated excluding single wolves, which is the reason for the discrepancy between the 1971 and 1972 reports.

In 1972-73 nine of the wolves taken were males, five were females, and two were of unknown sex.

Management Summary and Conclusion

The reported harvest of 16 wolves from Game Management Unit 14 is slightly above the 1962-63 through 1968-69 average of 12.7 wolves bountied per year and exceeds the 1971-72 number of 12 wolves sealed.

It appears that in Game Management Unit 14, the elimination of aerial hunting of wolves has not suppressed the reported wolf harvest.

Recommendations

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

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II

Appendix I. Wolf Harvest by Sex, Chronology, and Method of Take in Alaska's Game Management Unit 14 During the 1972-73 Season.

Harvest	14A		14B		14C		14 Unk. Area		All of GMU 14	
	No.	%	No.	%	No.	%	No.	%	No.	%
Males	6	54.5	1	50.0	1	50.0	1	100.0	9	56.3
Females	4	36.4	0	0.0	1	50.0	0	0.0	5	31.3
Unknown Sex	1	9.1	1	50.0	0	0.0	0	0.0	2	12.5
Total	11	100.0	2	100.0	2	100.0	1	100.0	16	100.1
Chronology by Month										
September	1	9.1	0	0.0	2	100.0	0	0.0	3	18.8
October	0	0.0	1	50.0	0	0.0	1	100.0	2	12.5
November	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
December	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
January	3	27.3	0	0.0	0	0.0	0	0.0	3	18.8
February	4	36.4	0	0.0	0	0.0	0	0.0	4	25.0
March	2	18.2	0	0.0	0	0.0	0	0.0	2	12.5
April	1	9.1	1	50.0	0	0.0	0	0.0	2	12.5
Total	11	100.1	2	100.0	2	100.0	1	100.0	16	100.1
Method of Take										
Ground Shooting	4	36.4	2	100.0	2	100.0	1	100.0	9	56.3
Trapping	5	45.5	0	0.0	0	0.0	0	0.0	5	31.3
Snaring	2	18.2	0	0.0	0	0.0	0	0.0	2	12.5
Total	11	100.1	2	100.0	2	100.0	1	100.0	16	100.1

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II
Jerome J. Sexton, Game Biologist II

Appendix II. Wolf Harvest from Bounty Records, Aerial Wolf Permit Returns, and Wolf Sealing Certificates for Alaska's Game Management Unit 14 from 1962-63 through 1972-73.

Regulatory Year	Male	Female	Unknown	Total
1962-63*	3	0	0	3
1963-64*	4	4	0	8
1964-65*	6	5	0	11
1965-66**	9	6	4	19
1966-67*	15	15	0	30
1967-68*	7	10	0	17
1968-69*	0	1	0	1[1/]
1969-70***	1	0	0	1
1970-71***	5	3	0	8
1971-72****	5	3	4	12
1972-73****	9	5	2	16

* Harvest data compiled from bounty records.

** Harvest data compiled from bounty records through June 1, 1966.

*** Harvest data compiled from returned aerial wolf permits.

**** Harvest data compiled from wolf sealing certificates.

1/ Effective July 21, 1968 no bounty was paid on wolves in Game Management Unit 14.

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 15 - Western Kenai Peninsula

Seasons and Bag Limits

Hunting	No open season
Trapping	No open season

Harvest and Hunting Pressure

Unit 15 has been closed to the taking of wolves since July 1, 1962.

Composition and Productivity

Surveys have been unsuccessful in establishing the size of the wolf population in Unit 15. However, reliable reports of wolf packs giving dates, numbers, locations and color combinations have been recorded and analysis of these data can be used to determine minimum numbers. Utilizing these data the minimum population level has been determined to be 35 wolves (Appendix I).

Five wolf packs ranging in size from 4 to 16 and two single wolves have been recorded. The observation of 16 wolves was most probably two packs running together. The observations of single wolves could be wolves that have strayed from a pack but are felt to be lone wolves because of the numerous sightings of single wolf tracks.

Packs observed between July 1, 1972 and May 1, 1973 only are utilized in establishing the minimum population level. It is felt that little change occurs in packs during this time except for deaths and pack splitting.

Management Summary and Conclusions

Based on tabulations of reported wolf packs there are a minimum of 5 packs of wolves totaling 33 animals and two single wolves for a total of 35 wolves in Unit 15. Wolves are distributed over most of Unit 15 from near Homer to Turnagain Arm, but appear to be most dense in the Shilak and Tustumena Lake areas.

Game Management Unit 15, excluding the area east of Kachemak Bay and the Harding Ice Field, is about 3,500 square miles in size. With a minimum population of 35 wolves and a habitable range of about 3,500 square miles the area per wolf is less than 100 square miles. This compares with: 50 sq. miles per wolf in Unit 13 (Rausch 1967); 50 sq. miles per wolf in Mt. McKinley Park (Murie 1944); 60-120 sq. miles per wolf in Northwest Territories (Kelsall 1957); 100-200 sq. mile per wolf in Ontario (Pimlott et al. 1969); 10 sq. miles per wolf in Algonquin Park, Ontario (Pimlott et al. 1969) and 7-10 sq. miles per wolf in Isle Royale National Park, Michigan (Mech 1966).

The density of wolves in Unit 15 compares favorably with densities in other nonpark areas in Alaska and North America. In Isle Royale and Algonquin Parks, where densities are considerably higher, wolves are believed to be in a balance with their ungulate prey and are utilizing the entire annual production.

Recommendations

It is recommended that consideration be given to allowing limited sport hunting of wolves in Unit 15.

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Submitted by: Paul A. LeRoux, Game Biologist III

Wolf - Game Management Unit 15 - Western Kenai Peninsula

Appendix I

Wolf Observations

Date	Observer	Total Wolves	Grays	Blacks	Browns	Area
3/6/73	Basil Bolstridge	4	3	1	--	Fox River
3/30/73	James Davis	3	1	1 + 1 unk.	--	Fox River
12/5/72	Basil Bolstridge	16	14	2	--	Shantatalik Creek
12/2/72	Paul LeRoux	7	6	1	--	Near Fox Lake
10/12/72	Jerry Glor	5	4	1	--	Funny River
2/9/73	James Davis	7	4	3	--	Skilak Lake
2/1/73	Al Franzmann	8	4	4	--	Skilak Lake
8/23/72	Peterson	9	4	5	--	Surprise Creek
11/1/72*	Buck Stewart	4	1	3	--	Mystery Creek
2/18/73	Al Thompson	1	1	--	--	Lower Ohmer Lake
9/21/72	James Davis	1	--	1	--	Thurman Creek

* This pack also seen in adjacent portion of Unit 7, 1 gray and 4 blacks.

Observations listed between horizontal lines are considered to be repeat observations of the same pack.

Submitted by: Paul A. LeRoux, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 16 - West Side of Cook Inlet

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

Thirteen wolves were reported taken in Game Management Unit 16 during 1972 (Appendix I). Of these, 8 (61.5 percent) were taken by ground shooting and 5 (38.5 percent) were taken by trapping.

During the 1972 season, aerial hunting was not permitted, and may have been the primary cause of the reduction from 40 wolves taken in 1971, to 13 in 1972. During the 1971 season, 21 wolves had been reported taken on aerial wolf permits.

As Appendix IV reveals, historical wolf harvest information was available from bounty records until 1966. From 1962 to 1966, the average wolf harvest in Unit 16 has numbered 41.5 while fluctuating from a low of 5 in 1962-63 to a high of 84 in 1965-66.

For the first time, the data available from the sealing documents enable biologists to determine the subunit in which the animals were taken. Three of the wolves were killed in 16A (Appendix II) and 10 in 16B (Appendix III).

Composition and Productivity

Nine of the wolves taken during the 1972-73 season were males and four were females.

Pack sizes (from a sample of 8 packs) ranged from one to 10 with an average of 4.3 wolves per pack. In 1971-72 pack sizes for 18 packs averaged 4.6 wolves.

Management Summary and Conclusions

The reported harvest of 13 wolves in 1972-73 is a sharp reduction from the 40 wolves harvested in Unit 16 during the 1971-72 season. The suspected reason for the reduction in harvest is the elimination of aerial permit issuance.

As derived from sealing forms, reported pack sightings were reduced from 18 to 8, but the average pack size was reduced very slightly, from 4.6 to 4.3. This index of wolf abundance suggests little change from last year.

Recommendations

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

Submitted by: Jack C. Didrickson, Game Biologist III

Appendix I. Wolf Harvest by Sex, Chronology, and Method of Take in Alaska's Game Management Unit 16 During the 1972-73 Season.

Harvest

Males - 9 Females - 4 Unknown - 0 Total - 13

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	2	15.4
August	0	0.0	February	2	15.4
September	0	0.0	March	7	53.8
October	0	0.0	April	1	7.7
November	0	0.0	May	0	0.0
December	1	7.7	June	0	0.0
			Unknown	0	0.0
			Total	13	100.0

Method of Take	Number	Percent
Ground Shooting	8	61.5
Trapping	5	38.5
Total	13	100.0

Color of Wolves Taken	Number	Percent
White	1	7.7
Brown	0	0.0
Gray	7	53.8
Black	5	38.5
Total	13	100.0

Submitted by: Jack C. Didrickson, Game Biologist III
Jerome J. Sexton, Game Biologist II

Appendix II. Wolf Harvest by Sex, Chronology, and Method of Take in Alaska's Game Management Subunit 16A During the 1972-73 Season.

Harvest

Males - 2 Females - 1 Unknown - 0 Total - 3

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	0	0.0
August	0	0.0	February	0	0.0
September	0	0.0	March	1	33.3
October	0	0.0	April	1	33.3
November	0	0.0	May	0	0.0
December	1	33.3	June	0	0.0
			Unknown	0	0.0
			Total	3	99.9

Method of Take	Number	Percent
Ground Shooting	2	66.7
Trapping	1	33.3
Total	3	100.0

Color of Wolves Taken	Number	Percent
White	1	33.3
Brown	0	0.0
Gray	0	0.0
Black	2	66.7
Total	3	100.0

Submitted by: Jack C. Didrickson, Game Biologist III
Jerome J. Sexton, Game Biologist II

Appendix III. Wolf Harvest by Sex, Chronology, and Method of Take in Alaska's Game Management Subunit 16B During the 1972-73 Season.

Harvest

Males - 7 Females - 3 Unknown - 0 Total - 10

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	2	20.0
August	0	0.0	February	2	20.0
September	0	0.0	March	6	60.0
October	0	0.0	April	0	0.0
November	0	0.0	May	0	0.0
December	0	0.0	June	0	0.0
			Unknown	0	0.0
			Total	10	100.0

Method of Take	Number	Percent
Ground Shooting	6	60.0
Trapping	4	40.0
Total	10	100.0

Color of Wolves Taken	Number	Percent
White	0	0.0
Brown	0	0.0
Gray	7	70.0
Black	3	30.0
Total	10	100.0

Submitted by: Jack C. Didrickson, Game Biologist III
Jerome J. Sexton, Game Biologist II

Appendix IV. Wolf Harvest from Bounty Records, Aerial Wolf Permit Returns, and Wolf Sealing Certificates for Alaska's Game Management Unit 16, 1962-63 Through 1972-73.

Regulatory Year	Male	Female	Unknown	Total
1962-63*	-	-	-	5
1963-64*	-	-	-	21
1964-65*	-	-	-	37
1965-66**	-	-	-	84
1966-67*	-	-	-	36
1967-68*	-	-	-	66
1968-69*	-	-	-	6[1/]
1969-70***	-	-	-	2
1970-71***	-	-	-	21
1971-72****	18	18	4	40
1972-73****	9	4	-	13

* Harvest data compiled from bounty records.

** Harvest data compiled from bounty records through June 1, 1966.

*** Harvest data compiled from returned aerial wolf permits.

**** Harvest data compiled from wolf sealing certificates.

1/ A new bounty law requiring claimants of bounties to be residents of the Unit in which the wolf was killed went into effect on 7/21/68. It is the probable cause of the reduction of wolves reported taken in 1967-68 to 1968-69 in Game Management Unit 16.

Submitted by: Jack C. Didrickson, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 17 - Bristol Bay

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

During the 1972-73 season, 20 wolves were reported harvested (Appendix I). The sex ratio in the harvest was nearly equal. Eighty percent of the animals were taken by shooting. The historical harvest for the unit is presented in Appendix II.

Composition and Productivity

No information available.

Management Summary and Conclusions

Aerial wolf permits were not issued during the 1972-73 season, yet two wolves were reported taken in this manner. These may represent illegal harvest or ground shooting with the aid of aircraft. Most of the wolves taken in the unit were sighted from aircraft which were then landed and the wolves shot. Trapping pressure on wolves is light and ineffective. The existing level of harvest is not considered detrimental to the population.

Recommendations

No changes in the seasons or bag limits are recommended.

Submitted by: James B. Faro, Game Biologist III

Wolf -- G.M.U. 17 -- Bristol Bay
Appendix I
1972-1973 Wolf Harvest*

Harvest

Males - 10 Females - 9 Unknown - 1 Total - 20

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	0	0.0
August	0	0.0	February	9	45.0
September	0	0.0	March	7	35.0
October	0	0.0	April	4	20.0
November	0	0.0	May	0	0.0
December	0	0.0	June	0	0.0
			Unknown	0	0.0
			Total	20	100.0

Method of Take	Number	Percent
Ground Shooting	14	70.0
Trapping	4	20.0
Aerial Shooting	2	10.0
Total	20	100.0

Color of Wolves Taken	Number	Percent
White	0	0.0
Brown	0	0.0
Gray	13	65.0
Black	7	35.0
Total	20	100.0

*Data from sealing records

Submitted by: James B. Faro, Game Biologist III
Jerome J. Sexton, Game Biologist II

Wolf -- G.M.U. 17 -- Bristol Bay
Appendix II
Historical Wolf Harvest, 1961-1973

Year	Harvest
1961-62[1/]	0
1962-63[1/]	15
1963-64[1/]	14
1964-65[1/]	1
1965-66[1/]	18
1966-67[1/]	26
1967-68[1/]	24
1968-69[1/]	15
1969-70[2/]	3
1970-71[2/]	13
1971-72[3/]	28
1972-73[3/]	20

1/ Data from bounty analysis
2/ Data from aerial wolf permits should be considered incomplete
3/ Data from hide sealing program

Submitted by James B. Faro, Game Biologist III

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 18 - Yukon-Kuskokwim Delta

Seasons and Bag Limits

Trapping	Oct. 1 - April 30	No limit
Hunting	Sept. 1 - April 30	Two wolves
Aerial shooting permit	Oct. 1 - April 30	
with resident or nonresident hunting license		Two wolves
with resident trapping license		Two wolves
aerial shooting possession limit statewide		Ten wolves
nonresident aerial shooting possession limit		Two wolves

Aerial shooting permits not issued, effective July 1, 1972.

Harvest and Hunting Pressure

The reported 1971-1972 harvest of wolves in Unit 18 was four, two were taken in March and two were taken in April. The sex ratio was one male and three females. These were taken by aerial hunters. There were none reported taken in the 1972-73 season. Wolves are occasionally seen on both the lower Kuskokwim and Yukon Rivers, but are not usually year-round residents of this area. A few wolves may also be taken by local residents and used for parka trim, these are rarely sealed.

Composition and Productivity

No current information is available.

Management Summary and Recommendations

Considering the general lack of information about wolves in this unit and the discontinuance of aerial shooting permits, it is recommended that no additional changes be made in the regulations.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 19 - McGrath

Seasons and Bag Limits

Hunting	Sept. 1 - Apr. 30	Two wolves
Trapping	Oct. 1 - Apr. 30	No limit
Aerial shooting permits 1971-72 season		
with resident or nonresident hunting license		Two wolves
with resident trapping license		Ten wolves
aerial shooting possession limit statewide		Ten wolves
nonresident aerial shooting possession limit		Two wolves

Aerial shooting permits not issued, effective July 1, 1972

Harvest, Trapping and Hunting Pressure

A record snowfall during the winter of 1971-72 coupled with a healthy wolf population and densely concentrated moose populations provided excellent hunting conditions especially for aerial hunting in Unit 19. The wolf harvest for this reporting period was 93 animals (60 males, 32 females and 3 sex unknown, Appendix I). This total is roughly equivalent to the 1970-1971 harvest estimate for Game Management Unit 19.

During this last year when aerial permits were issued, 68 wolves were taken by aerial shooting. Ground shooting (which in many cases was aided by aircraft) accounted for 23 wolves and trapping took 4 animals.

The wolf harvest for the 1972-73 reporting period was 59 (38 males, 20 females, and 1 sex unknown, Appendix II). Two factors undoubtedly influenced a decrease in the 1973 kill over previous years; there was a light snow pack with poor tracking conditions and the closure of aerial shooting. Nearly three-fourths of the wolves harvested were taken by landing aircraft near packs and shooting with rifles.

Seasonal Distribution, Migration and Concentration

Aerial surveys of wolves made in 1971 and 1972 produced observations of 17 packs, consisting of 117 individuals. A summary of these data is presented in Appendix III. Average pack size was 6.5 wolves, somewhat higher than 6.0 wolves per pack indicated by sealing data. Experienced local wolf hunters considered the wolf population higher than in 1970-71. My personal impression was that the confinment of both moose and wolves by deep snow to the river surfaces may have tended to give an impression of greater numbers than normal. However, wolves are abundant in Unit 19 and the trend over the past several years has been toward increased numbers.

Aerial surveys of wolves in Game Management Unit 19 during 1973 produced observations of 10 packs, consisting of 58 individuals. A summary of these data is presented in Appendix IV. Average pack size was 5.8 wolves, which was lower than in 1972. This may reflect a lowered productivity in 1973 along with the general decrease in prey species. However, tracking conditions were poor throughout most of the late winter and spring months of 1973. These conditions alone could very well influence the number of individuals seen per pack. General observations suggested that over 50 packs were operating within Game Management Unit 19 in 1973.

Management Summary and Conclusions

The general wolf season should be closed at least by April 15 instead of April 30. Wolf pelts examined after March 31 showed considerable rubbing and loss of guard hair. Furthermore, many paired wolves are present during the last month of the season. Harvest of these individuals is felt unnecessary in most cases.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Wolf - Game Management Unit 19 - McGrath
Wolf harvest, chronology and method of take, 1971-72*.

Harvest

Males	Females	Unknown	Total
60	32	3	95

Chronology by Month

Month	Number	Percent
September	3	3.2
October	0	0.0
November	0	0.0
December	0	0.0
January	4	4.2
February	26	27.4
March	42	44.2
April	20	21.1
Unknown	0	0.0
Total	95	100.1

Method of Take	Number	Percent
ground shooting	23	24.2
trapping	4	4.2
aerial shooting	68	71.6
Total	95	100.0

* data from sealing records

Appendix II. Wolf - Game Management Unit 19 - McGrath
Wolf harvest, chronology and methods of take, 1972-73*.

