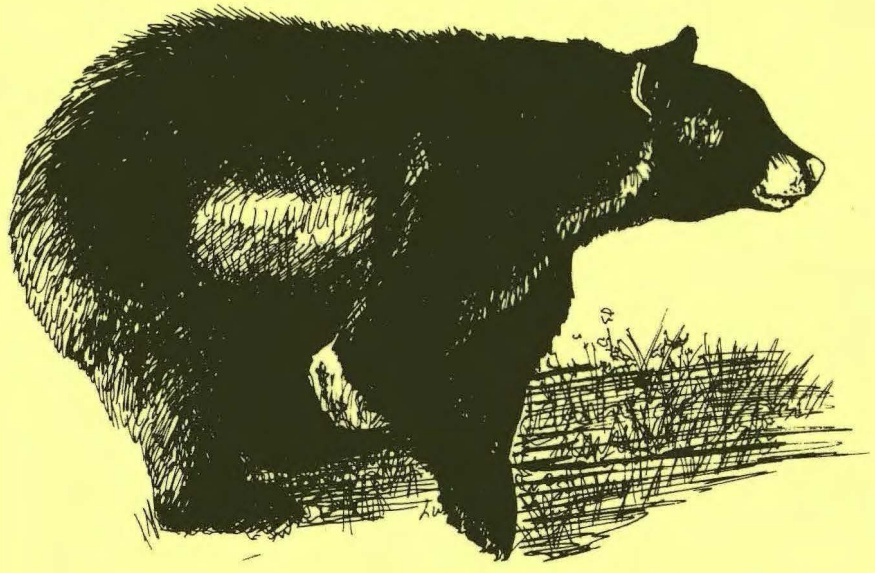
Alaska Department of Fish and Game
Division of Game
Federal Aid in Wildlife Restoration
Annual Report of Survey—Inventory Activities

BLACK BEAR



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STATEWIDE HARVEST AND POPULATION STATUS

Reports on black bears are presented for those units in which take of the species is significant and in which sealing is required. Black bears appear to be gaining in popularity as a game animal, but harvests generally are well within the capability of populations to withstand present levels of exploitation. Although few indices (other than harvest data) exist to indicate bear population levels, bears appear to be abundant and stable in most units.

Harvests of black bears in 1985 were high in most areas of southeastern Alaska, the Kenai Peninsula, and the Nelchina Basin. Harvests were below average in the Interior, where poor hunting weather was experienced in both spring and fall seasons. Record harvests were achieved in Units 5, 7 and 15, and 13.

Unit	Reported harvest	Defense of life or property kills
1A	49	6
2	97	3
1C	100	5
1B	22	
3	131	
5	39	
6	273	3
7 & 15	374	8
9	9	
11	2	
12	25	
13	104	
14	93	7
16	146	
20	119	3

Robert A. Hinman
Deputy Director

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1A and 2

GEOGRAPHICAL DESCRIPTION: Ketchikan area and Prince of Wales Island

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Black bear populations in Subunit 1A and Unit 2 appear to be stable. This assessment is based on harvest data, hunter success, and general observations. Mean skull size of males taken during spring seasons has remained relatively constant since 1975, and the high incidence of males in the spring harvest has not changed significantly.

Mortality

Hunters reported taking 49 black bears from Subunit 1A and 97 from Unit 2 in 1985 (Table 1). Six bears were taken in defense of life or property in Subunit 1A, and 3 were taken for that reason in Unit 2. The Subunit 1A harvest increased 9% over that of 1984 while the Unit 2 harvest declined by 19%.

Harvests since 1974 are summarized in Table 2. During the spring 1985 season in Subunit 1A, 22 bears were taken from Revilla and surrounding small islands, and 4 were taken on the mainland. In Unit 2, 47 bears were taken during spring. The corresponding 1984 Unit 2 harvest was 94 bears.

Male bears composed 100% of the Subunit 1A spring harvest compared with a mean of 91% for 1974-84. In Unit 2, males composed 81% of the harvest, down from the long-term average of 88%.

Hunters took 23 bears from Subunit 1A in fall 1985 compared with 22 in fall 1984. Twelve of these 23 bears were males. In Unit 2, the 1984 fall harvest of 50 bears was almost double the 1984 fall harvest and was by far the largest fall harvest on record. Of these 50 bears, 26 (52%) were males, compared

with a mean of 65% for the previous 5 years. The fall harvest in both units has consistently produced a lower ratio of males than has the spring season.

Chronology of the 1985 harvest is shown in Table 3. In Subunit 1A, 53% of the kill occurred during the spring season, and 69% of the spring bears were taken during 11-31 May. In Unit 2, 48% of the harvest occurred in the spring and 60% of those bears were taken during 1-20 May. Peak harvest in Subunit 1A generally occurs about 10 days later than peak harvest in Unit 2; peak harvest in both units appears to occur up to 10 days earlier following mild winters than following a moderate or severe winter.

In Subunit 1A during 1985, 67% of bear hunters used boats to reach hunting areas, 22% used aircraft, and 10% hunted from a road system. In Unit 2, where logging roads are more extensive, 60% used road vehicles, 9% used airplanes, and 32% traveled by boat. Use of roads is much more prevalent during fall seasons than during spring.

Nonresidents took 29% of the bear harvest in Subunit 1A and 14% in Unit 2. Sixty-one percent of the 28 bears taken by nonresidents were taken during the spring season. The percentage of the harvest taken by nonresidents varies from year to year, but appears to be relatively stable over time.

Six percent of the spring harvest was taken incidentally, while 21% of the fall take was incidental to other activities. Incidental take is normally higher in fall than in spring. Sixty-two percent of successful spring bear hunters and 46% of fall hunters reported saving some or all of the meat from their bears.

Skull dimensions of bears taken on Prince of Wales Island were once again larger than those of bears taken in Subunit 1A. Mean skull size (length plus width) for 29 males taken from Subunit 1A was 18.2 inches compared with 19.2 inches for 53 males taken from Unit 2. Comparable values for 1984 were 17.0 inches for 22 males from Subunit 1A and 19.2 inches for 81 males from Unit 2. Mean skull size has remained fairly constant for the past 8 years (Table 2). Age data for bears taken since 1978 are not available.

One hundred thirty-three hunters reported taking 146 bears from Game Management Units 1A and 2 in 1985. Thirteen hunters took 2 bears each. Two cinnamon bears were taken this year. The cinnamon color phase in this area is found only on the mainland, and some selectivity for cinnamon bears occurs.

