SUBSISTENCE USE OF BROWN BEAR IN SOUTHEAST ALASKA

by

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ABSTRACT

This report presents information on the historic and contemporary subsistence harvest and use of brown bear by southeast Alaskans. Although today brown bear are hunted primarily for sport and trophy, Alaskan Natives have harvested brown bear for food, clothing, tools, and other purposes for centuries. Traditionally, brown bear hunting among Natives was surrounded by numerous behavioral prescriptions which were considered vital to success in the hunt. Native stories, beliefs, and practices reflect these prescriptions and emphasize the close relationship between humans and brown bears. The brown bear remains a pervasive and important symbol in Tlingit social and ceremonial life.

While sport and trophy harvests of brown bear have increased steadily since the turn of the century, ethnographic, harvest, and interview data suggest that the subsistence harvest of brown bears has declined from aboriginal levels. Possible factors contributing to the decline include: the low desirability of the meat in comparison with other game species; the availability of alternative and more economically viable resources; the labor-intensive methods of preservation; increased regulation of the harvest; and the erosion of the cultural complex of beliefs and practices surrounding bear hunting. Although there are some conflicts between traditional brown bear hunting practices and contemporary regulation of the harvest, the present low level of harvest does not suggest a need to modify seasons or bag limits.

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INTRODUCTION

The brown bear's (*Ursus arctos*) celebrity as a formidable predator and cagey, unpredictable prey is legendary. In both Native American and European cultural traditions there are innumerable stories and beliefs concerning bears' powers and feats as well as a rich literature of oral and written narratives describing people's encounters with them. Many hunters consider brown bear the ultimate challenge among North American game animals, while for others bears represent the very embodiment of wilderness, the master of the forest. Indeed, the legend and lore surrounding bears is perhaps unsurpassed by any other animal (Shepard and Sanders 1985).

Brown bears have played an important role in the subsistence economies and social life of southeast Alaskan communities for centuries. In her study of Yakutat Tlingit culture and history, the anthropologist de Laguna (1972:364) remarked that "more was told about the habits of bears and the methods of killing them than about any other animal." Brown bears were hunted for their meat and hides, and other parts of the bear were fashioned into such things as tools, amulets, and ceremonial regalia. While the subsistence harvest of brown bear and consumption of brown bear meat appears to have declined in recent years in Southeast Alaska, some Natives still consume its meat and fat, and other parts of the bear continue to be utilized for ceremonial purposes. Moreover, the cultural significance of brown bear in southeast Alaska Natives' social and ceremonial life remains strong.

With the demise of the brown and grizzly bear in all but a few of the lower forty-eight states, Alaska has become the premier locale for trophy bear hunting. Since the 1930s Alaska's non-Native population has increased steadily and the state has become increasingly accessible to both resident and non-resident sport hunters seeking big game trophies. Today sport and trophy hunters are responsible for the majority of the known brown bear harvests.

Early game laws recognized the need for subsistence use of large game by Natives and other groups and included provisions for their hunting brown bears for food or clothing as needed.[1] The State or Alaska subsistence law, passed in 1978 (revised, 1986), created a priority for subsistence over all other fish and game uses. Subsistence uses are defined in this law as "noncommercial, customary and traditional uses of wild, renewable resources by a resident domiciled in a rural area of the state for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption" (AS 16.05.940).[2] The Alaska Board of Game, a seven-member citizen board appointed by the Governor, determines whether particular uses of game are subsistence uses. The Board has determined brown bear to be a subsistence resource in portions of Southeast Alaska, and separate regulations for subsistence hunting of brown bear were established in 1985. Although subsistence hunting is given priority in statute, subsistence regulations governing the taking of brown bear have remained effectively the same as those governing general (sport) hunting. Similarly, harvest records do not distinguish between sport and subsistence hunts.

The purpose of this study is to gather information on the historic and contemporary subsistence harvest and use of brown bear by southeast Alaskans. The research is based on a review of the historic, ethnological, and biological literature and on interview data collected from residents in the communities of Angoon, Sitka and Yakutat. The first section examines the biology of the resource and the modern history of brown bear management and harvest in Southeast Alaska. Section Two analyzes the cultural significance of the brown bear, particularly among the Native Tlingit. The third and fourth sections outline historic and contemporary uses of brown bear, and Section Four discusses changes in use patterns. Sections Five and Six examine historic and contemporary methods of harvesting and handling, preparing, preserving, and storing brown bear. The final section offers some general conclusions and suggests topics for further research.

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[1] See, for example, Act of May 11, 1908, (35 Stat., 102).

[2] The rural references were found to be unconstitutional by the Alaska State Supreme Court in December, 1989.

BROWN BEAR BIOLOGY, MANAGEMENT, AND HARVEST PATTERNS

In Southeast Alaska brown bears are found north of Frederick Sound on the major islands, including Admiralty, Baranof, Chichagof, Kruzof, Partofshikof, Yakobi, and Catherine islands, and along the major inland river systems. Brown bears are thought to have migrated to Southeast Alaska from the north during the last major glacial retreat. With the evolution of mammology and wildlife science, our knowledge of the biology, habits, and vulnerabilities of brown bears has been greatly improved. Similarly, developments in wildlife management have led to more effective monitoring of brown bear populations and harvest patterns.

Research on Southeast brown bear populations has included various attempts to classify brown and grizzly bears into different species and subspecies (e.g., Merriam 1918; Rausch 1963). In the early years of mammology, some researchers seemed driven to name as many new species and subspecies as possible based on what were often only minute differences in physical characteristics. Merriam in particular was an avid splitter, naming no less than 86 species of brown and grizzly bears, approximately one third of which were Alaskan. However, because they were not based on sound biological principles, most of these elaborate classificatory schemes have since been dismissed as "specious speciation" (Sherwood 1979).

While the speciation controversies have not been fully resolved, today all Alaskan brown and grizzly bears are classified as *Ursus arctos*.[3] In general the common name "brown bear" refers to those members of *Ursus arctos* found in the coastal regions, including Southeast Alaska, while the common name "grizzly bear" refers to those found in the interior. Milder climates and a richer food supply allow coastal brown bears longer feeding seasons and shorter hibernation periods than inland grizzlies. As a result coastal brown bears are generally larger than inland grizzlies. Indeed, perhaps the brown bear's most striking feature is its impressive physical stature. Large bruins may reach standing heights of nine feet and weigh up to 800 pounds.[4] Perched on their hind legs, brown bears are towering, human-like figures. Notwithstanding their massive frames, bears also are renowned for their stealth and cat-like quickness.

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[3] Tlingit bear taxonomy posits only two major species: *s'eek* (*Ursus americanus,* black bear) and *x'oots* (*Ursus arctos*) which is in agreement with the present scientific classification of bears in Southeast Alaska.

As omnivores, brown bears feed mainly on a diet of plants and fish and help to insulate themselves in winter by developing a 2-3 inch layer of fat during the course of fall feeding. Their food supply is largest during the salmon and berry seasons of summer and early fall and leanest during the winter and early spring. Accordingly, bears usually retreat to their dens in November and December for a period of dormancy, reemerging in April or May. Breeding occurs in the spring and early summer and cubs are born in January or February. Cubs stay with the female for 2-4 years, and during this period sows are quite protective of their young. Brown bears can live as long as 30 years.

Until recently, little scientific information was available on Southeast brown bear populations. With the exception of the highly-populated Admiralty, Baranof, and Chichagof islands (Dufresne and Willams 1932, Heintzleman and Terhune 1934; Klein, et al. 1958), few systematic studies of brown bear populations were carried out prior to statehood in 1959. Occasionally the status of the bear population was the subject of the governor's report or the writings of guides or hunters. However, these population evaluations were often colored by the writers' own biases. For example, those who found bears to be a nuisance or a threat, and thus favored increased hunting, often insisted that their numbers were either stable or increasing. On the other hand, as early as 1911 some local hunters were complaining that populations were depleted in some areas of the mainland (Hasselborg 1911).[5]

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[4] Boone and Crockett trophy bears are often over 10 feet square, measured as the length plus the width of the hide divided by two. Southeast brown bears average 8 feet by 8 feet.

Recent data indicate that brown bear populations in most areas of Southeast are presently stable (ADF&G 1990), although biological investigations of their reproductive capacity suggest that bear populations remain extremely sensitive to disruption. This is because brown bears exhibit the lowest reproduction rate of any North American mammal. In Southeast Alaska, females often do not breed until they are 7-8 years of age, and intervals between births range from 2-4 years. Moreover, the mortality rate among cubs in their first two years of life is 40 percent (Vern Beier, pers. comm. 1991).

Efforts to conserve the brown bear began with the passage of the Game Law of 1908,[6] but early management was marred by inconsistency and political confusion. Conservation measures were interspersed with periodic campaigns to exterminate the bear which some influential Alaskans perceived as a menace. Under the 1908 game law, the brown bear (but not the grizzly) was defined as a game species and afforded some measure of protection. Although there were no strict bag limits set forth in the law, a licensing system was implemented for brown bear parts being shipped out of the state which limited exports to three bears and levied a five dollar fee on each bear.[7] The 1908 law also established the first closed season (July 1-Sept. 30) on brown bear hunting south of 62 degrees latitude, thus including all of Southeast Alaska (see Table 1). Natives, miners and explorers were exempted from the law which provided for their "killing of any game animal or bird for food or clothing at any time;" however it was not legal for them to ship or sell game animals harvested out of season.

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[5] In his 1911 journal, Hasselborg reports poor bear hunting in the vicinity of Bartlett River, Berners Bay, and Windfall Lake, despite prime habitat. Several groups of Natives he encountered told Hasselborg that they had not killed a brown bear that spring, or in one case for three years (1911, Aug. 22). In several instances Hasselborg suggests that localized bear populations have been "exterminated" (1911, Aug. 22) or "thinned out" (1911, Aug. 26-27) by Natives, although he cites no direct evidence for this conclusion.

[6] Act of May 11, 1908, (35 Stat., 102).

Table 1 illustrates the season limits imposed on brown bear hunting since the first game law affecting brown bear was passed in 1908. These season limits may be compared with the traditional Native primary and secondary periods of harvest which are depicted at the top of the table. Although Natives and other subsistence users were exempt from the game laws which established the first closed seasons, today the seasons for subsistence and general hunting are the same. In general, there has been little conflict between the prime bear hunting periods in the traditional Native seasonal round and modern, regulatory season limits, except in those cases where winter, early spring, or late summer hunting seasons have been curtailed, such as in 1969-70.

Table 2 chronicles the history of brown bear hunting regulations since the 1908 game law. In addition to the implementation of season limits, another important regulatory tool, the bag limit, was introduced in 1919, the first limit being three bears per year. However, prior to 1930, both bag and season limits were periodically suspended and overall enforcement seems to have been minimal. As late as 1930 there was no bag limit or closed season on brown bear for Alaska residents except in Glacier Bay National Monument and on Kruzof and Partofshikof islands. Inconsistency in early management resulted from the fact that conservation

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[7] A person could also purchase a general license for the shipment of game at a cost of forty dollars. This license allowed for the export of two bears and could be combined with one five dollar bear license for a limit of three.

Table 1. BROWN BEAR HARVEST SEASONS

Game Management Units 1A, 1B, 1C, and 1D

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
YEARS												
Traditional Native Hunting Season*		//	///※	※※※※	※※※※	※///		///※	※※※※	※※※※	※///	
before 1908**	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※
1908-1924	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※				※※※※	※※※※	※※※※
1924-1925	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※
1926-30	※※※※	※※※※	※※※※	※※※※	※※※※	※※※			※※※※	※※※※	※※※※	※※※※
1930-33(R)	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※
1930-33 (N-R)	※※※※	※※※※	※※※※	※※※※	※※※※	※※※			※※※※	※※※※	※※※※	※※※※
1933-1955	※※※※	※※※※	※※※※	※※※※	※※※※	※※※			※※※※	※※※※	※※※※	※※※※
1956-1965	※※※※	※※※※	※※※※	※※※※	※※※※	※※※※			※※※※	※※※※	※※※※	※※※※
1966[1]	※※※※	※※※※	※※※※	※※※※	※※※※	※※※			※※※※	※※※※	※※※※	※※※※
1967-1968[2]	※※※※	※※※※	※※※※	※※※※	※※※※	※※			※※※※	※※※※	※※※※	※※※※
1969-1970[3]				※※※※	※※※※	※※			※※※※	※※※※	※※※※	
1971-1978[1]	※※※※	※※※※	※※※※	※※※※	※※※※	※※			※※※※	※※※※	※※※※	※※※※
1979-1988	※※※※	※※※※	※※※※	※※※※	※※※※				※※	※※※※	※※※※	※※※※
1989-1990[4]			※※	※※※※	※※※※				※※	※※※※	※※※※	※※※※

NOTES

R=Resident

N-R=Non-Resident

※=Primary period of harvest

/ = Secondary period of harvest

*This is a composite based on a literature review and interview data. Harvest seasons varied by community and according to seasonal conditions.

**The first game law protecting Alaskan brown bears was passed in 1908.

1. Sept. 1 - Jun. 20
2. Sept. 1 - Jun. 10
3. Sept. 1 - Nov. 30 and Apr. 1 - Jun. 10
4. Sept. 15 - Dec. 31 and Mar. 15 - May 31

Table 1, cont. BROWN BEAR HARVEST SEASONS

Game Management Unit 4

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
YEARS												
Traditional Native Hunting Season*		//	///▩	▩▩▩▩	▩▩▩▩	▩///		///▩	▩▩▩▩	▩▩▩▩	▩///	
before 1908**	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1908-1924	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩				▩▩▩▩	▩▩▩▩	▩▩▩▩
1924-1925	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1926-30	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1930-33(R)	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1930-33 (N-R)	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1933-1944	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1944-1955	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1956-1965	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1966^{1}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1967-1968^{2}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1969-1970^{3}				▩▩▩▩	▩▩▩▩	▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	
1971-1976^{2}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1977-1978^{4}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1977-1978^{5}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩				▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1979-1988^{6}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩				▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1979-1988^{7}	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩				▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1989-1990^{8}			▩▩	▩▩▩▩	▩▩▩▩				▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1989- 1990^{9}			▩▩	▩▩▩▩	▩▩▩							
1989-1990^{10}			▩▩	▩▩▩▩	▩▩▩				▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩

NOTES

R = Resident

N-R = Non-Resident

▩ = Primary period of harvest

/ = Secondary period of harvest

*This is a composite based on a literature review and interview data. Harvest seasons varied by community and according to seasonal conditions.

**The first game law protecting Alaskan brown bears was passed in 1908.

1. Sept. 1 - Jun. 20
2. Sept. 1 - Jun. 10
3. Sept. 1 - Nov. 30 and Apr. 1 - Jun. 10
4 Sept. 1 - Jun. 5 Unit 4 except Admiralty Island
5. Sept. 1 - May 20 Unit 4 Admiralty Island only
6. Sept. 15 - May 31 Unit 4 south and west of crest line of Chichagof & Baranof Islands
7. Sept. 15 - May 20 Remainder of Unit 4
8 Sept. 15 - Dec. 31 and Mar. 15 - May 31 south and west of Chichagof & Baranof Islands
9. Mar. 15 - May 20 northeast Chichagof Island controlled use area
10. Sept. 15 - Dec. 31 and Mar. 15 - May 20 remainder of Unit 4

Table 1, cont. BROWN BEAR HARVEST SEASONS

Game Management Units 5A and 5B

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
YEARS												
Traditional Native Hunting Season*		//	///▩	▩▩▩▩	▩▩▩▩	▩///		///▩	▩▩▩▩	▩▩▩▩	▩///	
before 1908**	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1908-1924	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩				▩▩▩▩	▩▩▩▩	▩▩▩▩
1924-1925	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1926-30	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1930-33(R)[1]	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1930-33 (N-R)	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1933-1955	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1956-1965	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1966[2]	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1967-1968[3]	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩
1969[4]				▩▩▩▩	▩▩▩▩	▩▩			▩▩▩▩	▩▩▩▩	▩▩▩▩	
1970-1972[5]					▩▩					▩▩▩	▩▩▩▩	
1973-1975[6]					▩▩				▩▩▩▩	▩▩▩▩	▩▩▩▩	
1976-1990	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩				▩▩▩▩	▩▩▩▩	▩▩▩▩	▩▩▩▩

NOTES

R = Resident

N-R = Non-Resident

▩ = Primary period of harvest

/ = Secondary period of harvest

*This is a composite based on a literature review and interview data. Harvest seasons varied by community and according to seasonal conditions.

**The first game law protecting Alaskan brown bears was passed in 1908.

1. Sept.1-June 20 in the following areas: 1) drainage to the Gulf of Alaska from the west shore of Glacier Bay to the Alsek River; 2) The drainage to the Gulf of Alaska from the west shore of Yakutat Bay and the west edge of Hubbard Glacier to the Bering River.
2. Sept. 1 - Jun. 20
3. Sept. 1 - Jun. 10
4. Sept. 1 - Nov. 30 and Apr. 1 - Jun. 10
5. Oct. 10 - Nov. 30 and May 10 - May 25
6. Sept. 1 - Nov. 30 and May 10 - May 25

efforts were often countered by calls for the elimination brown bears altogether. Many influential Alaskans perceived brown bears as a threat not only to humans but to other fish and game and to economic development in general. Sentiments such as those of Governor Thomas C. Riggs that "the bear is only a play thing of so-called sportsmen and should go the way of the buffalo because it impedes development" were not uncommon (see Sherwood 1979). Following some of his predecessors, Riggs argued in his Governor's Reports that because the brown bear's position as "*persona non grata* was now clearly unchangeable," the "meaningless legal form of protection extended to it should likewise be withdrawn" (Riggs 1922). But Riggs went even a step further. Exploiting the confusion surrounding Merriam's hair-splitting speciation, Riggs in 1919 declared that grizzly bears, which were not protected under the 1908 game law, could be hunted and exported without restriction. Because no one, save perhaps Merriam himself, could distinguish between a southeast brown bear and a southeast grizzly, Riggs' declaration in effect meant that brown bears could be hunted without restriction too. Although Riggs efforts were eventually thwarted, and the game laws eventually reworded to avoid ambiguity, the prevalence of anti-bear sentiment meant that there was little protection for them despite the laws.

In 1925 an important new game law was passed which eliminated market hunting of big game, including brown bears, and established the Alaska Game Commission.[8] Natives continued to be exempted under the new law and were still permitted to hunt game at any time of year for food and to sell game hides within the state unless otherwise restricted. Although another campaign against bears, including a liberalization of hunting regulations, was launched after Forest Service

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[8] Act of January 13, 1925 (43 Stat., 739)

Table 2. SOUTHEAST ALASKA BROWN BEAR HUNTING REGULATIONS BY GAME MANAGEMENT UNIT AND YEAR

Southeast Alaska Brown Bear Hunting Regulations, by Game Management Unit, and Year.