Harvest

Males	Females	Unknown	Total
38	20	1	59

Chronology by Month

Month	Number	Percent
September	6	10.2
October	1	1.7
November	3	5.1
December	3	5.1
January	3	5.1
February	24	40.7
March	9	15.3
April	7	12.0
Unknown	3	5.1
Total	59	100.3

Method of Take	Number	Percent
ground shooting	43	73.0
trapping	15	25.4
snaring	1	1.7
Total	59	100.1

* data from sealing records

Appendix III. Wolf pack observations 1971-1972, Game Management Unit 19.

Date	Area	Pack Size	Grey	Blk	Brown	Unk	Snow Conditions
11/15/71	Fourth of July Creek	5	2	3	-	-	15" new snow
11/18/71	5 Miles S. Farewell	8	8	-	-	-	6" new snow on hard drifts
11/20/71	Big River	5	-	5	-	-	12" new snow
12/20/71	South Fork Kuskokwim	15	3	12	-	-	hard packed snow
12/18/71	Farewell Lake	1	1	-	-	-	2" new snow
12/2/71	Tonzona River	16	-	-	-	16	glaciered river-bed
2/11/72	Big River	1	-	-	1	-	fresh snow
2/13/72	Nixon Fork	4	-	1	-	3	fresh snow
2/16/72	South Fork Kuskokwim	12	3	9	-	-	6" new snow on hard packed
2/18/72	Vinasale Mt.	5	2	3	-	-	hard packed
3/23/72	Sheep Creek	7	7	-	-	-	deep soft snow
4/2/72	Tonzona River	5	3	2	-	-	3" fresh snow on hard packed
4/7/72	Foraker River	2	2	-	-	-	new snow
4/7/72	Swift Fork Kuskokwim	4	4	-	-	-	new snow
4/11/72	Nixon Fork	5	2	3	-	-	1" fresh snow
4/21/72	Holitna River	10	3	-	-	7	deep, wet snow
11/17/72	Katlitna River	12	-	-	-	12	3" old snow

Appendix IV. Wolf pack observations 1973, Game Management Unit 19.

Date	Area	Pack Size	Grey	Blk	Brown	Unk	Snow Conditions
2/21/73	Soda Creek	10	3	7	-	-	fair wind drifted
2/22/73	Takotna River	1	-	1	-	-	fair wind drifted
3/1/73	Fish Creek	9	5	4	-	-	poor
3/1/73	Warldren Fork	8	2	5	1	-	fair, wind blown
3/2/73	Vinasale Mt.	1	1	-	-	-	poor, drifted
3/3/73	Takotna River	4	1	3	-	-	poor, drifted
12/10/73	Takotna River	10	5	5	-	-	3" soft, new snow
12/15/73	South Fork Kuskokwim	2	1	1	-	-	good, 3" new snow
12/19/73	South Fork Kuskokwim	1	1	-	-	-	good, new snow
12/24/73	South Fork Kuskokwim	12	7	5	-	-	6" fresh snow

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Aerial shooting permits not issued, effective July 1, 1972.

Harvest, Hunting and Trapping Pressure

Based on sealing certificates, the legally reported harvest of wolves in Game Management Unit 20 for the 1972-73 season consisted of 296 animals (154 M, 138 F, and 4 sex unknown), representing a 7 percent increase in harvest over the 1971-72 season when 277 wolves were taken. Comparable figures for the 1969-70 and 1970-71 seasons are not available, since the bounty system was discontinued and a mandatory sealing requirement was not initiated until 1971. Harvest data compiled from 1964-1969 indicate the number of wolves presented for bounty has fluctuated from a high of 366 in 1966-67 to a low of 134 in 1968-69, for a 5-year average harvest of 259.

Appendix I summarizes the subunit harvest, chronology and method of harvest, and color of wolves taken. Subunit 20C, occupying the largest area and receiving the heaviest trapping pressure, contributed 218 wolves, or 74 percent of the unit harvest. Trapping and snaring accounted for 87 percent of the total take, while 13 percent of the wolves were taken by ground shooting. Seventy-four percent of the unit harvest of known coloration wolves consisted of grays, and 24 percent consisted of the black color phase. Harvest chronology indicates a uniform distribution of the trapping effort throughout the period when most trappers prefer to take wolves (Nov.-March). The percentage of the known date harvest taken for the 5-month period is as follows: November (15%), December (18%), January (18%), February (18%), March (17%). The sex composition of the harvest (47% females) remained unchanged from the 1971-72 season, when females comprised 48 percent of the total kill, closely reflecting the 5-year (1964-69) average female harvest of 43 percent.

Composition and Productivity

No current data are available.

Population Trends

If pack size is a measure of abundance (population size directly proportional to pack size), a frequency distribution of pack size in the unit for the 1972-73 season may give some insight into relative abundance

when compared to the previous season and to Interior Alaska for the period 1960-66. Based on data compiled from sealing certificates, 91 packs (2 or more wolves) were observed in Unit 20 in 1971-72 containing 32 percent wolves in packs of 8 or more, while data from aerial wolf permits indicate 38 packs contained 32 percent wolves in packs of 8 or more. During the 1972-73 season, pack sizes of 8 or more comprised 27 percent of the 70 reported packs. The five percent decrease in frequency is probably not significant in terms of population decline.

Data compiled in Interior Alaska from 1960-66 indicate that total packs observed rose from a low of 12 in 1960-61 to a high of 121 in 1965-66, while the percent of wolves in packs of 8 or more reached a high of 58 percent in 1965-66 from a low of 22 percent in 1963-64. Although meaningful interpretation cannot be made when comparing data on a unit basis with those from a large portion of the state, if pack size for Unit 20 reflects wolf density throughout the Interior, the smaller pack size may indicate a smaller wolf population than existed in 1966. It is not known what population fluctuations occurred during the intervening years.

Management Summary and Recommendations

The wolf harvest in Unit 20 during the 1972-73 regulatory year increased by seven percent from the 1971-72 season, despite the elimination of aerial shooting. This can be partly explained by the increased interest in recreational and/or subsistence trapping prompted by a high market value for wolf fur (fur dealers were advertising $70.00 to $150.00 per pelt for the lighter color phases). In addition, the heavier hunting pressure on big game animals in the Fairbanks area increased the potential for wolves to be taken incidental to other hunting. Nevertheless, harvest data since 1964 indicate that Unit 20 has sustained a kill in excess of 200 wolves for 6 of the 7 preceding seasons for which data are available. This apparent high rate of exploitation does not appear to have adversely affected the population, as the number of wolf observations and actual reported harvest of wolves in the immediate Fairbanks area remain fairly stable. Utilizing surplus wolves through liberal hunting and trapping seasons should be continued.

PREPARED BY:

Mel Buchholtz
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Unit 20 wolf harvest, 1972-73 regulatory year. Based on information obtained from sealing certificates.

	No. Taken			Color					Chronology		Method of Harvest		
	M	F	Unk.	Gray	Black	Brown	White	Unk.	Month	No. Taken	Ground Shooting	Trapping	Snaring
GMU 20A	23	19	0	30	10	2	0	0	Sept.	1	8	19	15
									Oct.	3			
									Nov.	6			
									Dec.	6			
									Jan.	3			
									Feb.	15			
									March	4			
									April	3			
									May	1			
GMU 20B	12	12	0	17	5	2	0	0	Nov.	2	1	13	10
									Dec.	4			
									Jan.	11			
									Feb.	3			
									March	3			
									April	1			
GMU 20C	111	103	4	115	52	4	0	7	Sept.	10	29	88	101
									Oct.	8			
									Nov.	33			
									Dec.	37			
									Jan.	34			
									Feb.	34			
									March	41			
									April	15			
									Unk.	6			
GMU 20D	8	4	0	11	1	0	0	0	Nov.	3	0	10	2
									Dec.	4			
									Jan.	4			
									Feb.	1			
Unit 20 Total	154	138	4	213	68	8	0	7		296	38	130	128

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 21 - Middle Yukon

Seasons and Bag Limits

Trapping	Oct. 1 - Apr. 30	No limit
Hunting	Sept. 1 - Apr. 30	Two wolves
Aerial shooting permits 1971-72 season		
with resident or nonresident hunting license		Two wolves
with resident trapping license		Ten wolves
aerial shooting possession limit statewide		Ten wolves
nonresident aerial shooting possession limit		Two wolves

Aerial shooting permits not issued, effective July 1, 1972

Harvest and Hunting Pressure

Snow depths in 1971-72 surpassed those of 1970-71 and reached record depths by March 1972. Aerial hunting was therefore most practical during the spring months of 1972. The 1970-71 wolf harvest in Unit 21 was 93 wolves, including 54 males, 35 females and 4 sex unknown (Appendix I).

Aerial shooting accounted for 65 wolves, while ground shooting (nearly all by snow machine) took 21 wolves, and trappers caught 7 wolves. Hunting wolves by snow machine is becoming popular in the northeast section of Unit 21. Hunters of one Koyukuk River village have become especially adept at this means of harvesting wolves. However, as with aerial hunting, this method is only practical when deep snows provide adequate tracking conditions and hinder wolf movement.

The 1972-73 wolf harvest in Unit 21 was 48, including 27 males, 18 females, and 3 sex unknown (Appendix II). Light snowfall and a windy spring made tracking difficult for both snow machine and aircraft hunters. These conditions, along with the closure on aerial shooting, obviously affected the harvest in 1973. Furthermore, wolves were not confined by deep snow to river surfaces as was the case in 1972.

Composition and Productivity

Six wolf packs were observed in Unit 21 while conducting the 1972 spring moose counts. These packs consisted of 40 individuals or 6.6 wolves per pack. A summary of Unit 21 wolf pack observations is presented in Appendix III. Considering the flight time involved in these observations was about 15 hours it was evident that wolves were abundant especially along the major drainages of Unit 21. Other indications of wolf abundance such as pack trails and kills were commonly noted in other areas of Unit 21.

Aerial surveys of wolf packs in 1973 were limited as a result of the poor tracking conditions. Four packs were located, consisting of 28 wolves (Appendix IV). Mean pack size was 7.0 wolves, higher than in 1972, but possibly not a realistic value due to the sample size. Wolves seemed slightly less abundant in Unit 21 during the spring of 1973, but fall pack size and counts suggested good populations throughout most of the unit.

Management Summary and Recommendations

The general wolf season should be closed by at least April 15 instead of April 30. Pelt condition at this time does not warrant the additional season length. The breeding segment (pairs) is also shot into during the later part of the season. Harvest of these individuals is not felt necessary in most instances.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Wolf - Game Management Unit 21 - Middle Yukon
Wolf harvest, chronology and method of take, 1971-72*.

Harvest

Males	Females	Unknown	Total
54	35	4	93

Chronology by Month

Month	Number	Percent
September	1	1.1
October	0	0.0
November	1	1.1
December	7	7.5
January	1	1.1
February	9	9.7
March	28	30.1
April	44	47.3
Unknown	2	2.1
Total	93	100.0

Method of Take	Number	Percent
ground shooting	21	22.6
trapping	7	7.5
aerial shooting	65	71.6
Total	93	100.0

* data from sealing records

Appendix II. Wolf - Game Management Unit 21 - Middle Yukon
Wolf harvest, chronology and method of take, 1972-73*.

Harvest

Males	Females	Unknown	Total
27	18	3	48

Chronology by Month

Month	Number	Percent
September	0	0.0
October	0	0.0
November	1	2.1
December	3	6.3
January	3	6.3
February	11	22.9
March	20	41.7
April	9	18.8
May	0	0.0
June	0	0.0
Unknown	1	2.1
Total	48	100.2

Method of Take	Number	Percent
ground shooting	36	75.0
trapping	10	20.8
snaring	2	4.2
Total	48	100.0

* data from sealing records

Appendix III. Wolf pack observations 1972, Game Management Unit 21.

Date	Area	Pack Size	Grey	Black	Brown	Unk	Snow Conditions
4/6/72	Nowitna River	8	8	-	-	-	6" fresh snow
4/7/72	Melozitna River	12	5	7	-	-	1" new snow on hard packed
4/7/72	Dalbi River	5	2	3	-	-	2" new snow
4/14/72	Koyukok River 40 Miles above Koyukuk	5	4	1	-	-	1" new snow
4/15/72	Yukon River 20 Miles below Nulato	3	1	2	-	-	1" new snow
4/27/72	Little Mud	7	2	5	-	-	melting snow

Appendix IV. Wolf pack observations 1973, Game Management Unit 21.

Date	Area	Pack Size	Grey	Black	Brown	Unk	Snow Conditions
2/21/73	Sulukna River	1	-	1	-	-	poor, wind packed
2/22/73	Dishna	1	1	-	-	-	poor, wind packed
12/28/73	Nowitna River	18	3	15	-	-	good, new snow 4"
12/28/73	Nowitna River	8	4	4	-	-	good, new snow 4"

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 22 - Seward Peninsula

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

Wolves are still uncommon throughout most of Unit 22. They are most common in the eastern portion of the unit. Not all wolves taken are presented for sealing. Of the 11 wolves sealed in 1971-72, 10 were taken on reindeer ranges (8 by the Predator Control Agent), near Koyuk and one near Nome. Three of the five wolves sealed in 1972-73 were taken by the reindeer herders at Koyuk. All of these wolves are supposedly involved in reindeer depredations. The total unit harvest both years was probably less than 25 (considering the unreported harvest).

Seasonal Distribution, Migration and Concentration

Observations during various winter surveys indicate that there are probably less than six wolves west of Golvin on the Seward Peninsula. Wolves in the far eastern portion of Unit 22 might be migratory, following the Arctic Caribou Herd to their winter range.

Management Summary and Recommendations

1971-72 was the last year of an active predator control program on reindeer ranges. Consequently, the wolf harvest was reduced in 1972-73. Liberal bag limits and seasons should be continued to off-set the increased pressure for the Department to implement a predator control program on reindeer ranges.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 23 - Kotzebue Sound

Seasons and Bag Limits

Hunting	Sept. 1 - April 30	Two wolves
Trapping	Oct. 1 - April 30	No limit

Harvest and Hunting Pressure

Sealing documents are more widely used in Unit 23 than 22, however, not all wolves taken are presented for sealing. The 1971-72 reported wolf harvest for Unit 23 was 71 of which 43 were males. In 1971-72 the harvest was 83 of which 59 were males. Seventy-four percent were taken during February and March each year. Twenty percent of the harvest in 1971-72 was taken by predator control agents which is reflected by the fact that nearly 30 percent of the 1971-72 harvest was taken near Buckland. During 1972-73 there was no active predator control program and only seven percent of the harvest was taken in the Buckland area. In 1972-73 three-fourths of the unit harvest was evenly divided between the upper Kobuk, Ambler, Noatak and Selawik Rivers. Aerial shooting accounting for over half of the 1971-72 harvest while shooting from the ground accounted for 82 percent in 1972-73 when aerial wolf hunting permits were not issued. Of the wolves sealed, grays outnumbered blacks 51 to 20 in 1971-72 and 59 to 17 in 1972-73.

Seasonal Distribution, Migration and Concentration

Wolves are usually most abundant wherever the caribou are wintering. The largest packs are on the upper Kobuk and Ambler Rivers.

Management Summary and Recommendations

Wolf hides still command a high price on the local market. It is recommended that liberal bag limits and seasons be adopted to provide for the needs of local residents and to offset additional pressure that will be placed on the Department to initiate predator control programs on reindeer ranges.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 24 - Koyukuk

Seasons and Bag Limits

Trapping	Oct. 1 - April 30	No limit
Hunting	Sept. 1 - April 30	Two wolves

Aerial shooting permits not issued, effective July 1, 1972.

Harvest and Hunting Pressure

The total number of wolves harvested in Unit 24 during the 1972-73 regulatory year, as indicated by sealing forms, was 100 (59 male, 28 female, 13 sex unknown). This compares to harvests of 276, 58 and 129 in 1967-68, 1968-69 and 1971-72, respectively. Harvest figures are not available for the 1969-70 and 1970-71 regulatory years due to the discontinuance of the bounty system in 1969. The wolf sealing program was not initiated until the 1971-72 regulatory year.

Population Trends, Composition and Productivity

Information derived from work in the vicinity of Anaktuvuk Pass at the northern edge of the unit during the fall of 1972 suggested that the wolf population density in the northern part of the unit was comparable to densities in surrounding areas; it was roughly one wolf per 70 square miles. The production of pups, as reflected in the harvest of wolves by residents of Anaktuvuk Pass, appears to be normal, with pups constituting 40 to 50 percent of the fall population.

Management Summary and Recommendations

The limited information available does not provide a basis for generalizations regarding the status of wolves in Unit 24. Indications are that the population is at a moderate level. With the absence of legal aerial hunting, seasons and bag limits can remain as last year.

PREPARED BY:

Robert Stephenson
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 25 - Fort Yukon

Seasons and Bag Limits

Trapping	Oct. 1 - April 30	No limit
Hunting	Sept. 1 - April 30	Two wolves

Aerial shooting permits not issued, effective July 1, 1972.

Harvest and Hunting Pressure

The total number of wolves harvested in Unit 25 during the 1972-73 regulatory year was 48 as indicated by sealing forms. These included 27 males, 19 females and 1 wolf of unknown sex. This compares to harvests of 145, 61 and 121 in the years 1967-68, 1968-69 and 1971-72, respectively. Data are not available for the 1969-70 and 1970-71 regulatory years.

Population Trends

Reports from Renewable Resources Ltd. biologists working in the northern portion of this unit during 1973 indicate that the density of denning wolves is moderate to high compared to adjacent regions. Few data are available from the southern portions of the unit.

Management Summary and Recommendations

In the absence of data suggesting a decrease in population and considering the discontinuation of aerial hunting as a legal hunting technique, it is recommended that seasons and bag limits remain the same as last year.

PREPARED BY:

Robert Stephenson
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLF

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 26 - Arctic Slope

Seasons and Bag Limits

Trapping	Oct. 1 - April 30	No limit
Hunting	No open season	

Closed to the taking of wolves from an aircraft and to the aid or use of an aircraft in trapping wolves.

Harvest and Hunting Pressure

Information gained from sealing certificates indicates that 71 wolves (43 male, 28 female) were taken in Unit 26 during the 1972-73 regulatory year. Since all wolves taken by residents of Anaktuvuk Pass were sealed this probably represents the bulk of the wolf harvest. Hunters from the coastal villages of Barrow and Kaktovik ordinarily take from 20 to 30 wolves per year bringing the probable total harvest to approximately 100. This compares to harvests of 102, 83 and 67 in 1966-67, 1967-68 and 1968-69, respectively.

