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JUNEAU, ALASKA

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ANNUAL REPORT OF SURVEY-INVENTORY ACTIVITIES
PART II. BLACK BEAR, BROWN BEAR, POLAR BEAR, CARIBOU

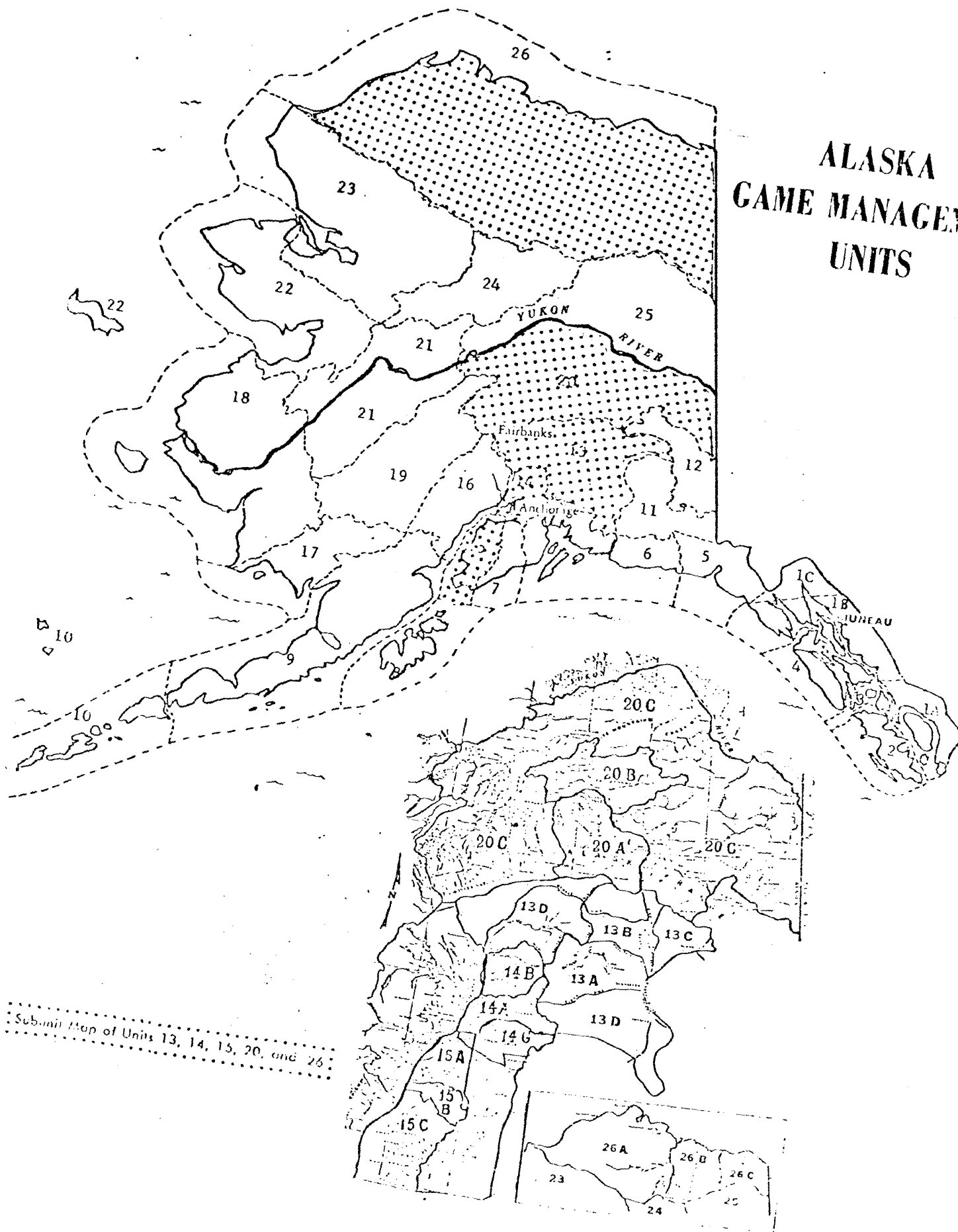
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Volume VII
Federal Aid in Wildlife Restoration
Project W-17-8, Jobs No. 3, 4, 5, 17, and 22

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(Printed August 1977)

ALASKA GAME MANAGEMENT UNITS



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

STATEWIDE HARVESTS AND POPULATION STATUS - 1975

Black Bear

Sealing of black bears taken by hunters was required only in Units 1-3, 5-7, 11-16, and 20; total harvest could not be estimated for the balance of the state. In those units, the total harvest in 1975 was 926. Sealing was initiated in most of these units in 1973, so harvest trends are not yet readily apparent. Black bear populations were reported to be healthy in all areas, with little or no indication that hunter harvest was affecting population levels.

Brown/Grizzly Bear

The statewide harvest for 1975 was 827 bears, very near the average for the last 5 years (820). Game Management Units 9, 8, and 4 were the units of heaviest harvest, with 225, 119, and 105 bears taken, respectively. Unit 9 would have sustained an even heavier harvest had not the spring season been closed by emergency order. Unit 4 sustained the highest kill on record, continuing the trend of increasing harvest.

Bear populations appear healthy in all areas and, except for Units 4, 8, and 9, could probably withstand a higher level of utilization.

Polar Bear

Polar bear harvest was 18 bears in 1975, all by Natives under the exemption to the Marine Mammal Protection Act. Polar bears appear to be increasing, at least in areas adjacent to the coast. Some problems may be arising with human-bear interactions near villages.

Caribou

In the six caribou herds (spread among 5 game management units) in which caribou harvest tickets were required, the total harvest was 957, extrapolated to 1127. This includes harvest from the Chisana, Delta, Forty-mile, McKinley, Mentasta, and Nelchina herds. In addition, 87 caribou were taken from the Kenai herd, 104 from Adak, about 50 from Unimak, about 2000 from Mulchatna, and less than 1500 from the porcupine herd.

Status of caribou varied considerably between herds. The small herds on Adak, Kenai Peninsula, and Unimak appeared stable or increasing. The McKinley, Delta, Forty-mile, and Chisana were all at relatively low levels, often due to continued low calf survival. The Nelchina herd appeared stabilized at a low level or perhaps beginning to increase; the Mulchatna herd appeared stable; and the Porcupine herd was stable at a high level. Harvest was stabilized in most of the herds by permit systems or season timing, although harvest and hunting pressure increased on the Mulchatna herd. Erratic migration movements of the Alaska Peninsula herd caused some concern that a population decline might be imminent.

TABLE OF CONTENTS

Game Management Unit Map.	i
Statewide Harvests and Population Status - 1975	ii
Black Bear.	1
GMU's 1A, 2 - Ketchikan and Prince of Wales Island	1
GMU 1B - Southeast Mainland.	3
GMU's 1C, 1D - Northern Mainland Portion of SE Alaska.	8
GMU 3 - Petersburg-Wrangell Area	10
GMU 5 - Yakutat.	15
GMU 6 - Prince William Sound and Gulf Coast.	16
GMU 7 - Seward	21
GMU 9 - Alaska Peninsula	26
GMU 11 - Wrangell Mountains.	27
GMU 12 - Upper Tanana, White River	32
GMU 13 - Nelchina Basin.	33
GMU's 14A, 14B - Upper Cook Inlet.	38
GMU 14C - Anchorage.	44
GMU 15 - Western Kenai Peninsula	46
GMU 16 - West Side of Cook Inlet	54
GMU 17 - Bristol Bay	59
GMU 20 - Fairbanks, Central Tanana	60
Brown/Grizzly Bear.	64
GMU 1 - Southeast Mainland	64
GMU 4 - Admiralty, Baranof, Chichagof, and Adjacent Islands.	65
GMU 5 - Yakutat.	71
GMU 6 - Prince William Sound and Gulf Coast.	74
GMU 7 - Eastern Kenai Peninsula.	79
GMU 8 - Kodiak and Adjacent Islands.	81
GMU 9 - Alaska Peninsula	89
GMU 10 - Aleutian Islands.	94
GMU 11 - Wrangell Mountains, Chitina River	96
GMU 12 - Upper Tanana, White River	98
GMU 13 - Nelchina Basin.	100
GMU 14 - upper Cook Inlet.	102
GMU 15 - Kenai Peninsula	104
GMU 16 - West Side of Cook Inlet	106
GMU 17 - Bristol Bay	108
GMU 18 - Yukon-Kuskokwim Delta	111
GMU 19 - McGrath Area.	112
GMU 20 - Fairbanks, Central Tanana	113
GMU 21 - Middle Yukon.	117
GMU 22 - Seward Peninsula.	118
GMU 23 - Kotzebue Sound.	120
GMU's 24-26 - Brooks Range and North Slope	122
Polar Bear.	125
GMU 26 - Arctic Slope.	125

Caribou.	126
GMU's 7, 15 - Kenai Peninsula (Kenai Herds)	126
GMU 9 - Alaska Peninsula (Alaska Peninsula and Mulchatna Herds)	130
GMU 10 - Aleutian Islands (Adak Island Herd).	133
GMU 10 - Unimak Island Only	137
GMU 11 - Wrangell Mountains and Chitina Valley (Mentasta Herd).	138
GMU 12 - Chisana Herd	141
GMU's 12, 20, 25 - Fortymile Herd	142
GMU's 13, 20 - McKinley Herd.	143
GMU's 14A, 14B - Upper Cook Inlet	145
GMU 16 - West Side of Cook Inlet.	147
GMU 17 - Bristol Bay (Mulchatna Herd)	148
GMU's 18, 19, 21 - Kuskokwim Mts., North Slope of Alaska Range (Mulchatna Herd, Beaver Mts. Herd, etc).	150
GMU 20 - Macomb Plateau (Delta Herd east of Delta River).	152
GMU's 23, 24, 26 - Arctic Herd.	154
GMU's 25, 26 - Porcupine Herd	155

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

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

Seasons and Bag Limits

Sept. 1 - June 30

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

Harvest and Hunting Pressure

Thirty-three bears from Subunit 1A and 42 from Unit 2 were sealed during 1975. These figures do not include three bears killed in Subunit 1A in defense of life and property. The total kill for Subunit 1A in 1975 was down 30 percent from 1974 while in Unit 2, the total kill rose from 27 in 1974 to 42 in 1975, up 56 percent.

In the spring portion of the season in Subunit 1A, 12 bears were taken on Revilla Island and 15 were taken on the mainland, 85 percent (27) males. In Unit 2, 27 bears were taken during the spring season (93% males). For both units, the spring season harvest was 89 percent males which compares closely with the 91 percent males taken for the same season and area in 1974. The reason for the high percentage of males in the spring harvest is unknown, but apparently is not due to incorrect recording of sex.

The fall harvest was small compared to the spring take; in Subunit 1A five bears were taken on Revilla Island and one from the mainland. The sex ratio of these six bears was 80 percent males. In Unit 2, 15 bears were taken during the fall season (58 percent males).

Sixty-nine percent of the combined Subunit 1A and Unit 2 harvests for 1975 was taken between May 1 and June 10. In Subunit 1A, 82 percent of the harvest came from the spring season while in Unit 2 only 64 percent was taken during the spring season. The greater fall kill in Unit 2 was probably due to the more extensive road system and a higher incidental kill in the fall because of more human activity during that time. Methods of transportation used in Unit 2 support this hypothesis. During the spring season in Unit 2, 15 percent was taken by hunters using motor vehicles, and during the fall season 67 percent was taken by those using motor vehicles.

The nonresident portion of the total harvest rose from 7 percent in 1974 to 25 percent (19 bears) in 1975. Only one bear was taken by a nonresident in Subunit 1A with the remaining 18 taken in Unit 2. Fifteen of the 19 bears taken by nonresidents were taken during the spring season.

Aircraft were used as transportation to the hunting area for 30 percent of the bears taken from Subunit 1A. The remaining 70 percent was taken using boats. In Unit 2, 43 percent was taken using air transportation, 24 percent was taken using boats and 33 percent from the road system. Eighty-four percent of 19 bears taken by nonresident hunters was taken using air transportation to the hunting areas.

Skull measurements again indicated that bears on Prince of Wales Island were slightly larger than those from Subunit 1A. In Subunit 1A, 25 males averaged 17.2 inches while 31 males taken in Unit 2 averaged 17.3 inches. Mean skull sizes changed very little from 1974.

Hunting effort per bear taken varied with the area and season hunted. During the spring season in Subunit 1A, 12 successful hunters on Revilla Island averaged 1.50 days/bear, while on the mainland, 15 hunters averaged 4.07 days/bear. The five fall season hunters in Subunit 1A hunted 1.2 days/bear. In Unit 2, 27 hunters in the spring season averaged 4.26 days/bear taken while the 15 fall season hunters averaged 3.33 days/bear. Comparing the last two spring seasons, the days of hunting per bear taken dropped from 3.39 in Subunit 1A in 1974 to 2.93 for 1975, while in Unit 2 it rose from 2.15 days/bear in 1974 to 4.26 for 1975.

No bears were taken on guided hunts in Subunit 1A or Unit 2 during either 1974 or 1975.

Sixty-eight people took 75 bears during 1975, which indicates seven people took two bears each.

Four cinnamon phase black bears were taken, all from the mainland portion of Subunit 1A. Also, the cinnamon bear reported in Nicholas Passage in 1974 was found to have been taken on the mainland. Apparently the cinnamon phase does not occur on any of the islands in either Subunit 1A or Unit 2.

Composition and Productivity

No data were available.

Management Summary and Conclusions

Harvest distribution changed from the 1974 season but the total harvest remained the same. The sex ratio of the kill remained very heavy toward males and the average skull size remained essentially the same as it was in 1974. Excessive hunting pressure does not appear to be a problem and no changes in the season or bag limits are recommended.

PREPARED BY:

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BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

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

Seasons and Bag Limits

Sept. 1 - June 30

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

Harvest and Hunting Pressure

Sealing requirements for black bears have been in effect since July 1, 1973. This report covers fall 1973 and calendar years 1974 and 1975.

The reported black bear harvest in Subunit 1B for calendar year 1974 was 15 bears (12 males and 3 females) with mean skull sizes, respectively, of 18.0 inches (n=11) and 15.4 inches (n=3) (Appendix I). In 1975 the bear harvest totaled 8 (6 males and 2 females) with mean skull sizes of 17.6 inches (n=6) and 15.4 (n=2), respectively.

Chronology of the black bear harvest indicated 80 percent (12) was taken during April, May and June and 20 percent (3) in September and October 1974 (Appendix II). Of 8 bears harvested in 1975, 7 were taken in May and June and 1 in September. In 1974, 66.7 percent of the total bear harvest was taken in May and in 1975, 75 percent was taken in May.

Successful hunters spent an average of 8.6 days pursuing black bears in Subunit 1B in 1974 and an average of 8.3 days in 1975 (Appendix III).

Method of transportation data show that 8 of the successful 1974 black bear hunters used boats, 2 aircraft and 2 highway vehicles. In 1975, 7 of the successful hunters used boats and 1 used aircraft.

Guided hunts accounted for 33 percent of the reported black bear harvest in 1974 and 25 percent in 1975 (Appendix IV).

Composition and Productivity

Presently, there is no available information concerning the sex and age composition of black bear populations in Subunit 1B.

Management Summary and Conclusions

Distribution of days hunted and harvest of successful black bear hunters showed the Cape Fanshaw to LeConte Bay area to be the most heavily utilized portion of Subunit 1B during 1974 and 1975 (Appendix

III). In 1974 successful bear hunters spent 69 percent (50) of 72 days hunting black bears in this area and took 53 percent (8) of the reported harvest. Of 36 days reported in 1975, 86 percent was spent in the Cape Fanshaw-LeConte Bay area, accounting for 88 percent (7) of the harvest.

Nonresidents accounted for 47 percent of the total unit harvest in 1974 and 38 percent in 1975.

The current level of black bear harvests in Subunit 1B is considered light.

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Appendix I. Black bear harvest and mean skull sizes of bears taken in Game Management Subunit 1B.

Year	Total Harvest	No. Males	% Males	No. Females	% Females	No. Unknown Sex	% Unknown Sex	Mean Skull Size Males(n)	Mean Skull Size Females(n)
1973*	3*	3*	100.0*	0*	0*	0*	0*	16.9(3)*	*
1974	15	12	80.0	3	20.0	0	0.0	18.0(11)	15.4(3)
1975	8	6	75.0	2	25.0	0	0.0	17.6(6)	15.4(2)

* Harvest during the period of Sept. 1 through Dec. 31, 1973 only.

Appendix II. Chronology of black bear harvests in Alaska's Game Management Subunit 1B.

Year	April		May		June			Sept		Oct		Nov		Total Unit 1B		
	M	F	M	F	M	F	Unk	M	F	M	F	M	F	M	F	Unk
1973*	No.	N 0	D A	T A*				3 0		0 0		0 0		3*	0*	0*
	%	N/A	N/A	N/A				N/A		N/A		N/A				
1974	No.	1 0	8 2	1 0	0			1 0	1 1	0 0		12 3	0			
	%	6.7	66.7	6.7				6.7	13.3	0.0						
1975	No.	0 0	5 1	0 1	0			1 0	0 0	0 0		6 2	0			
	%	0.0	75.0	12.5				12.5	0.0	0.0						

* Sealing requirement went into effect July 1, 1973. Harvest is for the period Sept. 1 through Dec. 31, 1973.

Prepared by: Dave Zimmerman, Game Biologist II

Appendix III. Distribution of black bear harvests and hunting effort by resident and nonresident successful bear hunters in Alaska's Game Management Subunit 1B.

Area	No. of Bear		No. of Days Hunted		Average Days Hunted Per Bear	
	Res.	Non-Res.	Res.	Non-Res.	Res.	Non-Res.
Cape Fanshaw to Le Conte Bay						
1973*	2*	0*	9*	0*	4.5*	0.0*
1974	3	5	4	46	1.3	9.2
1975	5	2	11	20	2.2	10.0
Stikine River to Lemesurier Point						
1973*	1*	0*	2*	0*	2.0*	0.0*
1974	5	2	8	14	1.6	7.0
1975	0	1	0	5	0.0	5.0
G.M.U. 1B Totals						
1973*	3*	0*	11*	0*	3.7*	0.0*
1974	8	7	12	60	1.5	8.6
1975	5	3	11	25	2.2	8.3

* Harvest and hunting effort during the period of Sept. 1 through Dec. 31, 1973 only.

Prepared by: Dave Zimmerman, Game Biologist II

Appendix IV. Comparisons of residency, guided and unguided and harvest of successful black bear hunters in Alaska's Game Management Subunit 1B.

Year	Residents		Non-Residents		Total Unit 1B
	Guided	Unguided	Guided	Unguided	
<u>Hunters</u>					
1973*	0*	3*	0*	0*	3*
1974	0	7	3	2	12
1975	0	5	2	1	8
<u>Harvest</u>					
1973*	0*	3*	0*	0*	3*
1974	0	8	5	2	15
1975	0	5	2	1	8

* Covers the period from Sept. 1 through Dec. 31, 1973 only.

Prepared by: Dave Zimmerman, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunits 1C and 1D - Northern Mainland Portion of Southeastern Alaska

Seasons and Bag Limits

Sept. 1 - June 30

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

Harvest and Hunting Pressure

The harvest of black bears during 1975 was 46 and 18 animals, respectively, for Subunits 1C and 1D (Appendix I). In 1974 the harvest was 47 in 1C and 13 in 1D.

In 1974 and 1975 the cinnamon color phase of the black bear accounted for 13 percent (6) of the harvest in Subunit 1C. In Subunit 1D the cinnamon color phase represented 28 percent (5) of the harvest in 1975 compared to 31 percent (4) in 1974.

The percentage of hunters taking two bears increased in 1975 over 1974 from 6 to 17 percent (3 to 8 hunters) and from 8 to 22 percent (1 to 4 hunters), respectively, for Subunits 1C and 1D. Also of interest was an increase in the number of nonresident hunters during the 1975 hunting season.

Harvest sites were evenly distributed throughout Subunits 1C and 1D during 1974 and 1975. Harvest distribution can be broken down as follows for the 1974 and 1975 hunting seasons: Taku Inlet and River, 4 and 5 bears; Port Houghton, 4 and 6 bears; Holkham Bay, 3 and 7 bears; Point Couverden, 3 and 6 bears; St. James Bay, 7 and 2 bears; Berners Bay, 2 and 1 bears; Klehini River, 3 and 6 bears and Kelsall logging road, 1 and 4 bears.

Composition and Productivity

No data were collected.

Management Summary and Conclusions

Black bear hunting pressure and hunting success are largely influenced by weather conditions (typically severe) in Southeastern Alaska. Hunter access is difficult and vegetative cover is dense. Black bears are plentiful and hunter take is believed to have little impact on the population.

Recommendations

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

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Appendix I. Black bear harvests, calendar years 1974 and 1975. Participation by nonresidents, mean and range of skull sizes, color phase of bears and hunters taking two bears.

Subunit	Year	Total		%	No.	%	Mean Skull Size M**	Range Skull Sizes M**	Mean Skull Size F**	Range Skull Sizes F**	Color Phase		2 Bear Hunters		
		Kill	Males								No. Cinn.	% Cinn.	Res.	Nonres. 2nd % of Total	
1C	1974	47	38	81	12	26	17.1	14.5-19.2	15.8	14.0-17.6	6	13	3	0	6
	1975	46	36	78	19	41	17.8	15.3-20.0	15.8	12.6-18.3	6	13	3	5	17
1D	1974	13	10	77	1	8	16.7	13.3-18.4	13.3	11.8-15.4	4	31	1	0	8
	1975	18	11	65	2	11	16.7	14.0-19.0	15.3	14.8-16.4	5	28	4	0	22

* All male % based on known sex bears (one unknown sex bear in Subunit 1D in 1975).

** Length plus width given in inches.

Prepared by: David A. Johnson, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 3 - Petersburg-Wrangell Area

Seasons and Bag Limits

Except the drainage of Petersburg Creek	Sept. 1 - June 30	Two bears; provided that not more than one may be a blue or glacier bear and the taking of cubs or females accompanied by cubs is prohibited.
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Only the drainage of Petersburg Creek	No open season
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Harvest and Hunting Pressure

Since July 1, 1973 the sealing of black bear hides and skulls has been required. This report covers calendar years 1974 and 1975.

Sealing data show a harvest of 27 black bears (25 males and 2 females) in 1974 with a mean male skull size of 18.4 inches (n=22) (Appendix I). Of the 21 successful hunters reporting, 12 (57%) were nonresidents and 9 (43%) were residents.

In 1975, 38 successful hunters took 48 bears (40 males, 7 females and 1 unknown sex) with a mean male skull size of 18.7 inches (n=33) and a mean female skull size of 16.9 inches (n=6). Twenty-four nonresidents represented 63 percent of the total successful hunters and they took 62 percent of the harvest.

Six hunters (all nonresidents) or 29 percent of the 21 successful hunters in 1974 took two bears each. In 1975, 10 hunters (6 nonresidents and 4 residents) took 2 bears each. Second bears comprised 22 percent of the total harvest in both 1974 and 1975.

Chronology of the harvest showed that 74 percent of the 1974 harvest occurred in May and June and 79 percent during the same period in 1975. The remainder of the harvest for both years occurred during the months of September and October (Appendix III).

Harvest was reported from five islands in 1974 and 1975. Kuiu Island was the most heavily utilized area during both years, accounting for 63 percent of the harvest in 1974 and 65 percent in 1975 (Appendix I). This harvest was mostly taken by guided nonresidents.

As indicated on sealing forms, successful hunters in 1974 spent 161 days pursuing black bears in GMU 3 compared to 291 days in 1975, an 81 percent increase (Appendix III). The number of days hunted per bear by residents was 2.4 days per bear in 1974 and 2.7 days per bear in 1975 while nonresidents spent 7.7 days and 8.1 days per bear, respectively.

Four guides were active in GMU 3 in 1974 compared to 7 in 1975 (Appendix IV). Guided hunts accounted for 59 percent of the black bear harvest in 1974 and 54 percent in 1975.

The most important method of transportation used by successful hunters in GMU 3 was boats, with 77 percent and 74 percent using boats in 1974 and 1975, respectively. Other means were used considerably less and included aircraft, highway vehicle, off-road vehicles and by foot.

Composition and Productivity

Presently, there is no available information concerning the sex and age composition of black bear populations in GMU 3.

Management Summary and Conclusions

The hunting pressure in terms of successful hunters (information on unsuccessful hunters is unavailable), was distributed lightly over most of the unit and heaviest in the northwestern portion during 1974 and 1975 (Appendix III). The northwestern portion, which includes Kuiu Island and that portion of Kupreanof Island along Rocky Pass and Keku Strait, accounted for 70 percent (19) and 81 percent (39) of the harvest during 1974 and 1975, respectively. With this substantial increase in harvest, the mean male skull sizes remained about the same; 18.6 inches (n=16) in 1974 and 18.7 inches (n=28) in 1975.

While black bears are considered relatively abundant throughout Unit 3, guides favor the northwest area, not only for its apparently good bear numbers, but also because of its close proximity to brown bear hunting areas on Admiralty and Baranof Islands.

Although nonresident hunters accounted for the major increases in harvest in Unit 3, there was a significant increase in the number of successful resident hunters, from 9 in 1974 to 14 in 1975 (Appendix IV). It is interesting to note that the increase in resident participation was mainly due to non-unit resident hunters. In 1974, 2 out of 9 successful resident hunters resided outside of Unit 3, whereas 6 out of 14 residents indicated non-unit residency in 1975.

Data from sealing requirements are providing useful information which will help establish guidelines for future black bear management. Data collected to date have not reflected an overharvest of black bears in Unit 3.

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Appendix I. Black bear harvests with mean skull size of male and female bears in Alaska's Game Management Unit 3.

Year	Total Harvest	No.		%		No.		%		No.		%		Mean Skull Size	
		Males	Females	Males	Females	Males	Females	Males	Females	Unknown Sex	Unknown Sex	Unknown Sex	Unknown Sex	Males(n)	Females(n)
1973*	9*	6*	66.7*	3*	33.3*	0*	0.0*	18.2(6)*	16.4(2)*						
1974	27	25	92.6	2	7.4	0	0.0	18.4(24)	16.1(2)						
1975	48	40	83.3	7	14.6	1	2.1	18.7(33)	16.9(6)						

* Harvest during the period of Sept. 1 through Dec. 31, 1973 only.

Appendix II. Chronology of black bear harvests in Alaska's Game Management Unit 3.

Year	April		May		June		Sept		Oct		Nov		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1973 *No.	N	0	D	A	T	A	3	1*	1	2*	2	0*	N/A	N/A
%	N	0	D	A	T	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1974 No.	0	0	14	1	4	1	4	0	3	0	0	0	25	2
%	0.0	0.0	55.6	7.1	18.5	2.4	14.8	0.0	11.1	0.0	0.0	0.0		0
1975 No.	0	0	24	0	10	3	4	3	2	1	0	0	40	7
%	0.0	0.0	50.0	0.0	29.2	7.7	14.6	7.7	6.2	0.0	0.0	0.0		1

*Sealing requirements went into effect July 1, 1973. Harvest is for the period Sept. 1 through Dec. 31, 1973.

Prepared by: Dave Zimmerman, Game Biologist II

Appendix III. Distribution of black bear harvests and hunting effort by resident and nonresident successful hunters in Alaska's Game Management Unit 3.

Area	No. of Bear Taken		No. of Days Hunted		Aver. Days Hunted Per Bear	
	Res.	Non-Res.	Res.	Non-Res.	Res.	Non-Res.
Kupreanof Is.						
1973*	0*	0*	0*	0*	0.0*	0.0*
1974	1	3	3	40	3.0	13.3
1975	7	5	14	57	2.0	11.4
Kuiu Is.						
1973*	3*	6*	3*	68*	1.0*	11.3*
1974	2	15	4	99	2.0	6.6
1975	7	24	24	184	3.4	7.7
Mitkof Is.						
1973*	0*	0*	0*	0*	0.0*	0.0*
1974	1	0	1	0	1.0	0.0
1975	2	0	2	0	1.0	0.0
Etolin Is.						
1973*	0*	0*	0*	0*	0.0*	0.0*
1974	2	0	2	0	1.0	0.0
1975	2	0	9	0	4.5	0.0
Wrangell Is.						
1973*	0*	0*	0*	0*	0.0*	0.0*
1974	3	0	12	0	4.0	0.0
1975	0	1	0	1	0.0	1.0
G.M.U. 3						
TOTALS						
1973*	3*	6*	3*	68*	1.0*	11.3*
1974	9	18	22	139	2.4	7.7
1975	18	30	49	242	2.7	8.1

* Harvest and hunting effort during the period Sept. 1 through Dec. 31, 1973 only.