Year	GMU	Season Type	Season	Limit	Comments
before 1908	ALL UNITS	Open	No Closed Season	None	Brown bear was not legally defined as a game animal until 1908.
1908-1919	ALL UNITS	Open	Oct. 1-July 1	Three for export	1) Non-Residents required to purchase hunting license. Export fee($5) required to ship brown bear parts out of state; 2) Natives, miners, and explorers exempted from season and bag limits if in need of food. 3) hunting game with dogs outlawed.
1919-1924	ALL UNITS	Open	Oct. 1-July 1	Three	1) 1919: Gov. Riggs ruled that grizzlies, including some SE species, were not brown bears, thus not protected under game laws; reversed in 1921; 2) Bag limit of three brown bears imposed; 3) Native provision extended to include clothing as well as food.
1924-1925	ALL UNITS	Open	No Closed Season	Three	1) Bear defined as "large brown and grizzly." 2) Closed seasons implemented for Glacier Bay N.M., Kruzof and Partofshikof Islands; 3) Native clothing exemption removed.
1925-1930	ALL UNITS	Open	Sept 1.-June 20	Three	Game Law of 1925 passed. Alaska Game Commission created. Market hunting outlawed.
1930-33 (NR)	ALL UNITS	Open	Sept. 1-June 20	Two	NR=Non-resident
1930-33 (R)	1A-4	Open	No Closed Season	None	R=resident
1930-1933	5A-5B	Open	Sept. 1-June 20	Two	Closed seasons and limits applied only to 1) The drainage to the Gulf of Alaska from the west shore of Glacier Bay to the Alsek R.; 2) the drainage to the Gulf of Alaska from the west shore of Yakutat Bay and the west edge of Hubbard Glacier to Bering R.
1933-1955	1A-3, 5	Open	Sept. 1-June 20	Two	Game management taken over by U.S. Fish and Wildlife Service (1943-59)
1933-1944	4	Open	Sept.1-June 20	Two	Except Admiralty Island, where the limit was one bear. Pack Creek closed to bear hunting (1933).
1944-1955	4	Open	Sept. 1-June 20	Two	1) Except Admiralty Island, where the limit was one bear beginining in 1935; 2) except Thayer Mountain and Pack Creek Reserve which were closed to brown bear hunting in 1944.
1956-1959	1,5	Open	Sept. 1-June 30	One	
1956-1959	4	Open	Sept. 1-June 30	One	Except Thayer Mountain and Pack Creek closed areas.
1960	1A - 3	Open	Jan. 1-Jun. 30	One	Alaska Dept. of Fish and Game assumes management of brown bears. Hunting licenses required for all hunters over the age of 16, including Natives. Sealing requirements introduced.
1960	4	Open	Jan. 1-Jun. 30	One	Except Thayer Mt. and Pack Creek closed areas.
1960	5A - 5B	Open	Jan. 1-Jun. 30	One	
1961-1962	1A - 3	Open	Sept. 1-Jun. 30	One	
1961-1962	4	Open	Sept. 1-Jun. 30	One	Except Thayer Mt. and Pack Creek closed areas.
1961-1962	5A - 5B	Open	Sept. 1-Jun. 30	One	
1963-1965	ALL UNITS	Open	Sept. 1-Jun. 30	One	
1966	ALL UNITS	Open	Sept. 1-Jun. 20	One	

Source: Alaska Department of Fish and Game records

Table 2, cont. SOUTHEAST ALASKA BROWN BEAR HUNTING REGULATIONS BY GAME MANAGEMENT UNIT AND YEAR

Southeast Alaska Brown Bear Hunting Regulations, by Game Management Unit, and Year.

Year	GMU	Season Type	Season	Limit	Comments
1967	ALL UNITS	Open	Sept. 1-Jun. 10	One	
1968	ALL UNITS	Open	Sept. 1-Jun. 10	One	One bear every four regulatory years.
1969	ALL UNITS	Open	9/ 1-11/30. 4/1-6/1	One	One bear every four regulatory years.
1970	1A - 4	Open	9/1-11/30. 4/1-6/10	One	One bear every four regulatory years.
1970	5A - 5B	Open	10/10-11/30. 5/10-5	One	One bear every four regulatory years.
1971-1972	1A - 4	Open	Sept. 1-Jun. 10	One	One bear every four regulatory years.
1971-1972	5A - 5B	Open	10/10-11/30. 5/10-5	One	One bear every four regulatory years.
1973-1975	1A - 4	Open	Sept. 1-June 10	One	One bear every four regulatory years.
1973-1975	5A - 5B	Open	9/ 1-11/30. 5/10-5/	One	One bear every four regulatory years.
1976	1A - 4	Open	Sept. 1-June 10	One	One bear every four regulatory years. Tag fees ($25) and requirements introduced.
1976	5A - 5B	Open	Sept. 1-May 31	One	One bear every four regulatory years.
1977-1978	1A - 3	Open	Sept. 1-June 10	One	One bear every four regulatory years.
1977-1978	4	Open	Sept. 1-June 5	One	Except Admiralty Island. One bear every four regulatory years.
		Open	Sept. 1-May 20	One	Admiralty Island only. One bear every four regulatory years.
1977-1978	5A - 5B	Open	Sept. 1-May 31	One	One bear every four regulatory years.
1979	1A - 1D	Open	Sept. 15-May 31	One	One bear every four regulatory years.
1979	2 - 3	Open	Sept. 1-June 10	One	One bear every four regulatory years.
1979	4	Open	Sept. 15-May 31	One	Chichagof Island south and west of a line which follows the crest of the island from Rock Point to Rogers Point including Yakobi and other adjacent islands. Baranof Island south and west of a line which follows the crest of the island from Nismeni Point to the entrance of Gut Bay, including the drainages into Gut Bay and including Kruzof and other adjacent islands. One bear every four regulatory years.
		Open	Sept. 15-May 20	One	Remainder of Unit 4; One bear every four regulatory years
1979	5A - 5B	Open	Sept. 1-May 31	One	One bear every four regulatory years.
1980-1984	1A - 3	Open	Sept. 15-May 31	One	One bear every four regulatory years
1980-1984	4	Open	Sept. 15-May 31	One	Chichagof Island south and west of a line which follows the crest of the island from Rock Point to Rogers Point

Source: Alaska Department of Fish and Game records

Table 2, cont. SOUTHEAST ALASKA BROWN BEAR HUNTING REGULATIONS BY GAME MANAGEMENT UNIT AND YEAR

Southeast Alaska Brown Bear Hunting Regulations, by Game Management Unit, and Year.

Year	GMU	Season Type	Season	Limit	Comments
					including Yakobi and other adjacent islands. Baranof Island
					south and west of a line which follows the crest of the island
					from Nismeni Point to the entrance of Gut Bay, including the
					drainages into Gut Bay and including Kruzof and other
					adjacent islands. One bear every four regulatory years.
		Open	Sept. 15-May 20	One	Remainder of Unit 4; One bear every four regulatory years
1980-1984	5A - 5B	Open	Sept. 1-May 31	One	One bear every four regulatory years.
1985-1986	1A - 1D	Subs./General	Sept. 15-May 31	One	One bear every four regulatory years. Board of Game recognizes subsistence use of brown bear in Southeast communities.
1985-1986	2 - 3	Subs./General	No open season		
1985-1986	4	Subs./General	Sept. 15-May 31	One	Chichagof Island south and west of a line which follows
					the crest of the island from Rock Point to Rogers Point
					including Yakobi and other adjacent islands. Baranof Island
					south and west of a line which follows the crest of the island
					from Nismeni Point to the entrance of Gut Bay, including the
					drainages into Gut Bay and including Kruzof and other
					adjacent islands. One bear every four regulatory years.
		Subs./General	Sept. 15-May 20	One	remainder of Unit 4. One bear every four regulatory years.
1985-1986	5A - 5B	Subs./General	Sept. 1-May 31	One	One bear every four regulatory years.
1987	1A - 3	Subs./General	Sept. 15-May 31	One	One bear every four regulatory years.
1987	4	Subs./General	Sept. 15-May 31	One	Chichagof Island south and west of a line which follows
					the crest of the island from Rock Point to Rogers Point
					including Yakobi and other adjacent islands. Baranof Island
					south and west of a line which follows the crest of the island
					from Nismeni Point to the entrance of Gut Bay, including the
					drainages into Gut Bay and including Kruzof and other
					adjacent islands. One bear every four regulatory years.
		Subs./General	Sept. 15-May 20	One	remainder of Unit 4. One bear every four regulatory years.
1987	5A - 5B	Subs./General	Sept. 1-May 31	One	One bear every four regulatory years.
1988	1A - 1D	Subs./General	Sept. 15-May 31	One	One bear every four regulatory years.
1988	2 - 3	Subs./General	No open season		
1988	4	Subs./General	Sept. 15-May 31	One	Chichagof Island south and west of a line which follows
					the crest of the island from Rock Point to Rogers Point
					including Yakobi and other adjacent islands. Baranof Island
					south and west of a line which follows the crest of the island
					from Nismeni Point to the entrance of Gut Bay, including the
					drainages into Gut Bay and including Kruzof and other

Source: Alaska Department of Fish and Game records

Table 2, cont. SOUTHEAST ALASKA BROWN BEAR HUNTING REGULATIONS BY GAME MANAGEMENT UNIT AND YEAR

Southeast Alaska Brown Bear Hunting Regulations, by Game Management Unit, and Year.

Year	GMU	Season Type	Season	Limit	Comments
					adjacent islands. One bear every four regulatory years.
	4	Subs./General	Sept. 15-May 20	One	remainder of Unit 4. One bear every four regulatory years.
1988	5A - 5B	Subs./General	Sept. 1-May 31	One	One bear every four regulatory years.
1989-1990	1A - 1D	Subs./General	9/15-12/31. 3/15-5/	One	One every four regulatory years by registration permit only.
1989-1990	2 - 3	Subs./General	No open season		
1989-1990	4	Subs./General	9/15-12/31. 3/15-5/	One	Chichagof Island south and west of a line which follows
					the crest of the island from Rock Point to Rogers Point
					including Yakobi and other adjacent islands. Baranof Island
					south and west of a line which follows the crest of the island
					from Nismeni Point to the entrance of Gut Bay, including the
					drainages into Gut Bay and including Kruzof and other
					adjacent islands. One bear every four regulatory years.
	4	Subs./General	Mar. 15-May 20	One	NE Chichagof Controlled Use area. One bear /four years
	4	Subs./General	9/15-12/31. 3/15-5/	One	Remainder of Unit 4. One bear every four regulatory years.
1989-1990	5A - 5B	Subs./General	Sept. 1-May 31	One	One bear every four regulatory years.

Source: Alaska Department of Fish and Game records

cruiser Jack Thayer was mauled by a brown bear on Admiralty Island in 1929 (see Howe 1987:85-86), this effort was countered by an ongoing crusade to save the bears, led by Eastern conservationists (e.g., Holzworth 1930).

On balance, management became more consistent and effective under the auspices of the Alaska Game Commission (1925-1959) and the U.S. Fish and Wildlife Service (1943-59). By 1936, annual bag limits were reduced to two bears and in some areas, such as Admiralty Island, to one bear. Season limits (September 1-June 20) were also consistently imposed on both residents and non-residents after 1936. However, commercial developments, lack of enforcement, and increases in sport and trophy hunting, especially for big coastal bears, continued to threaten populations in some areas of the state (Dufresne 1965).

Since 1960, brown bear hunting has been regulated by the Alaska Board of Game, and the population has been managed by the Alaska Department of Fish and Game. In order to maintain the brown bear population and manage it on a finer scale, the Department of Fish and Game's Division of Wildlife Conservation has developed a more comprehensive management regime which monitors hunting as well as other impacts on bear populations, such as industrial development and habitat alteration. These impacts, combined with increased hunting pressure and evidence of a low reproduction rate among brown bears, have made it necessary to further regulate harvests in order to conserve the population. Since 1968 the bag limit in all units open to brown bear hunting in Southeast Alaska has been one bear every four regulatory years, and in recent years a registration permit system has been introduced in some areas (see Table 2). Open seasons have been truncated, in some cases to exclude especially productive hunting periods, such as late May and early June, which might threaten bear populations (Schoen and Beier 1987:36). Since 1977 all brown bear hunters have been required to purchase a 25 dollar tag before hunting a brown bear. In addition, salvage and sealing requirements, introduced in 1961, mandate that a hunter retrieve the hide and skull so that scientific information regarding the sex, age, and hide quality of harvested bears can be obtained by game biologists.

In recent years, the Division has developed management objectives "for discrete areas to meet the demands placed on individual populations as access increases, hunting and guiding patterns change, and resource development continues" (ADF&G 1991:1). As a part of this effort, the Division of Wildlife Conservation has undertaken studies to determine the impacts of various commercial activities, including logging and mining, on brown bear populations in Southeast Alaska (Schoen and Beier 1987). Additional management problems are posed by garbage disposal sites, which attract high concentrations of bears to community areas, and by other so-called problem bears which frequent camps.[9] With respect to hunting, one management objective is to limit harvest to not more than five percent of the population (Vern Beier, pers. comm. 1991).

Of Southeast Alaska's five Game Management Units (GMUs, see Fig. 1), GMUs 1, 4, and 5 provide significant brown bear hunting. The total 1960-1990 harvests from each of these units is summarized in Figure 2. Figure 3 shows the total annual brown bear harvest for all of Southeast Alaska between 1960-1990. The total annual harvest has increased steadily in the last three decades. Between 1960-1970, the average annual harvest was 85 bears. In the 1970s the average rose to 118 per year, and in the 1980s it reached 147 bears per year, a 75 percent increase over the 1960s average annual harvest.

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[9] Problem bears are often killed, but such kills are frequently not reported. Standard hunting regulations do not apply to situations where bears must be killed in defense of life or property (DLP). However, DLP kills are only legal as a last resort, when all other means avoidance and defense have been exhausted. DLP kills are considered property of the state and must be reported and properly sealed and the hide and claws surrendered. DLP kills are typically highest in areas where human development has penetrated high value bear habitat. One goal of the Division has been to reduce the number of DLP kills through better management and education.

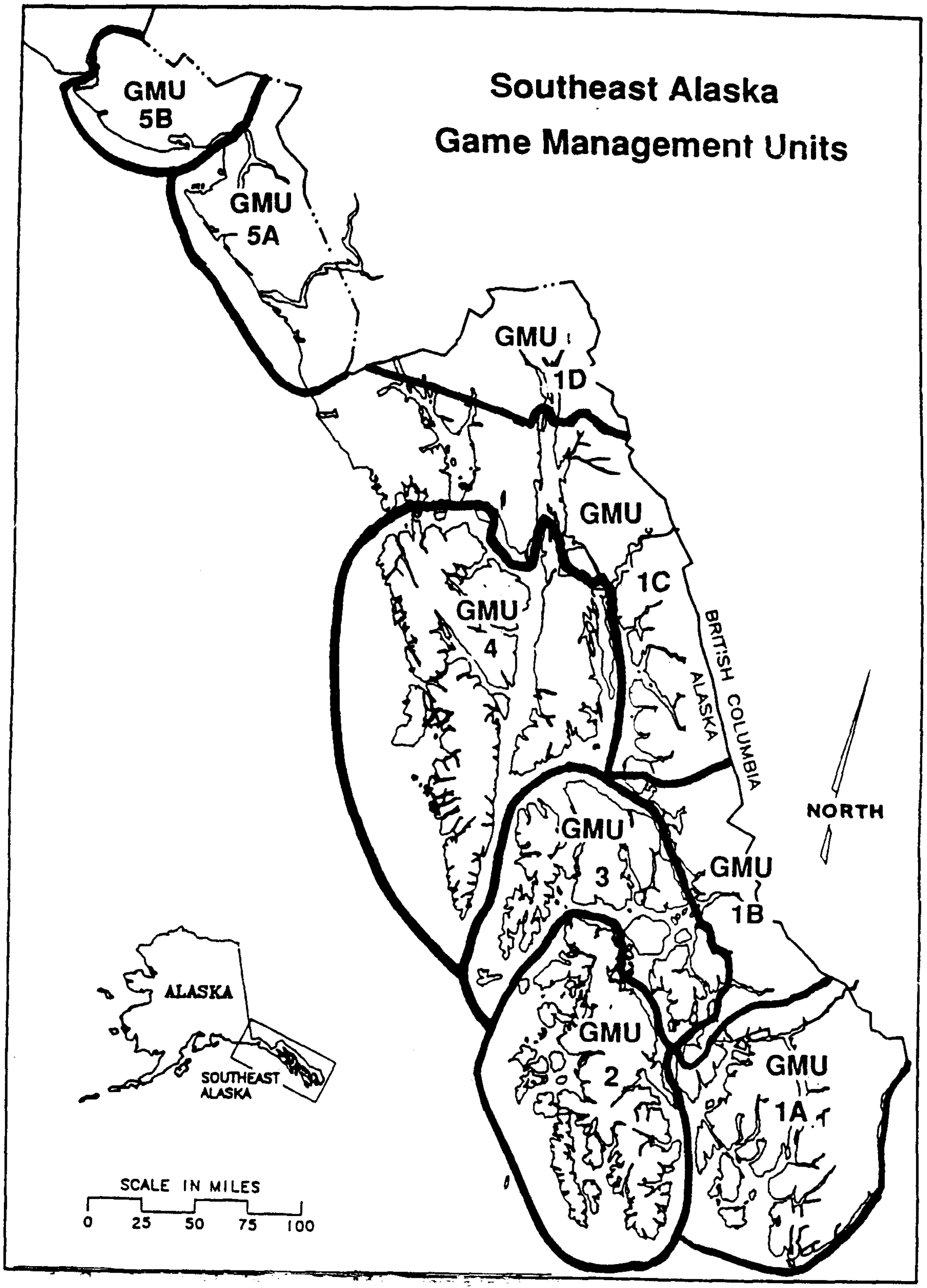
Southeast Alaska
Game Management Units
GMU 5B
GMU 5A
GMU 1D
GMU 1C
GMU 4
GMU 3
GMU 1B
GMU 2
GMU 1A
BRITISH COLUMBIA
ALASKA
NORTH
ALASKA
SOUTHEAST ALASKA
SCALE IN MILES
0 25 50 75 100