Population Trends, Composition and Productivity

The wolf population in the central part of the unit has been monitored since 1970. During this time the wolf population has increased to what could be called a moderate level of approximately one wolf per 70 square miles. Reproduction appears to be normal, with pups constituting from 40 to 50 percent of the fall population in the central portion of the unit.

Management Summary and Recommendations

Wolf population levels appear to be moderately high on the Arctic Slope. In view of the light hunting and trapping pressure in this large unit, trapping seasons should remain as last year's and the hunting season reopened from September 1 through April 30 with a limit of two wolves.

PREPARED BY:

Robert Stephenson
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 1 - Southeast Mainland

Seasons and Bag Limits

Hunting	Dec. 1 - Jan. 31	One wolverine
Trapping	Dec. 1 - Jan. 31	No limit

Harvest and Hunting Pressure

Fifteen wolverine (9 males, 4 females and 2 unknown sex) were taken in Unit 1 during the 1972-73 regulatory year. Eighty-seven percent were taken by trapping (Appendix I). In most cases wolverine were probably taken incidentally to wolf trapping.

Composition and Productivity

No data available.

Management Summary and Conclusions

Very little hunting or trapping pressure is directed specifically toward wolverine. Most of the wolverine are taken in wolf sets and the wolverine harvest would not change much with or without a season.

Recommendations

No changes are recommended in the season or bag limit.

Submitted by: Robert E. Wood, Game Biologist III

Appendix I

WOLVERINE 1972-73

UNIT 1

Harvest

Males - 9 Females - 4 Unknown - 2 Total - 15

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	6	40.0
August	0	0.0	February	0	0.0
September	0	0.0	March	0	0.0
October	0	0.0	April	0	0.0
November	0	0.0	May	0	0.0
December	9	60.0	June	0	0.0
			Unknown	0	0.0
			Total	15	100.0

Method of Take	Number	Percent
Ground Shooting	2	13.3
Trapping	13	86.7
Total	15	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 3 - Petersburg, Wrangell area

Seasons and Bag Limits

Hunting	Dec. 1 - Jan. 31	One wolverine
Trapping	Dec. 1 - Jan. 31	No limit

Harvest and Hunting Pressure

Twelve wolverine (Appendix I) were taken in Unit 3 during the 1972-73 regulatory year. Ten were trapped and two were snared.

Composition and Productivity

No data available.

Management Summary and Conclusions

Very little hunting or trapping pressure is directed specifically toward wolverine. Most of the wolverine are taken in wolf sets and the wolverine harvest would not change much with or without a season.

Recommendations

No changes are recommended in the season or bag limit.

Submitted by: Robert E. Wood, Game Biologist III

Appendix I

WOLVERINE 1972-73

UNIT 3

Harvest

Males - 5 Females - 2 Unknown - 5 Total - 12

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	10	83.3
August	0	0.0	February	0	0.0
September	0	0.0	March	0	0.0
October	0	0.0	April	0	0.0
November	0	0.0	May	0	0.0
December	2	16.7	June	0	0.0
			Unknown	0	0.0
			Total	12	100.0

Method of Take	Number	Percent
Trapping	10	83.3
Snaring	2	16.7
Total	12	100.0

Sumbitted by: Jerome J. Sexton, Game Biologist II

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 6 - Prince William Sound

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 16 - March 31	No limit

Harvest and Hunting Pressure

Unit 6 sealing data revealed a total of 33 wolverine (22 males, 10 females, 1 sex unknown) taken during 1972-73 season (Appendix I). Ground shooting accounted for 5 wolverine and 28 were taken by trapping. Fourteen persons submitted wolverine for sealing. Nine wolverine were taken east of the Copper River, 10 from Cordova to Copper River, 4 in Prince William Sound and 10 near Valdez.

The 1972-73 season produced the largest known harvest of wolverine in Unit 6 (Appendix II).

Composition and Productivity

No data available.

Management Summary and Conclusions

Analysis of the harvest data coupled with the general knowledge of wolverine abundance and distribution in Unit 6 indicate a resource not heavily utilized. Only locally, near Valdez and Cordova, are wolverine subjected to heavy hunting and trapping pressure.

Recommendations

It is recommended that existing hunting and trapping seasons be retained.

Submitted by: Julius Reynolds, Game Biologist III

APPENDIX I

WOLVERINE 1972 - 73

UNIT 6

Harvest

Males	Females	Unknown	Total
22	10	1	33

Chronology by Month

Month	Number	Percent
September - 1972	1	3.0
October	0	0.0
November	0	0.0
December	12	36.4
January - 1973	8	24.2
February	7	21.2
March	5	15.2
Total	33	100.0

Method of Take	Number	Percent
Ground shooting	5	15.2
Trapping	28	84.8
Total	33	100.0

Submitted By: Julius Reynolds, Game Biologist III
Jerome J. Sexton, Game Biologist II

APPENDIX II

WOLVERINE HARVEST DATA

UNIT 6

YEAR	NUMBER
1961-62*	14
1962-63*	3
1963-64*	9
1964-65*	12
1965-66*	16
1966-67*	26
1967-68*	8
1968-69*	13
1969-70*	Unk
1970-71**	18
1971-72***	21
1972-73***	33
Total	173

* Data for the years of 1961-62 through 1968-69 obtained from bounty records.

** Data obtained from a questionnaire to Cordova trappers.

*** Sealing data.

Submitted by: Julius Reynolds, Game Biologist III

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 7 - Eastern Kenai Peninsula

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 10 - March 31	No limit

Harvest and Hunting Pressure

Sealing records show that 24 wolverine were taken in Unit 7 during the 1972-73 season (Appendices I and II). The harvest was comprised of 16 males, 5 females and 3 sex unknown.

Three wolverine were taken by ground shooting, 18 by trapping, 1 by snaring and 2 by unknown means.

The 1972-73 harvest was the highest recorded for Unit 7, although this is an increase of only one animal from the 1971-72 season.

Composition and Productivity

Data from which composition and productivity can be determined are not collected by the Department except in the previously mentioned harvest information.

Management Summary and Conclusions

The wolverine harvest in Unit 7 increased by one animal from the 1971-72 season. The 1972-73 harvest is the highest on record.

Recommendations

No changes are recommended.

Submitted by: Paul A. LeRoux, Game Biologist III

APPENDIX I

WOLVERINE 1972-73

UNIT 7

Harvest

Males - 16 Females - 5 Unknown - 3 Total - 24

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	4	16.7
August	0	0.0	February	6	25.0
September	0	0.0	March	6	25.0
October	1	4.2	April	0	0.0
November	2	8.3	May	0	0.0
December	5	20.8	June	0	0.0
			Unknown	0	0.0
			Total	24	100.0

Method of Take	Number	Percent
Ground Shooting	3	12.5
Trapping	18	75.0
Snaring	1	4.2
Unknown	2	8.3
Total	24	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

APPENDIX II

WOLVERINE BOUNTY AND SEALING RECORDS - UNIT 7

Year	Males	Females	Unknown	Total
1961-62[1]	--	--	1	1
1962-63[1]	--	--	5	5
1963-64[1]	--	--	16	16
1964-65[1]	--	--	20	20
1965-66[1]	--	--	11	11
1966-67[1]	--	--	17	17
1967-68[2]	--	--	--	--
1968-69[2]	--	--	--	--
1969-70[2]	--	--	--	--
1970-71[2]	--	--	--	--
1971-72[3]	10	11	2	23
1972-73[3]	16	5	3	24

[1] Data from bounty records.
[2] Bounty discontinued, no record of harvest.
[3] Data from sealing records.

--Zero data

Submitted by: Paul A. LeRoux, Game Biologist III

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 11 - Wrangell Mountains - Chitina River

Seasons and Bag Limits

Hunting	September 1 - March 31	One Wolverine
Trapping	November 10 - March 31	No Limit

Harvest and Hunting Pressure:

A comparison of wolverine harvests from 1961-62 through 1972-73 is made in Appendix I. The wolverine harvest has fluctuated at a low level since 1962. The increased harvest in 1972-73 may be primarily due to increased trapping effort following the recent upswing in fur prices. Harvest data for 1972-73 are shown in Appendix II. Ninety-eight percent of the harvest was taken by means of trapping or snaring. Examination of the sealing data showed that 70 to 72 percent of the harvest was males during both 1971-72 and 1972-73. However, 71 percent of the kill occurred during February and March during 1971-72. The reason for the differences in timing of the harvest is unknown. Examination of the harvest data on a drainage basis revealed that 68 percent of the harvest came out of the Chitina Valley during 1972-73.

Composition and Productivity:

No information is available.

Management Summary and Conclusions:

The wolverine harvest has been relatively low in past years but may stay substantially higher as long as fur prices remain high. No information is available on wolverine abundance. Wolverine may be vulnerable to area-wide depletion if trapping effort is widespread. Because of the relative inaccessibility of most of Unit 11, it seems likely that hunting or trapping restrictions will not be necessary to reduce the harvest at this time.

Recommendations:

No changes in seasons or bag limits are recommended.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX I

Comparison of Annual Wolverine Harvests from 1961-62 through 1972-73 - GMU 11

Year	Harvest	Year	Harvest
1961-62	1*	1967-68	22*
1962-63	7*	1968-69	22*
1963-64	38*	1969-70	No data**
1964-65	12*	1970-71	No data**
1965-66	30*	1971-72	28***
1966067	33*	1972-73	48***

*Harvest figures are from bounty records.
**The bounty was discontinued on wolverine, and no harvest data are available.
***Harvest figures are from sealing records.
Submitted by: Carl McIlroy, Game Biologist III

APPENDIX II

WOLVERINE 1972-73

UNIT 11

Harvest

Males - 33 Females - 14 Unknown - 1 Total - 48

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	16	33.3
August	0	0.0	February	8	16.7
September	1	2.1	March	5	10.4
October	0	0.0	April	0	0.0
November	0	0.0	May	0	0.0
December	18	37.5	June	0	0.0
			Unknown	0	0.0
			Total	48	100.0

Method of Take	Number	Percent
Ground Shooting	1	2.1
Trapping	44	91.7
Snaring	3	6.3
Total	48	100.1

Submitted by: Jerome J. Sexton, Game Biologist II

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 12 - Upper Tanana and White River

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	1 wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Trapping and Hunting Pressure

Sealing records indicate 52 wolverine were taken in Unit 12 during the 1972-73 season. Thirty-one were males, 20 were females and one was unclassified.

Four wolverine were taken by ground shooting, two by snaring and the remaining 45 were trapped.

Harvest data for Unit 12 since 1962 are as follows:

Year	Number	Year	Number
1962-63	25*	1967-68	30*
1963-64	17*	1968-69	9*
1964-65	25*	1969-70	No data
1965-66	26*	1970-71	No data
1966-67	30*	1971-72	33**
		1972-73	52**

* Bounty records ** Sealing records

Chronology of the harvest in 1972-73 was as follows:

Month	Number	Percent
September	2	4
October	0	0
November	11	22
December	9	18
January	5	8
February	12	24
March	12	24
April	0	0
	51	100

Management Summary and Recommendations

The current favorable fur market situation has appeared to stimulate trapping effort in Unit 12. With wolverine pelts bringing up to $175 each to the trapper, considerable incentive exists to trap, either on a full or part-time basis.

Wolverine appear sparsely distributed and are never particularly dense even in unexploited areas. Wolverine are rather difficult to trap successfully, particularly for novice trappers. Trapping appears to have little effect on wolverine populations, except perhaps in specific local instances.

No changes in seasons or bag limits are recommended.

PREPARED BY:

Larry Jennings
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 13 - Nelchina Basin

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 10 - March 31	No limit

Harvest and Hunting Pressure

A comparison of wolverine harvests during the period 1962-63 through 1972-73 is made in Appendix I. The increased harvest of 1972-73, as compared to 1971-72, was probably a result of increased trapping effort following the upswing in fur prices two years ago. Harvest data for 1972-73 are shown in Appendix II. Ninety percent of the harvest was taken by trapping or snaring as compared to 80 percent in 1971-72. Sixty-five percent of the harvest was males (57 percent in 1971-72). The harvest both years was dispersed throughout the winter months although relatively more wolverine were taken late during March in 1971-72 (41 percent) as compared to 1972-73 (15 percent). The reason for the apparently late harvest during 1971-72 is unknown.

Composition and Productivity

No information is available.

Management Summary and Conclusions

Management information on the wolverine is limited. The total harvest would seem to be but a small fraction of the wolverine populations in Unit 13. Although wolverine are vulnerable to overtrapping by widespread trapping efforts, much of Unit 13 is relatively inaccessible during the winter. As mentioned in previous reports for this area, males predominate in the harvest. Should wolverine harvests start affecting a significant proportion of the populations, an increasing representation of females in the harvests would be expected. For the present, however, neither total harvest nor male:female ratios are cause for concern.

Recommendations

No change in seasons or bag limits is recommended.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX I

Comparison of Annual Wolverine Harvests from 1962-63 through 1972-73 - GMU 13

Year	Harvest	Year	Harvest
1962-63	37*	1968-69	No Data**
1963-64	32*	1969-70	No Data**
1964-65	65*	1970-71	No Data**
1965-66	102*	1971-72	75***
1966-67	132*	1972-73	140***
1967-68	86*		

*Harvest figures are from bounty records.
**The bounty was discontinued on wolverine during this period, and no information on the harvest is available.
***Harvest figures are from sealing records.

Submitted by: Carl McIlroy, Game Biologist III

APPENDIX II

WOLVERINE 1972-73

Unit 13 (All) Subunits and Unreported Subunits

Harvest

Males - 89 Females - 48 Unknown - 3 Total - 140

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	27	19.3
August	0	0.0	February	36	25.7
September	4	2.9	March	21	15.0
October	0	0.0	April	0	0.0
November	20	14.3	May	0	0.0
December	32	22.9	June	0	0.0
			Unknown	0	0.0
			Total	140	100.1

Method of Take	Number	Percent
Ground Shooting	13	9.3
Trapping	121	86.4
Snaring	5	3.6
Unknown	1	0.7
Total	140	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 14 - Upper Cook Inlet

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 10 - March 31	No limit

Harvest and Hunting Pressure

A total of 36 wolverine taken in Game Management Unit 14 were presented for sealing this year (Appendix I). This compares with a total of 12 wolverine reported taken in GMU 14 during the 1971-72 season and an average of 19.8 wolverine bountied during the years 1962-63 through 1967-68 (Appendix II).

During the 1972-73 season, four wolverine were taken by ground shooting and 32 by trapping.

Seventeen wolverine were taken from Game Management Subunit 14A, 5 from Subunit 14B, and 14 from Subunit 14C. All four wolverine taken by ground shooting were taken from Subunit 14A.

Nine of the 14 wolverine taken in Subunit 14C were taken in the Eagle River drainage near Anchorage.

Composition and Productivity

Twenty-three of the 36 wolverine taken were males, twelve were females and one was of unknown sex.

Management Summary and Conclusions

The reported harvest of 36 wolverine taken during the 1972-73 season is the second highest ever recorded in this unit (37 were bountied in 1965-66).

The majority (88.9%) of the wolverine were taken by trapping. The increased harvest and high percentage taken by trappers may reflect an increased interest in trapping in this area.

Recommendations

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

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II

Appendix I. Wolverine Harvest by Sex, Chronology, and Method of Take in Alaska's Game Management Unit 14 During the 1972-73 Season.

Harvest

Area	Males	Females	Unknown Sex	Total
All of Unit 14	23	12	1	36
14A	12	4	1	17
14B	5	0	0	5
14C	6	8	0	14

Chronology By Month

Month	All of Unit 14		14A		14B		14C	
	No.	%	No.	%	No.	%	No.	%
November	8	22.2	4	23.5	0	0.0	4	28.6
December	8	22.2	2	11.8	1	20.0	5	35.7
January	8	22.2	4	23.5	2	40.0	2	14.3
February	10	27.8	6	35.3	2	40.0	2	14.3
March	1	2.8	1	5.9	0	0.0	0	0.0
Unknown	1	2.8	0	0.0	0	0.0	1	7.1
Total	36	100.0	17	100.0	5	100.0	14	100.0

Method of Take

Ground Shooting	4	11.1	4	23.5	0	0.0	0	0.0
Trapping	32	88.9	13	76.5	5	100.0	14	100.0
Total	36	100.0	17	100.0	5	100.0	14	100.0

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II
Jerome J. Sexton, Game Biologist II

Appendix II. Wolverine Harvest from Bounty Records and Wolverine Sealing Data in Alaska's Game Management Unit 14, 1962-63 through 1967-68 and 1971-72 through 1972-73.

Regulatory Year	Harvest*
1962-63	9
1963-64	10
1964-65	15
1965-66	37
1966-67	27
1967-68	21
1968-69	No Data**
1969-70	No Data
1970-71	No Data
1971-72	12
1972-73	36
Average number bountied 1962-63 through 1967-68.	19.8

* 1962-63 through 1967-68 data from bounty records.
1971-72 through 1972-73 data from wolverine sealing records.

** Effective July 21, 1968 no bounty was paid on wolverine in Game Management Unit 14.

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 15 - Western Kenai Peninsula

Seasons and Bag Limits:

Hunting	Sept. 1 - March 31	One Wolverine
Trapping	Nov. 1 - March 31	No Limit

Harvest and Hunting Pressure:

Wolverine sealing records indicate that 20 wolverine were harvested in Unit 15 during the 1972-73 season (Appendices I and II). Two wolverine were taken by ground shooting and 18 by trapping and snaring.

Although the 1972-73 wolverine harvest was down 20 percent from the 1971-72 harvest it was still the second highest harvest on record.

Composition and Productivity:

Data from which composition and productivity can be determined are not collected by the Department except in the form of harvest information as shown on Appendix I.

Management Summary and Conclusions:

The wolverine harvest in Unit 15 declined by 20 percent from the 1971-72 to the 1972-73 season. The 1972-73 harvest was the second highest on record.

Recommendations:

No changes are recommended.

