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**Some Ethnographic and Historical  
Information on the Use of Large Land  
Mammals in the Copper River Basin**

William E. Simeone

August 2006



## **Alaska Region Technical Report Series**

Cultural Resources Report NPS/AR/CRR-2006-56

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Resource Report, NPS/AR/CRR-2006-56

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United States Department of the Interior  
National Park Service  
Alaska Region

Produced by:

Wrangell-St. Elias National Park and Preserve  
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## Introduction

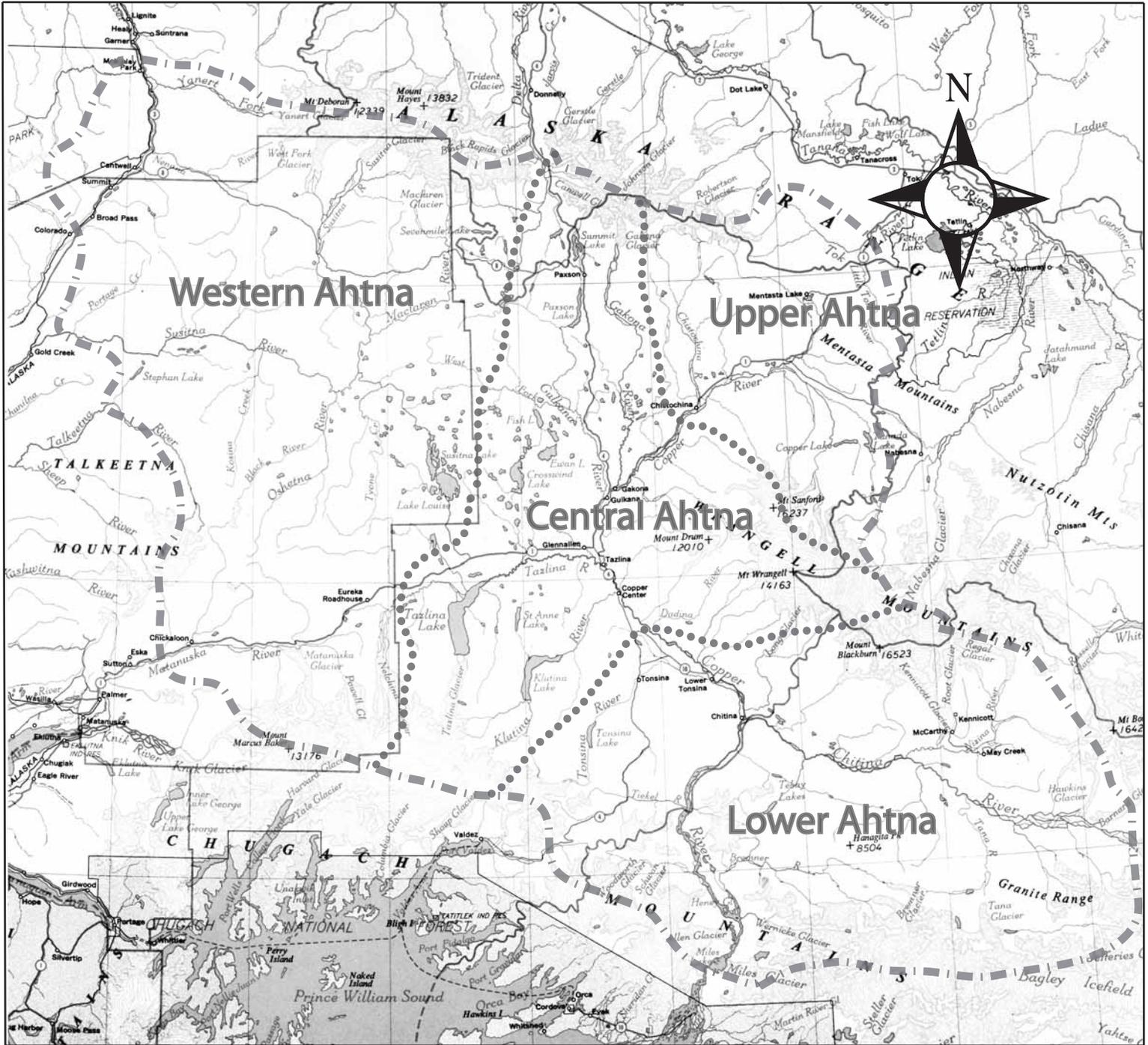
*Alaska is not so plentifully supplied with game as most people imagine.*

— Lt. Castner, Report on an Expedition from Tidewater  
on the Pacific to the Tanana (1898)

This study was conducted for Wrangell-St. Elias National Park and Preserve to document Ahtna traditional knowledge of large land mammals, particularly caribou, Dall sheep and moose. Mountain goats are not included because there is no evidence that they were a significant resource. The research focused primarily on lands within the northern portions of Wrangell-St. Elias National Park, a part of which is also the territory of the upper and lower Ahtna (see Figure 1). The territory of the latter encompasses all of the Chitina River and the Copper River from below Wood Canyon to about the mouth of the Tazlina River, while that of the former includes an area from the Sanford River north to Tanada and Copper Lakes, and the upper Nabesna River. Although National Park lands are the primary focus we have also included interviews with elders whose families hunted and trapped in the Gulkana River drainage, the Tangle Lakes and Crosswind Lake.

The report has two objectives. The first is to provide information on the distribution and changes in the populations of caribou, Dall sheep, and moose within the Copper Basin. This information comes from interviews with a number of Ahtna and observations made by an assortment of non-Native prospectors, explorers, geologists and big game hunters that moved through the country between 1885 and 1945. The second objective is to document the relationship between caribou, Dall sheep, and moose and the Ahtna, who have inhabited the Copper Basin for at least a millennium. For most of that time the Ahtna people have depended on these animals for food and for materials to make tools and clothing. Over the last 125 years this relationship has changed in that the Ahtna no longer rely entirely on these animals for food and clothing, yet as the interviews make clear this relationship remains close and intimate.

Figure 1. Ahtna Language Area



The Ahtna Language Area

language boundary



dialect boundary



Dialect name

## Animal Populations and Movements

### Caribou

The Ahtna dictionary (Kari 1990:493) lists 20 different entries under the word caribou (14 of which are listed below). In the Ahtna language caribou are *udzih*, which is also the word for cow caribou. The Ahtna distinguish between barren ground caribou (*Rangifer arcticus*), which they call *udzih yats'iiidi*, and woodland or mountain caribou (*Rangifer tarandus*) called *ts'igge' c'estsiine'*, literally 'local meat.' Circumstantial evidence suggests that upper Ahtna, who lived north of Chistochina, relied more often on mountain caribou while middle and western Ahtna relied on the Nelchina herd.

A number of people interviewed for this project made a distinction between caribou that migrate, i.e. the Nelchina herd, and mountain caribou that do not migrate. Mountain caribou are described as larger and heavier with bigger antlers than barren ground caribou, and one person said the meat of mountain caribou tastes more like moose. Wilson Justin says that barren ground caribou were thin and "hardly worth chasing." According to Wilson,

Around 20th of June they started getting 1/2 inch of fat, and I'm talking about those big bulls that we used to have up there, not the Nelchina ones. I don't remember anyone hardly chasing the migratory caribou, because they were too thin. But stationary bulls that we had up there, by mid-June/end of June they were beginning to get a pretty good layer of fat and they're the ones you look for, and sometimes you spend a whole couple of weeks before you ran across one and you took one. I wrote about taking one.... that's the first time I realized that they were separate caribou. We saw stragglers [of the Nelchina herd] coming back from Canada or wherever and they'd look all raggedy, we never bothered those, we finally found what we were looking for and that caribou was big and dark, really dark along the flanks.

In addition to distinguishing between mountain and barren ground caribou the Ahtna also distinguished the leader of a caribou herd (*udzih kaska'e'*) as well as the condition of the caribou in terms of gender, seasons and size (see the list below).

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• <i>udzih kaskaē'</i>	lead bull caribou <sup>1</sup>
• <i>tsaali ggaay</i>	baby caribou
• <i>dilt'aey</i>	bull caribou
• <i>uk'os c'ets'edi</i>	bull caribou that leads the herd
• <i>tsaali</i>	calf caribou
• <i>i'tezyaayi</i>	caribou during mating season
• <i>ntl'igi</i>	caribou in summer
• <i>nina'idyaayi</i>	caribou that stays in one place during the summer – literally 'that which stops again'
• <i>nsiili</i>	caribou that stay in the mountains due to hot weather – literally 'those that are warm'
• <i>k'os ts'iis</i>	male caribou without neck hair – literally 'rough neck'
• <i>dek'ali</i>	medium-size caribou that leads herd, comes from the word meaning pale
• <i>telniigi</i>	rutting caribou
• <i>tso'i ggaay</i>	two-year-old male moose or caribou
• <i>uk'os c'ets'edi</i>	young male caribou

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Historical accounts indicate that in the 18th and 19th centuries the Ahtna depended heavily on the spring and fall hunts of caribou and if the caribou did not arrive the Ahtna starved. Starvation was recorded for the years 1828, 1849-50, 1897, and 1910 (Grinev 1993:62; Reckord 1983b:29), but whether these events were related directly to the absence of caribou is unclear. The governor of Russian America, F.P. Wrangell ([1839] 1980:50), wrote that during the 1820s and 30s the principal occupation of the Ahtna was hunting for caribou. Communal hunts, using linear 'drift' fences to guide the caribou into surrounds, took place in the spring. In the fall the Ahtna drove the animals into a lake and stabbed them from canoes. Wrangell goes on to say

the existence of the tribe depends on the size of the hunt, for it depends on the animal for food and clothing. Fish are not plentiful enough to provide for food for the winter, and famine can follow a poor hunting season, with the result that whole families die out.

The zoologist Ronald Skoog (1968:636) speculates that caribou populations in the Copper Basin were at their zenith during the mid 19th century (around 1860), declined in the late 19th century,

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<sup>1</sup> Some northern Athabascan people who hunt caribou believe that you should not kill the lead caribou because the herd will lose its way. There is an analogy between *udzih kaskaē'* (the word *kaskaē'* means leader or boss) and the human *kaskaē'*.

and rose again at the beginning of the 20th century (cf. Hemming 1975; Ketz 1983). At archaeological sites along the shores of Paxson Lake, which archaeologists estimate to have been inhabited between 1850 and 1860, 99 percent of the 6,261 bones found at the site were from caribou (Ketz 1983:198, 201). The evidence also indicates that most of the animals were killed in the spring and were mainly young animals between 10 and 27 months old. No evidence was found of a drift fence although oral tradition indicates that there was one. One other site, located just south of the Denali Highway on Butte Lake, was used for caribou hunting up until about 1860 (BIA 1994). Local informants said that caribou drives occurred usually in August and employed between 25 and 30 people who drove the caribou into the lake where they were dispatched with spears. Apparently the caribou were channeled along a fence made of poles.