Figure 1. Southeast Alaska Game Management Units

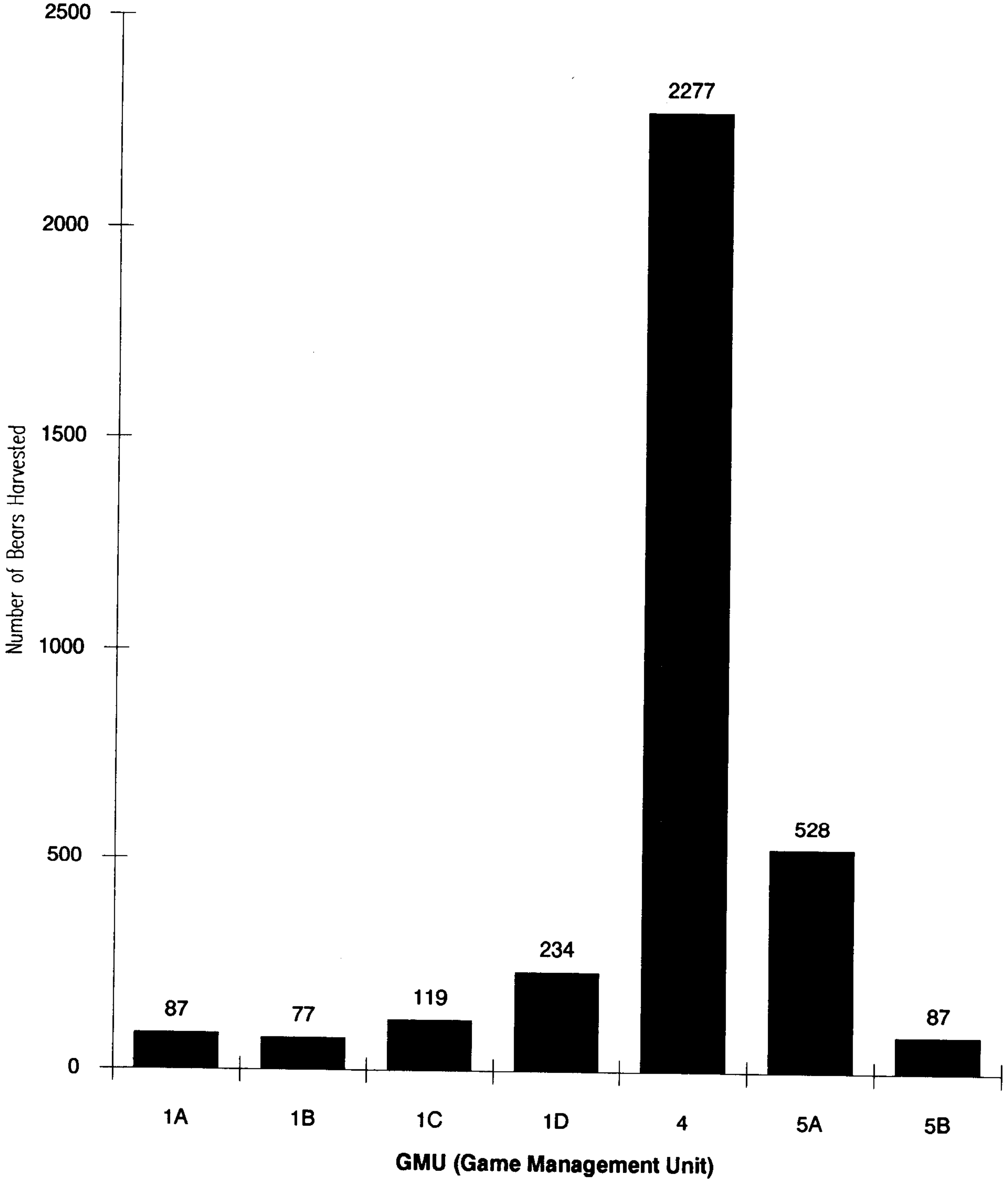

Figure 2. 1960-1990 Southeast Alaska Brown Bear Harvest by GMU

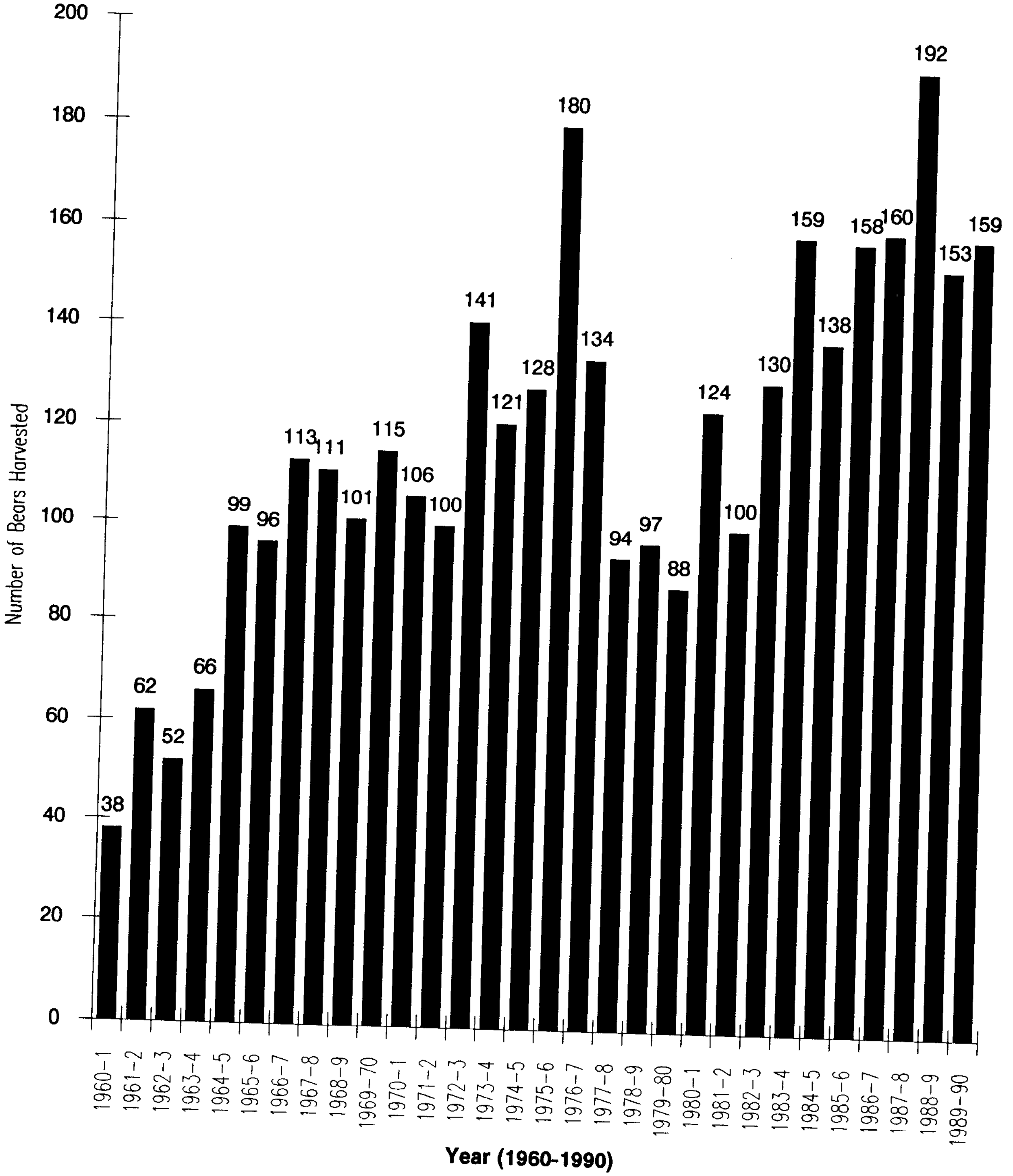

Figure 3. Southeast Alaska Brown Bear Harvest, 1960-1990

The highest concentrations of brown bears in Southeast Alaska are in GMU 4, which includes Admiralty, Baranof, and Chichagof islands. Admiralty Island, also known by its Tlingit name *Kootznoowoo*[10] (Brown Bear Fort), boasts the highest concentrations of brown bear in the state with estimates as high as 1.06 bears/mi^2 (ADF&G 1990:8). Track counts conducted in the 1930s found concentrations of 1.0 bears per square mile on Admiralty Island, 0.5 bears per square mile on Chichagof Island and 0.3 bears per square mile on Baranof Island (Dufresne and Williams 1932; Heintzleman and Terhune 1934; Klein, et al. 1958). Some of the earliest brown bear conservation proposals were directed at the Admiralty population. In 1935 the bag limit on Admiralty Island was reduced from two bears to one, and since 1933 Thayer Mountain and Pack Creek Reserve have been closed to hunting. In recent years additional bear viewing areas, closed to hunting, have been set aside at Seymour Canal, Salt Lake, and Mitchell Bay on Admiralty Island and at Port Althorp on northern Chichagof Island. Based on their analysis of 10 years of intensive research using radio telemetry and hunter harvest reports, the Division of Wildlife Conservation has concluded that brown bear populations in GMU 4 are presently stable, although in some cases bear harvests have exceeded the management objective of five percent. For example, the Hoonah Peninsula on Northeast Chichagof was closed to bear hunting in 1988 by emergency order in response to overharvesting of brown bears which was linked to improved road access and vehicle use in hunting (ADF&G 1990).

In accordance with its high populations, the number of bears harvested by hunters in GMU 4 historically has far exceeded that of any other unit. As Figure 2 shows, 2,277 bears, or 67 percent of the 3,413 bears harvested since 1960, have been taken in GMU 4. Annual harvests have been as high as 120 bears. Approximately

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[10] Unless otherwise cited, the orthography employed here follows that developed by Story and Naish (1973).

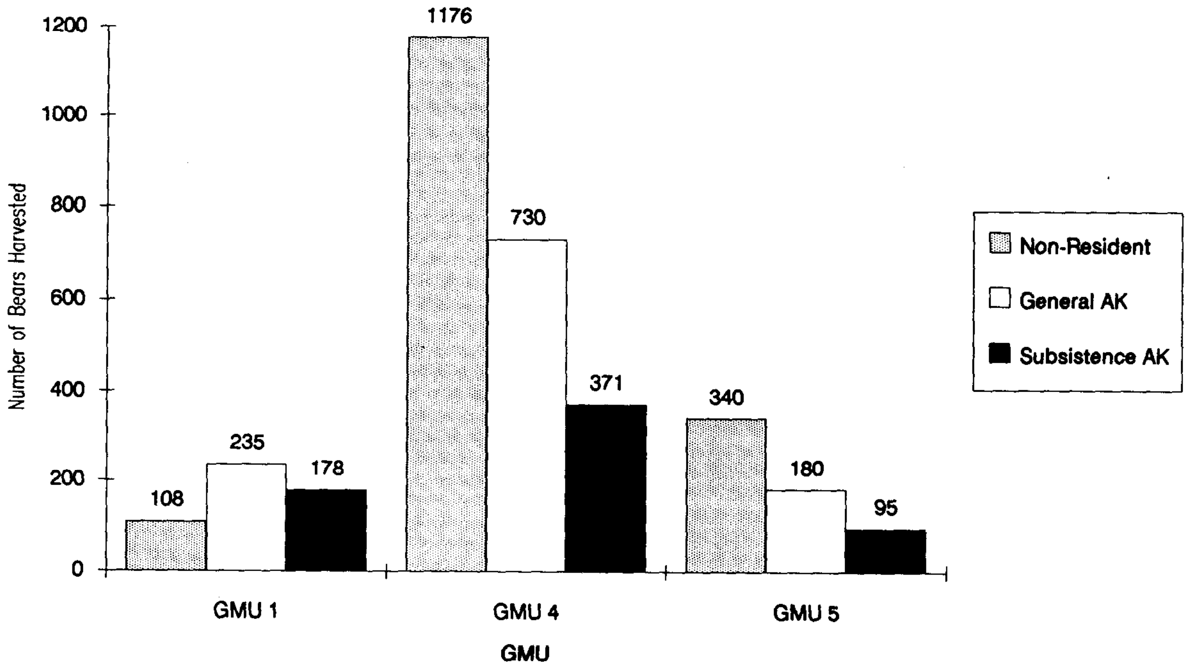
68 percent of the known harvest between 1960-1990 occurred in spring, with the most kills coming during the first three weeks of May. Because of its high concentrations of bears, GMU 4 is a popular hunting place for both non-resident and non-local Alaskan sport hunters; together these two groups have garnered 84 percent of the reported brown bear harvest since 1960. Communities recognized by the Board of Game in 1989 as having subsistence use of brown bear, including all communities within GMU 4 and Kake, have accounted for 16 percent of the harvest. Between 1984-1988, 82 percent of bear hunters in GMU 4 accessed their hunting area by boat, 10 percent used aircraft, and four percent used a vehicle. Hunts averaged 3-5 days during this same five year period (ADF&G 1990).

GMU 5 has yielded 615 bears or 18 percent of the reported Southeast brown bear harvest since 1960 (Fig. 2). The annual harvest in GMU 5 has averaged 30 bears since 1970. In recent years, bear harvests in this unit have increased steadily as access to hunting areas has improved considerably (ADF&G 1986). Non-resident hunters have accounted for 55 percent of the total harvest since 1960, while Yakutat, the only community recognized as having subsistence use of bear in this Unit, has accounted for 16 percent. Of those who hunt bear in GMU 5, approximately 50 percent access their hunting area by aircraft (Batin 1989:172). Road development in the Yakutat area has also provided increased access to hunting areas, and the use of off-road vehicles in hunting has become increasingly popular, especially in Unit 5A (ADF&G 1990).

In GMU 1 521 brown bears were taken, or 15 percent of the total Southeast harvest since 1960 (Fig. 2). The annual harvest in the unit has averaged 18 bears since 1960. Of the three units, GMU 1 has the lowest non-resident harvest rate, 108 bears or 21 percent of the total unit harvest (Fig. 4). In contrast, as Figure 4 shows, the proportional harvest by Alaskans in both subsistence and general hunting communities is higher than in other units. Subsistence communities, including

Wrangell, Kluckwan, Haines, and Skagway, have taken 34 percent of the total harvest, while general Alaskan hunters, including residents of Ketchikan and Juneau as well as other non-GMU1 communities, have harvested 45 percent of the bears. The majority of the harvest in GMU 1 occurs in subunits 1C and 1D, which accounted for 21 percent and 46 percent of the total harvest from 1984-1988.

The pie chart in Figure 4 divides the total harvest taken over the past three decades into three major user groups: non-residents, Alaskans hunting under general regulations, and communities recognized by the Board of Game as having subsistence use of brown bear. The largest portion or 47.58 percent of the harvest was taken by non-residents. Subsistence communities, on the other hand, accounted for 18.87 percent of the total, the smallest portion of the overall harvest.



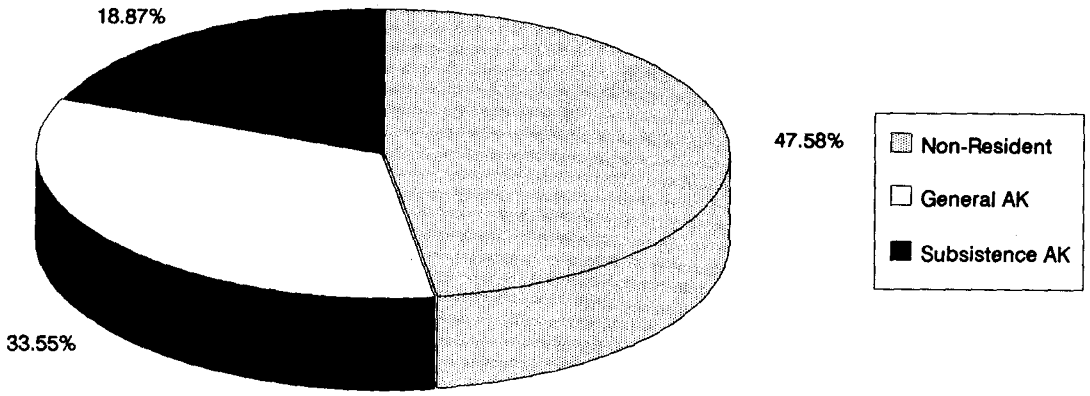


Figure 4. 1960-1990 Southeast Alaska Brown Bear Harvest by GMU and Hunter Group (top) and all GMUs Combined (bottom). (Subsistence AK= Harvest by residents of Southeast Alaskan communities designated by the Board of Game (1989) as having subsistence use of brown bear in the GMU. **General AK=** Harvest by residents of Alaskan communities not designated as having subsistence use of brown bear in the GMU.)

CULTURAL SIGNIFICANCE

The thing about grizzlies [brown bears] is their high intelligence...Every one I have ever met in the woods has tried to read my mind...It wants to know what your thinking
--Alaskan bear guide Hosea Sarber (in Dufresne 1965:134)

The cultural significance of bears in human societies has been the subject of a number of studies. Hallowell (1926), Frazier (1951), and Shepard and Sanders (1985) have conducted cross-cultural studies on the origins and development of bear folklore and customs, including rituals associated with the hunt. For Alaskans the brown bear has been a focal species for Native and non-Native cultural traditions alike. As one observer put it:

> *No one who has seen him going about the daily task of getting a living for himself, who has watched his highly amusing antics in his hours of play, or who has marveled at his courage, strength and vitality in a fight with other bears or with men, can help but carry away a great and lasting interest in the Alaska brown bear. (Heintzleman 1932:329)*

In both cultural traditions the bear has inspired a curious mixture of admiration, awe, fear, and respect. Its ferocity and anthropomorphic qualities have made the bear central figure in the lore and mythology of peoples worldwide.

What is more, the brown bear has always been a distinct part of Alaska's identity and symbology.

> *Big brown bears are Alaskan in the same way that Kangaroos are Australian, giraffes are African, camels are Moslem, and bulldogs are English. In Alaska bear stories are a favorite form of parlor entertainment, oral history and literature. The 'cache,' a miniature log cabin on stilts used to protect a trapper's or prospectors food supply from bears, is a cliche in Alaskan art. Alaska's flag has eight gold stars on a background of blue: The North Star and stars of the Big Dipper, Ursus Major, the Great Bear. (Sherwood 1979:49)*

While the bear has been an important symbol for Native and non-native cultural traditions alike, the two cultures' bear hunting traditions have differed significantly. For non-Natives the dominant brown bear hunting tradition has been sport and trophy hunts. The goal of the sport hunt is to match wits against and prevail over one of nature's most formidable predators. Successful sport hunter's typically remove the hide and head for trophy mounting. A subset of sport hunters, trophy hunters concern themselves exclusively with harvesting the largest of the species. This tradition is supported by Boone and Crockett Club which places a premium on record skulls. Unlike black bear meat, which is often retained and eaten, brown bear meat is almost never salvaged by sport and trophy hunters.

Sport and trophy hunting was not a traditional pattern among Alaskan Natives. The Tlingit, who inhabit the brown bears' prime habitat areas in Southeast Alaska, hunted brown bear primarily for use, consuming its meat and preparing the hide and other parts of the bear for various purposes. While the Native brown bear subsistence harvest has declined in recent years, it has not been supplanted by a corresponding increase in Native sport or trophy hunting. However, when there was a viable commercial market for bear hides, Tlingits participated in their hunting and trapping along with non-Natives. Indeed, subsistence and other economic considerations have always been major determinants in Natives' decisions to hunt or not to hunt brown bear.

For Tlingits, successful hunting traditionally involved not only the use of weapons but also the employment of a complex system of knowledge about the relationships between bears and humans. Many traditional beliefs and customs regarding the nature of bears are reflected in narratives and stories describing relations between Tlingits and bears dating back to ancient times. The remainder of this section examines in more detail the constellation of beliefs and practices which informed traditional Tlingit patterns of pursuit, handling, and use of brown bears.

General Beliefs Concerning the Nature of Bears

Tlingit beliefs concerning the nature of bears impressed many early European observers. In the nineteenth century, Russian Archpriest Anatolii Kamenskii (1985:73-74) commented:

> *They have many stories about the land otter and the bear which point to their close spiritual kinship with man and to their ability to understand him...*
>
> *The bear is respected even more. When an Indian goes to the woods and is afraid of meeting a bear he tries his best to placate it with praises and affectionate nicknames in order to prevent the encounter with the animal and to propitiate it. Otherwise, if one begins to scold the bear and to laugh at it, he can make the bear angry and bring his misfortune upon himself, since the bear can not only understand human speech but can scent the approach of enemies and unfriendly people from a great distance. In addition he possesses the same capabilities of understanding and feeling as man. He has such qualities as honesty, pride, generosity, revengefulness and others just as human beings do. ...*
>
> *It is also believed that the soul of the bear continues to live after the animal dies and that its soul can tell other bears about the abuses.*[11]

Among animal spirits or *yeik* the bear's was considered especially powerful.[12] As with other animals, proper observances had to be followed when addressing, hunting, preparing, or otherwise interacting with bears. These customs were said originally to have been taught by the bears themselves (de Laguna 1972:362).