Management Summary and Recommendations

The 1985 black bear harvest from Subunit 1A was up 44% over the long-term average of 34 bears but was essentially equal to the 1983 and 1984 harvests. Fall harvests for the past 3 years have been well above the long-term average, although spring harvests have remained relatively constant.

The 1985 Unit 2 harvest was up 29% over the long-term average of 75 bears. The spring harvest was well below that of the past 3 years but the fall harvest was double that of most years. Reasons for these changes in harvest are unknown.

From personal observation, hunter contacts, and skull measurements, it appears that bear populations in Units 1A and 2 are either stable or increasing and that current harvest levels are having little if any effect on bear populations.

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

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SUBMITTED BY:

Dave Anderson
Management Coordinator

Table 1. Black bear sport harvest statistics for Game Management Units 1A and 2, 1985.

GMU	Season	Total kill	Males	Females	Unk sex	Kill by nonres. (%)	Mean skull size in inches		Transport used (%)		
							Males	Females	Air	Boat	Road
Subunit 1A	Spring	4	4	0	0	1 (25)	18.03 (4)	0.0	50	50	0
Mainland	Fall	9	5	4	0	4 (44)	17.54 (5)	16.03 (4)	22	78	0
	Totals	13	9	4	0	5 (38)	17.76 (9)	16.03 (4)	31	69	0
Subunit 1A	Spring	22	22	0	0	2 (9)	18.57 (16)	0.0	14	68	18
Revilla	Fall	14	7	6	1	7 (50)	17.83 (4)	15.56 (5)	29	64	7
	Totals	36	29	6	1	9 (25)	18.43 (20)	15.56 (5)	19	67	14
Total	Spring	26	26	0	0	3 (12)	18.47 (20)	0.0	19	65	15
Subunit 1A	Fall	23	12	10	1	11 (48)	17.67 (9)	15.77 (9)	26	70	4
	Totals	49	38	10	1	14 (29)	18.22 (29)	15.77 (9)	22	67	10
Unit 2	Spring	47	38	9	0	5 (11)	19.77 (35)	16.72 (7)	11	53	36
	Fall	50	26	21	3	9 (18)	18.16 (18)	16.55 (18)	8	12	80
	Totals	97	64	30	3	14 (14)	19.22 (53)	16.60 (25)	9	32	59

Table 2. Black bear harvest from Game Management Units 1A and 2, 1974-85.

GMU	Year	Season	Kill	Percent males	Mean skull size in inches Males	(n)	Females	(n)
1A	1974	Spring	34	94	--	--	--	--
		Fall	13	62	--	--	--	--
		Totals	47	83	17.8	(36)	15.2	(5)
	1975	Spring	27	89	17.3	(21)	16.3	(3)
		Fall	6	67	16.9	(4)	16.5	(1)
		Totals	33	85	17.2	(25)	16.3	(4)
	1976	Spring	22	95	17.7	(21)	15.1	(1)
		Fall	5	80	18.1	(4)	16.5	(1)
		Totals	27	93	17.8	(25)	15.8	(2)
	1977	Spring	9	100	17.7	(9)	--	(0)
		Fall	7	57	13.7	(1)	15.4	(3)
		Totals	16	81	17.3	(10)	15.4	(3)
	1978	Spring	15	87	18.2	(11)	15.8	(2)
		Fall	9	67	17.4	(5)	16.2	(3)
		Totals	24	79	18.0	(16)	16.0	(5)
	1979	Spring	27	93	17.8	(24)	15.6	(1)
		Fall	3	33	--	(0)	17.1	(1)
		Totals	30	87	17.8	(24)	16.4	(2)
	1980	Spring	19	100	17.8	(18)	--	(0)
		Fall	8	38	16.1	(2)	15.7	(4)
		Totals	27	81	17.6	(20)	15.7	(4)
	1981	Spring	18	94	17.7	(16)	14.6	(1)
		Fall	7	71	16.9	(3)	14.5	(1)
		Totals	25	88	17.6	(19)	14.5	(2)
	1982	Spring	27	93	17.8	(24)	16.0	(2)
		Fall	8	63	17.0	(5)	16.8	(2)
		Totals	35	86	17.6	(29)	16.4	(4)
	1983	Spring	26	85	17.1	(21)	16.2	(3)
		Fall	22	55	16.9	(9)	15.8	(9)
		Totals	48	71	17.1	(30)	15.8	(12)
	1984	Spring	23	74	17.8	(13)	16.5	(4)
		Fall	22	41	15.8	(9)	15.8	(13)
		Totals	45	58	17.0	(22)	16.0	(17)
	1985	Spring	26	100	18.5	(20)	--	(0)
		Fall	23	55	17.7	(9)	15.8	(9)
		Totals	49	79	18.2	(29)	15.8	(9)

Table 2. Continued.

GMU	Year	Season	Kill	Percent males	Mean skull size in inches Males	(n)	Females	(n)
2	1974	Spring	22	77	--	--	--	--
		Fall	5	60	--	--	--	--
		Totals	27	74	--	--	--	--
	1975	Spring	27	93	19.5	(24)	17.5	(1)
		Fall	15	53	18.8	(7)	16.5	(5)
		Totals	42	79	19.3	(31)	16.6	(6)
	1976	Spring	61	87	19.4	(50)	16.8	(6)
		Fall	18	61	17.5	(8)	16.8	(7)
		Totals	79	81	19.1	(58)	16.8	(13)
	1977	Spring	34	85	19.0	(28)	17.2	(4)
		Fall	17	65	19.5	(5)	15.9	(4)
		Totals	51	78	19.1	(33)	16.5	(8)
	1978	Spring	44	89	19.3	(39)	17.5	(2)
		Fall	23	57	18.7	(11)	16.5	(7)
		Totals	67	86	19.0	(50)	16.7	(9)
	1979	Spring	47	98	19.1	(42)	17.6	(1)
		Fall	23	61	18.4	(8)	16.9	(8)
		Totals	70	86	19.0	(50)	17.0	(9)
	1980	Spring	47	89	19.3	(35)	17.0	(3)
		Fall	26	54	19.0	(13)	17.2	(9)
		Totals	73	77	19.2	(48)	17.2	(12)
	1981	Spring	46	85	18.6	(33)	16.7	(7)
		Fall	23	78	18.0	(13)	15.4	(3)
		Totals	69	83	18.5	(46)	16.3	(10)
	1982	Spring	78	90	19.2	(58)	17.3	(8)
		Fall	33	61	18.2	(16)	17.2	(12)
		Totals	111	81	19.0	(74)	17.2	(20)
	1983	Spring	64	84	19.5	(49)	16.7	(10)
		Fall	24	67	18.0	(15)	16.8	(7)
		Totals	88	80	19.1	(64)	16.7	(17)
	1984	Spring	94	84	19.2	(69)	17.0	(14)
		Fall	26	65	18.8	(12)	16.4	(7)
		Totals	120	80	19.2	(81)	16.8	(21)
	1985	Spring	47	81	19.8	(35)	16.7	(7)
		Fall	50	55	18.2	(18)	16.6	(18)
		Totals	97	68	19.2	(53)	16.6	(25)

Table 3. Chronology of black bear harvest in Units 1A and 2, 1985.