Evidence about caribou and moose in the Copper Basin comes from two other archaeological sites, with much older occupations than those further north (1200 A.D. to about 1800 A.D.) (Workman 1976; Clark 1974). The first site, named Gul 77 (Workman 1976), is located on a ridge above the confluence of the Gulkana River and Bear Creek and was inhabited during the late winter and spring. Of the faunal remains recovered, hare were the most numerous, followed by beaver. There was also evidence for possibly seven moose and five caribou (p. 129), but scant remains of fish. At the second site, named Gul 002, a summer site located at the confluence of the Gulkana and Copper Rivers and inhabited about the same time period as Gul 77, there were the possible remains of two caribou, one moose, and an abundance of salmon (Workman 1976:134).

One indicator of abundance used by Skoog (1968:276), which also indicates patterns of movement, is the remains of game fences. Locations for 11 of these fences are listed below, and there were probably more.<sup>2</sup> Note that by 1910 these fences were no longer in use, having been replaced by the repeating rifle.

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<sup>2</sup> The Ahtna distinguish between a linear game fence – used for either moose or caribou (*tsic*) – and a caribou corral (*tl'aztaani*) (Kari 1990:494). Moose were more often caught in single snares placed along a trail (see page 33) or in snares set in long fences that ran straight across the land. Because caribou are gregarious they can be guided into a corral. Snares were then set inside the corral. These hold the caribou until they can be stabbed with a spear or knife.

Archival data indicate that caribou were not abundant in the vicinity of Chitina at the beginning of the 20th century. The military explorer Lt. Henry Allen (1887), who made a trip up the Copper River in the spring of 1885, never mentions caribou at all, although he was fed moose and sheep meat. The geologist Oscar Rohn (1900:415), writing about the Chitina area in 1899, said that testimony from Natives, the number of antlers found, and the remains of game fences indicated that caribou must have been very abundant in the country adjacent to the Wrangell Mountains. He speculated that the animals either migrated or had gone extinct because the Natives were dependent chiefly on mountain sheep and goats (*ibid.*)<sup>3</sup> On the north side of the Wrangell Mountains Stephen R. Capps (1916) reported that caribou were numerous in the less rugged areas of the Beaver and White Rivers but that constant hunting by miners had reduced their numbers. Capps is probably referring to the Chisana herd.

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1. Game fence located at Tyone Lake, may have been for both moose and caribou
  2. Caribou fence near Tolsona Lake
  3. Caribou fence near Old Man Lake
  4. Caribou fence located in the vicinity of Crosswind Lake
  5. Game fence located between Sourdough Lake and Ewan Lake, used to capture caribou in the wintertime
  6. Caribou fence in the vicinity of St. Anne Creek
  7. Caribou fence located on either the Dadina or Nadina Rivers
  8. Caribou fence located on the uplands of Boulder Creek, reportedly made out of stone
  9. Caribou fence located at 26 mile on the Tok Cutoff
  10. Caribou fence opposite the mouth of Indian River
  11. Caribou fence at Suslota Village used to catch caribou in the springtime

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Source: de Laguna fieldnotes 1960-68; Reckord 1983; Simeone fieldnotes 2004.

Population numbers for several species of big game were provided in the annual governor's report to the Secretary of Agriculture dated June 30, 1919. According to the report the Ketchumstuk herd, now known as the Fortymile herd, was estimated at 100,000 animals. The warden watched the migration for eight days, from September 10 to 18, and reported movement

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<sup>3</sup> Fred Moffit (1915:130, 1930:8), a geologist who visited the Chitina Basin soon after Rohn, writes that forest fires were a problem as prospectors burned "many square miles" of timber, in part to get rid of mosquitoes and to provide forage for stock. Several years earlier Lt. Abercrombie (1900:569-570) made similar observations concerning the upper Klutina drainage. The ground was so dry that the moss had turned into punk and there were fires everywhere.

from west to east toward the Goodpaster River and Ketchumstuk country. There is no mention of the Nelchina herd in this report, but a “non-migratory caribou herd” on the northern side the Nutzotin Mountains had 2,000 animals. Moose populations in the Ladue Creek/White River area were estimated between 20,000 and 50,000 animals, and there were an estimated 10,000 sheep in the Nutzotin Mountains. In the Wrangell Mountains including the White River there were 1,000 sheep and on the south side of Mt. Natazhat and Klutina Glacier there were 3,000 Dall sheep.

During the winter of 1929-30 the anthropologist Robert McKennan (Mishler and Simeone 2006) visited what is now the eastern edge of Wrangell-St. Elias National Park, including the terminus of Russell Glacier, head of the White River, Solo Creek pack trail, Beaver Creek and its tributary Carl Creek, the Chisana area, Cooper Creek and upper Nabesna River. In his diary McKennan described hunting both caribou and Dall sheep. He describes an abundance of caribou around Chisana during the fall, especially south of the town, and he describes hunting for caribou on Carl Creek. Towards the end of 1929 McKennan moved to Nabesna, a village located at the mouth of Cooper Creek. The residents there were living mostly on caribou meat they had harvested in the fall. In December caribou migrated across the upper Nabesna River, and McKennan reports seeing large groups ranging in size from 500 to 2,000 animals. He writes “[t]he caribou trail had cut down through a foot of snow and into the gravel. It must have been a big bunch, for a herd of cattle couldn't have torn up the ground more.” By the end of December the migration had passed.

According to oral accounts moose and caribou were not plentiful in the Chitina Basin, but were found on the Kotsina River and there is a place name on the Chokosna River that refers to a caribou fence. Robert Marshall (2004), who lived around Lower Tonsina in the 1930s, described a caribou migration route that took the caribou across the Copper River in the vicinity of Lower Tonsina and Kenny Lake, passed Tonsina Mountain, “up top the Klutina Glacier,” to Tolsona Lake and on to the calving grounds at the head of the Nelchina River. The caribou came in March. About 2,000 or 3,000 animals crossed the river and for two or three days they were able to shoot caribou. In the 1950s the caribou stopped that pattern of migration.

Walya Hobson, who was interviewed in 1993, said that when she was young (1920s) it was hard to get moose and caribou in the Chitina area, and her family mostly hunted for sheep in the mountains. Her family hunted for moose in August in the Kotsina area and got two “timberline caribou” at “Kotsina Mountain.” Maggie Eskilida (1995), who lived on the east bank of the Copper River, opposite the mouth of the Tonsina River, also said there were only a few caribou and hardly any moose.

In the 1920s and 1930s Ruth Johns (1993) said her family hunted caribou around the base of Mt. Drum from August to March, but would kill caribou any time of the year if in need. In a later interview, Ruth (n.d.) added “there’s a lot of caribou that time (1920s), one time 200 caribou come out where we were staying [near the foot of Mt. Drum].”

Virginia Pete (2004), whose family hunted and trapped in the vicinity of Crosswind Lake in the 1930s, remembered a lot of caribou. They “used to see it on the lake [Crosswind Lake] thousands of them we see when we travel with dog team. We met a whole bunch of them. Dogs go wild, and we have to stop and let them go first and my dad would shoot them.”

Adam Sanford (Kari 1986), who was born about 1900, described annual hunting trips up the Sanford River. After hunting for sheep the family moved down river and stopped at “Creek That Has No Water” (*Una Tuu Koley Na*’), where there were lots of what he called summer caribou (*nsiil*), or caribou that stay in the mountains because of hot weather.

Katie John (n.d.) and Gene Henry (2000), who were born in the second decade of the 20th century, said that caribou were available at the head of the Copper River where their fathers had hunting territories, but they both emphasized the significance of sheep. In the 1920s and 1930s Katie John (n.d.) said her family hunted caribou at Batzulnetas and Suslota. She said that when her mother was young (circa 1870) the Ahtna speared caribou in Tanada Lake. Gene Henry referred to getting caribou “on the side” which means they apparently killed fewer caribou than sheep. Gene said that caribou calves were killed for their meat and skins, used to make socks and parkas. Johnny Nicolai (2004), who moved to Chisana in the 1936, said that there were “a lot” of caribou in that area and that the “Mentasta herd” ranged all the way to the White River.

Wilson Justin (2004), who grew up in the 1960s, had the impression that caribou were always bountiful, mainly because he and his family knew how to hunt them. But he points out that just because people were able to shoot a lot of caribou does not mean that the animals were actually plentiful. Wilson said that if you

talk to people who came in with the military in the 40s and you talk about the machine gunning and the shooting that the military did in terms of hunting and you talk about what they took away or shot, like 15-20 caribou at a time, you have to kind've step to the side of yourself and say, well does that mean that there was a lot of caribou here or does that mean that they're talking about being very efficient shooters?.... so I have a little bit of a difficulty with numbers, to me there was always plentiful food that was always hard work.

During interviews with Calvin and Wilson Justin (2004) we discussed the subject of the Mentasta and Chisana caribou herds. For many years Calvin and Wilson worked as hunting guides in the upper Copper River. According to Calvin in the 1960s and 1970s caribou hung around Mentasta and the base of Mt. Sanford and around Sugarloaf Dome behind Jack Lake on the Nabesna Road. They circled around Mt. Sanford and never went into Canada. These animals had big bodies and were easy to hunt. Now the climate has warmed up and it is too warm for the white lichen that the caribou feed on. Changes in browse have forced the animals to range further. Calvin also noted that caribou are easy for wolves to kill and that when there is lots of game the wolf population explodes. Wolves have lots of pups and nothing preys on the pups. Calvin hunts in the vicinity of Lost Creek on the north side of the Nabesna Road and he said there is a wolf pack on the north side of the Mentasta Mountains that is quite isolated. These wolves cause problems for the Mentasta herd.

Wilson also commented on the changes in caribou browse that he has observed over the last 20 to 25 years.

I do know that the caribou food is almost all gone, compared to when I was young. I mean when I was young you could walk for miles stepping

on lichen. You seen these lichen fields from above Jack Lake all the way into the head of Tanada Lake you could walk completely around that hill up there and do nothing but step on what the caribou eat. Now they go up there and they get that sedge grass, nothing else. You can find small patches [of lichen] here and there a mile or so apart but you can't find it like a carpet like it used to be. So I know that the caribou food has essentially migrated north or did something....

He then said that the Chisana or Mentasta caribou are highly prized and cannot be hunted by just anyone. In his estimation the National Park Service (NPS) should leave those animals alone.