Prepared by: Dave Zimmerman, Game Biologist II

Appendix IV. Comparisons of residency, guided and unguided successful hunters in Alaska's Game Management Unit 3.

Year	Residents				Total Res.	Nonresidents		Total Nonres.	Total Unit
	Guided Unit	Nonunit	Unguided Unit	Nonunit		Guided	Unguided		
1973*	0*	0*	0*	3*	3*	5*	0*	5*	8
1974	0	0	7	2	9	11	1	12	21
1975	0	0	8	6	14	20	4	24	38
<u>Harvest</u>									
1973*	0*	0*	0*	3*	3*	6*	0*	6*	9
1974	0	0	7	2	9	16	2	18	27
1975	0	0	8	10	18	26	4	30	48

* Covers the period from Sept. 1 through Dec. 31, 1973 only.

Prepared by: Dave Zimmerman, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 5 - Yakutat

Seasons and Bag Limits

September 1 - June 30

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

Harvest and Hunting Pressure

The 1975 sport kill of black bears in Unit 5 was 12 animals. All were taken in May during the spring season. Ten were of the black color phase (7 males, 1 female and 2 unknown) and 2 were of the blue phase (1 male and 1 female). The male blue phase bear had a total skull measurement of 19 5/8 inches which is the largest measured to date in Unit 5.

Kill locations and hunter pressure were similar to previous seasons with the majority of hunters utilizing the Yakutat Bay-Russell Fjord area and hunting by boat. The other important spring sport hunting area is the southwest slopes of the Brabazon Mountains from Tanis Lake to the Alsek River.

Populations, Composition and Productivity

No black bear surveys were conducted in 1975. However, casual observations and interviews with hunters indicated that black bears are numerous except in specific areas where there has been consistent hunting pressure over the years.

Management Summary and Conclusions

Information on black bear populations, composition and productivity is lacking for Unit 5. Additional efforts will be made to gather some basic population data on this species.

Recommendations

No changes in seasons or bag limits are recommended.

PREPARED BY:

Roland Quimby
Game Biologist II

SUBMITTED BY:

Robert E. Pegau
Regional Management/Research Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 6 - Prince William Sound and Gulf Coast

Season and Bag Limits

Jan. 1-June 30
Sept. 1-Dec. 31

One bear, provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

The 1975 season was the second full year hunters were required to have black bears sealed in Unit 6. The 1975 sport harvest was 148 bears, 104 males, 34 females and 10 of unknown sex (Appendix I). Three additional bears were taken on a non-sport basis. The 1975 kill represents nearly a 40 percent increase over the 1974 take of 108 bears (Appendix II). Males continued to dominate the harvest 70 percent in 1975 compared to 66 percent in 1974.

The spring season accounted for 135 bears (91%) in the harvest compared to 58 bears (72%) in 1974. Only 13 bears were taken in the fall. During the spring season 74 bears were taken in May and 61 in June. No distinct harvest peaks occurred during either the spring or fall seasons.

Skull data were obtained from 139 bears. Overall, the average skull measured (length plus width) 16.8 inches. Ninety-seven males averaged 17.2 inches, whereas 32 females averaged 15.6 inches (Appendix III).

No age data were available.

The northern portion of Prince William Sound (Port Wells to Valdez Arm) produced 53 percent of the total harvest (Appendix II). This same area contributed only 26 percent of the 1974 harvest. The vast area east of the Copper River to Icy Bay accounted for 15 percent of the harvest. Other areas in Unit 6 contributed less than 10 percent.

Composition and Productivity

No composition or productivity data were obtained.

Management Summary and Conclusions

The 1975 black bear harvest of 151 bears, which includes 3 non-sport kills, was 40 percent higher than the 1974 harvest. The increased harvest can probably be attributed to several factors: 1) increased

popularity of Prince William Sound spring black bear hunts, 2) black bears are easy to hunt, 3), high hunter success, 4) it is the first big game season to open in the spring and 5) a statewide increase in numbers of hunters.

After 2 years of harvest data, it is obvious that the spring season is the key to managing black bears in Prince William Sound. The vast majority of bears (75-90%) were taken in the spring of which 65-70 percent was males.

During 1974, the eastern side of Prince William Sound contributed 34 percent of the annual harvest, whereas in 1975 it contributed only 8 percent. The northern portion of Prince William Sound, Valdez Arm to and including Port Wells, jumped from 26 percent (1974) to 53 percent (1975). Also, the area east of the Copper River jumped from 5 percent in 1974 to 15 percent in 1975. The reasons for these major shifts were not obvious at this time.

Recommendations

Retain the current season and bag limit.

PREPARED BY:

Julius Reynolds
Game Biologist III

SUBMITTED BY:

John Vania
Regional Management Coordinator

APPENDIX I

Unit 6

Black Bear Sport Harvest by Season & Sex - 1975

	<u>Spring Harvest</u>			<u>Fall Harvest</u>			<u>1975 Harvest</u>		
	<u>Male</u>	<u>Female</u>	<u>Unk.</u>	<u>Male</u>	<u>Female</u>	<u>Unk.</u>	<u>Male</u>	<u>Female</u>	<u>Unk.</u>
No.	95.7	30	10	135	9	4	0	13	104
%	70.4	22.2	7.4	100.0	69.2	30.8	0	100.0	70.3
								23.0	6.8
									148
									100.1

Black Bear Sport Harvest by Season & Month - 1975

	<u>Spring Harvest</u>			<u>Fall Harvest</u>			<u>1975 Harvest</u>		
	<u>May</u>	<u>June</u>	<u>Total</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Total</u>	<u>Spring</u>	<u>Fall</u>	<u>Total</u>
No.	74	61	135	6	7	13	135	13	148
%	54.8	45.2	100.0	46.2	53.8	100.0	91.2	8.8	100.0

Prepared By: Julius Reynolds

Submitted By: John Vania

APPENDIX II

Unit 6

Black Bear Harvest by Year and Area

<u>Area</u>	<u>1974</u>		<u>1975</u>		<u>Difference</u>
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	
1. East of Copper River to Icy Bay	5	4.6	22	14.9	(up 10.3%)
2. Cordova to Copper River	12	11.1	4	2.7	(Down 8.4%)
3. Tatitlek to Cordova	37	34.3	12	8.1	(Down 26.2%)
4. Valdez Arm	5	4.6	28	18.9	(Up 14.3%)
5. Esther Is. to Valdez Arm	14	13.0	32	21.6	(Up 8.6%)
6. Port Wells	9	8.3	18	12.2	(Up 3.9%)
7. Passage Canal to P. Nellie Juan	12	11.1	12	8.1	(Down 3.0%)
8. P. Nellie Juan to Cape Fairfield	11	10.2	14	9.5	(Down .7%)
9. Unit 6 - Unknown	3	2.8	6	4.1	(Up 1.3%)
	<hr/>	<hr/>	<hr/>	<hr/>	
	108	100.0	148	100.1	

Prepared By: Julius Reynolds

APPENDIX III

UNIT 6

1975 Black Bear Skull Size Data

	Male	Female	Unknown
Spring	17.3"(88)*	15.5"(29)	16.6"(10)
Fall	16.1"(9)	15.7"(3)	--
Spring and Fall	17.2"(97)	15.6"(32)	16.6"(10)

* Sample size in parenthesis.

Prepared By: Julius Reynolds, Game Biologist

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 7 - Seward

Seasons and Bag Limits

Aug. 10 - June 30

Three bears; provided that not more than one may be a blue or glacier bear and that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Sixty-two black bears from Unit 7 were sealed during the 1975 season (Appendix I). Thirty-nine bears (28 males, 6 females and 5 sex unknown) were taken during the spring season and 23 (15 males, 5 females and 3 sex unknown) were taken during the fall season.

The 1975 harvest was up 55 percent from the 1974 level of 40 bears. The spring harvest was up 39 percent from the 1974 level and the fall harvest 92 percent.

The mean skull size for bears harvested in 1975 was not much different from those taken in 1974 (Appendix II). The mean skull size for males was 16.7 inches (n=42) and females 15.1 (n=10). The mean skull size for bears taken in the spring was males 16.6 (n=16) and females 15.3 (n=5). For the fall season the mean skull size was males 16.8 (n=26) and females 14.8 (n=5).

Nonresidents accounted for 12.9 percent of the 1975 harvest and residents 87.1 (Appendix III). Successful nonresidents averaged 2.9 days to bag a bear while residents averaged 2.2 days. The days hunted to bag a bear was biased for residents because of incidental kills involving only 1 day of hunting.

Boats provided transportation for 38 percent (23/61) of all successful hunters, aircraft 15 percent (9/61), off-road vehicles 2 percent (1/61), horses 2 percent (1/61) and other means 44 percent (27/61).

Management Summary and Conclusions

The cause of the large increase in the harvest from 1974 to 1975 was not known. The fall harvest of 39 bears in 1975 was the same as the fall harvest in 1973 leading to speculation that the 1974 harvest was low.

Since skull sizes did not change appreciably and the harvest was heavily weighted toward male bears the harvest was believed to be well below the sustained yield level.

The harvest continues to be well distributed throughout the unit.

Recommendations

No changes are recommended.

PREPARED BY:

Paul A. LeRoux
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I - Harvest Data for Black Bears Taken in Game Management Unit 7

Year	Season	Resident		Non-Resident		Total		Total	1/ % Males-	% Non-Residents			
		♂	♀	Unk.	♂	♀	Unk.						
1973	Fall	13	14	1	5	6	0	18	20	1	39	47	28
1974	Spring	14	8	6	0	0	0	14	8	6	28	64	0
1974	Fall	6	5	0	1	0	0	7	5	0	12	58	8
1974	Combined	20	13	6	1	0	0	21	13	6	40	62	2.5
1975	Spring	26	6	4	2	0	1	28	6	5	39	82	7.7
1975	Fall	11	4	3	4	1	0	15	5	3	23	75	21.7
1975	Combined	37	10	7	6	1	1	43	11	8	62	80	12.9

1/ Male % based on bears of known sex.

Prepared by: Paul A. LeRoux, Game Biologist III

Appendix II. Mean Skull Sizes (inches) of Black Bear Taken in Game Management Unit 7.

Year	Spring Season		Fall Season		Combined Seasons	
	Mean Skull Size Male	Mean Skull Size Female	Mean Skull Size Male	Mean Skull Size Female	Mean Skull Size Male	Mean Skull Size Female
1973	-	-	16.1 (13)	15.4 (17)	-	-
1974	16.4 (13)	15.1 (7)	16.6 (6)	15.9 (4)	16.8 (19)	15.4 (11)
1975	16.6 (16)	15.3 (5)	16.8 (26)	14.8 (5)	16.7 (42)	15.1 (10)
Sample size in parentheses						

Appendix III. Residency, Days Hunted, Number of Guided Hunts, and Method of Transportation for Successful Hunters in Game Management Unit 7, 1974.

Year	Residency of Successful Hunters				Average Days Hunted		Guided Hunts				Transportation Used Off Road									
	Res		Non-Res		Res	Non-Res	Res	Non-Res	Aircraft		Vehicles		Boat		Horse		Other			
	No	%	No	%					No	%	No	%	No	%	No	%	No	%		
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%		
1973	27	71	11	29	2.3	3.4	0	0	8	73	16	42	1	3	3	8	3	8	15	39
1974	39	97.5	1	2.5	2.0	1	100	1	2.6	9	21	0	0	16	37	4	9	14	33	
1975	54	87.1	8	12.9	2.2	2.9	0	0	4	50	9	15	1	2	23	38	1	2	27	44

Prepared By: Paul A. LeRoux, Game Biologist III

Appendix IV. Chronology of Black Bear Hunting Harvest in Game Management Unit 7, 1975.

<u>Year</u>			<u>Sex</u>		<u>Month of Kill</u>												
			<u>Unk.</u>	<u>Tot.</u>	<u>Unk.</u>	<u>J</u>	<u>F</u>	<u>M</u>	<u>A</u>	<u>M</u>	<u>J</u>	<u>J</u>	<u>A</u>	<u>S</u>	<u>O</u>	<u>N</u>	<u>D</u>
1969	17	13	2	32	0	0	0	0	0	7	2	0	9	11	2	1	0
1973*	16	21	1	38	0	-	-	-	-	-	-	-	15	21	2	0	0
1974	22	16	5	43	0	0	0	0	0	16	12	0	6	4	5	0	0
1975	43	11	8	62	0	0	0	0	0	17	22	0	12	8	3	0	0

Prepared By: Paul A. LeRoux, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1976

Game Management Unit 9 - Alaska Peninsula

Seasons and Bag Limits

No closed season

Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No harvest data are available, as the sealing of black bears is not required in this unit. The estimated harvest is 10-20 bears annually.

Composition and Productivity

No work was accomplished.

Management Summary and Conclusions

Black bears commonly occur in the northern portion of Unit 9. Occasional reports are received of black bears as far south as Katmai National Monument. Most of the harvest is believed incidental to hunts for other species. Some black bears are harvested by local residents for human consumption.

Recommendations

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

PREPARED BY:

Nick Steen
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 11 - Wrangell Mountains

Seasons and Bag Limits

No closed season

Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

A requirement that black bear hides and skulls be presented to the Department of Fish and Game for sealing went into effect July 1, 1973. This report covers the period from July through December 1973 and the years 1974 and 1975.

Information from sealing data indicates a harvest of seven black bears during 1975, two males and five females. The mean skull size for males was 16 6/8 inches, and 16 4/8 inches for females (Appendix I).

An analysis of the harvest by location of kill showed six black bears taken in the Chitina Valley and one on the Bremner River. Residency of successful hunters indicated that residents harvested more black bears than nonresidents (Appendix II). Since this had not been the case prior to the opening of the Chitina-McCarthy Road, the new access may be the reason for increased resident hunting pressure. All residents hunted unaccompanied by guides, whereas the single nonresident hunter reporting was guided. Reported types of transportation indicated that aircraft were the most popular method, with highway vehicles being second (Appendix II). The average number of days required to harvest an animal was 3.2.

The total number of black bear hunters has not been determined, but most black bears were probably harvested incidental to hunts for other big game species. This is strongly suggested by comparing the chronology of the harvest to the established hunting seasons for sheep, caribou and moose. One black bear was harvested in the spring and the remaining six were taken during the fall hunting season (Appendix III).

Composition and Productivity

Mean skull sizes of bears harvested over the 3-year period indicate that most animals were 6 years old or older, but age data have not yet been analyzed from collected teeth.

Management Summary and Conclusions

A comparison of mean skull sizes of males and females for the past 3 years indicates that hunters are drawing from a lightly hunted population of black bears in Unit 11. The steady decline in harvest from 1973 to 1975 is probably influenced more by chance than directly correlated to a declining black bear population. During spring and summer 1973 the McCarthy Road was first maintained by the Highway Department to McCarthy. This first year opportunity for access into an area that had previously required more specialized transportation equipment attracted many hunters. Also, during 1973, many black bears were harvested by men working daily on the road crews and at newly established camps. Five bears, for instance, were killed at one road camp. Also, moose hunting popularity along the McCarthy road has declined in recent years, and coupled with the fact that 1974 and especially 1975 were poor years for berries, may explain some of the decline in black bear harvest.

The high percentage of females in the 1975 harvest was believed to be purely chance. In years of larger harvests the percentage of males in the harvest represented a normal harvest relative to the Department's management goals.

Recommendations

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

PREPARED BY:

Ted Spraker
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Annual black bear harvest composition and mean skull size of males and females for Game Management Unit 11. This table covers the period 7/1-12/31 of 1973 and the years of 1974 and 1975.

<u>Date</u>	<u>Unit</u>	<u>Total Harvest</u>	<u>No.</u>		<u>%</u>	<u>No.</u>		<u>%</u>	<u>No.</u>		<u>%</u>	<u>Mean Skull Size Male*</u>		<u>Mean Skull Size Female*</u>	
			<u>Males</u>	<u>Females</u>		<u>Males</u>	<u>Females</u>		<u>Unknown Sex</u>	<u>Unknown Sex</u>		<u>Size Male*</u>	<u>Size Female*</u>		
1973	11	31	20	11	65%		11	35%	0	0		17.0(20)	15.9(8)		
1974	11	16	10	5	63%		5	31%	1	6%		16 6/8(10)	15 1/8(5)		
1975	11	7	2	5	29%		5	71%	0	0		16 6/8(2)	16 4/8(3)		

* Skull sample size in parenthesis, skull measurements were recorded in 1/8ths of an inch during 1974 and 1975.

PREPARED BY:

Ted Spraker
Game Biologist II

Appendix II. Residency, days hunted, number of guided hunts, and methods of transportation for successful black bear hunters in Game Management Unit 11. This table covers the period 7/1-12/31 of 1973 and the years 1974 and 1975.

Date	Unit	Residency of Successful Hunters				Av. Days Hunted	No. Guided Hunts				Transportation Used									
		Non-res.		Res.			Non-res.		Res.		Off-Road Vehicle		Boat		Horse		Other			
		No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
		No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
1973	11	18	58%	13	42%	3.7	18	100%	0	0	9	29%	3	10%	0	0	8	26%	11	36%
1974	11	7	44%	9	56%	5.3	7	100%	0	0	5	31%	2	13%	0	0	3	19%	5	37%
1975	11	1	14%	6	86%	3.2	1	100%	0	0	3	43%	1	14%	1	14%	0	0	2	29%

PREPARED BY:

Ted Spraker
Game Biologist II

Appendix III. A comparison of the chronology of black bear sport harvest in Game Management Unit 11, January 1 through December 31, 1974 and 1975.

	<u>No. of Bears Harvested</u>	
	<u>1974</u>	<u>1975</u>
May 10-20	1	1
May 21-31	0	0
June 1-10	1	0
June 11-20	0	0
July 1-10	0	0
July 11-20	0	0
July 21-31	0	0
August 1-9*	0	0
August 10-19**	4	1
August 20-31	2	1
September 1-10	3	2
September 11-20***	2	1
September 20-30****	3	0
October 1-10	0	1
October 11-20	0	0
October 21-December 31	0	0

* Period August 1-9 used because sheep, and caribou season opened on August 10.

** Periods August 10-19 and 20-31 were used because this time interval represented the period when sheep and caribou season was open, but before moose season opened on September 1.

*** September 20 was the closing date of sheep and moose season in all of Unit 11.

**** September 30 was the closing date of caribou season in Unit 11.

PREPARED BY: Ted Spraker, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 12 - Upper Tanana, White River

Seasons and Bag Limits

Unit 12	No closed season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited
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Harvest and Hunting Pressure

Sealing information indicated a harvest of 17 black bears from Unit 12 during the 1975 season. This is a slight decrease from the reported harvest of 24 bears during 1974. Because compliance with the mandatory sealing requirement was poor throughout Unit 12 (particularly in remote areas) the actual harvest certainly exceeded that reported here. Nevertheless, the total number of animals taken annually probably has little effect on the black bear population within Unit 12.

As listed below, most of the harvest occurred in the fall, and males were more commonly taken during both seasons than were females.

	<u>Spring Season*</u>	<u>Fall Season</u>
Male	5	7
Female	0	4
Unknown	<u>1</u>	<u>0</u>
	6	11

*Spring season is Jan. 1 - July 1; fall season is July 1 - Dec. 31.

Management Summary and Recommendations

Black bear hunting in Unit 12 continued to be opportunistic with little effort specifically directed toward this species. With the recent shortening of moose and caribou seasons in interior Alaska, interest in black bear as a source of recreational hunting and food may increase. The black bear population appears to be regulated by factors other than hunting, and even the current liberal seasons and bag limits have had no apparent effect on population size. Until hunting pressure increases greatly or management plans dictate, there is no reason to modify present seasons and bag limits.

PREPARED BY:

SUBMITTED BY:

Larry B. Jennings
Game Biologist III

Oliver E. Burris
Regional Management Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 13 - Nelchina Basin

Seasons and Bag Limits

No closed season

Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

A requirement that the hide and skull of black bears taken in certain units be presented to the Department of Fish and Game for sealing went into effect July 1, 1973. This report covers sealing data from that point through 1975.

Sealing data indicated that 71 black bears were harvested in Unit 13 during 1975. Composition of the harvest was 47 males (66.2%), 16 females (22.5%) and 8 of undetermined sex (11.3%). The mean skull size for males was 16 7/8 inches and for females was 15 inches (Appendix I).

An analysis of the harvest by location of kill shows the following number of black bears taken from each Subunit: 13A - 17, 13B - 3, 13C - 5, 13D - 33, and 13E - 13 (Appendix I). The large black bear population and the popularity of the Klutina Lake road in 13D help explain why this area produced 46 percent of the Unit 13 harvest. The Subunit 13D harvest dropped 18 percent from the 1974 total Unit 13 harvest due to the increased harvest in Subunits 13A and 13E. In 1974 Subunits 13A and 13E accounted for 16 percent of the total harvest, however, in 1975 they accounted for 42 percent.

Black bears probably are taken incidentally during hunts for other big game species. This is suggested from the chronology of the harvests from 1974 and 1975 compared to the established hunting seasons for sheep, goat, caribou and moose (Appendix II). However, a fairly substantial number of black bears were taken from May 11 to August 10, indicating that hunters were taking advantage of the open season during spring and summer months. Since sealing was not required prior to July 1, 1973 a three-season comparison of the spring hunting pressure cannot be made. Spring hunting success for 1974 and 1975 appeared low, with five black bears being taken from May 11 to June 10 in 1974 but the take increased to 17 during 1975.

Appendix III illustrates that 78.9 percent of successful hunters were residents and 21.1 percent were nonresidents. The average number of days required to harvest a black bear was 3.6, compared to 3.3

in 1974 and 3.6 in 1973. Eleven of the 15 nonresidents were guided, whereas none of the residents were. Walk-in trips and highway vehicle usage were the most common transportation methods used to harvest black bears. This was due to the fact that many black bears were taken as nuisance animals but sealed as sport kills or were spotted from the highway and harvested incidental to other activities.

Composition and Productivity

Information available from sealing certificates indicated that 66.2 percent (47) of the harvest was males, 22.5 percent (16) was females and 11.3 percent (8) was of undetermined sex. The mean skull size for males increased from 16 2/8 inches in 1973 and 1974 to 16 7/8 inches in 1975. However, this increase in skull size was not statistically significant at the 0.05 confidence level. The standard deviation for skull sizes of males was ± 1.35 inches and the variance was 1.79 inches from a sample of 40 males.

Due to the small sample of skulls from females, statistical testing was not applied.

Age data from collected teeth were not available for comparison.

Management Summary and Conclusions

A comparison of the average number of days hunted (Appendix III), sex composition and mean skull size (Appendix I) of the harvest from 1973 to 1975 indicated a lightly hunted population, with the possible exception of 13A. A substantial increase was reported in Subunit 13A when compared to the 1974 harvest (3 to 17). In 1973 Subunit 13A had a harvest of 11, 45.5 percent (5) were males and 54.5 percent (6) were females. In 1974 only 3 males were taken. In 1975, 17 black bears were taken in Subunit 13A. The male-female ratio approached a balance at 47.1 percent (8) males compared to 41.2 percent (7) females. Since 11 of the 17 black bears reported (65%) were taken during the fall hunting season for sheep, moose and caribou, the increase in general hunting pressure in this area may also increase the hunting pressure on black bears. With the increasing popularity of the Nelchina caribou herd and increasing numbers of ATV transported hunters the black bear harvest of Subunit 13A should be closely monitored.

Recommendations

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

PREPARED BY:

Ted Spraker
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Annual black bear harvest composition and mean skull size of males and females for Game Management Unit 13, by subunits. This table covers the period 7/1-12/31 of 1973 and the years of 1974 and 1975.

Date	Subunit	Total		No. Males	% Males	No. Females	% Females	No. Unknown		% Unknown Sex	Mean Skull Size Male*	Mean Skull Size Female*
		Harvest						Sex	Sex			
1973	13A	11	5	45.5	6	54.5	0	0	0	0	17.2(5)	15.4(5)
1974	13A	3	3	100.0	0	0	0	0	0	0	17 5/8(3)	----- (0)
1975	13A	17	8	47.1	7	41.2	2	11.8	0	0	17 2/8(6)	15-(6)
1973	13B	3	1	33.3	2	66.6	0	0	0	0	15.8(1)	15.4(2)
1974	13B	4	4	100.0	0	0	0	0	0	0	17 2/8(4)	----- (0)
1975	13B	3	3	100.0	0	0	0	0	0	0	17 6/8(3)	----- (0)
1973	13C	1	1	100.0	0	0	0	0	0	0	14 (1)	----- (0)
1974	13C	6	2	33.3	4	66.7	0	0	0	0	14 5/8(2)	16 1/8(1)
1975	13C	5	4	80.0	1	20.0	0	0	0	0	16 4/8(3)	----- (0)
1973	13D	32	20	62.5	10	31.3	2	6.3	6.3	6.3	16.1(16)	15.6(8)
1974	13D	32	19	59.4	11	34.4	2	6.3	6.3	6.3	16 5/8(16)	14 5/8(9)
1975	13D	33	24	72.7	6	18.2	3	9.1	9.1	9.1	16 5/8(20)	15 3/8(4)
1973	13E	22	15	68.2	7	31.8	0	0	0	0	16.1(13)	15.6(5)
1974	13E	5	4	80.0	1	20.0	0	0	0	0	15 1/8(2)	16 7/8(1)
1975	13E	13	8	61.5	2	15.4	3	23.1	23.1	23.1	17 1/8(8)	14-(2)
Total												
1973		69	42	60.9	25	36.2	2	2.9	2.9	2.9	16.2(36)	15.5(20)
1974		50	32	64.0	16	32.0	2	4.0	4.0	4.0	16 2/8(27)	15 7/8(11)
1975		71	47	66.2	16	22.5	8	11.3	11.3	11.3	16 7/8(40)	15-(12)

* Skull sample size in parenthesis, skull measurements were recorded in 1/8 ths of an inch during 1974 and 1975.

PREPARED BY: Ted Spraker, Game Biologist II

Appendix II. A Comparison of the Chronology of Black Bear Sport Harvest in Game Management Unit 13. January 1 through December 31, 1974 and 1975.

	<u>No. of Bears Harvested</u>	
	<u>1974</u>	<u>1975</u>
May 11-20	2	2
May 21-31	2	9
June 1-10	1	6
June 11-20	0	3
June 21-30	2	2
July 1-10	2	2
July 11-20	2	4
July 21-31	3	3
August 1-9*	2	3
August 10-19*	5	4
August 20-31**	4	6
September 1-10***	16	17
September 11-20***	5	8
September 21-30	2	1
October 1-10	2	1
October 11-20	0	0
October 21-December 31	0	0

* Period August 1-9 used because sheep and goat season opened in Unit 13 on August 10.

** Periods August 10-19 and 20-31 were used because these time intervals represented the period when sheep and goat season was open, but before moose and caribou season opened.

*** Period September 1-10 represented the opening of moose season (9/1) and caribou season (9/5).

**** September 20 was the closing date of sheep, caribou, and moose season in all of Unit 13.

PREPARED BY: Ted Spraker, Game Biologist II

Appendix III. Residency, Days Hunted, Number of Guided Hunts, and Methods of Transportation for Successful Black Bear Hunters in Game Management Unit 13. This table covers the period 7/1-12/31 of 1973, and the years 1974 and 1975.