Date	Harvest	
	Subunit 1A	Unit 2
Spring		
1-20 Apr	1	1
21-30 Apr	1	2
1-10 May	6	15
11-20 May	6	13
21-31 May	12	9
1-10 Jun	0	3
11-20 Jun	0	2
21-30 Jun	0	2
Fall		
1-10 Sep	10	14
11-20 Sep	5	3
21-30 Sep	6	9
1-10 Oct	2	7
11-20 Oct	0	6
21-31 Oct	0	2
1-10 Nov	0	5
11-30 Nov	0	4

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNITS: 1B and 3

GEOGRAPHICAL DESCRIPTION: Unit 1B - Southeast mainland from Cape Fanshaw to Lemesurier Point
Unit 3 - Islands of the Petersburg, Kake and Wrangell area

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Field observations and bear harvest data continue to indicate a healthy population of black bears in Game Management Units 1B and 3. Sex composition and skull sizes of harvested bears show no evidence of excessive harvest.

Population Composition

In Subunit 1B, 9% (n = 2) of the black bears harvested were females and 68% (n = 15) were males. The sex of the remaining 23% (n = 5) was unspecified.

In Unit 3, 15% (n = 20) of the harvest was females, with males composing over 75% (n = 98) of the total harvest. Thirteen bears (10%) were of unknown sex.

A high proportion of females in the harvest is a potential indication of over-exploitation. Although hunter selectivity for large bears in Units 1B and 3 biases the harvest toward males, it appears that total black bear harvests are not excessive at present. Table 1 presents composition of the harvest by location and season.

Mortality

The 1985 Subunit 1B harvest was 22 bears, compared with 16 in 1984. Eighteen bears (82%) were taken during spring, and 4 (18%) were taken during fall. Forty-four percent were taken

in May, 31% in September, 19% in October and 6% in April. It is likely that most bears killed in the fall were taken during the course of moose or goat hunts.

In 1985, the reported harvest from Unit 3 was 131 black bears. This was the highest take since the sealing program began, and was 33 bears higher than last year's take of 98 (Table 2). Males composed over 75% of the total harvest; this percentage is an indication of a healthy population. Nonresident hunters accounted for 40% (n = 52) of the Unit 3 black bear harvest. The total spring take was 96 bears (73%); the fall take was 35 (27%) (Table 1).

Sixty-eight percent of the spring bears were killed in May. The peak of the spring harvest in Unit 3 occurred during 1-15 May, during which 34% of spring bears were taken. Fifty-nine percent of the fall harvest was taken in September, and the remainder in October.

The highest kill per unit area occurred on Mitkof Island (Table 3), where 1 bear was taken for each 7 mi^2 of area. Mitkof Island has been extensively roaded by the Forest Service for logging activities, and almost every part of the island is accessible by vehicle. Kuiu Island was the next most popular site with a kill of 1 bear/13 mi^2.

Mean skull size of Unit 3 bears was 18.2 inches for males and 16.5 inches for females. Table 1 presents mean skull size by island and season.

The Unit 3 black bear harvest has steadily increased over the past decade (Table 2). Seven hundred forty-nine bears have been taken in Unit 3 between 1974 and 1985. This rate of harvest has not noticeably affected the age structure or sex ratio of harvested bears, and mean skull size has remained relatively constant (Table 4).

Although the bag limit is 2 bears, only 17% (n = 18) of the Unit 3 bear hunters killed a 2nd bear.

Management Summary and Recommendations

Mean annual black bear harvest in Unit 3 during 1974-85 was 63 (Table 2). Populations in both Units 1B and 3 are believed to be stable. Older age classes and males are still prevalent in the harvest. A viable black bear census technique is needed to determine bear numbers and population trends. It is recommended that metric measurements be used on bear skulls to simplify data summary and analysis.

The black bear harvest can be expected to increase as state land disposals are developed on Kuiu, Wrangell, Etolin, Mitkof, and Kupreanof Islands. Nonresident hunters appear to be increasingly interested in black bear hunting in Units 1B and 3.

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Table 1. Unit 3 black bear harvest by island and season, 1985.

Location	Season	Males	Mean skull size[a]	Females	Mean skull size[a]	Unk	Totals	Percent of harvest
Kupreanof Island	Spring	33	18.1	4	17.1	2	39	30
	Fall	2	18.9	2	16.9	0	4	3
	Total	35	18.2	6	17.0	2	43	33
Kuiu Island	Spring	34	18.4	3	15.7	1	38	29
	Fall	12	18.7	2	16.0	4	18	14
	Total	46	18.4	5	15.9	5	56	43
Mitkof Island	Spring	10	18.1	5	16.6	2	17	13
	Fall	5	16.9	4	15.6	4	13	10
	Total	15	17.7	9	16.2	6	30	23
Etolin Island	Spring	2	19.2	0	0	0	2	1
	Fall	0	0	0	0	0	0	0
	Total	2	19.2	0	0	0	2	1
Totals	Spring	79	18.3	12	16.6	5	96	73
	Fall	19	18.2	8	16.1	8	35	27
	Total	98	18.2	20	16.4	13	131	100

[a] Values indicate length plus width in inches.

Table 2. Historical Unit 3 black bear harvest by island, 1974-85.

Year	No. animals	Percent of harvest				
		Kupreanof	Kuiu	Mitkof	Wrangell	Other islands
1974	27	18	61	4	10	7
1975	49	25	63	4	4	4
1976	60	33	57	3	2	5
1977	27	15	77	4	0	4
1978	41	29	62	7	0	2
1979	50	31	52	4	4	9
1980	37	40	22	32	3	3
1981	66	38	24	32	5	1
1982	84	41	41	15	2	1
1983	83	34	52	13	0	1
1984	98	40	47	11	1	1
1985	131	33	43	23	0	1
Means	63	31%	50%	13%	3%	3%

Table 3. Unit 3 black bear harvest by island, 1985.

