

ALASKA DEPARTMENT OF FISH AND GAME

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ANNUAL REPORT OF
SURVEY-INVENTORY ACTIVITIES

PART XIV. FURBEARERS

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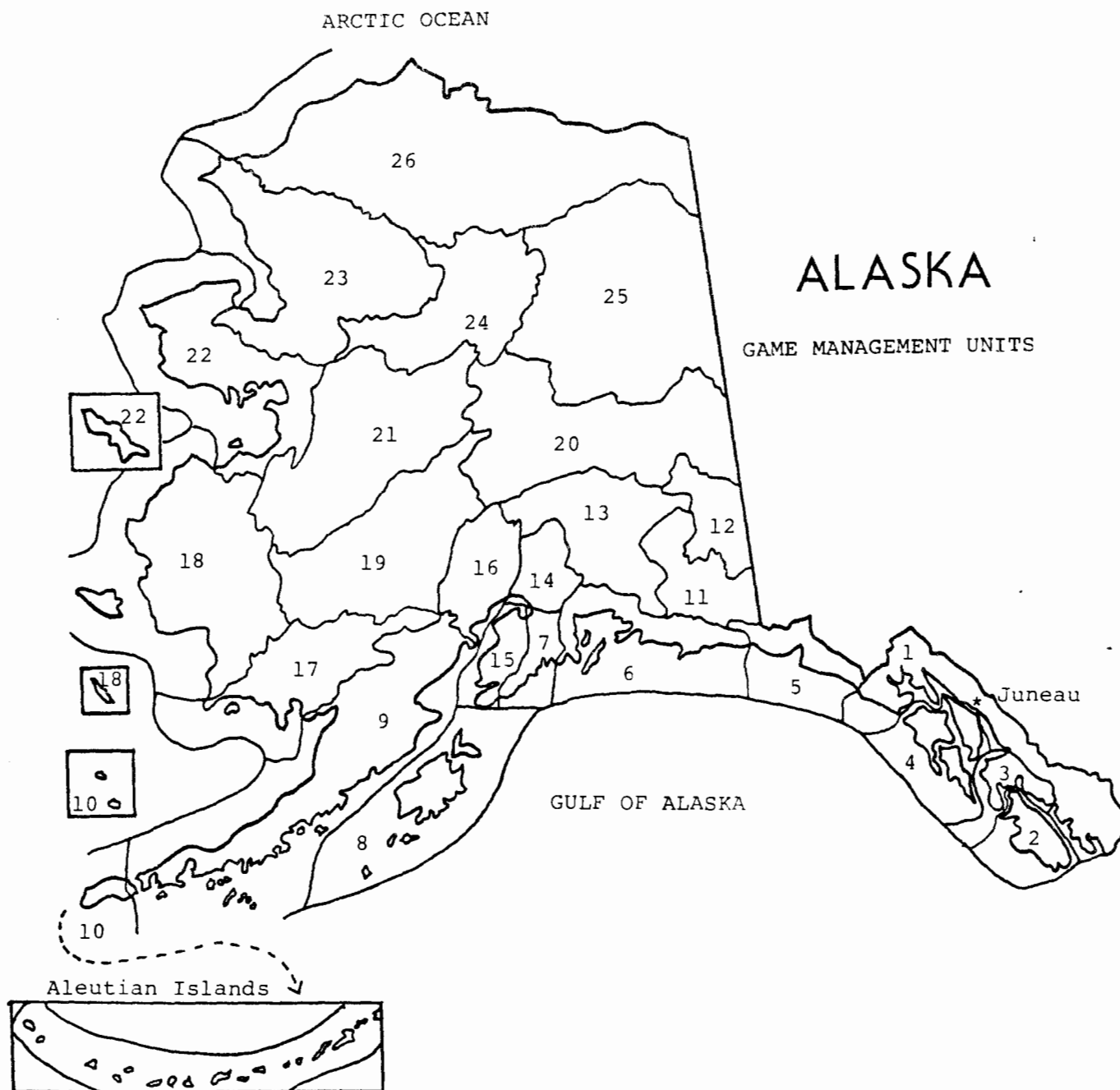
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(Printed June 1986)

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STATEWIDE HARVEST SUMMARY

In Alaska, 20 species of mammals are classified as furbearers by the Board of Game; however, only 13 of these species are normally harvested and enter the fur trade. No harvest information is gathered for the arctic ground squirrel, flying squirrel, Alaskan and hoary marmot, least weasel, or raccoon. The sea otter, which is also classified as a furbearer, is under federal management and not open to general hunting or trapping.

Estimates of Alaska's annual statewide furbearer harvests are derived from 3 sources: furbearer sealing certificates, fur export reports, and reports of acquisition of furs. Since furs kept for personal use often are not reported, actual harvests probably exceed those estimated from these data sources.

Of the 3 sources, pelt sealing gives us the most accurate and complete information, but only for the 5 species (beaver, lynx, otter, wolf, and wolverine) that must be sealed statewide. However, sealing data underestimates harvest in some rural areas of Alaska, especially in communities lacking a department office or sealing agent. Rural people commonly home dress and utilize beaver, wolf, and wolverine without bothering to get them sealed.

The number of animals sealed for each game management unit is presented in Table 1. The numbers in this table may not agree with the numbers reported for specific game management units in the unit reports that follow this summary. There are several reasons why a difference might occur. Pelts may be sealed late, certificates may arrive late, the GMU/subunit designation may have been incorrect for the specific location of harvest shown, then corrected at a later date, etc.

Sealing data for wolves is presented in a separate Wolf Survey and Inventory Report (Alaska Department of Fish and Game, 1986).

Data from fur export reports and reports of acquisition of furs are summarized in Table 2. In recent years, we took advantage of the fact that data from all 3 source documents were available for beaver, lynx, and otter, and it was possible to form a ratio between the number sealed and the number reported exported and/or purchased to develop estimates of harvest for unsealed species. This procedure assumes: 1) that species which do not need to be sealed are treated similarly, by the public, to the species that are sealed and, 2) that sealing data are better estimators of the actual

harvests of sealed species than either acquisition or export report data. In recent years, these 2 assumptions seemed reasonable. However, our harvest data for 1984-85 suggest that the behavior of the public with respect to the disposition of furs may have changed, and this calls into question the appropriateness of applying the ratio procedure to arrive at harvest estimates for unsealed species. In the past several years, the number of beaver, lynx, or land otter that have been sealed has always exceeded, by a substantial amount, the number reported purchased by dealers or the number reported exported. For example, in 1983-84 the number of beaver, lynx, and otter that were sealed exceeded the number acquired by fur dealers plus the number exported by trappers by 45, 63, and 49 percent, respectively. However, in 1984-85 the sum of dealer purchases and trapper exports (Table 2, Column 5), (two categories that should be mutually exclusive, i.e., a person cannot sell pelts to a dealer and also export the same pelts), exceeds the numbers sealed of beaver, lynx, and otter (Table 2, compare column 5 with column 6). There are at least 2 possible explanations: 1) harvest for each of these species actually exceeded the number sealed by a greater number in 1984-85 than in previous years and people failed to seal a large proportion of these pelts, 2) trappers sold or exported pelts held over from a previous year as well as the ones they took and sealed in 1984-85. Either or both explanations could account for this apparent change in public behavior. However, without additional information, it is not clear how to interpret these data. Before we attempt to estimate harvests of unsealed species, we need to reevaluate and probably modify our procedures for making these estimates.

Statewide, beaver populations have remained high in most areas (probably due to fairly low pelt prices), and the species continues to expand its range in western Alaska. Coyote may be increasing in numbers, especially in the Delta Junction area (Unit 20D). Lynx are generally low but a few major fur buyers report an increase in the percent kits in the harvest of some Interior areas suggesting that lynx may be increasing in selected locations. Although a few trappers said marten were less abundant in their trapping areas, the harvest statewide remained high. Otter populations seem to be stable in most areas. No marked changes appear to be occurring in the remaining species of furbearers.

Herbert R. Melchior
Statewide Furbearer Coordinator

Table 1. Number of beaver, lynx, otter (land), and wolverine sealed statewide during the 1984-85 regulatory year.

Unit	Species			
	Beaver	Lynx	Otter	Wolverine
1	79	2	113	28
2	234	--	193	--
3	52	--	141	3
4	14	--	163	--
5	1	--	1	2
6	35	1	35	12
7	36	2	17	16
8	147	--	187	--
9	218	52	143	50
10	--	--	--	--
11	21	76	3	32
12	44	82	1	19
13	90	48	19	56
14	288	15	47	10
15	172	28	46	4
16	389	1	33	21
17	1,655	29	219	57
18	1,508	23	431	7
19	700	30	69	60
20	655	221	20	63
21	700	123	69	60
22	1	154	6	20
23	28	26	5	37
24	235	162	19	19
25	334	618	11	62
26	--	3	1	4
Unk	--	--	--	--
Total	7,636	1,696	1,992	642

Table 2. 1984-85 reported dealer acquisitions, dealer exports, trapper exports, and total exports for 13 species of furbearers.

Species	(1) Dealer acquisitions	(2) Dealer exports	(3) Trapper exports	(4) Total exports	(5) Col. (1)+ Col. (3)	(6) Number sealed
Beaver	4,980	1,550	4,503	6,053	9,483	7,636
Coyote	161	34	312	346	473	--
Lynx	1,092	486	1,110	1,596	2,202	1,696
Marten	17,858	6,948	19,807	26,755	37,665	--
Mink	9,788	2,279	6,517	8,796	16,305	--
Muskrat	5,887	2,074	8,580	10,654	14,467	--
Otter (land)	879	255	1,162	1,417	2,041	1,992
Red fox ^a	5,874	2,588	4,471	7,059	10,345	--
Red squirrel	251	98	1,723	1,821	1,974	--
Weasel (Ermine)	218	132	411	543	629	--
White (Arctic) fox ^b	348	119	578	697	926	--
Wolf	122	69	435	504	557	1,042
Wolverine	175	35	336	371	511	642
Totals	47,633	16,667	49,945	66,612	97,578	13,008

^a Includes cross and silver fox.

^b Includes blue fox.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNITS: 1A AND 2

GEOGRAPHIC DESCRIPTION: Ketchikan and Prince of
Wales Island

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Beaver populations are probably increasing as colonies begin to use new habitat created by clearcut logging. Populations are likely to continue to increase until the forest canopy closes in the cut-over areas, eliminating the understory vegetation. Trapping pressure is light in areas with poor access, but the trapping effort has been increasing along the road system in Unit 2. In Subunit 1A, 11 trappers took 39 beavers. Four trappers accounted for 74% of the catch. In Unit 2, 22 trappers took 234 beavers; 5 trappers were responsible for 54% of the catch. If fur prices increase in the future, some overharvesting may occur, particularly in areas with good access. No changes in season or bag limit are recommended at this time.

Marten and Mink

Based on discussions with trappers, marten and mink populations are apparently holding at moderate to high levels. Generally, populations in accessible areas are lower because of concentrated trapping pressure there. Marten have been more affected than mink by increased trapping pressure because of relatively higher pelt prices and ease of trapping.

In 1984-85, the sealing of marten pelts was required in Units 1-5 for the 1st time since 1948. In Subunit 1A, 19 trappers took 203 marten (69% females); 4 trappers took 51% of the catch (Table 1). Most of the trappers used the same areas that they have trapped during the past few years. Almost the entire catch came from saltwater beach sites. The Unit 2 catch was 1,039 marten (54% males) taken by 60 trappers. Seven trappers took 47% of the marten catch, for an average of

69 marten. The largest single catch was 100 marten. About 50% of the Unit 2 trappers used the logging road system; they took slightly over 40% of the catch. No changes in season or bag limit are recommended at this time.

No harvest information is available for mink.

Otter

Otter populations are probably still below levels observed during the early 1970's, but they are currently increasing. Lower pelt prices have reduced trapping pressure recently. In Subunit 1A, the otter catch was 65 (63% males) taken by 13 trappers. Sixty-four percent of the harvest was made by 3 trappers. The catch was 30% higher than it was last season; 2 more trappers participated. In Unit 2, the otter catch was 192 (50% males) taken by 40 trappers. Fifty-four percent of the harvest was taken by 5 trappers; their average catch was 21 otters. No changes in seasons or bag limits are recommended.

Wolverine

The status of wolverines is unknown. These animals occur only on the mainland portions of Subunit 1A. Wolverines are seldom taken by trappers, especially during mild winters when beach areas are avoided. During 1984-85, no wolverines were taken. No changes in seasons or bag limits are recommended.

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Table 1. Marten catch in Subunit 1A and Unit 2, by major harvest area, 1984-85.

Major harvest area No./Name	Marten catch			Total
	Males	Females	Unk	
1 Gravina Island	0	0	0	0
2 Annette Island	0	0	0	0
3 Duke Island	0	0	0	0
4 South Revilla Island	32	9	0	41
5 North Revilla Island	18	11	0	29
6 Cleveland Pen.	27	23	0	50
7 Upper mainland	23	9	0	32
8 Lower mainland	41	10	0	51
Total Subunit 1A	141	62	0	203
9 Outer islands	0	0	0	0
10 Hecata Island	0	0	0	0
11 SW Prince of Wales	239	156	16	411
12 SE Prince of Wales	60	56	26	142
13 Central Prince of Wales	151	106	0	257
14 North Central Prince of Wales	88	84	0	172
15 North Prince of Wales	27	22	8	57
Total Unit 2	565	424	50	1039

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1B and 3

GEOGRAPHICAL DESCRIPTION: UNIT 1B - Southeast mainland from
Cape Fanshaw to Lemesurier Point

UNIT 3 - Islands of the
Petersburg, Wrangell, and Kake
areas

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

While beaver populations have been increasing, low fur prices have offered little incentive to trappers. Thus, little beaver trapping effort has been recorded. Sealing records indicate 52 beavers were taken in Unit 3, up from 25 in the 1982-83 season. The harvest in Unit 1B was 4, up from zero in 1983-84. This increase was probably due to anticipation of higher prices. Some trappers still seek beaver for use as wolf bait. No regulatory changes are recommended.

Marten

Marten populations continue to be good in most areas and are highly sought by trappers. Sealing of marten furs was required this year for the 1st time since 1948. Although the sealing program aids us in determining the sex composition and size of the harvest, the catch may not reflect true sex ratios of the population because trapping may be sex selective. In Unit 1B, 185 marten were trapped; 67% ($n = 123$) were males, and 33% ($n = 62$) were females (Table 1). In Unit 3, 250 marten were taken; males composed 69% ($n = 173$) of the catch; females made up 30% ($n = 75$); and the sex of 1% ($n = 2$) was unknown (Table 1). All marten were taken by trapping.

The sealing records for marten show 435 marten were trapped in Units 1B and 3 compared with the 256 reported by the fur export reports for 1983-84. This increase may be the result

of more accurate gathering of information, although trapping mortality was higher for most species in 1984-85 than in the previous year: .

The marten sealing program should be continued to provide baseline data needed to establish trapping and population trends. No regulatory changes are recommended.

Otter

Otter populations continue to be good in most areas; these animals remain one of the species most sought by trappers.

In Unit 1B, otter harvest remained the same as for last year. The harvest was composed of 40% males and 60% females (Table 2). Most of the otters were taken by trapping (Table 3). In Unit 3, the otter take increased from 42 in 1983-84 to 141 in 1984-85. The sex ratio was .57% males, 40% females, and 3% undetermined (Table 2). Sealing records were used to determine the sex composition and size of the otter harvest. The records may not reflect true sex ratios because trapping may be sex selective. The increase in the otter harvest was probably the result of anticipated higher fur prices. No regulatory changes are recommended.

Other Species

No systematic data were collected during the period other than those obtained through hide sealing. Raccoons and red foxes are not known to exist in Game Management Units 1B and 3. Lynx may occur in major drainages of Unit 1B, but none were trapped or reported during the period. Muskrats are found in low numbers throughout Units 1B and 3. Marmots are not trapped, but they are found in mainland alpine areas and on a few of the larger islands. Squirrels and weasels occur in both units and are taken incidental to mink and marten trapping.

