

SPECIES
MANAGEMENT REPORT

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CHAPTER 2: BROWN BEAR MANAGEMENT REPORT

From: 1 July 2012
To: 30 June 2014

LOCATION

GAME MANAGEMENT UNIT: 3 (3,000 mi²)

GEOGRAPHIC DESCRIPTION: Islands of the Petersburg, Kake, and Wrangell area, including Mitkof, Wrangell, Zarembo, Etolin, Kupreanof, Kuiu and adjacent smaller islands in central southeast Alaska

BACKGROUND

Southeast Alaska brown bears are thought to inhabit only those Unit 3 islands separated from the mainland by relatively short water crossings. Anecdotal information and staff observations indicate that small numbers of bears regularly occur on Deer, Wrangell, Etolin, Mitkof and Woronkofski islands. The department has no population estimates for Unit 3 brown bears.

Research recently completed on the Unit 1B mainland appears to confirm previous speculation that population interchange regularly occurs between those Unit 3 islands inhabited by brown bears and the nearby Unit 1B mainland. Although we are uncertain about the ability of the Unit 3 islands to support a sustainable harvest by themselves, based on the high likelihood of population interchange between the Unit 3 islands and the adjacent 1B mainland, in fall 2004 the Board of Game authorized a limited Unit 3 brown bear season. Under this management plan the Unit 3 brown bear population is to be managed as a segment of the mainland population. This change in regulation makes brown bear management consistent with Unit 1A, where relatively small numbers of brown bears on Revillagigedo Island are managed as part of the adjacent mainland population.

Prior to 1985 a 15 September–31 May hunting season existed for brown bears in Unit 3. In June 1985 the Board of Game voted to eliminate that season, and from July 1985 to June 2005 there was no open season for brown bear in the unit. During this period the Board of Game considered and rejected numerous proposals to reestablish a brown bear season in Unit 3. In fall 2004 the Board of Game authorized a resident-only spring season for brown bear in Unit 3. While the original intent of the proponents was to establish both spring and fall seasons a clerical error in the proposal resulted in the inadvertent omission of fall season dates. Because of uncertainties about the size of bear population, and in order to limit hunting pressure, the Unit 3 brown bear season is open only to Alaska residents.

During recent years we have received relatively few anecdotal reports of brown bears inhabiting Unit 3. Although extensive brown bear research has been carried out on Admiralty and Chichagof islands in Unit 4 (Schoen and Beier 1989; Titus and Beier 1993), no brown bear research has been conducted to date in Unit 3. Recently completed research on brown bears inhabiting the Bradfield Canal area of Unit 1B has confirmed speculation that population interchange occurs between Units 1A, 1B, 3, and British Columbia, Canada (Flynn et al., 2010).

Brown bear sealing requirements have been in effect in Alaska since 1961. Hunters have been required to obtain registration permits before hunting brown bears in Region I since 1989 (McCarthy 1991; Larsen 1993). Prior to the implementation of a registration permitting requirement in 1989, hunters were only required to obtain a license and metal-locking tag to hunt brown bear.

MANAGEMENT DIRECTION

MANAGEMENT OBJECTIVES

- Manage Unit 3 brown bear population as a segment of the Unit 1B mainland population.
- Limit the annual harvest in Unit 3 to no more than 3 bears annually.
- Limit the number of females in the harvest.
- Minimize the number of bears killed because of garbage and human food conditioning.

METHODS

Unit 3 brown bear hunters are required to obtain registration permits prior to hunting. The permit reports provide useful information about hunting effort, dates afield, and unsuccessful hunt and/or kill locations. We also collect brown bear harvest data through a mandatory-sealing program. During sealing we record the sex of harvested bears, along with the hunt date and kill location. We also measure bear skulls and extract a premolar tooth. At the end of each season, extracted premolars are sent to Matson's Laboratory (Milltown, Montana, USA) for age determination. All of the data we collect is tallied by regulatory year for our management purposes. Other information we use to assess and manage mainland brown bear populations in Unit 3 comes from hunters' anecdotal information, staff observations, and defense of life and property (DLP) kill records. For the purposes of this report, a regulatory year runs from 1 July through 30 June; e.g. RY12 = 1 July 2012–30 June 2013.