Island	Area (mi^2)	Harvest	Mi^2/ bear	Males	Females	Unknown	Percent of harvest
Kupreanof	1,090	43	25	35	6	2	33
Kuiu	746	56	13	46	5	5	43
Mitkof	211	30	7	15	9	6	23
Wrangell	220	0		0	0	0	
Etolin	343	2	172	2	0	0	1
Totals	2,610	131	20[a]	98	20	13	100

[a] Value represents mean for the 5 islands.

Table 4. Mean Unit 3 black bear skull size, 1974-85.

Year	Male	n	Female	n
1974	18.4	24	16.2	2
1975	18.6	34	16.8	6
1976	18.4	47	17.1	7
1977	18.5	17	16.2	7
1978	18.6	23	16.0	12
1979	18.5	36	16.8	4
1980	18.4	30	--	0
1981	18.5	43	16.6	10
1982	18.3	68	15.9	11
1983	18.7	61	16.4	12
1984	18.4	66	16.4	19
1985	18.3	79	16.4	17
Total or mean	18.4	528	16.4	107

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1C

GEOGRAPHICAL DESCRIPTION: Mainland portion of southeastern Alaska between Cape Fanshaw and the latitude of Eldred Rock

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Mortality

The black bear harvest (based on sealing documents) for 1985 in Subunit 1C was 100 bears (77 males, 14 females, and 9 of unknown sex), 18 bears above the 1984 harvest and 49 bears above the mean annual harvest of 50.5 bears since 1974. The harvest included 19 black bears of the cinnamon color phase. Residency of successful black bear hunters in 1985 was 80 (80%) residents and 20 (20%) nonresidents. Guided hunts in 1985 accounted for 13 bears (13% of the total sport kill), all taken by nonresidents. The reported nonsport kill was 5 bears (4 males and 1 female) taken in defense of life or property.

In Subunit 1C in 1985, average skull size of males ($\underline{n}$ = 69) was 17.8 inches and of females 16.2 inches ($\underline{n}$ = 13). The average male skull size ($\underline{n}$ = 63) in 1984 was 17.2 inches. Age data for bears killed in 1985 were not available.

Chronology of the harvest in 1985 showed that 75 bears were taken during the spring season, 76% of which were males. Seventy-three percent of spring bears were taken in May ($\underline{n}$ = 55). Of the remaining 25 bears killed, 12 were taken in September, 11 in October, and 2 in November. Males composed 60% of the fall harvest.

Successful hunters spent a total of 243 days hunting black bears, averaging 2.5 days/bear. Days hunted per bear killed ranged from 1 to 14.

Distribution of the 1985 harvest in Subunit 1C showed that 36 bears were taken in the Chilkat Range area (west side of Lynn Canal), 2 in Gustavus, 26 in the Berners Bay to Point Bishop area, and 36 in the Bishop Point to Cape Fanshaw area (including 10 bears in the Taku area).

Modes of transportation used by successful hunters were as follows: boat 72%, aircraft 8%, other 19%, and unknown 1%.

Management Summary and Recommendations

The 1985 reported harvest of 100 black bears in Subunit 1C was 18 bears above the 1984 kill of 82 animals and nearly 2 times greater than the previous 11-year mean annual harvest of 51 bears. Despite this harvest increase, there appear to be no significant changes in harvest characteristics. Some areas showed decreases in percent males in the harvests since 1984; however, this was attributed to an unusually high female take in the fall and an increase in the number of bears of unknown sex. If the 6 bears that hunters claimed were males (regarded as sex unknown) were used to calculate percent males in the harvest, the overall subunit value would be 82% instead of 76%.

Spring green-up was late in 1985. No bears were killed before May this year, whereas 1 and 12 animals were taken in March and April, respectively, in 1984.

Harvest data suggest an increase in hunter interest and harvest levels. Spring weather seems to greatly affect the distribution of bears. This distribution relative to hunter access greatly influences the black bear take in Subunit 1C. Populations appear to be at high levels. The mean skull size of male bears is slightly larger than in 1984, but the mean has remained fairly constant for the past 4 years.

To evaluate unsuccessful bear-hunting effort, a mail questionnaire is planned for the 1986 calendar year. Urban and commercial development within Subunit 1C will cause habitat loss, increased bear-human conflicts with the loss of some bears, and increased hunter access. Public education should continue, to reduce unnecessary conflicts and/or losses of bears.

A reduction of the bag limit from 2 bears to 1 bear and a shorter season beginning in 1979-80 have not reduced the harvest to date.

No changes in season or bag limit are recommended.

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BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 1D

GEOGRAPHICAL DESCRIPTION: Upper Lynn Canal

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Composition

Of 26 bears for which sex was determined, 18 were male (69%) and 8 were female (31%), compared with the 1973-84 mean of 75% males and 25% females.

Mortality

One "defense of life or property" black bear kill was documented in 1985. Sixteen resident and 2 nonresident hunters took 23 bears (15 males, 6 females, and 2 bears of unknown sex) during the spring season. The fall harvest was 3 male bears, 2 female bears, and 4 bears of unknown sex, all taken by 8 resident hunters.

Age data are currently unavailable for the 1985 Subunit 1D black bear harvest. Mean skull sizes for spring bears were 18.1 inches for 13 males, 15.6 inches for 4 females, and 19.8 inches for 1 bear of unknown sex. Two females and 2 bears of undetermined sex from the fall harvest averaged 16.6 inches and 17.0 inches, respectively. Twenty-two bears were of the black phase while 10 were of the cinnamon color phase. Only 4 bears were taken incidentally, and the meat was salvaged from all but 1 animal.

Management Summary and Recommendations

The 1985 Subunit 1D black bear harvest was the 2nd highest ever recorded and exceeded the 1973-84 mean harvest by 50% (Table 1). Although hunters may well select for large bears, skull dimensions of harvested bears remain large enough to suggest that the population is stable.

Residents of Haines continue to exhibit a strong preference not only for hunting black bears but also for using the meat. It is unknown whether the high number of cinnamon-colored

bears in the harvest is due to hunter selectivity or a high number of such bears in the population.

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

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Table 1. Subunit 1D historical black bear harvest, 1973-85.