Mink are common in Units 1B and 3 but sealing is not required. The continuing low price being offered gives the trapper little incentive to harvest mink. No regulatory changes are recommended.

Wolverine

Wolverine are present throughout most of the area, but are usually caught incidentally in wolf sets. Sealing records indicate sex composition but these records may not reflect true sex ratios because trapping may be sex selective.

Three male wolverines were taken in Unit 3. In Unit 1B, 2 males and 2 females were taken (Table 4). The wolverine harvest in Units 1B and 3 is incidental to trapping for other species. Wolverines are usually caught in wolf sets. No regulatory changes are recommended.

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Table 1. Marten harvest Unit 1B and Unit 3, 1984-85.

Month of kill	Unit 1B				Unit 3			
	Male	Female	Unk	%	Male	Female	Unk	%
December	82	51	0	72	89	44	2	54
January	30	7	0	20	55	14	0	28
February	11	4	0	8	29	17	0	18
Total	123	62	0	100	173	75	2	100

Table 2. Chronology and sex composition of otter harvest for Units 1B and 3, 1984-85.

Month of kill	Unit 1B			Unit 3			
	Male	Female	%	Male	Female	Unk	%
December	1	4	33	38	23	0	43
January	5	5	66	36	24	2	44
February	0	0	0	6	8	3	12
Totals	6	9	100	80	56	5	100

Table 3. Otter harvest, by method of take, for Units 1B and 3, 1984-85.

Method of take	Unit 1B			Unit 3			
	Male	Female	%	Male	Female	Unk	%
Shooting	0	2	13	1	5	0	4
Trapping	6	7	87	79	51	5	96
Snaring	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Totals	6	9	100	80	56	5	100

Table 4. Wolverine harvest Units 1B and 3, 1978-85.

Season	Unit 1B				Unit 3			
	Male	Female	Unk	Total	Male	Female	Unk	Total
1978-79	2	4	0	6	1	0	0	1
1979-80	2	1	0	3	0	1	0	1
1980-81	1	0	1	2	0	0	1	1
1981-82	0	4	0	4	0	1	0	1
1982-83	2	2	0	4	1	0	1	2
1983-84	2	1	0	3	0	1	0	1
1984-85	2	2	0	4	3	0	0	3
Totals	11	14	1	26	5	3	2	10

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1C

GEOGRAPHIC DESCRIPTION: Southeast mainland north of Cape
Fanshaw to the latitude of Eldred
Rock

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

The harvest of beavers in Subunit 1C was 36 in 1984-85; this is 60 fewer animals than were taken the previous year (Table 1). A total of 4 individuals took the 36 beavers. One trapper took 29 animals from Lincoln Island.

Lynx

One lynx was taken in 1984-85 in the Montana Creek drainage.

Marten and Mink

The sealing of marten skins became mandatory in 1984-85, for the 1st time in Units 1-5 since 1948. Based on sealing information, the catch for Subunit 1C was 245 marten, including 157 males, 87 females and 1 of unknown sex. Of the 245 marten, 209 animals were taken during December. Twenty-one trappers took marten in Subunit 1C. This level of marten harvest was relatively close to past figures obtained from records of fur dealer purchases from trappers and from trapper export records (for prior years, see Table 2). Distribution of the harvest showed that 62 marten (43 males, 19 females) were taken west of Lynn Canal along the Chilkat Range and Gustavus area, 67 (41 males, 26 females) in the Juneau area, 5 males in the Taku River area, 101 (64 males, 37 females) south of Taku Inlet, and 6 (4 males, 2 females) in the Berners Bay area.

Harvest figures for mink are not available from records of fur dealer purchases from trappers or from trapper export records. These sources are the only ones used for harvest determination.

Otter

The harvest of otter was 34 in Subunit 1C, nearly equal to the 33 taken in 1983-84. No changes in seasons or bag limit are recommended.

Red Fox

No information on pelts purchased by dealers or exported by trappers in Subunit 1C is available. However, no significant changes are known to have occurred.

Wolverine

The 9 wolverines harvested in Subunit 1C are nearly twice the number taken the previous year. The annual average since 1979-80 is 5.4 animals. Six trappers were successful in 1984-85. A proposal to extend the trapping season for Subunit 1C from 1 December-15 February to 10 November-30 April was adopted by the Board of Game during their spring meeting in 1985. By extending the wolverine trapping season and making it concurrent with the wolf trapping season, the problem of trappers wanting to possess and use wolverine accidentally taken while trapping wolves would be resolved. The harvest of wolverines is not expected to increase substantially as a result of the extension.

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Table 1. Furbearers in Subunit 1C and numbers of trappers, 1979-85.^a

Season	Beaver	Lynx	Otter	Wolverine	Marten	No. of trappers
1979-80	-- ^b	--	37	3	-- ^c	15
1980-81	--	--	34	5	--	20
1981-82	10	--	19	6	--	12
1982-83	26	2	30	8	--	16
1983-84	96	1	41	5	--	15
1984-85	36	1	34	9	245	27

^a Data from furbearers sealing documents.

^b No animals sealed during this time period.

^c Marten were not sealed until 1984-85; see Table 2 for additional information.

Table 2. Number of furs purchased from trappers and/or exported by trappers in Subunit 1C, 1979-85.

Season	Beaver	Lynx	Marten	Mink	Muskrat	Red Fox	Squirrel	Weasel	No. of Trappers
1979-80	18	0	365	235	12	0	0	12	29
1980-81	1	0	288	170	0	0	0	0	18
1981-82	--	0 ^a	95 ^a	73 ^a	0 ^a	1 ^a	0 ^a	7 ^a	8 ^a
1982-83	0	1	99	90	0	0	0	0	11
1983-84	17	3	193	61	0	4	0	10	21
1984-85	b	b	b	b	b	b	b	b	b

^a Data from trapper exports only.

^b Data not available.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1D

GEOGRAPHICAL DESCRIPTION: Upper Lynn Canal

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver.

Beaver are still scarce in Subunit 1D. During August 1984, 1 animal was found dead in the Little Salmon area. No changes in season (presently closed) or bag limit are recommended.

Lynx

Only 1 lynx was sealed from Subunit 1D during the 1984-85 trapping season. This animal was an adult male trapped from the Tsirku drainage in January. The low harvest level indicates that the influx of lynx from the Yukon, thought to be the reason for the higher-than-average take in 1982-83 and 1983-84, was a short-lived phenomenon, and lynx numbers have reverted to their normal level (Appendix A). No changes in seasons or bag limit are recommended.

Marten

Fourteen trappers took 94 males (57%), 71 females (43%), and 1 marten of unknown sex from Subunit 1D in 1984-85 (Table 1). The 166 animals came from the following locations: Skagway area, 40 (24%); Little Salmon and Tsirku drainages, 30 (18%); Kelsall drainage, 25 (15%); Chilkoot River and Lake, Lutak Inlet, 22 (14%); Takhin drainage, 18 (11%); Chilkat River, 10 (6%); Klehini drainage, 9 (5%); Chilkat Lake, 8 (5%); Kicking Horse drainage and Glacier Point area, 2 each (1% each). Length measurements were insufficient for analysis.

This report year, marten were sealed in Southeast Alaska for the 1st time since 1948. Thus, the most accurate harvest estimate ever made was obtained; however, it is likely that the number of marten sealed is less than the number taken

because of trappers' unfamiliarity with the requirement. Considering the fact that more animals were sealed than expected, the sealing program should be continued. No changes in season or bag limit are recommended at this time.

Otter

One male and 3 female land otters were taken by 3 trappers in Subunit 1D during the 1984-85 trapping season. Three adults from the Chilkat and Chilkoot watersheds were trapped, and 1 subadult female was shot in the Long Bay area. This harvest level is below the 1979-80 through 1983-84 five-year mean of 5.8, and at the lower end of the range of 2 to 10 otter harvested per year (Appendix A). No natural mortality was reported during the period. No changes in season or bag limit are recommended at this time.

Wolverine

Five license holders trapped 9 female and 5 male wolverines during the report period. Spatial distribution of take was as follows: Tsirku and Klehini Rivers, 4 (29%); Denver Glacier, Skagway River and Taiya River, 4 (29%); Chilkoot Lake, 3 (21%); Kellsall River, 2 (14%); and Chilkat Lake, 1 (7%). Temporal distribution was as follows: December, 5 (36%); January, 5 (36%); and February, 4 (28%).

This year's take is the 2nd highest in the past 6 years. The take per successful trapper rose over the previous year's figure (2.8 compared with 2.3). The variation in wolverine harvest is probably the result of trapper effort rather than changes in the population. No changes in season or bag limit are recommended at this time.

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Table 1. Subunit 1D marten harvest by sex, by month, 1984-85.

Month	Males		Females		Unknown	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
December	62	37	51	31	1	1
January	22	13	13	8	0	0
February	10	6	7	4	0	0
Totals	94	56	71	43	1	1

Appendix A. Historical furbearer harvest Unit 1D, 1979-85.

Year	Lynx	Marten	Otter	Wolverine
1979-80	1	--- ^a	6	11
1980-81	0	---	8	3
1981-82	0	---	3	6
1982-83	37	---	2	9
1983-84	14	---	10	18
1984-85	1	166	4	14
Mean	8.8		5.5	10.2

^a Sealing of marten was not required 1949-50 through 1983-84.

FURBEARER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 4

GEOGRAPHICAL DESCRIPTION: Admiralty, Baranof, Chichagof,
and adjacent islands

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Fourteen beavers taken in Unit 4 during 1984-85 were presented for sealing during the reporting period (Table 1). All beavers were taken from Admiralty Island. This catch is one of the highest ever reported from Unit 4, (17 reported taken in 1966-67) but on a statewide perspective, the catch is minor. The low take from Unit 4 is most likely a reflection of limited effort rather than low beaver densities. No changes in seasons or bag limits are recommended.

Marten

The Alaska Board of Game promulgated a regulation making it mandatory for trappers to seal marten taken from Units 1-5, effective at the onset of the 1984-85 season. This procedure provided the 1st comprehensive data on marten harvests in southeastern Alaska since the season of 1948-49, when a similar requirement that had been in effect intermittently since 1925 was terminated. The regulation was adopted to provide data on total harvest, chronology of harvest, sex, and number of trappers. These data are summarized in Tables 2, 3, and 4. No comparisons can be made on this initial year's data. Sealing documents reveal that 67 trappers presented 1,355 marten skins from Unit 4 for sealing as follows: 891 males, (65%); 463 females, (34%); and 1 sex unknown. Catch per trapper ranged from 1 to 112. Four major harvest areas including Peril Strait, West Chichagof, North Chichagof, and Tenakee Inlet (Fig. 1) produced 76% of the harvest; North Chichagof produced 35% of the total catch. The harvest of 1,355 in 1984-85 was substantially higher than any known previous harvest. It is not known if this catch is truly of record proportions or a reflection of better data produced by the sealing program; it may well be a combination of the two. No changes in seasons or bag limits are recommended.

Mink

No reliable harvest data are available. No changes in seasons or bag limits are recommended.

Otter

Preliminary data show that 167 otters were taken in Unit 4 during the 1984-85 season by 34 trappers (Table 5). Catch per trapper ranged from 1-24. These data are similar to those for the past 7 years, during which time the sealing program has been in effect. No changes in seasons or bag limits are recommended.

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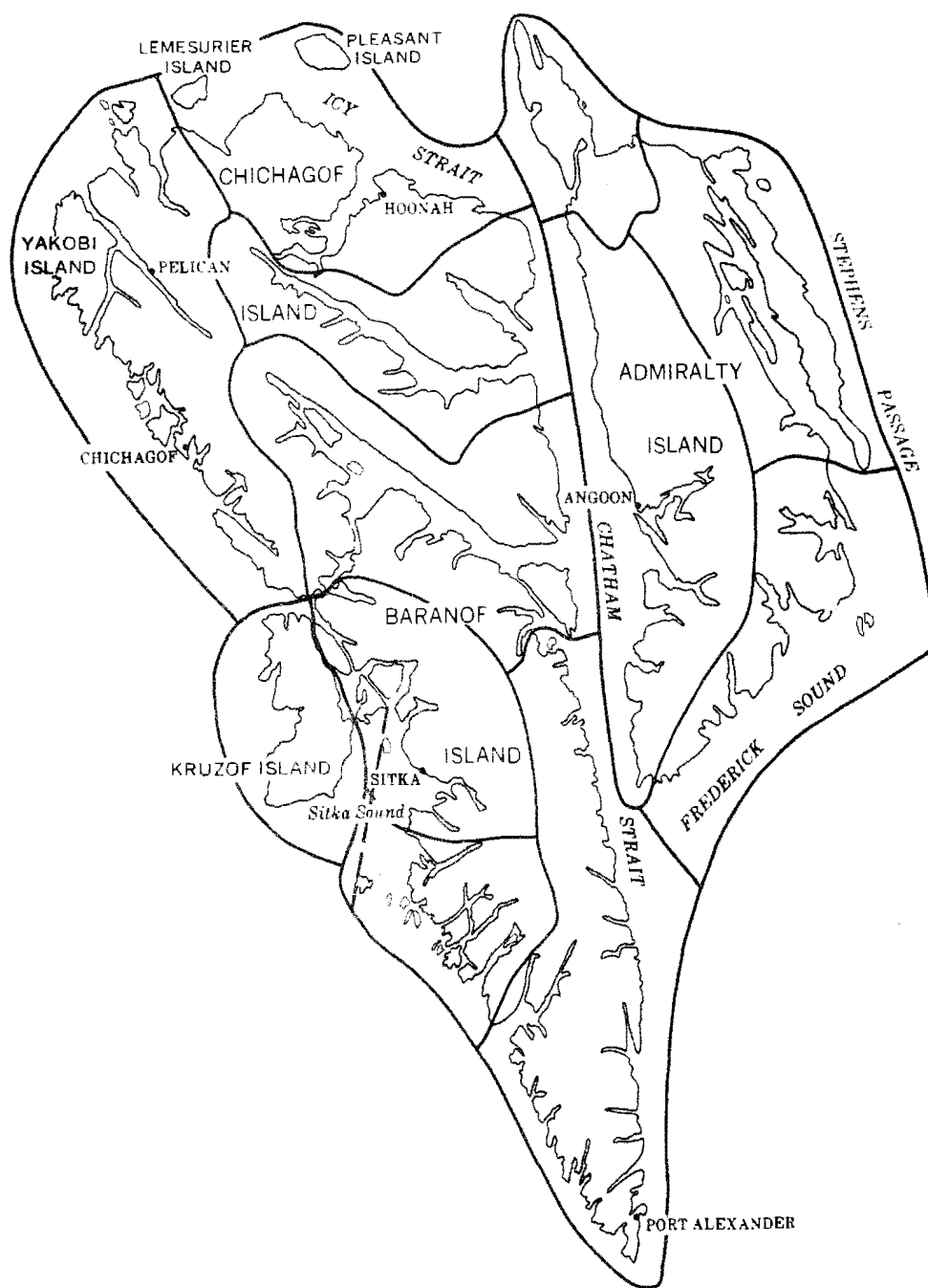


Fig. 1. Major harvest areas, Unit 4.

Table 1. Location and chronology of historic otter harvest, and historic harvest of other furbearers, Unit 4^a.

Regulatory year	Location of % of harvest				Otter		Chronology of harvest by %					Other species			
	Admiralty Baranof		Chichagof		Unk/ other							Harvest			
												Mink Marten Weasel Beaver			
							Nov	Dec	Jan	Feb	Unk				
1972-73	--	--	--	--	--	--	--	--	--	--	--	121	301	0	0
1973-74	--	--	--	--	--	--	--	--	--	--	--	408	662	0	0
1974-75	--	--	--	--	--	--	--	--	--	--	--	167	458	0	0
1975-76	--	--	--	--	--	--	--	--	--	--	--	256	797	0	0
1976-77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1977-78	--	--	--	--	--	--	1	22	34	40	3	271	811	0	8
1978-79	9	24	56	11	11	1	1	39	27	3	30	489	801	1	2
1979-80	16	39	46	0	0	1	1	38	28	11	23	475	1,074	3	1
1980-81	23	24	46	7	7	6	6	35	55	1	4	--	--	--	2
1981-82	26	15	51	7	7	2	2	55	29	14	1	--	--	--	9
1982-83	26	24	14	36	36	0	0	31	21	15	33	291	553	0	0
1983-84	21	34	29	16	16	0	0	23	32	--	45	221	657	0	0
1984-85	17	46	20	18	18	0	0	38	34	19	8	--	1,355	--	14

^a All beaver and otter data after 1977-78 and marten data for 1984-85 are from mandatory sealing. All other data derived from Dealer Purchase From Trapper, Fur Dealer Export and Trapper Export Reports.