The last thing that I want to say on caribou is that it's finally come out that what they call the Mentasta herd is a sub-species, now they call it the Chisana herd. I don't think they should be calling it any kind of herd, they should call it the, we used to have a term for them, I had it on the tip of my tongue, it slipped out. But it's really, those caribou was really prized by the Indians of Canada all the way over here, it's kind of like a royalty, the royalty of caribou, not any Indian can hunt them, you have to be someone special and I just don't like the idea of the park sitting in and trying to manage those caribou like they managed the other. My estimation if you're going to manage that group of caribou, you leave them alone. Stay the heck out them. Anyone who's ever survived the management scheme by federal agencies, state agencies can testify to how effective they are and getting you killed. You can tell the park that.

Wilson went to describe close relationship between the Mentasta/Chisana caribou and '*alts'e'naey*' clan, and he compared those caribou to horses, not in terms of property, but as animals that you have a relationship with and are concerned about.

[They] don't know the size of the Chisana herd now – but NPS should not monkey around with the herd on the basis of numbers. These caribou are like our horses and the state, Canadian government, or the NPS should not be trying to manage them. Those caribou belong to the '*alts'e'naey*' clan. We are interested in their well-being and we need to be told where the

caribou are and that's all we or the managers need to know. The *'alts'e'tnaey* have a relationship with those caribou. No one should kill those caribou without our permission and in addition to that you have to be somebody to go out and kill those animals. Cannot just be anybody. It is just like if I chased your wife, walked into your house and started to chase your wife.

Wilson also complained that resource managers don't share information about population numbers with people who might know what those numbers indicate, and he again reiterated his belief that managers should not be trying to manage the Mentasta/Chisana herd.

I find it offensive that the park treat those caribou as if they just discovered them. I have been talking about them all my life. By treating the caribou wrong, the NPS is developing a serious protocol issue with my family and the way you treat those caribou. My family would say that I should stay away from the NPS because they are crazy in the way they treat those animals. You (NPS) should come to me before you go see them. I want NPS to tell people what is going on with the caribou and to tell us where they are. The NPS should take locals when flying to look at the caribou.

Finally Wilson believes there were never large numbers of caribou in the Copper Basin and that the current number of caribou in the Nelchina herd is "artificially high." He believes this for two reasons: first, he thinks caribou fences constructed out of brush could not stop a large herd of animals and therefore the herds must have been smaller, and second, he has never heard the elders talk about large numbers of animals.

I never heard the older people talk about large numbers. I mean think about it, can you imagine what 2,000 caribou would do to wooden fences 3.5 feet high? They'd just eat it, it'd be nothing. I can't conceive a huge 50-60,000 caribou running around there; no one would be able to contain them.

I have a little bit of a problem with the numbers, I know when people heard me testify in the fish and game meetings know that I have a problem with the numbers because I know I've used a term artificially high level over and over and I think that's a major cause of these caribou disasters is maintaining artificially high levels. But that's a different issue, but I didn't want to mention that, I did want to mention that in my estimation that these trapping methodologies [snare fences] that we are hearing about, or I've heard about, were most effective with very small isolated numbers not these big huge herds that they've been talking about now.

So I have a whole different take on numbers, when you talk to the old Indians they always talk about family size, they never talk about hundreds of thousands, of noise like you can hear a caribou herd today for 2-3 miles, seems to me if they would've told those stories that I would've heard things along those lines, they would say like that we were over at Boulder Creek and we heard the caribou coming for 4 miles, but you never heard stories like that. So I don't know what all to make about all the numbers, only that we never suffered from lack of food because we had to hunt long and hard when I was young, and when you talk about older people who spent a lot of time on the Nabesna Road, I guess what I'm saying is that one user group always talks about the excesses of the other user groups, it was the old time guides that told me about the military people shooting everything in sight, it was the military people who retired and come out to talk about the old time guides shooting everything in sight and leaving bait stations out for bears, so what can you do?

#### Dall sheep<sup>4</sup>

In the Ahtna language Dall sheep are called *debae*, ewes are *c'edzedzi*, baby sheep are *ghesdaey*, adult male sheep are *ses yaane'*, and large rams are called *de'aeli* (Kari 1990:586). Interestingly,

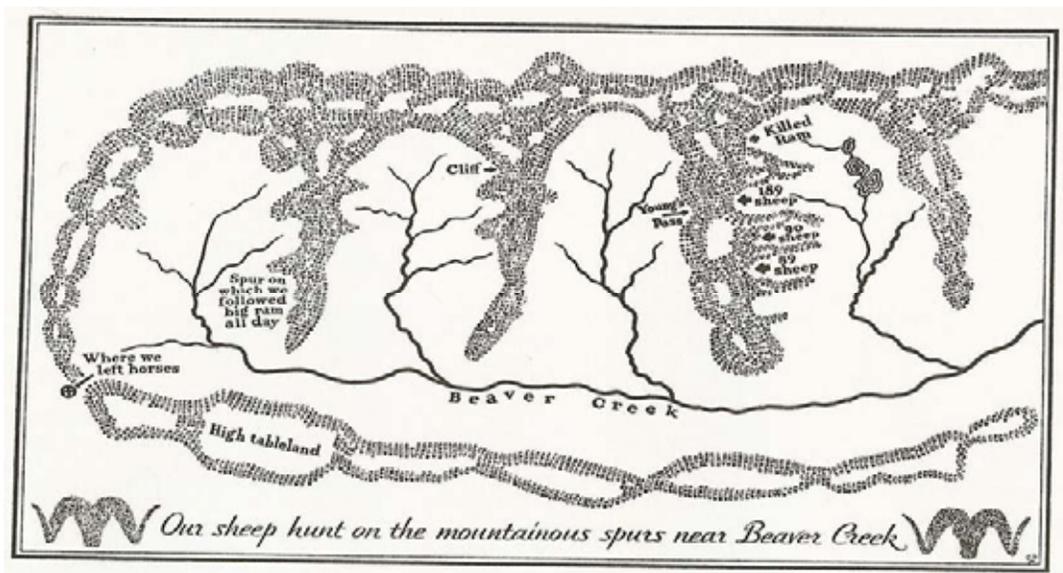
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<sup>4</sup> The number one ranked Dall sheep trophy was killed in the Wrangell Mountains in 1961. On the right side it measured 48-5/8 inches in length and 14-5/8 inches at the base. Seven out of the top 21 trophy Dall rams were killed in the Wrangell Mountains (Boone and Crockett 1981).

female Dall sheep are also referred to as *udzih*, which is the word for caribou. Both the written record and oral tradition indicate the importance of Dall sheep to the lower Ahtna and upper Ahtna. As suggested by Rohn (1900:415), this may have been the result of a decline in the caribou population at the end of the 19th and beginning of the 20th centuries. It does appear that sheep were plentiful in the Wrangell Mountains. Allen (1887:53, 57), for example, reported that he and his party were fed sheep meat at Nicolai's home on the Nizina River and that Nicolai's men killed six sheep while traveling down the Chitina River from the Nizina to Taral. Almost 20 years later Rohn (*ibid*) writes that up the Chitina River "hundreds" of sheep were seen at great heights.

In 1919 G.O. Young (1947) and two other hunters hired guides from the Yukon Territory to take them on a guided hunt from McCarthy, over the Wrangell Mountains through Skolai Pass, to Kluane Lake. Along the way they hunted sheep in the vicinity of upper Beaver Creek. Young drew a map (see Figure 2) of the area indicating the number of sheep he saw in particular drainages.

Figure 2. Young's sheep hunting map



Source: Young 1947.

During their trip Young and the other two hunters collected 52 different trophies of sheep, caribou, moose, mountain goat and bear. In Alaska a hunting license for a US resident was \$50 and the bag limits were two bull moose, which must be killed north of 62 degree latitude, three bull caribou, three male sheep and three male goats. In the Yukon Territory the license was \$100 for non-residents, and the limits were three bull moose, six caribou, three male sheep and three male goats. There was no limit on bears.

Ten years after Young's trip, the anthropologist Robert McKennan (Mishler and Simeone 2006) visited the Chisana area hunting some of the same locations as Young. South of Chisana, along the Solo Creek pack trail, McKennan writes that "sheep were everywhere in sight and I must have seen over a hundred. We pretty nearly rode over a bunch of about 30 ewes and lambs feeding in a creek bottom." During the month of October 1929 McKennan and residents of Chisana hunted sheep at Carl Creek (a tributary of the Beaver), where in two days they killed about five rams. A few months later McKennan (1959:136) attended a potlatch at the village of Batzulnetas where the guests feasted "on boiled strips of fat sheep meat, slightly tainted, as is the Copper River custom."

In an epilogue to Young's book *Alaskan-Yukon Trophies Won and Lost*, which was published in 1947, the guide, Eugene Jacquot wrote that since 1919 there had been a decline in moose, caribou and sheep because of an increase in wolves. He blamed the increase on the creation of a park in Yukon Territory by the Canadian government that had the effect of protecting wolves. Depletion of caribou and Dall sheep populations was also on the minds of the Alaska Game Commission (1948). In their 9th annual report to the Secretary of Interior for 1947-48 members of the Commission expressed deep concern over the rapid depletion of wildlife, especially white sheep and caribou and the possibility that these animals may "become extinct in the next few years." The reports states that Nelchina herd is not in normal numbers at the head of the Sustina River and the Commission wants to pass a regulation forbidding the shooting of Mt. Sheep during the 1949-50 season in order to prevent the animals from becoming extinct. They note that is the first time in the territory's history that Dall sheep hunting is to be closed.

Ahtna elders from the Chitina area say that sheep were abundant. Walya Hobson (1995), who was born in 1913 and grew up on the lower Tonsina River, said when she was a young girl moose were scarce so her family ate sheep meat. Robert Marshall (2004) said that people hunted sheep year round and killed as many as they needed until about 1945-46 when game laws became strictly enforced. There was always a lot of sheep, and in “them days don’t have to struggle to get the sheep, now days lots of hunter.”

Ahtna living on the upper Copper River spent the late summer and fall on the slopes of the Wrangell Mountains hunting for Dall sheep and mountain squirrels. Adam Sanford’s family made annual trips in July, August and September to the upper Sanford River and Boulder Creek to hunt sheep (Kari 1986). The entire family went on these trips and lived primarily on sheep meat and caribou. They encountered moose only occasionally (for a more complete description of the trip up the Sanford River see below). Adam also described a trip (probably in the 1920s) he took with his uncle Sanford Charley to Tanada Lake and the area of Goat Creek. On that trip the family lived on sheep meat. Adam noted that sheep from this area were small and not good to eat. He also commented that game was generally scarce in this area and people did not have much to share.

Gene Henry’s father, Batzulnetas Billy, had a hunting area located at the very head of the Copper River. Gene (2000) said in late summer the family moved from their home in Batzulnetas into the hills and spent most of the winter trapping and living on sheep meat. Gene said that his family killed approximately 30 sheep in a year.

Katie John’s father, Sanford Charley, had a hunting territory that included Tanada Lake, Goat Creek and upper Jacksina Creek (Kari 1986). When Katie was young the family spent the late summer and fall hunting. She estimated that her family killed 30 sheep in a good year.