Year	Harvest				Color phase	
	Males	Females	Unknown	Totals	Black	Cinnamon
1973	4	0	0	4	4	0
1974	12	3	0	15	12	3
1975	10	5	0	15	8	0
1976	21	5	0	26	16	10
1977	12	3	0	15	7	8
1978	17	9	0	26	17	9
1979	10	8	1	19	10	9
1980	21	3	0	24	18	6
1981	12	4	0	16	12	4
1982	16	6	0	22	14	8
1983	31	11	1	43	36	4
1984	15	6	2	23	17	6
1985	18	8	6	32	22	10
Means	15	5	<1	22	15	6

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 5

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

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Observations and discussions with hunters and guides suggest bears were present in 1985 in numbers similar to those of recent years. The Unit 5 black bear population appears to be stable or slightly increasing.

Population Composition

No black bear surveys were conducted during 1985. Harvest records indicate that 29 of 38 bears of known sex (38%) were male (Table 1). Some hunters reported seeing more cubs and subadult bears than in recent years.

Mortality

No nonsport, illegal, or "defense of life or property" black bear kills were documented in 1985. Nineteen nonresident and 12 resident hunters took 33 bears (25 males and 8 females) during the spring season. The fall harvest consisted of 5 males and 1 female taken by 3 resident and 2 nonresident hunters. Skull sizes of spring bears averaged 18.0 inches for males and 15.7 inches for females. Male bears taken in fall had skull dimensions averaging 17.2 inches while females averaged 16.6 inches. Of the 39 bears harvested in 1985, 34 were black and 5 were of the blue color phase (Table 1); six bears were reported as incidental take; and the meat from 7 bears was salvaged.

Management Summary and Recommendations

The 1985 black bear take in Game Management Unit 5 was the highest ever recorded. The harvest of 38 bears was twice the 1971-84 mean of 18 bears and 23% higher than the previous

record take of 1982. The mean skull size of male bears increased, indicating that older, larger bears are not scarce in the population. The "glacier bear" take (5 bears) equaled the previous record harvest which occurred in 1983.

Interest in black bear hunting in Unit 5 remains high, particularly among nonlocal Alaskans and nonresidents pursuing bears of the blue color phase. Harvest data and field observations indicate a stable or slightly growing population; no change in the season or bag limit is warranted at this time.

PREPARED BY:

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SUBMITTED BY:

David A. Anderson
Management Coordinator

Table 1. Historical Unit 5 black bear harvest, 1971-85.

Year	Harvest				Color phase	
	Males	Females	Unknown	Totals	Black	Blue
1971	3	0	0	3	3	0
1972	12	5	0	17	15	2
1973	12	7	0	19	18	1
1974	6	3	0	9	8	1
1975	9	2	1	12	10	2
1976	19	0	0	19	17	2
1977	16	3	0	19	12	1
1978	7	1	2	10	7	1
1979	14	7	1	22	18	4
1980	15	6	2	12	18	3
1981	12	5	2	19	17	2
1982	17	13	1	31	28	3
1983	14	3	3	20	15	5
1984	19	5	±	25	22	3
1985	30	9	0	39	33	5
Means	14	5	1	19	16	2

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 6

GEOGRAPHICAL DESCRIPTION: Prince William Sound and northern Gulf Coast

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Composition

No data were available.

Mortality

Sealing records indicate 273 black bears were killed, including 201 (74%) males, 56 (20%) females, and 16 (6%) of unknown sex. Hunters killed 221 (82%) bears during the spring and 49 (18%) during the fall. An additional 3 bears were reported killed in defense of life or property.

The number of bears killed in 1985 is 46% more than in 1984 and 137% more than the 10-year average for 1974-83. This substantial increase occurred primarily in Subunit 6D and to a lesser degree in Subunit 6A. In Subunit 6D, approximately 60% of the bears were killed by hunters using boats within 30 miles of either Valdez or Whittier.

The mean skull size of male bears was 17.3 inches (n = 191); this figure has remained constant since 1983.

Management Summary and Recommendations

The dramatic increase in bears killed in Subunit 6D is likely the result of a combination of factors. First, the Prince William Sound area has increased in popularity for bear hunters using boats. Second, the late spring in 1985 caused more bears to be vulnerable to hunters for a greater portion of the hunting season. The weather was colder than normal, which delayed snowmelt at higher elevations, slowed foliation of deciduous trees and shrubs, and set back the emergence of herbaceous shoots (J. Reynolds, pers. commun.). Food availability was limited, causing the bears to concentrate for

a longer time at the lower elevations, primarily on beach fringes. Delayed foliation of shrubs enhanced the visibility of bears that were not on beach fringes. The result was a harvest rate in excess of 15 bears/week for 7 consecutive weeks beginning the 2nd week of May. In previous years that rate was maintained for only 5 weeks, generally beginning the 1st week in May.

Modafferi (1982) has suggested that beach fringes provide reliable sources in spring for foods preferred by male bears. Bears' presence in these areas makes them more vulnerable to boat-transported hunters. In 1985, 74% of the bears killed in Subunit 6D were males, which was a higher percentage than the previous 11-year average of 68%. This increase suggests that more males were available or that males were vulnerable longer, or both.

Increased hunting effort is not verifiable because hunters are not currently required to report unsuccessful efforts. However, circumstantial evidence suggests that within Subunit 6D a moderate increase in commercial and recreational use of Prince William Sound and an increase in hunting effort (J. Reynolds, pers. commun.) has occurred.

The higher harvest in Subunit 6A during the past 2 years has probably been due to the subunit's increasing attractiveness to hunters seeking more than one species (black bear, moose, mountain goat) on their hunt.

High harvest levels are unlikely to continue if normal spring weather conditions occur in succeeding years. Despite localized reductions in numbers of large males, bear populations in Unit 6 should decline only slightly from a recent peak. Therefore, no regulatory changes are recommended.

Literature Cited

Modafferi, R. D. 1982. Black bear movements and home range study. Alaska Dep. Fish and Game. Fed. Aid in Wildl. Rest. Final Rep. Proj. W-17-10, W-17-11, W-21-11, W-21-1, and W-21-2. Job 17.2R. Juneau. 73pp.

PREPARED BY:

Herman Griese
Game Biologist III

SUBMITTED BY:

Leland P. Glenn
Survey-Inventory Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 7 and 15

GEOGRAPHICAL DESCRIPTION: Kenai Peninsula

PERIOD COVERED: 1 January 1984-31 December 1984

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Black bears are abundant and widely distributed on the Kenai Peninsula. Research conducted in portions of Subunit 15A has indicated a relatively high density of 1.5 black bears/km^2 in areas of suitable habitat (Schwartz et al. 1981). Observations made by hunters and Department personnel have also suggested that black bears are abundant.

Mortality

Hunters reported taking 160 bears during the spring season and 214 during the fall season (Table 1). An additional 8 bears were taken in defense of life or property. Two black bears were killed in Unit 15 for each one killed in Unit 7, which is consistent with the historical spatial distribution of harvests.