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[11] Kamenskii (1985:73ff) further noted that bear hunting was "surrounded by numerous omens, incantations," and that rituals associated with bears "resemble[d] strongly Eskimo and Siberian beliefs." This comparative inquiry was expanded by the anthropologist Hallowell (1926), who completed a systematic study of bear ceremonialism in the northern hemisphere. He found that certain beliefs and traits, such as post-mortem rites, varied synonymy, and the belief that bears are under the guidance of a spiritual controller, were common to boreal hunters of the Old and New Worlds. Hallowell further posited that the distribution of certain traits was linked to the economically important caribou. Division of Subsistence studies of Northern Alaskan peoples' bear hunting patterns (e.g., Loon and Georgette 1989) also may be examined for comparative reference.

As Kamenskii's observations reveal, in addition to their impressive physical stature and prowess, bears were thought to possess other extraordinary powers and human-like qualities. "Bears are like people you can talk to them," an informant told de Laguna (1972:826-827); and like humans they also "fish and bring the catch home to their children...[and] put up food for the winter." While recognition of the bears anthropomorphic qualities is not unique to Native culture (e.g., Hibben 1945:15), Tlingits actually used kinship terms in referring to brown bears. The animal was considered to be a brother to all members of the Eagle-Wolf moiety and a brother-in-law to all members of the Raven moiety (Olson 1967:15 -16).[13] The Teikweidee, or Brown Bear clan, were said to have an especially close relationship with bears (Olson 1967; de Laguna 1972).

Like most animals, bears were believed to have the ability to understand human language. This was especially important because it meant that bears could be influenced (coaxed, appeased, angered, and so on) directly with words. Moreover, bears' aural perceptual abilities were especially acute. Thus hunters had to be especially careful with their words even around camp or when otherwise far removed from the bears presence. One technique Natives used to avoid alerting or offending bears was not to refer to them by name. Instead in discussing the hunt circumlocutions or honorific names were used to make reference to the bear. These references included such approbations as *Big Ears*, *The Strong One* (*yats'inEt'*), *The*

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[12] Shamans who could harness the bear's powerful spirit or *yeik* were considered especially gifted.

[13] Tlingit social organization includes groupings termed moieties and clans by anthropologists. In Tlingit everyone belongs to one of two exogamous moieties or sides: Raven or Eagle (sometimes referred to as Wolf). Each moiety in turn is divided into various clan groups, each of which has a name (e.g., Brown Bear or Coho Salmon) and possesses crests which symbolize their identity. Each village and *kwaan* typically contained a number of clans from both moieties.

one going around in the woods (*ya'Et'gu tutw'adi'at*), *My brother-in-law*, or *Town person* [i.e., Chief] (*anq'awu*) (see McClellan 1975:128; Dauenhauer and Dauenhauer 1987:374).[14] Similarly, it was important never to laugh at or ridicule bears, as such a lack of respect would not only anger them but cause them to seek retribution (Swanton 1908:455; de Laguna 1972:826-27; Veniamenov 1984:413-15).

Although known for their poor eyesight, bears were believed to have a special sense which allowed them not only to perceive a hunter, but also to gauge his worthiness. A hunter's line of sight would appear to the bear like beams of light, even from great distances. If a hunter had not prepared properly for the hunt, for example, if he violated taboos or proscriptions, the bear could easily detect and avoid him. On the other hand, if a hunter was truly fit and clean and followed the proper rites associated with the hunt, then it would be more difficult for the bear to stop him even if it could sense the hunter's presence. As one Tlingit put it:

> *It comes in like beams, if a man is not a strong enemy [knowledge of the hunter comes to the bear like a sunbeam.] The bear can throw him out because he is not fit enough to come around. But that bear can't do anything if a good man comes. Like if you are a good Christian, any sin can't hurt you. (de Laguna 1972:880)*

Finally, bears were believed to possess the power to transform themselves into different beings, including humans (McClellan 1970; Veniamenov 1984:413-15). In the famous story entitled, *The Woman [Girl] Who Married the Bear* (discussed below), the female protagonist is deceived by a bear who first appears in the guise of a man. Bears were associated symbolically not only with transformation and power but also with such qualities such as stubbornness and violence (McClellan

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[14] The tradition of circumlocution and varied synonymy, including a taboo on the generic word for bear, is widespread. Even in English the term bear is derived from the word for brown rather than *Ursus*, the Latin term for bear (see Hallowell 1926; Shepard and Sanders 1985).

1975:130). Swanton (1908:455) reported that brown bears influenced the fate of souls and that they "guarded the spirit road to the level where people ascended if they died by violence." Such beliefs and stories emphasized bears' extraordinary powers and the need for humans to behave appropriately in dealing with them.[15]

Customs Pertaining to the Hunt

Because of the bear's superior capabilities, men and their families had to follow a strict regimen to insure success in the hunt. Prior to the hunt they were supposed to remain continent. Men bathed and fasted and abstained from sexual intercourse in order to cleanse and purify themselves for the hunt. While hunting, one was supposed to refrain from eating, drinking, or building fires. Similar rules also extended to the hunter's family at home. Family members were instructed to eat little, to remain quiet, and not to move excessively, particularly during sleep. If they fought or became angry with each other, it was believed that the bear would do the same to the hunter. Informants who contravened these instructions testified to corresponding adverse effects (e.g., de Laguna 1972:365)

Women were believed to have special powers over bears. One Tlingit stated that,

> *When a woman shoots bears, the bears can't do no harm. If a woman cleans your gun, then the bear knows and he just drops... It's just like they [the women] make a wish, I think. One shot and they [the bears] just drop. When it comes like that, the bear just got no power. (de Laguna 1972:364)*

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[15] Some of these beliefs and attributes are not restricted soley to bears, but characterize other animals as well, such as the ability to transform and the possession of a spirit controller.

Women were able to influence bears in other ways as well. Even today it is not uncommon for elderly women to tell of encounters with bears which were defused by speaking to the bear in Tlingit or taking other culturally prescribed actions.[16]

To insure success, hunters would rise before the call of the raven at dawn. They might use aids such as amulets or special medicines to improve their fortune. An extract known as "no-strength medicine" could be rendered from the roots of certain plants and chewed by hunters "so that bear would not wish to harm" them (de Laguna 1972:364-65). Or a hunter would take a piece of skunk cabbage, rub it, and put it in his pocket to insure that the bear would not bother him (George Jim, pers. comm.).

Upon encountering a bear or any sign of a bear, a hunter immediately took certain precautions. For example,

> *If a hunter found a bear den that had been prepared but not occupied, he was supposed to speak to the nearby bushes, saying ' Don't tell on me!' (Lil xat kinig'iq) and pay the bushes with a bit from his clothing. If he failed to do this the bushes souls (qwani), would alert the bear and the hunter would return to an empty den. (de Laguna 1972:365)*

Similarly, inland Tlingits considered it bad luck to poke at a female bear in her den in winter, although prodding was the common means of confirming a bears presence. If one did feel a bear, it was appropriate to extract some hair and give it to one's brother without speaking (otherwise the bear would hear). Sometimes the hair was put into the fire (McClellan 1975:127). Implicit in these customs was the recognition of the bear's superior powers and the danger of the hunt.

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[16] It is reported that a bear would become embarrassed and retreat if it saw a woman unclothed (Kamenskii 1985:75), and that a meddlesome bear could be driven away from a camp if a pubescent girl or a widow "grab[bed] its tracks" and threw them into boiling water (Olson 1967:122). There is also a story of a brown bear who turned to stone as a result of an adolescent girl's glance (de Laguna 1972:64). And according to Swanton (1908:455), "When a woman met a grizzly bear she took out her large labret and blew toward the bear through the hole in her lip. Then the bear would not touch her." Women tended to be especially cautious around bears because of the female protagonist's being carried off in the story, *The Woman who Married the Bear* (Kamenskii 1985:73-75; Venienimov 1984:413-415).

Narratives and Stories

Important narratives and stories detailing historical interactions between humans and bears have been recorded by ethnographers in various Native communities (e.g., Swanton 1909; Olson 1967; de Laguna 1960, 1972). Some of these stories are specific to Tlingit while others, such as *The Woman Who Married the Bear*, have a wider distribution among peoples of the Northwest Coast and the interior (Swanton 1905; Boas 1916; McClellan 1970). The stories continue to be recounted today and remain an important vehicle for the intergenerational transmission of cultural knowledge.[17]

The Woman [Girl] Who Married the Bear

By far the most widely recounted myth concerning Southeast Natives and bears is *The Woman [Girl] who Married the Bear* (Boas 1916:748-50; Barbeau 1946:1-12; Dauenhauer and Dauenhauer 1987:166-217; de Laguna 1972:880-882; McClellan 1970; Swanton 1909; Veniaminov 1984:413-14). McClellan has written a book on this story which includes an analysis of the plot and versions from several northern Native groups. Among the coastal Tlingit there are several versions of this story, and, as is common, different versions are localized in different territories (e.g., at Chilkat, see Venianminov 1984; at Yakutat, see de Laguna 1972).[18] The basic outline of the story can be summarized as follows (from McClellan 1975):

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[17] Aside from these well-known stories, there is another genre of stories which focuses on individual encounters with bears (e.g., de Laguna 1960:25-26). These more idiosyncratic stories, which might be classed along with other so-called *Alaskan Bear Tales* (e.g., Rearden 1989), are not summarized here.

> *A chiefs daughter, while out berrying, steps into some brown bear manure and complains using profanity, thus insulting the bear directly--a taboo. The bear then appears to her in the form of a fine-looking man, and they go off together. Later she discovers that he is really a brown bear in human guise who has kidnapped her because of her disrespectful behavior.*
>
> *The brown bear people watch her closely, and whenever she goes out of the den, they cover up her tracks. After spending some time with the bears and bearing several children, which are half-bear and half-human, the girl desires to return to her people. Thus, she tells her bear husband that she wants to make a den in the fall at a place where she knows her brothers will find her.*
>
> *In the spring the girl rolls a ball of her scent down into the valley so that her brothers' hunting dogs can track her. The bear husband, who has shamanic powers, dreams that he will be discovered by the brothers and asks his wife why she betrayed him. Although he has the power to kill, the bear instead chooses to let himself be killed by one of the girl's brother who has prepared himself for the hunt in the prescribed way. The bear instructs his wife how his body should be treated after his death and in the songs her brothers should sing.*
>
> *After the bear is slain by the brother, he discovers the girl (she helps them by tying arrow shafts together, or in other versions by using a mitten/glove). She tells the brothers that they have just killed their brother-in-law and that they must treat his body in a special way.*
>
> *The girl returns to society, in stages as at first she cannot tolerate the smell of humans. The next spring the brothers beg her and her children to put on bear skins for play hunting with arrows. But she warns them that she may turn into a bear which she eventually does and kills either one or all of them depending on the version.*
>
> *The woman and her children have now become bears forever, travelling into the mountains. Before departing she sings a song.*

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[18] McClellan (1975:128) notes that, "Raconteurs most often localized the event just north of coast Klukwan, close to Klukshu country."

This story illustrates a number of important beliefs and practices related to bear hunting. Perhaps most importantly, the story underscores the kinship between humans and bears. The story explains why bears are part human and how some humans are part bear. Second, the story emphasizes the bear's extraordinary physical and spiritual powers. Third, the story illustrates the importance of ritual knowledge and proper behavior both to the success of the hunt and after the kill. Fourth, because the girl told the brothers about the proper ritual, all Tlingits now know how to treat the slain bear so that it will not become angry.[19]

Although they emphasize the same themes, two recently published versions of this story by Frank Dick, Sr. and Tom Peters (in Dauenhauer and Dauenhauer 1987) differ somewhat in content from the above. Significantly, the version by Frank Dick, Sr. states that the consumption of brown bear meat became taboo as a result of these incidents. This was because the woman had married the bear, thus making the hunters the bear's brothers-in-law.[20] Thus the woman says:

> *Don't ever eat that.*
> *He is your brother-in-law*
> *Put a fire at the fur on his head.*
> *Put a fire at the fur on his head, little brother.*
> *(Dauenhauer and Dauenhauer 1987:213)*

Instead, the girl instead shows her people how to kill black bear which is not considered taboo to eat.

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[19] Also, McClellan (1970:5-6) notes that the story emphasizes cross-sex sibling avoidance, a common social structural principle among the Northern matrilineal groups, including Tlingits.

[20] Similarly Swanton (1908:455) states that, "Because a human being married among the grizzly bears, people will not eat grizzly-bear meat " (see also Holmberg 1985:17-18; Krause 1956:125; McClellan 1975:125-26, 130). One of de Laguna's (1972:366) informants, on the other hand, suggests that only the head was taboo to eat.

Noting the differences between the two versions with respect to the consumption of bear meat, Dauenhauer and Dauenhauer (1987:381-82) conclude that :

> *Whether bear can be eaten seems in the final analysis to be a family or even individual matter, and there is wide variation on the subject in Tlingit culture. There seems to be a general preference for black bear meat over brown bear meat, but no universal prohibition of any kind...*
>
> *Otherwise, bear meat may be avoided if a person is under some special personal bear meat taboo for physical, social, or spiritual reasons. But there is no universal taboo against eating brown or black bear meat. One coast elder remarked that in time of need even wolves, eagles, and seagulls may be eaten.*

Tom Peters version makes reference to a special spear which was used to kill the bear (*tsaagal*) as well as a certain medicine that was made from leaves to acquire certain power over the bear. His version also includes two songs which the bear taught to the girl. The words to these two songs have been translated as follows:

1) I went through every one
of those young people
and the last brother,
I know he did the right thing.

2) I dreamed about it
that they were going after him (?me?).
(Dauenhauer and Dauenhauer 1987:379; see also McClellan 1970:27)

The bear instructed the woman that these songs were to be sung when hanging the bear's skin.

Originally four songs (one for each limb of the animal) were taught to the woman by the bear, including one that the bear sang just before he was killed by the woman's ritually pure brother. This song is important because the bear:

> *came right out and gave himself up, and that's the reason when you kill a bear, you use this song and the bear feels good. Whoever kills the bear...points it [the bear's head] north, and gets willows and spruce and points it north...and sings this and the bear feels good about it. (in McClellan 1975:129)*

Additional songs and prescriptions pertaining to the handling of the slain bear are discussed below in the section entitled Handling, Preparing, Preserving and Storing.

Kaats' and the Bears

Another story of which many versions exist is *Kaats' and the Bears* (see Swanton 1909; Boas 1916; Keithahn 1963; de Laguna 1972; Garfield and Forrest 1978). A summary of this story, based on Swanton's (1909) version recorded in Sitka, is as follows:

> *Kaats' [a Tlingit hunter] and his dogs pursue a male bear to his den, where the She-Bear pulls him into her den, conceals him, and later marries him. They have several children. Indoors the Bears take off their skins and are just like people. After some time Kaats wishes to go home and the Bear Woman allows him to go but tells him not to touch his wife or take up his children. After returning home, Kaats' goes out hunting regularly but gives the food only to his bear children. Eventually he disobeys the she-bear's injunctions and is killed by his bear children. Kaats' bear children spread all over the territory, but all are eventually killed with spears and knives. But before the last bear is killed it destroys an entire camp in which a girl had said something bad to it.*[21]

Because events in this story involved members of their group, both the Teikweidee and the Kaagwaantaan clans claim the bear as a crest, a symbol of their identity.[22]

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[21] According to Garfield and Forrest's version (1978), these events took place near Rudyerd Bay. J.B. Fawcett's version (in Dauenhauer and Dauenhauer 1987) locates these events in Yes Bay (*Yees Geey*) near Ketchikan.

[22] According to Olson (1967:37), when Kaats' returned from his time with the bears, he looked "almost like a bear." He also notes that Kaats' bear wife sang a mourning song when he returned to the village, a song which is still sung by the Teikweidee in mourning. Traditionally, this song also was sung to honor slain brown bears. A version of this song is presented in the section on handling, preparing, preserving, and storing.

Figure 5 shows a totem pole, now on display in Saxman Park near Ketchikan, illustrating the story of Kaats' and the bears. This story is sometimes referred to as *The Man who Married the Bear.*

Bear and Raven

Two stories involving brown bears are included in the Raven cycle of legends, among the oldest Tlingit stories. Raven tales, which are widely distributed throughout the Northwest Coast and elsewhere, feature the bird as protagonist playing the role of creator or trickster. One story is paraphrased as follows:

> *Bear entertains Raven at a feast. He refers to Raven as 'my aunt's son' and goes to great lengths to please and provide for his guest, including slitting the back of his hands with a knife to provide grease for the salmon which he serves to Raven. Bear even cuts 'a piece of flesh out from in front of his thighs and put it into the dish. That is why bears are not fat in that place'. (see Swanton 1909:6; and de Laguna 1972:868-869)*

In another tale paraphrased below, which exemplifies the Raven's trickster side, Raven uses clever tactics to outsmart Bear on a fishing trip:

> *Raven invites Bear and Cormorant to fish for halibut. Steering the canoe to a good bank, Raven begins to catch halibut. Bear asks what kind of bait he is using. Raven says he cut off his testicles to use for bait, and Bear wants to do the same. Raven sharpens his knife and tells Bear to put his scrotum on the thwart. Raven then cuts it, and the dying Bear falls into the water. Later Raven gives the halibut bladders to the Bear Woman to swallow, and then causes her to drink water. The bladders well up and kill her (see Swanton 1909:6-7)*

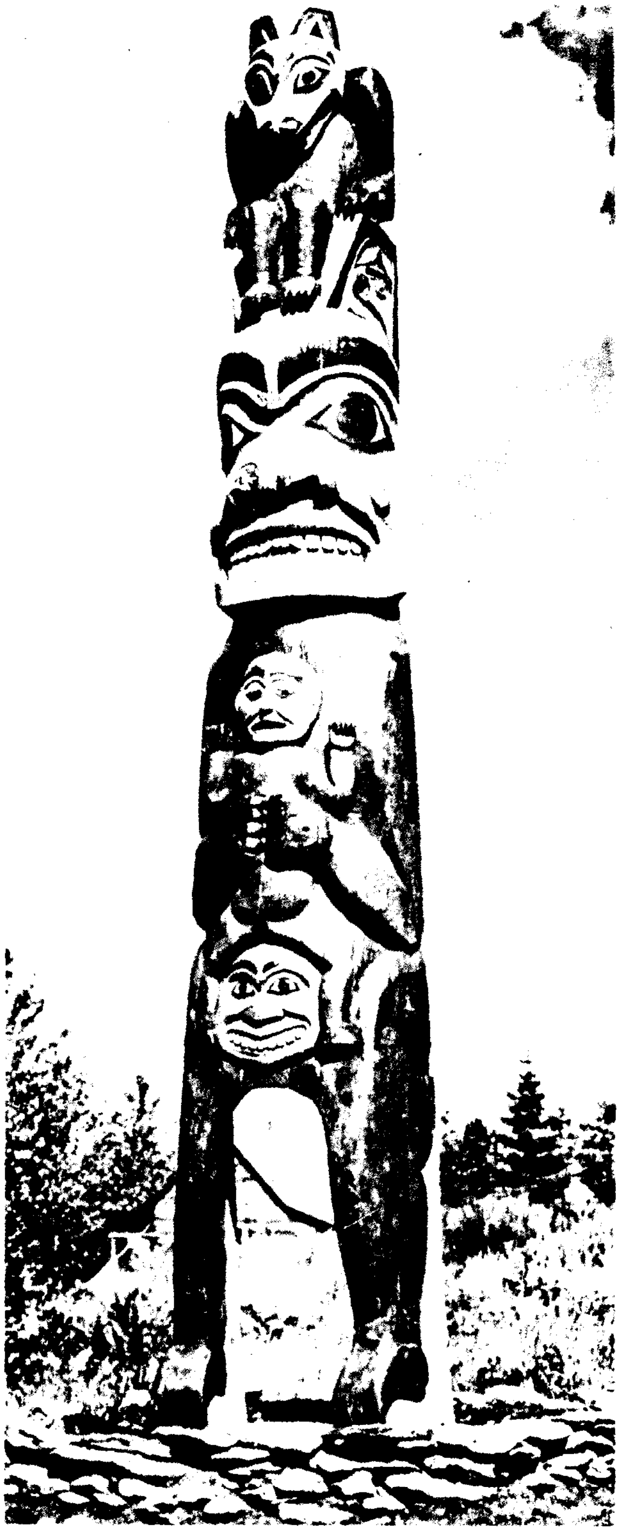

Figure 5. Pole from Saxman Park Illustrating the Story of Kaats'. The top figure is Kaats' bear wife. Kaat's is the main figure on the pole. According to Garfield and Forrest, "The animal ears, between which the bear wife sits, show that [Kaats'] was no ordinary man but possessed supernatural powers." Source: Garfield and Forrest (1978:30)