Date	Unit	Successful Hunters			Av. Days Hunted	No. Guided Hunts			Aircraft			Off Road			Transportation Used			Other			
		Non-res.		Res.		Non-res.		%	No.		%	Vehicle		%	Boat		%		Horse		%
		No.	%			No.	%		No.	%		No.	%		No.	%			No.	%	
1973	13A	6	54.5	5	45.5	3	60	0	0	4	36.4	0	0	0	0	0	0	0	0	7	63.6
1974	13A	0	0	3	100.0	0	0	0	0	2	66.7	0	0	0	0	0	0	0	0	1	33.3
1975	13A	3	17.6	14	82.4	2	66.7	0	0	5	29.4	0	0	3	17.6	0	0	0	9	52.9	
1973	13B	0	0	3	100.0	0	0	0	0	1	33.3	0	0	0	0	0	0	0	2	66.7	
1974	13B	0	0	4	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	100.0	
1975	13B	2	66.7	1	33.3	2	100.0	0	0	2	67.0	0	0	0	0	0	0	0	1	33.3	
1973	13C	0	0	1	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	100.0	
1974	13C	0	0	6	100.0	0	0	0	0	0	0	3	5.0	0	0	0	0	0	3	50.0	
1975	13C	1	20.0	4	80.0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	100.0	
1973	13D	12	37.5	20	62.5	11	91.7	0	0	10	31.3	2	6.3	1	3.1	3	9.4	16	5.0		
1974	13D	10	31.2	22	68.8	9	90.0	0	0	9	28.0	0	0	2	6.0	4	13.0	17	53.0		
1975	13D	7	21.2	26	78.8	5	71.4	0	0	4	12.5	2	6.3	2	6.3	4	12.5	20	62.5		
1973	13E	16	72.7	6	27.3	16	100.0	1	16.7	13	59.1	0	0	2	9.1	0	0	7	31.8		
1974	13E	0	0	5	100.0	0	0	1	20.0	2	40.0	0	0	0	0	0	0	3	60.0		
1975	13E	2	15.4	11	84.6	2	100.0	0	0.0	4	30.8	0	0	0	0	0	0	9	69.2		
Total																					
Unit 13																					
1973		34	49.3	35	50.7	30	88.2	1	2.9	28	40.6	2	2.9	3	4.3	3	4.3	33	47.8		
1974		10	20.0	40	80.0	9	90.0	1	2.5	13	26.0	3	6.0	2	4.0	4	8.0	28	56.0		
1975		15	21.1	56	78.9	11	73.3	0	0.0	15	21.4	2	2.9	5	7.1	4	5.7	44	62.9		

PREPARED BY: Ted Spraker, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

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

Seasons and Bag Limits

No closed season

Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Since July 1, 1973 all black bear hides from this unit presented to Alaska Department of Fish and Game representatives have been sealed and 1975 represents the second full year of data collection.

Eighty black bears were harvested in Subunits 14A and B during 1975 (Appendix I). Twenty-three (29%) of the bears were taken prior to July 1 and 55 (69%) after that date (Appendix II) with two bears taken with no reported date. In 1974, 6 bears were harvested prior to July 1, and 18 bears were taken after that date.

Of the black bears harvested in 1975, 65 were taken in Subunit 14A and 15 in 14B. In 1974, 17 bears came from Subunit 14A and 7 from 14B.

Sixty three (97%) of the hunters taking black bears in Subunit 14A during 1975 were residents while 2 (3%) were nonresidents (Appendix III). All 15 bears taken in 14B were harvested by residents, two (13%) of which were on guided hunts.

Thirty-eight successful black bear hunters (61%) in Subunit 14A reported using "other" methods of transportation. Boats and off-road vehicles each accounted for 10 percent and aircraft use 6 percent. No one reported using horses in Subunit 14A. In 14B "other" methods of transportation were used by 8 successful black bear hunters, while 2 used aircraft and 1 each used off-road vehicles, boats and horses.

The average number of days hunted in Subunit 14A per successful black bear hunter in 1975 was 2.2 days while in 1974 only 1.5 days were utilized to harvest a bear. Subunit 14B successful hunters took an average of 2.3 days to bag a black bear, much less than the average of 9.6 days in 1974. No effort data were available for unsuccessful black bear hunters.

Twenty-three black bears were harvested (30%) prior to July 1, and 55 were taken after that date. For 2 bears no dates were given. In 1974, 6 bears were taken prior to July and 17 after that date. Most bears harvested after July 1 were taken when other big game seasons were in progress.

Composition and Productivity

Forty-one (59%) of the black bears of known sex taken in Subunits 14A and 14B in 1975 were males, 28 (41%) were females and 11 were of unknown sex.

Thirty-three of the black bears of known sex taken in Subunit 14A during 1975 were males, 23 were females and 9 were of unknown sex. In Subunit 14A in 1974, 9 were males, 8 were females and none were reported as unknown sex. In Subunit 14B during 1975, 8 males, 5 females and 2 sex unknown black bears were reported harvested. In 1974 in Subunit 14B, 2 males, 2 females and 3 unknown sex bears were reported harvested.

Management Summary and Conclusions

The reported black bear harvest in Subunits 14A and 14B sharply increased in 1975. The situation was a reversal from the 1974 season, when the black bear harvest in these subunits was sharply reduced. Although no data were available to support the conclusion, it is believed that an increase in hunting pressure did not take place. Rather, the Palmer biologists received numerous calls and complaints during summer 1975 about nuisance black bears. It is possible that normal food for bears was low, therefore, bears foraged near human habitation to supplement their diets, thus making them available to hunters.

A reduction in skull size in the male segment of the harvested population also indicated younger bears which are usually not as wary as older animals, may have been taken. (It is also possible that the high natality and survival of bears born in previous years contributed to the larger harvest.)

In Subunit 14A, the average number of days hunted increased from 1.5 in 1974 to 2.2 in 1975. The same average in Subunit 14B decreased sharply from 9.6 days in 1974 to 2.3 in 1975, which brought the average for Subunits 14A and 14B down from 3.8 days in 1974 to 2.2 days in 1975. Generally, it appears that bears were more available during 1975, particularly in Subunit 14B.

The number of nonresidents participating in the black bear harvest in Subunits 14A and 14B has steadily decreased from 8 in 1973 to 4 in 1974 and 2 in 1975. Both nonresidents harvested bears in Subunit 14A.

Chronology of harvest data reveals that 23 (30%) of the black bears harvested in Subunits 14A and 14B were taken in the spring, while the majority, 55 (70%) were taken in the fall when other big game seasons were open. Most black bears are probably taken incidental to hunting other species.

Skull size data indicate that there have been no appreciable changes in the female skulls measured, but the male skulls have decreased from 17.4 inches in 1974 to 16.0 inches in 1975 (based on a sample size

of 34). Young males may be unwary which could cause the decrease in mean skull sizes if they entered into the harvest in relatively large numbers. No age data were available.

Recommendations

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

PREPARED BY:

Jack C. Didrickson
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Black Bear Harvest with Mean Skull Size of Male and Female Bear Sealed in Alaska's Game Management Subunits 14A and B During the Period July 1 through December 31, 1973 and January 1 through December 21, 1974 and 1975.

Sub Unit	Year 1/	Total Harvest	No. Males	% 2/ Males	No. Females	% 2/ Females	No. Unknown Sex	Mean Skull 3/	
								Size Male	Size Female
14A	1973	42	24	58.5	17	41.5	1	17.6 (21)	15.6 (15)
	1974	17	9	52.9	8	47.1	0	17.3 (7)	15.9 (5)
	1975	65	33	58.9	23	41.1	9	16.1 (27)	15.6 (22)
14B	1973	22	19	90.5	2	9.5	1	16.8 (16)	13.6 (1)
	1974	7	2	50.0	2	50.0	3	17.8 (2)	14.9 (2)
	1975	15	8	61.5	5	38.5	2	15.6 (7)	15.2 (4)
14?	1973	3	0	---	3	100.0	0	----	15.3 (2)
	1974	0	0	---	0	---	0	----	----
	1975	0	0	---	0	---	0	----	----
Total			42						
14A, B and ?	1973	67	42	66.2	22	33.8	2	17.3 (41)	15.5 (18)
	1974	24	11	52.4	10	47.6	3	17.4 (9)	15.6 (7)
	1975	80	41	59.4	28	40.6	11	16.0 (34)	15.5 (26)

1/ 1973 data for period July 1-December 31; 1974 and 1975 data for period January 1-December 31.

2/ Percentage based on known sex bears.

3/ Sample size in parenthesis.

Prepared By: Jack Didrickson, Game Biologist III

Appendix II. Chronology of Black Bear Harvest in Alaska's Game Management Subunits 14A and B, July 1 through December 31, 1973 and January 1 through December 31, 1974 and 1975.

Time Interval	No. of Bear Harvested			Time Interval	No. of Bear Harvested		
	1973	1974	1975		1973	1974	1975
Prior to May	--	0	0	July 1-10	1	0	3
May 1-10	--	1	0	July 11-20	2	0	7
May 11-20	--	1	0	July 21-31	5	0	5
May 21-31	--	0	4	Aug. 1-9 <u>1/</u>	2	0	3
June 1-10	--	1	9	Aug. 10-19 <u>2/</u>	10	2	6
June 11-20	--	1	6	Aug. 20-31	13	4	6
June 21-30	--	2	4	Sept. 1-10	20	3	10
				Sept. 11-20 <u>3/</u>	11	8	13
				Sept. 21-30	0	1	1
				Oct. 1-10	0	0	1
				Oct. 11-20	3	0	0
				Oct. 21-Dec. 31	0	0	0
Total Harvest				Total Harvest			
Prior to July 1	--	6	23	After July 1	67	18	55

1/ Period August 1-9 used because sheep season opened on Aug. 10.

2/ Period August 10-19 used because this time interval represents the period when sheep season was open, but before moose season opened on Aug. 20.

3/ Sept. 20 was the closing date of moose and sheep seasons in Subunits 14A and B.

Prepared By: Jack Didrickson, Game Biologist III

Appendix III. Reported Residency, Days Hunted, Number of Guided Hunts, and Methods of Transportation for Successful Black Bear Hunters in Alaska's Game Management Subunits 14A and B; July 1 through December 31, 1973 and January 1 through December 31, 1974 and 1975.

Sub- Unit	Residency of Successful Hunters						No. Guided Hunts				Aircraft				O.R.V.				Boat				Horse				Other	
	Non-res.		Res.		Av.Days Hunted	Non-res.		Res.		No.		%		No.		%		No.		%		No.		%				
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%					
	Year																											
14A	1973	3	7.1	39	92.9	2.3	2	66.7	0	0.0	3	7.1	5	11.9	3	7.1	3	7.1	28	66.7								
	1974	0	0.0	17	100.0	1.5	0	0.0	0	0.0	3	17.6	2	11.8	0	0.0	0	0.0	12	70.6								
	1975	2	3.1	63	96.9	2.2	0	0.0	0	0.0	6	9.6	9	14.5	9	14.5	0	0.0	38	61.0								
14B	1973	4	18.2	18	81.8	2.7	2	50.0	1	5.6	6*	27.3	2	9.1	1	4.5	1*	4.5	13	59.1								
	1974	4	57.1	3	42.9	9.6	2	50.0	0	0.0	3	42.9	1	14.3	0	0.0	1	14.3	2	28.6								
	1975	0	0.0	15	100.0	2.3	0	0.0	2	13.3	2	15.4	1	7.7	1	7.7	1	7.7	8	61.5								
14?	1973	1	33.3	2	66.7	3.3	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100.0								
	1974	0	-----	0	-----	-----	0	-----	0	-----	0	-----	0	-----	0	-----	0	-----	0	-----								
	1975	0	-----	0	-----	-----	0	-----	0	-----	0	-----	0	-----	0	-----	0	-----	0	-----								
Total																												
14A, B,	1973	8	11.9	59	88.1	2.5	5	62.5	1	1.7	9	13.2	7	10.3	4	5.9	4	5.9	44	64.7								
and ?	1974	4	16.7	20	83.3	3.8	2	50.0	0	0.0	6	25.0	3	12.5	0	0.0	1	4.2	14	58.3								
	1975	2	2.5	78	97.5	2.2	0	0.0	2	2.6	8	10.7	10	13.3	10	13.3	1	1.3	46	61.3								

* One hunter reported using both aircraft and horse and was included twice.

Prepared By: Jack Didrickson, Game Biologist III

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Subunit 14C - Anchorage

Seasons and Bag Limits

Subunit 14C except that portion in Chugach State Park	No closed Season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.
Subunit 14C in Chugach State Park	Day after Labor Day - April 30	One bear; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

During 1975, 17 black bears were harvested in Subunit 14C. Three bears were taken prior to July 1, and 14 were taken after that date. Nine of the 14 bears were killed during the month of September. In 1974 only 4 bears were taken during the entire season.

All bears except one were taken by residents of Anchorage and surrounding communities. Two hunters utilized a boat and 2 others utilized aircraft to aid them in reaching their hunting areas. All other successful hunters used foot travel only. The average hunter spent 2.2 days afield before taking a bear, with one individual hunting 8 days before being successful. Hunter effort appears to be increasing as reflected by both the harvest and the time spent on the hunt. The number of unsuccessful hunters was unknown.

Composition and Productivity

Fourteen of the 17 bears harvested in 1975 were males, one was a female and two were of unknown sex.

Mean skull size for 12 male bears taken in 1975 was 16.5 inches. In 1974 mean skull size was 16.6 inches for 3 males.

During a goat-sheep aerial survey in late August 1975, 20 black bears were observed feeding in subalpine areas of the Ship Creek, Hunter Creek and Lake George drainages. Nine of the 20 bears were cubs.

Management Summary and Conclusions

Incidental sightings and harvest statistics indicate that black bears were fairly abundant and available within Game Management Subunit 14C during 1975. Bear numbers appear to fluctuate greatly from year to

year. Such fluctuations are not thought to be proportionate to actual population levels, but rather to the "availability" or "presence" of bears during any particular year. For these reasons the substantial harvest increase from 1974 to 1975 was not cause for concern, as it is just as likely that a downward trend will occur in 1976. Regardless, it is doubtful that an annual harvest of 20 to 30 bears would prove detrimental to the population considering the extensive areas of excellent bear habitat, the harvest distribution and the sex ratios of previous harvests.

Recommendations

It is recommended to extend the spring bear season within Chugach State Park from its present closing date of April 30 until the day before Memorial Day. Such an extension would allow for a greater utilization of the bear resource at a time of year when it receives little other use and in view of the fact that a possible increased harvest should not prove detrimental to the bear population.

PREPARED BY:

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Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 15 - Western Kenai Peninsula

Seasons and Bag Limits

Aug. 10 - June 30

Three bears; provided that not more than one may be a blue or glacier bear and that the taking of cubs or sows accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Prior to July 1973 the only bear harvest data available were from the 1969 multiple species harvest questionnaire which was a part of the harvest report packet. Since compliance was voluntary and reminder letters were not sent these data must be considered minimal (Appendix I).

Sealing of black bear hides and skulls was initiated in Unit 15 on July 1, 1973. Therefore, 1974 was the first complete year of data collection. General unfamiliarity with the sealing requirement and remoteness of various communities, especially on the lower Kenai, resulted in some black bears remaining unsealed and not being included in the final tabulations.

Eighty-four black bears were sealed in 1975 (Appendix I). Subunits 15A and 15B had slightly lower harvests in 1975 than experienced in 1974 while Subunit 15C had a substantially larger harvest. Examination of harvest data from 1973 through 1975 indicated declining harvests in both 15A and 15B, and increasing harvests in 15C. Reasons for this trend are unknown.

Mean skull sizes for male and female bears harvested in 1975 increased over those recorded in 1974. However, male skull size in 15A decreased from 17.2 to 15.8 and female skull size in 15C decreased from 15.6 to 15.0. These differences are probably the result of small sample size.

Nonresidents took 16 percent of the total harvest (Appendix II). About 30 percent of the nonresident harvest was by unguided Swedish hunters on Bradley Lake in 15C. Nonresidents did not take any bears in 15A, and their harvest in 15B decreased from 9 to 4 bears.

The average number of days hunted per bear killed has steadily increased from 2.7 in 1973 to 4.1 in 1975 (Appendix II). Nonresidents average more days hunted per bear than residents because many resident

kills are incidental to the hunting of other species. This figure, however, has a high degree of variability because some bear sealers do not make an effort to distinguish between total length of hunt and days hunted until a bear was taken.

There were no resident guided hunts during 1975 (Appendix II). Nonresident guided hunts decreased from 8 to 2. There were 11 successful nonresidents who were unguided.

One black bear was shot in defense of property, and one bear was hit by a car. The two persons involved were licensed, however, and retained the hides and/or meat. Therefore, these bears were included in the sport harvest figures.

During the regulatory year 1975, one hunter took three bears and another took two bears.

Appendix II presents the transportation modes utilized by successful hunters. The use of boats was the only increase over 1974.

Appendix III presents the chronology and sex composition of spring and fall harvests since inception of the sealing program. In 1975, the fall harvest constituted 60 percent of the total, a 19 percent decrease from 1974. The spring harvest increased from 28 percent in 1974 to 40 percent in 1975. Reasons for the increased spring harvest are unknown.

As in 1974, male bears comprised 71 percent of the 1975 spring harvest. The percentage of male bears in the fall harvest, however, decreased from 79 percent in 1974 to 60 percent in 1975. No bears were taken after October 20.

Composition and Productivity

Inexpensive techniques for measuring sex and age composition of black bear populations have not been developed. Premolar teeth are being collected from harvested bears for aging, but have not been processed at this time.

In early October, while censusing mountain goat west of Rocky River, a total of 87 black bears (32 lone bears, 22 sows and 33 cubs) was observed.

Management Summary and Conclusions

It is generally believed that black bear populations fluctuate independently of hunting pressure in most areas. This appears to be the case in Unit 15 when comparing harvest distribution from 1973 through 1975.

The 1975 harvest was probably below the level of harvest the unit can sustain. Since black bears are a relatively low density species and

inhabit forested terrain, they are not easily overharvested. Harvest levels are somewhat self regulating by the principle of diminishing returns.

Recommendations

No changes in the season or bag limit are recommended.

PREPARED BY:

Warren Ballard
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Black bear harvest and mean skull size of male and female bears.

Game Management Unit 15

Year	Total Harvest	No. Males	% ³ Males	No. Females	% Females	No. Unknown Sex	Mean Skull Size Male ⁴	Mean Skull Size Female ⁴
1969 ¹	50	33	69	15	31	2	-	-
1973 ²	71	38	61	24	39	9	16.2 (30)	15.7 (21)
1974	67	42	66	22	34	3	16.3 (37)	14.5 (19)
1975	84	50	67	25	33	9	16.6 (40)	15.6 (20)

Game Management Unit 15A

Year	Total Harvest	No. Males	% ³ Males	No. Females	% Females	No. Unknown Sex	Mean Skull Size Male ⁴	Mean Skull Size Female ⁴
1973 ²	35	21	70	9	30	5	15.8 (17)	16.3 (9)
1974	18	9	50	9	50	0	17.2 (9)	13.5 (8)
1975	16	10	77	3	23	3	15.8 (10)	16.1 (2)

1 Data from multiple species harvest questionnaire.

2 Harvest for July 1-Dec. only. Black bear sealing was initiated July 1, 1973.

3 Percent determined from bears of known sex.

4 Skull sample size in parenthesis.

PREPARED BY: Warren Ballard, Game Biologist II

Appendix I. Black bear harvest and mean skull size of male and female bears.

Game Management Unit 15B

<u>Year</u>	<u>Total Harvest</u>	<u>No. Males</u>	<u>% Males</u>	<u>No. Females</u>	<u>% Females</u>	<u>No. Unknown Sex</u>	<u>Mean Skull Size Male³</u>	<u>Mean Skull Size Female³</u>
1973 ¹	20	10	56	8	44	2	16.3 (8)	15.3 (8)
1974	26	19	73	7	27	0	15.7 (19)	15.0 (6)
1975	21	12	67	6	33	3	16.0 (9)	16.8 (5)

Game Management Unit 15C

<u>Year</u>	<u>Total Harvest</u>	<u>No. Males</u>	<u>% Males</u>	<u>No. Females</u>	<u>% Females</u>	<u>No. Unknown Sex</u>	<u>Mean Skull Size Male³</u>	<u>Mean Skull Size Female³</u>
1973 ¹	16	7	50	7	50	2	17.8 (5)	14.9 (4)
1974	23	14	70	6	30	3	16.6 (9)	15.6 (5)
1975	47	26	63	15	37	6	17.2 (21)	15.0 (13)

¹ Harvest for July 1- Dec. 31 only. Black bear sealing was initiated July 1, 1973.

² Percent determined from bears of known sex.

³ Skull sample size in parenthesis.

PREPARED BY: Warren Ballard, Game Biologist II

Appendix II. Residency, days hunted, number of guided hunts and method of transportation for successful black bear hunters.

Game Management Unit 15

Year	Residency of Successful Hunters				Av. Days Hunted	No. Guided Hunts				Transportation Used									
	Non-Res		Res.			Non-Res		Res.		Aircraft		Off Road Vehicle		Boat		Horse		Other	
	%	%	%	%		%	%	%	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No.	No.	No.	No.		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1973 ¹	8	11	63	89	2.5	4	50	2	3	13	18	1	1	16	23	8	11	33	46
1974	15	22	52	78	3.4	8	53	2	4	25	37	4	6	15	22	5	8	17	26
1975	13	16	70	84	3.8	2	15	0	0	26	31	2	2	25	30	6	7	24	29

Game Management Unit 15A

Year	Residency of Successful Hunters				Av. Days Hunted	No. Guided Hunts				Transportation Used									
	Non-Res		Res.			Non-Res		Res.		Aircraft		Off Road Vehicle		Boat		Horse		Other	
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973 ¹	1	3	34	97	2.1	0	0	1	3	5	14	0	0	1	3	1	3	28	80
1974	2	11	16	89	2.4	0	0	2	12	4	22	3	17	3	17	0	0	8	44
1975	0	0	16	100	2.1	0	0	0	0	0	0	2	13	0	0	0	0	14	87

¹ Harvest for July 1 - Dec. 31 only. Black bear sealing was initiated July 1, 1973.

PREPARED BY: Warren Ballard, Game Biologist II

Appendix II. Residency, days hunted, number of guided hunts and method of transportation for successful black bear hunters.

Game Management Unit 15B

Year	Residency of Successful Hunters				Av. Days Hunted	No. Guided Hunts				Transportation Used									
	Non-Res		Res.			Non-Res		Res.		Aircraft		Off Road Vehicle		Boat		Horse		Other	
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973 ¹	0	0	20	100	2.7	0	0	1	5	3	15	0	0	10	50	4	20	3	15
1974	9	35	17	65	4.0	4	44	0	0	11	42	0	0	9	35	1	4	5	19
1975	4	20	16	80	4.1	1	25	0	0	9	45	0	0	5	25	3	15	3	15

Game Management Unit 15C

Year	Residency of Successful Hunters				Av. Days Hunted	No. Guided Hunts				Transportation Used									
	Non-Res		Res.			Non-Res		Res.		Aircraft		Off Road Vehicle		Boat		Horse		Other	
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	No.	%	No.	%		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1973 ¹	7	44	9	56	3.7	4	57	0	0	5	31	1	6	5	31	3	19	2	12
1974	4	17	19	83	3.6	4	100	0	0	10	43	1	4	3	13	4	17	5	22
1975	9	19	38	81	4.5	1	11	0	0	17	36	0	0	20	43	3	6	7	15

¹ Harvest for July 1 - Dec. 31 only. Black bear sealing was initiated July 1, 1973.

PREPARED BY: Warren Ballard, Game Biologist II

Appendix III. Chronology of number and sex of black bears harvested in Game Management Unit 15 from July 1, 1973 through 1975.

	No. bears		% of the total harvest		% males	
	1973	<u>1974</u> 1975	<u>1974</u> 1975	<u>1974</u> 1975	<u>1974</u> 1975	<u>1974</u> 1975
April 21-30		0	0	0	0	0
May 1-10		1	1	4	100	33
May 11-20		3	4	6	67	75
May 21-31		4	3	4	25	100
June 1-10		1	8	11	100	63
June 11-20		0	6	9	0	83
June 21-30		5	4	6	100	75
Total Spring		14	28	21	71	71
Aug. 10-19	14	7	12	10	71	58
Aug. 20-31	14	11	8	16	54	88
Sept. 1-10	16	12	6	18	58	50
Sept. 11-20	15	6	7	9	50	71
Sept. 21-30	8	11	3	16	54	33
Oct. 1-10	2	2	6	3	50	83
Oct. 11-20	1	4	0	6	100	0
Oct. 21-31	0	0	0	0	0	0
Total Fall	70	53	42	79	60	67

PREPARED BY: Warren Ballard, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 16 - West side of Cook Inlet

Seasons and Bag Limits

No closed season

Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

A total of 119 black bears taken in Unit 16 were presented for sealing during 1975 (Appendix I). This included 38 bears (31.9%) taken prior to July 1, and 81 (68.1%) taken after that date (Appendix II). From July 1 to December 31, 1974, a total of 30 bears (45.5% of the kill) was harvested while in 1973, 156 bears were taken during that period.

Eighteen bears (12 males, 4 females and 2 of unknown sex) taken in Unit 16 during 1975 came from Subunit 16A and 100 bears (63 males, 23 females and 14 of unknown sex) came from Subunit 16B. One bear for which the subunit was unknown was harvested.

Information was not available regarding the number of unsuccessful black bear hunters. Individuals who took black bear in Unit 16 hunted an average of 4.0 days per bear compared with 2.6 days in 1974 and 4.3 days in 1973.

Residency information revealed that 87 (73.1%) of the successful hunters in 1975 were residents and 32 (26.9%) were nonresidents. Thirteen (40.6%) of the nonresidents and one (1.1%) of the residents were on guided hunts.

Method of transportation data reveal that 68.1 percent of the successful hunters in Unit 16 utilized aircraft. This is similar to 1973 and 1974 figures.

The chronology of the reported black bear harvest (Appendix III) revealed the 10- to 11-day periods of May 21-31, September 1-10 and September 11-20 were the dates with the highest reported harvest. The two periods in September coincided with the moose season in Unit 16.

Composition and Productivity

The mean skull size of 64 male bears harvested in all of Unit 16 during 1975 was 16.6 inches. The mean skull size of 24 female bears was 15.4 inches. Both figures are comparable to 1973 and 1974 average skull sizes.

The mean skull size of 10 male black bears from Subunit 16A was 15.8 inches compared to 16.8 inches for 53 male black bears from Subunit 16B.

Management Summary and Conclusions

The Unit 16 black bear harvest during 1975 was substantially above the 1974 harvest but below the fall 1973 take. The fall 1975 harvest was only slightly more than half the fall 1973 harvest but more than double the fall 1974 take.

The increased harvest in 1975 over 1974 may have been partially caused by environmental factors resulting in an abnormally large number of bear-human interactions. This was evidenced at the Palmer office of the Alaska Department of Fish and Game by a large number of complaints regarding black bears during summer 1975.

The cessation of black bear hunting the same day an individual is airborne undoubtedly contributed to the reduced harvest after 1973.

Subunit 16A bear harvests, although much lower than those in Subunit 16B, have fluctuated less than that subunit. The availability of road access has probably been a factor.

Mean skull sizes of black bears have been relatively constant since 1974. Skull sizes of male bears taken in Subunit 16B have been larger than those from Subunit 16A.

Recommendations

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

PREPARED BY:

Jack C. Didrickson
Game Biologist III

Don Cornelius
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Black Bear Harvest in Alaska's Game Management Unit 16, with Mean Skull Size of Male and Female Bears Sealed During the Periods July 1 through December 31, 1973 and January 1 through December 31, 1974 and 1975.