Table 2. Unit 4 marten harvest, major harvest location, chronology, sex, and number of trappers, 1984-85.

Major harvest area	Catch (%)	Males (%)	Females (%)	Chronology (by %)				No. Trappers ^a
				Dec	Jan	Feb	Unk	
X30	75 (5)	49 (65)	26 (35)	63	13	0	24	12
X31	2 (1)	2 (100)	0 (0)	0	0	0	100	1
X32	24 (2)	18 (75)	6 (25)	50	25	0	25	6
X33	256 (19)	161 (63)	95 (37)	47	7	3	43	9
X34	166 (12)	123 (74)	43 (26)	20	31	9	40	11
X35	471 (35)	276 (59)	195 (41)	83	17	0	0	17
X36	146 (11)	102 (70)	44 (30)	34	0	0	66	7
X37	96 (7)	73 (76)	23 (24)	34	15	16	35	5
X38	23 (2)	16 (61)	6 (33)	34	26	39	0	4
X39	52 (4)	36 (69)	16 (31)	7	19	1	73	2
X41	44 (3)	35 (80)	9 (20)	14	86	0	0	4
Total	1,355 ^b	891 (66)	463 (34)	52	17	4	27	67

^a Some trappers sealed skins from more than 1 harvest location.

^b Sex of only 1 animal unknown.

Table 3. Unit 4 monthly marten catch and percentage of females in monthly catch, by major harvest area, 1984-85.

Major harvest area	Monthly catch									
	Dec		Jan		Feb		Month unknown		All months	
	n	% Females	n	% Females	n	% Females	n	% Females	n	% Females
X30	47	45	0	30	0	0	18	11	75	35
X31	0	0	2	0	0	0	0	0	2	0
X32	24	25	6	17	0	0	6	33	24	25
X33	119	19	19	79	100	100	110	46	256	37
X34	33	15	51	24	33	33	67	31	166	26
X35	391	42	80	40	0	0	0	0	471	41
X36	50	32	0	0	0	0	96	29	146	30
X37	12	27	14	21	27	27	34	21	96	24
X38	3	67	6	33	25	25	0	0	23	33
X39	3	33	10	30	0	0	38	32	52	31
X40	0	0	0	0	0	0	0	0	0	0
X41	6	17	38	21	0	0	0	0	44	20
Totals	688	35	236	33	47	40	369	33	1,355	34

Table 4. Percentage of Unit 4 marten catch, by trap site location and sex, for each major harvest area, 1984-85.

Major harvest area	Trap location											
	Old-growth forest beach fringe				Old-growth forest away from beach				Old-growth forest along road system			
	M		F		M		F		M		F	
	M	F	M	F	M	F	M	F	M	F	M	F
X30	6	0	12	42	14	4	20	8	0	0	47	46
X31	0	0	0	0	0	0	0	0	0	0	100	0
X32	33	33	5	17	0	0	0	0	0	0	61	50
X33	17	4	0	53	32	0	12	3	0	0	39	40
X34	0	0	0	0	0	0	0	0	11	2	89	98
X35	8	9	0	0	13	23	6	4	0	0	73	66
X36	2	11	37	34	31	30	5	7	2	7	25	11
X37	36	30	30	39	0	0	0	0	0	0	34	30
X38	0	17	0	0	0	0	0	0	0	0	100	83
X39	72	75	0	0	0	0	0	0	0	0	28	25
X41	23	44	0	0	0	0	0	0	0	0	77	56

Table 5. Historical otter harvests, Game Management Unit 4.^a

Regulatory year	Harvest			Statewide %	Harvest method by %		Number of persons presenting otter for sealing
	M	F	Unk Total		Shot	Trapped	
1972-73	--	--	--	--	--	--	--
1973-74	--	--	90	--	--	--	--
1974-75	--	--	121	--	--	--	--
1975-76	--	--	44	--	--	--	--
1976-77	--	--	113	--	--	--	--
1977-78	78	77	0 160	7	25	75	24
1978-79	84	70	0 157	--	67	33	26
1979-80	95	78	0 173	8	23	77	36
1980-81	81	63	10 155	7	27	73	27
1981-82	82	91	11 184	10	46	54	28
1982-83	94	69	0 163	11	51	49	23
1983-84	61	55	1 117	6	61	39	20
1984-85	88	74	5 167	8	50	50	34

^a Data for 1972-76 computed from Dealer Purchases From Trappers, Personal Use Export, and Trapper Export Reports; data for 1977 to present are from mandatory sealing records.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 5

GEOGRAPHICAL DESCRIPTION: Cape Fairweather to Icy Bay,
eastern Gulf Coast

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

One beaver, an adult female, was reported taken from Unit 5A during the report period. The animal was taken from Tawah Creek in October, under the provisions of a special permit, because of possible flood damage to the Yakutat airport runway. The lack of beaver harvest during the trapping season was a reflection of the weather during the report period. Fifty-nine inches of snow were recorded in November/December, 2 inches in January, and 205 inches from February through May. In January, 32 inches of rain were recorded. No changes in season or bag limit are recommended at this time.

Lynx

No lynx were reported taken from Unit 5 during the 1984-85 trapping season. The lack of harvest was a reflection of lower trapping pressure rather than a population trend. Both lynx and hares were observed and reported as frequently during the report period as during the previous winter. No changes in season or bag limit are recommended at this time.

Marten

Six trappers took a total of 63 marten (27 females and 36 males) from Unit 5A in 1984-85 (Table 1). All marten were taken from (in order of magnitude) the Situk, Old Situk, Ahrnklin, Ophir, and Lost drainages. The river systems are all accessible via the Yakutat road system. Fifteen females were measured and averaged 18.8 inches in length (nose to base of tail, range 16.0 to 23.0 inches), while 15 males averaged 21.1 inches long (range 18.5 to 24.0 inches). Harvest figures, by month, were December, 26 (41%); January, 26 (41%); and February, 11 (18%).

This report year marks the 1st time marten have been sealed in Southeast Alaska since 1948. Thus, the most accurate harvest data in a long while was acquired. If the previous years' harvest data are accurate (Appendix A), the 1984-85 harvest is about average. No changes in season or bag limit are recommended at this time.

Mink

Information from trapper interviews resulted in an estimate of 58 mink taken by 6 trappers. The catch was higher than the average of 45 mink for the 8 previous years for which data are available. Most, if not all, mink were taken incidental to marten-trapping efforts. No changes in season or bag limit are recommended at this time.

Otter

One land otter, an adult male, was taken in Unit 5 during 1984-85. As with other fur harvests, the low take can probably be related to inclement weather prevalent during the trapping season. No changes in season or bag limits are recommended at this time.

Wolverine

Two wolverines were taken during the report period. One male was shot in February along the west shore of the Alsek River. An animal of undetermined sex was taken out of season (May or June) from the Chaix Hills. This harvest was similar to recent years' take (Appendix A). No changes in season or bag limits are recommended at this time.

Other Species

Interviews revealed at least 7 weasels were taken by trappers in 1984-85. This species is taken incidental to trapping for marten and mink.

One coyote was reported taken during the report period. It was taken incidental to wolf trapping efforts.

Although no red foxes were recorded in harvest statistics for 1984-85, several sightings of red foxes were reported for the 1st time in many years. In the mid- to late 60's, this species was seen frequently in Unit 5, and in the 50's and early 60's they were very common (L. Johnson and R. Quimby, pers. commun.). Since the early 1970's, foxes have been observed infrequently. Foxes were farmed on at least 3

islands during the late 1920's and 1930's, but they were blue phase animals transplanted from northern Alaska (P. Henry, pers. commun.).

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

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Table 1. Unit 5 marten harvest, by sex and by month, 1984-85.

Month	Males		Females	
	<u>n</u>	%	<u>n</u>	%
December	17	27	9	14
January	13	21	13	21
February	6	9	5	8
Totals	36	57	27	43

Appendix A. Historical furbearer harvest for Unit 5A.

Year	Beaver ^a	Lynx ^a	Marten	Mink	Otter ^a	Weasel	Wolverine ^a
1971-72	0	--	--	--	--	--	8
1972-73	0	--	9	40	36	21	7
1973-74	13	1	40	13	8	8	14
1974-75	6	2	9	21	0	1	1
1975-76	0	--	--	--	--	--	0
1976-77	0	--	--	--	--	--	1
1977-78	0	0	--	--	3	--	1
1978-79	0	1	--	--	5	--	2
1979-80	0	0	13	6	2	--	3
1980-81	0	1	200	120	4	--	2
1981-82	0	0	200	100	4	--	3
1982-83	3	5	30	8	1	0	1
1983-84	4	3	75	50	4	0	2
1984-85	1	0	63	58	1	7	2

^a Data from sealing certificates, trapper interviews, trapper export reports, and Survey and Inventory Progress Reports. Data on nonsealed species should be considered low estimates.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 9

GEOGRAPHICAL DESCRIPTION: Alaska Peninsula

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Wolverine

Fifty wolverines including 27 males, 14 females, and 9 of undetermined sex were reported killed during the season. Most of the harvest occurred in Subunits 9B (42%) and 9E (38%). The male:female ratio in the harvest was 19:10. The methods of take were as follows: 33 (66%) trapped, 13 (26%) shot, 1 (2%) snared, and 3 (6%) unspecified. The chronology of harvest depends upon snow and other weather conditions that affect human access. One wolverine was taken before the trapping season opened. No wolverines were reported taken in September, 1 was taken in October, 5 in November, 10 in December, 9 in January, and 8 in February. During March, clear weather with good snow cover created ideal trapping and tracking conditions and 17 wolverines (34% of the annual harvest) were taken.

Wolverine trapping in Unit 9 is significantly affected by snow and other weather conditions. In general, frequent thaws and lack of snow, especially in 9E, make it difficult to maintain traplines. During the past 5 years, annual harvests have averaged 59 wolverines, with males outnumbering females by almost 2:1. The high male:female ratio indicates the current level of harvest is not excessive, and no changes in season or bag limit are recommended.

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FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 12

GEOGRAPHICAL DESCRIPTION: Upper Tanana and White River drainages

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Beavers exist at moderate to low density throughout most of Unit 12 although areas of high density occur in the eastern portion of the Northway-Tetlin Flats. The total reported harvest during this reporting period was 44 beavers compared with a harvest of 41 beavers in the 1983-84 season. Few trappers reported taking beavers in the 1983-84 season, which reflects low pelt value in relation to the work required to trap beavers through the ice.

One former concentration of beavers in the Scottie Creek drainage was noticeably less dense in spring 1985. Illegal hunting and predation are suspected causes for the decline. If wolf control is approved for Unit 12, beaver density is expected to increase, similar to the situation observed in adjacent Subunit 20E. Unless the market for beaver pelts increases, interest in beaver trapping is expected to remain low.

Land Otter

Only 2 land otters were reported taken during the reporting period, although otter sign appeared to be more abundant than in previous years. Few trappers made otter sets in Unit 12 because otter populations were relatively low and pelts were worth little compared with other, more abundant furbearers.

Lynx

Lynx continued to decline throughout Unit 12 from a low-amplitude cyclical high during winter 1982-83. Only 82 lynx were reported taken in Unit 12 during the 1984-85 season. Of the 82 lynx reported taken, 10 (12%) had pelts equal to or less than 35 inches and were presumed to be kittens. Forty-one percent of the harvest occurred in November, 25% in

December, 14% in both January and February, and 7% in March. Snowshoe hares, the primary prey of lynx, were notably scarce during the reporting period although some local areas of moderate hare populations occurred along the Tanana River.

Marten

Marten were extremely abundant during this reporting period, and trappers experienced catches as high as 3 marten per mile of trapline. Many of the marten taken were apparently young of the year. An extremely dense microtine population occurred during winter 1983-84, but this population had declined dramatically by July 1984. This abundance of prey may have contributed to an increased production and survival rate of marten during summer 1984.

Muskrat

Muskrats were noticeably abundant during September and October 1984 in the Northway, Tetlin, and Scottie Creek Flats. The cyclical population low apparently occurred during 1978-79. Good catches of muskrats were reported despite low demand for muskrats by the fur industry. At least 750 muskrats were harvested in fall 1984 as a result of the new 20 September opening of the trapping season. Based on examination of these fall pelts, it appears muskrats in Unit 12 produced 2 litters during summer 1984. Few pelts (less than 5%) were too small to be salable by late September. Fall muskrat trapping and shooting in Alaska should be considered a potentially valuable practice because it would make use of the 40-60% annual harvestable surplus. Fall seasons would provide for an annual harvest of muskrats that may otherwise die during winter.

Red Fox

According to local trappers and fur buyers, red foxes were relatively uncommon in the Northway-Tetlin Flats during this reporting period and nearly absent from hillside and hilltop habitats in northern Unit 12.

Wolverine

Nineteen wolverines were reported taken, including 13 males (68%) and 6 females (32%). According to experienced local trappers, wolverines are less common now than in the late 1960's. Fewer ungulates and wolves are present in Unit 12 now than during the late 1960's also. Because wolverines are opportunistic scavengers, it is likely that the lower availability of big game kills has an adverse impact on wolverine abundance.

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FURBEARER

GAME MANAGEMENT UNIT: 13

GEOGRAPHICAL DESCRIPTION: Nelchina Basin

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Wolverine

Sealing records indicate 55 wolverines were taken in Unit 13, up slightly from the 1983-84 take of 50. This year's harvest comprised 37 (67%) males, 16 (29%) females and 2 (4%) sex unknown. The chronology of the harvest was as follows: September, 2; October, 0; November, 4; December, 6; January, 6; February, 9; March, 23; and 5 in which the date of kill was unknown. Two wolverines were taken by snaring, 29 by trapping, and 24 by ground shooting.

Harvest by humans is believed to be a major mortality factor and may be limiting the wolverine population. In order to more conservatively regulate the wolverine harvest and to allow for a population increase, the Board of Game, during their spring 1985 meeting, reduced the wolverine season by 30 days. The 1985-86 season will close on 28 February instead of 31 March. Good snow conditions that typically occur in March allow aerial trappers to either land and shoot or make ground sets near frequented kills. I believe the reduction in season length will reduce the wolverine harvest by 20-40%.

No further changes in season dates or bag limits are recommended.

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FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 16

GEOGRAPHICAL DESCRIPTION: West side of Cook Inlet

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Wolverine

Twenty-one wolverines (12 males and 9 females) were reported killed, including 12 by trapping, 7 by ground shooting, and 2 by snaring. Of these animals 2 were taken in November, 6 in December, 3 in January, 7 in February and 3 in March. One wolverine was taken in Subunit 16A and the remainder were from Subunit 16B. Recent harvest levels remain below those of the 1970's. Mild winters since 1981 have restricted trapper mobility and efficiency; therefore, no changes in seasons or bags limits are recommended.

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FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 17

GEOGRAPHICAL DESCRIPTION: Northern Bristol Bay

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Beaver cache surveys were conducted on 8 rivers within Unit 17 on 21 and 27 October. An average of 1.3 beaver caches/mile of stream was observed (N = 294) which was the same density observed during 1982 and 1983. Several unoccupied houses with the remains of the previous winter's food cache were noted during these surveys, primarily in shallow areas. Mortality of these beaver colonies was attributed to low water conditions during the fall of 1983, extreme cold temperatures, and lack of snow cover through December. Starvation of entire colonies occurred when food caches in shallow areas froze.