Sex composition of bears killed was 68% males, 31% females, and 1% unclassified. Black bear harvest data pertaining to sex and season of harvest were tested for heterogeneity ($X^2 = 3.24$, $P > 0.50$), and then pooled for analysis (Table 2). The ratio of females:males in the harvests for the combined years 1980 through 1985 was significantly higher ($X^2 = 11.16$, $P < 0.05$) in fall (0.63) than spring (0.40).

A summary of the physiographic regions in which black bears were killed in 1984 and 1985 is presented in Table 3. In both years, regions were ranked in the order of magnitude of bears killed, as follows: interior mountains > lowlands > coastal mountains. An exception to this general pattern occurred in spring, when lowlands accounted for the highest proportion of the harvests, followed closely in rank by interior mountain kills in 1984 and coastal mountain kills in 1985. The absolute numbers of bears killed in each of the physiographic

regions increased from 1984 to 1985, with the greatest increase occurring in the coastal mountains (134%).

Management Summary and Recommendations

The 1985 harvest of 374 black bears was the highest reported kill for the Kenai Peninsula since the inception of mandatory sealing (1973) (Table 1). It represents a 61% increase over the 1980 record harvest, and is 103% higher than the previous 5-year harvest mean.

Even though current information is insufficient to conclusively explain the sharp increase in the 1985 black bear harvest, a brief discussion of some of the factors that might have affected bear hunting mortality may be useful from the standpoint of documentation and historical perspective.

The 1985 harvest was noteworthy in 2 respects. First, record numbers of bears were killed in both the spring and fall periods. The percentage of increase in kill and the number of bears killed were greatest for the fall periods (Table 1). Second, the harvest increase occurred across all major physiographic regions (Table 3).

Hunting pressure is 1 factor that could explain the universal harvest increases observed in 1985. It is generally accepted that black bears are experiencing a rise in popularity as a game animal in southcentral Alaska, but there is surprisingly little quantitative proof for this claim. However, circumstantial evidence strongly indicates increasing hunting pressure on the Kenai Peninsula. For example, public inquiries about black bear hunting have dramatically increased in recent years. Also, the number of permits issued to bait black bears on the Kenai National Wildlife Refuge seems to reflect the growing interest in this species: 1984 - 20 permits issued to 20 individuals; 1985 - 25 permits issued to 38 individuals; and 1986 (up to 15 May) - 51 permits issued to 84 individuals.

I believe the combination of a short growing season and an unusual distribution of food resources might have caused bears to be more susceptible to hunting in fall 1985. Unseasonally cool weather and snow cover persisted through May and into June in many areas, resulting in a noticeably shortened growing season. By late summer, it was apparent that production of devil's club (Oplopanax horridum) an important bear food, was very low, but that fruit yields of low muskeg forms of blueberry (Vaccinium sp.), also a preferred bear food, were very high in the lowlands. The scenario of a short growing season, scarcity of devil's club berries, and an abundance of

blueberries appears to have drawn feeding bears to open muskegs where they are more easily seen and killed by hunters. If lowland bears were more vulnerable to hunting during the fall period, we would expect a higher proportion of the harvest to have occurred during the general moose season (i.e. largely incidental kills) than in other years. In fact, analysis of the fall harvest in Subunit 15A indicates this is what happened. The fall kill in the lowlands rose from 18 (1984) to 50 (1985) bears, and 54% of the 1985 kills occurred during the general moose season compared with 33% in 1984. Weather conditions and moose hunting effort for the period were similar both years.

A similar situation seemed to emerge in the Kenai Mountains. There alpine forms of blueberry and crowberry (Empetrum nigrum) yielded abundant berry crops which attracted bears. On 2 occasions in late September, while making reconnaissance flights for mountain goats, I observed large numbers of bears feeding on berries of dwarf alpine shrubs. In addition to being more susceptible because of their feeding behavior, bears in the Kenai Mountains were exposed to 330 mountain goat hunters during October. Observations at the Homer ADF&G office indicate that many of these hunters killed black bears.

If future harvests remain near or exceed the 1985 level, managers will need to address the impacts of hunting mortality on black bear population dynamics. The 1st step in this process should be to analyze the age structure of harvested bears. It is apparent that there exists a need for better information concerning hunting pressure and certain environmental factors that are likely to influence hunting mortality. Systematically collected information about the duration of spring snow cover, food plant phenologies and fruit yields, the use of bait by hunters, and weather would facilitate more meaningful interpretation of black bear harvest data.

No changes in season or bag limit are recommended.

Literature Cited

Schwartz, C. C., A. W. Franzmann, and D. C. Johnson. 1981. Black bear predation on moose. Alaska Dep. Fish and Game. Fed. Aid in Wildl. Rest. Prog. Rep. Projects W-17-11 and W-21-1. Job 17.3R. Juneau. 16pp.

PREPARED BY:

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Table 1. Summary of black bear sport harvests on the Kenai Peninsula, 1980-85.

Year	Unit 7		Unit 15		Totals	Percentage Change
	Spring	Fall	Spring	Fall		
1980	22	48	55	107	232	
1981	26	29	42	58	155	- 33
1982	35	11	43	38	127	- 18
1983	51	28	57	52	188	+ 48
1984	41	22	77	78	218	+ 16
1985	47	82	113	132	374	+ 72
Totals	222	220	387	465	1,294	

Table 2. Comparison of spring and fall sex ratios of black bears in the sport harvest on the Kenai Peninsula, 1980-85.

Season	Male	Female	Total	% Females
Spring[a]	418	168	586	29
Fall[b]	410	249	659	38
Totals	828	417	1,245	33

[a] 1 January - 31 June.

[b] 1 July - 31 December.

Table 3. Comparison of the physiographic regions of 1984 and 1985 black bear sport-kill sites, by season, on the Kenai Peninsula, Alaska.

Year	Season	Rank of physiographic regions			n
1984	Spring	Lowlands (37.4)[a]	Interior Mountains (36.5)	Coastal Mountains (26.1)	115
	Fall	Interior Mountains (52.1)	Lowlands (36.7)	Coastal Mountains (11.2)	98
	Total	Interior Mountains (43.7)	Lowlands (37.1)	Coastal Mountains (19.2)	213
1985	Spring	Lowlands (37.7)	Coastal Mountains (35.1)	Interior Mountains (27.2)	162
	Fall	Interior Mountains (47.1)	Lowlands (34.1)	Coastal Mountains (18.8)	208
	Total	Interior Mountains (38.4)	Lowlands (35.7)	Coastal Mountains (25.9)	370

[a] Percentage in parentheses.