Sub Unit	Year 1/	Total Harvest	No. Males	% 2/ Males	No. Females	% 2/ Females	No. Unknown Sex	Mean Skull 3/ Size Male	Mean Skull 3/ Size Female
16A	1973	15	8	61.5	5	38.5	2	15.2 (8)	15.2 (5)
	1974	15	9	64.3	5	35.7	1	15.7 (9)	15.2 (4)
	1975	18	12	75.0	4	25.0	2	15.8 (10)	15.3 (4)
16B	1973	140	88	67.7	42	32.3	10	16.7 (72)	15.7 (38)
	1974	49	34	72.3	13	27.7	2	17.1 (31)	16.1 (11)
	1975	100	63	73.3	23	26.7	14	16.8 (53)	15.4 (20)
16?	1973	1	0	0.0	0	0.0	1	----- (0)	----- (0)
	1974	2	1	50.0	1	50.0	0	17.6 (1)	14.4 (1)
	1975	1	1	100.0	0	0.0	0	17.2 (1)	----- (0)
Total Unit 16	1973	156	96	67.1	47	32.9	13	16.5 (80)	15.6 (43)
	1974	66	44	69.8	19	30.2	3	16.8 (41)	15.8 (16)
	1975	119	76	73.8	27	26.2	16	16.6 (64)	15.4 (24)

1/ 1973 data for period July 1-December 31; 1974 and 1975 data for period January 1-December 31.

2/ Percentage based on known sex bears.

3/ Skull sample size in parenthesis.

Prepared By: Jack C. Didrickson, Game Biologist III and Don Cornelius, Game Biologist II.

Appendix II. Chronology of Black Bear Harvest in Alaska's Game Management Unit 16; July 1-December 31, 1973 and January 1-December 31, 1974 and 1975.

No. of Bear Harvested				No. of Bear Harvested			
Time Interval	1973	1974	1975	Time Interval	1973	1974	1975
Prior to April 1	--	0	0	July 1-10	1	2	0
April 1-30	--	1	0	July 11-20	0	0	1
May 1-10	--	2	1	July 21-31	2	0	2
May 11-20	--	14	4	Aug. 1-9 <u>1/</u>	4	1	3
May 21-31	--	8	14	Aug. 10-19 <u>2/</u>	10	3	4
June 1-10	--	2	8	Aug. 20-31	33	8	11
June 11-20	--	3	8	Sept. 1-10	53	1	23
June 21-30	--	3	3	Sept. 11-20 <u>3/</u>	37	8	25
				Sept. 21-30 <u>4/</u>	15	5	9
May (Date Unknown)	--	3	0	Oct. 1-10	0	1	3
				Oct. 11-20	1	0	0
				Oct. 21-Dec. 31	0	1	0
Total Harvest				Total Harvest			
Prior to July 1	--	36	38	After July 1	156	30	81

- 1/ Period August 1-9 used because sheep season traditionally opens on August 10.
2/ Period August 10-19 used because this time interval represents the period when sheep season was open but before moose season opened on August 20 in 1973 and 1974.
3/ September 20 is the traditional closing date of sheep season and was the closing date of the fall moose season in 1975.
4/ September 30 was the closing date of the fall moose season in 1973 and 1974.

Prepared by: Jack C. Didrickson, Game Biologist III and Don Cornelius,
 Game Biologist II

Appendix III. Residency, Days Hunted, Number of Guided Hunts, and Methods of Transportation for Successful Black Bear Hunters in Alaska's Game Management Unit 16; July 1 through December 31, 1973 and January 1 through December 31, 1974 and 1975.

Sub- Unit	Residency of Successful Hunters				Av.Days Hunted	No. Guided Hunts			Transportation Used (When Reported)															
	Non-res.		Res.	%		Non-res.	%	Res.	%	Aircraft			O.R.V.a			Boat			Horse			Other		
	No.	%								No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
	Year	No.	%	No.		%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
16A	1973	1	6.7	14	93.3	2.2	0	0.0	0	0.0	1	6.7	2	13.3	1	6.7	0	0.0	0	0.0	11	73.3		
	1974	0	0.0	15	100.0	1.9	0	0.0	0	0.0	4	28.6	4	28.6	0	0.0	0	0.0	0	0.0	7	42.9		
	1975	3	16.7	15	83.3	3.3	1	33.3	0	0.0	1	5.9	4	23.5	1	5.9	0	0.0	0	0.0	11	64.7		
16B	1973	46	32.9	94	67.1	4.4	34	73.9	1	1.1	190*	77.9	1	0.7	30*	21.4	0	0.0	0	0.0	4	2.9		
	1974	16	32.7	33	67.3	2.8	16	100.0	2	6.1	36**	72.0	0	0.0	8	16.0	1**	2.0	5	10.0				
	1975	29	29.0	71	71.0	4.1	12	41.4	1	1.4	77	78.6	0	0.0	8	8.2	0	0.0	13	13.3				
16?	1973	1	100.0	0	0.0	2.0	1	100.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
	1974	0	0.0	2	100.0	1.5	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
	1975	0	0.0	1	100.0	2.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
Total																								
Unit 16	1973	48	30.8	108	69.2	4.3	35	72.9	1	0.9	111	71.2	3	1.9	31	19.9	0	0.0	0	0.0	15	9.6		
	1974	16	24.2	50	75.8	2.6	16	100.0	2	4.0	42	63.6	4	6.1	8	12.1	1	1.5	12	18.2	0	0.0		
	1975	32	26.9	87	73.1	4.0	13	40.6	1	1.1	79	68.1	4	3.4	9	7.8	0	0.0	24	20.7				

* Four hunters who reported using both aircraft and boat were included in both categories.

** One hunter who reported using both aircraft and horse was included in both categories.

a Off-road vehicle

Prepared By: Jack C. Didrickson, Game Biologist III and Don Cornelius, Game Biologist II

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1976

Game Management Unit 17 - Bristol Bay

Seasons and Bag Limits

No closed season

Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

No harvest data were available as sealing of black bears is not required in this unit. The estimated harvest is 10-20 bears annually.

Composition and Productivity

No work was accomplished.

Management Summary and Conclusions

Most of the harvest is believed incidental to hunts for other species. Some black bears are harvested by local residents for human consumption.

Recommendations

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

PREPARED BY:

Nick Steen
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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 20 - Fairbanks, Central Tanana

Seasons and Bag Limits

Unit 20	No closed season	Three bears; provided that the taking of cubs or females accompanied by cubs is prohibited
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Harvest and Hunting Pressure

Sealing data for 1975, the second year in which hides and skulls of black bears taken in Unit 20 were sealed, indicated that 114 black bears were harvested. This represented a 25 percent increase from the 1974 harvest, when 91 bears were presented for sealing. Sex composition of the harvest has remained similar, averaging 72 and 78 percent males in 1974 and 1975, respectively.

Analysis of sealing data indicated that the majority of the harvest came from accessible portions of Subunits 20B and 20C. Thirty-four bears were taken in Subunit 20B, and 70 bears were harvested in Subunit 20C (Appendix I). Extensive road, trail and residential areas within these subunits concentrate human activities, thereby increasing the potential for bear-human interactions. For example, bears were commonly observed in the immediate Fairbanks area in 1974 and 1975, resulting in a harvest of 19 bears within approximately a 15 mile radius of Fairbanks north of the Tanana River. In addition, the Tatalina, Tolovana and Chatanika River drainages supported a relatively large harvest. During 1974, 25 bears were taken from these drainages. In 1975, 33 bears (24 males) were reported to have been taken from this area. Despite the relatively high bear density observed in northern portions of Subunit 20A, the low reported harvest of six bears from this subunit reflected the light hunting pressure and inaccessibility of the area from May through October.

Harvest chronology for the 1975 season (Appendix I) indicated that 62 percent of the known-date harvest occurred in May and June. The 19 percent harvest reported for September probably reflected increased hunting effort resulting from concurrent seasons for other big game species.

Interest in black bear hunting remained relatively high in 1975. Replies were recorded from 90 successful hunters regarding whether bears were taken specifically on a bear hunt or harvested incidental to other activities. Forty-three percent of the hunters questioned indicated they were hunting specifically for black bears. Fifty-four percent of the hunters taking bears during May and June indicated that they had hunted specifically for black bears. During July through October only 29 percent of the take was by persons specifically hunting bears.

Therefore, the majority of the harvest during this latter period was incidental to other hunting or the result of taking nuisance bears.

The incidence in defense of life and property kills related to BLM fire suppression activities or resource development operations was relatively high in the Interior during 1975. Bears dispatched for this purpose in Unit 20 included two taken by BLM fire crews at Fire #8644, two taken by Alyeska personnel (Yukon Bridge and Pump Station #7), one taken by Fish and Wildlife Protection officers at Livengood Camp and one taken at a mineral exploration camp on Birch Creek.

Additional black bears taken in the Interior consisted of three taken by ADF&G, one taken by Alyeska at Five Mile Camp, a road kill near Coldfoot Camp, two taken by BLM crews at Fires #8678 and #8691, and five taken by mining exploration crews in the Kobuk drainage. It appeared that reasonable precautions were taken in most of these incidents, excluding Five Mile Camp, to minimize depredations by bears. Aggressive behavior of bears appeared pronounced in June and July, prior to ripening of the berry crop. Consequently, most of the defense of life and property kills occurred during that period.

Composition and Productivity

Standardized surveys were not conducted in Unit 20. Bear sightings made incidental to moose surveys on the Tanana Flats (Unit 20A) on May 16, 17, 19 and 20 revealed a total of 10 adults, 1 yearling and 1 cub. If the number of bears observed in this standardized moose survey area reflected bear abundance throughout the unit, black bear numbers did not fluctuate significantly from 1974 levels, when seven adults, three cubs and three subadults were observed during May surveys. Indices of population levels in the remainder of the unit are not available.

Age data were not available at the time this report was prepared.

Management Summary and Conclusions

Tentative management plans for black bear in Unit 20 provide for the establishment of aesthetically pleasing hunting areas along Birch, Preacher and Beaver Creeks, and in the Minto and Murphy Dome areas. This will hopefully upgrade the trophy status of black bears. Implementation of these plans will result in reduction of season length and bag limit.

Continued availability of bears in areas receiving heavy hunting effort, a relatively dense spring bear population observed on standardized moose survey areas and a relatively low number of females harvested (22-28%) indicated that the current level of harvest did not adversely affect the abundance of black bears in Unit 20. Efforts should be directed toward encouraging the harvest of bears during periods of pelt primeness in May, June and September, especially in areas less susceptible to bear depredations. This will contribute toward the upgrading of the trophy status of this species.

In portions of Unit 20 near residential areas liberal seasons and bag limits should be maintained to minimize nuisance bear problems and maximize the opportunity to hunt until a potential overharvest exists. Preventative techniques, stressing proper garbage disposal on manned fires and pipeline camps, should be continued.

PREPARED BY:

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SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix I. Game Management Unit 20 black bear harvest based on data compiled from sealing certificates. Legal sport kill only, 1975.

Subunit	Sex			Color Phase		Date of Kill (Month)									Incidental Take ?		
	M	F	Unk	Bk	Cin	Apr	May	Jun	Jul	Aug	Sep	Oct	Unk	Y	N	Unspec	
Total																	
20A: 6 (5%)	6	0	0	4	2	0	0	1	0	1	4	0	-	5	0	1	
20B: 34 (30%)	26	8	0	31	3	0	8	15	3	2	6	0	-	19	8	7	
20C: 70 (61%)	52	17	1	62	8	0	27	16	9	4	11	2	1	24	30	16	
20D: 4 (4%)	4	0	0	3	1	1	0	3	0	0	0	0	-	3	1	0	
Totals: 114 (100%)	88	25	1	100	14	1	35	35	12	7	21	2	1	51	39	24	

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 1 - Southeast Mainland

Seasons and Bag Limits

Sept. 1 - June 10

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

The harvest of brown bears in Unit 1 during 1975 was 13 animals (8 males and 5 females). This was a decrease from 18 taken the previous year, but within the limits of variation over the previous 14 years (7-29) and below the average for that period.

The number of bears taken was too small to give significant parameters which might indicate overharvesting (percent males taken, mean skull size and mean age) on an annual basis. In 1975 the 7 male skulls averaged 21.5 inches in length plus width. This was 0.5 inches less than the previous year and 0.2 inches more than the mean size of the 83 skulls measured since 1961.

The mean age of 12 male bears taken in Unit 1 in 1974 was 6.0 years and the average for 8 male bears taken in 1975 was 6.1 years. The mean age of 46 males aged since 1969 was 6.4 years.

Hunters were evenly distributed throughout Unit 1 with the exception of the Chilkat River drainage where 29 percent (4 bears) was harvested. The average yearly harvest since 1970 for the Chilkat drainage is 4 bears.

Composition and Productivity

No data were available. The sex composition of the harvest probably does not reflect the true composition of the population.

Management Summary and Recommendations

The Unit 1 brown bear harvest was small and the population could apparently withstand heavier harvests.

Recommendations

No changes are recommended on the basis of information currently available.

PREPARED BY:

SUBMITTED BY:

David A. Johnson
Game Biologist III

Robert E. Pegau
Regional Management/Research Coordinator

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

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

Seasons and Bag Limits

Sept. 1 - June 10

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

The recorded sport harvest of brown bears during 1975 reached an all time high of 105 animals and the trend in recent years has been increasing harvests (Appendix I).

In view of the relatively small size of Unit 4 on a statewide basis, hunting pressure on Unit 4 is quite high. Discussions with hunters and guides indicate that success is high, often near 100 percent among guided hunters. The increasing trend of the harvest suggests an increase in hunting pressure as does the increasing number of complaints about hunter crowding.

In spite of increased harvests and hunting pressure, the composition of the harvest has remained relatively constant. Average hide size, average skull size, average age, nonresident take, kill by season, chronology of the kill and sex ratio were well within the 14-year average (Appendices I, II and III). There was an apparent decrease in the ages of female bears in the 1975 harvest, however. The sample size of female bears was only 28 and of those, four were 3 years of age or under. If those four bears are excluded from the analysis, the average for the female harvest was 7.1 years, which is more closely in line with recent years' age structure.

All males above 2 years of age are legal whereas many females above 6 to 8 years of age are normally accompanied by cubs so are not legal game. This might also account in part for the disproportionate representation of males in the harvest.

When the 1975 harvest data are broken down to specific islands or even further to the high-producing bays on southern Admiralty, there is still little variation from previous years' harvest statistics (Appendix II) except, of course, for the overall increase in the harvest.

The chronology of the kill by month (and a 10-day period during May) shows the same consistency that has characterized bear hunting in Unit 4 for years (Appendix III). The period of May 21-31 accounts for about half of the spring kill and about one-third of the annual kill. June and September contribute about 22 and 20 percent, respectively, of the annual kill.

Guided hunts, including nonresident hunters accompanied by resident relatives, account for slightly over 50 percent of the annual kill. The number of guides operating in Unit 4 has averaged 11 per year over the past 15 years, but the number is steadily increasing. Five of these guides have operated in Unit 4 since at least the early 1960's. Recent years have seen an increase in the number of guides from Southcentral Alaska where curtailed seasons have forced them to new areas. Only six of the 508 bears taken since 1970 have been taken by nonresidents who were accompanied by resident relatives.

Three bears were taken in defense of life/property in 1975.

Composition and Productivity

No specific attempts were made to obtain composition and productivity data. Beach observations in Hood Bay, Admiralty Island, under Research Job 4.7R indicated cubs of all ages represented 24 percent of the 19 individual bears seen. Both the total numbers of bears seen and the percentage of cubs were lower by about one-third over previous years. However, observation conditions were much less satisfactory in 1975 than in previous years and the significance of these observations are not known.

Management Summary and Conclusions

An increasing trend in the sport kill of brown bears from Unit 4 has been apparent for several years. In spite of the increased reported kill, pertinent harvest statistics have remained relatively constant suggesting minimal biological impact through sport hunting. Increased hunter interaction in the field throughout the unit, but especially on southern Admiralty Island, has lessened the overall quality of the hunting experience. Guides from Southcentral and Interior regions, who have not heretofore hunted Unit 4, created much of this interaction.

The Species Management Plans for brown bears, which are now being formalized, were formulated around the hunting tradition in Unit 4 for the period of 1961-1972. That tradition produced an annual kill of 60-70 bears of which males comprised 70 percent, about 70 percent of which occurred in spring, and of which nonresidents took about 50 percent. Under that rate of exploitation, the average male bear squared about 14 feet, was 8.0 years old with a skull of which the length plus width measured 22.5 inches. That kill was made during a season which ran from January 1 - June 10 and from September 1 - December 31. At that rate of exploitation, there were few instances of hunter conflict for space. Those harvest statistics were very consistent year to year.

The increased kill starting in the 1970's has not significantly altered the pertinent harvest statistics except for a lessening in the quality of the hunting experience through conflicts for space.

It is not known how many of the bears taken by resident hunters are actually taken incidentally to other activities. The Alaska Legislature, during its 1976 session, passed legislation which creates a \$25 tag fee for resident brown bear hunters. That act takes effect January 1, 1977 and should substantially reduce the resident take, it is doubtful that many people will purchase the tag unless they specifically intend to hunt brown bear. Hopefully that action will reduce the take to the desired annual kill by resident hunters to about 30-35 per year.

The current seasons coincide with the most desirable hunting conditions of weather and pelt primeness. Reduction in season length will only further aggravate the crowded hunting conditions.

If the above actions do not reduce the kill to an average of 60-70 animals per year, permit hunting will be necessary for the 1978 season.

Recommendations

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

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SUBMITTED BY:

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APPENDIX I

Brown/Grizzly Bear Sport Harvest, Calendar Years 1961 Through 1975. Game Management Unit 4.

Calendar Year	Total Kill	% Kill in Spring	% Males	% N.R.	Mean Hide Size Male 1/	Mean Skull Size Male 2/	Mean Cem. Lines 3/		Calendar Year Seasons
							Male	Female	
1961	39	72	80	59	15.1				1/1- 6/30 9/1-12/31
1962	44	73	66	66	14.6				Same
1963	27	67	74	56	14.4				Same
1964	55	72	67	44	14.2				Same
1965	64	64	67	52	13.7				Same
1966	75	65	63	67	13.1				Same
1967	62	66	69	48	13.2	22.7			1/1- 6/20 9/1-12/31
1968	50	72	76	36	12.7	22.3	8.0(10)		1/1- 6/10 9/1-12/31
1969	66	67	77	52	13.7	22.7	7.1(32)		1/1- 6/10 9/1-11/30
1970	66	85	73	55	13.7	22.0	7.8(40)		4/1- 6/10 9/1-11/30
1971	77	78	64	52	14.1	22.7	8.3(44)	8.1(15)	4/1- 6/10 9/1-12/31
1972	77	66	75	53	14.3	22.5	8.8(55)	6.4(17)	1/1- 6/10 9/1-12/31
1973	39	72	68	40	13.6	21.6	7.7(63)	8.5(32)	Same
1974	34	74	73	51	13.9	22.2	7.6(57)	7.7(21)	Same
1975	105	72	69	57	14.0	22.2	8.1(66)	6.4(29)	Same

1/ Length plus width given in feet.

2/ Length plus width given in inches.

3/ Tooth sample size given in parenthesis.

APPENDIX II

1975 Brown/Grizzly Bear GMU-4 Brown Bear Harvests by Subunit. Legal Sport Kills Only.

Location	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1/	1975
Baranof (4-A)	5	14	12	14	6	11	12	13	17	9	4		13
Percent of Unit 4	10	22	16	22	12	17	17	17	22	9	5		12
Chichagof (4-B)	13	16	16	17	16	24	21	25	32	45	36		41
Percent of Unit 4	25	25	22	27	31	36	29	32	42	46	43		39
Admiralty Total	33	33	45	32	29	31	39	39	28	45	43		51
Percent of Unit 4	65	52	62	51	57	47	54	51	36	46	52		49
Northern Admiralty (4-C)	14	14	10	10	13	6	13	9	9	12	12		12
Percent of Unit 4	27	22	14	16	26	9	18	12	12	12	15		11
Southern Admiralty (4-D)	19	19	35	22	16	25	26	30	19	33	31		39
Percent of Unit 4	37	30	48	35	31	38	36	39	25	33	37		37
Pybus Bay	3	4	16	7	5	3	10	8	8	8	5		7
Gambier Bay	9	7	3	1	4	3	7	4	3	4	3		7
Chiak Bay	3	5	3	3	2	4	2	1	2	7	7		3
Hood Bay	1	1	2	6	0	4	0	0	0	3	4		8
Total These Bays	16	17	24	17	11	14	19	13	13	22	19		25
Percent of Admiralty	49	52	53	53	38	45	49	33	46	49	44		49
Percent of Unit 4	31	27	33	27	22	21	26	17	17	22	23		24
Total for Unit	51	63	73	63	51	66	72	77	77	99	84		105
Percent Statewide Total	9	8	8	8	8	13	11	10	9	11	11		13

1/ Percentages based on 83 of 84 known kills.

GMU-4 Brown Bear Sport Harvest Chronology 1961-1975.

This data derived from hand compilation of sealing documents, computer printout, and old reports so totals will not all agree. In hand compiled data incomplete sealing documents were not used. Bears killed in April and December not listed except under Total Kill so percentages will not equal 100.

Prepared by: **Loyal Johnson, Game Biologist III**

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 5 - Yakutat

Seasons and Bag Limits

Sept. 1 - Nov. 30
May 10 - May 25

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Hunter success is probably lower on the mainland in Units 1 and 5 than in Unit 4 (Admiralty, Chichagof and Baranof Islands). Hunter success and age and sex composition of harvest are largely affected by the amount of physical effort required by the hunter to observe, choose and kill a bear. Hunter success and physical effort expended per bear may be determined more by the characteristics of the bear hunting sites available to the hunter than by the number of bears in any given area. For instance, in Unit 5 hunter observation points are either from a boat upon exposed bodies of water (large fjords) or inland areas where bears occur on brushy mountain sides, in thick riparian cover or in large wet meadows. These situations require more physical effort by the hunter than do Unit 4's hunting sites (observation points) which are typified by protected bays with their adjoining sedge meadows and beach fringes, which can be hunted with little effort from a boat. Thus, bear harvest data may reflect more the characteristics of the hunt than population density.

Hunter access is good and hunting pressure has been uniform throughout the Yakutat Forelands portion of GMU 5 (Yakutat Bay southeast to the northern boundary of Glacier Bay National Monument). Yakutat Bay and Russell Fjord are accessible by boat, while much of the remaining area is accessible from the Forest Service highway extending to the Dangerous River, by wheel plane from 8 public use cabins, and a number of commercial fishing or outfitting cabins. Presently, there are no commercial float planes for charter in Yakutat. A float plane would provide hunter access into most of the remaining lightly hunted areas and two additional public use cabins.

The Malaspina Forelands portion of GMU 5 (Yakutat Bay to Icy Bay) has fair to good access by wheel plane along the beaches at low tide and from two inland air strips. This area receives less hunting pressure because it does not lend itself to hunting from a boat due to wave action from the Gulf of Alaska; there are no public use cabins for shelter; and most of the terrain is flat and very brushy making it difficult to locate bears or hike throughout the area.

The average annual sport kill of brown bears (1961-75) for GMU 5 has been 15 animals, of which 11 percent (25) was taken from the Malaspina Forelands and 89 percent (198) from the Yakutat Forelands. The 1975 harvest by sport hunters was 15 bears, 10 males and 5 females (Appendix I). Five bears, all males, were taken during the spring season and 10 (5 males and 5 females) were harvested during the fall season. In addition, a sow accompanied by two cubs-of-the-year was illegally killed during the fall season. Mean hide sizes, skull sizes and cementum ages for males are presented in Appendix I.

Composition and Productivity

No surveys were conducted to gather data on the Unit 5 brown bear population.

Management Summary and Recommendations

No changes in the 1976 season are recommended. The Malaspina Forelands and Yakutat Forelands brown bear populations could be regulated separately and managed in accordance with different management objectives and goals.

PREPARED BY:

Roland Quimby
Game Biologist II

SUBMITTED BY:

Robert Pegau
Regional Management/Research Coordinator

Appendix I. Brown/grizzly bear sport harvests (GMU 5) 1961-75; by year, total kill, numbers of males, percent males, percent nonresidents, mean hide size of males and mean skull size of males and mean cementum ages of males.

Year	Kill	# of Males	Percent Males 1/	# by Non-Res.	Percent Non-Res.	Mean Hide Size Male 2/	Mean Skull Size Male 3/	Mean Cementum Age 4/
1961	9	6	75	5	56	15.0	23.5	
1962	7	4	67	0	0	15.4	20.0	
1963	5	4	100	1	20	15.4	23.8	
1964	12	4	33	5	42	14.4	--	
1965	15	12	80	4	27	13.7	25.1	
1966	22	11	55	16	73	15.2	25.0	
1967	17	9	53	11	65	14.5	23.2	
1968	18	13	72	7	39	13.8	22.0	
1969	20	10	50	9	45	13.6	21.9	6.6(6)
1970	7	4	57	4	57	13.3	24.1	8.4(3)
1971	21	12	60	7	33	13.5	21.5	5.5(9)
1972	21	12	57	8	38	14.0	22.1	4.6(6)
1973	21	13	62	4	19	14.9	22.8	8.4(10)
1974	13	8	62	0	0	13.5	21.7	4.2(6)
1975	15	10	67	6	40	13.9	19.7	3.6(8)
Total or Average	223	132	61	87	39	14.2	22.3	

1/ All male percentages based on known-sex bears.

2/ Length plus width in feet.

3/ Length plus width in inches.

4/ Sample size in parenthesis.

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 6 - Prince William Sound and Gulf Coast

Seasons and Bag Limits

May 10-25

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

The 1975 brown bear harvest in Unit 6 was 24 animals, 17 males and 7 females. The 1975 harvest was one of the smallest harvests recorded since statehood (Appendix I). Eighteen bears were taken in the spring season which was about average (18.6) for the past 15 years. The fall harvest of 6 was well below the average of 13.9.

In addition to the sport harvest of 24, 5 more bears were taken in defense of life or property. The non-sport kill has been fairly high (5 or 6) for the past 3 years (Appendix II).

Residents took 54 percent of the bears during this report period, primarily during the spring season (Appendix III).

The average male hide size during this report period was 14.5 feet, which is slightly larger than the average female. Male skull size averaged 23.9 inches and females averaged 19.8. The average age of harvested bears was 7.1 years, up slightly over the past 3 years. The 1975 harvest data on hide size, skull size and age compare favorably with the 15-year average (Appendix IV).

The actual hunting pressure exerted in Unit 6 is unknown, but is not believed to have increased significantly the past several years.

According to the sealing documents, 16 or two-thirds of the 1975 harvest was taken east of the Copper River. Montague Island contributed 2, Hinchinbrook Island 3, and Valdez to Cordova 3 and none came from the west side of the Copper River Delta.

Management Summary and Conclusions

Analysis of current and past harvests indicates the current level of harvest and hunting pressure is not adversely affecting the Unit 6 brown bear population.

Recommendations

Retain the current seasons and bag limits.