Based on sealing records, 1,655 beaver were harvested during 1984-85. During the Dillingham Beaver Round-Up, 27 February through 2 March, 1,580 beavers were sealed. Harvest levels have been relatively stable since 1981 when 1,632 beaver were taken, but the number of trappers during the same period has declined from 202 to 135. Beaver trapping was primarily concentrated along the major rivers with the Wood, Snake, and Igushik River drainages receiving the most pressure.

Trapping throughout Unit 17 during January was extremely difficult. Warm temperatures melted existing snow and opened all major lakes and rivers, making travel along traplines impractical. An emergency order was issued to reopen the season in Unit 17A from 8 February through 25 February. No adverse effects from the emergency opening were noted.

Warm temperatures in January led to wide-spread flooding along major waterways, and food caches for many of the main channel colonies were swept away. Starvation of many colonies is assumed to have occurred; there was little opportunity to replace lost food caches, since water levels were still high in most areas when rivers and creeks refroze. Villagers along

the Nushagak River commented (during the spring) that there did not appear to be as many beavers as there were the previous year.

Low pelt prices have had a negative effect on beaver trapping effort in the northern Bristol Bay area during the past 4 years. Another factor which may have contributed to low trapper effort was a rise in personal income derived from the salmon fishing industry. The economic outlook for the salmon industry shows a downward trend for the near future; should that occur, a corresponding increase in trapping pressure is expected.

Some of the Nerka Lake stream tributaries that once provided excellent spawning habitat for sockeye salmon are now completely blocked by beaver dams. Efforts to direct trapping pressure to this area have been unsuccessful. The area lies within the boundaries of the Wood-Tikchik State Park which has as part of its legislative mandate the responsibility for maintaining salmon spawning habitat in a productive condition. Park personnel are considering a program for summer 1986, to remove dams no longer utilized by beaver colonies in order to enhance spawning habitat.

Wolverine

Twenty-one trappers reported taking 57 wolverines, including 39 males, 16 females and 2 of unknown sex. Of these animals 43 came from Subunit 17B and 14 came from Subunit 17C. Thirteen were reported shot and 44 were reported trapped. In contrast, only 14 wolverines were reported taken the previous year.

Deep snow and good weather created favorable trapping and tracking conditions during the 1984-85 season. Annual harvest levels fluctuate dramatically depending on the suitability of winter snow conditions for trapping and tracking. These fluctuations make it difficult to accurately assess changes in population size.

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FURBEARER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 18

GEOGRAPHICAL DESCRIPTION: Yukon-Kuskokwim Delta

PERIOD COVERED: 1 July 1984-June 30 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Summary

Furbearers continue to be present in all areas of suitable habitat throughout Unit 18. With the possible exception of lynx, furbearer abundance and distribution appear to be related more to climate and habitat suitability than to trapping pressure. The lynx population is currently very low due to a scarcity of hares and, in some areas, heavy trapping pressure. The low density of muskrats is attributable primarily to several winters with thick ice and little snow, resulting in substantial overwinter mortality. Fox, mink, river otter, and beaver populations are reported to be moderately high in all areas of suitable habitat.

Arctic and red foxes have been implicated in some coastal areas of Unit 18 as significant predators of black brant, cackling Canada-, emperor-, and white-fronted geese. All 4 species of geese have declined markedly in recent years and much effort is being directed toward their recovery. Because several of these geese concentrate their nesting on a narrow coastal fringe, opportunistic predators such as foxes likewise concentrate their foraging activities on the nesting grounds. The goose populations are currently at low enough levels that any significant mortality will effectively prevent their recovery. A review of possible management alternatives such as predator control is recommended.

Efforts to improve the sealing program should continue. Furs used for domestic or handicraft items are usually not sealed. The problem is aggravated by the low fur prices received for some sealed species, particularly beaver and otter. We need to expand the network of village sealing agents already in existence. We also need to continue to encourage individuals to seal all their furs, including those used at home. Fur buyers also need to be encouraged to comply with reporting requirements.

Beaver

Although beaver densities continue to remain high throughout Unit 18, we believe the rapid rate of increase observed in past years has slowed in most of the unit. Two winters with cold temperatures and thick ice froze many beaver colonies out of the shallower ponds and sloughs. Coastal population densities remain low compared with densities found further inland, due to a scarcity of willows and other hardwood shrubs. Highest densities are found south of the Kuskokwim River in drainages of the Kilbuck Mountains. Overall, beaver densities north of the Yukon River and in the Delta lowland north of the Kuskokwim River are low, although some limited areas support very high beaver densities. Results of the 1984-85 Trapper Questionnaire indicate that most trappers believe beavers are still very numerous in Unit 18. However, most did not comment on whether they believe beaver numbers are still increasing.

Aerial cache surveys of 9 drainages were conducted during October 1984 (Table 1). Highest densities were observed in drainages south of the Kuskokwim River with counts ranging from 0.53 to 3.09 caches/mi. In the Yukon drainage, observed densities were lower, ranging from 0.48 to 2.27 caches/mi. Increases in density were observed in 3 drainages, decreases in 4, and no change in 1. It is noteworthy that the 4 drainages in which beaver densities decreased from 1982 to 1984 are lower Kuskokwim drainages (Kanektok, Kwethluk, Kisaralik, and Tuluksak), but that the drainage with the greatest increase in density from 1982 to 1984 is also a lower Kuskokwim drainage (Eek). Trapping pressure sustained by the different Kuskokwim drainages varies greatly and may partially explain the widely different population trends observed. Some drainages contain lower quality habitat than others and may have greater population declines during periods of thick ice. Other factors such as survey conditions, pilot and observer experience, and sightability may affect cache survey results as well. Swenson et al. (1983) noted that due to observer bias, aerial cache surveys often can only detect large-scale changes in population density, and may not be the best method for monitoring population trend. However, the Black, Reindeer, and Eek drainages exhibited density increases exceeding 50%, while the Tuluksak and Kisaralik drainages exhibited fairly large declines (42% and 52%, respectively). Because of the magnitude of observed changes, these drainages probably did experience real changes in population size. Although changes were observed in all other drainages except the Archuelinguk, the differences are smaller and may be attributable to variable survey conditions.

Data gathered from sealing certificates indicate that Unit 18 trappers harvested 1,550 beavers during the 1984-85 trapping season. This harvest represents a substantial increase from the 1983-84 reported harvest of 940 and the 1982-83 reported harvest of 1,177. Because beavers that are used domestically are not sealed, data are difficult to interpret. We believe, however, that the actual beaver harvest (including domestically used animals) probably exceeds the reported harvest by 30-50%. Low beaver fur prices discourage the sale of pelts, and many beavers are not sealed. The increase in harvest is not surprising given the Board of Game's 1984 decision to open the season on 1 November in Unit 18 south of the Yukon River. Although few individuals seem to take advantage of the late spring season (e.g., extended from 31 March to 10 June in 1982-83 for part of GMU 18, and from 31 March to 30 April in 1984-85), many individuals did take advantage of the new regulation and trapped beaver in November when ice was still thin.

In summary, beavers remain numerous in Unit 18. Reports from the public and from agency personnel, and results of aerial cache surveys indicate that beavers are numerous in virtually all areas of suitable habitat on the Yukon-Kuskokwim Delta, although population growth appears to have slowed. Many local residents, particularly those dependent on the subsistence harvest of blackfish and whitefish, believe that beaver dams significantly affect migratory patterns of fish and would like to see beaver numbers reduced. Studies determining the relationship between blackfish and whitefish migrations and beaver densities are recommended. Additional studies to determine the accuracy and usefulness of beaver cache surveys are also recommended.

Fox

Arctic foxes are confined to the coast of Unit 18, and their numbers are subject to wide annual fluctuations. Arctic foxes appear to be most common from Nunivak and Nelson Islands northward to the Yukon Delta. Because arctic and red foxes have been implicated as major predators of nesting geese in the Cape Romanzof area, many individuals believe that foxes must be very common. However, the geese nest only along a narrow coastal fringe, and this ideal foraging situation undoubtedly attracts foxes from a considerable distance. Therefore, it is difficult to assess fox population density solely on the basis of the number of foxes observed on the goose nesting grounds. Numbers of foxes and fox sign observed by Trapper Questionnaire respondents varied widely throughout the unit, although most trappers reported arctic fox densities to be the same as those of last year.

Fur dealer purchase and export data were not available at the time of writing. Because arctic fox pelt prices are very low and domestic use is widespread throughout the unit, assessment of the arctic fox harvest is difficult. However, we do not believe the harvest was unusually high or low; the number taken probably did not exceed 800 foxes. Most trappers reported trapping conditions and village harvest levels to be normal.

Red foxes are common throughout Unit 18 and are observed in nearly all suitable habitat. Willow stands containing abundant snowshoe hares and ptarmigan appear to be favored by foxes, particularly during winter. Red foxes were reported to be abundant, especially in the Kuskokwim River drainage. Trapper Questionnaire respondents reported varying numbers of red foxes, and no consistent trend has been observed.

Conversations with fur buyers and results of the Trapper Questionnaire indicate that the 1984-85 red fox harvest was similar to that of 1983-84, numbering approximately 1,200 animals. Low prices paid for fox pelts during the past several years have undoubtedly discouraged much fox trapping, and we do not believe the current harvest is unusually high. Although serious fox trappers take a sizable proportion of the harvest, many foxes are taken opportunistically by hunters engaged in other activities.

Lynx

Lynx are common only in the eastern and northern portions of Unit 18, with the exception of a few localized pockets elsewhere in the unit. Snowshoe hare numbers are currently low, and the overall lynx population is believed to be low as well. Results of the 1984-85 Trapper Questionnaire indicate that lynx are still low in most areas of the unit; Yukon River trappers, however, reported seeing more lynx this year than last.

Sealing data indicate that 21 lynx were harvested in Unit 18 during the 1984-85 season. The current harvest is identical to the harvest reported in 1983-84, but is only one-third the size of the 1982-83 reported harvest. Because lynx pelts command very high prices in the fur market, we believe sealing data accurately reflect the actual harvest level. Twenty-four lynx were harvested by trappers responding to the 1984-85 Trapper Questionnaire. Because the Questionnaire is sent to only about 25% of the active trappers in Unit 18, the actual harvest of lynx would appear to be much higher than 24. However, most individuals receiving the Questionnaire are very active trappers, so the sample is heavily biased toward trappers who harvest many furs. Successful lynx trapping in

Unit 18 involves extensive travel to remote country, and only serious trappers participate. Therefore, we believe estimates derived from fur seals and from the Questionnaire are reliable indications of the actual Unit 18 lynx harvest.

Although lynx are eagerly sought by local trappers, trapping pressure is not uniform, and some refugia exist in northern portions of the Andreafsky and Chuilnak drainages and in remote wooded drainages of the Kilbuck Mountains. Because lynx are easily trapped, such refugia are necessary to ensure repopulation of other, more depleted areas.

Marten

Marten are limited to the eastern and northern portions of Unit 18, and their occurrence is highly localized and confined to heavily timbered drainages of the Andreafsky, Ilivit, and Kilbuck Mountains. Even in the best habitat, however, marten densities are low compared with those of the Interior. Trapper Questionnaire data are limited, and no consistent trend regarding population status can be identified.

As reported in past years, the annual harvest of marten is very low in Unit 18 and rarely exceeds 300-500. Only trappers from Marshall, Russian Mission, and Kalskag take marten on a regular basis. In addition, trappers from Pilot Station, St. Mary's, and Mountain Village sporadically harvest some marten.

Mink

Mink are widely distributed throughout Unit 18 and are most common in the Delta lowland north and west of the Kuskokwim River. Highest densities occur in the Kashunak, Black, and Johnson River drainages, in coastal drainages, and near Baird Inlet. Trapper Questionnaire respondents residing in tundra villages of the Delta lowland reported mink densities to be higher than in 1983-84. Trappers residing in Yukon and Kuskokwim River villages, however, reported mink numbers to be unchanged.

Fur dealer purchase and export data are not available at the time of writing. Knowledgeable local residents, however, believe the harvest was again moderately high and may have exceeded 10,000 mink. The good ice and snow conditions found in many areas along the coast undoubtedly contributed to the high harvest. Economically, mink represent the most important furbearer on the Yukon-Kuskokwim Delta, and many trappers devote a considerable amount of time in November and December to trapping mink. If mink prices were to increase dramatically, annual harvests in excess of 20,000 mink could once

again become a reality. Under such circumstances, improved methods of evaluating harvest levels and population trends would need to be developed.

Muskrat

Results of the Trapper Questionnaire indicate that muskrat numbers are low throughout Unit 18 compared with past years. Unusually thick ice on lakes and ponds during several recent winters probably caused substantial overwinter mortality among muskrats, particularly those living in shallow ponds.

Fur dealer purchase and export data were not available at the time of writing. We believe, however, that the muskrat harvest was low due to poor pelt prices and low population densities, and probably did not exceed 3,000. Although domestic use of muskrat pelts may be significantly greater than we believe, it is certain that current harvests do not approach levels recorded in past decades (20,000-30,000 annually).

Otter

River otters remain abundant throughout Unit 18, particularly in the Delta lowland south of the Yukon River and north of the Kuskokwim. Most respondents to the Trapper Questionnaire reported that otter numbers are stable or increasing in their trapping areas, and that densities have not changed significantly since 1983-84.

During winter 1984-85, trappers sealed 431 otters. This harvest was not as high as the 1983-84 harvest of 587, but was much higher than the 1982-83 harvest of 171. Although trappers often do make otter sets, many otters are caught incidentally in beaver sets. Such incidental catches will often cause the otter harvest to reflect the intensity of beaver trapping, although factors such as ice thickness, travel conditions, and fur prices are also important in determining the level of interest in trapping otters.

Wolverine

As reported in past years, wolverines remain uncommon throughout Unit 18. Highest numbers are observed in the Kilbuck Mountains southeast of the Kuskokwim River, and in the Andreafsky and Chuilnak Mountains north of the Yukon River. A scarcity of prey limits wolverine numbers to extremely low levels in the Delta lowland. According to results of the Trapper Questionnaire, wolverines are uncommon, but populations are stable. Sealing certificates indicate that 7 wolverines were harvested during 1984-85, compared with 3 the

previous year. The domestic demand for wolverines is high, and we believe many pelts are not sealed. Six wolverines were reported harvested by Trapper Questionnaire respondents. Because the Questionnaire sampled no more than 25% of active Delta trappers and because many wolverines are taken opportunistically by hunters who are not serious trappers, the actual harvest was probably at least 10-15 wolverines.

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beaver population trends on prairie rivers in Montana.
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Table 1. Comparison of Unit 18 beaver cache aerial surveys, 1982 and 1984.

River	River miles	1984 caches	Caches/mile		% Change in caches/mile from 1982
			1982	1984	
Yukon River drainages:					
Archuelinguk	14.5	10	0.69	0.69	0
Black	44.5	101	1.32	2.27	+72
Chuilnak	67.2	32	--	0.48	--
Reindeer	61.0	34	0.30 ^a	0.56	+87
Kuskokwim River drainages:					
Eek	59.5	184	1.14	3.09	+171
Kanektok	52.8	96	2.41	1.82	-24
Kisaralik	30.0	16	1.10	0.53	-52
Kwethluk	69.5	102	1.64 ^a	1.47	-10
Tuluksak	49.5	46	1.70 ^a	0.93	-45

^a Survey actually conducted in 1981.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 19

GEOGRAPHICAL DESCRIPTION: Upper and middle Kuskokwim River drainages

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Beaver populations appear to be expanding throughout Unit 19 and numbers were at high levels in Subunits 19A and 19D. Although prices for beaver pelts increased, the harvest (700 beavers) and number of trappers (75) only increased slightly from the record low numbers of the past 2 seasons (Table 1). The numbers of trappers and catches remained below the previous 12-year annual average of 1,094 beavers taken by 128 trappers. The harvest comprised 15% kits and 42% large adults (pelts 65 inches or over). These figures are similar to the long-term averages for beavers taken in Unit 19. Trapping pressure and harvest continued to decline in Subunit 19A, but 45% of the unit harvest occurred in this subunit. The harvest increased in Subunits 19B and 19C, but these subunits only accounted for 12% and 6%, respectively, of the Unit 19 catch. The numbers of trappers and take have increased in Subunit 19D during the past 2 seasons.