Calvin Justin (2004), who guided in the 1960s and 1970s, said there used to be bigger bands of ewes and lambs. Up until about 1985 it was easy to kill sheep around Lost Lake but after that it was not so easy. Now there are more hunters with four wheelers who have pushed the sheep further back into the hills. Calvin said weather is a problem too; rain in the winter causes ice

sheets to form over browse so that the sheep cannot get to it. There used to be sheep closer to the Nabesna Road, now, Calvin said, it takes him a week to find a sheep.

Mineral exploration and development had an effect on sheep populations in certain areas of the Copper Basin. Capps (1916) wrote that in the Chisana area there was an exceptional abundance of game except around the mining camps. He estimated that during the winter of 1913-14 the miners killed 2,000 sheep within a distance of 20 miles of the placer mines and had almost exterminated them. By 1929-30 the sheep population may have recovered because McKennan records that there were large numbers of sheep in the Chisana area.

Commercial meat hunting followed the development of the mines. Wilson Justin (2004) described what he sees as the effect of commercial meat hunting on the sheep populations in the Wrangell Mountains. Meat hunters were hired to supply meat so they killed easily accessible animals, which in the case of sheep were ewes and lambs. As a result sheep populations declined. By the 1960s the populations had rebounded, but pressure from the commercial guiding industry has had the effect of pushing the sheep back into the mountains into places that cannot support a large amount of sheep. Wilson explained that the mines

used to hire Indians to go out and kill sheep for food, all of them [the mines]. The problem with that is it's not selective and you have to get as much meat as you can in the shortest period of time over to them [the mines]. So they would shoot 30-40 [sheep] closest to them in the head at close range, usually the easiest sheep to kill were the ones closest to the bottom of the hill and those were ewes and lambs. So in my estimation the mines did a lot to knock the sheep population for a loop by killing the breeding stock. I've never heard of any market hunter... I never heard any of them talk about going after the rams.

[You can] spend the whole day on one ram but you can take a .22 rifle and go into a herd of ewes and rams and get eight or ten. So all of the hunting that I'm aware of in the 20s around Chisana and the Nabesna and McCarthy were done by specialist. And they were doing damage to the

breeding stock so I always think that that's one of the reasons why when we came into the hunting business.... why Jack John and all of the older folks talk about seeing increasing number of sheep from the 1940s and the 50s and the 60s. By the time I got into the business it was, my aunt Lena [Charley] was a guide for us in 1967, and she was astounded at the number of sheep that were running across on the daily basis. To me it was natural because I just got there, but to the others it was incredible riches of sheep.

Then when I go to look at it long, long, long, oh I'd say right about the time miners came in to the time that I got out of the business which was 1985 or mid 80s, I see selective patterns. Now sheep is way down and there's all kinds of reasons: number one, after the miners came along and pretty much knocked off the best breeding stock, the guiding industry came in and turned into a, what they did was change the pattern of sheep, all the sheep that used to be in our area moved into places where it would not support large populations.

Since the development of Alaskan oil in the 1970s the population of the state has increased, which has brought an increase in hunting pressure especially in road-connected areas. According to Wilson Justin (2004) the effect was a downturn in the overall sheep population and a movement of sheep to more inaccessible places. This was not so much a result of people actually shooting sheep but a result of increased human presence. Reiterating Calvin's point, Wilson also mentioned the effect of weather.

Yeah, if you go into the Mentasta Mountains, where we did a majority of our guiding.... it was not unusual to count 500 sheep, and 20 or 30 rams. I hit the same ride, was it 1994 or '95? Same everything, I saw none [no sheep]. Not a single one, I did a second ride that, later that year, I took two rides that year. I saw about 11 ewes and lambs on the second one. That tells you what happened to change. But if you go up here above Grizzly Lake and look in the springtime in the back you'll see sheep back there.

They never had been around. Most of the sheep in our area, which is Mentasta Mountains where we took at least a dozen, rams, usually 10 rams every season. Except they got over-hunted – not shot, if those people could actually hunt, if they had any skills they'd keep their sheep and they wouldn't have to come back year after year. Like what they did when they just moved in and started camping on every ridge, and the sheep just got up and left. Moved over here, moved back over towards Canada. That is a major impediment in making any determinations of sheep population.

There were two big sheep die-offs that I can remember from rain in January in 1981 and 1982 when it rained and then all their feed [became] just iced over and they froze. I couldn't even begin to convey how sad it was in the spring time to see the ravens in the mountains, they just had free food all spring. That's the only time where I can say where weather had an aggressive impact on sheep population all the rest had been strictly human intrusion.

When asked if and how people distinguished different groups of sheep, Wilson answered this way:

Not so much, I mean we had terms for all the specific sheep, like lambs, ewes.... but we had, they said the sweetest sheep came from [areas near] salt licks. The same thing over towards McCarthy there's, some place over there and over in White River there's another [salt] lick of some kind where they said they're a delicacy, they were prized for their taste. But other than that, I never really knew any distinction.

Interviewer: That's interesting, because the biologist used the base of the horn as one of the ways to distinguish different kinds of sheep from where they're from....

Wilson: Yeah, I think that the only other way that you would consider distinction is probably color. I mean, yeah, when you look at the Nabesna River sheep the first thing you'll noticed is that they're flecked all around the tail, and they also have flecked ears. A few of them have dark feet. A long time after I noticed that over here they were all white and over there they were flecked. I finally asked, I forgot who it was, somebody, that's the one fish and game called the Fannin sheep, it's supposed to be a sub-species there, a mixture. Never tasted any different and they were just as smart as anyone else. But they used to call, when they say color, its really not the color, they used to talk about the prized old rams that went to spend so much time sleeping, they get really yellowish hooves, reusing the same bed, sleeping in urine, they get really yellow/orange color and the older folks used to think it's a sure sign of exceptionally good tasting sheep, and I agree with them. I say that when you get one of those kinds of sheep, they're far better eating than the others.

They're much more easier to cook, the first thing I thought was that you could safely say that they cook faster and they taste better. But they had a name for them, they call them something, I can't even remember, but they were distinctly yellowish in color from a distance, because they were sleeping in the same bed that they urine in.

### Moose

Moose are *deniigi* in the Ahtna language and there are 15 entries in the Ahtna dictionary that describe moose in various stages of development (Kari 1990:554).

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• <i>c'eyiidze'</i>	bull moose
• <i>c'ukaayaali</i>	bull moose in rut – literally 'that which is going for something'
• <i>idetsiige'</i>	calf moose
• <i>deyaazi</i>	cow moose
• <i>ts'aay' alaeli</i>	four-year old bull moose
• <i>k'edaghalc'et'i</i>	largest bull moose
• <i>c'anatadilaeyi</i>	male moose in October

• <i>dey'dettlok'i</i>	moose with new set of antlers
• <i>c'ilggezi</i>	one- or two-year-old moose
• <i>ts'ighu'alaeli</i>	one-year-old male moose
• <i>nilt' adelyaayi</i>	twin moose calves
• <i>skaa alaeli</i>	three- or four-year-old bull moose
• <i>sesi ten' alaeli</i>	two- or three-year-old bull moose
• <i>tso'iggay</i>	two-year-old male moose or caribou
• <i>caltaey</i>	yearling cow moose

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Oral tradition says that up until the 1930s or 1940s moose were scarce in the Copper River Basin. Or to put it another way, moose densities were low in Unit 13 during the early 1900s (Tobey 2004). This is a relative phrase, meaning that moose were present but scarcer than they are now. As noted above archaeological evidence indicates that moose were available in the Copper Basin before 1800. The presence of at least four known “moose fences” also attests to the presence of moose.

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1. Moose fence at Willow Lake, which stretched from Willow Mountain to Willow Lake and from the lake to the Copper River
  2. Moose fences located on both sides of the Tonsina River
  3. Moose fence located about 6 miles from Bear Creek, near the Copper River
  4. Moose fence on the Nelchina River
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Source: de Laguna 1968.

Written historical sources also attest to the presence of moose in the mid to late 19th century. Rufus Sereberinikoff, the Russian explorer who visited the Copper Basin in May of 1848, met two Ahtna families on the Tazlina River who had fresh moose meat (Allen 1900:412-413).<sup>5</sup> Almost 40 years later the explorer Henry Allen (1887) reported being fed both fresh and dried moose meat on his trip up the Copper River in the spring of 1885, and a number of other explorers, such as Lowe (1900:591) and Powell (1997:39), report an abundance of moose.<sup>6</sup> Castner (1900:688), who visited the Lake Louise area in 1898, reported seeing “plenty of moose and caribou sign” in the area, and he estimates that he saw the tracks of at least 1,000 moose that summer. At the same time Castner observes, “Alaska is not so plentifully supplied with game as most people imagine.” The geologists, Moffit and Mertie (1923:14), reported moose near the

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<sup>5</sup> Apparently Sereberinikoff knew the difference between caribou and moose because he also records meeting another group of Ahtna who had killed several caribou while the animals were swimming in Tazlina Lake.

<sup>6</sup> Neither Lowe nor Powell mentions actually seeing any moose.

Kotsina and Kuskulana Rivers, and Capps (1916) reported that moose were said to be “abundant” on the north side of the Nutzotin Mountains and are seen occasionally in other parts of the area.

Robert Marshall (2004) said that when he was a child (in the late 1920s and early 30s) the only place they could get moose was on the east side of the Copper River. His parents snared moose on that side of the river. There was no moose in the Chitina area at that time. Virginia Pete (2004) said a long time ago they used to see moose only occasionally. In the 1950s there were no moose around Copper Center and only a few in the vicinity of Tazlina.

Before 1950 moose were scarce enough that if you saw tracks you were obliged to run the animal down. When he was a young man Robert Marshall ran down a moose during the winter. He chased the moose on snowshoes, and had to walk 5 miles before he caught up with it. It was 20 degrees below zero that day. Robert said you have to start slow and then speed up. You know you have got the moose when it slows down and then stops to rest. Eventually the moose tried to double back and to get by Robert; but he was able to kill it with a shot from 350 yards.

Wilson Justin (2004) has a theory about changes in moose populations in the Copper Basin. He thinks that during the mini ice age moose browse was scarce and it was not until the climate began to warm, sometime in the 1700s, that the moose population in the basin increased. At the same time there was an increase in the Native population and they reduced the moose population so that by the 1900s there were few moose in the area. For this reason market hunters targeted black bear and sheep. The scarcity of moose also made them valuable so when one was encountered a hunter went to great lengths to kill it.