Bears and Humans During The Flood

There are several stories detailing interactions between bears and Tlingits during the Flood, which, according to Tlingit oral history, deluged Southeast Alaska many centuries ago. De Laguna recorded a story associated with Table Mountain on Admiralty Island, which tells of stone forts being constructed to prevent bear attacks:

> *There was a Flood, when all the people had to go to the tops of the mountains. They built walls of rocks around the tops, like nests. Some people had dogs. The bears came up after them. Those that didn't have dogs to chase the bears were all killed, but those that had dogs were saved (de Laguna 1960:131)*

Another historic event involving bears and humans during the time of the Flood was dramatized for Niblack by Chief Shakes of Wrangell (see Fig. 6, Fig. 7). The story tells "of how an ancestor of Shakes' rescued the bear from drowning in the great flood of years ago, and how ever since there had been an alliance between Shakes' descendants and the bear" (Niblack 1970 [1890]:377).[23]

The Man Who Entertained Bears

There is also a story of a man who entertained bears in a feast, as related by Swanton (1909:221):

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[23] Olson (1967:31-32) gives more complete account of the origin of the Nanyaayih clan. In this version, when the Flood came, the people retreated to a mountain called *Sekutle'h* on the south bank of the Stikine. *A white Kodiak bear led the way and the people followed his trail. The signs of this trek can still be seen. On the mountain have been seen the decayed remnants of a mat and of a rope which was used to moor the raft that was used.* Brown bears were sometimes referred to as *white bears* in part to emphasize their contrast to black bears which also inhabited Southeast Alaska. Also, a song about the bear was composed to commemorate these events.

> *After leaving his village a man encountered some grizzly bears. Frightened, he decided to invite them to a feast. He returned home and told his village. He then prepared by painting himself and putting a stripes of red across his upper arm muscles, a stripe over his heart, and another across the upper part of his chest. Next morning they came, others at the village saw the bears and fled, so the man received them alone but served them a big meal. Afterward the head bear stood and gestured like he was making a speech. Finally the bears left, licking the man's paint off as they filed out. The day after this, the smallest bear came back, appeared to the man in human form, and spoke to him in Tlingit. He had been a human being who was captured and adopted by the bears. He told the man that the chief had expressed his sympathy for the man at the feast and noted that he was in a similar position.*

Swanton (1908:222) interpreted this story as follows:

> *It was on account of this adventure that the old people, when they killed a grizzly [brown] bear, would paint a cross on its skin. Also, when they gave a feast, no matter if a person were their enemy, they would invite him and become friends just as this man did to the bears, which are yet great foes to man.*

Bear Crest Stories

Tlingit social groups acquired crests, usually representations of fish or animals, which were considered valuable property and believed to embody aspects of the group's identity and history. Several major Tlingit social groups of the Eagle moiety, including the Teikweidee (or Brown Bear clan) and the Kaagwaantaan have taken the bear as a crest.[24] The crest connotes a special relationship between the group and the animal.

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[24] According to Swanton (1908:455), "The origin of the bear emblem is always referred to the hero Kaats', who married a female grizzly bear, though to which Wolf clan he belonged is entirely uncertain, the Teqoedi [Teikweidee] and Kagwantaan [Kaagwaantaan] both claiming him." See also Garfield (1947:446).

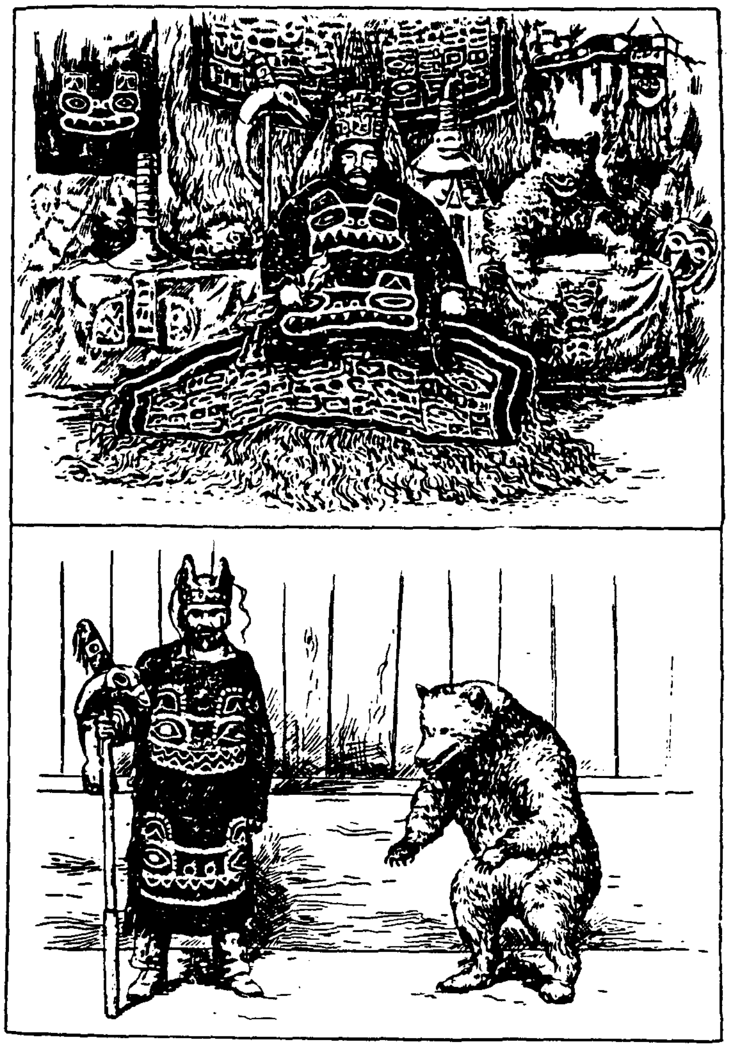

Figure 6. The body of Chief Shakes Lying in State with Ceremonial Regalia and other Emblems of Wealth Associated with the Brown Bear (top). A Performance Dramatizing the Historical Alliance between Shakes' People and the Brown Bear (bottom). Source: from a sketch in the U.S. National Museum and a Photograph by Niblack (1890:360,361).

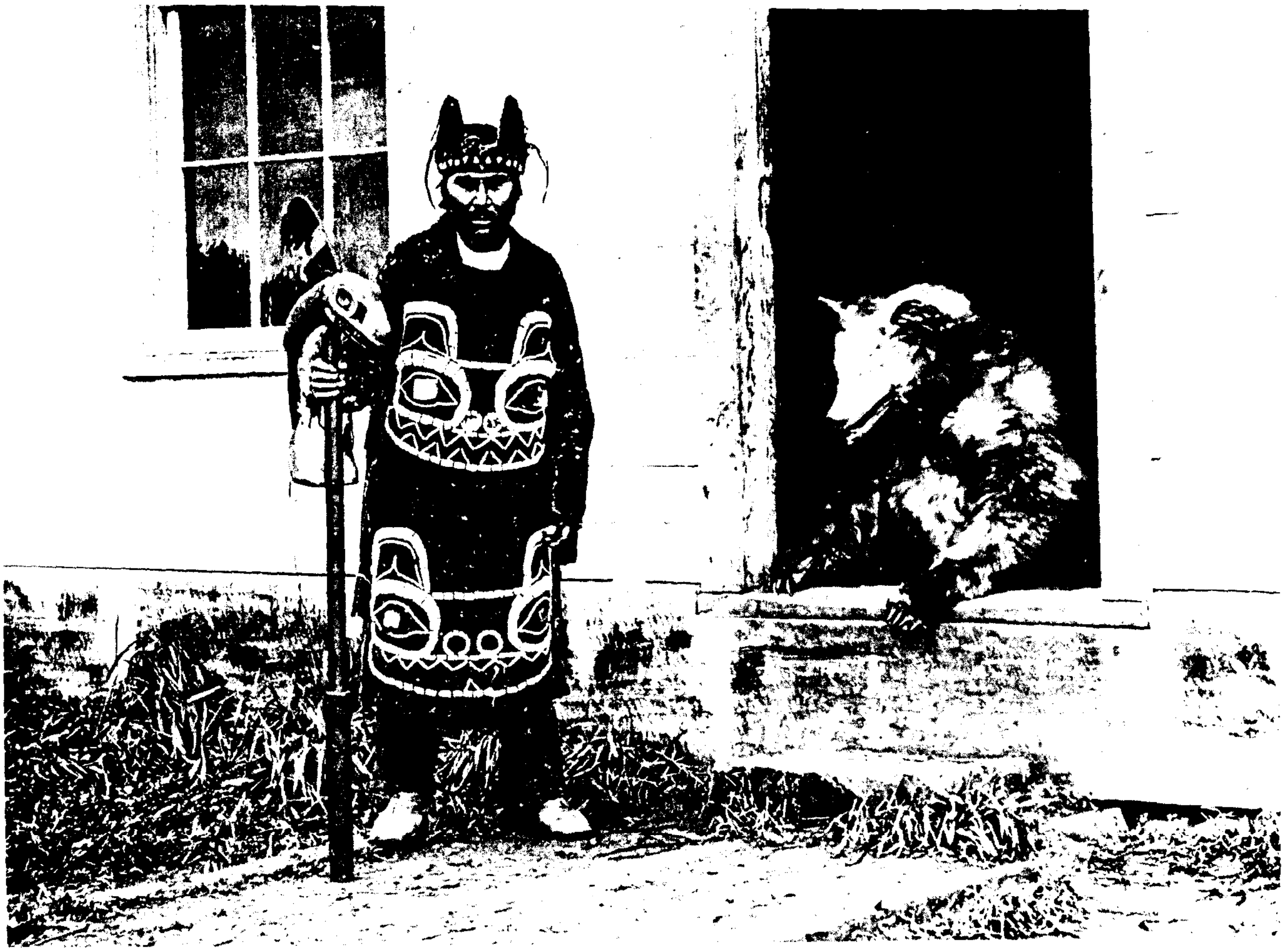

Figure 7. Chief Shakes and another Nanya'a.yi Chief in Dance Costumes, Wrangell, 1895. The man in the doorway wears a complete brown bear skin. Chief Shakes (left) wears the "bear's ears" headdress and a tunic ornamented with the haliotis shell to represent bear's head, and holds the "Killerwhale Cane." Source: Emmons (1991:174), courtesy of the American Museum of Natural History.

Stories detailing how these crests were obtained comprise an important part of clan histories. In the case of the Teikweidee, brown bears gave the group their name at a peace ceremony:

> *Bears were killing all of the Dog Salmon (Teel) until there was only one left. He was afraid for he knew he would be killed too, but he decided to swim up the river anyway. The Bears came and, understanding the thoughts of the Salmon, took him up to their camp. The Bears invited the Teikweidee, and all the people living at Catuqwa'an ('Mountain-Inside-Town'), to a peace ceremony. They painted the salmon with red stripes which the dog salmon still wears. Then they made death payments for all the relatives they had killed and decreed that only a few salmon would be killed by bears in the future so the tribe would not become extinct.*
>
> *At this ceremony the Bears instructed hunters in the proper treatment of bears. They explained that the head must be decorated with red paint and eagle down and songs sung to it. The inside of the skin must also be painted with red stripes to commemorate the painting of the dog salmon.*
>
> *It was at this ceremony that the Bear hosts gave the Teikweidee their name. (Garfield 1947:443)*

The Teikweidee later took the brown bear as a crest.

Olson (1967:40) recorded the following version of the origin of the bear crest of the Kaagwaantaan:

> *In Neva Strait near Sitka was a hunting and fishing camp called Kla'cayikan (end of lagoon place). People went there in early spring to gather herring eggs and catch herring. At one end of the village lived an old widow in a very small house. One night a big bear came to this house, reached in and stole all her drying herring. She had seen only a 'a big man's hand' reach in.*
>
> *She hung up more herring and the next night she watched. The bear came again and as he reached in she said, 'Who is that with the big wide fingers? You are a no-good thief.' And she cursed him. The bear jumped in and killed her. Then he went to other houses, killing people. They tried to stab him, but he was a 'close-ribbed bear' and the weapons would not pierce*

> *between his ribs. The bear escaped. The people went to Sitka and told what had happened. All the men of the Kaagwaantaan went to hunt for the bear. Again the bear came to rob. They stabbed him back of his rib 'armor.' One young man with a spear stabbed him from behind. The bear turned on him and the man stumbled on a root and fell over backwards. As the bear jumped at him he raised his spear, the butt resting on the ground. The bear impaled himself. The others came and stabbed him so that he ran only a little way and died. They skinned him, cut off his ears, knocked out his teeth and took his claws. (The teeth and claws are often used as part of dance costumes.)*
>
> *Back in Sitka they carved a bear's head in wood and attached the ears. The skin was made into a dance shirt called xutskuda't!s, which is still kept by a Sitka family.*

The following is another legend of the origin of the brown bear crest of the Kaagwaantaan as recounted in Olson (1967:40; see also Swanton 1909:228):

> *A man named Daktu'nk of Klukwan went hunting porcupine up a branch of the Chilkat River. A bear attacked him, tore out his left eye and a portion of his scalp, and bit his leg. Then the bear went away. Finally the man was able to get to his canoe and made his way home. There he told what had happened. The people met in Killer Whale House and determined to hunt and kill the bear. (Now this was one of the type of bear called tsuk'kastu'k whose ribs are set so close together that a spear or knife cannot pass between.)*
>
> *They found the bear and killed him with arrows and spears. They were surprised at how his ribs were set edge to edge. They cut off the bear's head, brought it home and set it on a plank. Then they said, 'Let's take the bear for a crest.' So they did.*

Because the bears committed violent acts against their clan members, the Kaagwaantaan were entitled to kill the bear and claim it as a crest.[25] According to Emmons (1991:133), "If a Tlingit were killed by a [brown] bear it was incumbent on the men of his family [lineage, clan] to form a party and go...kill the bear, since the bears were considered to form a family like those of human beings, and the law of a life for a life had to be carried out."

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[25] Apparently, individuals also could claim bears as personal crests, their claim usually being based on some personal encounter with the bear, such as an attack (Swanton 1908:419). For example, a person who survived a bear attack might don a specially decorated bear skin in ceremonies.

These narratives detail the important relationships between bears and humans and instruct listeners in the proper conduct towards and uses of bears. As noted above, similar myths are found among other coastal as well as interior Native groups. Commenting in general about the numerous stories and prescriptions pertaining to bears, McClellan (1975:130) asserts that "these animals are not usually very gracious in their feelings towards mankind."[26] Although bears could be kind to humans, one theme that the corpus of stories as a whole suggests is that the bear's disposition is difficult to predict. Similar beliefs about the ferocity and capriciousness of bears are also found in the Euro-American tradition (see Shepard and Sanders 1985).

Bear Ceremonialism and Symbolism

Narratives and stories involving bears were often dramatized in rituals and depicted in art. Because of their importance in Tlingit social and ceremonial life, bears figured prominently in both these spheres.

Ceremonies and Regalia

As noted above, Niblack witnessed an extraordinary ceremony in which the legend tracing the descent of Chief Shakes from the bear was dramatized. The performance included a recreation of the historical events complete with regalia, including a bear skin and a bear mask. Niblack made a sketch of the occasion (Fig. 6) and noted,

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[26] McClellan further states that , "the origin of [the bear's] stubborn nature can be traced back to the Animal Mother story," where, contrary to the mother's wishes, "the bear kept his fighting teeth and has been fighting and biting ever since" (1975:130). See Shepard and Sanders (1985) or Barbeau (1946) for a Haida version of the Animal (or Bear) Mother story.

> *[This figure] represents a scene taken from a representation witnessed by the writer at Chief Shake's Fort Wrangell, Alaska. The figure of the bear is a mannikin of a grizzly [brown bear] with a man inside of it. The skin was obtained up the Stikine River, in the mountains of the interior, and has been an heirloom in Shakes' family for several generations. The eyes, lips, earlining and paws are of copper, and the jaws are capable of being worked. A curtain screen in one corner being dropped, the singing of a chorus suddenly ceased, and the principal man, dressed as shown, with baton in his hand, narrated in a set speech the story. (Niblack 1970:376-77)*

Chief Shakes also wore a bear skin in ceremonial dances and moved in imitation of the bear "in commemoration of the bear that the clan ancestors had followed as they escaped from the flood" (Olson 1967:49).[27]

Crests and Visual Art

Crests were carved, painted, or woven on items such as totem poles, house posts, screens, dance hats, war hats, blankets, shirts, dance staffs, drums, boxes, canoes, paddles, and even painted on faces. Many of these representations refer to the brown bear.

Totem poles commonly served as memorials and as records of important events. Stories, including *The Story of Kaats' and The Bears* and *The Woman Who Married the Bear,* were memorialized in totem poles (e.g., Garfield and Forrest 1978; Jones 1914:172). In some carvings bears are depicted with human bodies and bear heads, again signifying the close kinship and legendary intermarriages between humans and bears (see Fig. 5).

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[27] Olson (1967:49) also comments on Shakes' bear regalia and its historical associations. The first brown bear skin he used was said to be the one from the very bear that accompanied him from the flood (Swanton 1908:415-416).

Names

Certain persons, clans, geographic points, houses, and other objects were named after brown bears (e.g, Swanton 1908:421-422;444). Already cited above is the story explaining how the Teikweidee (Brown Bear Clan) acquired their name at a peace ceremony given by the brown bears (Garfield 1947:443ff). Nearly every community had a brown bear house which featured representations of the bear (Shotridge 1913:97; de Laguna 1960:13; Olson 1967:11; Dauenhauer and Dauenhauer 1990). For example, in one Teikweidee house, *Kaats hit* (Kaats' house), "a brown bear was carved on the planks or post over the door and a carved bear was placed at each end of the smoke hole. These last were called *Gankahuttsi* (smoke hole bears) and were a special property of this house" (Olson 1967:11).