Land Otter

Land otter sign continued to be abundant and widespread in most of Unit 19; especially Subunits 19A and 19D. Little trapping effort is directed specifically toward otters, with the exception of 1 trapper who took over 25% of the 66 otters sealed from Unit 19. The otter harvest has remained relatively constant during the past 7 years, averaging 66 otters annually (range 55-86). The number of trappers has ranged from 25 in 1984-85 to 58 in 1981-82. Normally, over half of the Unit 19 otter harvest is taken in Subunit 19A, but during this report period only 25 otters were reported taken by 13 trappers in this subunit. The take also declined in Subunit 19D; in Subunit 19B the catch increased due to the efforts of 1 trapper.

Lynx

Lynx populations were low throughout Unit 19, and the decline that started in 1982-83 continued. No lynx were reported taken from drainages of the Kilbuck Mountains in Unit 19, an area that accounted for over half of the Unit 19 catch during the lynx population high. Most of the 30 lynx that were sealed were taken along drainages of the South Fork of the Kuskokwim in Subunit 19C. Twenty trappers reported taking lynx, for an average of 1.5 lynx per trapper. The most successful trapper took 5 lynx from an area that has produced 35-50 lynx annually during years of peak populations.

Marten

Marten remains the principal species for trappers in the upper and middle Kuskokwim drainages; this species accounted for over half of the estimated value of the Unit 19 furbearer harvest during the 1984-85 season (Table 1). Although prices for marten pelts were high early in the 1984-85 season, prices dropped considerably as the season progressed. The marten population was low for the 2nd consecutive year in the Upper Kuskokwim area, and as a result, average catches were much lower than normal. I was aware of only 1 trapper who took more than 200 marten during the season. Marten populations were also low in the middle Kuskokwim area, but numbers were higher than in the upper Kuskokwim drainage. The estimated harvest was less than 2,500 marten for Unit 19.

Red Fox

Red fox populations were lower throughout Unit 19 than during the previous 2 years. Most trappers took fewer than 5 foxes, and the total unit take was probably less than 100.

Wolverine

Wolverine tracks were frequently seen during a late March 1985 wolf survey in much of Subunit 19D and parts of Subunits 19B and 19C. Sixty wolverines (30 males, 26 females, and 4 of undetermined sex), were reported taken during 1984-85 by 39 trappers. Most wolverines (77%) were taken with traps. The number of trappers taking wolverines has remained relatively constant (average 38 per year). The harvest apparently is not greatly influenced by snow conditions as has been the case with wolf harvests in Unit 19. Based on bounty records, an average of 21 wolverines a year were taken during the 1960's. The catch increased to 37 per year in the early 1970's. Since 1975 the annual take has remained relatively constant, averaging 64 per year (range 53-75). In Subunit 19A, 9 trappers took 10 wolverines, and in Subunit 19D, 4 trappers took 8

wolverines. Ten Subunit 19B trappers took 22 wolverines, and 20 wolverines were caught by 16 trappers in Subunit 19C. Normally, male wolverines are more frequently taken than females, and during the 1984 season 66% of the wolverines taken were males. Nearly equal numbers of wolverines were taken in February and March, the most productive trapping months.

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Table 1. Unit 19 furbearer harvest, number of trappers, and estimated pelt values for the 1984-85 trapping season.

Species	Number harvested	Average price paid	Number of trappers	Estimated value
Beaver	700 ^a	\$ 30	75	\$ 21,000
Land otter	66 ^a	35	24	2,310
Lynx	30 ^a	350	21	10,500
Marten	<2,500	50	≈110	125,000
Mink	≈100	30	≈25	3,000
Muskrat	≈250	3	≈20	750
Red fox	<100	45	≈25	4,500
Wolf	110 ^a	225	36	24,750
Wolverine	60 ^a	250	39	15,000
Total value of fur harvest				\$206,810

^a Number sealed.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 20

GEOGRAPHICAL DESCRIPTION: Central Tanana Valley

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Sealing documents indicated 655 beavers were harvested from Unit 20 during the 1984-85 season. The reported harvest, by subunit, was as follows: 20A, 44; 20B, 303; 20C, 244; 20D, 25; 20E, 0; and 20F, 39. In Subunits 20A, 20B, and 20C, less than 10% of the beaver take was kits (pelt size less than 53 inches) and over 70% of the pelts were adults that measured 60 inches or more. Among the 25 beavers taken in Subunit 20D, 48% were kits and 48% were adults, using pelt size as an indicator of age. Applying the same criteria, the Subunit 20F take comprised 21% kits and 59% adults.

Most beavers taken in Subunit 20A were trapped in the Totatlanika River drainage. In Subunit 20B, the greatest number of beavers (135) came from the Chena River drainage; the next largest take in this subunit (108 beavers) was from the Tolovana drainage. The Kantishna drainage produced the highest beaver harvest (203) in Subunit 20C. The Nenana River drainage, also in 20C, yielded 23 beavers. More than two-thirds (17) of the beavers harvested in Subunit 20D were taken from the Clearwater drainage, and in Subunit 20F the Tozitna River drainage produced 27 of 39 beavers taken in the subunit.

The beaver catch in 1984-85 (655) declined slightly from the 1983-84 take (761). Because almost twice as many beavers were taken in 1983-84 as in the previous year (437), the 1984-85 take is considered relatively high. However, in 1979-80, 1,955 were taken in GMU 20; in 1980-81, 1,310 were taken, and in 1981-82, 946 were sealed. Trappers reported moderate to high numbers of beavers in Unit 20, and the proportion of kits in the harvest (8%) for the unit as a whole indicates beavers are not being overharvested. When harvest consists of more

than 20% kits, a closer look at the population may be needed to prevent overharvest. Although the proportion of kits in Subunit 20D was 48%, the total number of beavers taken was small (25); consequently, this figure may not represent the population.

As the human population increases in Unit 20, conflicts between beavers and humans also increase. Beavers inhabiting sloughs in the greater Fairbanks area have damaged vegetation and plugged culverts. Although many urban and suburban homeowners enjoy watching beavers, it has become necessary to harvest more of these animals in areas where conflicts consistently occur.

Land Otter

According to sealing records, 20 land otters (12 males, 8 females) were trapped in Unit 20 during the 1984-85 season. The number of otters taken in each subunit was as follows: 20A, 4; 20 B, 4; 20C, 8; 20D, 2; 20E, 0; and 20F, 2. The otter harvest occurred throughout the season: 1 otter (5%) was taken in November, 6 (30%) in December, 6 (30%) in January, 2 (10%) in February, 3 (15%) in March, and 2 (10%) at an unknown date.

The land otter harvest during the 1984-85 season was less than half that of the previous year (47), but about the same as in 1982-83 (23). The Unit 20 otter population has remained fairly stable over the past several years. Trappers reported moderate to moderately high numbers this year; most trappers felt otter numbers remained about the same as in 1983-84.

Lynx

Sealing records indicate that 222 lynx were caught in Unit 20 during the 1984-85 season. The reported harvest, by subunit, was as follows: 20A, 34; 20B, 60; 20C, 29; 20D, 47; 20E, 20; and 20F, 32. The catch was distributed throughout the season with 42 (19%) taken in November, 67 (30%) in December, 63 (28%) in January, 30 (14%) in February, and 11 (5%) in March. The dates of take for 9 lynx were not known.

The Unit 20 lynx harvest in 1984-85 was reduced from that of 1983-84 (367). Trappers responding to the Trapper Questionnaire not only reported low lynx populations, but indicated a decline from the number present in 1983-84. This decrease probably resulted from low hare populations.

Wolverine

Sealing documents indicated 63 wolverines (34 males and 29 females) were harvested from Unit 20 during the 1984-85 season. The number of wolverines in each subunit was as

follows: 20A, 8; 20B, 16; 20C, 10; 20D, 19; 20E, 7; and 20F, 3. The wolverine catch occurred throughout the season with 4 (6%) taken in September, 14 (22%) in November, 16 (25%) in December, 10 (16%) in January, 14 (22%) in February, and 5 (8%) in March.

The wolverine catch in Unit 20 (63) was little changed from the harvest of 57 taken during the preceding season. Trappers responding to the Questionnaire reported wolverine populations were much the same in 1984-85 as in the 3 previous years.

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FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 21

GEOGRAPHICAL DESCRIPTION: Middle Yukon River drainages

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Trapping Conditions

The weather was mild for most of the 1984-85 trapping season, but record snowfalls hampered access, frequently covered sets, and caused overflow conditions that induced marten trappers to quit early. Poor trapping conditions also discouraged fox trapping.

Hare populations were low throughout Unit 21 except for a few isolated willow communities along the major rivers. Rodent densities remained high in the Yukon and Koyukuk River lowlands.

Beaver

Seven hundred beavers from Unit 21 were sealed during the 1984-85 season (Table 1). Subunit 21D had the highest harvest, and within this subunit most beavers were caught in the Kaiyuh Flats. The overall take continued to be far lower than the estimated harvestable population. Pelt prices regulate beaver harvests more than regulations; when pelt prices are low, as they were during the 1984-85 season, relatively few beavers are taken.

Coyote

Coyotes are still common around the Galena area and a few are caught each year. The number of coyotes taken is unknown.

Land Otter

Sixty-eight land otters were reported taken in Unit 21 during the 1984-85 season (Table 1). Otters continue to be very abundant in the unit; however, low prices and lack of trapper interest have resulted in low catches.

Lynx

The lynx harvest (Table 1) indicated declining numbers throughout Unit 21. Populations may be at their cyclic low following the peak in 1981-82. Extremely high pelt prices increased trapper effort. The upper drainages of the Nulato, Gisasa, and Kateel Rivers, areas not normally trapped, were subject to increased pressure from Unit 22 trappers. The increased effort probably caused the slight rise in harvest for Subunits 21B, 21C, and 21E (Table 2).

Marten

Early in the 1984-85 season, prices for marten started out moderately but rapidly increased, creating more trapper effort. However, deep snow conditions hampered trappers; consequently, harvests were slightly below normal despite higher prices.

Mink

Mink continued to be of minor importance to Unit 21 trappers, and few trappers actively made mink sets.

Red Fox

Red fox populations were high in the major drainages of Unit 21, but catches were low because of low trapper interest resulting from low pelt prices.

Wolverine

The 1984-85 wolverine catch (Table 1) in Unit 21 was 57. Trapper harvests were normal, but favorable aerial hunting conditions led to increases in the number of wolverines taken by landing and shooting.

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Table 1. Furbearer harvest in Unit 21, 1980-85.

Species	1980-81	1981-82	1982-83	1983-84	1984-85
Beaver	1,406	593	882	984	700
Land otter	86	55	32	103	68
Lynx	122	484	364	121	123
Wolverine	41	43	78	32	57

Table 2. Lynx harvest by subunit, 1980-85.

Subunit	1980-81	1981-82	1982-83	1983-84	1984-85
21A	4	18	16	2	2
21B	15	92	49	5	13
21C	0	9	13	0	1
21D	98	350	236	86	82
21E	3	11	43	21	25
Total	120	480	357	114	123

FURBEARER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 22

GEOGRAPHICAL DESCRIPTION: Seward Peninsula

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Summary

Information on distribution and density of furbearers within Unit 22 was obtained from management biologists' incidental observations and from reports by hunters and trappers. Harvest information was obtained from sealing records, a trapper questionnaire, and casual conversations with village residents.

Slight changes in furbearer densities within the unit have occurred over the years; however, it is not known whether these changes were caused by human activities or by natural environmental factors. Records indicate that hunting and trapping pressure on Seward Peninsula furbearers has been low during the past 20 years. Long-term effects of harvest are believed to have been minimal and are expected to remain so.

Accurate furbearer harvest data continue to be unavailable because many pelts kept for personal use are not sealed. Also, because trappers are not required to seal mink, muskrats, marten, foxes, or weasels, harvest data for these species are difficult to obtain.

Obtaining accurate harvest data continues to be an important management goal within Unit 22. Village fur sealers are currently employed in all unit villages to assist and encourage hunters and trappers to seal furs. A trapper questionnaire was used this year for the 1st time. Although the questionnaire was structured to obtain information on furbearer population trends, trapping pressure, and public perceptions of Department programs, it also yielded valuable information on the current harvest of some species. Plans are being formulated to restructure this questionnaire with more emphasis on acquisition of harvest information.

Although our efforts have been partially successful, accuracy of Unit 22 furbearer harvest data could be improved. As previously indicated, many people do not seal furs they plan to use for ruffs, hats, and other garments. Continued public contact is needed in rural areas to emphasize the management benefits of the sealing program. An effective law enforcement program is needed if we are to obtain satisfactory compliance with current hunting and trapping regulations.

Because densities of most furbearers within the unit are relatively low, hunting and trapping pressure on these species will probably remain low during the coming year. Present regulations are adequate and, in most cases, meet the needs of local hunters and trappers.

Beaver

Beaver trapping effort in Unit 22 was minimal during the reporting period and is expected to remain so until beaver densities and/or pelt prices increase to a profitable level. Beavers continue to expand their range westward on the Seward Peninsula, but the highest concentrations are found in Subunits 22A and 22B.

Although just 1 beaver was sealed in Unit 22 during 1984-85 (Table 1), casual conversations with village residents and responses to a trapper questionnaire indicate that additional beavers were taken. Many of the pelts from these beavers were kept for the making of handicrafts and so were not sealed. I estimate the total harvest of beavers within the unit to be less than 50 annually.

Lynx

The harvest of lynx within the unit has steadily declined during the past 3 years. Marked declines in lynx prey densities occurred during the same time period. The direct relationship between fluctuations in prey populations and lynx abundance and distribution has been well established. Sealing certificates indicate that hunters and trappers harvested 156 lynx from 11 drainages within Unit 22 (Table 1). The Unalakleet and Shaktoolik drainages (Subunit 22A) were the most productive and provided 50% of the reported harvest. Sex composition of the lynx harvest was 62 males, 70 females, and 24 of unknown sex. Trapping accounted for 96% of this year's recorded harvest; the remaining 4% were taken with firearms. Although lynx were taken by trappers during every month of the trapping season, most were taken during December, January, and February (Table 2).

Otter

Although land otters appear to be increasing, numbers still remain relatively low unit-wide. Historically, interest in trapping otters within the unit has been minimal, probably because of low otter densities.

Sealing certificates indicate that 6 land otters (3 males and 3 females) were harvested from 3 drainages within the unit during November and December (Tables 1 and 2). As was true of other furbearers, a number of otter pelts were not sealed because they were used for the making of handicrafts. I estimate the harvest of land otters within Unit 22 to be less than 20 animals annually.

Wolverine

Wolverines occur throughout Unit 22; however, highest densities appear to be within Subunits 22A and 22B. Sealing certificates indicate that 21 wolverines were harvested within the unit during the reporting period (Table 1). A chronology of this harvest is given in Table 3. Of the reported harvest, 62% were taken with traps and 38% were shot. One animal is known to have been taken with the aid of an aircraft. Because wolverine pelts are highly valued for the making of ruffs, etc., not all are sealed. Information obtained through casual conversation with village residents and from a trapper questionnaire indicate that a minimum of 28 wolverines were harvested within the unit during the reporting period. I estimate the annual Unit 22 wolverine harvest to be 30-40 animals.

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Table 1. Unit 22 beaver, lynx, otter, and wolverine harvest by drainage, 1984-85.

Subunit	Drainage	Beaver	Lynx	Otter	Wolverine
22A	Pikmiktalik	0	3	0	1
	Golsovia	0	2	0	2
	Unalakleet	1	37	2	4
	Egavik	0	9	0	0
	Shaktoolik	0	41	0	1
	Ungalik	0	9	0	0
	Subtotals	1	101	2	8
22B	Inglutalik	0	10	0	0
	Koyuk	0	27	0	2
	Kwik	0	0	0	2
	Topkok	0	10	3	4
Subtotals		0	47	3	8
22C	Solomon	0	0	0	1
	Eldorado	0	0	0	1
	Sinuk	0	0	1	1
Subtotals		0	0	1	3
22D	Kuzitrin	0	2	0	1
Subtotals		0	2	0	1
22E	Shishmaref				
	Inlet	0	6	0	1
Subtotals		0	6	0	1
Unit 22 totals		1	156	6	21

Table 2. Unit 22 lynx, wolverine, and otter harvest, by month, 1984-85.