By the time 1900 came along and the Chisana, the Nabesna, and the White River market hunters started hunting, there was no moose around, caribou was the only other alternative but you only got that on a seasonal basis, so that the black bear and sheep were market hunted. These stories are just amazing about how when someone found a moose track, everything was set aside. [You] offered your prayers to the gods for the good fortune and went back to the village and said ‘I’ll be gone, I found moose tracks.’ My

dad, Old John, it was nine days, before he got to the moose, he slept on the trail, he never stopped, he just literally just ran the moose to the earth. John was in his teenage years when that happened.

Wilson thinks that because it is now so warm, the moose browse has grown too high so the moose are headed north because the best are willows really close to the ground. He notes that if you go down to the river now you will see two-year-old willows that are over 6 feet high. Wilson also thinks

we can handle about 10 times the moose we have now, but one thing they don't do is they don't allow fires to burn... and one of the best ways to make more moose is to keep fire starting. But there again, that's a scientific approach, and I don't think you can get too much support for that.

Today moose are the most important animal in terms of subsistence. At the same time there is a general belief that there were more moose in the 1970s and 1980s and that currently the moose population is declining. One person thought there were fewer bulls with the result that hunters sent out to kill moose for a potlatch end up killing cows, even if they are pregnant (Hicks 2004). Another problem is that increased competition from non-locals that is making it harder to find moose. Jerry Charley (2004) said that is one reason he no longer hunts moose.

While people rely more on moose than either caribou or sheep it is not always the preferred food among elders who grew up on caribou and sheep. One reason why moose are preferred is because they provide more meat than any other animal. Families are larger now, and it would take about eight sheep or three caribou to equal one moose (W. Justin 2004).

### Comments on Animal Cycles

Jerry Charley (2004) thinks that moose and caribou come in cycles of abundance, and he thinks moose have a 30-year cycle, in part because there were so many moose in the 1950s. Walya Hobson (1995) also talked about the cyclical nature of animal populations and the fact that in the past the Ahtna may have over harvested some animals because they simply had no choice.

That's all they live on so don't get much of a chance, like right now that it's against the law to kill cow moose, those days they have to kill what they see, they can't help it that's why because they need the meat, if not, they starve. So that way moose get low and not much to grow up again and then sometime moose go away because they eat up all there where their eating ground, all buds and everything gone so they have to go someplace else. That's why rabbit go away too sometime rabbit be gone for four years and it comes back again.

### Predator Control

There is a difference of opinion about predator control between elders, people born before World War II, and middle-aged people born after the war. For the most part elders think killing wolves is a good because (1) bounties provided income when there were few jobs available (many elders recall killing wolf pups in the spring for the bounty), and (2) fewer wolves means more caribou and moose. Younger people view wolves as a part of the ecosystem.<sup>7</sup>

Virginia Pete (2004) spoke directly to wolf control. In the 1930s and 1940s bounties were paid for wolves and they were a way of earning cash in the summer time. The bounties also a way of increasing the population of moose and caribou, and Virginia thought that a bounty program should be reinstated.

You know long time ago they used to hunt, my dad, uncle used to go around the hill, bluff, and when they [wolves] have pup, they used to find them and kill all of the little ones and take their arm and they used to sell them. They had all kinds of ways to make money. Right now nobody does that no more, that's why there is so many wolf around. They're [the wolves are] taking all those caribou and moose. I been thinking about that, along time ago they used to do that and make money, all those little puppies. They should do that again.

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<sup>7</sup> Most of the Athabaskan elders I have talked to over the years are in favor of killing wolves because they compete for caribou and moose. Those born before about 1920 remember killing wolf pups for bounty. One reason people give for the increase in the wolf population is that few people trap them anymore.

Interviewer: How much was the bounty?

Virginia: I think about \$15 to \$30, because I remember they used to make money. They used to split the bounty, men cannot go alone because those wolf are dangerous. [In ] 1947 – [I]went with my dad – about 12 miles up looking for muskrat and they found wolf den, and you can hear that little wolf back there, and that wolf was sitting in the front growling. And you know what they did. All those dry trees they stuck in the den and put fire to it and they killed that wolf with smoke and they take all the little puppies out and they skin them. When they bring it back they sold it. Not only wolf, but coyote too. Dangerous, they [the wolves] used to eat dog, used to come after dog. They live around here; you see them around here once in a while. Used to see tracks. I don't see it now. That's what they used to do to them to protect all those moose and caribou, rabbit. Now we don't got no caribou around, moose.

Jerry Charley (2004) did not think that in the past Native people tried to control predators but he thinks it is necessary to limit the wolf and bear populations so there are more moose and caribou. There is a pack of 20 wolves on the Chistochina River. He said, “thin them out,” and it is okay to shoot them from an airplane and he hopes they shoot wolves the next year (in 2005). In the old days there were hardly any wolves because there was a bounty on wolves: \$50 for a wolf, \$2 for an eagle, and \$35 for a coyote.

On the other hand Joeneal Hicks (2004) said that he grew up respecting bears and wolves and he still does. “They have to eat too,” he said. Joeneal believes the problem is not with “mother nature” but man. This problem comes in two forms. First there is competition for moose and caribou from urban hunters who often have the ability to travel far off the road. Then there are all the moose killed by trains and automobiles. Joeneal said the Alaska Railroad and automobiles kill many moose but no one points a finger at them, instead they blame the decline on wolves because “the wolves cannot talk back.” Joeneal went on to say that he has seen an increase in the number of wolves over the last several years but he does not agree with wolf control. He does

not think the current management system is “very effective.” A better way to control wolves is provide trappers with an incentive by raising the price of wolf pelts. Right now the price of the pelt is so low it’s not worth the gas or the time needed to set a trap. He added “people in this area need money.”

Wilson Justin (2004) thought that all the native groups practiced predator control selectively and extensively. They used to smoke out wolves, not to kill them but smoke them out so they move their dens. He said after they were smoked out they never used that den again, never came back, so it was not killing wolves but relocating them. Wolf pelts were valuable for winter clothing so, according to Wilson, it was not wise to kill off the wolves because it would be like killing off your “store.” At the same time you didn’t want them competing for your moose, so they made them move. They would kill the leadership of the pack, smoke out the den so they “would go somewhere else and harass someone else’s game.” Predators were also important because the Ahtna could read prey populations by how the predators interacted with them. Wilson said it was like a “telescope”.... “predators were things you could look way across the valley and see what’s over there.” Now “most modern day Indians have bought into the western concept that if you’re a predator then you should be shot.” According to Wilson,

most people tend to forget that in an Indian society, no one element can be disposed of, they work too much together all across the board. So the current idea of controlling predators is really not control but eradication, and eradication is never a choice or option in indigenous societies, never ever, so that’s where I am on that.

### **Historic Ahtna Hunting Practices**

#### Seasonal Round of Subsistence Activities – Late 19th and Early 20th Century

Historically the Ahtna followed an annual round based on a sophisticated knowledge of animal behavior. By taking game, fish, and wild plants in quantity during the spring, summer, and fall and efficiently storing their food in large underground caches for winter use, the Ahtna managed a hedge against starvation. After salmon fishing in late May and June, families moved upland to hunt large game, picked berries, and fished for non-salmon species such as whitefish. With the onset of cold weather people returned to the Copper River to congregate in large multifamily

winter houses where they remained until supplies of dried meat and fish ran low. During the coldest months of the year the Ahtna often dispersed in small groups until March or April when they again gathered at lakes to hunt migratory waterfowl and muskrats, and fish for grayling and whitefish. After break up they moved back to the Copper River to fish for salmon.

Caribou, moose, Dall sheep, black bear, brown bear and to some extent mountain goat were important to the Ahtna. However, it is difficult to measure the relative importance of each species because the availability of animals varied from year to year and the hunter had to make the strategic choices throughout the year in order to bring his family through. Generally, Ahtna elders did not quantify their harvests but had general idea about how animals were killed in a season. Danny Ewan (2004), who now lives in Gulkana, hunted the West Fork of the Gulkana River when he was a young man. In the 1920s and 1930s several families worked together and killed 25 moose and about 50 caribou annually. Elders Katie John (n.d.) and Gene Henry (2000) said that their families harvested about 30 sheep and 2 or 3 moose annually. Etta Bell (1995), an elder from the Kenny Lake area, estimated that her family needed 14 sheep and 2 moose for the year.

### Ahtna Traditional Territory

Traditional Ahtna territory covers an area of 23,000 square miles including the entire Copper River drainage and the upper ends of the Matanuska, Talkeetna, and Susitna River drainages. Within that area are four groups corresponding to the four dialects of the Ahtna language and four geographical subregions (de Laguna and McClellan 1981:641-642; see map on page 2).

1. Lower Ahtna territory encompassed the entire Chitina River drainage and the Copper River from below Wood Canyon to about the mouth of the Tazlina River. Today this area includes the villages of Chitina, Copper Center and Tazlina.
2. Central Ahtna territory included the lake district of the Copper River lowlands westward to Lake Louise and the Gulkana and Gakona River drainages. The modern villages of Gulkana and Gakona are included in this area.
3. Western Ahtna territory included the area around Lake Louise and the drainages of the upper Susitna and Matanuska Rivers. Most Western Ahtna now live in the village of Cantwell.

4. Upper Ahtna territory included the upper Copper River, from around the mouth of the Sanford River to the upper Slana River and Tanada and Copper Lakes and the modern villages of Chistochina and Mentasta.

In the 19th century Ahtna society was organized into small bands that inhabited well-established territories over which they had special use rights.<sup>8</sup> These rights were held by common consent and could not be infringed upon without the threat of violence (Reckord 1983:78). At the same time in-laws were virtually obligated to share food so members of several bands often had access rights to a particular territory. Complete strangers, on the other hand, had to ask permission to enter a particular territory and unauthorized trespass could result in the trespasser being killed.

Band territories included several different ecological zones that offered a combination of resources that could be harvested at different seasons of the year. Salmon fishing sites were located along the Copper River, while hunting and gathering areas extended away from the river into higher elevations and were connected to the lowlands by trails that usually following tributary rivers or streams.

Sometime after 1900 band territories became family hunting and trapping territories. Ruth Johns (1993), an elder from Copper Center, said, “they used to respect each other’s territory. Nobody went into another family’s territory, unless they were invited in to hunt in that area.” Similarly Joe and Martha Goodlataw (de Laguna 1968) said, “Each village had to go different place, had own hunting territory.”