Angoon Tlingits often refer to themselves as *Xootsnuwuwedi*, People of the Brown Bear's Fort:

> *According to tradition, when the people first came to the site of Angoon.......there were no trees on this peninsula and a bear or bears were seen walking around. So the people named the place xuts nuwu 'Brown Bear's Fort.' The name is also applied to Admiralty Island as a whole....the east side of the island is sometimes referred to as xutsnuwu'at'ek 'That behind the Brown bear's Fort.' The expression xutsnuwu lit'a, translated as 'Sharp Nose [or knife] of the Brown Bear's Fort,' is applied both (?) to the north end of the whole island and to Danger Point at the end of Angoon Peninsula. (de Laguna 1960:25)*

Similarly, individuals and clans were named for brown bears because of historical associations or, in the case of individuals, sometimes for personal qualities such as fierceness which resembled those of the brown bear (e.g., Olson 1967:77).

HISTORIC USE

This section describes historic uses of brown bear as revealed in the archaeological, ethnological, and historic records. To date, archaeological excavations often have not yielded many brown bear remains. Archaeologists have suggested that this fact may be due to the difficulty involved in transporting a slain bear back to a site or to the special rules and rites prescribed for the handling and treatment of bears (described below) (de Laguna, et al. 1964:78). Thus, the bulk of evidence concerning the specific uses of brown bear comes from the historic and ethnological sources rather than the archaeological record.

Meat

Brown bear meat was eaten regularly by Natives, although evidence concerning the role of brown bear meat in the Tlingit diet is conflicting.[28] De Laguna (1972:394) concluded that brown bear traditionally was a key source of meat among land mammals for Yakutat Tlingits, although "it is doubtful that bear meat ever formed a substantial part of the diet." However, at least one of her informants claimed that Yakutat Natives "used to live on the bear meat" (de Laguna 1972:394). Brown bear meat typically has not been consumed by non-Natives.

Bear meat may have been an especially important resource for Natives in areas such as Yakutat prior to the arrival of moose, where deer or other large game were not plentiful. Research among other Alaskan Native communities suggests that brown bear might have been a key buffer resource because they provided large quantities of meat, fat, and other materials when other resources were scarce (e.g., Behnke 1981:1). Indeed, one Tlingit elder stressed that brown bear meat was important because "there was plenty of it" (Newton and Moss 1984:17), suggesting its availability was a key factor.

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[28] As noted above, the issue is complicated by the legendary social ties between bears and humans and possible taboos against eating the meat (see Swanton 1909: 49; Holmberg 1985:17-18; Krause 1956:125; McClellan 1975:125-26, 130; Dauenhauer and Dauenhauer 1987).

The desirability of bear meat is a matter of individual preference (Jacobs and Jacobs 1982:121) which may be influenced by two additional factors: the age of the bear and the time of year it is harvested. With respect to age, younger bears are preferred, and bears older than three years are considered undesirable to eat. Several harvesters noted that yearlings are best because of their diet consists of more milk and less fish than mature bears. Two year olds are also considered edible although not desirable. With respect to time of year harvested, fall bears are considered to be strong or fishy-tasting due to their feeding on salmon. On the other hand, at least one source reports that spring flesh was also considered poor and was fed only to dogs (Oberg 1973:68). For those who savor bear fat, the best time to harvest is in the late summer and fall, after the bears have begun to feast on oil-rich salmon and build-up fat around their backs, hips, and intestines.

Hides

Brown bear hides have traditionally been sought by both Natives and non-Natives. Among Native groups, brown bear hides were used for ceremonial robes, clothing, floor or wall coverings, and bedding (Niblack 1970 [1890]:301; Jacobs and Jacobs 1982:121; 1973:68). Niblack claimed that bearskins, "not bringing a good price, are generally kept by the Indians for bedding" (see also Birket-Smith and de Laguna 1938). Hides were considered prime in the early spring (Oberg 1973:68), although fall bears were also taken for their coats.[29] Hides were preferred for children's bedding and were believed to provide warmth and to prevent illnesses, such as arthritis (George Jim, pers. comm. 1991).

Non-Natives have traditionally sought hides as trophy rugs or wall mounts. In addition to the subsistence and trophy harvests, hides were also sought for commercial trade or sale by both Natives and non-Native hunters. This market demand, combined with the availability of more effective guns, may have contributed to increases in annual brown bear harvests before market hunting was outlawed in 1925.

Fat and Tallow

While the taste of brown bear meat is not universally esteemed, "tallow from a fat brown bear is still highly prized" by some Natives (Jacobs and Jacobs 1982:121). Like seal, herring, and eulachon grease, bear fat or grease was valued for its taste and preservation qualities. It was also believed to possess certain medicinal qualities. Historically, clams and other shellfish sometimes were cooked in bear grease and preserved (Newton and Moss 1984:17).

Mandible

Archaeological evidence indicates that mandibles probably were used as pendants or amulets. Half the mandible might be worn strung around the neck after a hole was drilled at the base (de Laguna 1960:120).

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[29] In late spring and summer bears' coats deteriorate due to shedding and rubbing.

Teeth and Claws

Teeth were employed as tools in weaving and worn as amulets and beads. According to Samuel (1982:65) bear teeth were traditionally used for flattening seams in the weaving of Chilkat blankets. De Laguna (1960:119) suggests that a tooth might be fashioned into a pendant or charm by a shaman, "and when worn around the neck was considered good medicine to ward off sickness." Beads were manufactured from the centers of bear canines, from which the tip and root have been cut, leaving the nerve canal to serve as a hole for stringing (de Laguna 1960:121). Labrets and nose ornament holes reportedly were made using a bear claw (de Laguna 1960:119).

Bones and Sinews

Bones were made into a variety of tools, and sinews were used for cord and thread (Jacobs and Jacobs 1982:121). Brown bear bones might be fashioned into powerful shamanic devices. De Laguna (1972:366) observed that,

> *Some, if not all, shamans are said to have had an animal bone with a hole in it, through which they could look when foretelling the future. Peter Lawrence, for his imitation of a shaman's performance in the ANB Hall, had what purported to be part of a bears pelvis, cut and painted in red and green to suggest an animal's head (Fig. 74)....The bone is supposed to be that of a bear because it has lots of power. (de Laguna 1972:697)*

Barbs for gaff hooks, which appear to have been shaped from a bear penis bone, have been found in archeological excavations near Angoon (de Laguna 1960:117). Other bones of the bear were used for manufactures. Sometimes hunters carried a heavy bone awl in order to fashion a pouch from the bear's hide to transport the meat and fat (de Laguna 1972:366).

Ears

As noted above, bears ears were used as crests by some clans, including the Kaagwaantaan and Nanyaayi (see Fig. 6). Bears ears were also often part of the warrior's dress. Similarly, they might be worn by a shaman as an aid against hostile spirits (de Laguna 1972:694). Angoon elder George Jim (pers. comm. 1991) has two pairs of bear's ears that he inherited from his uncle, a shaman, which he still uses for ceremonies and dances.

Tongue and Intestines

Shamans often sought to acquire medicine and power by cutting animal tongues, including that of the brown bear (de Laguna 1972:678). Eyaks, who previously inhabited parts of the Yakutat territory, reportedly sewed bear (and seal) intestines together to make waterproof garments. This custom is also found among other Northern groups (Birket-Smith and de Laguna 1938:65-66).

CONTEMPORARY USE PATTERN

Recent published data on subsistence brown bear harvests by Alaskans is available in Division of Subsistence community studies which were carried out in the 1980s. This section reviews these and other findings on the contemporary harvest and use of brown bear.

For Yakutat, Mills and Firman (1986:98-101) report that both brown bear and black bear are harvested by residents, but that "the number of bears that key respondents remember being harvested before moose arrived to the area were higher than the number presently harvested by Yakutat residents." Their 1984 random household survey indicated that six percent of households harvested bear (black or brown) the year of the study. Some residents also worked as guides for non-resident bear hunters, who are required to have a licensed guide in order to hunt. Historic and contemporary bear harvest areas were mapped, many of which were also recorded in an earlier survey conducted by Goldschmidt and Haas (1946).

The division's study in Sitka (Gmelch and Gmelch 1985:47, 67-69) found that four percent of sampled households had hunted brown bear between 1978-1982, while one percent reported hunting black bear. The majority of local bear hunters are described as "Caucasian" and "outsiders,"[30] and the authors observe that, "brown bear hunting is almost exclusively for sport and trophy since the meat is not considered palatable by local hunters" (Gmelch and Gmelch 1985:68).[31] Most Sitkans hunt brown bear on Admiralty and Chichagof islands rather than on Baranof Island, where the bear hunting is said to be insignificant, except for areas around Kelp Bay and Gut Bay. Other traditional brown bear harvest areas in the vicinity of Sitka included Kruzof Island (North Side of Shelikof Bay) and the Sitka River (Goldschmidt and Haas 1946). Reflecting on the decline of subsistence use of bear meat, one Native respondent "attributed the neglect of bear meat today to the amount of time needed [to] prepare it....this involved parboiling [and] smoking, followed by further cooking." The respondent also explained that, "with cash incomes today, many Natives would rather buy beef in the market than go to all the trouble of preparing bear meat, whose taste is less desirable than other wild foods" (Gmelch and Gmelch 1985:69).

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[30] Including non-residents and temporary residents, such as Coast Guard personnel (Gmelch and Gmelch 1985:67).

[31] My interview data confirm this general finding, although some elders and long-time bear guides could identify individuals who ate brown bear meat regularly in the past.

Respondents from Angoon consulted for this study stated that brown bears were most often hunted in the upland regions surrounding Kootznoowoo Inlet and Mitchell, Hood, Chaik and Whitewater bays. Other bear hunting regions identified by Angoon residents include Young Bay, Hawk Inlet, Gambier Bay, Poison Cove, Kelp Bay, Tyee area, and Fishery Point (Goldschmidt and Haas 1946).[32] Harvest of brown bears in recent years has been minimal. Department of Fish and Game harvest data have recorded only three brown bears harvested by Angoon residents since 1960 (see Appendix), although I was told this figure is probably low, due to low reporting.[33] In addition, several hunters stated that they will hunt brown bear for food or other purposes if they need it. Several Native elders recall long ago hunting brown bears to market the hides. One informant stated that he sold bear skins from Hood Bay to people in Kake. However, "bear hunting is said to have ceased when it was thought that it was illegal" (George and Bosworth 1988:123).

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[32] Goldschmidt and Haas (1946:13; citing Davidson 1928) make reference to hunting territories and "districts ...far back in the mountains which are used solely for the hunting of mountain-goats and large game." These reserves reportedly could be held exclusively by a clan, but in fact were often leased to outsiders. Similarly an outsider could seek permission from a clan leader (yitsadi) if no one was hunting in a particular territory (see also Swanton 1908:425). No direct reference is made to bear hunting reserves, however, or whether these hunting territories were post-contact institutions, which may have developed as a response to fur trade competition.

[33] Low levels of compliance with licensing and harvest reporting are common problems in rural Alaskan communities. For, example, Loon and Georgette (1989) found that less than 20 percent of the brown bear harvested by local residents they interviewed in northwest Alaska had been reported to the Department of Fish and Game, despite a long history of tag and sealing requirements. Reasons for not complying have to do with the failure of the requirements to acknowledge traditional and customary hunting patterns. However, neither my interview data nor other Division findings suggest such a high unreported harvest or level of non-compliance in Southeast, but rather a low level of brown bear hunting.

A more general study, entitled *Traditional and Customary Natural Resources Used by the Southeast Alaska Natives,* prepared by Tlingit and Haida Central Council (THCC 1983), suggests that a significant percentage of Natives in some communities still use brown bear for subsistence. The report found that 9.8 percent of 99 Natives surveyed in four communities (Haines, 22.7 percent; Hoonah, 15.8 percent; Petersburg, 0 percent; Saxman, 2.6 percent) used brown bear. The percentage of people using a resource in a community is usually higher than the percentage actually harvesting the resource. This is especially true of large game, such as brown bear, which may be widely shared and distributed.

Changes in Subsistence Brown Bear Harvest

The ethnographic record suggests that the subsistence harvest of brown bear was a widespread, regular, and highly ritualized activity among Natives. On the other hand, recent data suggest that many of the traditions associated with brown bear hunting are no longer being practiced and that harvest levels and use of the resource have declined. Although no single cause is evident, Native informants point to several factors in explaining changes in brown bear subsistence harvests.

The three factors most often cited as contributing to changes in the subsistence harvest are: desirability of the meat, economic circumstances, and changes in state regulations. As noted above, it seems that brown bear meat was not especially prized in comparison with deer, moose, and goats, and its preparation involved more labor than other meats. Because of matters of personal taste, given a choice of game and other foods, many Natives choose not to harvest brown bear.

The danger of trichinosis, a product of trichinae worms that infest brown bears' muscle, is also given as a reason for not salvaging bear meat. Several informants stated that the choice whether or not to harvest brown bear was linked to economic circumstances and the availability of other resources. One Native cited the 1920s as an example of a time when their were few jobs and little money for Natives. During that period, people hunted brown bears, consumed their meat and fat, and used, sold, or traded the hides to meet their needs.

Several Native hunters stated that the introduction of new territorial and state regulations, including licensing, tag, and sealing requirements, smaller bag limits, and shorter seasons, and enforcement pressures contributed to the decline of brown bear use by Natives. Certain efficient, traditional means of hunting, including the use of dogs, are prohibited by regulation. Given the cultural strictures and plethora of special knowledge and skills associated with bear hunting, it may not have been practical to continue traditional patterns of hunting under territorial and state regulations. At the same time, violating or attempting to modify traditional norms of bear hunting may have been considered equally risky, contributing to a decline in hunting. For example, under contemporary regulations, a hunter must declare his intent to pursue a brown bear unequivocally by obtaining a permit and purchasing a tag. For a traditional hunter, such a direct and public declaration of intent would, in effect, ruin the chance for a successful hunt because the bear would perceive the intent and avoid the hunter. Similarly, salvage and sealing requirements would have been incompatible with prescribed treatments of the slain bear. Some Tlingits suggest they became discouraged or intimidated by these regulations and abandoned the enterprise in favor of other forms of hunting which were less conflicting and restrictive.

In addition to these factors, the general decline in traditional knowledge about bears and bear hunting practices may also have contributed to the decline in bear hunting. Certain practices, such as the ceremonial rites performed to appease the bear's spirit, were actively discouraged by some Christian missionaries. Much of the traditional belief system surrounding bears was considered contrary to both Western science and Christian traditions. In this context, traditional beliefs and practices regarding brown bears may have been deemphasized to the extent that much of the cultural knowledge surrounding brown bears was not transmitted to younger generations. Today, while Native people still express respect for the brown bear in many ways, and there is even resurgent interest in its spiritual aspects, many of the specific customs which traditionally enabled Tlingits to hunt brown bear successfully seem either to have been abandoned or not directly experienced by younger generations. This pattern also may have contributed to the decline in harvest levels.[34]

Finally, another issue warranting further study is to what extent the fur trade affected the traditional harvest and use of brown bear. Both Natives and non-Natives Alaskans were involved in the fur trade industry in the nineteenth and twentieth centuries. Unlike black bear pelts, which were valued in Russia, brown bear pelts apparently did not command a price worthy of the risk and effort necessary to obtain them during the early fur trade era (see Dall 1970 [1850]:500; Krause 1956:133). However, by the early twentieth century brown bear pelts were commanding prices of up to 50 dollars, and trappers actively sought them (Jones 1914:75; George Jim, pers. comm. 1991). It is possible that during favorable market periods (prior to the 1925 ban on market hunting), when brown bears were more intensively trapped, the subsistence use of the species likewise increased. When market hunting was banned, subsistence use may have decreased. More research is needed to determine the role these and other factors in the decline in brown bear harvests.

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[34] In some areas, violations of traditional hunting procedures are still believed to endanger individuals and to jeopardize the success of the hunt. For example, McClellan (1975:126) observes: "Nowadays, as in the past, men prefer to be in couples, or even larger groups when hunting bears. However, since the chief danger for the bear hunter is supposed to be cowardice on the part of his companions, he chooses his hunting partners with great care. 'You can't get frightened if you are going to kill well and not get hurt. You can't get nervous.' Those who have narrow escapes from bears almost always blame the cowardly actions of their fellow hunters." Lacking appropriate cultural knowledge and experience, but perhaps aware of its importance, young hunters may find bear hunting especially risky. In fact, de Laguna (1960:26) cites a the lack of experienced male bear hunters as a reason why problem bears around Angoon were not hunted during her stay there in the 1950s.

Notwithstanding the decline in harvest and meat consumption, brown bear are still hunted and parts of the bear, such as the hide and ears, continue to be utilized for ceremonial occasions by Tlingits. As traditional and customary uses of brown bear, such practices are also protected under subsistence law.

METHODS OF HARVEST

Traditionally, the preferred method for hunting brown bear was to hunt in groups and often with dogs. A variety of implements were used, including spears, snares, deadfalls, traps, and bow and arrow. Since the late 19th century, the preferred method of hunting bears has been with guns, alone or with a group of people. Bear hunting was and still is considered extremely dangerous, as hunters are sometimes attacked or otherwise injured by bears, especially by wounded bears which are viewed as posing a special threat.[35] Traditionally, "When one came to a bear trail he said, 'My father's brother-in-law, have pity on me. Let me be in luck' (*Xat ga Laxe'l*)" (Swanton 1908:455). At the same time, while being respectful, it was considered important not show fear or cowardice towards the bear in any way.[36]

Native hunters traditionally pursued bear throughout the year using a variety of strategies:

> *In winter he hunts him [the bear] with dogs in his lair, which he recognizes by the scratchings on the tree trunk, and in summer he lies in wait for him in the twilight when he comes down from the mountains to forest meadows to feast on young greens, and in autumn he finds him while he is fishing for salmon in shallow streams. (Krause 1956:125)*

The traditional peak hunting periods were in the late winter, spring, late summer and early fall (see Table 1).

Dogs were trained to track bears and to drive them towards the hunters' weapons. Dogs might also be used to rouse a bear from its den. Training often included preparing the dogs with magical exercises known as *hex.wa*. Another technique employed to sharpen a dog's ability to smell bears was to ritually cut the animal's nose on one side and then rub the opening with bear fur (de Laguna 1972:363).

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[35] Recently, some residents of Angoon have initiated an effort to ban brown bear hunting in Kootznoowoo Inlet and Mitchell Bay in part because they fear that wounded bears pose a threat to other users of the area. According to traditional beliefs a bear also can be "wounded" (i.e., offended) by disrespectful behavior.

[36] In earlier times a Tlingit might be punished for showing cowardice toward a bear (see for example de Laguna 1972:717).

The Inland Tlingit were reported to have used divination techniques to locate bears and assess the probability of a successful hunt. These techniques included the interpretation of holes in porcupine hip bones and the "jumping" of bear knee bones which were burned with hot rocks (McClellan 1975:129). Some individuals were believed to have a special affinity for locating and/or killing bears. In some cases these individuals were members of the Teikweidee (Brown Bear) clan (de Laguna 1972:365)

Like other Native groups, Tlingits found denning bears to be good targets because of their approachability and relative defenselessness. Dens were identified from tracks as well by noting "unusually high piles of snow with frosted tops" (McClellan 1975:127). According to Oberg (1973:67-68), "Bear dens would be looked for in the autumn or winter and marked so that late in March, when the bears began to stir from their dens, the Indians were ready to catch them before they became too strong." Because den entrances typically face downhill, the careful hunter would approach from the uphill side.[37] The hunter would attempt to lure or drive the bear from its den by throwing something into or in front of the den or by using dogs. The bear was typically slain just as it emerged from the den (de Laguna 1972:364-65; Oberg 1973:67-68; McClellan 1975:127; Dauenhauer and Dauenhauer 1987:377).