RESULTS AND DISCUSSION

POPULATION STATUS AND TREND

Quantitative population data are not available for Unit 3 brown bears. Based on hunters' anecdotal reports, department staff observations, pilot observations, and sealing records, we believe the population is stable at low levels.

MORTALITY

Harvest

Season and Bag Limit

1 bear every 4 regulatory years
by registration permit only

Residents Only

15 March–31 May

Board of Game Action and Emergency Orders. The Board of Game took no actions, and we issued no emergency orders regarding Unit 3 brown bears during this report period.

Hunter Harvest. No brown bears were legally harvested by hunters in the unit during the report period. However, in October 2012 a male brown bear was killed illegally on Mitkof Island by a black bear hunter, and in August 2013 a sow was killed on Wrangell Island under the state's defense of life and property (DLP) provision.

Registration permits (RB075) are required for Unit 3 brown bear hunters. Unlike other brown bear hunts in the region, the hunt in Unit 3 is limited to the spring season. During spring 2012, 24 registration permits were issued. Three (13%) of those permittees reported going afield to hunt brown bear, but none were successful. During spring 2013, 25 registration permits were issued. Nine (36%) of those permittees reported going afield to hunt brown bear, but none were successful (Tables 1, 2, and 3). Although not specifically targeting brown bear, many hunters register for the Unit 3 brown bear hunt in the event they have an opportunity to harvest a bear incidental to other activities.

Hunter Success and Residency. The Unit 3 brown bear hunt is closed to nonresidents. For the 2012 spring hunt, 2 of the 3 hunters who actually took to the field were local residents of Unit 3, and 1 was a nonlocal resident of Alaska. In spring 2013, 7 of the 9 hunters that took to the field were local residents of Unit 3, and 2 were nonlocal residents of Alaska. None of those who took to the field during RY12 or RY13 were successful (Table 4).

Harvest Chronology. In the absence of a fall season, bears are only available to hunters late in the spring season when most have left their dens and are seeking food. During this period most available food, primarily grasses and sedges, is found near saltwater where bears often concentrate. This potentially makes a large portion of the bear population vulnerable to harvest during a short period for hunters using boats or glassing along shorelines. No bears were legally harvested by hunters during the report period, so we have no data on harvest chronology.

Transport Methods. All 3 of the hunters who took to the field in spring 2012 reported using a boat to access hunting areas. Of the 7 hunters who took to the field in spring 2012, 5 reported using boats to access hunting areas, 1 reported using a highway vehicle, and 1 failed to report a method of transport.

Other Mortality

Since 1978 there have been 6 reported instances of Unit 3 brown bears having been killed in defense of life and property, 1 of which was reported during this report period. Anecdotal reports suggest that there is some unreported harvest, but we cannot document the number of bears killed in this way.

HABITAT

Assessment

The Tongass National Forest (Tongass), managed by the U.S. Forest Service (USFS), encompasses most Unit 3 brown bear habitat except for intertidal and other state-owned lands, municipal lands, and Alaska Native corporation lands. The Tongass is managed under a multiple use concept. Timber harvest, road construction, mineral exploration, and other human developments pose the most serious threats to brown bear habitat in the unit. Although rare, bear-human interactions and conflicts resulting from increased access and development cause us concern. DLP mortalities are an ever-present possibility where bears are likely to come into contact with people.

CONCLUSIONS AND RECOMMENDATIONS

We believe most brown bear hunting in Unit 3 occurs incidental to other outdoor activities. Some hunters who obtain a brown bear registration permit probably do so only on the chance they may encounter a brown bear while engaged in other outdoor activities. The Unit 3 registration permit hunt will provide information about brown bear distribution, hunting effort and success. As anticipated, the harvest of Unit 3 brown bears has thus far been low; however, we are concerned by the high percentage of females in the harvest. Three of 4 bears taken legally by hunters since the Unit 3 hunt was reauthorized in 2005 have been females. Although reports of brown bear sightings on Mitkof Island have increased in recent years, no brown bears have been taken legally on the island since the hunt was reauthorized. Although reported DLP brown bear mortality has remained low over the last decade, during the report period 1 sow was killed in defense of life and property. Much of the solution for reducing bear/human conflicts depends on the willingness of the public, municipalities, and timber and mining companies to adopt and adhere to responsible garbage management practices.