Species	Month										Totals
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Unknown		
Lynx	0	1	20	28	40	30	22	9	6	156	
Wolverine	1	0	4	4	2	5	2	3	0	21	
Otter	0	0	2	4	0	0	0	0	0	6	

Table 3. Unit 22 wolverine harvest, by subunit and sex, 1984-85.

Subunit	Male	Female	Unknown	Totals	
				No.	%
22A	5	2	1	8	38
22B	3	5	0	8	38
22C	2	1	0	3	14
22D	0	1	0	1	5
22E	1	0	0	1	5
Totals	11	9	1	21	100

FURBEARER

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 23

GEOGRAPHICAL DESCRIPTION: Kotzebue Sound

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Summary

For the 2nd consecutive season, lynx, muskrat, red fox, arctic fox, and wolverine populations are believed to be low in at least some parts of Unit 23. There is no indication, however, that any of these species are below acceptable levels, with the possible exception of wolverines in localized areas. No regulatory changes are recommended at this time.

Beaver

Responses to the 1985 Unit 23 trapper survey suggest that the Kobuk and Selawik River drainages continue to support the largest beaver populations in Unit 23. All 28 beavers sealed in Unit 23 during 1984-85 were taken from these drainages: 2 from the Selawik and 26 from the Kobuk. The actual harvest from Unit 23 is probably much higher than the reported harvest, because many beaver pelts are used locally for food or clothing without first being sealed.

A beaver cache aerial survey conducted during October 1985, over a 138.7 mi² trend-count area of the Selawik River drainage, revealed 73 active caches or a density of 0.53 caches/mi². This was higher than the 1981 density of 0.37 caches/mi² and the 1982 density of 0.26 caches/mi². Villagers from Selawik believe the range of beavers has extended steadily westward down the Selawik River drainage from areas of high density into areas of lower density. Villagers are concerned that increases in beaver numbers, and hence dams, may impede movement of fish along the Selawik River.

Fox

According to information obtained from the 1984-85 trapper survey, arctic fox numbers remained low in 1984-85. Dealer purchase and trapper export records are not available at the time of writing.

Results of the 1984-85 trapper survey indicate low to medium red fox abundance throughout most of Unit 23. In the Selawik River area, however, medium to high numbers of red foxes were reported. Red fox observations made per hour of spring and fall moose survey flying increased from 0.1 foxes/hr in 1982-83 to 0.3 foxes/hr in 1983-84 and to 0.7 foxes/hr in 1984-85 (Table 1). These data suggest a population increase.

No significant reports of rabies outbreaks among red foxes have been made in Unit 23 since 1980, when a statewide epidemic occurred. One report of a possible case of mange was received from an individual trapping in the Noatak River drainage. The report could not be verified, however, because the trapper discarded the pelt in a lake.

Lynx

Twenty of 21 respondents to the 1985 trapper survey indicate that lynx appeared to be less abundant during the 1984-85 season than during 1983-84. This is not surprising, given that snowshoe hares (the most important prey of lynx) are in at least the 3rd year of their cyclic low. The 1984-85 reported harvest (26 lynx) is by far the lowest reported for Unit 23 during the past 8 seasons (Table 2). This drop is due to 2 factors: 1) declines in lynx numbers resulting from declines in snowshoe hare populations, and 2) decreased trapping effort due to the perception by trappers that lynx are too uncommon for trapping to be profitable. Harvests will probably remain low until the cyclic increase of snowshoe hares is well underway.

Marten

Results of the 1984-85 trapper survey indicate that marten abundance has remained low to medium throughout Unit 23 for at least the 2nd consecutive season. Trapper export and dealer purchase records are not available at the time of writing, so harvest trends cannot be assessed. Questionnaire respondents indicated, however, that marten appeared to be about as abundant in 1984-85 as in 1983-84.

Mink

As was true of 1983-84, results of the 1984-85 trapper survey indicate that mink are moderately abundant in Unit 23 with a few localized areas of low or high abundance. Dealer purchase and trapper export data are not available at the time of writing.

Muskrat

Results of the 1984-85 trapper survey indicate medium to low muskrat densities throughout Unit 23. This indication is consistent with trapper export and dealer purchase reports for 1982-83 and 1983-84, when harvests of 0 and 22 muskrats, respectively, were reported. Dealer purchase and trapper export data for 1984-85 are not available at the time of writing.

Otter

Responses to the 1984-85 trapper survey indicate medium to high river otter abundance throughout Unit 23. Twelve of 16 reporting trappers believe otters are as common in 1984-85 as they were in 1983-84, if not more so. Otter sign was observed incidentally during aerial survey flights and flights to villages; these observations corroborate the impression of a largely unchanged population level.

The 1984-85 reported harvest of 5 otters is only slightly lower than the 3-year annual mean of 8 for 1981-1984 (Table 2). Commercial trapping effort has probably been light due to the low monetary value of otter fur. However, the reported harvest of 5 otters is undoubtedly lower than the actual harvest, because otter fur is commonly used by villagers without first being sealed.

Wolverine

Past records indicate that wolverines tend to be unevenly distributed throughout Unit 23. Likewise, trappers responding to the 1984-85 questionnaire have varied impressions of the status of wolverines in their areas. As was the case in 1983-84, responses to our 1984-85 survey indicate medium to high abundance of wolverines in the northern portion of Unit 23, but low to medium abundance in the southern portion of the unit. In general, the southern portions of Unit 23 are more accessible to hunters and trappers than the more rugged or heavily wooded northern portions. Harvest pressure may be holding wolverine populations at a lower than desirable level over much of the Selawik and Buckland River drainages. This speculation cannot be substantiated at this time; however, we will continue to question local residents and to watch for signs of wolverine during surveys and flights to villages.

Thirty-seven wolverine pelts were sealed in 1984-85 (Table 2), a number similar to the 3-year mean of 42 for 1981-84. As with many furbearers, the actual wolverine harvest was probably higher than the reported harvest, because wolverine pelts are commonly sold or traded locally without first being sealed.

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Table 1. Red fox observations during Unit 23 fall and spring moose surveys, and recorded cases of fox rabies, 1976-85.

Report period	Survey time (hrs)	Foxes observed	Foxes/hr	Reported cases of rabies in red foxes
76-77	32.9	14	0.4	3
77-78	28.7	12	0.4	1
78-79	26.7	34	1.3	0
79-80	37.0	29	0.8	11
80-81	21.7	22	1.1	0
81-82	40.8	61	1.5	2
82-83	47.1	4	0.1	0
83-84	62.5	19	0.3	1
84-85	62.5	42	0.7	0

Table 2. Reported harvest of lynx, otter, and wolverine from Unit 23, 1977-85.

Species	Total take	% Male	Method of take				Chronology							Area ^a				
			Shot	Trapped	Snared	Unk	Nov	Dec	Jan	Feb	Mar	Apr	1	2	3	4	5	
<u>Lynx</u>																		
1977-78	230	55	0	223	5	2	11	28	60	67	61	0	0	0	31	166	27	6
1978-79	385	53	2	341	3	39	12	48	81	117	127	0	0	0	117	147	120	1
1979-80	407	54	14	378	3	12	19	53	96	110	110	13	1	1	128	139	136	3
1980-81	306	60	3	254	1	41	30	45	62	72	80	17	1	1	17	128	143	14
1981-82	483	54	7	444	0	32	23	68	77	145	148	19	1	1	77	133	238	34
1982-83	277	--	6	265	1	5	24	36	39	69	70	34	4	4	5	34	149	83
1983-84	98	--	3	93	0	2	9	23	25	25	10	5	0	0	10	14	27	42
1984-85	26	61	3	23	0	0	3	8	2	4	7	2	1	1	8	8	4	5
<u>Otter</u>																		
1977-78	12	--	1	11	0	0	0	4	5	1	2	0	0	0	1	4	3	4
1978-79	15	--	2	13	0	0	0	12	2	0	1	0	0	0	5	1	8	1
1979-80	19	--	10	9	0	0	5	9	2	1	2	0	0	0	4	2	13	0
1980-81	29	--	0	27	2	0	21	4	2	0	0	2	0	0	3	6	20	0
1981-82	9	--	0	9	0	0	5	0	1	3	0	0	0	0	0	4	4	1
1982-83	7	--	1	5	0	1	4	1	1	0	1	0	0	0	2	2	2	0
1983-84	8	--	1	7	0	0	3	3	2	0	0	0	0	0	1	5	1	0
1984-85	5	--	0	5	0	0	2	2	1	0	0	0	1	1	1	1	1	1
<u>Wolverine</u>																		
1977-78	75	67	26	49	0	0	9	8	29	17	12	0	4	4	10	40	15	6
1978-79	45	73	9	34	0	0	4	4	13	7	17	0	2	2	8	18	2	6
1979-80	26	63	12	14	0	0	2	4	4	6	9	1	2	2	8	10	4	2
1980-81	18	76	11	7	0	0	3	6	1	1	5	2	0	0	10	5	3	0
1981-82	48	75	13	35	0	0	2	3	8	7	23	5	1	1	28	14	5	0
1982-83	37	67	16	20	1	0	3	2	3	13	12	4	2	2	21	6	3	5
1983-84	46	59	17	27	1	1	2	8	17	7	5	3	0	0	23	9	6	7
1984-85	37	61	19	15	2	2	1	5	7	3	13	7	0	0	15	11	5	6

^a 1 = Pt. Hope-Kivalina (drainages west of Noatak R. drainage), 2 = Noatak R. drainages, 3 = Kobuk R. drainages, 4 = Selawik R. drainages, 5 = Buckland R. drainages and northern Seward Peninsula drainages.

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 24

GEOGRAPHICAL DESCRIPTION: Koyukuk River above Dulhi River

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Trapping Conditions

The weather was mild during most of the trapping season, but record snowfalls hampered access and repeatedly covered sets. The heavy snowfall and warm temperatures were responsible for frequent overflow which caused additional difficulties for trappers.

Beaver

Two hundred thirty-six beavers from Unit 24 were sealed. Only 17 beavers were taken above the confluence of the Alatna River.

Land Otter

Although land otters were abundant in Unit 21, most of the 19 otters taken (Table 1) were caught incidental to beaver trapping.

Lynx

Sealing data indicate a harvest of 162 lynx (Table 1). Even with high prices and increased trapping effort, the catch was relatively low, which suggests that lynx populations continued to decline from their peak in 1981-82.

Wolverine

The wolverine harvest (19 animals sealed) was below the average annual take (Table 1); the reason for the low take is unknown. Actual harvest could be higher because furs used locally are seldom sealed.

Other Furbearers

Red fox populations were high but there is little interest among trappers in catching foxes. Marten were moderately abundant in southern Unit 24 and continued to be the mainstay of the trappers' catch.

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Table 1. Furbearer harvest in Unit 24, 1980-85.

Species	1980-81	1981-82	1982-83	1983-84	1984-85
Land otter	47	11	13	28	19
Lynx	432	798	698	430	162
Wolverine	45	24	45	36	19

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 25

GEOGRAPHICAL DESCRIPTION: Yukon Flats, Chandalar,
Porcupine, and Black River
drainages; Birch and Beaver
Creeks

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Beaver

Sealing records indicate that 334 beavers were harvested in Unit 25 (Table 1). Most were taken in Subunits 25B (39%) and 25D (58%); only 11 beavers were taken in the other 2 subunits combined. Most beavers caught (65%) were adults (Table 2), and 62% of the take occurred during the period January-March (Table 3). Sixty-four beavers were taken using traps, and 222 were snared; method of take was not reported in 48 instances.

The harvest in 1984-85 increased by 102 animals compared with 1983-84. Populations are probably large enough to safely allow the increased take, particularly in Subunit 25D where incidental observations indicate increased numbers of beavers.

Land Otter

Harvest of 11 land otters was reported, and most (7 otters) were taken in Subunit 25B. Most of the catch occurred during November and December. Six otters were trapped and 5 were snared.

Incidental observations indicate otter density is low in most of Unit 25. The exception is Subunit 25D where density is moderate, reflecting higher quality habitat. Concentration of harvest in Subunit 25B is probably due to greater trapping pressure in that area. Harvest was probably not excessive in any portion of the unit.

Lynx

A harvest of 617 lynx was reported on sealing forms. Most lynx (52%) were taken in Subunit 25D, and 75% of the catch occurred during the period November-January. Four hundred fifty-six lynx were trapped and 152 were snared. The method of take was not specified for 9 lynx.

Compared with the 1983-84 season, the lynx harvest decreased by 410. Most of this decline occurred in Subunits 25B and 25D (243 and 143 less, respectively). This pattern of decline began in 1982-83, suggesting lynx populations peaked throughout most of Unit 25 during 1981-82. However, the maximum number sealed (1,564) occurred in 1982-83 in Unit 25, and the number sealed in 1981-82 was less (1,452) by 112. The shortened lynx-trapping season in Unit 25 should therefore be continued to protect the population during the low-density phase of the cycle. In addition, efforts to educate trappers to avoid incidental catch of lynx should be continued.

Wolverine

Harvest of 62 wolverines was reported. Most were taken in Subunits 25B (45%) and 25D (37%). Seventy-four percent of the take occurred between December and February.

Incidental observations and harvest reports indicate that wolverine populations are stable and harvest is not excessive. Density is probably moderate in Subunits 25A and 25B and is low in Subunits 25C and 25D.

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Table 1. Furbearer harvests in Unit 25, 1984-85.

Species	Subunit				Total
	25A	25B	25C	25D	
Beaver	8	130	3	193	334
Land otter	0	7	1	3	11
Lynx	73	203	19	322	617
Wolverine	8	28	3	23	62

Table 2. Unit 25 beaver harvest by pelt size category, 1984-85.

Subunit	Pelt size in inches (length plus width)			
	0-52 ^a	53-59	60-64 ^b	≥65 ^b
25A	1	3	3	1
25B	17	19	40	54
25C	0	0	1	2
25D	49	28	57	59
Total	67	50	101	116

^a Kits.

^b Adults.

Table 3. Chronology of furbearer harvest from Unit 25, 1984-85.

Species	Month							Total
	Nov	Dec	Jan	Feb	Mar	Apr	Unknown	
Beaver	51	34	57	77	72	8	35	334
Land otter	5	5	0	1	0	0	0	11
Lynx	116	195	151	86	66	1	2	617
Wolverine	7	17	14	15	9	0	0	62

FURBEARERS
SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 26A

GEOGRAPHICAL DESCRIPTION: Arctic Slope west of the Itkillik River

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Fox

Harvest data are not available for arctic fox during this reporting period. Arctic foxes appear to be relatively abundant around Barrow, and no changes in seasons or bag limits are recommended.

No harvest information is available for red foxes during this reporting period. In 15 hours of moose surveys flown on the Colville River and its tributaries in late April 1985, 5 red foxes and no wolverines were observed. No changes in seasons or bag limits are recommended.

Lynx

Five lynx were reported taken in the subunit. No changes in seasons or bag limits are recommended.

Otter

One otter was sealed in the vicinity of Anaktuvuk Pass. This is the 1st otter reported taken in Subunit 26A since the 1977-78 season.

Wolverine

Sealing records kept at Fairbanks indicate that 5 wolverines were sealed in Subunit 26A during 1984-85. The actual harvest was certainly higher. Fur sealing does not work well on the western North Slope at this time. Sealing officers are present in only 2 of the 6 communities there (Barrow and Anaktuvuk Pass). Wolverine pelts are usually not sent out for tanning but are dried and used locally, sometimes immediately after the animal is taken. Maintaining paid fur sealers in

every community would certainly increase reporting, and a skull-buying program carried out by paid fur sealers would probably be the best solution. However, manpower and funds to do this are not presently available. No changes in seasons or bag limits are recommended.