### Descriptions of Hunting Areas

#### Lower Ahtna

At the beginning of the 20th century Ahtna families living on the lower Copper River, above the mouth of the Chitina River, hunted all of the streams flowing out of the Wrangell Mountains. Walya Hobson (1995) said that a number of families hunted sheep up the Kotsina River to where

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<sup>8</sup> In 1898 Abercrombie (1900:579) provided a description of Ahtna bands living on the middle Copper River. He writes that the Tazlina group had approximately 150 people and a territory that extended westward to the Knik River and from the mouth of the Tazlina River eastward to the Gulkana and north to the mountains. Abercrombie reports the Gakona band had about 75 members, but says nothing about their territory. The Klutina band was led by Chief Stickwan and had about 35 people. Their territory extended from the mouth of the Klutina to a small creek above the mouth of the Chitina.

the Klavesna River comes in. There were no caribou in that area and only once in a while was there a moose. Etta Bell (1995) recalled that when she was young her family hunted the Chetaslina,<sup>9</sup> Cheshnina and Chichokna Rivers for black bear, moose and Dall sheep. Margret Eskilida's (1995) family lived on the east bank of the Copper River opposite the mouth of the Tonsina River. She said there were hardly any moose and only a few caribou so that people had to live off sheep meat, which they hunted on the Dadina and Nadina Rivers. Her family also hunted sheep in the vicinity of Strelna. Robert Marshall (2004) talked about his and his family's subsistence activities when he was growing up on the lower Copper River. Robert was born in the 1920s and brought up in Lower Tonsina. One of the main sheep hunting areas was along the Copper River and Northwestern Railway near Moose Lake and the Crystalline Hills.

People living at Taral hunted up Canyon Creek into the Hanagita Valley. Joe and Martha Goodlataw (1968) said that "Each village had to go different place; had own hunting ground." The Nadina River was the dividing line between Taral and Copper Center territory.

#### Central and Western Ahtna

According to Ben Neeley (n.d.), who was born around 1910, he and his family, along with the Ewans hunted up the Gulkana River and into the Tangle Lakes area. They then packed the meat to the Gulkana and floated down stream to mouth of the Gulkana. The last time he remembers doing this was 1930. After that the men began to work for wages. Later Ben's father moved the family up toward Sourdough and they hunted in that area – as far west as Ewan Lake. They hunted caribou in the fall and killed moose in the winter. They also hunted moose in August after salmon fishing. Other families from Gulkana Village went up to the West Fork of the Gulkana River. Ben said that hunting areas belonged to families and people did not trespass on other people's areas. He stressed that people did not waste food. "Take care of the people and the animals. Leave animals for next season." He said "don't kill all the muskrats in one lake. Get only males and let the females go, for the little ones coming next year.

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<sup>9</sup> Three miles up the Chetaslina there is a creek called *Ts'itazdlen Na'* or "straight current river" where the upper Copper River people's trail ascends. This trail goes between Batzulnetas and Taral around the base of Mt. Drum. The East Fork of the Chetaslina is called *Tsezuuli* or "pipe rock." The Chichokna River is called *Tsitsox Na'*. The Dadina River is called *Hwdaadi Na'* or "downriver river," and the Nadina is *Hwniidi Na'* or "upriver river."

Using dog teams limited the number of caribou you could kill. “They wouldn’t kill ten or twelve caribou. No, it was one caribou here, three, no maybe two caribou there, then move on to another place. Get another caribou. Just keep going to the end. Then they stopped to put them up, dry it for the winter.” He concluded, “they don’t know how many they killed.... No they don’t get what they want, [they get] what they can handle.”

### Upper Ahtna

Adam Sanford was born around 1900. When he was a teenager his family traveled up the Sanford River to hunt Dall sheep, caribou, and mountain squirrels. The trip took place in July, August and September (Kari 1986). As they moved they continually hunted sheep, which was their primary source of food. It is unknown how many people made the trip, but there may have been as many as 25 people. Adam and his family walked up the Sanford River (*Ts’itael Caegge* or “River That Flows Straight”). At the head of Natii Creek, which flows off the northeast side of Mt Drum from Natii Glacier, they killed sheep and stayed for three days. From there the group moved to Bear Trap Creek (*Tsaani ‘Aet Na’*), which flows off of the east side of Mt. Drum.

- After that they moved up the Sanford River to “Its Creek Is a Brown Area” (*Una’ Hwnelk’ezi Na’*). This creek was located on the north side of Mt. Drum and 2 or 3 miles from the terminus of the Sanford Glacier.
- From there they moved to End Creek (*Kaghaa Na’*), which may have flowed out of the Sanford Glacier, and
- from there into “Nest Headwaters” or *Dit’ox Tl’aa*, a creek that flows out of Mt. Sanford. According to Adam this was a very steep canyon and there were only rams on this creek.
- They then moved to *Benta Keniide*, a series of lakes located north of the middle Sanford River. They tried to hunt moose but Adam said there were very few moose around at that time – “only occasionally here and there.” There were only caribou.
- Started down river and stopped at “Creek That Has No Water” (*Una Tuu Koley Na’*). Adam comments there were lots of summer caribou (*nsiil*) there.
- From there they moved over to Sand Mountain (*Saas Dzet*) located on the south bank of Boulder Creek. They stopped there for a while to hunt ground squirrels.
- Then they moved over to the head of Boulder Creek (*Tsedghaazi Tl’aa* or “Rough Rock Creek Headquarters”) to hunt sheep.
- After that they moved into upper Drop Creek to “Ascending Trail Creek” (*Kateni Na’*) to hunt more sheep.
- At the end of the trip they returned to the Copper River and the mouth of Boulder Creek to fish for salmon. This must have been late September or early October because Adam says that the “shelf ice would appear.”

Adam Sanford also described another trip that he took, probably in the 1920s, with his uncle's family (Sanford Charley) who lived at Bazulnetas. They traveled to Tanada Lake and camped there, then moved along the eastern shore of the lake up Goat Creek to the head of Jacksina Creek.<sup>10</sup> Adam said they lived on "small sheep," which were not very good to eat. There was little game in this valley that is enclosed by mountains on both sides. Apparently they went as far as the Nabesna Glacier and then turned back and crossed into Wait Creek. Adam said that Bazulnetas people lived on sheep during the summer. But he also said that game was always scarce and "there was not much to share among the people" (Kari 1986:180).

Gene Henry (2000), who was born in 1911, provided a more detailed description of hunting on the upper Copper River. During the fall and early winter the family moved from Bazulnetas to the head of the Copper River where they lived on sheep meat. According to Gene the family killed approximately 30 sheep and a few caribou. Moose were very scarce in those days.

Long time ago, you know, my father lived Bazulnetas, down Bazulnetas village.... [F]all time we go up mountain kill sheep, dry them for winter. We might get few caribou on the side too. We get little caribou meat but isn't very much moose them years. Now moose all over. That time, no moose over there, way up there in the mountains sometime, mountain side somewhere you see moose but not too many around here, nothing no moose them days.

And, we out hunting, hunting sheep way up in the mountain, we get quite a few sheep and dry them for winter....

*Sez'aann*, he call it *Sez'aann* (hill at the head of the Copper River). That's on top there we get sheep. Pretty bad rocky mountain but we [have a] few place[s] to get up there. We get on top there, we kill sheep all the time. And the other place, on the other side. *Tsitaet* ("wide head" or Mt. 5530

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<sup>10</sup> This is the area described by Katie John for her father's (Sanford Charley) territory.

east of Tanada Lake) he call, on the other side. A creek comes down out of that mountain there, every creek we go for sheep hunting. We move around to get sheep all the time, that's the way we get game. That's my young days. I just ten, fifteen, twenty years old them days. Healthy, strong, not today.

Interviewer: How many did you kill, how many sheep would you get?

Gene: Oh, I don't know, about 30, something like that. We would dry them right in the camp there. We camp out, make *dzazes*, *daxi c'ezax* (?). We would dry the meat. That's the way we used to do it. Even when we get caribou meat, we get fat caribou sometimes over there.

Interviewer: Did your whole family go when you went sheep hunting?

Gene: Oh, yeah we all go out sheep hunting but, family stay in the camp but me and old man go out get game, me and my father go out. My brother is too small them days, but he goes out to get meat with us though. He does a lot of different work.

She [his mother] was cutting meat, drying, old lady working on cutting meat, everything. Making them sheepskin, *c'eggan* you know, tan. He using them sheep skin for mattress. He drying them sheepskin for mattress, dry up them, and we got lots of them in the wintertime, we're making mattress out of sheep, old fur skin. Sheep skin, caribou skin, young [caribou] calf, we make parka out, we make moccasin out of them moose hide, caribou skin, stuff like that, old people, our old people know how to do it.

Interviewer: When they were hunting, would they kill the rams and the ewes? Did they kill all the sheep or just certain ones?

Gene: We get all the sheep we want, mostly we get them big rams. We kill little ones too sometimes, if we get into [them], not too many though, we go after big ram all the time, big ram sheep. Big ram has got lots of meat on, fat. We kill little one once in a while too.

Interviewer: What do you do with the horns?

Gene: We throw away, we don't use horns in them days. Old people bring horn so they make spoon out of. Old people make spoon out of. My dad make lots of spoon out of them horns.

Interviewer: Did you go towards Mount Sanford?

Gene: Yeah, up in the mountain, way up there, way up headed toward the mountain Sanford. Little creek up there he called (Ahtna) that creek come down to Copper River, way down there. About 2 or 3 miles from Batzulnetas. Right across, we break trail at that creek there. It's our hunting ground for wintertime. We kill caribou up there, head of that river. That's the way we used to live, get a little game for winter. Get a little meat once in awhile. We live on game but we take care of them.

### **Hunting Technologies**

The Ahtna developed efficient methods to harvest large amounts of game with minimal effort. Before firearms became prevalent most game animals were harvested with snares and dispatched with bows and arrows, spears or knives, and then firearms. Sheep were snared. According to Wilson Justin (2005) sheep snares were small but strong and set on a frequently used trail. Wilson said that he was told that sheep always step in the same place so you laid the snare down on a trail or passage and then blocked it at the end, so you had the sheep in a file. Once the sheep were snared you could dispatch them with a knife or spear.

Caribou were driven into corrals constructed at the end of long “drift” fences used to guide the animals toward the opening of the corral. Snares were placed within the corral. As the animals milled around the corral they became entangled in the snare and could then be easily dispatched with a spear, knife or bow and arrow. According to elder Tenas Charlie (de Laguna 1968) corrals were hidden behind a hill, or out of sight. As the caribou move towards the corral people moved in behind the caribou to drive them toward the corral. The animals were killed with arrows. In some places, such as Paxson Lake, Tanada Lake or Tazlina Lake, caribou were stampeded into the water and speared from canoes. In the Ahtna language the word *silnidaek* means to kill caribou from a canoe with a spear.

Moose, on the other hand, were caught either in individual snares set across a trail or in snares set in long, linear game fences. A moose fence might be 2 or more miles long. Robert Marshall (2004) told about snaring moose when he was a young boy. His father could not see very well so they set snares for moose. This was on the east bank of the Copper River near the old village of Liverstack. When a bull moose is caught it will not jerk and run, but just stand there. Robert said that when the moose saw us he moved backwards and my dad walked up and shot him. More often they caught cow moose, which were usually caught around the neck. Snares were set where moose came down to the creek. A half-inch rope was anchored to a tree and the loop of the snare placed right on the trail. Moose were also hunted during the winter using snowshoes. According to Ahtna elders, a man who was good on snowshoes could run down a moose in three or four hours (de Laguna 1968).