No research has been conducted on Unit 3 brown bears, however inferences can be made based on research conducted in neighboring Unit 1B (Flynn et al., 2010). Because most of the brown bears in the Unit 1B research project use the estuary and beach fringe habitats favored by hunters during the late spring and fall, the bears, especially the males, are highly vulnerable to hunting. It is likely Unit 3 bears exhibit similar habitat preferences as Unit 1B bears. In addition, brown bear management on the mainland coast and Unit 3 needs to consider that male and female bears in

this area have larger home ranges and make greater movements than bears in Unit 4. These larger movements make bears in Unit 3 more vulnerable to exploitation and disturbance.

The primary threat to brown bears in Unit 3 is habitat loss associated with clearcut logging. The construction of roads to facilitate forest management activities also improves access to brown bear habitat and increases the likelihood of human caused mortality.

Although no Unit 3 brown bears were legally harvested by hunters during the report period, at this time we recommend no changes to the current season or bag limit.

LITERATURE CITED

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Table 1. Unit 3 total known brown bear mortality, regulatory years 2004–2013.

Regulatory Year	Legal Harvest	Unit 3	Other Mortality
2004	No open season		0
2005	1		0
2006	1		0
2007	2		0
2008	0		0
2009	0		0
2010	0		0
2011	0		0
2012	0		1 ^a
2013	0		1 ^b

^a Illegal kill.

^b Defense of life and property.

Table 2. Age and skull size of brown bears killed in Unit 3, regulatory years 2004–2013.

Regulatory year	Mean skull size ^a				Mean age ^b			
	Male	Nr	Female	Nr	Male	Nr	Female	Nr
2004	N/A		N/A		N/A		N/A	
2005	24.5	1	0	0	11	1	0	0
2006	0		22.4	1	0		N/A	1
2007	0		18.7	2	0		2.5	2
2008	0		0	0	0		0	0
2009	0		0	0	0		0	0
2010	0		0	0	0		0	0
2011	0		0	0	0		0	0
2012	23.5 ^c	1	0	0	N/A		0	1
2013	0		18.6 ^d	1	0		N/A	1

^a Skull size equals length plus zygomatic width.

^b Determined through analyses of extracted premolar teeth.

^c Illegal harvest.

^d Taken in defense of life or property.

Table 3. Unit 3 brown bear registration permit hunt RB075 data, regulatory years 2004–2013.

Regulatory year	Permits issued	Percent did not hunt	Percent unsuccessful hunters	Percent successful hunters	Bear harvest			
					Males (%)	Females (%)	Unknown	Total
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2005	9	(44)	(80)	(20)	(100)	(0)	0	1
2006	16	(50)	(88)	(13)	(0)	(100)	0	1
2007	14	(57)	(67)	(33)	(0)	(100)	0	2
2008	25	(64)	(100)	(0)	(0)	(0)	0	0
2009	25	(56)	(100)	(0)	(0)	(0)	0	0
2010	17	(88)	(100)	(0)	(0)	(0)	0	0
2011	28	(71)	(100)	(0)	(0)	(0)	0	0
2012	24	(88)	(100)	(0)	(0)	(0)	0	0
2013	25	(64)	(100)	(0)	(0)	(0)	0	0

Table 4. Unit 3 number of brown bear hunters, by residency, regulatory years 2004–2013.

Regulatory year	Local Resident ^a	Nonlocal Resident	Nonresident	Total hunters	Total successful hunters
2004	N/A	N/A	N/A	N/A	N/A
2005	5	0	N/A	5	1
2006	5	3	N/A	8	1
2007	3	3	N/A	6	2
2008	7	2	N/A	9	0
2009	7	3	N/A	10	0
2010	2	0	N/A	2	0
2011	5	2	N/A	7	0
2012	2	1	N/A	3	0
2013	7	2	N/A	9	0

^a Local residents are those hunters who reside in Unit 3.