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FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNITS: 26B and 26C

GEOGRAPHICAL DESCRIPTION: Arctic Slope east of and including the Itkillik drainage and east of the Colville River

PERIOD COVERED: 1 July 1984-30 June 1985

Season and Bag Limit

See Trapping Regulations No. 25 and Fur Animal Hunting Regulations No. 25.

Arctic fox

Arctic foxes were abundant in Subunits 26B and 26C during winter 1984-85. Trappers who concentrated on arctic foxes did very well. However, rabies was confirmed in both foxes and wolves in the North Slope area. During summer 1985, numerous arctic fox carcasses with white winter pelage were located in the Arctic National Wildlife Refuge. It thus appears that arctic foxes experienced a late winter die-off, probably due to disease. Lemming populations are high, hence foxes that survived are probably reproducing well.

Lynx

Lynx occasionally disperse into Unit 26 from high-density snowshoe hare-lynx habitats farther south. Neither lynx nor hares are particularly abundant in the eastern Brooks Range, and no lynx were reported taken in Subunits 26B or 26C during the 1984-85 season.

Red Fox

No data are available on population trends of red foxes in Subunits 26B and 26C. It is not known whether rabies has affected red foxes as it did arctic foxes and wolves. There is little trapping pressure on red foxes in these subunits.

Wolverine

No wolverines were sealed from Subunits 26B or 26C. At least 1 wolverine was shot by a Kaktovik resident, however, and Nuiqsut hunters may also have taken wolverines. Wolverine

pelts that are tanned and used locally are seldom sealed. Wolverine numbers are probably somewhat limited by hunting and trapping in Subunits 26B and 26C, particularly in coastal plain areas where wolverines can be easily tracked down by snowmachine or aircraft. Driving, herding, molesting, or shooting from a moving snowmachine is illegal, as is shooting the same day as airborne. Most wolverines harvested in Unit 26 are taken by these illegal methods. Wolverines are less abundant in Subunits 26B and 26C than in Subunit 26A, even in areas where little or no hunting or trapping occurs. Natural processes may therefore limit the potential abundance of wolverines in Subunits 26B and 26C. Furthermore, moderate harvests keep wolverine numbers well below their potential in Subunits 26B and 26C.

No changes in wolverine season or bag limit are recommended at this time. However, information and education programs are needed in Nuiqsut and Kaktovik to reduce the illegal use of snowmachines by wolverine hunters and to explain the importance of reporting harvest. The advisability of closing the wolverine trapping season on 31 March rather than 15 April, which would align it with the hunting season, should be discussed with local advisory committees. Wolverines are especially vulnerable to snowmachine hunters during the longer daylight, warmer temperatures, and better snow conditions of April.

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Appendix A. Results of 1984-85 Trapper Questionnaire

FURBEARERS

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNITS: 12, 13, 19, 20, 21, 24, and 25

GEOGRAPHICAL DESCRIPTION: Interior Alaska

PERIOD COVERED: 1 July 1984-30 June 1985

Trapper Questionnaire

The Trapper Questionnaire was sent to 500 trappers in Units 12, 13, 19, 20, 21, 24, and 25 in spring 1985. Unlike previous years, the Glennallen area (Unit 13) was included in the questionnaire survey. Although no reminder letters were sent, 223 questionnaires (44%) were returned. Thirty respondents who returned the questionnaire indicated they had not trapped and hence provided no other information. One hundred ninety-three responses provided data regarding harvest and population trends (Tables 1-15).

Questionnaire Results: Harvest and Population Levels

Beaver:

Trappers reported moderate numbers of beavers, with a slight increase compared with 1983-84. Responses from the Galena-Nulato, Aniak-Lower Kuskokwim, McGrath, Hughes-Huslia, Nenana-Clear, and Tanana-Ruby areas indicated high beaver numbers. Trappers from these areas and the Delta, Tok-Northway, and Manley-Livengood-Minto areas reported increased beaver populations.

Coyote:

Less than half the respondents had comments regarding coyote abundance, and few trappers, except those from Delta and Tok-Northway, reported catching coyotes. Delta trappers reported catching 50 coyotes (average 5 coyotes per trapper), and Tok-Northway area trappers reported catching 14 coyotes (average 3 coyotes per trapper). Coyote populations were reported to be moderately high in the Delta area and at moderate levels near Glennallen. Generally, however, populations of coyotes were reported to be low or nonexistent, with little change from 1983-84.

Land Otter:

Land otter abundance was reported as low to moderately low throughout the Interior, except for the Aniak-Lower Kuskokwim area where reports indicated little change or a slight decrease in numbers. Trappers in the Galena-Nulato, Hughes-Huslia, Minchumina, McGrath, Tanana-Ruby, and Tok-Northway areas reported otters to be moderately abundant and little changed from 1983-84. Aniak-Lower Kuskokwim area trappers reported increases in otter populations.

Lynx:

According to questionnaire responses, lynx catches in the Interior declined in 1984-85 compared with 1983-84. Cooperators reported catching 385 lynx in 1984-85 (Table 1) compared with 625 in 1983-84. Although we acknowledge that many trappers do not reveal their actual catch, comparison of the sealing records from 1984-85 with those of 1983-84 indicates that 1,332 lynx were sealed from the Interior in 1984-85, compared with 2,369 lynx sealed in 1983-84. Both sealing records and questionnaire responses suggest the lynx take in 1984-85 was about 60% of that in 1983-84.

Fewer lynx were reported taken in the Fort Yukon area in 1984-85 than in the previous year, and the average number of lynx per trapper decreased. Fairbanks area trappers also reported lower catches of lynx in 1984-85, as did trappers from most other areas.

Lynx populations were reported as low to moderately low throughout the Interior. All respondents except those from the Galena-Nulato, Hughes-Huslia, and Tanana-Ruby areas reported decreasing lynx population levels compared with those of 1983-84.

Marten:

Regionwide, the total marten harvest and the average catch of marten per trapper increased in 1984-85 (Table 1) compared with 1983-84. Only Beaver-Stevens Village-Rampart, Eagle-Chicken, Galena-Nulato, Healy-Mt. McKinley, and Manley-Livengood-Minto area trappers reported a decrease in the numbers of marten taken. Elsewhere in the Interior, cooperators reported significant increases.

Marten populations were reported as moderate and increasing slightly in the Interior. Aniak-Lower Kuskokwim, Delta, Glennallen area, and Tok-Northway trappers reported moderately high numbers of marten. Numbers increased in the Circle-Central, Fairbanks, Glennallen area, Tanana-Ruby, and Tok-Northway areas but remained much the same or declined somewhat in most other areas.

Mink:

Mink populations were reported to be low to moderately low and declining in the Interior. Only Nenana-Clear area trappers reported moderate numbers of mink.

Muskrat:

Muskrat populations were reported to be low to moderately low in the Interior and little changed from 1983-84. Tok-Northway area trappers reported moderate but increased numbers of muskrats, but in most other areas muskrat populations were thought to be low and little changed from 1983-84.

Red Fox:

Interior trappers reported an average harvest of 9 red foxes per trapper (Table 1), slightly more than in 1983-84. The total number of foxes reported taken in the Interior was slightly higher, 897 compared with 848 the previous year. Delta trappers again reported taking the most foxes (134) and the highest average number per trapper (12.2). The latter figure represented a decrease from the average harvest of 17.4 foxes per trapper in 1983-84.

Fox populations were reported to be moderately low regionwide and less abundant than in 1983-84.

Red Squirrel:

Numbers of red squirrels were thought to be moderate to moderately high in 1984-85, with little change from 1983-84.

Wolf:

Overall, trappers reported that wolf populations in the Interior were moderately low, and that numbers were lower than in 1983-84. In contrast, respondents from the Circle-Central, Tanana-Ruby, and McGrath areas reported moderate to moderately high numbers of wolves and some increase in numbers compared with the previous year. Trappers from the Brooks Range, Eagle-Chicken, Fairbanks, Glennallen, Healy-Mt. McKinley, and Lake Minchumina areas reported some decrease in numbers of wolves.

Wolverine:

Respondents indicated that wolverine populations were moderately low to low throughout the Interior with little change or a slight decline in numbers compared with 1983-84. Increased

numbers of wolverines were reported from the Aniak-Lower Kuskokwim, Circle-Central, and Fort Yukon areas. Two-hundred eighty wolverines were sealed from the Interior in 1984-85. This represents 44% of the statewide harvest.

Grouse:

Grouse populations were reported to be moderately low to moderate in the Interior, about the same as in 1983-84. The Aniak-Lower Kuskokwim, Circle-Central, Tanana-Ruby, and Nenana-Clear areas were the only areas where increases were reported.

Ptarmigan:

Trappers indicated low ptarmigan populations throughout the Interior, and reports suggested a slight decline from the 1983-84 levels. The only exception was the Tok-Northway area where trappers reported moderately high ptarmigan numbers.

Snowshoe Hare:

Snowshoe hare numbers were reported to be low throughout the Interior. Populations were thought to have declined since the previous year in all areas except the Aniak-Lower Kuskokwim, Hughes-Huslia, Manley-Livengood-Minto, and Tanana-Ruby areas. Trappers in the Aniak, Lower Kuskokwim, and Livengood-Manley-Minto areas reported an increase in hare numbers.

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Survey-Inventory Coordinator

Table 1. Lynx, fox, and marten harvests as indicated by the Trapper Questionnaire, 1984-85.

Area	Number trappers ^a responding	Number lynx taken	Number lynx/ trapper ^a	Number foxes taken	Number foxes/ trapper ^a	Number marten taken	Number marten/ trapper ^a
Aniak-Lower Kuskokwim	6	2	2.0	25	4.2	750	125.0
Beaver-Stevens Village- Rampart	7	18	6.0	30	7.5	212	42.4
Brooks Range	13	40	4.0	6	1.5	215	43.0
Circle-Central	7	35	8.8	30	7.5	216	54.0
Delta	16	43	4.8	134	12.2	379	31.6
Eagle-Chicken	6	5	1.7	6	3.0	133	44.3
Fairbanks	28	19	2.7	64	4.9	478	23.9
Fort Yukon	17	124	13.8	104	10.4	670	51.5
Galena-Nulato	8	4	2.0	9	4.5	146	73.0
Glennallen area	10	9	4.5	217	21.7	282	31.3
Healy-Mt. McKinley	8	10	5.0	24	4.0	22	11.0
Hughes-Huslia	6	4	2.0	14	3.5	109	27.3
Minchumina	5	1	1.0	9	2.3	282	56.4
Manley-Livengood-Minto	7	3	3.0	4	2.0	102	25.5
McGrath	12	6	1.2	32	4.6	724	72.4
Nenana-Clear	10	7	2.3	33	8.3	385	48.1
Tanana-Ruby	7	2	2.0	4	2.0	413	103.3
Tok-Northway	17	50	5.0	114	8.8	752	63.7
Miscellaneous	3	3	3.0	38	19.0	77	25.7
Interior totals	193	385	5.2	897	9.0	6,347	51.2

^a Not all trappers trapped for lynx, fox, and marten and some did not indicate their catch. Therefore, these figures represent only the harvest indicated on the questionnaire divided by the number of trappers listing any catch.

BEAVER

Table 2. Interior Alaska beaver population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	0	0	6	9.0	0	2	3	7.4
Beaver-Stevens								
Village-Rampart	2	3	1	4.3	1	3	2	5.7
Brooks Range	2	2	1	4.2	2	2	1	4.2
Circle-Central	1	4	2	5.6	0	7	0	5.0
Delta	1	5	4	6.2	0	5	4	6.8
Eagle-Chicken	2	1	0	2.3	0	3	0	5.0
Fairbanks	3	6	2	4.6	1	8	2	5.4
Fort Yukon	2	7	5	5.9	0	9	3	6.0
Galena-Nulato	0	2	4	7.7	0	2	2	7.0
Glennallen area	2	2	1	4.2	1	4	0	4.2
Healy-Mt. McKinley	0	2	0	5.0	0	2	0	5.0
Hughes-Huslia	0	1	3	8.0	0	2	2	7.0
Minchumina	1	2	2	5.8	2	2	1	4.2
Manley-Livengood-Minto	0	2	1	6.3	0	1	1	7.0
McGrath	0	5	4	6.8	0	6	3	6.3
Nenana-Clear	0	3	3	7.0	0	3	2	6.6
Tanana-Ruby	0	1	5	8.3	0	4	1	5.8
Tok-Northway	2	6	2	5.0	0	5	4	6.8
Miscellaneous	1	0	0	1.0	0	1	0	5.0
Interior totals	19	54	46	5.9	7	71	31	5.9

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

COYOTE

Table 3. Interior Alaska coyote population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	0	0	0	--	0	0	0	--
Beaver-Stevens								
Village-Rampart	0	0	0	--	0	0	0	--
Brooks Range	3	0	0	1.0	2	2	0	3.0
Circle-Central	3	0	0	1.0	2	2	0	3.0
Delta	3	5	6	5.9	0	6	7	7.2
Eagle-Chicken	1	0	0	1.0	0	1	0	5.0
Fairbanks	9	1	1	2.1	5	5	2	4.0
Fort Yukon	5	0	0	1.0	2	2	0	4.2
Galena-Nulato	3	0	0	1.0	1	2	0	3.7
Glennallen area	2	8	0	4.2	1	6	2	5.4
Healy-Mt. McKinley	2	2	0	3.0	2	1	1	4.0
Hughes-Huslia	1	0	0	1.0	0	1	0	5.0
Minchumina	3	0	0	1.0	0	3	0	1.0
Manley-Livengood-Minto	3	0	0	1.0	0	3	0	5.0
McGrath	2	0	1	3.7	1	1	1	5.0
Nenana-Clear	4	0	0	1.0	0	4	0	5.0
Tanana-Ruby	2	0	0	1.0	0	2	0	5.0
Tok-Northway	6	3	2	3.5	2	4	4	5.8
Miscellaneous	1	0	0	1.0	0	1	0	5.0
Interior totals	53	19	10	2.9	18	46	18	5.0

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

GROUSE

Table 4. Interior Alaska grouse population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	1	1	1	5.0	0	1	1	7.0
Beaver-Stevens								
Village-Rampart	4	1	1	3.0	0	4	1	5.8
Brooks Range	6	2	0	2.0	3	3	0	3.0
Circle-Central	3	3	0	3.0	1	2	4	6.7
Delta	7	7	0	3.0	2	10	1	4.7
Eagle-Chicken	3	2	0	2.6	1	4	0	4.2
Fairbanks	8	6	4	4.1	4	8	6	5.4
Fort Yukon	5	5	3	4.4	4	3	5	5.3
Galena-Nulato	3	2	0	2.6	1	1	1	5.0
Glennallen area	4	3	0	2.7	2	3	1	4.3
Healy-Mt. McKinley	3	1	0	2.0	1	3	0	4.0
Hughes-Huslia	2	2	0	3.0	0	3	0	5.0
Minchumina	5	0	0	1.0	2	3	0	3.4
Manley-Livengood-Minto	2	3	1	4.3	1	3	2	5.7
McGrath	5	5	0	3.0	3	7	0	3.8
Nenana-Clear	4	6	0	3.4	0	5	4	6.8
Tanana-Ruby	3	2	1	3.7	1	1	3	6.6
Tok-Northway	5	6	2	4.5	2	9	2	5.0
Miscellaneous	1	0	0	1.0	0	1	0	5.0
Interior totals	74	57	13	3.3	28	74	31	5.1