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 9

GEOGRAPHICAL DESCRIPTION: Alaska Peninsula

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Black bears occur in moderate to low densities in portions of Subunits 9A and 9B.

Mortality

Nine black bears (6 males and 3 females) were reported taken during 1985. All but 1 were taken by resident hunters, and none involved "defense of life or property" circumstances. This kill was similar to the average annual harvest reported since 1981. Sealing of black bears is not required in Unit 9, and the reported harvest does not reflect the actual number of bears killed by hunters. Local residents opportunistically kill black bears for personal use; these bears often go unreported. The Unit 9 total annual human-caused black bear mortality for 1985 is estimated at 20-25 bears.

Management Summary and Recommendations

Sealing of black bears is not required in Unit 9. I believe, however, that the overall kill of black bears is well below the limit for sustained yield. Consequently, no regulatory changes are recommended.

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BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 11

GEOGRAPHICAL DESCRIPTION: Wrangell Mountains

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Observations by staff and reports from the public indicate black bears are abundant in suitable forest habitat throughout Unit 11.

Mortality

Hunters reported taking only 2 black bears: 1 male and 1 female. This harvest was well below the 10-year (1975-84) average of 9 bears/year. One bear was taken during the spring season and 1 during the fall season. Both were reported taken incidentally during hunts for other species of game.

Management Summary and Recommendations

Black bears in Unit 11 receive little hunting pressure. Most hunters are seeking other big game species and black bears are taken opportunistically. Local residents take black bears for meat; however, the number taken for food and not sealed is unknown. Prior to 1 July 1985, a hunter was not required to salvage (or have the Department seal) the hide and skull if he shot the bear for meat only.

No changes in season or bag limit are recommended.

PREPARED BY:

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SUBMITTED BY:

Leland P. Glenn
Survey-Inventory Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 12

GEOGRAPHICAL DESCRIPTION: Upper Tanana and White Rivers

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Evidence from general observations and harvest data indicates that black bears exist at moderate densities throughout suitable forested habitat in Unit 12, even in close proximity to communities where black bears are heavily hunted. No trend in bear abundance is evident.

Mortality

The reported take of black bears was 25 in 1985 compared with 45 in 1984 (data available for the 1984 report included only 39 bears). Decreased hunting effort due to a late spring breakup was probably responsible for the lower 1985 harvest. Of the known-sex bears taken (n = 24), half were males and half were females. Of the 25 bears killed, 13 (52%) were taken during spring and 12 (48%) were killed during fall. Most bears were taken in the northwestern portion of Unit 12 along the Alaska and Tok Cutoff Highways or along the Tanana and Tok Rivers.

Management Summary and Recommendations

The primary management objective for black bears in Unit 12 is to provide the maximum opportunity to participate in hunting; this objective is being met through a year-round season and a bag limit of 3 bears. Interest in spring black bear hunting is increasing, but only in easily accessible areas. Available evidence suggests that harvests are light in comparison to bear abundance.

To make more complete use of harvested black bears, most of which are taken for food, consideration could be given to legalizing the sale of hides of black bears. Hides of black bears may currently be sold legally in Canada, and this has apparently not caused population declines.

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BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 13

GEOGRAPHICAL DESCRIPTION: Nelchina Basin

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Miller et al. (in press) conducted a census of black bears along a portion of the Susitna River in conjunction with the Susitna Hydroelectric Project. Results of this census indicate a density of 1 black bear/4.3 mi^2.

Black bear surveys to determine status and trend have not been conducted in other portions of the unit. However, densities similar to those found along the Susitna are believed to occur in suitable forested habitats throughout Unit 13.

Population Composition

Females radio-collared by Miller (1985) along the Susitna River had a mean litter size of 2.2 cubs-of-the-year and 2.0 yearlings. Miller also found a sex ratio of 1:1 for 36 cubs-of-the-year handled in their dens between 1983 ad 1985.

Mortality

The reported legal harvest of black bears during 1985 was 104, which is a slight increase over the 1984 harvest of 102 and a considerable increase over the 10-year (1975-84) average harvest of 72 bears per year. The reported spring harvest was 38 (37%) bears, while 66 (63%) were reported killed in the fall. Subunit 13D had the highest harvest with 48 bears reported taken, followed closely by Subunit 13E with 47. Subunit 13A had a harvest of 5 with 13B and 13C having 2 each.

Information obtained from bear sealing certificates indicates that 73% (76) of the hunters were specifically hunting black bears, while 27% (28) reported taking a bear incidentally while hunting other species. Also, 65% of the successful black bear hunters indicated the meat was salvaged. The nonresident harvest of 16 black bears composed 15% of the

kill, which is similar to the 18% harvest figure for nonresidents the previous year.

The sex composition of the harvest was 60 males, 38 females and 6 unknown. The 61% males reported in the 1985 harvest is slightly lower than the 13-year average of 67% males, while the percentage of females (39%) is slightly above the 33% average. Mean skull size was 16.6 inches for males and 15.4 inches for females; these figures are the same as the 13-year averages.

Natural mortality rates for cubs-of-the-year belonging to radio-collared females have been reported by Miller (1985). Of the 42 cubs-of-the-year observed from 1982-84, 14 (33%) were lost.

Management Summary and Recommendations

Black bear hunting is increasing in popularity in Unit 13. More hunters are specifically seeking bears as the hunting opportunities for other species decrease due to shorter seasons and permit restrictions. Bears are especially abundant in Subunits 13D and 13E. The 1985 harvest of 104 black bears was the highest ever reported in the unit. Skull size data remains unchanged, suggesting there has not been an overall decline in the average age of bears killed. The percentage of males in the harvest also remains high. These harvest indicators suggest that the population is capable of maintaining itself at the current harvest level.

No changes in season dates or bag limits are recommended.

Literature Cited

Miller, S. D. 1985. Big game studies. Vol. VI. Black bear and brown bear. Phase II Report. Susitna Hydroelectric Proj. Alaska. Dep. Fish and Game. Juneau.

Miller, S. D., W. B. Ballard, and E. F. Becker. In press. Density and structure of black and brown-grizzly bear populations in Alaska estimated using modified capture-recapture techniques. Proc. Int. Conf. Bear Res. and Manage, Williamsburg, Va. 1986.

PREPARED BY:

Robert W. Tobey
Game Biologist III

SUBMITTED BY:

Leland P. Glenn
Survey-Inventory Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 14

GEOGRAPHICAL DESCRIPTION: Upper Cook Inlet

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

The black bear population appears to be stable; however, the long-term effect of human expansion may result in a decrease in bear population size.