Robert Marshall (2004) reported several techniques for killing bears. Hunters killed bears with spears by teasing them so the bear got angry. “Keep teasing it and pretty soon the bear will stand up and you move into it, but you have to wait until the bear is down, you cannot stab bear when he is standing up, stick the spear in the neck. The bear will charge and you jab in the neck.” Another way to kill a black bear is with a set of snares. Bait the black bear by placing bait inside a corral made of brush and then set snares on each side of the corral. Robert said with this technique you would always get a black bear.

Besides developing efficient technologies, Ahtna hunters studied and managed the landscape and learned the habits of animals. According to Katie John (2004) her father regularly burned the old dried out vegetation in order to encourage new growth that animals could feed on. Burning was conducted near lakes to encourage new food for muskrats, at the base of mountains where sheep congregated in the winter and on the sides of hills were moose congregated.

My daddy used to take care of his animal out there for the eat. Those mound, burn those open place. He burn those open place – near creek burn everything up and new grass and new leaf coming, make in good shape animal. Then muskrat – when hunt muskrat – over burn everything by the lake – all new one come back up. That’s way they keep animal fat. Now start forest fire. Even blueberries grow more than before, really big too, new leaf. That’s the way they used to do, burn everything – that’s the way they keep moose fat and caribou.

Sheep stay up high – burn down the bottom were they coming down to eat. Father used to burn up the creeks in the mountains – winter time moose go there – open place – and brush grow there better – burn there and next year all new stuff coming out. Tetlin – big burn – more moose now – fresh food. But old brush no good for them. Any place forest fire good place to eat.

In her comments Katie noted that her father could burn brush without having to worry about setting off a huge forest fire.

You know Alaska, long time ago never see forest fires – water under the ground. Dig those moss – get it out big one, I use to know just wet. No forest fire long time ago. But all those things was change, now coming dry.

Besides creating fresh habitat for animals hunters also studied the habits of animals and carefully chose their timing of the hunt. Virginia Pete (2004) described how her father hunted moose by waiting for a south wind. She explained that when it was very cold sound carried for miles

making it difficult to track moose because they could hear you coming. In mild weather, sound did not carry as far and it was easier to follow a moose. She also pointed out that when it snowed in the mountains moose moved down into the valleys. Virginia said:

Go into woods and look for track – now moose come into the village – used to have to go into the woods – move out. South wind blowing he would follow the moose – find a track and follow it. Track the moose down. Moose lay down in the afternoon– fresh track look for – no fresh track and old track, this morning track they know, touch the snow with their finger and they know it's fresh and used to follow it. Track it. Never make no noise, really careful, just sneak up on to it and they kill that moose.

### **Spiritual Dimensions**

But successful hunting is not simply a matter of skill or technology. Ahtna hunters paid particular attention to ritual observances that were thought to be equally essential for hunting success. According to Frank Stickwan, all meat had bad luck with it. He said that if you handle meat right and don't throw it away the animal knows. You will be lucky with meat. Those who have good luck, handle it right. If you don't handle it right, the animals themselves know, and you will get bad luck (de Laguna 1960).

In Ahtna culture, animals are not understood to act upon instinct but considered sentient beings who act on their own volition, in other words in accordance with their own values and choices. For this reason all animals were considered powerful, dangerous beings that could cause sickness, which in the Ahtna language is referred to as *c'uniis*, or literally 'it takes something' (Kari 1990:308). This sickness came from mishandling animals after they were harvested. The animals that can cause this disease include moose, brown bear, black bear, wolverine, lynx, and the other furbearers. Children were considered especially vulnerable to this sickness. To avoid being contaminated and to placate the spirit of the dead animal Ahtna hunters followed a myriad of rules. For example, hunters never spoke of going out to kill game but referred to animals indirectly so as not to offend them. This was particularly true of such dangerous animals as brown bear. The remains of some animals were considered too powerful to bring into the house

because they were too dangerous for small children to come into contact with. To protect children from *c'uniis* elder Martha Jackson said that a successful hunter never said, "I have killed a moose." Instead he would tell his wife to "paint the baby's face" and once she had painted with baby's face with black paint she could ask if he killed a moose. According to Martha it is *engii* or bad luck to say you have killed a moose until you have protected the baby by painting its face (de Laguna 1968).

Annie Ewan (de Laguna 1968) said that you have to clean up the moose kill, cannot throw anything away. I interpret that literally but it also means one cannot be careless. Annie said that when a moose is killed it does not know it's dead until three days have passed. Moose have a spirit.

I asked Virginia Pete what kinds of rules there were for hunting moose:

Oh *engii* stuff? Woman never use to work on moose, when man get moose, young girls only man's take care of that stuff, all the animals. When you get to 60 womans they work on that. Used to call it *engii* for bad luck. *Engii* word is really particular. You cannot do nothing, cannot walk over across anything.

Interviewer: Woman can work on fish though?

Virginia: But not when they have their period. Young girls not allowed in fish camp, where you have wheel. I just think right now, the way it was young girls never go down to fish wheel when you have your period. You cannot touch fish. Cause if you let them do that where that wheel is, they [the fish] just move out, and next year just nothing. That's why they never let them girls, fish don't like that I guess. That's what I understand. On trap line, trapping time too, no kids. You have those animals in here like fox. My dad he used to put fox, hang it up on tree until it get all, just put it out there, and when they ready to come back down before Christmas he

brings it in and us kids cannot make no noise. If they do they kicked out. That's *engii* part too. We cannot play.

You know why they say that? They say when you set trap out there those animals they come and they can hear that, they can hear us. That's what my dad used to say. They listen to that and they take off. My dad used to tell me that. That's *engii*, cannot say anything, no noise. That's a lot of things, we should have workshop for that. My girls I tell that that and they laugh. Last time my dad got moose [at] 3 mile. That was his last moose, 1986. And we, just me and Markel was with them. My mom said we got to get help, we cannot move this big thing. My dad said tell your son-in-law to come up but don't tell them girls to come up. You think they would listen? Don't tell them to come up here, it's *engii!* Got moose in September, sure enough all them kids came up and my dad said stay over there. We back it to the road. That was the last time my dad discipline us with *engii*. Him and my mom got moose. Fresh moose, woman never touch, after three days it's okay.

Although restrictions on women hunting have almost disappeared some younger people still consider it bad luck to take a woman hunting. Joeneal (Hicks 2004) said that it is all right to take a woman hunting but not if they are having their period, that, he said, is "forbidden." He explained there is the problem with smell, of "different chemicals." He also said that being in camp required a certain amount of discipline.

If that's the way you are, don't go because it supposedly makes bad luck and animals and all that can smell you. And the other part of it is that if you are a woman out there in camp you are really expected to be a housewife. They look up to you to be a cook and feed the people. Its still the same way, times have changed but it is really important if you have your period, not to go. Some people ignore that. I took a woman who was in menstrual cycle and had very, very bad luck, didn't get nothing. Being in camp have to be quiet, not make any unnecessary noise, need some sort

of discipline at all times. If you take a woman out to camp it will come back on you, get bad luck.

Humans and animals exist in a reciprocal relationship in which animals give themselves freely to human beings in order that humans may survive. But the animal's sacrifice is contingent on their being treated with deference, which included approaching an animal in a respectful frame of mind when hunting, as well as taking care of the animal's remains in a courteous manner once it had been killed. In the Ahtna view life is cyclical and it is incumbent on human beings to treat animals with respect so that the animals may be reborn to be harvested again. Ahtna elders have repeatedly made the point that there is a direct link between the hunting practices of human beings, the survival of humans, and the sustainability of animal populations. Elder Pete Ewan put it this way,

[i]f we don't treat the animal right that's been taught to us, we will not get so easy animals.... if you don't treat animal, anything right, the fishing, you will never get fish [or caribou] no more.... (Ahtna Inc. 1988:3)

### **The Processing, Preparing and Sharing of Meat**

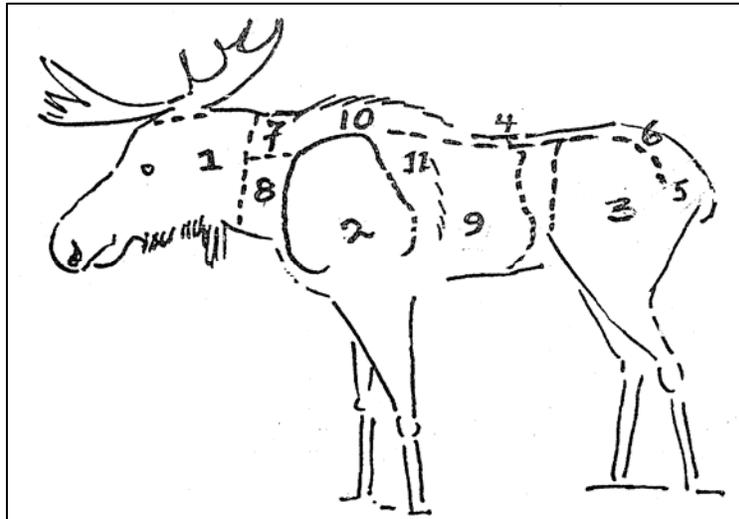
Pete Ewan's stricture to "treat the animal right" includes meticulously preparing the animal's remains after it has been killed. According to elder Annie Ewan (de Laguna 1968) it is imperative that a hunter clean up the moose kill and not throw anything away. After a moose is killed it does not know it is dead until three days have passed, and during that time the moose is aware of how its remains are handled.

The dotted lines in the diagram below (see Figure 3) follow the pencil lines made by elder Annie Ewan in butchering a moose. The numbers refer to stages of flensing (de Laguna 1968).

To butcher a head, first cut off the horns then remove all of the meat and the eyes. Split the tongue and hang it up with the eyes. Remove both sides of the jaw and put them on the fire to cook. Marrow is removed from the jawbones and placed in a lard can that is set to cool. The

marrow is eaten when you are having tea. The meat from head, along with the nose can be cut up and made into soup.

Figure 3. Stages of flensing a moose



Source: de Laguna 1968.

Additional details for processing moose were obtained from Virginia Pete (2004).

When they get that moose clean out all of the stomach part first and lay in skin for a couple of hours so meat tender and good and juicy. That's the way they used to provide all the meat. Then after a couple of hours they would cut it up. All the parts and the skin and all they used to bring it home. Bring it back to the family and provide all the food. Never waste nothing. They just clean out every thing, stomach part, head. I heard along time ago used to eat moose foot. Used to burn in the fire, I don't know how they did it. I used to hear old people talk.