Submitted by: Paul A. LeRoux, Game Biologist III

APPENDIX I

WOLVERINE 1972-73

UNIT 15

Harvest

Males - 14 Females - 6 Unknown - 0 Total - 20

Chronology by Month

Month	Number	Percent	Month	Number	Percent
July	0	0.0	January	3	15.0
August	0	0.0	February	5	25.0
September	1	5.0	March	6	30.0
October	0	0.0	April	0	0.0
November	1	5.0	May	0	0.0
December	4	20.0	June	0	0.0
			Unknown	0	0.0
			Total	20	100.0

Method of Take	Number	Percent
Ground Shooting	2	10.0
Trapping	18	90.0
Total	20	100.0

Submitted by: Jerome J. Sexton, Game Biologist II

APPENDIX II

WOLVERINE BOUNTY AND SEALING RECORDS - UNIT 15

Year	Males	Females	Unknown Sex	Total
1961-62[1]	--	--	1	1
1962-63[1]	--	--	--	--
1963-64[1]	--	--	3	3
1964-65[1]	--	--	13	13
1965-66[1]	--	--	15	15
1966-67[1]	--	--	16	16
1967-68[1]	--	--	19	19
1968-69[2]	--	--	--	--
1969-70[2]	--	--	--	--
1970-71[2]	--	--	--	--
1971-72[3]	18	7	0	25
1972-73[3]	14	6	0	20

[1] Data from bounty records.
[2] Bounty discontinued, no record of harvest.
[3] Data from sealing records.
--Zero Data

Submitted by: Paul A. LeRoux, Game Biologist III

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 16 - West Side of Cook Inlet

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 10 - March 31	No limit

Harvest and Hunting Pressure

Sixty-seven wolverine taken in Unit 16 during the 1972-73 season were presented for sealing (Appendix I). This compares favorably with 51 wolverine reported harvested during the 1971-72 season and an average of 36.9 wolverine reported per year during the 1962-63 through 1968-69 season (Appendix II).

Twelve (17.9 percent) of these wolverine were taken by ground shooting, fifty-four (80.6 percent) were taken by trapping or snaring, and the method of take is unknown for one (1.5 percent).

Five of these for which the subunit of take was known were taken in Subunit 16A and 59 were taken in 16B.

Composition and Productivity

Forty (60 percent) of the wolverine taken in GMU 16 during the 1972-73 season were males, 23 were females, and 4 were of unknown sex.

Management Summary and Conclusions

The reported harvest of 67 wolverine in Unit 16 is the highest on record for this unit. The hunting of wolverine accounts for only a small portion of the take, the majority being taken by trapping.

Recommendations

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

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II

Appendix I. Wolverine Harvest by Sex, Chronology, and Method of Take in Alaska's Game Management Unit 16 During the 1972-73 Season.

Harvest

Area	Males	Females	Unknown Sex	Total
All of Unit 16	40	23	4	67
16 A	3	2	0	5
16 B	35	20	4	59
Unit 16, Unreported Subunit	2	1	0	3

Chronology By Month

Month	All of Unit 16		16A		16B		Unit 16-Subunit Unreported	
	No.	%	No.	%	No.	%	No.	%
September	1	1.5	0	0.0	0	0.0	1	33.3
October	1	1.5	0	0.0	1	1.7	0	0.0
November	1	1.5	0	0.0	1	1.7	0	0.0
December	10	14.9	0	0.0	10	16.9	0	0.0
January	23	34.3	0	0.0	21	35.6	2	66.7
February	16	23.9	4	80.0	12	20.3	0	0.0
March	15	22.4	1	20.0	14	23.7	0	0.0
Total	67	100.0	5	100.0	59	99.9	3	100.0

Method of Take

Ground Shooting	12	17.9	0	0.0	11	18.6	1	33.3
Trapping	53	79.1	5	100.0	47	79.7	1	33.3
Snaring	1	1.5	0	0.0	0	0.0	1	33.3
Unknown	1	1.5	0	0.0	1	1.7	0	0.0
Total	67	100.0	5	100.0	59	100.0	3	99.9

Submitted by: Jack C. Didrickson, Game Biologist III
Donald A. Cornelius, Game Biologist II
Jerome J. Sexton, Game Biologist II

Appendix II. Wolverine Harvest from Bounty Records and Wolverine Sealing Data in Alaska's Game Management Unit 16, 1962-63 through 1968-69 and 1971-72 through 1972-73.

Regulatory Year	Harvest*
1962-63	13
1963-64	43
1964-65	34
1965-66	58
1966-67	51
1967-68	44
1968-69	15
1969-70	No Data
1970-71	No Data
1971-72	51
1972-73	67
Average number bountied 1962-63 through 1968-69	36.9**

* 1962-63 through 1968-69 data from bounty records.
1971-72 through 1972-73 data from wolverine sealing records.

** 1971 GMU 16 wolverine Survey & Inventory report had a typographical error indicating 39.9 instead of 36.9.

Submitted by: Jack C. Didrickson, Game Biologist III

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 18 - Yukon-Kuskokwim Delta

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 10 - March 31	No limit

Harvest, Trapping and Hunting Pressure

Wolverine are normally found on the northeastern, southeastern and eastern boundaries of Unit 18. The number reported and sealed in 1971-72 was three animals. The number sealed increased to nine (3 males and 6 females) for the 1972-73 season. The 1971-72 season was the first season sealing of wolverine skins was required. It appears that the effectiveness improved the second season.

Harvest data since 1961 are listed as follows:

Year	Number	Year	Number
1961-62	4	1967-68	7
1962-63	5	1968-69	1
1963-64	6	1969-70	No data
1964-65	3	1970-71	No data
1965-66	5	1971-72	3
1966-67	4	1972-73	9

Prior to 1970 the harvest was determined by the bounties paid for wolverine taken in that unit. A mandatory sealing program was initiated in 1971 to provide harvest information.

Management Summary and Conclusions

Because wolverine are highly valued for ruff material some are taken and not reported, but used locally. Wolverine reported in the 1972-73 season were taken by trapping techniques. If hunting wolverine is common the kill from hunting is not sealed.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 19 - McGrath

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Trapping and Hunting Pressure

The 1971-72 harvest of wolverine was 29, consisting of 15 males, 10 females and 4 sex unknown (Appendix I).

As in most other units the 1972-73 harvest increased over the 1971-72 reported harvest (Appendix II). The 1972-73 harvest was 41 (23 males, 16 females and 2 sex unknown).

Unit 19 was one of the few units showing a small harvest during the hunting season. Two were taken in September 1971 and two in September 1972.

The harvest data since 1960 are listed below:

Year	Number	Year	Number
1960-61	7	1967-68	16
1961-62	25	1968-69	13
1962-63	33	1969-70	No data
1963-64	21	1970-71	No data
1964-65	19	1971-72	29
1965-66	25	1972-73	41
1966-67	25		

Management Summary and Conclusions

Trapping pressure continues to be light, especially during the spring months when wolverine are more often taken in conjunction with beaver trapping ventures. Gradually increasing pelt values should encourage more interest in the pursuit of wolverine.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Wolverine - Game Management Unit 19 - McGrath
Wolverine harvest, chronology and method of take, 1971-72*.

Harvest

Males	Females	Unknown	Total
15	10	4	29

Chronology by Month

Month	Number	Percent
September	2	6.9
October	0	0.0
November	0	0.0
December	3	10.3
January	7	24.1
February	5	17.2
March	8	27.6
April	0	0.0
Unknown	4	13.8
Total	29	100.0

Method of Take	Number	Percent
ground shooting	12	41.4
trapping	12	41.4
snaring	2	6.9
unknown	3	10.3
Total	29	100.0

* data from sealing records

Appendix II. Wolverine - Game Management Unit 19 - McGrath
Wolverine harvest, chronology and method of take, 1972-73*.

Harvest

Males	Females	Unknown	Total
23	16	2	41

Chronology by Month

Month	Number	Percent
July	0	0.0
August	0	0.0
September	2	4.9
October	0	0.0
November	6	14.6
December	5	12.2
January	9	22.0
February	12	29.3
March	7	17.1
April	0	0.0
May	0	0.0
June	0	0.0
Unknown	0	0.0
Total	41	100.1

Method of Take	Number	Percent
ground shooting	8	19.5
trapping	28	68.3
snaring	5	12.2
Total	41	100.0

* data from sealing records

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Hunting and Trapping Pressure

Based on sealing certificates, the legally reported harvest of wolverine in Game Management Unit 20 for the 1972-73 season consisted of 133 animals (80 males, 42 females, and 11 sex unknown), representing a 142 percent increase in harvest over the 1971-72 season when 55 wolverine were taken. Comparable figures for the 1969-70 and 1970-71 seasons are not available, since the bounty system was discontinued and a mandatory sealing requirement was not initiated until 1971. However, data compiled from bounty forms for the 5-year period 1964-69 indicate the harvest has fluctuated from a low of 23 in 1969 to a high of 108 in 1967, for a 5-year average of 73 for the unit.

Appendix I lists the subunit harvest, chronology, and method of harvest. Subunit 20C, which occupies the largest area and undoubtedly receives the heaviest trapping pressure, contributed 73 percent of the unit harvest. Trapping accounted for 88 percent of the total take, while ground shooting and snaring accounted for 5 percent and 8 percent, respectively.

Females comprised 34 percent of the harvest of known sex kills, a slight increase in the female composition of the harvest (28%) from 1971-72. This may not be a reflection of the sex structure of the population, as females which have given birth to young in mid-winter remain close to the den site and are less susceptible to trapping.

Harvest chronology indicates a fairly uniform distribution of the trapping effort throughout the trapping season (November-March). The percentage of the known date harvest taken for the 5-month period is as follows: November (27%), December (13%), January (27%), February (16%), March (17%). In contrast, late season trapping effort characterized the 1971-72 season when 61 percent of the known date harvest occurred in February and March.

Composition and Productivity

No current information available.

Management Summary and Recommendations

It is not known whether the sharp increase in the wolverine harvest for Game Management Unit 20 in 1972-73 is a reflection of abundance of

animals, increased trapping pressure or both. Undoubtedly, the relatively mild winter and the high market value of wolverine fur (fur dealers were paying $40.00 to $130.00 per pelt) contributed to the high interest in recreational and subsistence trapping. In addition, the high lynx, fox, and wolf populations in this unit provided incentive for increased trapping effort for all furbearers.

Although wolverine do not appear to be overly abundant in the unit, pressure on the resource is restricted to a relatively few areas where trapping effort is high, notably the Dry Creek - Wood River, Eagle, Kantishna and Central areas. Nevertheless, the potential for over-harvest in accessible areas does exist if fur prices remain at the current level, and snow machines provide greater mobility for trappers.

In the event future harvests decline while fur prices and trapping pressure remain high, it is recommended that a bag limit on trapping be initiated.

PREPARED BY:

Mel Buchholtz
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Unit 20 wolverine harvest, 1972-73 regulatory year. Based on information obtained from sealing certificates.

	No. Taken			Chronology		Method of Harvest		
	M	F	?	Month	No. Taken	Ground Shooting	Trapping	Snaring
GMU 20A	20	5		Sept.	1	3	20	2
				Nov.	4			
				Dec.	2			
				Jan.	7			
				Feb.	6			
				March	5			
GMU 20B	2	4		Nov.	4		5	1
				Jan.	1			
				March	1			
GMU 20C	51	33	11	Nov.	26	2	86	7
				Dec.	13			
				Jan.	24			
				Feb.	13			
				March	16			
				Unknown	3			
GMU 20D	5	0		Aug.	1	1	4	
				Nov.	1			
				Dec.	1			
				Jan.	1			
				Feb.	1			
GMU 20 (unspecified)	2			Jan.	2		2	
Unit 20 Totals	80	42	11		133	6	117	10

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 21 - Middle Yukon

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Trapping and Hunting Pressure

The 1971-72 harvest of wolverine was 26; 17 males, 6 females and 3 sex unknown (Appendix I).

The 1972-73 harvest was also 26; 15 males, 11 females and 3 sex unknown (Appendix II).

There was little change between the two seasons in either methods of taking or chronology of harvest. In the 1971-72 season the harvest was greater in the last part of the trapping season (73% in January, February & March) and in 1972-73 the harvest was greater, earlier (85% in December, January & February).

The harvest data since 1960 are listed below:

Year	Number	Year	Number
1960-61	9	1967-68	37
1961-62	23	1968-69	12
1962-63	33	1969-70	No data available
1963-64	12	1970-71	No data available
1964-65	15	1971-72	26
1965-66	45	1972-73	26
1966-67	27		

Management Summary and Conclusions

Trapping pressure is light and harvest should remain low until interest in spring trapping is renewed along with increased pelt values.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Wolverine - Game Management Unit 21 - Middle Yukon
Wolverine harvest, chronology and method of take, 1971-72*.

Harvest

Males	Females	Unknown	Total
17	6	3	26

Chronology by Month

Month	Number	Percent
September	0	0.0
October	0	0.0
November	2	7.7
December	5	19.2
January	3	11.5
February	7	26.9
March	9	34.6
April	0	0.0
Unknown	0	0.0
Total	26	99.9

Method of Take	Number	Percent
ground shooting	1	3.8
trapping	20	76.9
snaring	5	19.2
Total	26	99.9

* data from sealing records

Appendix II. Wolverine - Game Management Unit 21 - Middle Yukon
Wolverine harvest, chronology and method of take, 1972-73*.

Harvest

Males	Females	Unknown	Total
15	11	0	26

Chronology by Month

Month	Number	Percent
July	0	0.0
August	0	0.0
September	0	0.0
October	0	0.0
November	1	3.8
December	10	38.5
January	5	19.2
February	7	26.9
March	3	11.5
April	0	0.0
May	0	0.0
June	0	0.0
Unknown	0	0.0
Total	26	99.9

Method of Take	Number	Percent
ground shooting	1	3.8
trapping	24	92.3
snaring	1	3.8
Total	26	99.9

* data from sealing records

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 22 - Seward Peninsula

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest and Hunting Pressure

The local demand for wolverine is very strong and most are processed into garments or craft items as soon as the hides dry. Consequently, most are not sealed. Of the 14 wolverine sealed in 1971-72 half were taken in February. Of the 16 sealed during 1972-73 half were taken in March. Males out-numbered females 7 to 4 with 3 in which sex was not determined in 1971-72 and 14 to 2 in 1972-73. From contacts in local villages it appears the total unit harvest was about 25 wolverine each year. The Fish and Kuzitrin Rivers and the Shismaref area are the most productive. Tracking and then shooting them is still by far the most common method of taking wolverine.

The harvest since 1961 is listed below:

Year	Number	Year	Number
1961-62	4	1967-68	31
1962-63	13	1968-69	19
1963-64	23	1969-70	No data available
1964-65	11	1970-71	No data available
1965-66	41	1971-72	14
1966-67	31	1972-73	16

Seasonal Distribution, Migration and Concentration

From various aerial surveys it is apparent that wolverine are still not very common throughout most of Unit 22.

Management Summary and Recommendations

Wolverine are not abundant in Unit 22 and the harvest is low. However, hunting pressure within 30 to 50 miles of both villages is heavy. The very strong demand (raw wolverine hides sell for $125-$200 in the villages) and the increased mobility of hunters using snow machines will keep populations depressed near the villages.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 23 - Kotzebue Sound

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest and Hunting Pressure

Efforts were made to enlist the assistance of a local resident in each village to seal wolves and wolverine in a designated area in 1972-73. The effect is demonstrated in that only seven wolverine were sealed in Unit 23 during 1971-72 while 55 were sealed in 1972-73. The 1971-72 harvest was also below normal due to extended periods of very adverse weather in February and March. In 1972-73, 45 percent of the harvest was taken in March, nearly equal amounts were taken by ground shooting and trapping. Over one-third were taken near Kiana and the rest were equally divided between Noatak, Ambler, Kobuk and Selawik.

The harvest data since 1959 are listed below:

Year	Number	Year	Number
1959-60	3	1966-67	11
1960-61	1	1967-68	9
1961-62	4	1968-69	30
1962-63	2	1969-70	No data available
1963-64	51	1970-71	No data available
1964-65	16	1971-72	7
1965-66	5	1972-73	55

Seasonal Distribution, Migration and Concentration

Wolverine tracks are only occasionally seen during aerial surveys. Tracks are more abundant in the more remote areas in Unit 23.

Management Summary and Recommendations

The use of a local resident in each village to seal wolverine seems encouraging. The local demand for wolverine has continued to be heavy and most wolverine in the proximity of villages will be harvested.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 24 - Koyukuk

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Trapping and Hunting Pressure

The reported harvest for the 1972-73 hunting and trapping season was 15 (9 males and 6 females). This was not a significant increase over the 1971-72 harvest of 12 (9 males, 2 females, 1 sex unknown).

The following table lists the harvest for Unit 24 from 1959 to 1973.

Year	Number	Year	Number
1959-60	4	1966-67	11
1960-61	4	1967-68	24
1961-62	0	1968-69	0
1962-63	11	1969-70	No data available
1963-64	10	1970-71	No data available
1964-65	16	1971-72	12
1965-66	5	1972-73	15

There was not a great deal of change in the methods used to take wolverine from the 1971-72 season to the 1972-73 season. In 1971-72, 25 percent were taken by ground shooting and 75 percent by trapping techniques. In 1972-73, 13.3 percent were taken by ground shooting and the remainder by trapping techniques. In the 1971-72 season, most of the wolverine were taken in the months of December and February (3 in December and 5 in February). The following season a large majority of the harvest occurred in March when 10 of the total of 15 were taken.

Management Summary and Recommendations

It is unlikely that the present sealing program accurately reflects the harvest in Unit 24. Local utilization of wolverine for ruffs and garment trim results in wolverine skins being manufactured into various items before they are sealed. Harvest patterns in Unit 24 are associated with trapping techniques unlike Units 22 and 23 where a much higher percentage of the wolverine are taken by ground shooting. Despite substantial increases in the fur markets for many species of furbearers and the continued high value for wolverine, the total trapping effort has not increased greatly. It is unlikely that there will be any management problems associated with excessive harvests of wolverine.

PREPARED AND SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 25 - Ft. Yukon

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Trapping and Hunting Pressure

The reported harvest for the 1972-73 hunting and trapping season was 74 (36 males, 32 females, 6 sex unknown). This was a considerable increase over the 1971-72 harvest of 41 (24 males, 12 females, 5 sex unknown).

The harvest for Unit 25 from 1959 to 1973 is listed in the following table.

Year	Number	Year	Number
1959-60	12	1966-67	20
1960-61	56	1967-68	29
1961-62	22	1968-69	29
1962-63	32	1969-70	No data available
1963-64	35	1970-71	No data available
1964-65	42	1971-72	41
1965-66	48	1972-73	74

Wolverine harvested in Unit 25 are taken by trapping techniques. None were reported taken by hunting in either 1971-72 or 1972-73. For both seasons the harvest tends to be evenly distributed between the months of November, December, January, February and March. There has been no harvest reported from the months of September and October when only the hunting season is open.