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

HARE

Table 5. Interior Alaska hare population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	2	1	0	2.3	0	0	2	9.0
Beaver-Stevens								
Village-Rampart	3	3	0	3.0	3	2	1	3.7
Brooks Range	8	1	0	1.4	6	3	0	2.3
Circle-Central	7	0	0	1.0	6	1	0	1.6
Delta	11	2	0	1.5	4	7	1	4.0
Eagle-Chicken	5	1	0	1.7	3	3	0	3.0
Fairbanks	12	6	2	3.0	8	9	2	3.7
Fort Yukon	8	4	1	2.8	8	3	1	2.7
Galena-Nulato	4	1	0	1.8	2	1	1	4.0
Glennallen area	7	0	0	1.0	7	0	0	1.0
Healy-Mt. McKinley	4	1	1	3.0	3	1	2	4.3
Hughes-Huslia	3	1	0	2.0	0	3	0	5.0
Minchumina	5	0	0	1.0	2	2	1	4.2
Manley-Livengood-Minto	3	3	0	3.0	0	3	3	7.0
McGrath	5	5	0	3.0	2	6	2	5.0
Nenana-Clear	7	3	0	2.2	5	2	2	3.6
Tanana-Ruby	3	3	0	3.0	1	3	1	5.0
Tok-Northway	7	6	1	3.3	4	7	2	4.4
Miscellaneous	1	0	0	1.0	0	0	1	9.0
Interior totals	105	41	5	2.4	64	56	22	3.8

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

LAND OTTER

Table 6. Interior Alaska land otter population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	0	1	3	8.0	0	1	3	8.0
Beaver-Stevens								
Village-Rampart	2	1	0	2.3	1	2	0	3.7
Brooks Range	3	2	0	2.6	2	3	0	3.4
Circle-Central	3	1	0	2.0	0	4	0	5.0
Delta	4	4	1	3.8	0	7	1	5.5
Eagle-Chicken	2	1	0	2.3	0	3	0	5.0
Fairbanks	7	5	0	2.7	4	8	0	3.7
Fort Yukon	4	6	0	3.4	1	6	1	5.0
Galena-Nulato	1	4	0	4.2	0	3	0	5.0
Glennallen area	4	2	1	3.3	3	3	1	3.9
Healy-Mt. McKinley	4	1	0	1.8	1	3	0	4.0
Hughes-Huslia	0	4	0	5.0	0	4	0	5.0
Minchumina	2	2	1	4.2	1	4	0	4.2
Manley-Livengood-Minto	2	1	0	2.3	0	2	0	5.0
McGrath	3	5	1	4.1	4	4	1	3.7
Nenana-Clear	3	2	0	2.6	1	3	0	4.0
Tanana-Ruby	1	4	2	5.6	1	5	0	4.3
Tok-Northway	2	4	1	4.4	2	2	3	5.6
Miscellaneous	1	0	0	1.0	1	0	0	1.0
Interior totals	48	50	10	3.6	21	67	10	4.6

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

LYNX

Table 7. Interior Alaska lynx population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	4	0	0	1.0	1	2	0	3.7
Beaver-Stevens								
Village-Rampart	6	1	0	1.6	4	2	1	3.3
Brooks Range	10	1	0	1.4	9	0	2	2.5
Circle-Central	6	1	0	1.6	6	1	0	1.6
Delta	13	1	0	1.3	5	8	0	3.5
Eagle-Chicken	5	0	0	1.0	3	2	0	2.6
Fairbanks	14	3	1	2.1	11	6	1	2.8
Fort Yukon	13	2	0	1.5	11	2	0	1.6
Galena-Nulato	6	1	0	1.6	2	3	1	4.3
Glennallen area	10	0	0	1.0	8	1	0	1.4
Healy-Mt. McKinley	4	2	0	2.3	3	2	1	3.7
Hughes-Huslia	3	1	0	2.0	1	3	0	4.0
Minchumina	5	0	0	1.0	4	0	1	2.6
Manley-Livengood-Minto	4	1	0	1.8	2	1	1	3.0
McGrath	8	0	1	1.9	2	5	2	5.0
Nenana-Clear	8	0	0	1.0	5	2	0	2.1
Tanana-Ruby	4	1	0	1.8	1	2	1	5.0
Tok-Northway	13	3	0	1.8	7	5	3	3.9
Miscellaneous	2	0	0	1.0	0	1	0	5.0
Interior totals	138	18	2	1.6	85	48	14	3.1

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

MARTEN

Table 8. Interior Alaska marten population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	1	4	1	6.0	2	3	1	4.3
Beaver-Stevens								
Village-Rampart	1	5	1	5.0	2	4	1	4.4
Brooks Range	3	3	0	3.0	2	3	1	4.3
Circle-Central	1	5	1	5.0	0	0	7	9.0
Delta	0	8	5	6.5	1	3	8	4.7
Eagle-Chicken	2	4	0	3.7	2	4	0	3.7
Fairbanks	6	10	5	4.8	3	9	8	6.0
Fort Yukon	4	6	5	5.3	5	5	2	4.0
Galena-Nulato	4	2	1	3.3	3	2	0	2.6
Glennallen area	1	4	4	6.4	0	3	5	7.5
Healy-Mt. McKinley	2	2	1	4.2	2	2	0	3.0
Hughes-Huslia	2	2	1	4.2	1	2	2	5.8
Minchumina	2	2	1	4.2	3	1	1	3.4
Manley-Livengood-Minto	1	4	1	5.0	2	4	0	3.7
McGrath	2	8	1	4.6	2	6	3	5.4
Nenana-Clear	3	4	2	4.6	1	5	2	5.5
Tanana-Ruby	1	5	1	5.0	0	4	2	6.3
Tok-Northway	2	5	9	6.8	0	4	11	7.9
Miscellaneous	1	2	0	3.7	0	1	1	7.0
Interior totals	39	85	40	5.0	31	65	55	5.6

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

MINK

Table 9. Interior Alaska mink population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	1	2	0	3.7	1	1	0	3.0
Beaver-Stevens								
Village-Rampart	7	0	0	1.0	2	4	1	4.4
Brooks Range	6	0	0	1.0	5	0	0	1.0
Circle-Central	5	1	1	2.7	1	5	1	5.0
Delta	6	4	0	2.6	4	5	0	3.2
Eagle-Chicken	2	0	0	1.0	0	2	0	5.0
Fairbanks	7	6	1	3.3	4	7	3	4.7
Fort Yukon	11	3	0	1.9	6	5	1	3.3
Galena-Nulato	3	3	0	3.0	1	3	0	4.0
Glennallen area	5	3	0	2.5	4	3	0	2.6
Healy-Mt. McKinley	1	1	1	5.0	0	2	0	5.0
Hughes-Huslia	1	3	0	4.0	1	3	0	4.0
Minchumina	3	2	0	2.6	3	2	0	2.6
Manley-Livengood-Minto	2	0	0	1.0	0	1	0	5.0
McGrath	5	2	1	3.0	4	3	1	3.5
Nenana-Clear	1	2	1	5.0	1	1	1	5.5
Tanana-Ruby	3	3	0	3.0	1	2	2	5.8
Tok-Northway	9	4	0	2.2	6	4	1	3.2
Miscellaneous	1	0	0	1.0	0	1	0	5.0
Interior totals	79	39	5	2.6	44	54	11	3.8

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

MUSKRAT

Table 10. Interior Alaska land muskrat population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	2	1	0	2.3	0	1	1	7.0
Beaver-Stevens								
Village-Rampart	2	4	0	3.7	0	2	4	6.3
Brooks Range	4	0	0	1.0	2	2	0	3.0
Circle-Central	3	0	0	1.0	0	3	0	5.0
Delta	7	3	0	1.2	3	6	0	3.7
Eagle-Chicken	2	0	0	1.0	0	2	0	5.0
Fairbanks	5	4	0	2.8	0	7	2	5.9
Fort Yukon	5	3	2	3.3	2	3	4	5.9
Galena-Nulato	3	0	0	1.0	0	1	0	5.0
Glennallen area	2	2	0	3.0	2	2	0	3.0
Healy-Mt. McKinley	1	1	0	3.0	0	1	0	5.0
Hughes-Huslia	2	1	0	2.3	0	3	0	5.0
Minchumina	4	0	0	1.0	3	1	0	2.0
Manley-Livengood-Minto	2	0	0	1.0	0	1	0	5.0
McGrath	2	1	1	4.0	1	2	1	5.0
Nenana-Clear	3	2	0	2.6	0	3	0	5.0
Tanana-Ruby	2	1	1	4.0	0	1	2	7.7
Tok-Northway	2	4	3	5.4	1	4	3	6.0
Miscellaneous	1	0	0	1.0	0	1	0	5.0
Interior totals	54	27	7	2.8	14	46	17	5.2

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

PTARMIGAN

Table 11. Interior Alaska ptarmigan population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	2	2	0	3.0	1	1	1	5.0
Beaver-Stevens								
Village-Rampart	5	1	0	1.7	2	4	0	3.7
Brooks Range	4	4	2	4.2	3	3	2	4.5
Circle-Central	5	1	0	1.7	2	3	2	5.0
Delta	9	4	0	2.2	3	9	0	4.0
Eagle-Chicken	2	3	0	3.4	1	3	1	5.0
Fairbanks	14	2	1	1.9	7	8	2	3.8
Fort Yukon	6	5	2	3.8	4	4	4	5.0
Galena-Nulato	6	0	0	1.0	2	1	1	4.0
Glennallen area	2	5	0	3.9	2	2	2	5.0
Healy-Mt. McKinley	2	2	2	5.0	2	3	1	4.3
Hughes-Huslia	2	1	0	2.3	2	1	0	2.3
Minchumina	4	0	0	1.0	3	1	0	3.0
Manley-Livengood-Minto	3	2	0	2.6	1	4	0	4.2
McGrath	7	3	0	2.2	4	3	3	4.6
Nenana-Clear	8	0	0	1.0	3	3	1	3.8
Tanana-Ruby	6	0	0	1.0	2	2	1	4.2
Tok-Northway	2	8	2	5.0	1	7	4	6.0
Miscellaneous	0	1	0	5.0	0	1	0	5.0
Interior totals	89	44	9	2.7	45	63	25	4.4

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

RED FOX

Table 12. Interior Alaska red fox population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	0	4	2	6.3	1	2	2	5.8
Beaver-Stevens								
Village-Rampart	2	2	2	5.0	1	3	2	5.7
Brooks Range	5	5	0	3.0	4	6	0	3.4
Circle-Central	1	5	1	5.0	1	3	3	6.1
Delta	7	6	1	3.3	8	4	1	2.8
Eagle-Chicken	3	0	0	1.0	2	1	0	2.3
Fairbanks	11	8	2	3.3	7	11	2	4.0
Fort Yukon	6	9	0	3.4	4	7	2	4.4
Galena-Nulato	3	2	2	4.4	2	2	2	5.0
Glennallen area	2	7	1	4.6	2	4	3	5.4
Healy-Mt. McKinley	3	3	0	3.0	4	1	0	1.8
Hughes-Huslia	3	3	0	3.0	1	3	1	5.0
Minchumina	3	2	0	2.6	2	3	0	3.4
Manley-Livengood-Minto	4	1	0	1.8	2	3	0	3.4
McGrath	2	6	1	4.6	3	4	2	4.6
Nenana-Clear	2	5	1	4.5	2	3	2	5.0
Tanana-Ruby	3	3	0	3.0	1	3	1	5.0
Tok-Northway	4	11	0	3.9	5	7	2	4.1
Miscellaneous	1	1	0	3.0	0	0	1	9.0
Interior totals	65	83	13	3.7	52	70	26	4.3

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

SQUIRREL

Table 13. Interior Alaska squirrel population abundance and trend indices by species based on Trapper Questionnaire, 1984-85, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	1	1	1	5.0	0	2	0	5.0
Beaver-Stevens								
Village-Rampart	1	2	2	5.8	0	3	1	6.0
Brooks Range	3	1	1	3.4	3	1	1	3.4
Circle-Central	0	1	4	8.2	0	3	2	6.6
Delta	0	7	5	6.7	1	7	3	5.7
Eagle-Chicken	1	2	2	5.8	0	5	0	5.0
Fairbanks	2	6	8	6.5	2	10	4	5.5
Fort Yukon	1	6	6	4.7	5	4	3	4.3
Galena-Nulato	2	1	0	2.3	0	1	0	5.0
Glennallen area	4	0	1	2.6	2	2	1	4.2
Healy-Mt. McKinley	0	2	0	5.0	0	1	1	7.0
Hughes-Huslia	0	2	1	6.3	1	2	0	3.7
Minchumina	2	2	1	4.2	1	4	0	4.2
Manley-Livengood-Minto	0	5	0	5.0	1	2	1	5.0
McGrath	2	6	1	4.6	3	5	1	4.1
Nenana-Clear	1	6	3	5.8	1	7	1	5.0
Tanana-Ruby	0	3	2	6.6	1	4	0	4.2
Tok-Northway	3	7	4	5.3	5	6	2	4.1
Miscellaneous	0	1	0	5.0	0	1	0	5.0
Interior totals	23	61	42	5.6	26	70	21	4.8

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

WOLF

Table 14. Interior Alaska wolf population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kuskokwim	4	1	0	1.8	1	2	1	5.0
Beaver-Stevens								
Village-Rampart	2	2	1	4.2	2	2	1	4.2
Brooks Range	6	2	0	2.0	3	3	1	3.9
Circle-Central	2	2	3	5.6	0	3	4	7.3
Delta	7	5	2	3.6	4	8	1	4.1
Eagle-Chicken	3	1	1	3.4	3	2	0	2.6
Fairbanks	8	4	3	3.7	7	6	2	3.7
Fort Yukon	9	2	3	3.3	3	7	2	4.7
Galena-Nulato	2	3	0	3.4	0	3	0	5.0
Glennallen area	5	4	0	2.8	3	5	0	3.5
Healy-Mt. McKinley	4	1	0	1.8	4	1	0	1.8
Hughes-Huslia	1	3	0	4.0	1	2	1	5.0
Minchumina	4	1	0	1.8	2	3	0	3.4
Manley-Livengood-Minto	2	1	0	3.3	1	1	1	5.0
McGrath	2	2	6	6.6	2	2	6	6.6
Nenana-Clear	4	3	0	2.7	2	3	1	4.3
Tanana-Ruby	1	2	2	5.8	0	2	2	7.0
Tok-Northway	6	10	0	3.5	1	9	3	4.8
Miscellaneous	1	0	0	1.0	1	0	0	1.0
Interior totals	73	49	2	3.5	43	64	26	4.5

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).

WOLVERINE

Table 15. Interior Alaska wolverine population abundance and trend indices based on Trapper Questionnaire, 1984-85.

Area	Abundance in 1984-85 season ^a				Compared with 1983-84 ^a			
	Low	Mod.	High	Index ^b	Fewer	Same	More	Index ^b
Aniak-Lower Kusokokwim	3	3	0	3.0	0	3	2	6.6
Beaver-Stevens								
Village-Rampart	4	1	0	1.8	2	3	0	3.4
Brooks Range	4	4	0	3.0	3	3	1	3.4
Circle-Central	4	1	2	3.9	1	3	3	6.1
Delta	9	5	0	2.4	4	8	1	4.1
Eagle-Chicken	4	1	0	1.8	0	5	0	5.0
Fairbanks	5	7	2	4.1	3	8	4	5.3
Fort Yukon	9	4	2	3.1	2	10	1	5.9
Galena-Nulato	3	1	0	2.0	1	1	0	3.0
Glennallen area	9	0	0	1.0	7	1	0	1.5
Healy-Mt. McKinley	4	1	0	1.8	2	2	0	3.0
Hughes-Huslia	1	3	0	4.0	1	2	1	5.0
Minchumina	3	1	1	3.4	0	4	1	5.8
Manley-Livengood-Minto	4	0	0	1.0	0	3	0	5.0
McGrath	3	5	0	3.5	4	4	0	3.0
Nenana-Clear	7	1	0	1.5	4	2	1	3.3
Tanana-Ruby	3	3	0	3.0	2	3	0	3.4
Tok-Northway	6	8	1	3.6	3	7	4	5.3
Miscellaneous	1	0	0	1.0	0	0	1	9.0
Interior totals	86	49	8	2.8	39	72	20	4.4

^a Based on the number of answers to each question; not all cooperators answered all questions.

^b Index values range from 1.0 through 9.0 and were derived by giving an arbitrary value of 9.0, 5.0, and 1.0 to each "High" (More), "Moderate" (Same), and "Low" (Fewer) answer, respectively. The total value of the answers to each question for each species was divided by the number of answers to that question. An index of 9.0 indicates High (More), 5.0 indicates Moderate (Same), and 1.0 indicates Low (Fewer).