Mortality

Ninety-three black bears were killed during the hunting season: 51 in Subunit 14A, 18 in Subunit 14B, and 24 in Subunit 14C. During the spring season 38 bears including 18 males, 19 females, and 1 of unknown sex were killed; during the fall season 55 bears including 29 males, 20 females, and 6 of unknown sex were killed. Resident hunters killed 90 of 93 bears. In addition to the 93 bears taken during the hunting season, 7 bears (5 males and 2 females) were killed in defense of life or property, all in Subunit 14C.

Management Summary and Recommendations

The sport kill of 93 black bears decreased slightly from the previous year (99 bears). The kill since 1974 has averaged 79 bears/year and ranged from 29 to 106.

Characteristics of the harvest are generally within the normal range of annual fluctuations. The percentage of females in the harvest, however, is relatively high (45%) and should be monitored closely.

No changes in season or bag limits are recommended.

PREPARED BY:

Michael G. McDonald
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Survey-Inventory Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 16

GEOGRAPHICAL DESCRIPTION: West side of Cook Inlet

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Observations of bears by Department staff and the public indicate an abundant population of black bears in Unit 16.

Mortality

The sport kill of 146 black bears (92 males, 49 females, and 5 sex unknown) was the largest since 1981 but still below the high of 248 bears killed in 1980.

Thirty-six bears were reported killed in Subunit 16A, (21 males, 13 females, and 2 sex unknown) with 14 taken during the spring and 22 taken during the fall. One hundred and nine bears were reported killed in Subunit 16B (70 males, 36 females, and 3 sex unknown) with 43 taken during the spring and 66 taken during the fall. The subunit location of 1 bear was not reported.

The mean skull size of bears killed during the spring was 17.0 inches (n = 29) for males and 15.4 inches (n = 21) for females. During the fall season, the mean skull size for males was 16.6 inches (n = 51) and for females was 15.4 inches (n = 24). These skull measurements are similar to skull-size data obtained during the past 10 years.

Management Summary and Recommendations

Annual fluctuations in the Unit 16 bear kill are influenced by a number of variables (including weather conditions) which influence hunting effort. Many bears are taken incidental to other recreational activities. Recent regulations which allow baiting of black bears have also influenced the annual kill.

The reported harvest for 1985 was only a few bears more than the average annual harvest of 130 for the previous 10 years. Mean skull sizes of males and females and the high percentage of males in the harvest indicate that hunting has not had a detrimental impact on the bear population.

No changes in season dates or bag limits are recommended.

PREPARED BY:

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Mark A. Chihuly
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Survey-Inventory Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 17

GEOGRAPHICAL DESCRIPTION: Northern Bristol Bay

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

Black bears exist at low to moderate densities in Subunit 17B and low densities in Subunit 17C; the species inhabits only a small portion of northern Subunit 17A.

Mortality

Sealing of black bears is not required in Unit 17. Since 1973, only 29 black bears have been reported taken. All were reported killed within Subunit 17B.

Management Summary and Recommendations

Data necessary for management of Unit 17 black bears are lacking. Very little is known about the population except general indications that it is of low density. I recommend the season and bag limit be restricted until more information for management is available.

PREPARED BY:

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Game Biologist III

SUBMITTED BY:

Leland P. Glenn
Survey-Inventory Coordinator

BLACK BEAR

SURVEY-INVENTORY PROGRESS REPORT

GAME MANAGEMENT UNIT: 20

GEOGRAPHICAL DESCRIPTION: Central Tanana-middle Yukon Valley

PERIOD COVERED: 1 January 1985-31 December 1985

Season and Bag Limit

See Hunting Regulations No. 25 and 26.

Population Status and Trend

No data on black bear numbers or trend were collected in Unit 20 during 1985. General observations suggest black bear numbers are stable and at moderate densities throughout most of the unit. Densities of black bears along road systems near Fairbanks are probably lower than densities in suitable habitat in more remote areas.

Mortality

Hunters reported killing 119 black bears in Unit 20 during 1985: 69 males (59%), 47 females (41%), and 3 bears of undetermined sex (Table 1). Fifty-two bears (44%) were taken during fall and 67 bears (56%) were killed during spring. Nonresidents took only 4 bears. Three additional bears were killed in defense of life or property.

Eighty-eight percent of the successful hunters reported salvaging meat from kills: 91% salvaged meat in the fall and 86% during spring. Forty-nine percent of the fall take occurred incidental to other activities; 12% of the spring harvest was reported as incidental.

The 1985 harvest was 42% below the 1984 harvest, and 31% below the previous 5-year (1980-84) average annual kill. The fall harvest dropped by 57% from 1984, the spring harvest by 20%. Harvest declined in all subunits. Poor weather during fall and deep spring snow may have resulted in decreased hunter effort and hence contributed to the reduced harvest.

Teeth collected from harvested bears in Subunit 20B during 1985 were sectioned for aging. Mean ages were 4.2 years for males and 6.8 years for females. Age data were not available from other Unit 20 subunits.

During both 1984 and 1985, the percentage of males in the Unit 20 harvest was 59%, which is significantly lower than the previous 2-year (1982 and 1983) proportion of 71% males ($P < 0.005$). Because 49% of the Unit 20 black bear harvest since 1982 has come from 20B, the decline in the percentage of males reflects high harvest rates in that subunit.

Management Summary and Recommendations

Black bear numbers appear to be stable at moderate densities in most portions of Unit 20. The 1985 take was 31% below the previous 5-year average annual harvest. That decline was probably due to poor fall weather which reduced hunting effort, and deep spring snow which delayed emergence from dens.

The increasing human population in the Fairbanks area has focused hunting pressure on the Subunit 20B road system. The declining proportion of males in the 20B harvest and the relatively young age of male bears taken reflects increasing hunter effort. The impact of current harvest levels on the population status of black bears in 20B is uncertain. Research into the response of 20B black bears to current exploitation rates is needed to effectively manage this population.

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SUBMITTED BY:

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Table 1. Unit 20 black bear harvest, by subunit, 1985.

Subunit	Fall			Spring			Total
	Males	Females	Unk	Males	Females	Unk	
20A	6	2	0	7	2	0	17
20B	14	13	0	22	15	1	65
20C	1	1	0	1	0	0	3
20D	3	3	0	5	1	0	12
20E	2	4	1	6	2	1	16
20F	0	2	0	2	2	0	6
Total	26	25	1	43	22	2	119