Management Summary and Recommendations

The accuracy or completeness of the sealing program in this unit has not been determined, however it is unlikely that all wolverine being taken in Unit 25 are being sealed. Local utilization of wolverine skins for ruffs and garment trim is probably much less than in several of the other game management units such as Units 18, 22, 23 and 26. Harvest figures taken from the number of wolverine skins sealed in the unit are probably a better measure of the harvest compared to those units where there is a high local utilization of wolverine skins. It appears that wolverine are not taken by hunting or ground shooting (shooting is allowed as a legal method of trapping). The increased harvest in the 1972-73 season is most likely a result of the substantial improvement in the fur market and the increase in trapping effort. Management problems are not expected to develop as a result of the increase in trapping pressure.

PREPARED AND SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

WOLVERINE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 26 - Arctic Slope

Seasons and Bag Limits

Hunting	Sept. 1 - March 31	One wolverine
Trapping	Nov. 1 - March 31	No limit

Harvest, Trapping and Hunting Pressure

The 1971-72 harvest as determined by the number of wolverine sealed from Unit 26 was only 2 males. The harvest from the 1972-73 season was only 5 males.

The historical record of harvest for Unit 26 for the last 14 years is as follows:

Year	Number	Year	Number
1959-60	13	1966-67	33
1960-61	31	1967-68	25
1961-62	8	1968-69	17
1962-63	10	1969-70	No data available
1963-64	42	1970-71	No data available
1964-65	No data available	1971-72	2
1965-66	11	1972-73	5

The method of harvesting wolverine in Unit 26 is essentially the same as the techniques used in Units 22 and 23 where wolverine are hunted and shot. Very few are taken by traditional trapping techniques.

Management Summary and Recommendations

Prior to the discontinuation of the wolverine bounty it was felt that the bounty system and harvest estimates derived from the bounty system were not an accurate measure of the wolverine kill in Unit 26. The very high value of wolverine for parka ruffs and other garment trim in this unit resulted in few wolverine being held for the bounty. This situation has not changed in reference to the wolverine sealing program and it's highly likely that the wolverine harvest in Unit 26 has been grossly underestimated for many years. Recent increases in the value of furs and particularly wolverine have not been of substantial influence in this area because the high value of wolverine skins has persisted for many years.

PREPARED AND SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BLACK BEAR

SURVEY INVENTORY PROGRESS REPORT - 1972

Game Management Unit 5 - Yakutat

Seasons and Bag Limits

Sept. 1 - June 30	Two bears; provided that not more than one may be a blue or glacier bear and that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Hunting pressure has not affected the black bear population in Game Management Unit 5 to any noticeable degree. The areas with the highest numbers of black bears, as recorded by aerial surveys, had no hunting pressure during the spring of 1973 (Upper Alsek and Harlequin Lake). Most of the hunting done in the Yakutat Bay-Russell Fiord area is by boat and much of the area is not penetrated. The 1973 spring black bear harvest was 21 bears compared to 13 for the spring of 1972. Each spring one glacier bear was taken. During the fall 1972, a male glacier bear was captured alive for display at the San Diego Zoo.

As revealed by aerial survey and hunter interview, hunting pressure for black bear during spring 1973 was isolated to two areas. The first and most utilized area was from the town of Yakutat along the coastline to Chicago Harbor up to Pt. Latouche, around Hubbard Glacier and down both shores of Russell Fiord. There were at least 6 camps in this area; two being charter boats and four fixed camps. In this Yakutat Bay-Russell Fiord area the total number of guides, assistant guides, clients and unguided hunters was from 24 to 30 individuals for the 2-week period from May 9 to May 24.

The second area was from Tanis Lake to Gateway Knob where moderate hunting pressure was exerted. Two parties numbering five individuals were in the Forest Service cabin at Tanis Mesa for five days each. Two parties totaling four individuals were located just south of Gateway Knob for an unknown period of time, and one guide and client were located on Dry Bay where they also hunted the Gateway Knob area.

For the whole of Game Management Unit 5 black bear hunters in the spring of 1973 could be considered in several categories. From 6 to 12 hunters came specifically for glacier bear. At least 15 to 20 came with the first objective of bagging a brown bear and secondarily a black bear and if by chance a glacier bear. The rest of the black bear hunters were specifically after black bear. My estimate for the total hunters and guides interested in black bear hunting in Game Management Unit 5 for the time period of May 9 through May 24, 1973 was from 35 to 41 individuals.

Populations

Because the blue color phase of the black bear (glacier bear) is one of the most valued big game animals in the world, and the Yakutat area appears to be the region where this color phase most commonly occurs, a major effort was made in spring 1973 to obtain information on Unit 5's black bear population. This was accomplished with aerial surveys totaling some 33.2 hours of actual flying time. Results of these surveys are as follows:

A total of 136 black bear sightings were made in 33.2 hours of flying. Eighty-six different individual black bears were seen from one to five times each covering a time period of 11 days. One of the 86 black bears observed was of the blue color phase.

When trying to derive a ratio for the number of black bears to the number of glacier bears in a given population the relative observability of the two color phases must be considered. A black bear was in stark contrast with its background while a glacier bear blended in with its background. It is felt that this difference in observability may mean that it could be three to four times easier to see a black bear than to see a glacier bear from the air.

There was a distinct correlation between the timing of emergence of black bears and snow conditions on mountain slopes.

During the first period, from April 18 to April 28, a total of 14.1 hours were flown, with only one probable sighting on April 19. The only areas lacking snow at this time were the lower mountain sides and beaches between Pt. Latouche and Chicago Harbor next to Yakutat Bay.

The second time period, from April 28 to May 2, was the transition period when the right combination of rain and snow and other weather conditions caused a sudden shedding of snow (snow slides) from southerly exposed slopes. During this period seven black bears were seen in 5.9 hours or 1.2 bears per hour.

In the third period, from May 2 to May 13, black bears appeared in numbers meaningful enough to give an idea of distribution and relative abundance. The aerial survey data revealed 128 black bears in 19.9 hours of flying or 6.4 bears per hour of flying time. Most of the sightings made in this time period were from the area west of Russell Fiord with much of our survey effort concentrated in the area from Harlequin Lake to the Novatak Glacier portion of the Alsek River drainage. The reason for restricting our later surveys to eastern areas of Yakutat was to prevent conflict with hunters in the Russell Fiord area.

It is evident that aircraft can be used for surveying black bears in the spring if surveys are done at the appropriate time. Best ground and snow conditions occurred during the 2- or 3-week period between the time period of frequent spring snow slides on mountain slopes and leaf emergence.

Management Summary

If done at the appropriate time black bears in Unit 5 can be readily surveyed in the spring by aircraft. Such surveys should be accomplished during the 2- or 3-week period between the loss of snow on mountain slopes and leaf emergence. The calendar period for this occurrence in 1973 was from May 2 until May 20.

When trying to derive a ratio for the number of black bears to the number of glacier bears in a given population one has to consider their observability. A black bear was in stark contrast with its background and the glacier bear blended with its background. The glacier bear's natural camouflage necessitates a very careful scrutiny of any observable black bear population in order to determine the presence of a glacier bear.

It is not felt that the hunting pressure has affected the black bear population in Game Management Unit 5 to any noticeable degree. The areas with the highest number of black bears, as recorded by aerial surveys, had no hunting pressure this spring (Upper Alsek and Harlequin Lake). Most of the hunting done in the Yakutat Bay-Russell Fiord area was by boat and again there was little penetration of the available habitat.

Seasons and bag limits should remain unchanged.

PREPARED BY:

David Johnson
Game Biologist III

SUBMITTED BY:

Donald E. McKnight
Game Research Chief

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT- 1972

Game Management Unit 6 - Prince William Sound

Seasons and Bag Limits:

September 1 - June 30	One bear; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure:

At present, there is no method of determining harvest or hunting pressure on black bears in Unit 6. Judging from incidental contacts and observations of bear hunters, the harvest south of Cordova and in Prince William Sound is probably moderate with the possible exception of the area near Whittier where it probably is fairly heavy.

Composition and Productivity:

Beach surveys along the western coast of Prince William Sound from Harvard Arm (Port Wells) south along the mainland to Cape Fairfield were conducted June 5 and 7, 1972 to determine areas of black bear abundance. A total of 49 bears were seen: 39 adults, 2 sows with 1 large cub and 2 sows with 2 large cubs.

Management Summary and Conclusions:

Lack of adequate data on black bear abundance and harvest makes it impossible to determine the status of black bear in Unit 6.

Recommendations:

No changes are recommended in the season or bag limit, but it is recommended that the Department require successful hunters to seal their hide and skull.

Submitted by: Julius Reynolds, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 7 - Seward

Seasons and Bag Limits

Aug. 10 - June 30	Three bears provided that not more than one may be a blue or glacier bear and that the taking of cubs or sows accompanied by cubs of the blue color phase is prohibited.

Harvest and Hunting Pressure

Data relating to the harvest of, and hunting pressure on black bears are not available. Generally hunting pressure along the road system of Unit 7 is heavy. Considerable hunting pressure is also exerted on black bears along the Resurrection trail system. Success is dependent upon weather and snow conditions in the spring and the availability of berries in the fall. Hunting success is generally good in the fall.

Composition and Productivity

Presently the Department has no means of collecting meaningful data pertaining to the composition and productivity of black bears in this Unit.

Management Summary and Conclusions

Data on which management conclusions can be drawn are not available. General observations suggest that black bear are abundant in this Unit and that hunting has had little, if any, effect on them.

Recommendations

Present regulations allow the taking of cubs and sows accompanied by cubs except of the blue color phase. Although few instances of this occurring are known, protection of cubs and sows with cubs would benefit the image of the hunter and the Department.

Sealing of black bears should be initiated to provide harvest information.

Submitted by: Paul A. LeRoux, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 9 - Alaska Peninsula

Seasons and Bag Limits

No closed season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No work accomplished.

Composition and Productivity

No work accomplished.

Management Summary and Conclusions

Black bears occur in the northern portion of Unit 9 only. Personnel of the National Park Service reported the sighting of a single black bear in Katmai National Monument during the summer of 1972. Hunting pressure on the species is light.

Recommendations

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

Submitted by: James B. Faro, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 11 - Wrangell Mountains

Seasons and Bag Limits

No closed Season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No harvest or hunting pressure information is available. The majority of black bears taken are believed to be incidental to other hunts.

Composition and Productivity

No composition or productivity information on black bear is available.

Management Summary and Conclusions

No conclusions can be drawn at this time.

Recommendations

No recommendations will be made at this time.

Submitted by: Nicholas C. Steen, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 12 - Upper Tanana Valley, White River

Season and Bag Limit

No closed season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No black bear harvest data are available for Unit 12, but casual observations suggest that the harvest is small. Hunting, at the current level, is not believed to be a factor limiting population abundance except in localized areas.

The black bear is a popular species with non-resident and military personnel and this popularity will probably increase in the future. The species is not generally actively pursued by most residents, although many will take one when given the opportunity.

Composition and Productivity

Black bears appeared to be abundant throughout Interior Alaska during 1970, but were noticeably less abundant during 1971. Casual observations indicate that the population during 1972 was higher than in 1971, but lower than during 1970. Natural mortality, a major factor which may be winter denning loss, is probably responsible for this variation in population size.

Management Summary and Recommendations

Some effort should be directed toward gathering some factual harvest data from Interior Alaska. However, no changes in seasons or bag limits are recommended at this time.

PREPARED BY:

Larry Jennings
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 13 - Nelchina Basin

Seasons and Bag Limits:

No Closed Season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure:

No harvest or hunting pressure information is available.

Composition and Productivity:

No composition or productivity information is available. Observations of long time residents indicate that the black bear population is greater now than it has been in many years.

Management Summary and Conclusions:

No conclusions can be drawn at this time.

Recommendations:

No recommendations will be made at this time.

Submitted by: Nicholas C. Steen, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 14 - Upper Cook Inlet

Seasons and Bag Limits

No closed season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No data were collected during 1972.

Composition and Productivity

Eighteen black bears were observed incidental to other game surveys in Unit 14 during 1972. Of these, 10 were adults and 8 were cubs.

Management Summary and Conclusions

Insufficient data preclude making any meaningful statements concerning the status of black bear in Unit 14. A newly enacted game regulation which requires that all black bear taken in Unit 14 after July 1, 1973 be sealed by Alaska Department of Fish and Game representatives will provide black bear harvest data in future years.

Recommendations

No changes in regulations are recommended at this time.

Submitted by: Jack C. Didrickson, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 15 - Western Kenai Peninsula

Seasons and Bag limit:

Aug. 10 - June 30	Three bears provided that not more than one may be a blue or glacier bear and that the taking of cubs or sows accompanied by cubs of the blue color phase is prohibited.

Harvest and Hunting Pressure:

Data relating to the harvest of and hunting pressure on black bears are not available. Hunting pressure on black bears is thought to be relatively light and most bears are taken incidental to hunting of other species.

Composition and Productivity:

Presently the Department of Fish and Game has no means of collecting meaningful data relating to the composition or productivity of black bears in this Unit.

Management Summary and Conclusions:

Data pertaining to harvest, hunting pressure, composition and productivity are not available.

Recommendations:

Present regulations allow the taking of cubs and sows with cubs except of the blue color phase. Although few instances of this occurring are known, protection of cubs and sows with cubs would benefit the image of the hunter and the Department.

Sealing of black bears should be initiated to provide harvest information.

Submitted by: Paul A. LeRoux, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 16 - West Side of Cook Inlet

Seasons and Bag Limits

No Closed Season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No data were collected during 1972.

Composition and Productivity

No data were collected during 1972.

Management Summary and Conclusions

Insufficient data preclude making any meaningful statements concerning the status of black bear in Unit 16. A newly enacted game regulation which requires that all black bear taken in Unit 16 after July 1, 1973 be sealed by Alaska Department of Fish and Game representatives will provide black bear harvest data in future years.

Recommendations

No changes in regulations are recommended at this time.

Submitted by: Jack C. Didrickson, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 17 - Bristol Bay

Seasons and Bag Limits

No closed Season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No work accomplished.

Composition and Productivity

No work accomplished.

Management Summary and Conclusions

Hunting pressure on black bears in Unit 17 is light. A single bear of the blue or glacier color phase was reported taken near the outlet of Teloquana Lake. This was apparently the first report of a bear of this color phase from this unit.

Recommendations

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

Submitted by: James B. Faro, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Season and Bag Limit:

No closed season	Three bears; provided the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No data on the total sport harvest or measure of the hunting pressure on black bear in Unit 20 are available. Bear observations by Department employees combined with a moderate number of nuisance complaints and defense of life and property cases from local residents indicate a higher black bear population in the immediate Fairbanks area than reported in 1971. Bear sightings made incidental to moose surveys on the Tanana Flats in May 1972 revealed a total of four bears, two of which were feeding on recent moose kills. Three bears were shot in defense of life and property during August (two by members of the public, and one by ADF&G); in addition, two individuals were threatened by bears exhibiting aggressive behavior on the Tanana Flats (one bear breaking into a tent and attacking the occupant and another approaching a fisherman who eventually drove the animal away).

Although there is presently no accurate means of assessing black bear harvest or abundance, the number of hides received at local taxidermist firms may provide an index of the magnitude of harvest for comparative purposes. During 1972, three Fairbanks based receiving stations processed 111 black bear hides for tanning and mounting. Based upon informal tabulations or general impressions by each taxidermist, the estimated sport harvest from the Interior was 100 bears. Many bears received for processing in Fairbanks are killed elsewhere. Sixty-five bear hides were received for processing after July 1, while 46 were received prior to this date in 1972. In 1971, when only one taxidermist was operating full time in the Fairbanks area, 80 hides were processed, compared to 147 in 1970. Despite the questionable reliability and shortcomings of these data, they probably reflect the harvest trend throughout the Interior.

Composition and Productivity

Composition surveys are not conducted in this unit. The apparently higher bear population in 1972 may be the result of good cub survival following a milder winter in 1971-72 compared to the previous year. Other factors affecting productivity are unknown.

Management Summary and Conclusions

Black bear populations in Unit 20 do not appear to be adversely affected by the current level of harvest. In order to encourage the sport and trophy values of this animal, it is recommended that the protection of sows accompanied by cubs be continued. Proper garbage disposal near residential areas must be encouraged.

In order to monitor the level of harvest and hunting pressure more accurately, a mandatory or voluntary reporting system should be introduced in 1973.

PREPARED BY:

Mel Buchholtz
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

UPLAND GAME ABUNDANCE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Statewide

Techniques

The standard small game abundance questionnaire was mailed in mid-October, 1972 to 274 people throughout the State, and by the end of January, 1973, 189 replies had been received. As in the past, the bulk of responses 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 February, 1973.

Findings

Replies to the questionnaire are summarized in Appendix A. Cooperators from the Interior, Gulf, Southwestern and Western Regions of the State felt that 1972 grouse populations were low and showed a decrease from 1971, with the exception of the Western Region, where responses indicated that the grouse populations remained about the same. Cooperators on the Alaska Peninsula indicated grouse populations to be moderate and about the same as 1971.

Ptarmigan densities were thought to be moderate in the Gulf, Alaska Peninsula, and Western Regions, and in Kodiak, but moderately low in Southeastern Alaska. Cooperators reported that ptarmigan populations had remained the same in the Western, Alaska Peninsula, Southeastern and Interior Regions during the past year, but have increased slightly in the Gulf, as compared to 1971.

The questionnaires indicated that snowshoe hare populations were moderately high in the Gulf, with a slight increase this year as compared to 1971. In the Interior and the Alaska Peninsula, populations were moderate and decreasing (as compared to 1971), and were low in the Southeastern, Western and Kodiak areas. Cooperators in the Southeastern and Western Regions indicated a slight increase this year as compared to 1971, but questionnaires from Kodiak showed a decrease in hare populations since last year.

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 change in seasons or bag limits is recommended at this time.

Appendix A. Summary of replies to questionnaire on grouse, ptarmigan and hare populations, 1972.