PREPARED BY:

Julius Reynolds
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Unit 6

Brown Bear Sport Harvest by Season & Sex

Year	SPRING			FALL			SPRING AND FALL		
	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Total
1961	4	2	0	6	2	5	0	7	13
1962	8	1	0	9	9	6	0	15	24
1963	5	4	1	10	11	9	0	20	30
1964	13	4	2	19	9	3	1	13	32
1965	12	11	0	23	6	5	0	11	34
1966	14	9	1	24	6	8	0	14	38
1967	23	8	3	34	13	11	2	26	60
1968	21	12	4	37	18	7	1	26	63
1969	8	5	1	14	4	5	0	9	23
1970	9	10	0	19	4	4	1	9	28
1971	11	2	0	13	3	4	0	7	20
1972	14	4	1	19	7	13	0	20	39
1973	12	2	1	15	10	5	1	16	31
1974	9	10	0	19	5	5	0	10	29
1975	13	5	0	18	4	2	0	6	24
Average (15 yr.)	11.7	5.9	.9	18.6	7.4	6.1	.4	13.9	19.1 12.1 1.3 32.5

Submitted By: Julius Reynolds

APPENDIX II

Unit 6

Non - Sport Kill of Brown Bear

<u>Year</u>	<u>Number of Bear</u>
1961	0
1962	0
1963	2
1964	0
1965	1
1966	1
1967	3
1968	0
1969	0
1970	0
1971	2
1972	2
1973	6
1974	5
1975	5
<hr/> 15 years	<hr/> 27 bear

APPENDIX III

Unit 6 - 1975

Brown Bear Sport Harvest by Season, Sex & Residency

<u>Sex</u>	<u>SPRING</u>		<u>FALL</u>		<u>SPRING & FALL</u>	
	<u>Resident</u>	<u>Non-Res.</u>	<u>Resident</u>	<u>Non-Res.</u>	<u>Resident</u>	<u>Non-Res.</u>
Male	8	5	0	4	8	9
Female	3	2	2	0	5	2
Totals	11	7	2	4	13	11
					(54%)	(46%)

Submitted by: Julius Reynolds

APPENDIX IV

Unit 6

Brown Bear Sport Harvest Mean Hide, Skull & Age Data

Year	(in feet) HIDE SIZE		(in inches) SKULL SIZE		AGE		
	Male	Female	Male	Female	Male	Female	Male & Female
1961	14.2	13.4	19.6				
1962	15.6	13.7	26.2				
1963	13.8	12.6	23.9	20.4			
1964	14.5	13.9	24.5	23.0			
1965	15.3	13.4	25.2	22.1			
1966	14.3	13.7	24.2	22.3			
1967	13.9	12.9	23.7	21.7			
1968	14.3	12.6	23.4	21.7			
1969	14.0	12.4	23.5	20.8	8.2	8.3	8.3
1970	14.4	12.9	22.9	21.2	5.4	6.1	5.8
1971	15.1	12.1	23.9	20.2	9.9	5.3	8.4
1972	13.4	12.5	22.0	20.9	5.4	7.3	6.2
1973	13.8	11.6	23.0	20.0	5.1	4.9	5.0
1974	13.9	12.2	22.4	19.7	6.4	5.8	6.1
1975	14.5	12.3	23.9	19.8	7.9	5.2	7.1
<hr/>							
Average (15 yr.)	14.3	12.8	23.4	20.9	6.4	6.6	6.5
<hr/>							

Submitted by: Julius Reynolds

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 7 - Eastern Kenai Peninsula

Seasons and Bag Limits

Sept. 10 - Oct. 10

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Brown/grizzly bear sealing records show that one male bear was harvested in Day Harbor during the 1975 season (Appendix I). The bear, a young male, was taken by a resident hunter who used a boat for transportation.

Two non-sport kills, one male and one female were also reported.

Composition and Productivity

Due to the very low harvest in this unit the hide and skull size data are too limited for meaningful analysis.

Management Summary and Conclusions

During the past 5 years 12 sport kills and five non-sport kills have been reported from Unit 7. Although brown bears are relatively abundant in parts of the unit there is little interest in hunting them; this is probably because of the heavy timber and brush in the areas they inhabit. The kill is well below the allowable level and bear numbers appear to be increasing over most of the unit.

Recommendations

No changes in seasons or bag limits are recommended.

PREPARED BY:

Paul A. LeRoux
Game Biologist

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

BROWN/GRIZZLY BEAR - GNMU 7

Appendix I

Table 1. Harvest and hunting pressure, Unit 7.

Calendar Year	Total Kill	No. Males	% Males ^{1/}	No. Nonres.	% Nonres.	Mean Hide Size Male ^{2/}	Mean Skull Size Male ^{3/}	Mean Cem. Age Male ^{4/}	Calendar Year Season
1961	1	0	0	0	0	0	--	--	9/1-9/30
1962	1	0	0	0	0	0	--	--	Same
1963	0	0	0	0	0	0	--	--	Same
1964	0	0	0	0	0	0	--	--	Same
1965	0	0	0	0	0	0	--	--	10/15-11/15
1966	0	0	0	0	0	0	--	--	9/1-9/30
1967	1	1	100	1	100	6.7	24.2	--	10/15-11/15
1968	0	0	0	0	0	0	--	--	Same
1969	2	2	100	1	50	15.1	24.5	6.8(2)	Same
1970	2	2	100	0	0	13.2	19.0	2.8(2)	9/20-10/15
1971	0	0	0	0	0	0	--	--	9/20-10/15
1972	1	0	0	1	100	0	0	0	9/10-10/10
1973	2	1	50	0	0	13.3	--	--	9/10-10/10
1974	0	0	0	0	0	0	--	--	9/10-10/10
1975	1	1	100	0	0	9.9	18.6	2.8(1)	9/10-10/10

^{1/} All male % based on known-sex bears.^{2/} Length plus width given in feet.^{3/} Length plus width given in inches.^{4/} Tooth sample size in parentheses.

PREPARED BY:

Paul A. LeRoux, Game Biologist III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 8 - Kodiak and Adjacent Islands

Seasons and Bag Limits

Unit 8, that portion of Kodiak Island south and west of a line from the mouth of Hidden Basin Creek to the mouth of Kizhuyak River and including Uganik Island.	Oct. 25 - Dec. 31 Mar. 1 - May 15	One bear every four regulatory years by permit only; provided that the taking of cubs and females accompanied by cubs is prohibited.
Unit 8, remainder of Kodiak Island	Sept. 1 - Dec. 31 Jan. 1 - July 5	
Unit 8, Afognak, Shuyak and Raspberry Islands	Oct. 1 - Dec. 31 Mar. 1 - May 20	

Harvest and Hunting Pressure

The 1975 sport harvest declined to 118 bears after 4 years of increasing harvest (Appendix I). This harvest was 14 percent of the statewide total of 824 bears. The non-sport harvest, primarily bears killed in self defense, was nine animals, three males and six females. Seventy males (59%) and 48 females (41%) were taken by sport hunters during 1975. The spring season harvest included 52 males (60%) and 34 females (40%) for a total of 86 bears. Thirty-two bears were taken in the fall, 18 males (56%) and 14 females (44%). Three bears were reported wounded and lost by hunters during the fall season.

Concerned about increasing harvest and maintaining high quality hunting experience, the U.S. Fish and Wildlife Service limited the number of land-use permits for hunting brown bears on the Kodiak National Wildlife Refuge to 254 in 1975. During the spring season all 174 of the available permits were issued. Eighty permits were issued during the fall season for the refuge. The refuge harvest was 130 bears in 1974 when 396 permits were issued and 77 bears in 1975 when only 254 permits were issued.

Distribution of the 1975 harvest is indicated in Appendix II. Harvest subunit 4, which encompasses the highly productive Karluk, Red River, Frazer Lake and Uyak Bay drainages, sustained 36 percent of the harvest. The Afognak-Raspberry-Shuyak Islands area supported only 8 percent of the harvest.

Nonresident hunters took 69 percent of the 1975 bear harvest (Appendix I). The disproportionate take by nonresidents is explained by the relatively higher success of guided hunters and the fact that many

of the better hunting areas on the Kodiak National Wildlife Refuge were unavailable to resident hunters since guides had secured the available permits for those areas for their nonresident hunters on the first day the permits were issued.

Needing additional information and closer regulation of hunting effort outside the Kodiak National Wildlife Refuge, the Department of Fish and Game initiated a permit system for hunting brown bears in Unit 8. The permit system became effective during fall 1975. Permit numbers were not limited initially. Anyone hunting the Refuge was thus required to obtain both the federal land-use permit and the new state bear hunting permit.

Two hundred and ninety-four fall hunting permits were issued. Thirty-eight permits went to nonresident hunters and 256 to resident hunters (Appendix III). An 89 percent report return indicated only 68 (30%) residents actually hunted. Most residents obtained permits so they could legally take a bear while hunting deer or other game. Thirty-six of the 37 reporting nonresident permittees reported hunting.

Bear hunting pressure in areas outside the Kodiak National Wildlife Refuge has been difficult to assess except as reflected in actual harvest. Information from the new hunting reports indicate that 58 percent of the fall bear hunters hunted in the Afognak and northeastern Kodiak Island areas. Many of these hunters are local residents who spend relatively little time hunting and are mostly unsuccessful. Sealing data indicate that 26 bears (22%) from the 1975 harvest was taken in the Afognak and northeastern Kodiak areas.

Composition and Productivity

Aerial stream and alpine composition counts were conducted by the U.S. Fish and Wildlife Service. Cubs comprised 14 percent of the population as indicated by alpine counts and 25 percent as indicated by the stream counts. Yearlings comprised 28 percent and 17 percent of the alpine and stream composition counts, respectively. Young animals in the cub, yearling and subadult classes totaled 286 or 60 percent of the 476 animals counted in both alpine and stream counts during 1975.

Management Summary and Conclusions

The decrease in harvest from 165 in 1974 to 118 in 1975 resulted partly from the limitation of permits for hunting on the Kodiak National Wildlife Refuge. Unusually poor hunting weather during both seasons also contributed to the decrease.

Sex ratio of the harvest remained near that recorded for the previous 9 years (Appendix I), with approximately three males killed for every two females. Trophy size, as indicated by hide and skull sizes in males, showed a slight decrease from the previous year (Appendix IV). Mean age of males harvested also declined.

Males 5 years old or older made up 59 percent of the harvest. Mean hide and skull size of females also decreased for 1974. Twenty-seven (57%) of the females were 5 years old or older, presumably sexually mature animals (Appendix V). Mean age of the females harvested was only 5.7 years compared to over 7 years during each of the preceding three seasons.

Slight decreases in average age and skull size occurred in both sexes compared to the previous year. Composition counts indicated productivity was within limits recorded in previous years. The harvest of 118 animals in 1975 was below average and well within allowable limits.

Recommendations

Average annual harvest during the 1961-75 period was 135 bears. Annual harvests have been as high as 200 animals in 1966 and as low as 92 animals in 1970. Continuing increases in statewide brown bear hunting pressure have reduced the effectiveness of traditional season length reductions for controlling harvest. An increasing harvest trend which began in 1971 was reversed this year due, partly, to the limited availability of Refuge permits. Issuing a predetermined number of permits for bear hunting seems the best alternative for regulating hunting pressure and stabilizing annual harvest.

It is recommended that annual sport harvests from Unit 8 not be allowed to exceed 135 bears. Should annual harvest exceed 135 animals, a proportional reduction in hunting permits should be imposed during the following season. Males should comprise a minimum of 60 percent of the harvest. Further decline in average ages of the bears harvested should prompt reconsideration of the allowable annual sport harvest.

Nonsport harvest and wounding loss account for an estimated 20 bears annually. As increased recreational activity and human occupancy occur throughout Unit 8, nonsport harvest can be expected to increase. Any detectable increase in this mortality source will necessitate proportional reduction in allowable sport harvest.

PREPARED BY:

Roger B. Smith
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

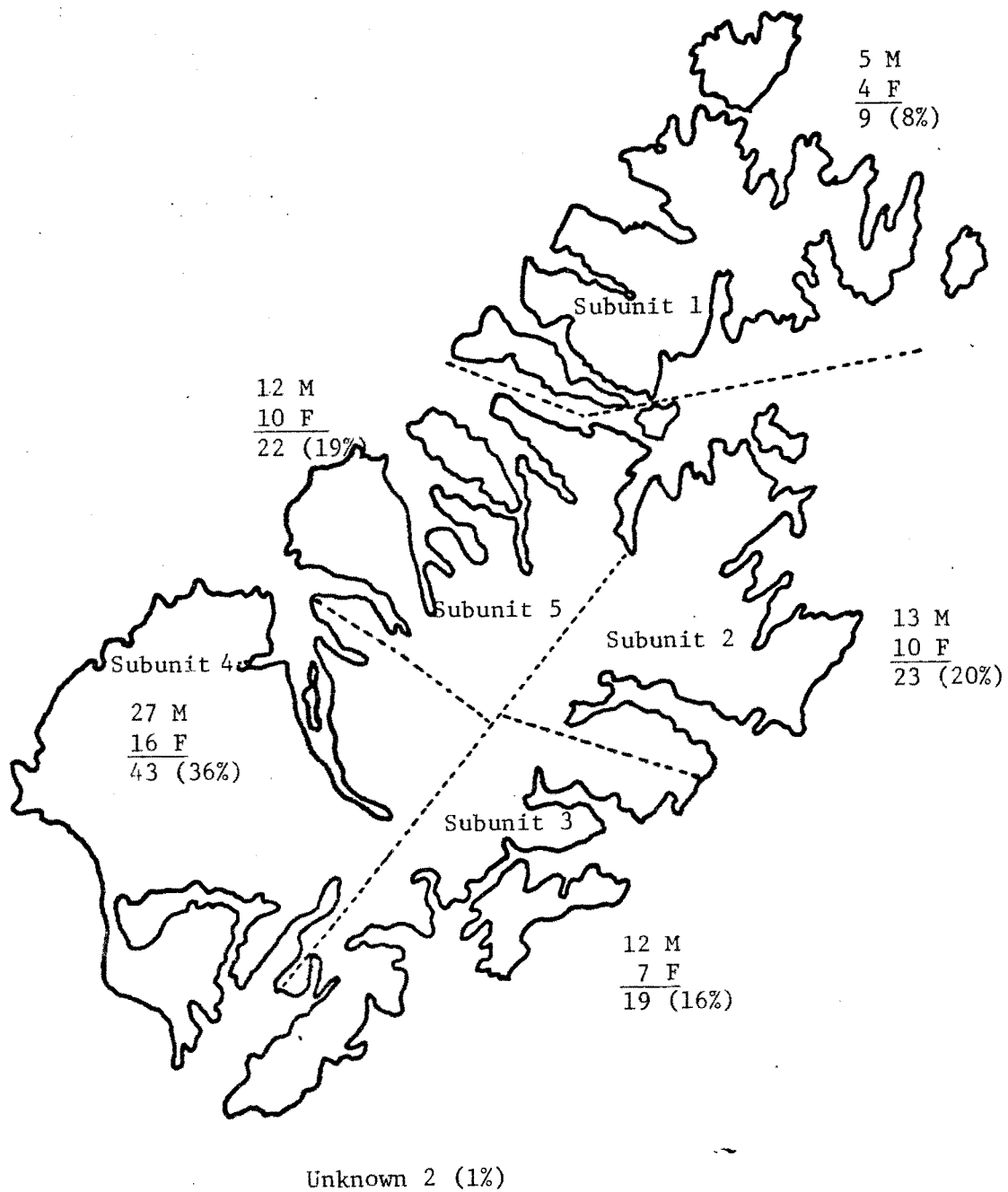
Brown Bear Sport Harvest by Year, Sex of Bear and Residency of Hunter, 1966-1975, Unit 8.

Calendar Year	Total Kill	No.		%		No. Unknown	No. By		% By
		Males	Females	Males	Females		NonResidents	NonResidents	
1966	200	107	89	55	45	4	97		49
1967	186	107	78	58	42	1	92		49
1968	105	61	43	59	41	1	62		59
1969	97	61	36	63	37	0	52		54
1970	92	61	29	68	32	2	44		48
1971	113	63	42	60	40	8	51		45
1972	132	80	50	62	38	2	71		54
1973	155	85	70	55	45	0	91		59
1974	165	95	70	58	42	0	113		68
1975	118	70	48	59	41	0	82		69

PREPARED BY: Roger B. Smith, Game Biologist III

APPENDIX II

Distribution of Unit 8 Brown Bear Sport Harvest, 1975



PREPARED BY: Roger B. Smith, Game Biologist III

APPENDIX III

SUMMARY OF BROWN BEAR PERMIT REPORT RETURNS, UNIT 8, FALL 1975

	<u>Resident Hunters</u>	<u>Non-Resident Hunters</u>	<u>Totals</u>
No. Permits Issued	256	38	294
% Permits Issued	87%	13%	100%
No. Permits Returned	228	37	265
% Permits Returned	89%	97%	90%
No. Reporting Permittees Who Hunted	68	36	104
% Reporting Permittees Who Hunted	30%	95%	39%
No. Successful Reporting Permittees	7	23	30
% Successful Reporting Permittees	10%	64%	29%

PREPARED BY: Roger B. Smith, Game Biologist III

APPENDIX IV

Hide and Skull Size and Age Summary for Male Brown Bear Sport Harvest, Unit 8, 1966-1975

Calendar Year	Mean Skull Size	Skull Sample Size	Mean Hide Size	Hide Sample Size	Mean Age	Sample Size	No. > = 5yr	% > = 5yr	Mean Age > = 5yr
1966	23.9	66	15.6	107					
1967	23.7	64	15.2	107					
1968	23.8	58	15.5	61					
1969	23.8	60	15.9	60	5.7	52	28	54%	7.4
1970	23.0	60	15.1	60	5.5	57	25	44%	8.6
1971	23.3	60	15.1	63	6.4	59	28	47%	10.1
1972	23.5	80	15.1	79	6.2	77	36	47%	9.2
1973	24.1	83	15.5	85	7.4	84	55	65%	9.4
1974	24.1	92	15.4	95	7.0	92	59	64%	8.8
1975	23.6	67	15.3	69	6.5	66	39	59%	8.4

PREPARED BY: Roger B. Smith, Game Biologist III

APPENDIX V

Hide and Skull Size and Age Summary for Female Brown Bear Sport Harvest, Unit 8, 1966-1975

Calendar Year	Mean Skull Size	Skull Sample Size	Mean Hide Size	Hide Sample Size	Mean Age	Sample Size	No. > = 5yr	% > = 5yr	Mean Age > = 5yr
1966	21.6	47	13.5	88					
1967	21.7	34	13.5	78					
1968	21.1	41	13.9	42					
1969	21.8	33	14.1	32	5.2	32	15	47%	7.6
1970	22.1	29	14.0	29	6.8	28	16	57%	9.3
1971	21.2	40	13.7	42	5.5	40	15	37%	9.0
1972	21.7	50	14.0	50	7.8	46	25	54%	11.0
1973	21.0	69	13.6	69	7.1	69	38	55%	9.9
1974	21.7	68	13.7	70	7.5	68	47	69%	9.1
1975	20.7	44	13.2	47	5.7	47	27	57%	7.4

PREPARED BY: Roger B. Smith, Game Biologist III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 9 - Alaska Peninsula

Seasons and Bag Limits

That portion of Unit 9 bounded
by the Naknek River-Katmai
National Monument on the north
and a line drawn between Right
Head of Port Moller Bay and
American Bay on the south.

No open season

Remainder of Unit 9

May 10-25
Oct. 7-21

One bear every four
regulatory years;
provided that the taking
of cubs or females
accompanied by cubs is
prohibited.

Harvest and Hunting Pressure

The total harvest of 224 bears for calendar year 1975 represents the third highest reported sport harvest for this unit (Appendix I). The figure would have been higher except the spring season for the heavily hunted central portion of the Alaska Peninsula was cancelled by Field Announcement (No. II-20-74) following a kill of 141 bears during the fall 1974 season. A management objective of an annual harvest of 150 bears south of the Naknek River-Katmai National Monument had previously been established and 119 bears were taken during the fall 1974 season, or 84 percent of the desired harvest. The modified 1975 spring season produced an additional 53 bears from south and west of Port Moller Bay-American Bay in this unit. The total harvest for the area south of Naknek River-Katmai National Monument in the July 1, 1974-June 30, 1975 regulatory year was 172 bears - exceeding the management objective by 14.7 percent.

For the calendar year (January-December 1975) covered by this report, the harvest south of the Naknek River-Katmai National Monument was 184 bears. The fall 1975 harvest added an additional 131 bears to the 53 bears taken in the spring. Unit-wide, the spring season produced 69 bears and the fall season 155 bears. No major changes were identified in the established harvest patterns of recent years. Males comprised 56 percent of the total known-sex harvest with the spring season producing a higher percentage of males - 64 percent - than the fall season - 52 percent (Appendix II). The small increases in mean male hide size, skull size and cementum age were not considered significant.

Composition and Productivity

Data for mean litter size are available from McNeil River, Katmai National Monument and the Becharof Lake area. Mean litter size for both cubs-of-the-year and cubs older than one year at McNeil River was 2.0. Data gathered by Will Troyer, National Park Service, in Katmai National Monument gave a mean litter size of 2.0 for cubs- of-the-year and 1.8 for cubs older than one year. In the Becharof Lake area, Troyer found 2.0 to be the mean litter size for cubs-of-the-year and 2.0 for older litter sizes. No data were available from the Department's Chignik-Black Lake brown bear research program in 1975, but previous data from that heavily hunted area have nearly consistently indicated slightly higher mean litter sizes than observed in unhunted or lightly hunted populations. There does not appear to be any significant change in the reproductive capabilities of the Alaska Peninsula brown bear population and indications are that reproductive success remains good.

Management Summary and Conclusions

Brown bear hunting pressure on the Alaska Peninsula now has the capability of taking the desired annual harvest from the area south of the Naknek River-Katmai National Monument during either the fall or spring season. Further reductions in season lengths would serve to intensify hunting efforts and deteriorate hunting aesthetics. Maintaining annual fall and spring seasons could result in a harvest at least double the desired management level of 150 bears per year. Permits are an option to regulate harvest levels, but would significantly reduce opportunity by restricting hunting only to those individuals holding permits. Permits should not be utilized so long as other management options are capable of maintaining the desired harvest level and characteristics.

Mature female brown bears in this area normally breed every third year and are accompanied by their offspring for 2 more years. As a result, only a third of the mature females are receptive to males during any given year. A sex ratio in the reproductive segment of the population of one mature male for three mature females results in a one to one ratio between animals actively mating. The fact that the brown bear is polygamous further insures good breeding success. A population biased towards females will have a higher total cub production than one with a more equal sex ratio of mature bears. Such remains the case so long as the population is not biased so heavily towards females that there are not enough males available to breed receptive females.

Spring seasons produce a greater percentage of males in the harvest than fall seasons (Appendix II). By emphasizing the spring season, it is possible to alter the population structure in favor of females by primarily harvesting males. If fall seasons are emphasized with their near equal sex ratio in the harvest, the population structure would gradually shift to one with boars and sows more equally represented. To

manage using only one or the other season could result in a less productive population as there could be fewer total females or an inadequate number of males to breed all females, depending upon the season utilized.

The level of fall harvests in 1973 and 1974 necessitated cancellation of all, or a portion of, the following spring seasons in order to maintain desired harvest objectives for the area south of the Naknek RiverKatmai National Monument. For long-term management it is essential that the options of both fall and spring seasons be maintained.

The harvest objective of 150 bears annually south of the Naknek River-Katmai National Monument is a conservative level established to maintain a population with some older age class bears and an abundance of the mature age classes. Biologically, a higher harvest level could be tolerated, but only by sacrificing the older age class individuals and producing a young age structure in the population. At this time, brown bears on the Alaska Peninsula are managed as trophies to be taken under aesthetically pleasing conditions, rather than for a maximum number of bears in the harvest.

In spring 1975, the Board of Game established a policy designed to maintain both the fall and spring seasons, yet retain the 150 bear harvest objective. The Board established a program of alternate regulatory year brown bear hunting in Unit 9. A total harvest of 300 bears south of the Naknek RiverKatmai National Mounment could be allowed during a single regulatory year. However, the following regulatory year would be closed to sport hunting and therefore the harvest for both years would not exceed an average of 150 bears annually. By establishing the alternate regulatory year approach (July to June) rather than alternating calendar years (January to December), hunting pressure would be spread between two cohorts of young bears recently separated from the sows and legal for the first time. These young bears have proven particularly vulnerable to sport hunting and normally represent a significant portion of the harvest. If a calendar year approach were adopted, one cohort would be legal during both its first spring and fall without the sow, while the next year's cohort would not be subjected to hunting pressure until its second year without the sow. Under the regulatory year approach, one cohort would be legal only during its first fall separated from the sow and the next year's cohort legal only during its first spring separated from the sow. Neither cohort would be legal during both its first spring and fall away from the sow. It is desirable to maintain uniform recruitment into the population and not seriously affect differential hunting pressure on individual cohorts. The 1976-77 regulatory year will be the first year Unit 9 is closed to sport hunting. The effectiveness of the alternate year approach will have to be carefully monitored in the field and through harvest data.

Recommendations

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

PREPARED BY:

James B. Faro
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

GAME MANAGEMENT UNIT 9

Brown/Grizzly Bear Sport Harvest, Calendar Year 1961 through 1975

Calendar Year	Total Kill	% ^{1/} Males	% Nonres.	Mean Hide Size Male ^{2/}	Mean Skull Size Male ^{3/}	Mean Cem. Age Male ^{4/}	Calendar Year Season
1961	120	73	59	16.3			1/1-5/31, All of 9; 10/1-12-31 S. of Egegik Paule Bay, Rem. Unit 9/10-12/31
1962	154	70	62	16.3			Same
1963	164	65	70	15.9			1/1-5/31, 9/1-12/31
1964	156	70	71	16.1			Same
1965	209	67	66	15.6			1/1-5/31, All 9 N. of Meshik 9/1-12/31 S. of Meshik 9/15-12/31
1966	229	72	75	15.6			N. of Meshik 1/1-5/31, 9/1-12/31 S. of Meshik 1/1-5/31 & 9/15-12/31
1967	214	70	76	15.7	24.5	--	1/1-5/20, 9/15-12/31
1968	160	73	84	15.4	24.0	--	1/1-5/10, 9/15-12/31
1969	93	75	72	15.7	24.3	7.5(55)	1/1-5/10 All of 9 & 9/15-10/31 N. of Park, 10/1-11/30 S. of Park
1970	158	67	75	15.1	23.9	6.9(93)	S. of Park 5/1-5/15 N. of Park 5/1-5/25, All of 9 10/1-10/31
1971	195	66	0	15.0	23.9	6.8(112)	5/10-5/25, 10/1-10/31
1972	279	56	73	14.6	23.3	6.8(146)	Same
1973	242	59	76	14.8	23.2	6.0(129)	5/10-5/25, 10/7-10/21
1974	141	53	81	14.1	21.4	5.5(73)	10/7-10/21
1975	224	56	63	14.4	23.0	6.0(119)	5/10-5/25, 10/7-10/21

1) Based upon known sex individuals.

3) Length plus width given in inches.

2) Length plus width given in feet.

4) Tooth sample size in parenthesis.

Prepared By: James B. Faro, Game Biologist

APPENDIX II

Comparison of Spring and Fall Harvest Data, GMU 9, 1963-1975

Year	Male Cementum Lines ^{1/}		Percent Males	
	Spring Season	Fall Season	Spring Season	Fall Season
1963	Not Available		82	51
1964	Not Available		84	59
1965	Not Available		80	54
1966	Not Available		89	58
1967	Not Available		81	58
1968	Not Available		82	66
1969	Not Available		87	58
1970	8.2(48)	5.6(45)	78	59
1971	8.6(41)	5.7(71)	83	59
1972	8.4(41)	6.2(105)	69	53
1973	6.4(65)	5.6(64)	70	50
1974	No season	5.5(73)	No season	53
1975	6.9(42)	5.6(77)	64	52

1) Tooth sample size in parenthesis.

PREPARED BY: James B. Faro, Game Biologist III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 10 - Aleutian Islands

Seasons and Bag Limits

May 10-May 25
Oct. 1-Oct. 21

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

The 1975 harvest from Unimak Island was six bears, all taken by Alaskan residents (Appendix I). Only one bear was harvested during the spring season, with the remainder being taken in the fall. Forty percent of the known sex harvest was males. Due to the small sample size, no conclusion can be made concerning skull size, hide size, or age of harvest.

Composition and Productivity

No data were available.

Management Summary and Conclusions

Only Unimak Island, immediately off the end of the Alaska Peninsula, has a brown bear population. Bear hunting access to the island is regulated by a permit system under the control of the U.S. Fish and Wildlife Service. The number of permits issued annually is conservative and remains the primary factor in maintaining a low harvest level. For that reason, liberalization of season dates would not significantly alter existing harvest levels. The permit system apparently favors use by Alaskan residents as it has been 7 years since a nonresident reported taking a bear from the island.

Recommendations

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

PREPARED BY:

James B. Faro
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

GAME MANAGEMENT UNIT 10

Brown/Grizzly Bear Sport Harvest, Calendar Year 1961 through 1975.