Traditionally, spears were used to kill emerging or oncoming bears. Spear handles were crafted from strong yew wood to which blades or knives were attached (Newton and Moss 1984:17).[38] A hunter would carry the spear low to the ground and when the bear charged, "the butt end of the spear was braced against the ground, and when the bear charged, the man would jump quickly aside, letting the bear impale himself on the spear" (de Laguna 1972:364, 365). This method was especially dangerous because, "it was impossible to kill a bear unless he put up a fight" (Jacobs and Jacobs 1982:121).[39] Often the initial thrust was not sufficient to slay the bear and a "furious battle then ensued in which a number of dogs were always killed and sometimes even men" (Oberg 1973: 63-64). Some Natives maintain that bears are left-handed and do not move well to their right, thus it is best exploit the right side when attacking (John Bremner, Sr., pers. comm. 1991; cf. Loon and Georgette 1989).

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[37] A bear was said to run only downhill when it sees a man (de Laguna 1972).

[38] Crabapple wood was also reportedly used for spear handles (George Jim, pers. comm. 1991).

A story of a nineteenth century bear spearing (de Laguna 1972:715-716) tells of three brothers who encountered a mother bear and two cubs near Situk Lake near Yakutat. One of the men had a spear (*tsagaal*):

> *about 4 or 5 feet long, with a blade like a knife. He stripped and tied his shirts around his waist. As the mother bear charged, he held the butt of his spear against the ground, the blade, slanting forward. The bear jumped at him, but was stabbed in the throat.*

The informant noted that the man had a bear spirit (*'ixt*) helping him and that is why he was not afraid of the bear.[40]

Another successful spearing technique involved digging a hole along a bear trail and waiting for it to pass over. As the bear passed over him, the hunter would raise the spear and brace the butt end against the far side of the hole. The bear would be stabbed in the soft underbelly and would proceed to impale itself on the spear. This method is similar to that described in the Kaagwaantaan bear crest story above (Olson 1967:40).

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[39] Oberg (1973:67-68) indicates, however, that a half-awakened bear might be speared from above in the head or neck as it emerged from its den.

[40] He was also a member of the Teikweidee and thus, according to de Laguna (1972:715-716), perhaps "had special powers over bears."

Safer means of killing bears included bow and arrow, deadfalls, traps, snares, and guns. Bow and arrow might be employed in combination with spears to bring down an animal. When shooting a bear with an arrow or gun, one was supposed to shoot for the heart side between the ribs (de Laguna 1972:365), although I was told by one hunter that the best place to aim is for a small bare spot just behind the left foreleg.[41]

Figure 8 shows one type of deadfall and three snare designs employed by Tlingits to harvest brown bear. Emmons (1991:134) reported that the snare was favored by the mainland groups, who procured it in trade from peoples of the interior, while the deadfall was favored by the island dwellers. Krause (1956:125) describes deadfall construction as follows:

> *A strong tree is weighted down with a log or stones and held in a diagonal position by means of a support which is baited [usually with fish]. A little horseshoe-shaped shelter with the floor covered with chips of wood attracts the attention of the bear toward the bait so that the weight of the falling log will break his back.*

A deadfall had to be especially weighty in order to kill a bear. Hasselborg (1911, June 17) observed a deadfall trap for bear, which he presumed to be set by Tlingits, in the summer of 1911. Snares and deadfalls were erected along bear trails and at the mouths of streams (Goldschmidt and Haas 1946:23). Snare loops were secured with logs to help set the noose and prevent the bear from chewing through the line which was constructed from heavy duty sea-lion or moose hide.

Throughout the late nineteenth and twentieth centuries, bears have been hunted with guns (see Fig. 9.) and steel traps. Natives were able to acquire good

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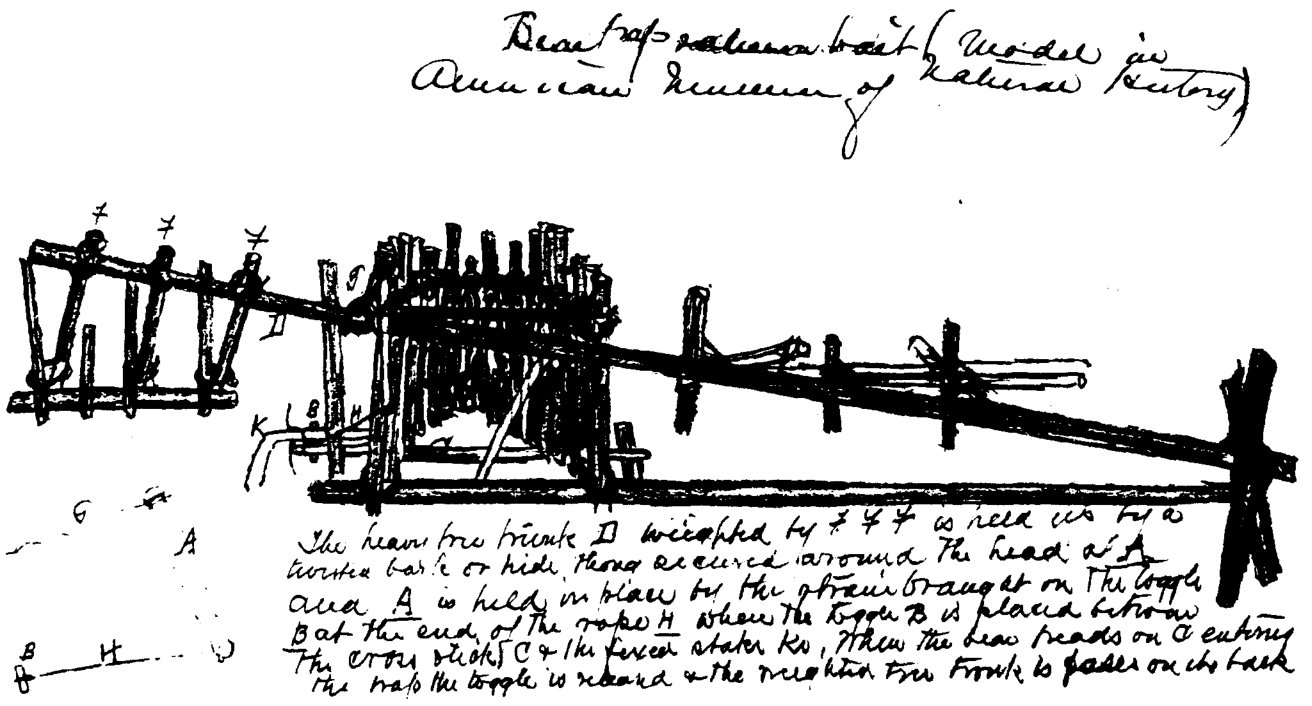
[41] At least one writer claims that in the early days of guns Natives "usually rammed five bullets down the gun and let fly when the bear was only a few yards away" (Holzworth 1930:51).



Bear trap salmon bait (Model in American Museum of Natural History)

The heavy tree trunk D weighted by F F F is held up by a twisted bark or hide thong secured around the head of A and A is held in place by the strain brought on the toggle B at the end of the rope H when the toggle B is placed between the cross stick C & the fixed stake K, When the bear treads on C entering the trap the toggle is released & the weighted tree trunk is falls on its back

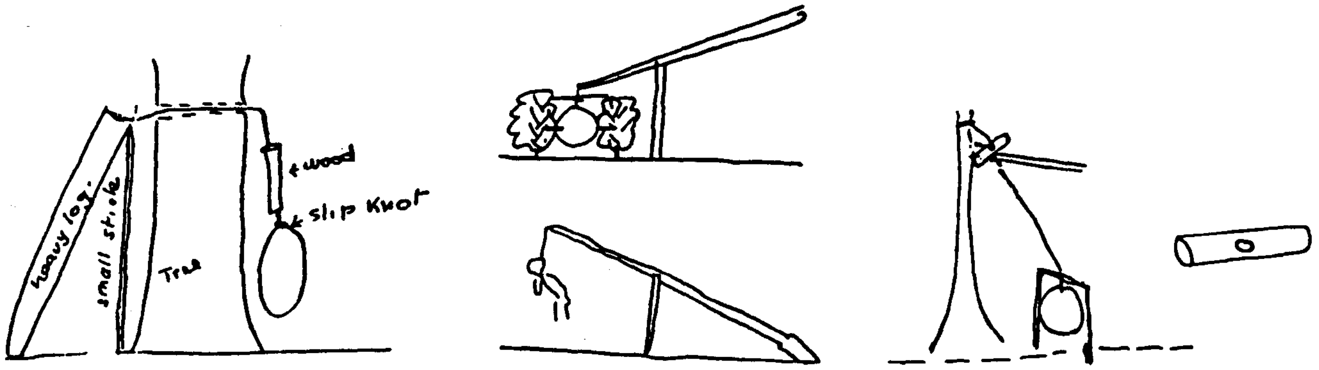


Figure 8. Traditional Tlingit Deadfall and Snares Used for Brown Bear. Top: Tlingit deadfall for bears. (Pencil sketch by G.T. Emmons, made from a model). The text reads as follows: Bear trap, salmon bait. The heavy trunk D weighted by F F F is held up by a twisted bark or hide thong secured around the head of A, and A is held in place by the strain brought on the toggle B at the end of the rope H when the toggle B is placed between the cross stick C and the fixed stake K. When the bear treads on C entering the trap the toggle is released and the weighted tree trunk falls on its back." Source: Emmons (1991:135), courtesy of the American Museum of Natural History. Bottom: Three types of bear snares. Source: De Laguna (1972).

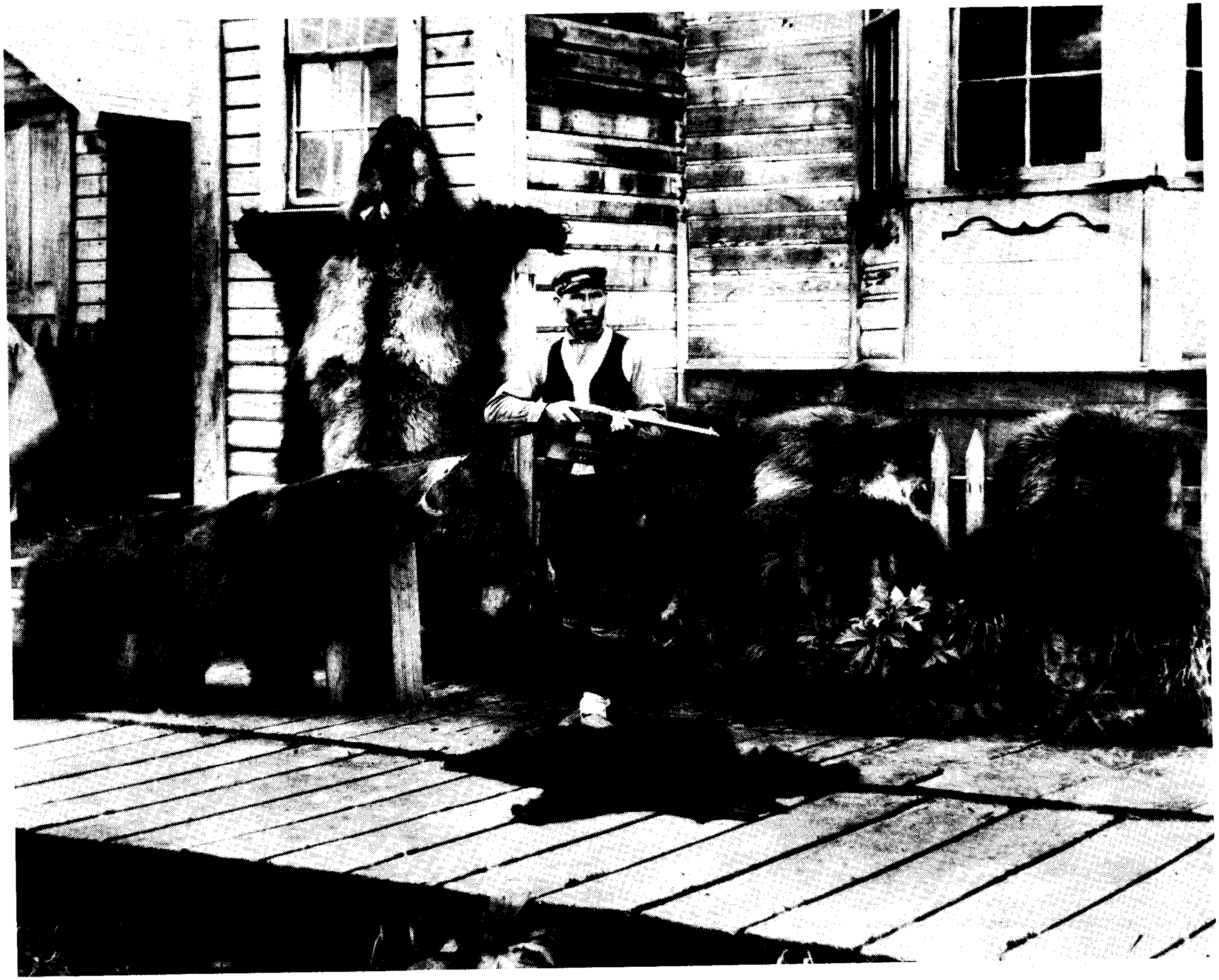


Figure 9. Tlingit Bear Hunter in Turn-of-the-Century Sitka. Photograph by E.W. Merrill, courtesy of Sheldon Jackson College Library.

firearms as early as the Russian period, and, with the introduction of steel traps in the early twentieth century, snares and deadfall were quickly abandoned as a means of obtaining bear (Emmons 1991:135). In the 1880s and 1890s, Emmons (1991:130) observed that, "When manufactured bullets were not to be had, pieces of lead or native copper were beaten into slugs, and these were often preferred for bear hunting."

Today 30-30 and similar caliber rifles, common before World War II, have given way to higher-powered guns. Visual aides, such as scopes and binoculars, are widely available to hunters. On the other hand, some traditional means of hunting, including the use of dogs, pits, snares, deadfalls, and traps have long been outlawed by federal and state regulations. Although visual aides may be used to locate game, bears are still tracked primarily by foot. Bear hunting is still considered to be an especially dangerous endeavor.

Developments related to access also have influenced modern bear hunting practices. Technologies for accessing bear hunting areas have improved with the advent of aircraft, speed boats and all-terrain vehicles. Contemporary regulations have affected access both directly, through such measures as bag and season limits, and indirectly in that, as a practical matter, regulations necessitate that the logistics of a bear hunt be organized well in advance from a settlement where such things as licences, permits, and tags may be obtained. In addition, today many Tlingits no longer maintain access to their traditional hunting, fishing, and other seasonal camps, where contacts with bears were most frequent and out of which bear hunts traditionally often were organized.

Most of the contemporary bear hunts described by key respondents in Angoon, Sitka, and Yakutat were organized in fall or early spring. In Yakutat, there was a strong pattern of spring bear hunting. De Laguna (1972:364) notes that, "Today [c. 1954] many men go regularly on bear hunts in the spring when the animals emerge from their dens, even though bear meat and bear hides are no longer of any significant value." This activity was sometimes combined with clearing the salmon streams of debris to facilitate salmon returns upstream. In addition to providing spring food and furs, bear hunting in Yakutat was viewed as a means of reducing the impact of a competing salmon predator (Mills and Firman 1986:54).

When Angoon and Sitka Natives had fishcamps in the mid-twentieth century, fall hunts were usually organized out of these camps, and bears were pursued up the salmon creeks where they fed. The most common tactic was to pick a good spot (e.g., in the fallen logs near a stream where one could find cover and a place to steady one's rifle) and lie in wait for the bear. Bears could also be lured to a spot by the hunter's imitating the splashing sounds made by salmon migrating up a shallow stream (John Bremner, Sr., pers. comm. 1991). The bear's carcass might be floated down the creek to the fishing camp, where the meat was butchered and smoked and the hide prepared. While spring bears possessed more desirable meat, fall bears had a larger quantity of fat, which was especially prized.

MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING

When a brown bear
is killed
this is when
a person would walk around
in the direction of the setting sun.

--Charlie Joseph, Angoon Teikweidee elder on the occasion of the raising of an Eagle Kaagwaantaan totem pole in Fairbanks. (See Dauenhauer and Dauenhauer 1990:364)

After the kill, additional observances were mandated in order to avoid angering the bear's spirit, which was considered to be especially powerful. Honor was paid to the bear through words and songs. Failure to show proper respect to the bear might prove harmful to the hunter and his family as bears "would revenge any abuse of their kinsmen, even the dead ones" (Kamenskii 1985:75; see also Swanton 1908:455; de Laguna 1972:365, 826).[42]

After appeasing the bear's spirit and kinsmen with words of thanks and praise, the hunter conducted a short ceremony before skinning to insure good weather for drying the hide. The hunter would raise the bear's paw north of his head and then move it toward the south in the direction that the sun travels. This gesture was repeated four times and served to "push down the clouds" and invite sunny weather for drying. If this rite was not carried out, the weather would surely turn bad (George Jim, pers. comm. 1990).

Treatment of the Head

It was especially important to handle the bear's head properly. Among Northern Athabaskan groups as well as Eyak and some Northern Tlingit, the custom was to bury the head in the field, usually facing the mountains (de Laguna 1972:365-66). However, for the majority of Tlingits the custom was to bring the head back to camp where it was decorated with eagle feathers, painted red, and warmed by the fire. At Sitka in 1894, Emmons (1991:133) observed that "two brown bears were killed, and when the skins were stretched to dry, eagle down was put on the heads so that their spirits would feel honored." One might also speak to the bear's head as if to a human being, saying, for example, "I am your friend. I am poor and come to you" (Swanton 1908:455).

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[42] So powerful was the bear considered that some hunters would slash its eyes immediately after the kill, so that it would not see who killed it (de Laguna 1972:826). In addition, one observer noted Native hunters believed that some of the bear's strength and bravery could be transferred to themselves if they ate its heart and drank its warm blood (Kamenskii 1985:65).

At this time songs were sung to honor the bear and to avoid angering its spirit which would jeopardize success in future hunts.[43] One of these songs was the same as that sung by Kaats' bear wife as she prepared Kaats' body after he was slain by his bear children (Charlie Joseph, pers. comm. 1990):

Ee-hee-yei-aahaa-haa,
Ee-yaa-hei-hei
ayoo hoo haa
aaa

Tleix gwaadei hei,
ax nak xa niyaagoot xwei,
shei hei ax kaagei
ayoo hoo aa

Have you gone away
from me forever,
my mother's brother? [44]

Through such songs, the bear was both honored and mourned, and its spirit was appeased. In the 1950s it was reported that "real good hunters" still cut off the head and brought it back to camp but that they didn't sing the songs (de Laguna 1972:365-66). In recent years such handling rituals have declined, although the songs still may be performed on ceremonial occasions (cf. Garfield and Forrest 1978:33).

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[43] According the Swanton (1908:455), the entrails were also burned at this time and the hunter talked to them saying, "I am poor. That is why I am hunting you."

[44] This song was transcribed and translated by Nora Dauenhauer of the Sealaska Heritage Foundation from a version sung by Charlie Joseph, a Teikweidee elder from Angoon, which was recorded in Angoon by the author in July, 1990.