Area	Species	Present Abundance				Comparison with 1971			
		High	Mod	Low	Index	More	Same	Fewer	Index
Brooks Range (5)									
	Grouse (General)	-	-	-	-	-	-	-	-
	Ptarmigan (General)	0	1	1	3.0	0	1	1	3.0
	Rock Ptarmigan	2	0	0	9.0	1	0	0	9.0
	Willow Ptarmigan	2	1	0	7.7	2	0	0	9.0
	Snowshoe Hare	1	0	0	9.0	-	-	-	-
Western (18)									
	Grouse (General)	0	0	2	1.0	0	2	0	5.0
	Ruffed Grouse	0	0	2	1.0	0	1	0	5.0
	Spruce Grouse	1	2	+2	4.2	1	3	0	6.0
	Ptarmigan (General)	3	6	5	4.4	3	6	3	5.0
	Rock Ptarmigan	-	-	-	-	-	-	-	-
	Willow Ptarmigan	1	5	1	5.0	0	5	3	3.5
	Snowshoe Hare	1	3	6	2.2	3	5	2	5.4
Alaska Peninsula (5)									
	Grouse (General)	0	1	0	5.0	0	1	0	5.0
	Spruce Grouse	1	2	0	6.3	1	1	1	5.0
	Ptarmigan (General)	1	1	1	5.0	0	3	0	5.0
	Willow Ptarmigan	3	0	0	9.0	3	0	0	9.0
	Snowshoe Hare	0	3	0	5.0	0	2	1	3.7
Kodiak (4)									
	Ptarmigan (General)	1	2	0	6.3	2	1	0	8.0
	Rock Ptarmigan	0	1	1	3.0	0	1	1	3.0
	Willow Ptarmigan	0	2	0	5.0	0	1	1	3.0
	Snowshoe Hare	0	1	3	2.0	0	2	2	3.0
Southeastern (23)									
	Grouse (General)	1	3	10	2.6	3	2	8	3.5
	Spruce Grouse	0	4	5	2.8	2	5	2	5.0
	Blue Grouse	3	7	5	4.5	2	7	5	4.1
	Ptarmigan (General)	1	5	6	3.3	1	6	2	4.6
	Rock Ptarmigan	0	0	2	1.0	0	1	1	3.0
	Willow Ptarmigan	0	3	4	2.1	0	4	2	3.7
	Snowshoe Hare	0	5	6	2.8	4	5	2	5.7

Appendix A. Continued.

Area	Species	Present Abundance				Comparison with 1971			
		High	Mod	Low	Index	More	Same	Fewer	Index
Gulf (71)									
	Grouse (General)	1	8	25	2.2	4	11	19	3.2
	Ruffed Grouse	0	2	13	1.5	0	7	6	3.2
	Spruce Grouse	0	14	38	1.4	3	17	29	2.9
	Sharptail Grouse	0	2	10	1.7	1	5	7	3.2
	Ptarmigan (General)	13	24	12	5.1	11	25	9	6.2
	Rock Ptarmigan	1	10	4	4.2	1	10	4	4.2
	Willow Ptarmigan	9	16	8	5.1	10	13	10	5.0
	Whitetail Ptarmigan	1	2	5	3.0	1	2	4	3.3
	Snowshoe Hare	33	20	11	6.4	25	25	11	5.9
Interior (63)									
	Grouse (General)	2	9	40	2.0	5	16	30	3.0
	Ruffed Grouse	0	9	54	1.6	4	22	20	3.6
	Spruce Grouse	0	11	35	2.0	3	17	25	3.0
	Sharptail Grouse	0	2	24	1.3	1	11	15	2.9
	Ptarmigan (General)	2	27	12	4.0	5	27	8	4.7
	Rock Ptarmigan	0	13	7	3.6	0	13	7	3.6
	Willow Ptarmigan	0	15	10	3.4	1	14	9	3.3
	Whitetail Ptarmigan	0	2	2	3.0	0	2	1	3.7
	Snowshoe Hare	14	36	9	5.3	3	13	42	2.3
Statewide									
	Grouse (General)	5	23	77	2.3	14	34	58	3.3
	Ruffed Grouse	0	11	70	1.5	4	30	27	3.5
	Spruce Grouse	2	33	79	2.3	10	42	57	3.3
	Sharptail Grouse	0	4	34	1.4	2	16	22	3.0
	Ptarmigan (General)	21	66	36	4.5	22	68	23	5.0
	Rock Ptarmigan	3	26	16	3.8	2	28	15	3.8
	Willow Ptarmigan	15	42	23	4.6	16	37	25	4.5
	Whitetail Ptarmigan	1	4	7	3.0	1	4	5	3.4
	Snowshoe Hare	52	65	34	5.5	35	51	60	2.7

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

RAPTOR

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 12 and 18-26 - Interior Arctic

Introduction

Goshawk information presented here is from work conducted in the Fairbanks vacinity under Federal Aid Project W-17-4 Job 10.6R. Data on other species are largely from a report of ground surveys along the Chandler, Chandalar, and Tanana Rivers conducted by Dr. John R. Haugh and David Pastrich during the summer of 1972. The Chandler River from its confluence with the Siksikpuk River to its confluence with the Colville River was surveyed during the period June 13 - July 1, 1972. A brief aerial reconnaissance of the East and Middle Forks of the Chandalar conducted on July 8, 1972, revealed a lack of appropriate nesting cliffs along the Middle Fork and East Fork above Little Rock Mountain. The East Fork of the Chandalar River was surveyed during the period July 8-14, 1972 from Little Rock Mountain downstream, on the Chandalar, to a point about four miles below the confluence of the East and Middle Forks. The Tanana River was surveyed from the Tetlin bridge to Fairbanks (July 22-31, 1972) and from Fairbanks to Nenana (June 6, 1972). Rubber rafts, foldboats, canoes, and motorized river boats were used in various aspects of the 1972 surveys of cliff nesting raptors, and equipment as well as logistic support was provided by the Alaska Department of Fish and Game.

The river surveys were designed mainly to assess peregrine falcon abundance, however, information on other species was obtained.

Peregrine falcons depend on cliffs overlooking major rivers for nest sites, consequently, findings truly reflect peregrine nesting density and abundance. However, gyrfalcons, rough-legged hawks, and golden eagles are not dependent on such cliffs and survey findings probably underestimate nesting density and distribution of these species. The ground survey along the East Fork of the Chandalar in 1972 substantiated findings of 1971 aerial surveys.

Data on owls are not presented in this report.

Goshawks

Goshawk production in 1972 was much lower than in 1971 due mainly to general nest failure, hatching failure, and pre-fledging chick mortality. From 14 nests studied in 1972, 22 young fledged for an average of 1.6 young per nest started. The clutch sizes of 16 nests averaged 2.9. Of 11 successful nests, hatching success and pre-fledging chick survival were 79 and 88 percent, respectively. Comparable figures for 1971 are: 2.5 young were fledged per nest started, an average clutch size of 3.1, a hatching success of 96 percent, and 100 percent pre-fledging chick survival.

GOSHAWKS

Drainage	Clutch Size	No. Eggs Hatched	No. Young Fledged
Columbia Creek	3	0	0
Goldstream Creek	3	2	?
Goldstream Creek	3	2	2
Goldstream Creek	3	2	2
Goldstream Creek	2	1	1
Pearl Creek	4	4	2
St. Patrick Creek	4	3	3
Vault Creek	?	2	2
Engineer Creek	4	4	4
Isabella Creek	3	3	3
Big Eldorado Creek	3	1	0
Ketchum Creek	3+	0	0
Tanana River	3	3	3
Cripple Creek	3	3	3
Boulder Creek	3	0	0
Deadwood Creek	1	0	0

Peregrine Falcons

Two pairs of peregrine falcons were located on the section of the Chandler surveyed. In 1971 an aerial survey revealed one pair of nesting peregrines in this area. According to Haugh, one to two pairs of peregrines should be considered a reasonably accurate prediction of peregrine nesting numbers along the portion of the Chandler studied.

No peregrines were located on the portion of the Chandalar surveyed, despite the fact that cliffs appearing suitable for nesting occur along the river. Peregrines are known to nest less than 100 miles away on the Yukon and Porcupine Rivers. The reason for their absence on the Chandalar is not known, however, Haugh suggests that lack of suitable habitat or prey species associated with such habitat may be limiting peregrine distribution in this region.

The following summary of peregrine surveys along the Tanana River is taken directly from Haugh's 1972 report submitted to the Department of Fish and Game.

Peregrine falcon populations along the Tanana: --Four pairs of peregrines were found along the Tanana River between Tetlin and Big Delta in 1972. Of these, two pairs produced three young each, one pair produced two young and one pair failed to nest successfully. The four active sites found in 1972 were in the same locations occupied by falcons in 1971. In 1972, for the second straight year, no peregrines were found between Big Delta and Fairbanks or between Fairbanks and Nenana.

In the past as many as 13 pairs of peregrines may have nested on the Tanana River between Tetlin and Nenana. (This estimate is based upon information provided by Alaskan ornithologists, river guides and other sources.) Although records are not adequate to determine when the majority of the falcons disappeared, it seems likely that most of the decline occurred between 1960 and 1970. In 1970 Haugh and Cade surveyed the falcon population between Tetlin and Nenana and found seven pairs of falcons. This number declined to the present level of four pairs in 1971. The reason for the decline of the peregrines along the Tanana is uncertain, but a combination of factors may be involved. Accumulation of pesticide residues may be having an influence on the birds, but the fact that extinction has been most rapid, and now appears complete, along the more accessible parts of the river between Big Delta and Nenana indicates that direct human interference may be a factor of major importance in the decline of the peregrine along the Tanana. In this light, it is interesting to note that in 1970 falconers illegally robbed young falcons from several nests between Fairbanks and Tanacross. Of the three pairs of birds which failed to return in 1971, two were in the area disturbed by the falconers, and one was near Fairbanks and perhaps also subject to considerable human disturbance. In a healthy population, nests would usually not be expected to lead to nest site abandonment the following year. However, in a "sick" population containing high levels of pesticide residues, human disturbance might play a more important role. Moreover, in a population failing to reproduce at normal levels, surplus individuals would not be available to replace birds which had disappeared, and, therefore, once abandoned, sites would not be found and reoccupied by other falcons.

In the light of recent declines in peregrines throughout much of their former range in North America and Europe, a further decline in 1972 of the Tanana falcon population seemed to be a strong possibility. Therefore, even though the failure of one of the pairs to raise young is disappointing, the continued occupancy of four sites in 1972 is encouraging. The isolated nature of these remaining sites serves, to an extent, to protect the birds still present and lends hope that this residual population will survive to reproduce and repopulate former eyrie sites along the Tanana River when environmental conditions improve.

PEREGRINES

Drainage	Date of Observations	No. of Eggs	No. of Young
Chandler	28 June	2 (V)	2
Chandler	29 June	4 (V)	-
Tanana	25 July	0	2
Tanana	25 July	0	2
Tanana	28 July	0	2
Tanana	29 July	0	3

V=eggs viable

GYRFALCONS

Nesting gyrfalcons were located only on the Chandler River during 1972 surveys. Only these nests were located as shown below.

Drainage	Date of Observations	No. of Eggs	No. of Young
Chandler	27 June	-	3
Chandler	28 June	-	3
Chandler	29 June	1 (V)	2

V=eggs viable

Rough-legged Hawks

In 1972 nesting rough-legged hawks were located only on the Chandler River. Eight of the ten pairs located had viable young, and the successful nests contained an average of four chicks. In 1971 ten nests of rough-legged hawks in northern Alaska contained an average of 2.9 chicks, and in 1970 five nests averaged 1.9 young. There appeared to be more rough-legged hawks nesting along the Chandler in 1972 than suggested by aerial surveys in 1971. The high nesting density and productivity in 1972 probably reflect an abundance of available prey.

ROUGH-LEGGED HAWKS

Drainage	Date of Observation	No. of Eggs	No. of Young
Chandler	25 June	-	3
Chandler	27 June	-	-
Chandler	28 June	1(A)	3
Chandler	28 June	-	4
Chandler	28 June	-	4
Chandler	28 June	1(A)	5
Chandler	28 June	1(V)	4
Chandler	29 June	-	4
Chandler	29 June	3(A)	-
Chandler	29 June	-	5

V=eggs viable

A=eggs addled

Golden Eagles

Active golden eagle nests were located only on the Chandalar River in 1972 surveys. Of four nests located, three were active. The inactive nest was probably used in 1971, but a small forest fire, probably in 1971, precluded use of this site in 1972.

Drainage	Date of Observation	No. of Young
Chandalar	9 July	(inactive)
Chandalar	11 July	1
Chandalar	12 July	3
Chandalar	13 July	2

Miscellaneous Observations

The golden eagle nest on Deadwood Creek was again active, however, the ones on Eagle and Harrison Creeks were not checked. A merlin nest was located on May 16, 1972 at which time the adults strongly defended the nest. On June 20 there were five eggs which later hatched successfully. A sharp-shinned hawk nest was located on May 29 at which time the adults were strongly defending it. On June 20 the nest had been abandoned and contained only one egg which was found to be fertile. On June 24 a red-tailed (Harlan's) hawk nest containing two eggs was located.

Management Conclusions and Recommendations

The Department should continue to collect information on productivity and status of Alaskan raptor populations. We should continue to work closely with land managing agencies in order to designate and protect critical nesting areas. The Department of Fish and Game should cooperate with the U.S. Bureau of Sport Fish and Wildlife in order to provide for the use of gyrfalcons and goshawks for falconry. By utilizing only the previously mentioned species, total protection can be afforded the peregrine and other migratory species. Yet, the sport of falconry can be practiced with the species best adapted for Alaskan conditions.

PREPARED BY:

Jerry D. McGowan
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

PTARMIGAN

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Season and Bag Limits

August 10, 1972 - April 30, 1973	20 a day; 40 in possession

Harvest and Hunting Pressure

No systems were in operation to determine ptarmigan harvest or hunting pressure in Unit 20 during the 1972-73 season.

Abundance, Composition and Productivity

The annual census of breeding rock ptarmigan at Eagle Creek (May 20-26, 1972) revealed 79 territorial males on the 15 square-mile study area representing typical Interior Alaska rock ptarmigan breeding range. This is an 11 percent decline in breeding number from 1971, and a 34 percent decline from the population high of 120 males recorded in 1968. Since 1968, the number of breeding males has declined between 6 and 13 percent annually and current populations are approaching the lowest level recorded in the 14 years of counts at Eagle Creek. In view of past trends in breeding abundance I would expect populations to increase in 1973 or 1974. Counts of 15 broods in August 1972 at Eagle Creek revealed broods ranging in size from two to eight chicks. The average of 4.3 chicks per brood is considerably below the 12 year average of 5.2, and suggests low production during 1972.

Management Summary and Recommendations

Rock ptarmigan densities fluctuate strongly over the years in Interior Alaska, but these fluctuations occur independent of fall hunting (see Effects of Controlled Hunting on Rock Ptarmigan, Final Rept., April, 1971). Recent findings suggest that moderate spring hunting on small areas does not greatly alter yearly population trends nor the abundance of ptarmigan available to fall hunters. In years of low abundance, however, little or no replacement occurs following removal of territorial adults in late April. It is not known if this holds true in springs of high breeding densities. (See Effects of Spring Hunting on Rock Ptarmigan Populations, Final Rept., 1973). Ptarmigan are highly vulnerable to hunters in the spring when the birds are on territories. Large spring harvests in restricted areas such as along roads or trails passing through breeding habitat could greatly reduce or even eliminate ptarmigan available for non-consumptive uses the following summer. Heavy spring harvests over larger areas could significantly reduce birds available to fall hunters. There is a trend by the Department of Highways to open roads earlier in the spring, or in some cases, maintain roads throughout the winter. This coupled with increasing human populations and more wide-spread use of snow machines will result in sportsmen placing

more pressure on spring ptarmigan populations.

While no regulation changes are proposed for 1973-74, I recommend that plans for monitoring spring harvests of ptarmigan be commenced. It is recommended that alpine areas along the Steese and possibly the Taylor Highways be used as indicators of spring ptarmigan harvests in the Interior. If such harvests appear to exceed 40 percent of the spring population, an earlier spring closure is recommended.

PREPARED BY:

Jerry D. McGowan
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

SPRUCE GROUSE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Season and Bag Limits

Aug. 10, 1972 - April 30, 1973 — 15 per day; 30 in possession

Harvest and Hunting Pressure

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

Abundance, Composition and Productivity

Standard spruce grouse road counts were conducted on the Steese Highway during September. Only three valid counts were obtained partially due to early snowfall in the Central area. The counts ranged from 4 to 18 birds for averages of 0.56 grouse per driven mile and 10.7 grouse observed per morning. While this suggests that grouse were more abundant than in 1971, the small number of counts does not allow statistical treatment of the data. There were, however, enough birds available along the road to offer fair hunting.

Management Summary and Recommendations

The standard count along the Steese Highway is the only field program aimed at assessing spruce grouse abundance in the Interior. It is recommended that the counts be continued. No change in season or bag limit is recommended.

PREPARED BY:

Jerry D. McGowan
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

RUFFED GROUSE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Season and Bag Limits

Aug. 10, 1972 - April 30, 1973	15 a day; 30 in possession

Harvest and Hunting Pressure

No systems were in operation to determine ruffed grouse harvest or hunting pressure in Unit 20 during the 1972-73 season.

Abundance, Composition and Productivity

No standardized counts of ruffed grouse were made in 1972, but very few ruffed grouse were observed during the 1972-73 season. Questionnaire responses further suggest low densities with a moderate decline from 1971. Ruffed grouse numbers were high in 1970, but have declined sharply since that time.

Management Summary and Recommendations

Ruffed grouse fluctuate widely in Alaska, independent of hunting pressure. No changes in seasons or bag limits are recommended at this time.

PREPARED BY:

Jerry D. McGowan
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

SNOWSHOE HARE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 12 - Upper Tanana, White River

Season and Bag Limit

No closed season — No limit

Harvest and Hunting Pressure

Neither hunting pressure nor harvest of hares in Unit 12 has been measured, but interest in hunting snowshoe hares generally depends on their abundance. Hares are often hunted on the Taylor Highway and other highways in the vicinity of Tok in conjunction with outings for moose and other game.

Abundance and Distribution

Results from questionnaires sent to trappers in the spring of 1972, and small game abundance questionnaires received in January of 1973 indicate that hare populations were still fairly high during the early part of 1972, dropping off to a moderate level during the later part of the year. Hares seem to be abundant in some locations, scarce in others, depending on habitat, but the general trend is a decline in hare numbers in the Tok area.

Management Summary and Recommendations

Hares will probably be available in Unit 12 this year, although the hunter may have to search for areas of hare activity. Hunting itself has little effect on hare populations, however.

No changes are recommended in seasons or bag limits.

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

SNOWSHOE HARE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Central Tanana Valley

Season and Bag Limit

No closed season — No limit

Harvest and Hunting Pressure

Interest in hunting snowshoe hares depends largely on their availability. Hunting pressure on hares in Unit 20 has not been measured, but is generally concentrated along the roadways.

Abundance and Distribution

Snowshoe hare populations were beginning to decline in some areas of Unit 20, such as Central and the Tanana Flats. Hare populations in the Fairbanks and Delta vicinities are still fairly high, but have declined from 1971 levels. The cause of the decline is most likely an increase in juvenile mortality, coupled with a slight decrease in reproduction. Densities of 500 to 700 hares per square mile were estimated around the Fairbanks area in the early fall. Some local areas still show much higher densities, while hares have become somewhat scarce in others. A relatively high incidence of reproductive abnormalities was noted in the Delta hare population, and hares will probably decline in numbers in that location.