Calendar Year	Total Kill	% Males ^{1/}	% Nonres.	Mean Hide ^{2/} Size Male	Mean Skull ^{3/} Size Male	Mean Ccm ^{4/} Age Male	Calendar Year Season
1961	1	100	0	18.0	27.6	--	1/1-5/31
1962	3	67	0	16.6	--	--	10/1-12/31
1963	0	0	0	--	--	--	Same
1964	15	60	33	16.9	26.6	--	1/1-5/31
1965	10	70	10	15.6	25.4	--	9/1-12/31
1966	6	67	17	17.2	26.3	--	Same
1967	8	38	0	13.4	23.0	--	1/1-5/31
1968	4	50	100	14.8	23.2	--	9/15-12/31
1969	4	75	0	19.4	27.2	14.8(1)	Same
1970	5	80	0	12.5	19.9	2.8(4)	1/1-5/10
1971	4	25	0	15.3	23.4	2.8(1)	10/1-11/30
1972	5	60	0	13.7	18.6	3.5(3)	5/1-5/15
1973	3	33	0	11.3	22.5	4.8(1)	10/1-10/31
1974	5	60	0	16.3	25.9	10.0(3)	5/10-5/25
1975	6	40	0	14.6	22.6	5.1(2)	10/1-10/31
							Same
							Same
							Same
							5/10-5/25
							10/1-10/21

- 1) All male % based on known-sex bears.
- 2) Length plus width given in feet.
- 3) Length plus width given in inches.
- 4) Tooth sample size in parenthesis.

SUBMITTED BY: James B. Faro, Game Biologist

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 11 - Wrangell Mountains, Chitina River

Season and Bag Limits

Sept.1-Oct.10
May 15-May 25

One bear every four regulatory years;
provided that the taking of cubs or
females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Tabulated data on brown/grizzly bear harvests from 1961 through 1975 are presented in Appendix I. The 1975 Unit 11 kill (20 bears-6 spring, 14 fall) was fairly well dispersed. Overall, data trends for male percentage in the harvest, hide size, skull size, and cementum age indicate that excessive harvesting is not presently a problem.

Composition and Productivity

No data were available.

Management Summary and Conclusions

Although harvest sample sizes are small, all presently used indices indicated that the brown/grizzly bears in Unit 11 are harvested at a relatively low level. It is believed that the harvest would have to increase substantially before it would be reflected in bear abundance or sex and age composition of the harvest.

Recommendations

No change in seasons or bag limits is recommended at this time.

PREPARED BY:

Carl McIlroy
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Brown-Grizzly Bear Sport Harvest, Calendar Years 1961 through 1975. By: Year, Total Kill, Number of Males, % of Males, No. of Nonresidents, % of Nonresidents, Mean Hide Size of Males, Mean Skull Size of Males, Mean Cementum Lines of Males and Calendar Year Seasons.

GAME MANAGEMENT UNIT 11

Calendar Year	Total Kill	No. Males	% Males ^{1/}	No. Nonres.	% Nonres.	Mean Hide Size Male ^{2/}	Mean Skull Size Male ^{3/}	Mean Cem. Lines Male ^{4/}	Calendar Year Seasons
1961	6	3	60	3	50	11.8			5/15-6/15 9/1-12/31
1962	15	6	40	11	73	12.2			Same
1963	9	6	67	7	78	12.6			Same
1964	23	14	67	16	70	13.3			Same
1965	19	9	50	13	68	13.2			Same
1966	11	9	90	8	73	12.8			Same
1967	19	9	47	14	74	12.5	23.2		Same
1968	15	8	53	7	47	12.0	21.0		Same
1969	9	6	67	2	22	15.2	23.0	7.4(5)	5/15-6/15 9/1-9/30
1970	16	10	63	7	44	13.8	22.0	8.3(10)	5/15-6/10 9/15-10/5
1971	17	9	64	15	88	13.3	23.5	8.7(9)	9/15-10/5
1972	13	7	54	9	69	12.7	22.2	8.4(7)	9/10-10/10
1973	19	12	63	13	68	12.1	19.8	6.4(12)	5/15-5/31 9/10-10/10
1974	14	9	64	12	86	12.8	21.5	6.4(9)	Same
1975	20	12	63	12	60	12.0	21.9	7.2(10)	5/15-5/25 9/1-10/10

1) All male % based on known-sex bears.

2) Length plus width given in feet.

3) Length plus width given in inches.

4) Tooth sample size in parenthesis.

PREPARED BY: Carl McIlroy, Game Biologist III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 12 - Upper Tanana, White River

Seasons and Bag Limits

Unit 12	May 10-May 25 Sept. 10-Oct. 10	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited
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Harvest and Hunting Pressure

Sealing information indicated that 14 grizzly bears (8 males and 6 females) were harvested in Unit 12 during the 1975 season. One additional grizzly was taken in defense of life and property. This was a slight decrease from the annual harvest of 15 bears (10 year average) and considerably below the 26 bears taken in 1973. Skull size of bears harvested in 1975 averaged 21.0 inches (males) and 18.9 inches (females). Compared to bears taken in 1974 this represented an increase in skull size for males and a decrease for females, but in both cases the changes are probably insignificant. Among the 1975 harvest, hide size averaged 13.2 feet (males) and 11.4 feet (females). These figures showed little change from those of the 1974 harvest. Age data for the 1975 harvest were not available.

Kill locations reported for the 1975 harvest are as follows:

<u>Drainage</u>	<u>Spring</u>	<u>Fall</u>	<u>Total</u>
Chisana	1	5	6
Nabesna	0	2	2
Tetlin	0	2	2
Tok	0	2	2
White	1	1	2
<hr/>			
Total	2	12	14

Hunting pressure on the grizzly bears in Unit 12 was not measured. Ten of the 14 bears harvested in 1975 were taken during guided hunts. This suggested that considerable interest in grizzly hunting existed among nonresidents, but it remains unknown whether or not the majority of the Unit 12 harvest resulted from hunters after grizzly bears specifically or from incidental take.

Management Summary and Recommendations

The reduction of the Unit 12 moose season may have reduced the grizzly harvest by shortening the amount of time hunters spent afield and, hence, their probability of encountering bears. The harvest of 14 animals is probably a safe level unit-wide, but, assuming that sealing information is correct, excessive harvests may have occurred in specific drainages. For example, during the last two years 11 bears were reported to have been taken from the Chisana drainage (6 in 1975 and 5 in 1974). If this rate of harvest continues it is likely that the bear population and the average size of bears taken will decline significantly. There was some question, however, as to whether or not the location of kills was accurately reported, particularly in the case of the Chisana drainage. Unfortunately, age data for bears taken during 1975 are unavailable. Because of the small sample size, changes in hide and skull size are useful only as a gross measure of trends in age composition of the harvests. Therefore, until better data are available no changes in seasons or bag limits are recommended.

PREPARED BY:

Larry B. Jennings
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 13 - Nelchina Basin

Seasons and Bag Limits

Sept.1-Oct.10

One bear every four regulatory years;
provided that the taking of cubs or
females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Bear harvests have fluctuated since 1961 with peaks occurring in 1966 (63 bears), 1971 (72 bears), 1974 (72 bears) and 1975 (80 bears), (Appendix I). During most years the kill was markedly affected by the opening date of the season; earlier openings resulted in greater harvests. Mean age of male bears, mean skull size of males and percentage of males in the harvest have fluctuated without apparent trends since 1967.

Composition and Productivity

No data were available.

Management Summary and Conclusions

Prior to 1974, harvests of about 40 bears per year were showing no effects on bear harvest data. Harvests increased to 72 and 80 bears during 1974 and 1975, respectively, by opening the hunting season earlier. The intent was to hold harvests at this higher level for 3 years to see if the Unit 13 bear population could sustain this level of exploitation. Key indicators of harvest level, percentage of males in the harvest and mean age of harvested male bears, have not shown changes characteristic of overharvested bear populations during the past 2 years.

Recommendations

If Unit 13 brown/grizzly bears continue to tolerate a high harvest level during the 1975 season, increasing the harvest with a spring hunting season is recommended. Harvest levels should be cautiously increased until harvest data indicate a slight decrease in population age and male/female ratios.

PREPARED BY:

Carl McIlroy
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Brown-Grizzly Bear Sport Harvest, Calendar Year 1961 through 1975: Participation by Nonresidents in the Bear Harvest with Mean Hide, Skull Size and Cementum Lines of Male Bears Presented for Sealing.

GAME MANAGEMENT UNIT 13

Calendar Year	Total Kill	No. Males	% Males1/	No. Nonres.	% Nonres.	Mean Hide Size Male2/	Mean Skull Size Male3/	Mean Cem. Lines Male4/	Calendar Year Seasons
1961	41	20	50	25	61	13.0	20.4		9/1-9/30
1962	34	21	62	19	56	13.6	18.9		Same
1963	41	21	53	26	63	12.5	23.3		Same
1964	36	15	43	23	64	12.8	21.3		Same
1965	44	25	58	21	48	12.8	21.5		Same
1966	63	33	56	41	65	13.0	21.2		Same
1967	31	16	53	14	45	12.8	21.1		9/15-10/5
1968	38	18	49	18	47	12.8	22.0		Same
1969	17	15	88	8	47	13.0	22.0	6.7(12)	9/20-10/20
1970	27	18	69	15	56	12.6	20.5	5.2(14)	9/15-10/5
1971	72	32	48	44	61	12.2	20.0	5.0(26)	9/1-10/5
1972	48	28	58	25	52	13.0	21.3	6.9(27)	9/10-10/10
1973	43	25	60	26	60	13.2	21.3	6.9(25)	9/10-10/10
1974	72	40	56	34	47	12.8	20.8	6.3(39)	9/1-10/10
1975	80	43	58	37	46	12.9	21.7	7.2(40)	9/1-10/10

- 1) All male % based on known-sex bears.
- 2) Length plus width given in feet.

- 3) Length plus width given in inches.
- 4) Tooth sample size in parenthesis.

PREPARED BY: Carl McIlroy, Game Biologist III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 14 - Upper Cook Inlet

Seasons and Bag Limits

Unit 14, except that portion of Unit 14C in Chugach State Park	Sept. 10 - Oct. 10	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.
Unit 14C in Chugach State Park		No open season

Harvest and Hunting Pressure

Five bears were killed in Game Management Unit 14 during 1975 (Appendix I). A decreasing trend in total harvests since 1963 is evident. Chugach State Park (Subunit 14C) has been closed to hunting since 1973, and this closure contributed to the decrease in total harvests. Nonresident hunters have taken a smaller portion of each harvest during the 1970's compared to the 1960's.

Composition and Productivity

Percentages of males in the harvests have varied greatly, as expected when dealing with such small numbers. The percentage of all males harvested from 1961 to present is 50.8 percent of the total harvest.

Management Summary and Conclusions

Total bear harvests from Unit 14 have declined in the 1970's relative to the 1960's. This decline is probably only partly due to cessation of hunting in Subunit 14C since the creation of Chugach State Park. Wide fluctuations of population indices obscure trends, but cumulative statistics indicate that the population is relatively young. The cumulative percentage of males is somewhat higher than expected of a heavily exploited population. The high human density of the Unit 14 lowlands coupled with the visibility of grizzly bears has virtually eliminated resident grizzly bears from suburban areas. Harvested bears are increasingly composed of younger bears filling in vacated niches peripheral to areas of high human density.

Recommendations

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

PREPARED BY:

SUBMITTED BY:

Jack C. Didrickson and Carl McIlroy
Game Biologist III and Game Biologist III

John S. Vania
Regional Management Coordinator

Appendix I. Brown/Grizzly Bear sport harvest, calendar years 1963 through 1975. Participation by nonresidents in the bear harvest with mean hide, skull size and cementum age of male bears presented for sealing in Alaska's Game Management Unit 14.

Calendar Year	Total Kill	No. Males	% Males	1/ Males	No. Nonres.	% Nonres.	Mean Hide ^{2/} Size Male	Mean Skull ^{3/} Size Male	Mean Cem. ^{4/} Age Male	Calendar Year Seasons
1963	13	8	67	5	38	12.9				9/1-9/30
1964	12	9	75	1	8	12.8				Same
1965	15	7	47	7	47	12.6				9/1-10/15
1966	5	2	40	2	40	13.4				9/1-9/30
1967	12	6	55	6	50	11.8				Same
1968	11	3	30	6	55	14.4		21.2	0	Same
1969	2	2	100	0	0	13.0		21.9	1.8(2)	9/20-10/20
1970	4	0	0	0	0	0		20.4	0	9/15-10/5
1971	16	6	38	4	25	11.8		--	3.0(6)	9/1-10/5
1972	4	2	50	0	0	12.5		18.0	4.8(2)	9/10-10/10
1973	1	1	100	0	0	10.7		14.7	2.8(1)	9/10-10/10
1974	3	1	50	0	0	10.6		--	3.8(1)	9/10-10/10
1975	5	4	80	1	20	14.4		16.8	9.8(4)	9/10-10/10
								19.4		

1/ All male % based on known-sex bears.

2/ Length plus width given in feet.

3/ Length plus width given in inches.

4/ Tooth sample size in parenthesis.

PREPARED BY: Jack C. Didrickson, Game Biologist III
Carl McIlroy, Game Biologist III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 15 - Kenai Peninsula

Seasons and Bag Limits

Sept. 10 - Oct. 10

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Sealing reports indicated that 5 brown bears (3 males) were harvested in Unit 15 during the fall 1975 season (Appendix I). The 1975 harvest was slightly higher than the average annual harvest of 4.1 bears from 1961 through 1974.

Composition and Productivity

Hide and skull sample sizes were too small to warrant analysis (Appendix I).

Management Summary and Conclusions

The 1975 harvest of 5 bears was slightly larger than the previous 14-year annual average of 4.1 bears. Annual harvests have always been low in relation to other brown bear management areas and the slight variation in annual harvests did not reflect population trends. Most bear harvests occur incidental to moose hunting. Moose seasons in 1975 were shorter than those in 1974 and may account for the decreased harvest.

At present there is no method of censusing brown bears. Hunters expressed the opinion that brown bears were increasing in numbers.

Recommendations

No changes in seasons or bag limits are warranted.

Methods of censusing brown bears should be developed to determine if a spring hunting season is warranted.

PREPARED BY:

Warren Ballard
Game Biologist II

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Brown/Grizzly Bear Sport Harvest, Calendar Years 1961 Through 1972. Participation by Nonresidents in the Bear Harvest With Mean Hide, Skull Size and Cementum Age of Male Bears Presented for Sealing.

GAME MANAGEMENT UNIT 15

Calendar Year	Total Kill	No. 1/ Males	% 1/ Males	No. Nonres.	% Nonres.	Mean Hide Size Male ^{2/}	Mean Skull Size Male ^{3/}	Mean Cem. Age Male ^{4/}	Calendar Year Seasons
1961	4	2	50	0	0	17.5(1)			9/1-9/30
1962	5	2	40	3	60	11.4(2)			Same
1963	4	2	50	0	0	12.8(2)			Same
1964	2	2	100	2	100	12.8(2)	23.3(1)		Same
1965	3	1	33	1	33	13.1(1)			Same
1966	4	1	25	1	25	17.3(1)			Same
1967	4	2	50	1	25	15.4(2)	24.5(2)		Same
1968	11	7	64	1	9	14.4(6)	22.2(6)		Same
1969	6	4	67	0	0	14.3(4)	24.8(3)	6.8(2)	Same
1970	4	2	50	1	25	15.2(2)	26.2(1)	7.8(1)	9/20-10/15
1971	3	2	67	0	0	12.8(2)	19.1(2)	2.8(2)	9/01-10/15
1972	2	1	50	0	0	--	23.7(1)	3.8(1)	9/10-10/10
1973	6	3	50	3	50	13.7(3)	21.0(3)	4.8(3)	9/10-10/10
1974	8	4	50	2	25	13.1(4)	17.9(4)	7.8(3)	9/10-10/10
1975	5	3	60	0	0	13.4(2)	23.8(3)	3.8(2)	9/10-10/10

1/ All male % based on known-sex bears.

2/ Length plus width given in feet, sample size in parenthesis.

3/ Length plus width given in inches, sample size in parenthesis.

4/ Tooth sample size in parenthesis.

PREPARED BY: Warren Ballard, Game Biologist II.

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 16 - West Side of Cook Inlet

Seasons and Bag Limits

May 10 - May 25

Sept. 10 - Oct. 10

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

Nineteen brown/grizzly bears were killed in Unit 16 during 1975 (Appendix I). Four bears (two males, one female, and one sex unknown) were killed during the 15-day spring season. Fifteen bears (six males and nine females) were killed during the fall season. Smaller harvests have occurred during those years when the fall hunting season was delayed until September 10 (1972, 1974, and 1975). During 1975 nonresident hunters took 42 percent of the harvest, somewhat less than in past years.

Composition and Productivity

Percentages of males in past harvests have ranged from 41 percent to 80 percent. The mean age of male bears harvested has fluctuated from 5.1 to 8.0. Relatively large skull sizes and hide sizes from past harvests also show the continuing availability of large bears.

Management Summary and Conclusions

The total bear harvest is small relative to the large area of Unit 16. The high percentages of males and the relatively old age of bears indicate that harvests have not markedly altered the structure of the bear population. The bear population apparently has not had a high level of hunting pressure, or is not excessively vulnerable to hunters, or both. There appears to be no biological reason for not advancing the fall season opening to September 1.

Recommendations

A September 1 opening of the fall season is recommended.

PREPARED BY:

Jack Didrickson and Carl McIlroy

Game Biologist III and Game Biologist III

SUBMITTED BY:

John S. Vania

Regional Management Coordinator

Appendix 1. Brown/Grizzly Bear Sport Harvest, Calendar Years 1964 through 1975 by: Year, Total Kill, Number of Males, Percentage of Males, Number of Non-residents, Percentage of Non-residents, Mean Hide Size of Males, Mean Skull Size of Males, Mean Cementum Lines of Males and Calendar Year Seasons in Alaska's Game Management Unit 16.

Calendar Year	Total Kill	No. Males	% Males	1/ Nonres.	No. Nonres.	% Nonres.	2/ Mean Hide Size Male	3/ Mean Skull Size Male	4/ Mean Cem. Lines Male	Calendar Year Seasons
1964	19	13	68	9	47	12.7				9/1-12/31
1965	37	22	73	19	51	13.5				Same
1966	28	11	41	14	50	13.2				Same
1967	25	11	48	16	64	14.1	22.6			Same
1968	23	16	70	16	70	14.4	22.0			Same
1969	37	23	64	17	46	14.1	22.0	6.8(22)		5/15-6/15
1970	41	32	80	28	68	14.0	22.1	6.8(28)		9/1-10/15
1971	41	20	51	20	49	13.0	20.9	5.1(18)		5/15-6/10
1972	23	13	59	11	48	13.6	23.6	8.0(12)		9/1-10/15
1973	43	24	60	24	56	12.9	22.0	6.5(24)		5/15-6/10
1974	24	14	64	16	67	13.2	22.2	6.6(14)		9/10-10/10
1975	19	8	44	8	42	13.5	20.4	7.2(8)		5/10-5/25
										9/10-10/10

1/ All male % based on known-sex bears.

2/ Length plus width given in feet.

3/ Length plus width given in inches.

4/ Tooth sample size in parenthesis.

Prepared by:

Jack C. Didrickson and Carl McIlroy, Game Biologists III

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 17 - Bristol Bay

Seasons and Bag Limits

May 10-May 25

Oct. 7-Oct. 21

One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.

Harvest and Hunting Pressure

The 1975 calendar year harvest level remained the same as in 1974 (Appendix I). The harvest was nearly equally divided between seasons with the spring producing 15 bears and fall 14 bears. All bears taken during the spring were males but the fall harvest was comprised of 57 percent males. As in past years, successful hunters were primarily nonresidents (86 percent). Alaskan residents reported only a single bear during the spring and three bears in the fall. No significant changes were noted for data on mean hide size, skull size, and mean cementum age of male bears (Appendix I). The trend of the harvest data indicates that present harvest levels have not had a detrimental effect on the area's brown bear population.

Composition and Productivity

No data were available.

Management Summary and Conclusions

Unit 17 brown bear seasons now coincide with those of adjoining Unit 9 which experiences heavy brown bear hunting pressure. During spring the central portion of Unit 9 was closed to bear hunting and a portion of the hunting pressure normally fielded by that area transferred to Unit 17. However, even with the additional hunting pressure, the resulting harvest levels were not excessive and present seasons need not be altered. Past brown bear management problems in the unit have been directly associated with the discrepancy between its regulations and those in effect on the heavily hunted Alaska Peninsula.

Brown bear seasons in Unit 17 must be monitored to detect any major changes in harvest patterns. As the number of potential bear hunters increases statewide, additional pressure can be expected in this unit. Brown bears appear to be less abundant than on the Alaska Peninsula, so direct extrapolation of acceptable harvest pressure could result in

overharvest. The unit is also strongly influenced by changes in hunting pressure in Unit 9 as a result of alteration of season dates. The closure of the Alaska Peninsula to brown bear hunting during the 1976-77 regulatory year may significantly alter Unit 17's harvest pattern established during the last 2 years.

Recommendations

No changes in the hunting seasons or bag limits are recommended.

PREPARED BY:

James B. Faro
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

APPENDIX I

Game Management Unit 17 - Bristol Bay

Brown/Grizzly Bear Sport Harvest, Calendar Years 1961 through 1975

Calendar Year	Total Kill	% ^{1/} Males	% Nonres.	Mean Hide Size Male ^{2/}	Mean Skull Size Male ^{3/}	Mean Cem Age Male ^{4/}	Calendar Year Season
1961	2	50	0	13.6	--	--	5/15-6/15 9/1-12/31
1962	2	100	0	15.4	18.8	--	Same
1963	3	100	0	16.3	--	--	Same
1964	4	50	75	11.5	--	--	Same
1965	6	33	83	13.3	18.7	--	Same
1966	9	50	44	14.0	--	--	Same
1967	11	27	91	14.7	22.5	--	Same
1968	10	70	60	13.5	23.4	--	Same
1969	6	50	50	14.7	23.2	8.2(2)	5/15-6/15 9/1-10/15
1970	23	55	87	14.7	23.1	6.1(11)	5/15-6/10 9/1-10/15
1971	33	66	79	14.1	22.3	6.5(18)	Same
1972	35	63	77	13.8	21.9	8.0(21)	Same
1973	41	75	80	14.9	23.7	9.6(26)	5/15-6/10 10/7-10/21
1974	29	83	76	15.1	23.4	7.4(21)	Same
1975	29	79	86	15.0	22.7	9.8(23)	5/10-5/25 10/7-10/21

1) All male % based on known-sex bears.

2) Length plus width given in feet.

3) Length plus width given in inches.

4) Tooth sample size in parenthesis.

Prepared By: James B. Faro, Game Biologist

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 18 - Yukon-Kuskokwim Delta

Seasons and Bag Limits

Unit 19	Sept. 10 - Oct. 10 May 10 - May 25	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.
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Harvest and Hunting Pressure

No reported harvest in 1975.

Management Summary and Recommendations

Bears are present in numbers sufficient to eventually attract hunters in this unit. Expansion of guided and resident sport hunting into Unit 21 is anticipated in the near future. Present seasons are adequate for current management needs.

PREPARED BY:

Peter E. K. Shepherd
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 19 - McGrath area

Seasons and Bag Limits

Unit 19	May 10 - May 25	One bear every four
	Sept. 10 - Oct. 10	regulatory years; provided
		that the taking of cubs
		or females accompanied
		by cubs is prohibited.

Harvest and Hunting Pressure

Forty-three grizzly bears were reported to have been taken in Unit 19 during 1975. Only four of these were taken during the spring hunt, but this is not unusual when Unit 9 is open to spring hunting. Ninety percent of the grizzly bears were bagged on guided hunts.

Management Summary and Recommendations

The 1975 grizzly harvest in Unit 19 was lower than annual harvests of the past several years. The spring harvest was substantially lower than that of 1974. The decreased take resulted largely from hunting efforts being shifted from Unit 19 to other areas. It is expected that such fluctuations in annual harvest will continue to occur in Unit 19 when seasons in adjacent units are altered.

PREPARED BY:

Peter E. K. Shepherd
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SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 20 - Fairbanks, Central Tanana

Seasons and Bag Limits

Unit 20(A)	Sept. 10-Oct. 10	One bear every four regulatory years; provided
Units 20(B), 20(C), 20(D)	Sept. 10-Oct. 10 May 10-May 25	that the taking of cubs or females accompanied by cubs is prohibited

Harvest and Hunting Pressure

The reported sport harvest of grizzly bears for Unit 20 during calendar year 1975 was 28 bears, corresponding exactly to the 1974 harvest. An additional four bears were reported as nonsport kills. Harvest levels have not fluctuated substantially since 1967 and have varied from a low of 21 (1967) to a high of 36 (1972).

Fall seasons remained the same as those in 1974. The 1975 spring season opened 6 days earlier than in 1974 but was shortened from 17 to 16 days. Because 82 percent of the harvest occurred during the fall season, changes in the spring season had little effect on the harvest.

Harvest chronology for the 1975 fall season (Table 1) indicated that 74 percent of the bear harvest occurred during the first 14 days of the 31 day season. Similarly, 83 percent of the fall harvest occurred during the first two weeks of the 1974 autumn season. The number of bears taken incidental to other hunting was probably lower in 1975 because of the shortened moose season in portions of Units 20A and 20C, which furnished a large portion of the total harvest.

Table 1. Unit 20 fall season harvest chronology by week, 1975.

<u>Date of kill</u>	<u>Bears harvested</u>	<u>Percent of fall harvest</u>
September 10-16	9	39
September 17-23	8	35
September 24-30	3	13
October 1-10	<u>3</u>	<u>13</u>
Total	23	100%

The popularity of Unit 20 as an area for guided hunts has declined since the early 1970's. In 1972, 58 percent of the bear harvest was taken by nonresidents. During 1975, two guides operating in the Salcha and Yanert drainages accounted for the five bears (18% of the harvest) taken in Unit 20 by nonresidents.

Male bears comprised 70 percent of the harvest in 1975. This represents an increase over the 5-year (1970-74) average of 56 percent.

Data on hide size, skull size and mean age of bears harvested in 1975 are presented in Appendix I. Comparison of these data with those for 1974 revealed 1) increases in average hide size (males and females), average skull size (males) and average age (males) and 2) decreases among females in average skull size and age.

Analysis of kill locations obtained from sealing certificates indicated the central and western portions of the Alaska Range continued to furnish the majority of bears in the harvest (Table 2). Fifteen bears (10 males) were taken from an area bounded by the Toklat drainage on the west and the Delta River drainage on the east. This represents 54 percent of the 1975 reported annual harvest for Unit 20. Age data from 14 bears taken in this area indicated that females averaged 4.8 years (n=4, range 3-7), while the average age for males was 8.9 years (n=10, range 4-18).

Table 2. Unit 20 spring and fall 1975 grizzly bear sport harvest by drainage.

<u>Drainage</u>	<u>No. taken</u>	<u>Percent of unit harvest</u>
Toklat River	3	11
Yanert River, Wood River	7	25
Delta River, Delta Creek	5	18
Gerstle River	2	7
Salcha River	2	7
Nenana River	1	4
Robertson River	1	4
Chatanika River	1	4
Chena River	1	4
Tanana (George Creek)	1	4
Yukon (Rampart to Chicken)	4	14

Composition and Productivity

Grizzly bear surveys were not conducted in Unit 20, but localized bear density remained relatively high in the vicinity of traditional caribou calving grounds. Observations made in conjunction with caribou composition surveys at the headwaters of Delta Creek revealed a minimum of seven adults and one cub between Hayes and McGinnis Glaciers from May 28 - June 12, 1975.

Age structure of the 1975 sport harvest for 25 bears of indicated that 40 percent of the animals were age 8-years or older, compared to 63 percent in this age class in 1974. Forty-four percent of the known age males and 38 percent of the females consisted of bears in this age category. This relatively small sample comes primarily from a small area within the central portion of the Alaska Range. Consequently the data may not truly reflect the age structure of the population, and the relatively high proportion of young bears comprising the harvest probably reflects production rather than over-exploitation of the population.