Preparation of Meat and Hide

Because of their size and weight, bears were usually butchered in the field before being transported back to camp. The bear was skinned by making incisions down the belly and legs. Before the hide was removed it was ritually shaken three times. The flesh was stripped from the bones, but the entrails were saved. The hide might be used to cover the meat or it might be fashioned into a pouch to carry the meat and fat (de Laguna 1972:366). Emmons (1991:133) remarked that *The bones of the head and the feet were either buried deep in the ground, or cast into the sea. But withal, its flesh was eaten and its pelt was used like that of any other animal.*

Before being put to general use, the hide itself was treated with great care.[45] It was put on stretchers and carefully tied. In the past, a hunter would take a piece of charcoal and draw a picture of the sun along a half moon as another measure to insure good weather for drying. Then eagle feathers were placed on the fur side of the hide as a gesture of peace to the bears (George Jim, pers. comm. 1990). Among the Teikweidee it was also common to paint the inside of the skin with red stripes "to commemorate the painting of the dog salmon," as related in the crest story discussed above (Garfield 1947:443).

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[45] According to McClellan (1975:129):
Inland Tlingit hunters also usually leave the skins of both black and grizzly bears outside the camp for several days, with the head part pointed towards the sun, and the fur side out. 'You do this so the bear people think good of it, [think that] you treat it with respect.' Sometimes, 'especially when they are bothered' by bear spirits, hunters put swan's-down on the skin and treat it with red paint..Two grizzly skins must never be laid or hung tail to tail because 'you split your luck.'

Before preparing the meat for consumption and storage, a short ritual was conducted which included warming the bear's head and putting the tongue and the heart, smothered in seal grease, on a stick. As the stick was held over the fire, one or more songs were sung to the bear's head. These songs were learned from the bear people. If this ritual was conducted properly, the bear's spirit would be pleased and good weather would prevail for drying the skin. If the bear was not treated properly, it would rain continuously and drying would be difficult. The rain was believed to be "the tears of the brown bear crying" (George Jim, pers. comm. 1990).

Next, the meat was prepared. Traditionally, the only way to preserve bear meat (*xuts tliyi*) was to smoke and dry it, although more recently it has been canned, frozen, or salted in barrels (Williams, in Newton and Moss 1984:16). Before being dried and smoked the meat was sometimes parboiled, seared, or soaked in salt water. After drying, the meat was usually put up in oil to preserve it (de Laguna 1972:394; see also Gmelch and Gmelch 1985). Bear meat was sometimes smoked along with seal and deer meat, and was preserved in seal oil and seal grease or in its own grease. The meat and the fat often were cut into strips like bacon for smoking. Smoked fat and meat could be fried and was said to be good for breakfast (George Jim, pers. comm. 1991). Occasionally other foods, such as berries and shellfish, were preserved in bear fat.

Distribution

Like other foods, the meat, fat, and other parts of the bear were distributed through kin and community networks. Because brown bear kills represented large packages of meat which had to be quickly consumed or processed to avoid spoilage, the fresh meat and fat were often widely distributed. Undoubtedly, the gifts of meat, fat, or other parts of the bear carried great prestige for the harvester-givers because of the dangers and demands inherent in the hunt. If they were not kept or bartered by the hunter(s), certain valuable parts of the bear, such as the hide and fat, made especially prestigious gifts.

CONCLUSIONS

The State Board of Game has determined that there is subsistence use of brown bear in Southeast Alaska. This report has shown that brown bears were hunted consistently as a subsistence resource by Natives of Southeast Alaska in those areas where they were available. Bears were taken for food, and other parts of the bear were used for such things as bedding, tools, and ceremonial regalia. Among non-Natives, brown bears have traditionally been hunted almost exclusively for sport and trophy.

For Tlingits of Southeast Alaska bear hunting has always been considered extremely dangerous and traditionally was surrounded by numerous behavioral prescriptions which were considered vital to success in the hunt. Native stories, beliefs, and practices reflect these prescriptions and emphasize some basic notions about the nature of brown bears including that bears are closely related to humans, that bears *understand* people in some fundamental ways, and that they must be treated with respect to avoid negative consequence. The brown bear remains a pervasive and important symbol in Tlingit social and ceremonial life.

While it is clear that brown bear was hunted consistently, its traditional role as a food source in the subsistence economy is less clear. Although some sources suggest that the consumption of meat was taboo, others state that it was eaten regularly. There is also some evidence to suggest that bears may have been a buffer resource during times when other resources were scarce because of their seasonal availability and the large quantities of meat and fat that they could provide.

Early pre-statehood management of the brown bear population was inconsistent and interspersed with efforts to eliminate brown bears altogether. Although conservation efforts prevailed and management improved, the early campaigns against brown bears, combined with subsistence and increased market hunting pressures in the early part of the century, may have depleted some local bear populations. With the Game Act of 1925, market hunting was banned and some traditional Native means of bear hunting, such as the use of traps and dogs, were outlawed. Since statehood in 1959, brown bear hunting has been increasingly regulated in order to provide sustainable hunting opportunities and to conserve bear populations.

Ethnographic, harvest, and interview data suggest that the subsistence harvest of brown bear has declined from aboriginal levels. There is no single explanation for the decrease in harvest; rather, it seems to be the result of a constellation of factors. Some possible factors include: the low desirability of the meat in comparison with other game species; the availability of alternative and more economically viable resources; the labor-intensive preservation methods; increased regulation of the harvest; and the erosion of the cultural complex of beliefs and practices surrounding bear hunting. While there is probably some low level of harvest of bears for food and other purposes by residents of rural Southeast communities, it does not appear to be anywhere near the size of the contemporary sport harvest by non-Natives.

The present low level of subsistence harvest does not suggest the need for liberalization of bag limits; nor do season limits in Southeast Alaska appear to conflict with traditional peak hunting seasons. Registration, tag, and sealing requirements, on the other hand, appear to be at odds with traditional beliefs and customs regarding bear hunting and post-mortem rites. These culturally-based differences may affect certain hunters' decisions whether or not to harvest in accordance with present regulations.

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APPENDIX

This appendix summarizes Department of Fish and Game brown bear harvest data since 1960, when detailed record keeping was initiated. The table shows the annual number of bears harvested by community of residence and GMU (Game Management Unit). These data represent only the *reported* harvest and not the total brown bear harvest. It is likely that additional bears were harvested and not reported during this period.

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

			BROWN BEAR HARVEST DATA 1960 - 1989													
COMMUNITY	1960-1	1961-2	1962-3	1963-4	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	1974-5	1975-6
GMU 1A																
ANCHORAGE														1	1	
ANNETTE ISLAND					1		5		4					1		
BERRYTON																
COFFMAN COVE																
CRAIG																
HYDER												1				
JUNEAU												1				
KETCHIKAN	1	1		1	1		3	3	2	3	2	1		1		2
KLAWOCK																
MEYERS CHUCK														1		
NON RESIDENT																
PETERSBURG													1			
YES BAY																
GMU 1B																
ANCHORAGE										1						
BRADFIELD																
CRAIG																
JUNEAU																
KETCHIKAN		2														
KLAWOCK																
MEYERS CHUCK																
NON RESIDENT			1		1			1								
PETERSBURG																
SITKA																
THORNE BAY																
WRANGELL	1	3			1					5	3	2	3	2		3

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

							BROWN BEAR HARVEST DATA 1960 - 1989								
COMMUNITY	1976-7	1977-8	1978-9	1979-80	1980-1	1981-2	1982-3	1983-4	1984-5	1985-6	1986-7	1987-8	1988-9	1989-90	1960-89
GMU 1A															
ANCHORAGE	1														3
ANNETTE ISLAND															11
BERRYTON												1			1
COFFMAN COVE														1	1
CRAIG												2			2
HYDER															1
JUNEAU															1
KETCHIKAN	5		9	1		1	2			1	2	4	3	2	51
KLAWOCK					1			4	2						7
MEYERS CHUCK															1
NON RESIDENT							2		2			1		1	6
PETERSBURG															1
YES BAY			1												1
GMU 1B															
ANCHORAGE															1
BRADFIELD					1										1
CRAIG												1			1
JUNEAU									1						1
KETCHIKAN		1				2			1	1			2		9
KLAWOCK												1			1
MEYERS CHUCK											1				1
NON RESIDENT			1												4
PETERSBURG			1			2	1			1		1			6
SITKA					1										1
THORNE BAY						1	1			2					4
WRANGELL	3	5	1	1	1	1	2	1	3	3	1	1	1		47

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

			BROWN BEAR HARVEST DATA 1960 - 1989													
COMMUNITY	1960-1	1961-2	1962-3	1963-4	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	1974-5	1975-6
GMU 1C																
ANCHORAGE					1				1							
AUKE BAY	1															
DELTA JUNCTION																
EAGLE RIVER							1									
HAINES					1					1						1
JUNEAU	2	3	1	4	5		3	2	4	2	4	1		4	4	4
KETCHIKAN					1											
NON RESIDENT		1				3								2		2
SEWARD																
SKAGWAY							1									
TOK																
GMU 1D																
ANCHORAGE								1								
DUTCH HARBOR																
FAIRBANKS				1						2			1		1	
HAINES	1	2	7	2	8	1	8	5	2	4	2	3	5	1	3	2
JUNEAU						2		1		3					1	
KETCHIKAN													1			
KLUKWAN			1					1								
NON RESIDENT		1		2	2	1	3	4	4	1	4	3	4	1	3	5
SITKA																
SKAGWAY				2		1	1		1	1	2		1		2	
GMU 3																
ANITA BAY																
THORNE BAY																
WRANGELL																
GMU 4																
ANCHORAGE		1	1		1	1	2	2	1	4	8	7	13	9	12	12
ANGOON					1						1					
ANNETTE ISLAND					1						1					
BAY SHORE																

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

						BROWN BEAR HARVEST DATA 1960 - 1989								
COMMUNITY	1976-7	1977-8	1978-9	1979-80	1980-1	1981-2	1982-3	1983-4	1984-5	1985-6	1986-7	1987-8	1988-9	1989-90	1960-89
GMU 1C															
ANCHORAGE					1										3
AUKE BAY															1
DELTA JUNCTION				1											1
EAGLE RIVER															1
HAINES										1		1			5
JUNEAU	4	2	2	4	1	1	4	6	3	5	5	2	2	1	85
KETCHIKAN															1
NON RESIDENT	2	1	1		1	2			3	1					19
SEWARD													1		1
SKAGWAY															1
TOK	1														1
GMU 1D															
ANCHORAGE	2				1							1	1		6
DUTCH HARBOR											1				1
FAIRBANKS	1		1										1		8
HAINES	1	3	1	2	6	1	3	7	2	8	2	11	2	3	108
JUNEAU		1	1				1	1				1			12
KETCHIKAN													1		2
KLUKWAN															2
NON RESIDENT	3	1	2	5	4	2	2	7	2	2	4		4	3	79
SITKA			1												1
SKAGWAY					1	1		1					1		15
															0
GMU 3															0
ANITA BAY											1				1
THORNE BAY							1								1
WRANGELL				1			1							1	3
GMU 4															
ANCHORAGE	12	3		4	2		2	6	3	6	4	8	5		129
ANGOON									1						3
ANNETTE ISLAND															2
BAY SHORE										1					1

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

			BROWN BEAR HARVEST DATA 1960 - 1989													
COMMUNITY	1960-1	1961-2	1962-3	1963-4	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	1974-5	1975-6
GMU 4, continued																
BETHEL																
CHATHAM																
CHICKEN																
CRAIG																
DELTA JUNCTION																
EAGLE RIVER																
ELFIN COVE								1								
FAIRBANKS						1	5	2	1			3	7	8	3	2
FALSE ISLAND																1
GLENNALLEN									1							2
GUSTAVUS																
HAINES													1	1		
HEALY														1	1	1
HOBART BAY																
HOONAH		2			2	3	2	2	1	1		2		3	2	1
JUNEAU	3	8	4	21	13	11	13	27	18	11	18	11	20	16	12	19
KAKE						1										
KENAI															1	
KETCHIKAN				1		2	1				1	3	1		1	2
KLAWOCK																
LITTLE PT WAL																
NOME																
NON RESIDENT	18	25	23	22	26	46	37	26	29	45	35	38	40	40	55	87
NORTH POLE																
NORTHWAY															1	
PELICAN					6								3			1
PETERSBURG		3	1				1	4	2	3	1	2	3		1	
SEWARD								1								
SITKA	6	4	2	6	11	9	5	7	8	11	11	4	6	8	9	12
SKAGWAY																1
TENAKEE SPRINGS												1		1		1
THORNE BAY																
TOK																
TYLER										1						
WASILLA																
WRANGELL										2		1	2			

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

							BROWN BEAR HARVEST DATA 1960 - 1989								
COMMUNITY	1976-7	1977-8	1978-9	1979-80	1980-1	1981-2	1982-3	1983-4	1984-5	1985-6	1986-7	1987-8	1988-9	1989-90	1960-89
GMU 4, continued															
BETHEL								1							1
CHATHAM					1										1
CHICKEN			1												1
CRAIG											1	1	1		3
DELTA JUNCTION							1				1				2
EAGLE RIVER	2	3	1	1				1		1	1	2	1		13
ELFIN COVE															1
FAIRBANKS	1	3	1		3	1		1	1		3	2	2		50
FALSE ISLAND	1														2
GLENNALLEN															3
GUSTAVUS							1								1
HAINES	1									1		1	1		6
HEALY															3
HOBART BAY												4			4
HOONAH			1	1	1	2	2	3	5	3	6	5	8	2	60
JUNEAU	7	8	3	3	9	7	15	21	13	21	27	31	29	5	424
KAKE						2							1		4
KENAI															1
KETCHIKAN	2	2	1				1		1		1		2		22
KLAWOCK													1		1
LITTLE PT WAL	1														1
NOME	1								1						2
NON RESIDENT	53	29	40	34	38	32	32	52	50	55	54	46	49	20	1176
NORTH POLE												1		2	3
NORTHWAY															1
PELICAN	2	1		1			1		2		1		2		20
PETERSBURG	1	1		1	1			4	1	2	3	1	1	1	38
SEWARD															1
SITKA	8	8	5	5	17	12	16	19	11	14	10	11	14	2	271
SKAGWAY															1
TENAKEE SPRINGS	1			1	1	1	1		2			2			12
THORNE BAY												1			1
TOK			1												1
TYLER															1
WASILLA								1							1
WRANGELL					1				1			1		1	9

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

BROWN BEAR HARVEST DATA 1960 - 1989

COMMUNITY	1960-1	1961-2	1962-3	1963-4	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	1974-5	1975-6
GMU 05A																
ADAK APO									1							
ANCHORAGE			1			1		2	1		3	1	2	8	4	3
ANNETTE						1							3			
BIG LAKE																
CORDOVA									1							
DELTA JUNCTION																
EAGLE RIVER																
FAIRBANKS											1					1
FT GREELY																
GIRDWOOD													1			
HAINES										1						
HOONAH																
JUNEAU			1	2	3	3		5	5	5		1	2	3	1	
KETCHIKAN									1							
NENANA																
NON RESIDENT	5			2	6	3	17	12	9	5	5	5	10	1	3	9
NORTH POLE																
PALMER																1
PELICAN								1								
SITKA			1		3				1	1				1		
TALKEETNA											1					
THORNE BAY			1													
VALDEZ																
WASILLA													1			
WHITTIER											1					
YAKUTAT			3		3	5	3	1		1	2	6	6	5	5	1
GMU 05B																
ANCHORAGE			1			1						1	3	1	1	1
BARROW																
CORDOVA					1											
FAIRBANKS																1
JUNEAU										1		1	1	1	1	
KETCHIKAN																
KODIAK																2
NON RESIDENT							2		2							
SITKA									1							

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

						BROWN BEAR HARVEST DATA 1960 - 1989								
COMMUNITY	1976-7	1977-8	1978-9	1979-80	1980-1	1981-2	1982-3	1983-4	1984-5	1985-6	1986-7	1987-8	1988-9	1989-90	1960-89
GMU 05A															
ADAK APO															1
ANCHORAGE	3	4	3	1	1	3	4	2	1			4			52
ANNETTE															4
BIG LAKE									1						1
CORDOVA															1
DELTA JUNCTION						1	1				1				3
EAGLE RIVER					1				1			2			4
FAIRBANKS	2	1	1	2		1			1		1	1			12
FT GREELY											1				1
GIRDWOOD															1
HAINES															1
HOONAH						1									1
JUNEAU	2				1	3	1	3	1		2	2			46
KETCHIKAN								1							2
NENANA											1				1
NON RESIDENT	7	7	10	12	14	16	20	16	15	19	15	29	12	11	295
NORTH POLE														1	1
PALMER									1						2
PELICAN															1
SITKA						1			1	1					10
TALKEETNA															1
THORNE BAY															1
VALDEZ												1			1
WASILLA											1	1			3
WHITTIER															1
YAKUTAT	2	4	3	3	3	2	4	1	3	3	3	4	4	1	81
															0
GMU 05B															0
ANCHORAGE			1	1					1		1		1		14
BARROW			1												1
CORDOVA															1
FAIRBANKS	1														2
JUNEAU															5
KETCHIKAN			1	1											2
KODIAK															2
NON RESIDENT	1	6		2	11		8			5	4	3		1	45
SITKA															1

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

			BROWN BEAR HARVEST DATA 1960 - 1989													
COMMUNITY	1960-1	1961-2	1962-3	1963-4	1964-5	1965-6	1966-7	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	1974-5	1975-6
GMU 05B, continued																
YAKUTAT		5	3									1				
TOTAL																
1A	1	1	0	1	2	0	8	3	6	3	2	3	1	4	1	2
1B	1	5	1	0	2	0	0	1	0	6	3	2	3	2	0	3
1C	3	4	1	4	8	3	5	2	5	3	4	1	0	6	4	7
1D	1	3	8	7	10	5	12	12	7	11	8	6	12	2	10	7
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	27	43	31	50	61	74	66	72	61	78	76	72	96	87	98	142
5A	5	0	7	4	15	13	20	21	19	13	13	13	25	18	13	15
5B	0	5	4	0	1	1	2	0	3	1	0	3	4	2	2	4
ALL GMUs	38	61	52	66	99	96	113	111	101	115	106	100	141	121	128	180

Appendix: Brown Bear Harvest Data, 1960-1990, Southeast Alaska Game Management Units (GMU) by Residence of Hunter.

							BROWN BEAR HARVEST DATA 1960 - 1989								
COMMUNITY	1976-7	1977-8	1978-9	1979-80	1980-1	1981-2	1982-3	1983-4	1984-5	1985-6	1986-7	1987-8	1988-9	1989-90	1960-89
GMU 05B, continued															0
YAKUTAT			1			1			1	1	1				14
TOTAL															
1A	6	0	10	1	1	1	4	4	4	1	2	8	3	4	87
1B	3	6	3	1	3	6	4	1	5	7	2	4	3	0	77
1C	7	3	3	5	3	3	4	6	6	7	5	3	3	1	119
1D	7	5	6	7	12	4	6	16	4	10	7	13	10	6	234
3	0	0	0	1	0	0	2	0	0	0	1	0	0	1	5
4	93	58	54	51	74	57	72	109	92	104	112	117	117	33	2277
5A	16	16	17	18	20	28	30	23	25	23	25	44	16	13	528
5B	2	6	4	4	11	1	8	0	2	6	6	3	1	1	87
ALL GMUs	134	94	97	88	124	100	130	159	138	158	160	192	153	59	3414