Management Summary and Recommendations

Hare populations will decline in many areas of Unit 20 this coming year, although some snowshoes should be available to hunters around the Fairbanks area throughout 1973. Hares may be relatively abundant in local "hot spots" and scarce in other areas. Hunting has no perceptible effect on hare abundance. Snowshoe hare populations can accommodate more hunting pressure without detrimental effects.

No changes are recommended in seasons or bag limits.

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

SNOWSHOE AND ARCTIC HARES

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 22 - Seward Peninsula

Season and Bag Limit

No closed season — No limit

Hunting and Harvest Pressure

Snowshoe hares are hunted primarily by young hunters in the vicinity of their villages on the river systems that have snowshoe hare populations. Hunting has almost no affect on the snowshoe hare population. Spring breakup was mild and there was little loss due to breakup.

Arctic hare are expanding their range and they are starting to provide a major source of recreational hunting during the winter. The harvest at Shishmaref was down somewhat last year, however it was higher in most other villages in Unit 22 so the total harvest was slightly higher than 1971.

Abundance and Distribution

The snowshoe hare population appears to be stable on the Seward Peninsula and they are still restricted to the larger river systems. Snowshoe populations are still low, following the severe breakup in the spring of 1971.

The Arctic hare population on the Serpentine River is lower than in 1971. They are more numerous in most other areas of Unit 22. They are usually found along the river systems in the western part of Unit 22. In the rest of the Unit they usually are found near willow stands on the rolling foothills.

Management Summary and Recommendations

Snowshoe populations were lower following the 1971 spring breakup. Hunting is restricted to the vicinity of the villages.

Arctic hare populations are increasing in most of Unit 22 and they are now providing a major source of recreational hunting.

No change in season or bag limit is recommended.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

SNOWSHOE AND ARCTIC HARES

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 23 - Kotzebue Sound

Season and Bag Limit

No closed season — No limit

Hunting and Harvest Pressure

Almost all snowshoe hare hunting is restricted to within three miles of the villages. The 1972 spring breakup was relatively mild and only had a minimal effect on the snowshoe population.

Arctic hares are not abundant in Unit 23 so hunting is limited.

Abundance and Distribution

Snowshoe hares occur on the larger river systems in Unit 23. These snowshoe populations are still depressed following the severe 1971 breakup.

Arctic hares are still restricted to the Buckland and Deering areas where they appear to be increasing. Other areas in Unit 23 that have historically had large Arctic hare populations still report that Arctic hares are scarce.

Management Summary and Recommendations

Snowshoe populations in Unit 23 are related to the severity of spring breakup. Breakup in 1972 was relatively mild but they do not appear to be recovering from the high losses following the 1971 breakup. Hunting affects the population only within the vicinity of villages.

Arctic hares are still found in a limited part of Unit 23 but they appear to be increasing. They are still taken incidental to other activities.

It is recommended that the current liberal seasons and bag limits remain unchanged.

PREPARED BY:

Rober E. Pegau
Game BiologistIII

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

SNOWSHOE HARE

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 25 - Fort Yukon

Season and Bag Limit

No closed season — No limit

Harvest and Hunting Pressure

Although the harvest has not been measured, there probably is not a great deal of hunting pressure on hares north of the Yukon, except around villages. There is a small number of local hunters and access is limited to other hunters.

Abundance and Distribution

Reports from the Fort Yukon area indicate a very low snowshoe hare population. The hare population apparently crashed in the Stevens Village and Fort Yukon areas sometime in late 1970, and has been at a low level since that time.

Management Summary and Recommendations

Hares are expected to be relatively scarce. Hunting is not a significant influence on hares, therefore, no changes are recommended in seasons or bag limits.

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BEAVER

SURVEY-INVENTORY PROGRESS REPORT - 1972

Statewide

Techniques

Since 1957 the stretched pelts of beaver have been sealed and measured to enumerate the harvest and separate the entire catch into age classes. In Alaska, beaver hides are traditionally stretched round. The pelts are measured by adding the diameter taken from nose to the base of the tail, or bottom of the pelt, to the medial diameter. These measurements are taken in inches and age classes are established on the following basis: young of the year or kits - less than 53 inches, yearlings - 53 to 59 inches, two-year-olds - 60 to 64 inches, and adults - 65 inches and larger.

Studies previously made at the Alaska Cooperative Wildlife Research Unit have determined the general relationship between the degree of exploitation and the percentage of age classes in the harvest. These relationships are not completely inflexible and should be used as indicators or symptoms rather than conclusive evidence of the effect of the beaver harvest on the population.

When the harvest is comprised of more than 25 percent kits the population can be considered overharvested. A properly harvested population will have 20 percent or less kits in the harvest. A beaver population can be considered to be underharvested when the harvest is composed of less than 15 percent kits.

Since 1957 when this system was basically initiated, numerous exceptions have been noted to these guidelines. Game Management Units are generally large geographic areas and a manageable beaver population may be the beaver inhabitating a relatively small tributary within a game management unit. Overharvest of drainages or tributaries within a game management unit are sometimes obscured by a large but conservative harvest in the remainder of the game management unit. Human populations are not evenly distributed within a game management unit; therefore, trapping pressures are often disproportionately distributed in relation to beaver abundance and distribution. The potential for overharvest varies between the game management units and other factors such as the economic well-being of the trappers in the area and the particular type or style of trapping employed by the trappers. Whenever the harvest is composed of 20 percent kits, a careful examination of the harvest by tributary or drainage should be made. At the 20 percent level of harvest in an entire game management unit it is highly likely that over exploitation is occurring on some tributaries.

Findings

The beaver harvest has been separated into age classes by the measurements recorded on the beaver affidavit since 1957. The harvest by game management unit and age class since 1968 is recorded in Appendix 1. The 1972

harvest of approximately 5,600 beaver is a substantial increase over the 1971 harvest of approximately 4,000. The beaver harvest generally reflects economic and cultural situations with only a few possible exceptions. The harvest does not reflect a declining or overharvested statewide beaver population.

Management Summary and Conclusions

The beaver sealing program provides a sound basis for proper management and control of the beaver resource. Its analysis provides sufficient information to indicate where management problems may be occurring. Aerial cache counts, analysis of the harvest by tributary, and surveys of the local economic situation and trapping modes can provide sufficient information for positive and finite management of the resource.

The status of beaver populations and harvest distribution should be carefully examined in Units 8, 9, 14, 15, 17, 18 and 19 (in units 17 and 19 beaver cache counts and analysis of the harvest by tributaries has been made for several years). The harvests from Units 8, 14 and 15 are very small and may not justify the effort to manage the resource to provide a greater benefit to the public.

Submitted by: Oliver E. Burris, Game Biologist IV

Appendix 1. Beaver affidavit analysis, 1968-72.

Game Mgmt. Unit	Year	Limit	Percent Kits (Under 54")	Percent Kits and Yearlings (Under 59")	Percent Adults (Over 59")	Total No. of Beaver	No. of Trappers	Avg. No. Beaver/ Trapper
1	1968	50	13.5	30.8	69.2	104	13	8.0
	1969	No limit	15.1	41.1	58.9	75	9	8.3
	1970	No limit	15.2	38.0	62.0	165	24	6.8
	1971	No limit	15.5	25.0	75.0	84	7	12.0
	1972	No limit		20.0	80.0	5	3	1.7
2	1968	50	15.0	45.0	55.0	20	2	10.0
	1969	No limit	8.7	39.1	61.2	23	4	5.8
	1970	No limit	21.4	52.4	47.6	42	6	7.0
	1971	No limit	20.0	40.0	60.0	5	1	5.0
	1972	No limit		66.7	33.3	3	1	3.0
3	1968	50	19.0	33.3	66.6	21	3	7.0
	1969	No limit	No harvest reported					
	1970	No limit	30.6	45.1	54.9	62	5	12.4
	1971	No limit	40.0	60.0	40.0	20	1	20.0
	1972	No limit	25.0	50.0	50.0	8	3	2.7
4	1968	50	50.0	50.0	50.0	2	1	2.0
	1969	No limit	33.3	66.6	33.4	3	2	.6
	1970	No limit	50.0	80.0	20.0	10	2	5.0
	1971	No limit	No harvest reported					
	1972	No limit			100.0	1	1	1.0
5	1971	No limit	60.0		40.0	5	1	5.0
	1972	No limit	No harvest reported					
6	1968	50 and no limit*	7.1	27.5	73.1	113	11	10.3

Appendix 1. Beaver affidavit analysis, 1968-72 (continued).

Game Mgmt. Unit	Year	Limit	Percent Kits (Under 54")	Percent Kits and Yearlings (Under 59")	Percent Adults (Over 59")	Total No. of Beaver	No. of Trappers	Avg. No. Beaver/ Trapper
6	1969	50 and no limit*	39.1	52.1	47.9	48	7	6.8
	1970	10 and no limit*	18.7	42.0	58.0	150	15	10.0
	1971	10 and no limit	17.3	25.0	75.0	52	7	7.4
	1972	10 and no limit	35.8	56.7	43.3	67	8	8.4
7	1968	20	23.6	45.8	54.2	72	10	7.2
	1969	20	50.0	50.0	50.0	3	3	1.0
	1970	20	25.0	54.2	45.8	24	4	6.0
	1971	20	11.8	35.3	64.7	17	3	5.6
	1972	20	10.0	23.3	76.7	30	5	6.0
8	1968	No limit	28.7	53.1	46.9	205	18	11.4
	1969	No limit	28.5	40.7	59.7	175	12	14.5
	1970	No limit	31.3	49.3	50.7	351	24	14.6
	1971	No limit	36.5	55.4	44.7	85	8	10.6
	1972	No limit	32.0	40.0	60.0	52	6	8.7
9	1968	40 and 15*	25.4	34.9	65.9	536	50	10.7
	1969	40 and 15*	23.4	34.4	66.0	148	17	8.7
	1970	40 and 15*	19.6	34.2	65.8	419	37	11.3
	1971	40 and 15*	26.4	42.7	57.3	246	25	9.8
	1972	40 and 20*	21.3	36.0	64.0	337	27	12.5

Appendix 1. Beaver affidavit analysis, 1968-72 (continued).

Game Mgmt. Unit	Year	Limit	Percent Kits (Under 54")	Percent Kits and Yearlings (Under 59")	Percent Adults (Over 59")	Total No. of Beaver	No. of Trappers	Avg. No. Beaver/ Trapper
11	1968	20	15.8	33.3	66.7	57	4	14.2
	1969	20	10.4	31.2	68.9	77	7	11.0
	1970	No limit	8.5	29.8	70.2	47	6	7.8
	1971	No limit	9.1	42.4	57.6	34	8	4.2
	1972	No limit	33.4	33.4	66.6	3	2	1.5
12	1968	15	16.1	34.5	65.5	87	23	3.8
	1969	15	7.4	19.4	80.6	108	29	3.7
	1970	15	9.5	34.7	65.3	148	32	4.6
	1971	15	12.5	31.3	68.7	16	3	5.3
	1972	15	25.0	37.5	62.5	9	5	1.8
13	1968	20	18.8	34.8	65.3	149	29	5.1
	1969	20	8.3	25.9	74.1	204	32	6.3
	1970	20	13.2	27.9	72.1	189	24	7.8
	1971	20	34.4	49.1	50.9	116	15	7.7
	1972	20		6.7	93.3	16	7	2.3
14	1968	40	20.0	42.9	57.0	382	50	7.6
	1969	40	16.8	42.4	60.0	220	33	6.6
	1970	40	27.2	51.0	49.0	202	32	6.3
	1971	40	20.0	42.0	58.0	50	14	3.5
	1972	40	34.8	43.5	56.5	23	6	3.8
15	1968	40	10.5	36.8	63.2	38	5	7.6
	1969	40	39.3	57.1	45.1	135	14	9.6
	1970	40	25.0	58.3	41.7	73	15	4.8
	1971	40	20.7	34.5	65.5	29	7	4.1
	1972	40	41.5	58.7	41.3	29	5	5.7

Appendix 1. Beaver affidavit analysis, 1968-72 (continued).

Game Mgmt. Unit	Year	Limit	Percent Kits (Under 54")	Percent Kits and Yearlings (Under 59")	Percent Adults (Over 59")	Total No. of Beaver	No. of Trappers	Avg. No. Beaver/ Trapper
16	1968	40	23.2	45.0	55.0	732	59	12.4
	1969	40	15.8	41.5	59.1	975	66	14.7
	1970	40	17.9	38.3	61.7	717	62	11.5
	1971	40	17.6	40.2	59.8	279	28	9.9
	1972	40	13.8	31.6	68.4	329	25	13.1
17	1968	20	25.7	36.4	63.6	3,158	198	15.9
	1969	15	No harvest reported			Est. 1,750	Est. 150	Est. 11.6
	1970	15	22.6	34.1	65.9	1,190	118	10.1
	1971	15	27.5	41.0	59.0	824	80	10.3
	1972	15	20.5	34.0	66.0	762	70	10.9
18	1968	10	23.2	38.0	62.0	1,423	194	7.3
	1969	10	19.8	35.6	64.4	975	137	7.1
	1970	10	21.2	37.2	62.8	946	128	7.3
	1971	10	15.6	33.0	67.0	385	58	6.6
	1972	10	20.6	39.7	60.3	961	133	7.2
19	1968	25 and 10*	14.0	30.0	70.1	1,368	149	9.2
	1969	25 and 10*	7.4	23.0	77.0	895	98	9.1
	1970	25 and 10*	7.3	22.9	77.1	1,132	128	8.8
	1971	25 and 10*	17.0	31.1	68.9	516	78	6.6
	1972	25 and 10*	13.3	27.2	72.8	597	93	6.4
20	1968	25	12.1	27.7	72.2	1,502	152	9.9
	1969	25 closed*	12.9	29.9	70.1	1,658	156	10.6
	1970	25 closed*	11.3	29.2	70.8	1,366	148	8.7
	1971	25 closed*	6.9	23.5	76.5	607	78	7.7
	1972	25 closed*	6.4	20.4	79.6	1,136	103	11.0

Appendix 1. Beaver affidavit analysis, 1968-72 (continued).

Game Mgmt. Unit	Year	Limit	Percent Kits (Under 54")	Percent Kits and Yearlings (Under 59")	Percent Adults (Over 59")	Total No. of Beaver	No. of Trappers	Avg. No. Beaver/ Trapper
21	1968	15	16.1	31.3	68.7	2,353	227	10.4
	1969	15	7.3	24.0	76.0	1,991	185	10.7
	1970	15	6.4	21.5	78.5	1,138	119	9.5
	1971	15	10.5	22.0	78.0	472	57	8.2
	1972	15	8.3	28.4	71.6	1,029	112	9.2
22	1968	50	26.5	47.1	53.0	68	9	7.6
	1969	50	15.4	30.8	69.2	27	4	6.7
	1970	50	No harvest reported					
	1971	50	66.7		33.3	3	1	3.0
	1972	50	No harvest reported					
23	1968	20	50.0	50.0	50.0	2	1	2.0
	1969	20	No harvest reported					
	1970	20	No harvest reported					
	1971	20			100	12	1	12.0
	1972	20	No harvest reported					
24	1968	20	7.5	24.7	75.3	714	62	11.5
	1969	20	7.2	25.5	74.5	842	64	13.1
	1970	20	3.9	24.6	75.4	508	48	10.5
	1971	20	7.2	31.8	68.2	71	13	5.4
	1972	20	4.8	18.1	81.9	116	13	8.9
25	1968	20	19.1	36.9	63.1	236	42	5.6
	1969	20	13.6	36.3	62.7	120	34	3.5
	1970	20	19.5	40.5	59.5	343	61	5.8
	1971	20		9.5	90.5	31	7	4.4
	1972	20	13.8	34.1	65.9	123	28	4.4

Appendix 1. Beaver affidavit analysis, 1968-72 (continued).

Game Mgmt. Unit	Year	Limit	Percent Kits (Under 54")	Percent Kits and Yearlings (Under 59")	Percent Adults (Over 59")	Total No. of Beaver	No. of Trappers	Avg. No. Beaver/ Trapper
TOTAL	1968		19.1	34.2	65.8	13,342	1,312	10.2
	1969		12.5	30.3	69.7	10,474	1,069	9.7
	1970		15.2	32.4	67.6	9,220	1,038	8.8
	1971		18.4	33.9	66.1	3,911	501	7.8
	1972		14.3	30.6	79.4	5,636	663	8.5

* Unit was divided with different bag limits in the subdivisions and/or closed areas.

5 year average	(1968-72)	8,517
5 year range	(1968-72)	3,911-13,342
5 year average	(1968-72) no. of trappers	917

BEAVER

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 17 - Bristol Bay

Seasons and Bag Limits

February 1 - February 28 — 15 per season

Harvest and Trapping Pressure

The reported harvest for 1972 was 762 beaver taken in Unit 17 (Appendix I). This is the lowest reported harvest since 1957. The percentage of kits in the harvest (20.5) was the lowest since 1959.

Composition and Productivity

No work accomplished.

Management Summary and Conclusions

The low harvest reported from Unit 17 in 1972 is the result of a good commercial fishing season in Bristol Bay, and the opportunities for winter employment in building projects at several of the villages. There was not the usual economic pressure to go trapping that generally produces a high beaver harvest for this unit.

However, the trapping pressure was not reduced on a unit-wide basis. Streams which required long travel to reach and primitive camping conditions to trap were ignored while those close to the villages were heavily trapped. It is generally considered that harvests of over 20 percent kits may result in over-utilization of the resource. The high percentage of kits in the 1972 harvest indicates that trappers were not selective for large beaver but continued to attempt to take the maximum number of beaver from each house. In those streams close to the villages, a trend of overharvest continued.

Recommendations

Trapping pressure on streams near the villages should be reduced to allow beaver populations in these areas to recover from past overharvest. A system of limited stream closures would protect these areas and yet allow trappers to take fur from lightly harvested areas. Attempts should be made to contact villagers and secure their cooperation in designating and requesting stream closures. If village cooperation cannot be obtained, a unit-wide closure of beaver trapping should be considered.