Robert Marshall (2004) said that meat was boned and then smoked. When they got enough meat they packed up the dog packs and relayed the meat down the trail, moving from one relay spot to another. They had high drying racks at different locations that they used every year. The entire family, women, children, 20 or 30 dogs with packsacks, walked in a line. The dogs were trained to follow in line and each dog had a name. They walked all day. "Big dogs, heavy packing dogs." The animal bones were cooked while in camp. The heavy stuff – bones, hooves and head

– was eaten in camp. It was hard work, but that is all they did those days. The boys were glad to go hunting, to get away from fishing.

Today moose head soup is almost always served at potlatches. Meat from both caribou and moose was eaten fresh; however, most meat was dried and later boiled and made into soup. Virtually everything was used: skins, sinew, innards, head, marrow, bones, and hooves. In the winter caribou were gutted and placed under the snow, to be butchered later. Leaving the animals for a few days made them tender. In March bull caribou are getting fat so people tried to kill a bull at that time. As rule they did not kill cow caribou unless they were starving. Frank Stickwan said that cow moose with calves were not killed but “protected.”

Food was considered to belong to the individual who acquired it, but it was always freely distributed. In fact, the sharing of food was, and continues to be, a mark of good training and to get or maintain a good name a person has to be unfailingly generous with it. Historically, prominent *denae* or chiefs were known for their generosity. Elder Bell Joe (n.d.) said that they took care of a lot of people by providing them with food and giving people “something to eat all the time.” Those who had nothing to eat knew that they could count on the *denae* if they needed food. The distribution of food was an integral part of traditional Ahtna culture and took place both informally and formally. In the latter case large quantities of moose, caribou and sheep meat were given away at potlatches, and the larger the quantities of meat distributed, the more successful the potlatch. In more recent times meat is always shared informally first with elders and then with households throughout the community. Wild meat is also served at every potlatch.

## Summary

Information on the historical distribution and abundance of caribou, Dall sheep and moose within the Copper River Basin has been presented from three sources: first, a limited amount of archaeological evidence; second, written evidence from explorers, miners, and travelers; and third, oral testimony from Ahtna elders who were born around the beginning of the 20th century as well as from younger Ahtna who were born after World War II.

Archaeological and written evidence indicate that the Ahtna relied heavily on caribou, to the point that if the caribou did not appear the Ahtna starved. More than likely it was the spring migration of caribou that was most important because during the fall there would have been stores of dried salmon and sheep meat available. Locations of caribou fences and oral testimony from Robert Marshall also suggest that caribou migration patterns have changed over time. There is some indication that mining activity early in the 20th century had an effect on caribou populations in the vicinity of the mines but populations on the north side of Wrangell Mountains seemed to have rebounded by 1929. McKennan reported seeing as many as 2,000 animals at one time on the upper Nabesna River, though whether these were barren ground caribou or woodland/mountain caribou from the Mentasta/Chisana herd is uncertain.

Wilson Justin is skeptical that there were ever large numbers of caribou in the Copper Basin, in large part because the elders do not mention large numbers. However, note that Virginia Pete remarks on seeing “thousands” of caribou cross Crosswind Lake in the winter. According to Calvin and Wilson Justin caribou browse in Tanada Lake area has diminished in the last 20 years. The mountain or woodland caribou found in the upper Copper River have considerable significance to the upper Ahtna – both as a resource and for symbolic reasons.

Sources agree that moose were not abundant in the Copper Basin until relatively recently, but they were present. Wilson Justin speculated that moose might have come back into the area during the early 19th century at the same time that Indian populations were on the increase and that the decline in moose at the end of the 19th century was due to over hunting. Note that Walya Hobson makes a similar statement, in order to survive people sometimes over exploited game populations but that eventually the animals returned. Another factor to consider is the fires set by miners or prospectors that would have improved moose browse. Discussion in this report of the use of fire by the Ahtna is limited, but several elders have described spring burning to improve habitat for moose.

Today moose are the most important subsistence resource for Ahtna villages because they are relatively abundant and much easier to hunt than Dall sheep. In addition moose provide much more meat than either caribou or sheep. While moose are more abundant now, there is concern

that moose populations are declining. That, coupled with increased competition from non-locals, is making it harder to kill moose.

For the Ahtna living in the lower and upper Copper River sheep were an important resource that was harvested in the late summer and fall. In the recollection of many elders sheep were almost more important than any other resources except salmon. I think this was true for three reasons: there were few moose, caribou are highly seasonal, and there was a large population of sheep except around the mines, i.e. Chisana, Nabesna, and Kennecott. Today most of those interviewed think that sheep populations have declined, while Calvin and Wilson think that the remaining sheep have moved further back to areas that cannot support large sheep populations.

**Appendix A:**  
**Historical Background: Events That Have Shaped Large  
Land Mammal Hunting in the Copper Basin**

Beginning with the gold rush of 1898 a series of events had a profound effect on the large animals in the Copper Basin generally and Wrangell-St. Elias National Park especially.

Exploration and Mining

U.S. Geological Survey geologist Stephen R. Capps (1916) visited the upper Chisana/Nabesna area two different times – in 1908 before the Chisana gold rush and in 1913 while the rush was on. Capps wrote that the whole area is “exceptional for the abundance and variety of game....” Dall sheep “were formerly plentiful in all areas of rugged topography and are still abundant except in the vicinity of the mines. It is estimated that 2,000 sheep were killed within a distance of 20 miles of the placer camps during the winter of 1913-14, and in that area they have been almost completely exterminated. In the more remote valleys, however, large bands of sheep may still be seen.” Capps goes on to say that caribou are numerous in the less rugged areas of the Beaver and White Rivers but “constant hunting has much reduced their numbers.” Moose were said to be “abundant” on the north side of the Nutzotin Mountains and are seen occasionally in other parts of the area. Capps noted that the miners trapped for fox, lynx and marten and that rabbit and ptarmigan were unusually numerous the last few years. He speculates that the early prospectors lived on a diet of ptarmigan and rabbit during the summer of 1913. Note that Capps estimated the aboriginal population in 1908 as between 45 and 50 people, and the only settlement he knew about was at Cross Creek opposite the mouth of Notch Creek.

Trapping

In the 1920s trapping became an important source of income for many Ahtna. Rather than remain in their winter villages located close to the Copper River many Ahtna families spent the winter and spring on trap lines. In the early 1920s there were few restrictions on the harvest of big game. Caribou and moose were killed any time of the year, but caribou were taken mainly in the winter months while moose were killed in the fall, as it was getting colder.

### Game Laws

Game laws that had been on the books since the 1920s started to be enforced in 1927, limiting the amount of game people could harvest. The enforcement of game laws “unsettled” people (Reckord 1983:69). Ahtna elder Ben Neeley relates a story about his father getting arrested for shooting a moose when his wife (Ben’s mom) was ill with T.B.

After 1930 fur prices declined and trapping became less profitable. As a result some Ahtna took jobs that required them to stay close to home rather than spend extended periods trapping and hunting.

### Working for Wages

During World War II the economy of the Copper Basin grew and construction of new highways in the post-war years made access to the basin easier. Many Ahtna took jobs with the Alaska Road Commission or the Federal Aviation Administration (Reckord 1983:71).

Following World War II many Ahtna people continued to work rather than return to trapping, although people continued to hunt and fish. During the 1950s, game laws were more strictly enforced. Many Ahtna elders remember that the enforcement of game laws made it much more difficult to hunt in the traditional manner. At the same time government agents put great pressure on the Ahtna to keep their children in school. Ahtna who took their children on trap lines were threatened with prosecution for keeping them out of school (Reckord 1983:73).

In the 1950s areas along the Richardson and Glenn highways became the most accessible places in the Alaska interior and more and more non-Natives settled in the Copper Basin (Reckord 1983:73). Between 1950 and 1960 the population of the Copper Basin more than doubled from 808 to 2,193 (Simeone and Fall 2003). At the same time residents from Anchorage and Fairbanks started to hunt in the region. Ahtna elders remembered that during the 1950s many caribou were shot and left along the road (Stanek 1981:21-22). Ben Neeley said that he began to road hunt in the 1950s and Oscar and Bella Ewan said that in the late 1960s, by the beginning of the hunting season the roads were thick with cars during the weekend. People worked during the week and did not have a chance to hunt.

In May of 1975 the first segments of the Trans Alaska Pipeline were laid at Tonsina River. The employment generated by extraction of oil on the North Slope swelled the population of the state and the Copper Basin. Between 1970 and 1980 the population of Alaska increased by almost 33 percent, while the population of the basin increased by almost 47 percent (Simeone and Fall 2003). The cash income and jobs brought by the pipeline construction, along with more stringent game regulations developed to deal with the increased human population, have had an effect on traditional hunting patterns.

### Big Game Guiding

Wilson Justin (2004) views guiding was a natural outgrowth of market hunting, which had created a group of expert hunters. He said that the development of the guiding industry in the 1930s created a need for trails-men, guides, woodsmen and weather readers, and local Indians naturally fit into the industry. They adapted to guiding as measure of skill and a way to provide for the family. Up until the 1960s guides hunted through the country, they moved every day and stayed out for long periods, 30 or more days. In the 1960s hunts were shortened to around 20 days. The guides created base camps at high altitude and hunted a particular area. Then in the mid-1960s airplanes were introduced and clients could go out for the day. Wilson Justin and his family continued to use horses, and hunted for days at a time, relying on skill to track and find animals. Wilson said he was brought up on stories about guiding, learned the skills from his family and started guiding when he was 17 years old. This was a way of life that lasted about 50 years.

## **Appendix B:**

### **Caribou Regulatory History**

Key features of the regulations governing hunting of the Nelchina caribou herd from 1946 through 2004 include the following:

- From 1946 until 1971, there were fall and winter hunting seasons.
- As the herd grew beginning in the early 1950s, annual limits increased from one to three caribou, and reached four caribou in the 1964-65 season. State regulations have not allowed the taking of more than one animal since 1972.
- Participation in the Nelchina caribou hunt has been controlled and limited by permits since 1977, after the precipitous decline in herd size in the early 1970s.
- The Alaska Board of Game has provided a subsistence hunting opportunity for Nelchina caribou since 1981.
- Prior to the 1989 *McDowell* decision, participation in subsistence hunting was limited to residents of qualified rural communities. Other Alaskans obtained permits through a drawing permit system.
- Since *McDowell*, most state hunting opportunity for Nelchina caribou has been regulated through a Tier II hunt, whereby individuals are scored based on the factors set out in AS 16.05.258 (b)(4)(B).
- There have been federal subsistence regulations for Nelchina caribou since 1990. Participation in the federal hunt is by registration permit and is limited to rural residents of communities of particular areas with customary and traditional uses recognized by the Federal Subsistence Board.

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