Management Summary and Recommendations

Despite variations in season length and timing, the Unit 20 grizzly harvest has stabilized since 1967, with an average annual take of 28 bears. Parameters used to evaluate the level of exploitation of the population indicate this harvest was not excessive. Central portions of the Alaska Range between the Delta and Kantishna Rivers continued to furnish the majority of bears in the harvest. Assuming the age data for females harvested from the central Alaska Range are representative of the bear population in this area, continued harvests of the magnitude recorded for 1975 appear sufficient to depress the reproductive potential. However, the small number of females harvested in this area in 1975 and lack of information on the minimum age at which females produce young preclude recommendations of safe levels of exploitation. Nevertheless, frequent observations of bears continue in the areas of the central Alaska Range where a major portion of the harvest occurs. Harvest from these areas may account for the appearance of younger cohorts in the Unit 20 harvest.

Except for 1974, when males comprised 46 percent of the harvest, there has been no appreciable reduction in the male composition of the harvest. This indicates a sufficient rate of recruitment of adult bears to the hunt population.

There is presently no method of evaluating hunting pressure for grizzly bears in Unit 20. Prior to 1975 it was assumed that most bears were taken incidental to moose hunting. In 1975 closure of the moose season on September 10 eliminated the potential for this incidental take. The fact that the harvest did not decline from the 1974 level, plus the fact that nonresidents accounted for 18 percent of the kill, indicate that hunting effort for bears by residents may be higher than was anticipated.

The current level of harvest does not appear to conflict with proposed management goals for the unit. Implementation of these plans will result in the establishment of areas for hunting under aesthetically pleasing conditions in the central Alaska Range and Birch-Beaver-Preacher Creek areas. The remainder of the unit will allow for maximum recreational bear hunting opportunities. No changes in seasons or bag limits are suggested at this time.

PREPARED BY:

Mel Buchholtz
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

Appendix 1. Characteristics of Unit 20 grizzly bear harvest, calendar year 1975.

Total sport kill	M	F	Unk.	Harvest by non- residents	Spring harvest	Fall harvest
28	19	8	1	5	5	23

Mean hide size (ft.)		Mean skull size (in.)		Mean cementum age (yrs.)		Subunit harvest			
M	F	M	F	M	F	20A	20B	20C	20D
13.3	12.1	21.8	19.6	7.9	7.0	2	2	18	6

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 21 - Middle Yukon

Seasons and Bag Limits

Unit 21	May 10 - May 25 Sept. 10 - Oct. 10	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited.
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Harvest and Hunting Pressure

No reported harvest.

Management Summary and Recommendations

Grizzly bears are present in numbers sufficient to eventually attract hunters to this unit. Expansion of guided and resident sport hunting into Unit 21 is expected in the near future.

PREPARED BY:

Peter E. K. Shepherd
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SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 22 - Seward Peninsula

Seasons and Bag Limits

Unit 22	Sept. 1-Oct. 31 May 10-May 25	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited
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Harvest and Hunting Pressure

The reported harvest of brown bears during 1975 was six animals, less than one percent of the entire statewide kill. With the exception of one male all bears were taken during the spring season. Harvest composition during the year was four males, one female, and one bear of undetermined sex. Two of the males were killed by nonresidents in the spring season and the remaining four were shot by residents.

It is probable that a considerable number of bears were taken and not reported. A subsistence report by the Joint Federal-State Land Use Planning Commission in 1974 indicated that an average of 61 bears are taken annually by Unit 22 village residents. Most reindeer herders consider the grizzly a nuisance, and it is common for herders to kill bears and not report the incident. From conversations with village residents and from the number of complaints regarding illegal kills, it was estimated that the unreported kill amounted to 10-15 animals. Therefore, the Unit 22 harvest during 1975 was estimated at 20 bears.

Composition and Productivity

No surveys were conducted to determine composition or productivity of the Unit 22 grizzly population, but in the course of other investigations sightings of bears were recorded. Bear density on a unit-wide basis appeared low, but relatively high densities were observed in certain areas. These concentrations probably represented responses to food sources. An air taxi operator reported sighting more than 30 bears along a 100 mile stretch of beach between Unalakleet and Stebbins. Bears were also concentrated along major rivers where spawning salmon offered a readily available source of food. During spring, when bears emerged from their dens, tracks were seen throughout the Seward Peninsula. The Unit 22 population apparently has been increasing during the last few years, and in 1974 bears occupied all portions of the unit where suitable habitat existed. It was estimated that a minimum of 200 bears occupied Unit 22 during 1975.

Management Summary and Recommendations

The 1975 harvest of grizzly bears in Unit 22 was relatively low, even in view of the estimated number of unreported kills. Although guides have recently started conducting hunts in Unit 22, the impact of such hunts on the bear population was not considered significant during 1975. The number and success of guides conducting bear hunts in Unit 22 should be closely monitored in the future. Assuming that a minimum of 200 grizzly bears occupy Unit 22, the population does not appear to be in danger of overharvest, and, until there is a significant increase in the take, no changes in seasons or bag limits are recommended.

PREPARED BY:

Carl A. Grauvogel
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BROWN/GRIZZLY BEAR
SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 23 - Kotzebue Sound

Seasons and Bag Limits

Unit 23	Sept. 10-Oct. 10 May 10-May 25	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited
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Harvest and Hunting Pressure

The reported take of brown bears during 1975 consisted of 13 animals and was 1.6 percent of the total statewide kill. The harvest was almost equally divided between spring and fall seasons despite the fact that the latter season was almost twice as long. Six bears were taken during spring and seven during fall. Most, if not all, of the fall harvest occurred during hunts for other species. By contrast, spring hunting was specifically directed toward grizzly bears.

Males comprised 9 of the 13 bears killed and accounted for most of the harvest in both spring and fall seasons. This pattern has been observed in other years and is probably attributable to greater mobility among males and hunter preference for larger animals.

The unreported harvest of grizzly bears is considerable. A subsistence survey conducted by the Northwest Alaska Native Association (NANA) and published in 1974 by the Joint Federal-State Land Use Planning Commission listed an annual harvest of 80 bears by Natives. Some residents of the region claim to use grizzly bears for food and commonly disregard established regulations. Periodic visits to villages confirmed the illegal taking of several bears. The total 1975 harvest for Unit 23 was estimated to be at least 30 bears.

Composition and Productivity

Grizzly bear surveys were not conducted in Unit 23 during 1975. Based on information obtained through interviews with residents of the unit and personal observations made in the course of other field activities, the Unit 23 grizzly population during 1975 was estimated at 300-600 animals.

Management Summary and Recommendations

The annual harvest for the last three years has been relatively low, even considering the rather sizeable unreported kill. Prior to 1973 several guides regularly booked combined spring hunts for polar and grizzly bears, but this activity terminated with the cessation

of aerial polar bear hunting. Since then, nonresidents have taken less than 18 bears annually. Assuming that a minimum of 300 bears occupy Unit 23 the population does not appear to be in danger of overharvest. No changes in seasons or bag limits are recommended at this time.

PREPARED BY:

Carl A. Grauvogel
Game Biologist III

SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

BROWN/GRIZZLY BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 24-26 - Brooks Range and North Slope

Seasons and Bag Limits

Units 24-26 (except that area included in the Arctic National Wildlife Range)	Sept. 10-Oct. 10*	One bear every four regulatory years; provided that the taking of cubs or females accompanied by cubs is prohibited
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Units 25 and 26, those portions included in the Arctic National Wildlife Range	No open season*
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*Arctic National Wildlife Range was closed for the 1975-76 regulatory year; therefore, it was open in the spring and closed during the fall of 1975.

Harvest and Hunting Pressure

During 1975 sport hunters killed a total of 56 grizzlies in the Unit 24-26 area. Since 1961 this figure has been exceeded only once, when 61 were killed in 1973. Hunting pressure has steadily increased in the area. During the last 15 years the season length has been shortened considerably, but the number of bears killed has remained static or has increased. During the previous five years, when both spring and fall hunting were allowed, the mean take reported annually was 42. Data from 1971 and 1972 were not included in this calculation because either spring or fall seasons were closed during those years.

Bears probably were taken in nearly the same proportions as they existed as legal animals in the population. That is, considering the fact that females accompanied by cubs cannot legally be taken, approximately 75 percent of the single adults should be males and 25 percent females. Nonresidents, who must be accompanied by guides, were more selective in killing males than were residents: nonresidents took 40 (75%) males and residents took 16 (56%) males. The total take was comprised of 39 males and 17 females (70 and 30%, respectively).

The mean age of the grizzlies killed and reported in these units during 1975 was 9.9 years. The mean age of bears comprising annual harvests varies greatly; therefore, no inference regarding population status should be made on the basis of this criterion. The same is true for skull and hide sizes as parameters of population status.

Composition, Productivity and Abundance

Composition and productivity data are available only from a 5000 square mile area in the eastern portion of Unit 26 and the northern portion of Unit 25. Studies conducted in this area during 1973 and 1974 indicated that the density of grizzlies was low - about 1 bear per 50 square miles of prime habitat and 1 bear per 100 square miles of total available habitat.

The reproductive potential of bears in this study area was lower than that reported in other parts of North America. Although some grizzly sows 8.5 years old were observed with cubs, females on the average were 10.3 years of age before they produced young. The average litter size for females of all age classes was 1.8, and some females remained productive until 22.5 years of age. From a model based on the reproductive status of adult females in the population, the average interval between litters was 4.2 years.

The ages of the bears in the area (Table 1) appeared to indicate a declining population; there were more bears in the 12.5 - 14.5 and 15.5 - 17.5 year age classes than in younger age categories. Furthermore, there were not enough mature breeding females in the population to produce a number of young sufficient to maintain the population at its present level. Therefore, the population can be expected to decline unless the present rates of survival and productivity change.

Table 1. Age structure of the grizzly bear population on a study area in the eastern Brooks Range, 1974.

Age in Years	0.5-2.5	3.5-5.5	6.5-8.5	9.5-11.5
Number in Age Group	27	9	9	11

Age in Years	12.5-14.5	15.5-17.5	18.5-20.5	21.5-24.5
Number in Age Group	20	14	6	3

Management Summary and Recommendations

Hunting pressure in Units 24-26 is increasing and is not likely to taper off. Based on available data, the present level of sport harvest in the Brooks Range is numerically depressing the bear population to the point of influencing its ability to recover. While it is possible that population data presented here are representative of only a relatively small area, the low reproductive potential of females may apply throughout the area. Therefore, adoption of a low-harvest policy for these units seems warranted.

It is recommended that harvest in these units be held to no more than a total of 30 bears per calendar year. This level of harvest would allow recovery of the populations to former numbers and eventually provide for increased harvest. This level could be attained by shortening

present seasons, biennially alternating open seasons, or instituting seasons by permit only. Of these three options, the permit system offers the greatest control over hunter kill. At the same time it allows seasons to be scheduled during the period when pleasant weather conditions normally prevail. Shortening or biennial opening of the season may concentrate hunting pressure into a shorter time span without effectively decreasing the total kill; for these reasons a permit system offers the best solution for decreasing the take of bears in this area.

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SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

POLAR BEAR

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 26 - Arctic Slope

Seasons and Bag Limits

The passage of the Federal Marine Mammal Protection Act (MMPA) in 1972 prohibited the killing of all marine mammals (including polar bears), with the exception that Alaskan Natives could take such animals for subsistence (including parts of marine mammals for arts and crafts) providing the take was not wasteful. During the 1975-1976 season Alaskan Natives continued to take polar bears with no restrictions on seasons or bag limits.

Harvest and Hunting Pressure

Since the passage of the MMPA there has been no sport harvest of polar bears. During 1975, 18 polar bears taken by Natives were sealed. Because there was a great deal of uncertainty regarding the legalities of use of polar bear hides by Natives, hunters showed a lack of interest in having bear hides sealed.

Distribution and Abundance

The general feeling of village residents along the coast was that polar bear populations were rapidly increasing. Indeed, bears have been visiting village dumps and occasionally entering townsites even when people were visible. This has led to concern among residents, since bears have approached areas where children were playing. It appears that unless the harvest pattern changes, polar bears may cause nuisance problems in local areas.

Management Summary and Recommendations

Prior to the passage of the MMPA, there was little evidence of overharvest. Because there has been very low harvest and little hunting pressure to influence bear distribution since the Act, polar bears have become common along the coast and in some instances dangerous to the public. Efforts should continue to return management to the State so that regulations can be promulgated which will benefit both the resource and the public.

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SUBMITTED BY:

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Oliver E. Burris
Regional Management Coordinator

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 7 and 15 - Kenai Peninsula (Kenai Herds)

Seasons and Bag Limits

Unit 7, that portion including the drainages of Resurrection Creek, Big Indian Creek, and all Chickaloon River drainages.	Aug.10-Nov.30 Jan.1-Mar.31	One caribou, a limited number of caribou by permit only, provided that only antlered caribou may be taken from Jan.1-Mar.31. Conditions and number of permits will be described by Commissioner's announcement.
Remainder of Unit 7 Unit 15	No open season	

Harvest and Hunting Pressure

Eight hundred and sixty-nine persons obtained permits to hunt caribou in Unit 7 during the 1975-1976 season. Permits were available throughout the season on an unlimited basis. Eighty-seven caribou were taken (38 males and 49 females) (Appendix I).

Sixty-seven percent (58/87) of the harvest occurred in August (Appendix II) 20 percent in September, 7 percent in October, 2 percent in November and 5 percent in January

Snow accumulation was low allowing snow machine access to the wintering area for the first time since the season was opened in 1972. Unethical practices by snow machine hunters and disturbance of the caribou resulted in the closure of the season by field announcement on January 16, 1976.

Composition and Productivity

Conditions for censusing caribou were very poor throughout the winter of 1975-76. Several census attempts on the American Pass group resulted in failure. On February 25, 1976 a census resulted in counting 252 caribou. Conditions were fair except that snow was blown off many of the south- and west-facing slopes utilized by caribou. The animals were difficult to spot and it is believed that some caribou were missed.

The 1975 pre-hunting season population was projected at 397 animals. Removal of 87 animals by hunters should have left 310. Either production was not as good as expected or approximately 60 caribou were missed

during the census. With a post-hunting season population of 252 caribou, if recruitment equalled 36 percent as it has in the past, there should have been about 342 caribou in the population prior to the 1976 hunting season.

No complete surveys of the Subunit 15A group were made. Based on the observation of a herd of 62 caribou in spring 1975, the herd was estimated at 75-100 animals.

Management Summary and Conclusions

Although hunter success remained low, in terms of total permits issued, it appeared that the desired winter level of 250 animals was achieved by the harvest of 87 caribou. The validity of this year's census is in question.

Based on a minimum population of 252 and the past recruitment rate of 36 percent, the 1976 pre-hunting season population should number about 340 caribou. Because there was reason to believe the recruitment rate may have been below the usual 36 percent in 1975, and may again be low in 1976, a more conservative harvest is indicated.

Recommendations

It is recommended that not more than 50 caribou be harvested prior to conducting a census of the herd.

PREPARED BY:

Paul A. LeRoux
Game Biologist III

SUBMITTED BY:

John S. Vania
Regional Management Coordinator

Appendix I. Seasons, permits issued, harvest by sex and hunter success in Game Management Unit 7.

Year	Season	Permits Issued	Harvest		Total	Percent Successful
			♂	♀		
1972-73	Aug. 10 - Nov. 30	20	6	0	6	30.0
1973-74	Aug. 10 - Nov. 30	100	10	1	11	11.0
1973-74	Jan. 1 - Jan. 31	50	1	0	1	2.0
1973-74	Feb. 1 - Feb. 28	50	0	0	0	0.0
1973-74	March 1 - March 31	50	0	0	0	0.0
Total 73-74		250	11	1	12	4.8
1974-75	Aug. 10 - Nov. 30					
	Jan. 1 - March 31	573*	30	14	44	7.7**
1975-76	Aug. 10 - Nov. 30					
	Jan. 1 - March 31***	869*	38	49	87	10.0***

* Unlimited permits.

** Unknown number of hunters did not hunt.

*** Emergency order closed season on January 16, 1976.

Prepared by: Paul LeRoux, Game Biologist III.

Appendix II. Chronology of the harvest, American Pass group Game Management Unit 7.

	Aug.		Sept.			Oct.		
	10-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31
♂	9	9	3	12	0	1	2	0
♀	24	19	1	0	1	2	1	0
Total	33	25	4	12	1	3	3	0
	Nov.			Jan.		Feb.	March	
	1-10	11-20	21-30	1-10	11-31			
♂	1	0	0	1	0	0		0
♀	0	0	1	3	0	0		0
Total	1	0	1	4	0	0		0

Prepared by: Paul A. LeRoux, Game Biologist III

Appendix III. Sex and age composition of the American Pass caribou group GMU 17.

Date	Tot. ♂♂ per 100 ♀♀	Yrlg. per 100 ♀♀	Calves per 100 ♀♀	Yrlg. % in Herd	N ₁ = ()	Calf % in Herd	N ₂ = ()	Cow % in Herd	N ₃ = ()	Bull % in Herd	N ₄ = ()	Sample Size (sum of N ₁ thru N ₄)
Nov. 19, 1974 (Count area one)	71.2	26.9	44.2	11.1%	(14)	18.3%	(23)	41.3%	(52)	29.4%	(37)	126
Nov. 19, 1974 (count area two)	76.7	13.3	43.3	5.7%	(4)	18.6%	(13)	42.9%	(30)	32.9%	(23)	70
Total	73.2	22.0	43.9	9.2%	(18)	18.4%	(36)	41.8%	(82)	30.6%	(60)	196

Remarks: All observations were from ground counts. A spotting scope was used to classify caribou in count area 1. In count area 2, due to the proximity of caribou to observer, binoculars were used (excellent conditions).

Caribou were counted 3 times in count area 2 and only the most optimum count was recorded in the final tally. Approximately 200 caribou were in count area 1.

Area 1 counts were good counts. The main interference was looking into sun without benefit of sun shade on spotting scope.

Prepared by: Paul A. LeRoux, Game Biologist III

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 9 - Alaska Peninsula (Alaska Peninsula and
Mulchatna Herds)

Seasons and Bag Limits

July 1 - June 30

Five caribou, provided that not
more than three caribou may be taken
from August 10 - November 30.

Harvest and Hunting Pressure

Hunting pressure on caribou on the Alaska Peninsula has remained relatively constant for the past 3 years. As harvest reports are not required for this unit, specific harvest figures are unavailable. The estimated harvest remained at approximately 2,000 animals with less than 10 percent of those animals coming from the Mulchatna herd in Unit 9.

A check station was operated in the King Salmon-Naknek area between September 18 and October 24. The harvest reported by 408 hunters contacted was 401 caribou (248 males and 153 females).

Composition and Productivity

An aerial photo census was conducted on post-calving concentrations south of the Naknek River. Photographs of caribou in the vicinity of Port Heiden identified 10,379 animals. The accompanying, summer, ground composition counts showed ratios of 29.1 bulls:100 cows and 49.2 calves:100 cows. Fall composition surveys of 2,396 caribou showed 33.0 bulls:100 cows and 44.6 calves:100 cows. The population estimate of this group of caribou, based upon this census, was 10,340.

Photographs taken in the Black Hills, south of Port Moller, showed 2,627 caribou. The accompanying, summer, ground composition counts showed 19.8 bulls:100 cows and 48.9 calves:100 cows. Budgetary limitations precluded conducting fall composition counts necessary to complete the census on this group.

Management Summary and Conclusions

Caribou ranging between the Naknek River and Port Moller comprise the majority of the Alaska Peninsula herd. These animals receive heavy hunting pressure and approximately 75 percent of the harvest comes from this group. Composition counts of these animals indicate a decline in the bull:cow ratios. In 1970 there were 48.3 bulls:100 cows compared to 33.0 bulls:100 cows in 1975. This reduction could be due to the multiple bag limit and hunter bias for large antlered animals. Limited check station data indicate 61.8 percent of the harvest was male, while the male segment of the herd, including male calves, comprised only 31

percent of the population. To maintain the present harvest level while attempting to produce large antlered males, the sex ratio of the harvest should be altered to increase the number of females harvested, and reduce the number of males taken.

The fall 1975 sex and age composition ratio of 44.6 calves:100 cows indicates a herd experiencing excellent reproduction and possibly increasing. An increase in herd size is not desired at this time, as the existing population may be causing range deterioration.

During the past year, neither the spring nor fall migrations of the Alaska Peninsula caribou herd followed previously established patterns. Post-calving concentrations were delayed approximately 2 weeks, raising questions as to the accuracy of the photo census. Much of the fall migration was believed to have occurred along the mountains of the Aleutian Range instead of on the Bering Sea flats. Arrival on the wintering grounds between the King Salmon and Naknek River, was delayed nearly 6 weeks with the herd then congregating on the northern edge of the area. This concentration remained only 1 month before the southward movement began, 6 weeks earlier than normal. The animals deviated from their established southerly migration route, swinging east along the north shore of Becharof Lake and into the Kejulik Valley. Few caribou have used this valley in past years.

Similar erratic migratory patterns were reported for the Nelchina herd in the 1960's, the Forty-Mile herd in the 1930's and again in the 1950's and the McKinley herd in the 1920's (Skoog 1968). In these instances the erratic movements were a prelude to the emigration of a large number of animals resulting in population declines. The cause of emigration is unknown, but if related to herd density or range deterioration, continued population expansion encouraged by reduced harvests would be undesirable. If erratic migratory patterns are an accurate warning of population declines, the Alaska Peninsula caribou herd may experience a decline in the near future. This decline would most likely occur through emigration across the Naknek and Kvichak Rivers, into the range of the Mulchatna caribou herd. This type of movement has not occurred since the 1900's.

Recommendations

1. An aerial photo census, using 35mm hand-held cameras, should be conducted on the post-calving concentrations in 1976. The erratic movements encountered in 1975 leave the accuracy of that year's survey in question.
2. Reduce the bag limit during the period of high male harvest, August through November, to one caribou. Lowering the kill during this time will reduce the male harvest and should help reverse the declining bull:cow ratio.
3. Maintain a liberal bag limit during the winter hunting period, but restrict that harvest to antlered animals. This should maintain the present harvest level while directing the harvest to the antlered

females. Bull caribou would be protected as few retain antlers during the winter. The cows would gain protection during calving and for several months following, when calves are most dependent upon them for survival. Calves would receive protection for the first year of life.

4. A harvest report program should be initiated for the Alaska Peninsula to obtain specific harvest data needed for management.
5. No changes in season length are recommended.

Literature Cited

Skoog, R.O. 1968. Ecology of the Caribou (Rangifer tarandus) in Alaska. University of California, Berkeley, unpub. 698pp.

PREPARED BY:

Nick Steen
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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 10 - Aleutian Islands (Adak Island Herd)

Seasons and Bag Limits

Adak Island only Aug. 10 - Mar. 31* Two caribou

*Season may be closed by field announcement

Harvest and Hunting Pressures

One hundred and four caribou were killed on Adak Island during the 1975-76 season (Appendix I). The confirmed sport harvest consisted of 39 males, 60 females, and 5 unknown sex calves.

Composition and Productivity

No data were available.

Management Summary and Conclusions

Hunting on Adak Island is almost entirely the result of recreational efforts by military and civilian personnel stationed there. The management policy for the island is to keep the herd at approximately 240 animals.

On December 9, 1975, U. S. Navy conservation agents conducted a caribou census on Adak Island via UH-46 Delta-type helicopter. Adak Island has been divided into six survey sectors to facilitate complete and accurate surveys (Appendix II). Two hundred and eighty-seven caribou were seen. Eighty-seven caribou were reported harvested prior to that survey.

On April 21, 1976, U. S. Navy conservation agents conducted another caribou census via two UH-46 Delta-type helicopters. The survey flight level was kept at 400 feet due to the nearing of calving and weather conditions. To avoid duplication of counts, photographs were taken of groups of caribou; there was also close coordination via radio and survey sector maps.

The total number of caribou observed was 203. One hundred and four caribou were reported harvested prior to the April survey. Therefore 17 caribou were taken between the December and April surveys. If the count of 287 count data are used as a minimum population figure, this would indicate 270 caribou were present on Adak Island after the 1975-76 hunting season (precalving 1976).

Recommendations

A caribou sex and age composition count should be conducted on Adak Island during the peak of the rut.

Using the minimum population of 270 caribou on Adak Island prior to 1976 calving, approximately 100 caribou should be taken during the 1976-77 hunting season.

PREPARED BY:

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SUBMITTED:

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Regional Management Coordinator

APPENDIX I

Adak Caribou Herd, Population and Mortality 1958 - 1975

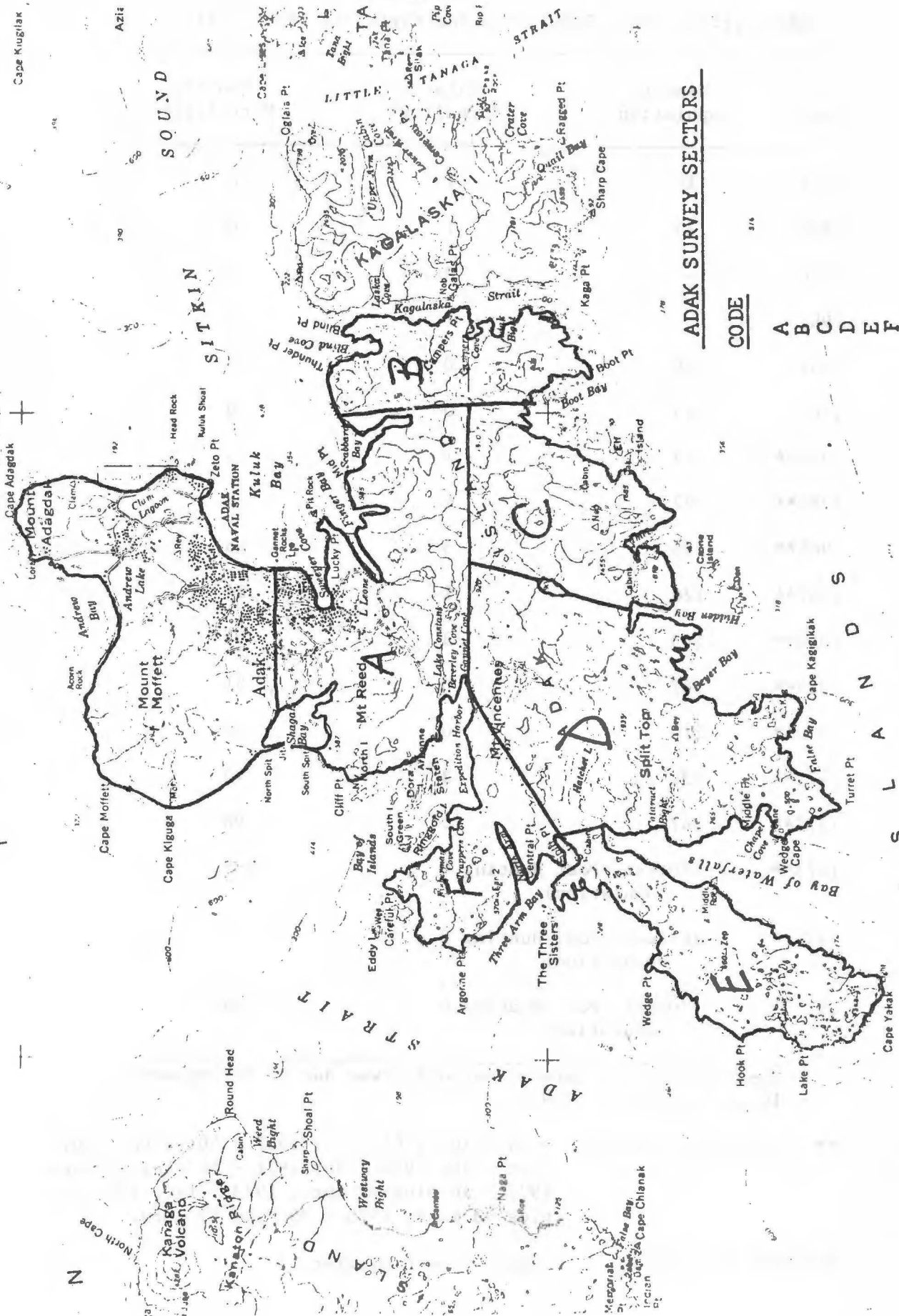
Year	Winter Population	Natural Mortality*	Hunting Mortality*
1958	10	1	0
1959	23	1	0
1960	-	0	0
1961	-	1	0
1962	36	0	0
1963	43	0	0
1964**	65	1	4
1965**	87	8	2
1966**	106	3	18
1967**	126	1	24
1968**	163	3	55
1969**	167	0	51
1970**	214	0	53
1971**	230	3	45
1972**	347	1	98
1973**	230(est. Post Hunting 0 population)		108
1974**	264(est. Post Hunting 0 population)		93
1975**	270(est. Post Hunting 0 population)		104

* Essentially, all natural mortality was due to entanglement in wire prior to 1969.

** Allowable harvest: 1964 - 10; 1965 - 30; 1967 - 50; 1968 - 50; 1969 - 50; 1970 - 50; 1971 - 50 plus 20 more; 1972 - 50 plus 97 more; 1973 - 140; 1974 70 plus 48 more; 1975 - 90 plus 47 more.

PREPARED BY: Jerome J. Sexton, Game Biologist II

APPENDIX II



ADAK SURVEY SECTORS

CODE

A B C D E F

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 10 - Unimak Island only

Seasons and Bag Limits

August 10 - March 31

Four caribou

Harvest and Hunting Pressure

Harvest and hunting pressure on Unimak Island caribou is very light due to limited access. The majority of the harvest is by residents of Cold Bay, False Pass and the Cape Sarachev Radar Site. The total harvest is believed to be less than 50 caribou a year.

Composition and Productivity

An aerial photo census, as described by Bos (1973), was attempted in July 1975, however, due to climatic and budgetary restrictions, only a limited photo census was accomplished. Fog in the vicinity of Cape Mordvinof prohibited censusing the northwest portion of the island. Photographs of the remainder of the island showed 3,334 caribou.

Management Summary and Conclusions

Access to the caribou herds of the Aleutian Islands is difficult and costly to all but local residents. Due to this limited access, it is doubtful if hunting has any effect upon caribou populations.

Recommendations

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

Literature Cited

Bos, G.N. 1973. Nelchina Caribou Report. Alaska Dept. of Fish and Game. Fed. Aid in Wildlife Restoration, Project W-17-5. Juneau. 25pp.

PREPARED BY:

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SUBMITTED BY:

John S. Vania
Regional Management Coordinator

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 11 - Wrangell Mountains and Chitina Valley
(Mentasta Herd)

Seasons and Bag Limits

August 10 - September 30

One caribou

Abundance and Mortality

A photo census of this herd in post-calving aggregations was obtained on June 27, 1975. Several all-bull bands were also counted in addition to groups composed primarily of cows and calves. A count of 1,978 adults and 478 calves (2,456 combined total) was obtained. Calves constituted 19.5 percent of the herd. This herd's size has remained relatively stable for at least the past 6 years (Appendix I).

The estimated harvest of 162 caribou during 1975 was relatively large. Reported harvests (Appendix I) have varied widely, but it is likely that the larger harvests were mostly from bands of Nelchina caribou that wintered in Unit 11. Harvests from this herd during the past 4 years probably more closely reflect actual harvests during earlier years. If the typical harvest has been 100 caribou and the typical herd size has been 2,000 caribou, average harvests of about 5 percent of the total herd have apparently stabilized herd growth. Therefore, a continuation of large harvests, such as occurred during 1975, should be avoided.

Most hunters of Mentasta caribou have been Alaskan residents (Appendix II). Hunter success and transportation means by successful hunters have changed with the reduction in season length and bag limit. The harvests have shifted from the Nabesna Road vicinity to the Mt. Drum vicinity where aircraft transportation to dirt strips is the preferred transportation method.

Management Summary and Recommendations

The Mentasta caribou herd has apparently been stabilized with relatively low harvests, mostly bulls. The causes of the low yield should be investigated and corrected to make this herd more beneficial to humans. This type of hunt, where most hunters use aircraft to reach areas that they hunt on foot, frequently provides a lot of enjoyment per animal harvested (a high quality hunt) and is desirable. The season and bag limit should remain unchanged.

PREPARED BY:

SUBMITTED BY:

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Game Biologist III

John S. Vania
Regional Management Coordinator

APPENDIX I

Seasons, bag limits, harvests, sex composition of the harvests, and abundance estimates, Mentasta herd, 1968-69 to 1975.

Year	Season	Bag Limit	Harvest		Reported Adult Males in Harvest Number (%)	Estimated Total Adult Caribou Population ^c .
			Known	Estimated ^a .		
1968-69	Aug. 10 - Mar. 31	3 Caribou	304	----	122 (74%)	----
1969-70	Aug. 10 - Mar. 31	3 Caribou	288	414	203 (71%)	1892
1970-71	Aug. 10 - Sep. 30 Nov. 1 - Mar. 31	3 Caribou	846	1317	519 (62%)	2047
1971-72	Aug. 10 - Mar. 31	3 Caribou	1693	2006	742 (45%)	----
1972	Aug. 10 - Sep. 20	1 Caribou	89	----	60 (69%)	----
1973	Aug. 10 - Sep. 30	1 Caribou	81	99	65 (82%)	2202
1974	Aug. 10 - Sep. 30	1 Caribou	90	105	66 (76%)	----
1975	Aug. 10 - Sep. 30	1 Caribou	143	162	101 (72%)	1978

a. Estimated harvests were based on extrapolation formulas.

b. Male percentage in the harvest during 1968-69 was based on a sample size of 164. Percentages are based only on reports where sex of kill was specified.

c. Skoog tallied 2305 caribou in the Mentasta herd during February 1962 (Bos, 1974). Maximum total estimates made during post calving aggregations of subsequent years are listed. Abundance estimates during 1970 and 1971 were accumulate estimates of group sizes made from a fixed wing aircraft. The 1973 value of 2202 was a corrected census estimate obtained from direct summer counts corrected for fall composition values. The 1975 value was a photocensus count of all adults found during late June.

Prepared by: Carl McIlroy, Game Biologist III

APPENDIX II

A comparison of percentage of resident hunters, hunter success and transportation means for the Mentasta herd, 1960-70 through 1975.

Year	Resident Hunters, Number (%) ^a .	Caribou Kill per Hunter, Number (%)			Average Kill Per Hunter	Transportation Means of Successful Hunters, Percent. ^b					
		0	1	2+		A	H	B	S	O	F
1969-70	114 (68%)	102 (35%)	122 (42%)	67 (23%)	0.99	-----Not Available-----					
1970-71	389 (85%)	118 (19%)	250 (41%)	241 (40%)	1.39	-----Not Available-----					
1971-72	827 (89%)	457 (32%)	474 (33%)	492 (35%)	1.19	-----Not Available-----					
1972	50 (69%)	342 (82%)	63 (15%)	11 (3%)	0.22	31%	7%	2%	17%	25%	18%
1973	53 (66%)	172 (68%)	81 (32%)	—	0.47	75%	12%	—	—	5%	7%
1974	51 (59%)	107 (54%)	90 (46%)	—	0.84	64%	18%	1%	—	10%	7%
1975	83 (62%)	110 (43%)	143 (57%)	—	0.57	80%	10%	2%	—	6%	2%

a. Percentages calculated by: (residents/residents & nonresidents) x 100.

b. Symbols for transportation means: A = Airplane, H = Horse, B = Boat, S = Snowmachine, O = Off-road vehicles (including trail bikes) and F = Afoot and/or highway vehicle, Sample = Sample size. Because some hunters do not report the type of transportation used and other hunters report several types, the sample size does not represent all hunters, but this data is useful for trend comparisons.

Submitted by: Carl McIlroy, Game Biologist III

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 12 - Chisana Herd

Seasons and Bag Limits

Unit 12	Aug. 10-Sept. 30	One caribou
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Harvest and Hunting Pressure

Harvest tickets revealed that the 1975 caribou harvest from the Chisana herd was 50 animals (43 bulls, 6 cows and 1 animal of undetermined sex). This marks a substantial increase from the average annual harvests of 30 animals recorded for this herd during the period 1960-74.

Management Summary and Recommendations

Little information has been gathered on the Chisana herd. In the future, efforts should be made to obtain age and sex composition data, rates of recruitment, and population estimates at three to five year intervals. This information is essential if the status of this herd is to be understood and significant trends in abundance detected.

A short season and conservative bag limit are now in effect and the relatively low harvests expected in the near future will not influence this herd substantially. Therefore, no regulation changes are recommended until a better understanding of the herd has been obtained.

PREPARED BY:

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SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 12, 20 & 25 - Fortymile herd

Seasons and Bag Limits

Units 12, 20 & 25 Aug. 10-Sept. 20 One caribou

Harvest and Hunting Pressure

According to harvest ticket reports 34 caribou (22 bulls and 12 cows) were legally harvested from the Fortymile herd during the 1975 season. Almost all of the harvest occurred near the headwaters of the Fortymile River in the Mt. Harper-Molly Creek area. Air transportation was the primary mode of hunter access. The season closed before the caribou began crossing the Taylor Highway in mid-October. This precluded a considerably higher harvest.

Composition and Productivity

Normally, composition surveys are conducted in mid to late September when the herd has moved into the alpine foothills surrounding Glacier Mountain. During 1975 this movement did not occur and, because of the unsuitable terrain (timbered areas) occupied by the caribou, fall counts were not attempted.

Classification counts conducted on the calving grounds (summarized below) indicated that calf survival during 1975 was low. Thus, the trend of low calf survival recorded during the past few years continued during 1975.

<u>Date</u>	<u>Calves/100 Adults</u>	<u>Sample Size</u>
5-27-75	64	275
6-12-75	18	1241

Management Summary and Recommendations

Although recruitment into the Fortymile herd appeared to be continuing at a low level, the few animals taken by sport hunters probably had an insignificant impact on the herd. Therefore, the short season provided some recreational opportunity without seriously affecting the herd. Efforts to gather sex and age composition data should be continued on an annual basis. Until the herd increases in size or its composition changes substantially, no changes in seasons or bag limits are recommended.

PREPARED BY:

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SUBMITTED BY:

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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 13 and 20 - McKinley herd

Seasons and Bag Limits

Units 13 and 20

Aug. 10-Sept. 20

One caribou

Harvest and Hunting Pressure

This report covers calendar year 1974 and 1975, since the most recent documentation of this herd covered the 1973 season.

Reported harvest and hunting pressure remained light the past two years. During the 1974 season 32 hunters harvested 10 caribou, consisting of 4 bulls, 5 cows, and one animal of unknown sex. Five of six nonresidents took caribou from the McKinley herd. Among the 26 resident hunters, 5 were successful.

A slight increase in hunting pressure and harvest occurred during the 1975 season. Thirty-seven hunters harvested 10 bulls and 3 cows; success for both residents and nonresidents was 50 percent.

Seasonal Distribution, Migration and Concentration

Observations of caribou inside and outside McKinley Park indicated a general northerly movement through the Park during the period June through October, with animals wintering in northern and western portions in the foothills of the Muddy River drainage and Kantishna Hills.

A band of 500 caribou was observed south of the Park on the upper Chulitna River in early June 1974. Several smaller groups ranging in size from 5-140 animals were seen along the southern boundary of the Park between Costello Creek and Foggy Pass later that month. Scattered bands totaling 500 caribou were seen moving down Stoney Creek in October and at the headwaters of Moose Creek in November.

During late May and early June 1975 many small bands of caribou were scattered throughout the eastern half of the Park. Post-calving movement was in a westerly direction and in July approximately 615 caribou were located in the Bull River-Foggy Pass area. Distribution of animals from October through December 1975 revealed utilization of winter range in the vicinity of Wonder Lake, Moose Creek, Muddy River, and McKinley River. The "traditional" calving area (Savage-Sanctuary Rivers) was not utilized in 1975; instead, calving was widespread from the south slopes of the Alaska Range to Wonder Lake.

Composition and Productivity

Limited information obtained in 1974 suggested low initial production; ground composition counts conducted one month following calving revealed that calves comprised 17 percent of the population (n=432).

During 1975, data on herd composition and productivity were obtained through fixed wing reconnaissance flights. Despite inherent shortcomings in reliability of information and differences among observers, the data indicated extremely low calf production and survival to six months of age. Calves comprised only 10 percent of the sample (n=198) three weeks following calving in June; by the end of December the calf segment of caribou observed had declined to 1 percent.

Management Summary

Marked declines in the numbers of caribou within and immediately adjacent to McKinley Park have occurred since the late 1950's, when the herd numbered at least 8,000 animals. Part of this reduction can be attributed to a westerly emigration of animals into the Big River, Tonsona River and Rainy Pass areas. Caribou frequently observed in these areas apparently do not utilize the traditional summer and winter ranges of the McKinley group.

Current information suggests this herd numbers 800-1,000 animals; further declines in population size will result from the low level of calf production observed in 1975. Reported sport harvests have not been a significant factor in the herd's recent decline, but hunting may delay its recovery. Losses to predation may be the most significant depressant on population increase; wolves and grizzly bears are abundant within, and immediately adjacent to, the Park boundary. This factor alone will maintain the herd at a low level in the absence of improved recruitment.

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SUBMITTED BY:

Oliver E. Burris
Regional Management Coordinator

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

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

Seasons and Bag Limits

Sept. 5 - Sept. 20

One caribou

Harvest and Hunting Pressure

Eight caribou, all males, were harvested in Unit 14 during 1975 (Appendix I). Eight of 39 hunters who obtained caribou harvest reports for this area were successful hunters; five were residents and three were nonresidents (Appendix II). Past caribou harvests in Unit 14 have usually been from the Talkeetna Mountains, probably from scattered bands of the Nelchina herd.

Composition and Productivity

Because caribou harvested in Unit 14 are peripheral bands of the Nelchina herd, see Caribou Survey-Inventory Progress Report, Unit 13 for composition and productivity information.

Management Summary and Conclusions

Unit 14 caribou are peripheral bands of the Nelchina herd. Harvest and sightings have been dependent upon hunting/observing pressure as well as seasonal distribution and abundance of the Nelchina caribou. Caribou observations in Unit 14 have generally been sporadic, and there has been little interest by the hunting public of Unit 14. Total harvests have ranged from a high of 55 during 1971-72 to a low of 8 this year.

Recommendations

Season and bag limits in Unit 14 should coincide with those set for the Nelchina (Unit 13) herd.

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Game Biologist III and Game Biologist III

SUBMITTED BY:

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Regional Management Coordinator

Appendix I. Reported Harvest of Caribou from Alaska's Game Management Subunits 14A and B, 1969-70 through 1975-76.

<u>Year</u>	<u>Males</u>	<u>Percent</u>	<u>Females</u>	<u>Percent</u>	<u>Unspecified</u>	<u>Total</u>
1969-70	Breakdown not available for Unit 14					14
1970-71	"	"	"	"	"	38
1971-72	"	"	"	"	"	55
1972-73	"	"	"	"	"	21
1973-74	11	84.6	2	15.3	0	13
1974-75	13	81.2	3	18.7	2	18
1975-76	8	100.0	0	0	0	8

Appendix II. Residency* of Successful Caribou Hunters in Alaska's Game Management Subunits 14A and B, 1969-70 through 1975-76.

<u>Year</u>	<u>Resident</u>		<u>Nonresident</u>		<u>Residency</u>	<u>Total</u>
	<u>No.</u>	<u>Percent</u>	<u>No.</u>	<u>Percent</u>	<u>Not Given</u>	
1969-70	8	80.0	1	10.0	1	10
1970-71	13	54.1	11	45.8	0	24
1971-72	21	53.8	17	43.5	1	39
1972-73	9	42.9	12	57.2	0	21
1973-74	4	30.8	9	69.2	0	13
1974-75	14	82.4	3	17.6	1	18
1975-76	5	62.5	3	37.5	0	8

* Hunters who took more than one caribou only counted one time.

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Game Biologist III and Game Biologist III

CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 16 - West Side of Cook Inlet

Seasons and Bag Limits

Aug. 10 - March 31

Two caribou

Harvest and Hunting Pressure

No data were gathered during this report period.

Composition and Productivity

No data were gathered during this report period.

Management Summary and Conclusions

As noted in the Survey-Inventory Progress Report for 1974, little data are available on caribou in Unit 16. With season lengths shortened in Southcentral Alaska, it is expected that more hunter pressure may be generated on caribou in Unit 16 in the future.

Recommendations

The harvest report requirements should be expanded to include caribou taken in Units 16 and 19.

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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 17 - Bristol Bay (Mulchatna Herd)

Seasons and Bag Limits

July 1 - June 30

Three caribou

Harvest and Hunting Pressure

Hunting pressure on caribou in this unit has remained relatively constant for the past 2 years. Heavy hunting pressure occurred during the winter months due to hunting the same day airborne.

Specific harvest figures were unavailable as harvest reports are not required for this unit. The estimated harvest for GMU 17 was 1,500 caribou. An additional 500 caribou were believed harvested from the Mulchatna herd during its travels in surrounding game management units. The total estimated harvest for the Mulchatna caribou herd was 2,000 animals.

Composition and Productivity

Caribou in this unit comprise the closest herd with a year-round season and multiple bag limit to the Southcentral Alaska population centers. An exception to the statewide airborne regulation allows harvesting these caribou from January 1 through April 30 the same day the hunter is airborne. This exception, with the liberal bag limit, is believed to have resulted in 75 percent of the estimated total harvest resulting from hunts during the January to April hunting period. Most of the remaining harvest is believed to be during the fall by trophy and recreational hunters. The harvest by local residents for domestic use probably constitutes less than 20 percent of the total.

Patches of bare ground, exposed by wind and snow and covered with ash, from the January volcanic eruptions on Augustine Island, restricted access by skiequipped aircraft during January and February 1976, thereby reducing hunting pressure and harvest during that period. Fresh snow, clear skies and calm winds during March provided excellent conditions for ski-equipped aircraft, increasing hunting pressure and harvest.

Present liberal regulations allowing for a multiple bag limit and hunting the same day airborne encourages caribou hunting in this unit. In winters with conditions suitable for ski-equipped aircraft, the present regulations could attract excessive hunting pressure, resulting in an overharvest. The implementation of a restrictive daily bag limit on aircraft-transported hunters could reduce this attraction. Elimination of the airborne exception is not desired by local residents. With an estimated 14,231 animals (1974 data) in the Mulchatna caribou herd, it can sustain the present harvest level.

The Mulchatna caribou herd also ranges through portions of Game Management Units 9, 18, and 19. Reports for these units should be consulted for additional hunting pressure and harvest information.

Recommendations

1. A harvest report program should be initiated for this unit to obtain specific harvest data needed for management.
2. A daily bag limit of one caribou should be implemented for hunters utilizing aircraft for transportation from January 1 through April 30. This would lessen the desirability of caribou hunting in GMU 17 and should reduce the potential for an excessive harvest.

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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 18, 19 and 21 - Including the Mulchatna herd, the Beaver Mountains herd and other groups found in the Kuskokwim Mountains and the north slope of the Alaska Range.

Seasons and Bag Limits

The portions of Units 18 and 21 south of the Yukon River, and Unit 19	Aug. 10 - Mar. 31	Three caribou
The portions of Unit 18 and 21 north of the Yukon River	No closed season	No limit

Mulchatna

Harvest and Hunting Pressure

Patterns of hunting activity in the Nushagak Hills and Upper Mulchatna and Stony River drainages have continued to develop along the same direction as reported in 1974. Spring utilization of caribou has become increasingly heavy in the Upper Stony River, Whitefish Lake and Upper Mulchatna River areas. Many airborne hunters ignored the "day airborne" regulation effective in Unit 19. The estimated harvest for both fall and spring 1975-76 was nearly 1000 animals.

Seasonal Distribution, Migration and Concentration

Movements and seasonal distribution of this herd showed very little change from that reported in 1974.

Beaver Mountains Herd

Harvest and Hunting Pressure

Less than 20 caribou were known to have been taken from the Beaver Mountains herd in 1975.

Seasonal Distribution, Migration and Concentration

Seasonal distribution of this herd showed little change from that reported for 1974. Small groups of animals from the Beaver Mountains herd were seen south of Bonanza Creek (Unit 21) in the spring of 1975.

Kuskokwim Mountains Groups (Cloudy-Sunshine Mountains, Nixon Flats, Unit 19)

Harvest and Hunting Pressure

Fall movements of this group again resembled former patterns, and caribou were available for four to six weeks on the upper Nixon Flats. Hunters took no more than 10 animals during this period.

Seasonal Distribution, Migration and Concentration

On October 29, 1975, approximately 90 caribou were seen on the Nixon Fork near Little Burnt Top, and caribou remained in this general vicinity until late November.

Composition, Productivity and Distribution

Only 12 calves were in the group observed on the Nixon Fork drainages, and scattered observations of other small bands of the Kuskokwim Mountains group also suggested that production and/or survival had remained low.

Big River-Farewell-Telida Group

Harvest and Hunting Pressure

Very few caribou have been harvested from this group in recent years. The infrequency of observations suggested that this group is comprised of very few animals. Nicholai residents took up to 12 caribou in the Big River area during December 1975.

Seasonal Distribution, Migration and Concentration

No changes in distribution and migration of this group have been noted since 1974.

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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Unit 20 - Macomb Plateau (Delta herd east of Delta River)

Seasons and Bag Limits

Unit 20 Aug. 10-Sept. 20* One caribou

*The Macomb Plateau Management Area was closed to all motorized vehicles (except float planes utilizing Fish Lake) involved in hunting from August 10-September 20.

Harvest and Hunting Pressure

Restrictions eliminated use of motorized vehicles within the Macomb Plateau Management Area during the 1974 and 1975 hunting seasons. As planned, this reduced hunting pressure and success, yet allowed for considerable recreational opportunity. Hunting pressure and harvest data are summarized in Table 1. Despite the vehicular restriction the number of hunters utilizing the area increased 72 percent between 1974 and 1975. On opening day 42 hunters were observed on the Macomb Plateau. According to harvest ticket reports 124 hunters took 28 caribou (14 females and 14 males) from Macomb Plateau and 14 caribou (9 males and 5 females) from the Alaska Range between the Delta and the Robertson Rivers. Overall hunter success was 34 percent. Success among foot hunters increased from 15 percent (1974) to 29 percent (1975). Success ratios among hunters using other modes of transportation decreased.

Table 1. Summary of harvest ticket data for Macomb Plateau, 1975.

Transport Type	No. of all Hunters	Successful Hunters			% Hunter Success
		Cows	Bulls	Total	
Walk in	77	13	9	22	29
Aircraft	4		1	1*	25
ATV's	28	3	6	9	32
Horses	15	3	7	10	67
Total	124	19	23	42	34

*Caribou not taken in Macomb Management Area; in addition one horse hunter and three walk-in hunters took caribou from areas other than Macomb.

Composition and Productivity

Composition counts conducted on the ground were not obtained in 1975 because of inclement weather. Aerial calf counts in mid-November showed 11 percent calves (31 calves, 247 adults).

Management Summary and Recommendations

The number of caribou in the Alaska Range east of the Delta River was estimated at 700 to 800 animals. This estimate included those on Macomb Plateau. Production (5 to 8% yearlings) was relatively low. Based on annual production, the reported harvests during 1974 and 1975 were high and approached the annual increment each year. Data regarding caribou movement to and from Macomb Plateau are insufficient to allow an accurate assessment of population trends. Preliminary findings indicate the Macomb caribou may be a nucleus herd of approximately 250 animals that remain on the Plateau year round. An equal number of animals may return to the Plateau for the rut during October and November. Following the rut these animals leave the Plateau to winter along the upper Robertson, Gerstle, Johnson and Delta Rivers. If this is true the resident, nucleus herd receives much more hunting pressure than the caribou utilizing the area only during the rut. In effect, we may be collecting composition data from two separately hunted populations, one that receives heavy hunting pressure and one with light hunting pressure.

The actual harvests are thought to be 25 to 30 percent higher than reported. For example, the reported harvest from the Macomb Plateau portion of the area during 1975 was 28 animals. A running tally augmented with field checks was taken during the 1975 season and indicated 35 animals were harvested from Macomb Plateau alone. Poor hunter distribution presents another problem in management of caribou occupying the eastern Alaska Range. Eighty percent of the harvest was from two vulnerable areas (Macomb Plateau and the Jarvis-Ober Creek area). Therefore, it appeared that 90 percent of the harvest was from the accessible 50 percent of the herd. Low calf survival, wolf predation and continued harvest at the levels recorded during 1974 and 1975 will likely result in a slow decline in the nucleus herd. Caribou in the surrounding area sustained less than 20 percent of the harvest and were possibly on the increase. A higher take of wolves from the area would result in increased calf survival and more caribou available to the hunters.

More information on caribou movement is needed to determine the location of the animals during the hunting season. In addition, range conditions should be evaluated.

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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 23, 24 and 26 - Arctic herd

Seasons and Bag Limits

Units 23, 24 and 26	No closed season	No limit
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Survey and Inventory data for the Arctic herd will be included in Federal Aid to Wildlife Restoration Progress Report (W-1-17-8, Study III-B, Job 3.19) entitled Size, Composition and Productivity of the Arctic Caribou Herd, by James L. Davis.

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CARIBOU

SURVEY-INVENTORY PROGRESS REPORT - 1975

Game Management Units 25 and 26 - Porcupine Herd

Seasons and Bag Limits

Units 25 and 26 No closed season No limit

Harvest and Hunting Pressure

The harvest of the Porcupine caribou herd in 1975 was taken primarily by hunters from Kaktovik and Arctic Village in the United States and by hunters from Old Crow in Canada. The harvest estimate for Kaktovik, where most caribou were taken during the calving season, was 100-200 animals. Caribou were available to residents of Arctic Village during August and again from October to April. As many as 800-1200 caribou were killed by hunters from Arctic Village. Some caribou were reported to have been taken by residents of Venetie. No figures were available for the number of caribou killed by Canadian hunters, but reports indicated that the take was probably no higher than that recorded for Arctic Village residents. Sport hunting in the area by persons residing outside the unit increased but probably accounted for no more than 50-100 animals.

Herd Size, Composition and Productivity

The size of the Porcupine caribou herd has remained at about 110,000 animals since 1970. Composition observed during the post-calving migration is presented in Table 1. An aerial photo extrapolation estimate was not conducted, but one is planned during 1976 or 1977. Sex and age composition surveys conducted in 1975 indicated that the herd remained static or increased slightly. Calf production is high and survival to yearling age is good.

Table 1. Porcupine caribou herd composition observed during post-calving migration, 1972-1975.

Year	Source*	Cows		Calves		Calves/ 100 cows	Yearlings		Bulls		Total No.
		No.	%	No.	%		No.	%	No.	%	
1972	ADF&G	6,357	54	3,052	26	48	1,079	9	1,433	12	11,921
1973	RRCS/ADF&G	11,037	58	5,144	27	47	1,070	6	1,830	10	19,101
1974	RRCS	7,818	55	5,176	37	66	437	3	696	5	14,127
1975	RRCS	9,823	52	4,986	27	51	1,711	9	2,294	12	18,814

*Alaska Department of Fish and Game
Renewable Resources Consulting Services

Management Summary and Recommendations

During 1975, hunter kill of caribou from the Porcupine herd in the United States was probably no more than 1500 animals. Assuming that no more than an equal number were killed by Canadian hunters, less than three percent of the herd was harvested. Annual recruitment was probably about 8,000 to 10,000 animals. Unless hunting trends change or the newly-built Dempster Highway affects the population, the present level of harvest seems acceptable.

At the same time it appears that the Western Arctic caribou herd has declined from 240,000 in 1970 to about 100,000 in 1975. If restrictive regulations are promulgated for caribou hunting in the range of the Western Arctic herd, increased hunting pressure may be exerted upon the Porcupine herd. If this occurs, more restrictive regulations should be effected for the Porcupine herd to keep the take within the herd's ability to maintain its present size.

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