Submitted by: James B. Faro, Game Biologist III

BEAVER - GMU 17 - Bristol Bay

APPENDIX I

Reported Beaver Harvest, GMU 17, 1957 - 1972

Year	Percent Kits (under 54")	Percent Adults (over 59")	Total Harvest
1957	22.9	63.2	367
1958	19.1	67.0	3,165
1959	19.6	70.6	3,245
1960	24.3	65.8	3,721
1961	23.1	65.2	2,849
1962	29.5	58.5	1,903
1963	23.3	63.2	2,172
1964	28.4	61.6	1,766
1965	22.1	65.1	957
1966	25.2	62.1	1,424
1967	25.3	63.0	2,711
1968	25.7	63.6	3,158
1969	No Data Available		Est. 1,750
1970	22.6	65.9	1,190
1971	27.5	59.0	824
1972	20.5	66.0	762

Submitted by: James B. Faro, Game Biologist II

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 18 - Yukon-Kuskokwim Delta

Seasons and Bag Limits

Species	Season	Bag Limit
Beaver	Feb. 1 - Mar. 31	10 per season
Coyote	Nov. 10 - Apr. 30	No limit
White fox	Nov. 10 - Apr. 15	No limit
Red fox	Nov. 10 - Apr. 15	No limit
Lynx	Nov. 10 - Mar. 31	No limit
Marten	Oct. 20 - Feb. 28	No limit
Mink and weasel	Nov. 10 - Jan. 31	No limit
Land otter	Nov. 10 - Mar. 31	No limit
Squirrels (all species)	No closed season	No limit
Wolf	Oct. 1 - Apr. 30	No limit
Wolverine	Nov. 10 - Mar. 31	No limit

Harvest and Hunting Pressure

Beaver: A notable increase in catch and the number of trappers occurred during the 1972 beaver season. In 1971, 58 trappers took 385 beaver, in comparison to the 1972 catch of 133 trappers with 961 beaver. Kits comprised 20 percent of the 1972 catch, suggesting a higher level of exploitation. Beaver lodges are becoming increasingly evident on the outer fringes of the Yukon-Kuskokwim Delta. Over 100 beaver were sealed at Emmonak, most were taken close by in sloughs and lakes. This village is located on the very fringe of the Yukon Delta. Traders and trappers report increasing numbers of beaver on the Delta.

White Fox: The white fox catch was down considerably from the previous year.

Red Fox, Lynx, Marten: No information available.

Mink and Weasel: Mink trapping reached one of the lowest levels in memory of several traders in the Yukon-Kuskokwim area. George Sheppard (April 1972) of Mountain Village reported he had never seen such a poor mink catch in the 40 years he had been trading. Severe flooding over much of the Delta was commonplace in the spring of 1971. There is some evidence to suggest that this may have caused heavy losses to kit mink. Local residents also reported a lack of mice and rabbits mostly because of losses during spring high water.

Land Otter: The land otter catch apparently increased in 1972. However, no statistics are available to verify this observation.

Squirrel: No information available.

Composition and Productivity

Studies are not being conducted on composition and productivity except aerial beaver cache surveys over selected drainages.

Management Summary and Recommendations

No regulatory changes are proposed.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 19 - McGrath

Season and Bag Limits

Species	Season	Bag Limit
Beaver		
Unit 19A (Kuskokwim drainage upstream from McGrath and Takotna River)	Feb. 1 - Apr. 15	25 per season
Unit 19B (Downstream from McGrath, except Holitna River as described below)	Feb. 1 - Feb. 28	10 per season
Unit 19B (Holitna River drainage upstream from its confluence with Hoholitna River except Titnuk Creek)	No open season	10 per season
Coyote	Nov. 1 - Apr. 30	No limit
Red Fox	Nov. 1 - Jan. 31	No limit
Lynx	Nov. 1 - Mar. 31	No limit
Marten	Oct. 20 - Feb. 28	No limit
Mink and weasel	Nov. 1 - Jan. 31	No limit
Muskrat	Nov. 1 - June 10	No limit
Land otter	Nov. 1 - Mar. 31	No limit
Squirrel	No closed season	No limit
Wolf	Oct. 1 - Apr. 30	No limit
Wolverine	Nov. 10 - Mar. 31	No limit

Harvest and Hunting Pressure

Beaver: The same factors which affected the beaver trapping effort in 1971, essentially occurred in 1972. These factors were deep snow (four to five feet), thick ice, and other sources of income, including food stamps. In 1972, 101 trappers reported 597 beaver caught compared to 78 trappers with a catch of 516 in 1971.

Increasing pelt values for beaver possibly prompted more trappers to go afield in 1972; however, adverse snow and ice conditions may have reduced their effectiveness. The average number of beaver per trapper was less in 1972 than in 1971. Regardless of high fur prices and abundance, beaver continue to be relatively underharvested in many drainages of Unit 19. As reported previously, this lack of interest can largely be attributed to the changing socioeconomic picture.

Coyote: Coyotes are rare in Unit 19. Conversations with several older trappers suggest past occurrences of coyotes as far west as the Innoko River in Unit 21 (1930-1940). Several coyotes and considerable sign were noted in October of 1972 along the South Fork of the Kuskokwim and the Tonsona River. This invasion may be in response to increasing snowshoe hare populations.

Red fox: Red fox continued to be abundant in 1972. Possibly a few more were taken this season due to increased pelt values, some sold for as high as $35.00 and they averaged about $20.00.

Lynx: The Nikolai area, North Fork of the Kuskokwim and several major tributaries to the east of the Kuskokwim seem to support the majority of lynx in Unit 19. The average price per lynx rose again this season to about $35.00.

Marten: Marten numbers appeared to remain high in Unit 19. Heavy catches were made in the Sleetmute, Stony River, and Takotna River areas. Many more marten were encountered in the low lying areas than normally is expected. This distribution may have been an effect of the heavy snowfall which makes food gathering difficult on the upland areas. Average price per pelt rose from $3.00 to about $18.00. Total catch for Unit 19 exceeded 2000 marten.

Mink: Few mink were trapped in 1972. Low prices, and lower numbers, plus the availability of other easily taken furbearers resulted in a meager catch of mink.

Muskrat: Muskrats are not found in abundance anywhere in Unit 19. Those that are trapped and shot are mainly sought by recreational trappers. About 100 were taken locally in 1972.

Land otter: Although fairly abundant, land otters are not commonly taken intentionally. Most are caught incidentally to beaver trapping. There were about 25 otter taken in the upper portions of Unit 19 in 1972, most in the McGrath and Nikolai areas. Another 15 or more were caught near Sleetmute on the Holitna and Hoholitna Rivers.

Squirrel: Little, if any, specific trapping effort is made to trap squirrels in Unit 19. Most are caught in marten cubbies and pole sets.

Composition and Productivity

Surveys relating to abundance, composition and productivity of fur animals except beaver were not made during this report period. Beaver food cache surveys are conducted on the Takotna, Nixon Fork, Holitna, and Hoholitna Rivers. These surveys are reported in the Beaver Research Progress Report.

Management Summary and Recommendations

Land otter seasons should close concurrently with beaver closure on April 15. Prices, abundance, and availability in the spring months might stimulate a more realistic harvest of these animals.

PAREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 21 - Middle Yukon

Seasons and Bag Limits

Species	Season	Bag Limit
Beaver Unit 21A (Yukon River Drainage upstream from Anvik River and Innoko River upstream from Holikachuk)	Feb. 1 - Mar. 31	15 per season
Unit 21B (Remainder of Unit 21)	Feb. 1 - Feb. 28	15 per season
Coyote	Nov. 1 - Apr. 30	No limit
Red fox	Nov. 1 - Jan. 31	No limit
Lynx	Nov. 1 - Mar. 31	No limit
Marten	Oct. 20 - Feb. 28	No limit
Mink and weasel	Nov. 1 - Jan. 31	No limit
Muskrat	Nov. 1 - June 10	No limit
Land otter	Nov. 1 - Mar. 31	No limit
Squirrels (all species)	No closed season	No limit
Wolf	Oct. 1 - Apr. 30	No limit
Wolverine	Nov. 1 - Mar. 31	No limit

Harvest and Hunting Pressure

Beaver: In spite of adverse snow and ice conditions throughout Unit 21 trapping effort increased greatly in 1972. The beaver catch increased from 472 taken by 57 trappers in 1971 to 1,029 taken by 119 trappers in 1972. A favorable fur market and higher pelt prices caused much of the increased effort. Little trapping was done out of Kaltag, Galena and Huslia. Trappers from Holy Cross, Holikachuk, Koyukuk and Ruby produced most of the beaver.

Coyote: None known in this area in recent years.

Red fox: Fairly abundant, but no data available on catch.

Lynx: A few were taken in the Cripple Creek and Ruby areas. Lynx numbers are very low throughout this unit.

Marten: Marten were abundant in most of Unit 21. Several large catches of over 100 marten were made in the Nowitna drainages. Marten tracks and sign were indicative of high populations in the Mud River (Innoko drainage), Kaiyuk, Yuki, Dishna, and North Fork of the Innoko. Few trappers took advantage of the high marten populations.

Mink: Reports indicated mink were generally scarce in Unit 21.

Muskrat: Unit 21 is not considered excellent rat habitat. Pushups or feeding houses were prevalent along the Yukon from the Kaiyuk Flats to Holy Cross. Trappers report increasing populations along the Yukon flood plain. It appears that few muskrats were trapped or shot and no specific information is available to determine the annual take.

Otter: Otter are abundant over much of Unit 21, especially in the Iditarod, Yentna and Innoko River area. Most otter, however, are taken incidentally to beaver trapping. No data are available with regards to the 1972 catch.

Composition and Productivity

Surveys are not done except for beaver on part of the Innoko and Dishna Rivers. Results of these surveys appear in the annual Beaver Research Progress Report.

Management Summary and Recommendations

Most furbearer regulations are adequate under current harvest and population levels. The bag limit on beaver on the Innoko River drainage above Holikachuk should be increased from 15 to 25 beaver. Harvest data on the Innoko River show low trapping effort in the last few years and a low harvest. Beaver cache surveys indicate this population can sustain an increased level of utilization. Otter seasons should be closed to coincide with the closing of beaver season. Otter populations are abundant throughout much of this unit; moreover, fur prices are good and utilization could be increased to allow greater subsistence use. Such a change would preclude accidental taking of otter in beaver sets.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 22 - Seward Peninsula

Seasons and Bag Limits

Species	Season	Bag Limit
Beaver	Feb. 1 - Apr. 15	50 per season
Arctic fox	Nov. 10 - Apr. 15	No limit
Red fox	Nov. 10 - Apr. 15	No limit
Lynx	Nov. 1 - Mar. 31	No limit
Mink and weasel	Nov. 1 - Jan. 31	No limit
Muskrat	Nov. 1 - June 10	No limit
Land otter	Nov. 1 - Mar. 31	No limit
Ground squirrel	No closed season	No limit

Harvest and Hunting Pressure

Even though fur prices were the highest that they have been for several years, trapping pressure in Unit 22 did not increase significantly. Fox hunting increased due to higher fur prices and higher red fox populations.

Beaver: Beaver are trapped in the southeastern edge of Unit 22. Beaver appear to be extending their distribution into new drainages as they are now found in the Koyuk and Kwiniuk Rivers. Total unit harvest remains low, less than 50.

Arctic fox: Almost the entire Arctic fox harvest in Unit 22 is on St. Lawrence Island. A few are taken at Shishmaref, Wales and Nome. At St. Lawrence Island the harvest was very low during early 1972. The fall harvest was slightly higher than the fall 1971 harvest.

Red fox: Red fox were more abundant in the fall of 1972 and hunting pressure increased due to the greater availability of foxes. Trapping pressure did not increase significantly although red fox pelts were selling for $50 or more and red fox were commonly seen in the vicinity of towns and villages.

Lynx: Lynx are trapped by one trapper at White Mountain and a few are also taken by Elim residents. Total unit harvest is less than 50.

Mink and weasel: The mink and weasel harvest is very low. Women take a few weasels for trim on their parkas.

Land otter: Almost no trapping pressure in Unit 22. Most are taken incidental to fish trapping.

Ground squirrels: Ground squirrels are still taken in the spring for women's parkas. Trapping pressure is seldom extensive in any area.

Composition and Productivity

Abundance information is obtained from trappers, village residents and notes taken during aerial surveys.

Beaver: Beaver are most abundant in the southeastern portion of Unit 22. Beaver houses and caches were also seen on the Kwiniuk, Koyuk and Unalakleet Rivers but they were not abundant.

Arctic fox: On St. Lawrence Island, Arctic fox were more abundant in 1972-1973 than in 1971-1972 but they were still not as abundant as they were in 1970-1971.

Red fox: Red fox were commonly seen in the vicinity of towns and villages. Several have been shot as they were suspected of having rabies. Verified cases of rabies in red fox are still low in Unit 22.

Lynx: Lynx populations are still high in the river drainages in southcentral and southeastern Unit 22. They appear to be about as abundant as last year.

Mink and weasel: No information.

Muskrat: Muskrat sign is common on most rivers east of Nome.

Land otter: Land otter tracks are common on the large rivers in Unit 22.

Ground squirrel: Ground squirrels appeared more abundant in 1972 than they have for the last several years.

Management Summary and Recommendations

Despite very high fur prices, trapping effort in Unit 22 was very low. Most residents have alternate sources of income or are not interested in trapping. Trapping effort is highest on St. Lawrence Island but there are less trappers each year. Hunting red fox remains a popular sport.

No changes in season or bag limits are recommended.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 23 - Kotzebue Sound

Seasons and Bag Limits

Species	Season	Bag Limit
Beaver	Nov. 1 - Apr. 15	20 per season
Arctic fox	Nov. 10 - Apr. 15	No limit
Red fox	Nov. 10 - Apr. 15	No limit
Lynx	Nov. 1 - Mar. 31	No limit
Mink and weasel	Nov. 10 - Jan. 31	No limit
Muskrat	Nov. 1 - June 10	No limit
Land otter	Nov. 1 - Mar. 31	No limit
Ground squirrel	No closed season	No limit

Harvest and Hunting Pressure

Increased fur prices had little effect on trapping pressure in Unit 23.

Beaver: A few (less than 10) beavers were taken near Selawik.

Arctic fox: Most Arctic fox were taken at Point Hope with a few more taken at Kivalina, Kotzebue and Deering. The 1972 harvest at Point Hope was less than 50.

Red fox: Red fox were taken incidentally to other hunting activities. Fox were more abundant in 1972 and consequently the harvest was higher.

Lynx: The lynx harvest remains less than 40.

Mink and weasel: No known trapping pressure.

Muskrats: A small number were taken near Selawik.

Land otter: A few were taken incidental to fishing.

Ground squirrel: Women continue to trap a few ground squirrels in the spring.

Composition and Productivity

Information about abundance of furbearers is taken from talks with local residents and from notes during aerial surveys.

Beaver: Beaver houses and caches are abundant on the upper Selawik and Kugarok River areas.

Arctic fox: Arctic fox were more abundant in the fall of 1972 than the spring of 1972.

Red fox: Red fox were more commonly seen this year throughout most of Unit 23.

Lynx: Lynx numbers are moderate and appear to be about the same as last year.

Mink and weasel: No information.

Muskrats: Muskrats are very common in the Selawik and Kugarok River areas.

Land otters: Land otter tracks are common on most river systems in Unit 23.

Ground squirrels: Ground squirrels are abundant in the drier areas of Unit 23.

Management Summary and Recommendations

Furbearers continue to be of limited importance to residents of Unit 23. Despite near record fur prices trapping effort did not increase significantly. Other sources of income are available and reliance on furbearers is almost nonexistent.

No changes in seasons or bag limits are recommended.

PREPARED BY:

Robert E. Pegau
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

LYNX

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 12 - Upper Tanana-White River

Seasons and Bag Limits

Hunting	Sept. 1 - Apr. 3	Two lynx
Trapping	Nov. 1- Mar. 31	No limit

Harvest and Hunting Pressure

From information obtained from a questionnaire, Tok area trappers reported an average of 10.2 lynx per trapper in the 1971-72 season. Although fur dealer export reports for 1971-72 are not yet available, replies to the trapper questionnaire indicated at least 51 lynx were harvested in the Tok area.

Trapping pressure seems to be fairly light in Unit 12, with less than seven trappers reporting.

Composition and Productivity

According to trapper questionnaire replies, lynx populations were moderately low in the Tok area during the 1971-1972 season, but trappers felt that there were more lynx than in the previous year.

Eleven female lynx carcasses were collected from the Tok area during the 1971-72 season. Ages, determined from tooth cementum layers, and long bone development indicated 4 kits, 1 sub-adult and 6 adults, including 2, seven-year-old animals and 1, six year old. This limited sample does not permit any accurate conclusions about actual age composition of the population.

Management Summary and Recommendations

Lynx populations should continue to increase and remain high during 1973. Trapping should be very good in the Tok area.

No changes are recommended in seasons or bag limits.

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

LYNX

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 20 - Fairbanks, Tanana Valley

Seasons and Bag Limits

Hunting	Sept. 1 - Apr. 30	Two lynx
Trapping	Nov. 1 - Mar. 31	No limit

Harvest and Hunting Pressure

From information obtained from a questionnaire, Fairbanks area trappers reported an average of 8.2 lynx per trapper during the 1971-72 season. Delta trappers averaged 20.3 lynx each. Although Fur Export Reports are not yet available, the trapper questionnaires indicated that at least 123 lynx were harvested in the Fairbanks area by 21 trappers.

Much of the trapping around Fairbanks is done as a sideline, by people with other occupations.

Composition and Productivity

Lynx populations increased in the Fairbanks, Delta and other parts of Unit 20 during 1971-72 and have been high around Fairbanks and Delta during the 1972-73 trapping season. Thirty female lynx carcasses, purchased from trappers in the Fairbanks area during the 1971-72 season, showed an age composition of 19 kits, 9 sub-adults, 1 two-year-old and 1 three-year-old. The high proportion of kits also indicates that lynx would be abundant the following season (1972-1973).

Management Summary and Recommendations

Lynx populations should remain high throughout 1973, with very good trapping around the Fairbanks area.

No changes are recommended in seasons or bag limits.

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

LYNX

SURVEY-INVENTORY PROGRESS REPORT - 1972

Game Management Unit 25 - Fort Yukon

Seasons and Bag Limits

Hunting	Sept. 1 - Apr. 3	Two lynx
Trapping	Nov. 1 - Mar. 31	No limit

Harvest and Hunting Pressure

From information obtained from a questionnaire Fort Yukon trappers averaged 20.6 lynx per trapper in the 1971-1972 season. Fur dealer export reports for 1971-72 were not available, but figures from previous years suggest that at least 600 lynx were harvested by Fort Yukon area trappers in 1971-72 season.

Composition and Productivity

Replies to the trapper questionnaires indicated that trappers in Fort Yukon felt that there were fewer lynx this year than last, although their catch was higher. They expressed the feeling that there were fewer kittens which would not show up in the 1971-72 catch but would affect next year's harvest.

Management Summary and Recommendations

No changes are recommended in seasons or bag limits.

PREPARED BY:

Jeannette Ernest
Game Biologist II

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator