

TUTTUT TUMAI
(Inupiaq)

BEDZEYH TENE
(Koyukon Athabaskan)

TUNTUT TUMAIT
(Yup'ik)

CARIBOU TRAILS

Marci Johnson, NPS

ISSUE 9 FALL 2008

NEWS FROM THE WESTERN ARCTIC CARIBOU HERD WORKING GROUP

YOUR 2008-2009 CARIBOU WORKING GROUP REPRESENTATIVES:

**WAINWRIGHT, ATQASUK
& BARROW**
Enoch Oktolik, Wainwright

POINT HOPE & POINT LAY
Teddy Frankson, Pt. Hope

NUIQSUT & ANAKTUVUK
Isaac Kaigelak, Nuiqsut

NOATAK & KIVALINA
Raymond Hawley, Kivalina

KOTZEBUE
Attamuk Shiedt, Sr., Kotzebue

LOWER KOBUK RIVER
Raymond Stoney, Kiana

UPPER KOBUK RIVER
Sally Custer, Shungnak

KOYUKUK RIVER
Pollock Simon, Sr., Allakaket

MIDDLE YUKON RIVER
Benedict Jones, Koyukuk

**BUCKLAND, DEERING
& SELAWIK**
Ron Moto, Deering

**NORTHERN SEWARD
PENINSULA**
Elmer Seetot, Brevig Mission

NOME
Roy Ashenfelter, Nome

**ELIM, GOLOVIN,
WHITE MTN.**
Charles Saccheus, Elim

SOUTHERN NORTON SOUND
Frank Kavairlook, Koyuk

REINDEER HERDERS ASSN.
Tom Gray, Nome

CONSERVATIONISTS
John Schoen
Audubon Alaska, Anchorage

HUNTING GUIDES
Phil Driver, Anchorage

TRANSPORTERS
Eric Sieh, Kotzebue

**ANCHORAGE
ADVISORY COMMITTEE**
Don Frederick, Anchorage

FAIRBANKS HUNTERS
Patrick Valkenburg, Fairbanks

TIMES ARE CHANGING

Caribou are facing change in many forms. Global warming brings with it increasing wildfires, decreasing lichens, expanding shrubs, melting permafrost, and other unknowns. Industrial oil, gas and mineral development brings with it site construction, roads, pipelines, power lines, potential spills and contamination. The warming climate is also causing a retreat of sea ice, which will open the Arctic to an even greater expansion of resource exploration and development. These are all changes that may potentially impact the Western Arctic Caribou Herd, and any change that affects caribou also affects caribou hunters and all who value caribou.

PROTECTING CARIBOU FOR THE FUTURE

The Caribou Working Group includes subsistence hunters living within the range of the Western Arctic Caribou Herd, other Alaskan hunters, reindeer herders, hunting guides, transporters, and conservationists. The group meets as a whole once or twice a year, with additional sub-committees meeting throughout the year as specific needs arise.

At each general meeting biologists report on the current health and population status of the herd, the condition of their range, and biological factors affecting the herd. Invited specialists present information on a variety of topics that may impact the herd, such as Arctic warming, statewide transportation proposals, and public land use planning processes. Elders also address the group, sharing some of the hardships endured by caribou hunters in the past, and the deep knowledge that has been passed down for generations, as well as reminding the group of the importance of protecting caribou for the future.

The group identifies and researches specific concerns, and advocates for precautions and actions that will benefit the herd. This may include a request for additional habitat studies, or additional protections from the impacts of development. The group provides public information through Caribou Trails and other efforts, and members are always eager to receive comments from the public.

WHAT YOU CAN DO

Being a good hunter is no longer just about bringing home meat. It also means involving yourself in issues surrounding the future of the Western Arctic Caribou Herd. While this is the state's biggest herd, its size can decline dramatically, for reasons not well understood. We need to try to understand how a warming climate and increasing industrial development may affect the herd—and make sure our calls for protection are heard. Experienced hunters need to teach young hunters both the traditional—and the legal—way to hunt. These are especially challenging times for caribou, and we all need to be involved and active caretakers of this precious resource.

THE MISSION OF THE CARIBOU WORKING GROUP

“To work together to ensure the long term conservation of the Western Arctic Caribou Herd and the ecosystem on which it depends, and to maintain traditional and other uses for the benefit of all people now and in the future.”



Western Arctic Caribou Herd
Working Group
P. O. Box 175
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DANIEL & MILDRED FOSTER, SELAWIK ELDERS

Daniel & Mildred Foster of Selawik were invited to the December 2007 Caribou Working Group Meeting in Anchorage to share their lifelong knowledge about caribou.

(Left) Daniel and Mildred inspiring the next generation!



It was 1942 when Daniel was born in a muskrat camp 18 miles from Selawik. He enjoys telling folks how he was hunting muskrat when he was just two weeks old...in his mother's backpack!

Daniel was only seven years old when his cousin left the village, and he took over the care of his cousin's seven dogs. They had no stove oil or running water back then, and he used the dogs daily to gather and haul wood and water. **"If you go out in the woods every day you soon learn to keep your axe sharp!"**

Just one year later Daniel was eager to hunt with the men. His mother said he was too young to go out in country, but the hunters invited him and said they'd take care of him. Daniel's father was away working, so he loaded his mother up with wood before he left. **"I was scared leaving the village that time—it was my first time ever away from home."**

On that first trip they had to camp four nights before reaching caribou, and that's when it became hard for him to keep up with the hunters. **"Once the hunters' dogs found caribou, they smelled it and took off. I couldn't keep up. By the time I caught up with them the caribou had already been killed. If you want to train your dogs to keep up with caribou hunters, you need to wound a caribou and let the dogs catch up with it, and then let your dogs eat it. Then they will know in the future."**

Next day he started hunting with his dog team. The men sent one dog team to chase the caribou toward the hunters. **"Finally my dogs 'caught-on' and wanted to catch the caribou. The dogs wouldn't let me shoot because they wanted the caribou for themselves!"** The 30/30 was too heavy a gun for him, so another cousin showed him how to hunt. He also taught Daniel how to butcher caribou, what to keep for dog food, and what to take home.

Back then, Daniel explained, people hunted in wintertime. **"Thanksgiving and Christmas we always had the best pot of soup!"** Now he says they hunt caribou in fall time, and that the caribou don't follow the same route that they used to.

Daniel also remembers that, **"Caribou those days were really big caribou. You couldn't lift a big bull by yourself. They're not that big nowadays. Even so, we can't go without caribou. Sometimes I don't have updated license,"** he said, pointing to his belly, **"but when I get hungry, I know where to go to find food!"**

Mildred explained the importance of subsistence to the many people present. **"Anything we caught was treasured because that is what we would eat."** Long ago they always put fish away, but the only meat they knew was caribou. **"Our grocery store didn't have any meat, just the canned stuff, so we weren't used to eating any other meat. Even when we got older and would eat in the restaurants, after four or five days we'd want to go home and eat caribou. Goulash, fried, burgers, stews, meatloaf—you can make anything with caribou."**

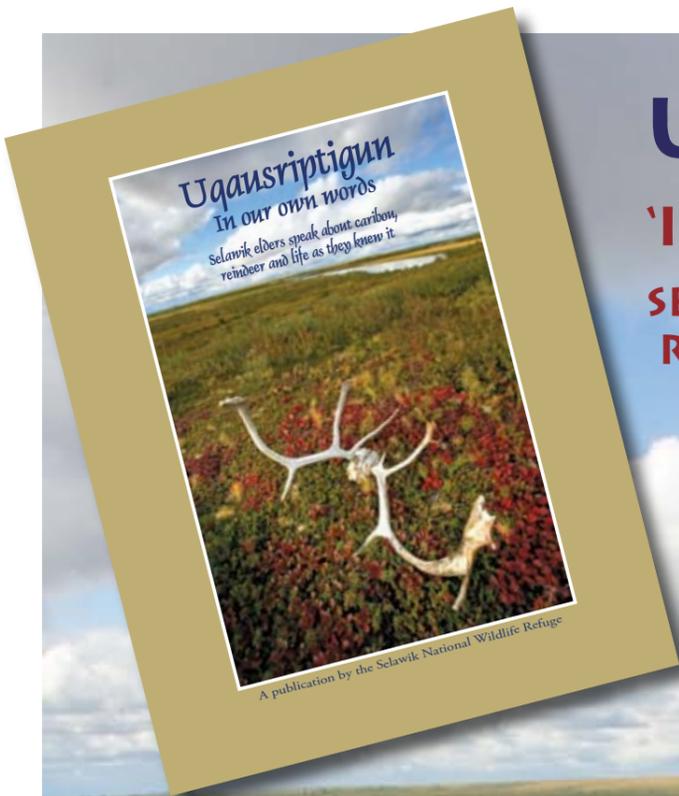
Mildred shared her personal observation and concern that caribou are no longer as plentiful in the Selawik area. **"Nowadays we need to let our kids know about eating caribou, but there is hardly any meat. We used to fill our freezers, but not this year. Groceries are really expensive. We can't afford to buy food from the stores—and we're not used to it anyway."**

Caribou has many other uses besides being excellent eating. **"We use a lot of caribou parts for our fishing. The shoulder blade is used for scaling fish. The antler tips were used to make punchers to string fish, and we saved the wide part of the antler for sinkers for the net in summer time. We also make ulu and knife handles with the antlers. Women use leggings for mukluks, mittens, use the skin for mukluk laces, yo-yos, dolls, masks, or doll clothing. I'm really going to miss having the caribou..."**

Mildred described some of the changes occurring on the land, many of which are related to the warming climate. **"We see more and more grizzlies close by the village, even when there aren't many caribou or blueberries in the area. Now there is really hot, dry weather in summertime. The tundra is brittle now. Where there were sloughs it's are now dry. The ponds—also dry. There is a bridge across the village and the ground around one of the bridge supports is falling and becoming undermined."**

Mildred thanked the group for inviting her and to listening to her concerns. **"We don't know how to go back to the way it was. It is good to know that people here are concerned about trying to help."**





UQAUSRIPTIGUN

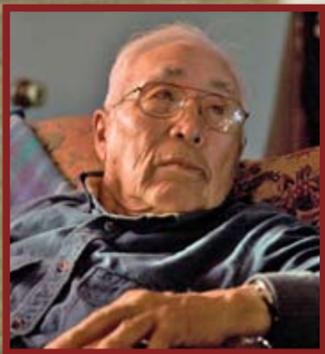
'IN OUR OWN WORDS'

SELAWIK ELDERS SPEAK ABOUT CARIBOU, REINDEER, AND LIFE AS THEY KNEW IT

Hannah Loon's interviews with Selawik elders are now a booklet produced by the Selawik National Wildlife Refuge.

Topics include how caribou were hunted long-ago, traditional hunting 'laws' and practices, reindeer herding in the Selawik area, changes in caribou, and much more!

Here is a sample of interviews and photos from the booklet.



Ralph Auyataḡaq Ramoth, Sr.

"You must let the first caribou go by. Let the first bunch go by and the rest of them will follow. For example, if the caribou start coming down those hills right there, and if I go out and hunt them right now, I could re-route them away."

"This is what you call subsistence. It's not a sport. Subsistence is what you need at home."

Laura Iguaqpak Smith

"Before caribou came to Selawik, the people walked and backpacked over to the Noatak River, to the headwaters. They would leave early in the fall while the caribou hides were thin and could be used for clothing. The hunters also took dogs to help pack."

"Any of their catch left behind they stored. None was wasted."



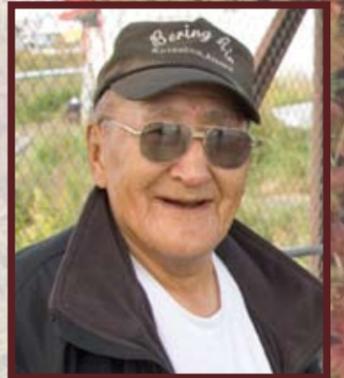
Delbert Qigḡak Mitchell, Sr.

"At that time in Selawik the people trapped in winter and hunted muskrats in spring. I followed and learned about these from my father while I was a young boy. People also gathered wood, grass, and ducks—the whole works. In winter it was the only way—to hunt and to gather wood."

Johnny Mikiana Norton

"Sometimes one would not take any caribou home. Most of the time one could take a sled load home. They would harvest about four or five caribou. You have to use somebody to go move the herd, and someone else to hide while the other person drives them to them. The people hiding would shoot them. That was how they hunted a long time ago."

"The elders worked together in the past. Together they worked as a team. Today it is first come, first served."



Eva Kitik Henry

"They traveled by dog team to search for caribou, and had eight dogs or so in a team. They would be gone for a long time sometimes—one week, two weeks, one month and longer. They would leave their children and their homes during this time."

Daniel Sipahk Foster, Sr.

"That is what I would like to pass on. Even the ducks when they are skinny, we don't shoot at them just for sport or to let them fall. There is a season for them that we like, and so we wait until then. This is what we advise our young people. You don't play with any of the animals. You don't kill them and leave them. You must get only what you need. Taikuu."



To request a copy of the booklet, or for ideas on how to do a similar project in your community, contact:

Susan Georgette, Selawik National Wildlife Refuge
907-442-3799 or 1-800-492-8848
Susan_Georgette@fws.gov

DONALD SMITH, KIANA ELDER

Invited Guest Elder at the May 2007
Caribou Working Group Meeting in Kotzebue,
Donald Smith shared stories of caribou hunting in
earlier times.

(Right) A rare
picture of Donald
resting, who still
chops his own wood
and hunts caribou.

Photos by
Thomas Q. Sabo

(Below) Donald
seining in 2007.



Donald as a young man.

The room full of subsistence hunters, big game guides, conservationists, reindeer herders and government representatives was hushed as Donald Smith, an elder from the Kobuk River valley described the many changes he has seen in his lifetime.

The group heard how hunters would travel 60-70 miles in search of caribou, and that both they and their dogs carried backpacks on the journey. Donald also spoke about how Natives managed wildlife on their own. **“Thirty or forty years ago Eskimo controlled their caribou—just like farmers. If you over hunt one year then you won’t get as much next year.”**

He also described how clothing has changed. **“We used caribou skins for mukluks, parkees, and sleeping bags before Cabelas came along. Nowadays lots of businesses make clothes to keep people warm so we don’t need to do this anymore. Used to be if you put your mukluks too close to stove burner they would get charred. Now you can buy winter boots.”**

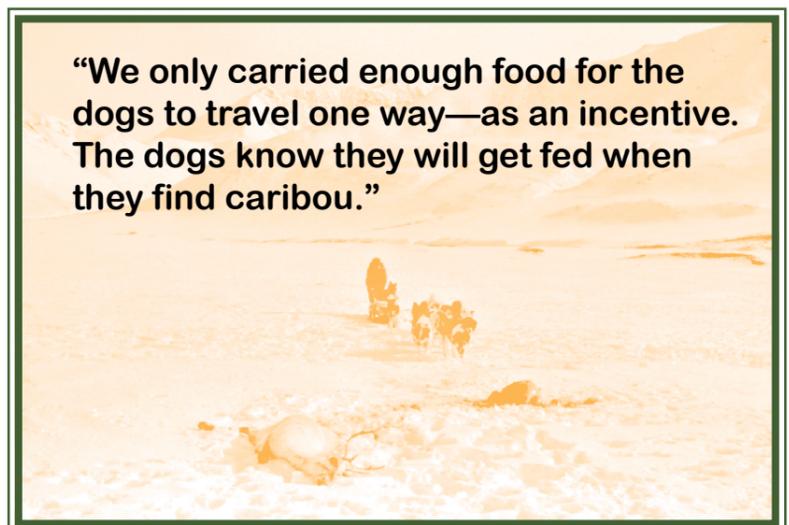
“We had names in our own language for all the hills and creeks that were different from what was printed on the government maps.”



Donald explained to the group that he had only gone to school through the 4th grade, and found adjusting to western ways and laws especially challenging - but he was an expert in his own country. He never needed maps to get around the Kiana area because he knew the country so well. **“We had names in our own language for all the hills and creeks that were different from what was printed on the government maps.”** When Donald entered the Army in 1942, he learned how to use a map in strange country. Something he had never had to do before.

Donald recalled that long ago they saw only a few caribou in Ambler, but that now the caribou go much farther south. He noted that they make many trails over time because their hooves cut a ditch in the tundra which eventually caves in and creates a creek.

“We only carried enough food for the dogs to travel one way—as an incentive. The dogs know they will get fed when they find caribou.”



Hunters traveled by dog team in winter when Donald was a young man. He recalled how they would drive their teams all the way to Noatak, not knowing for sure whether caribou would be there or not. **“We only carried enough food for the dogs to travel one way—as an incentive. The dogs know they will get fed when they find caribou. If we were lucky, we found caribou. Otherwise it was a tough time coming back. But dogs are tough—they go when they are needed. Hard to go now with gas—can’t go far on 5 gallons of gas. A snowmachine will stop without fuel—without fuel dogs just go slower.”**

Dogs also had a built-in navigation system, Donald explained. **“They know the trail. You don’t have to tell your leader what to do—the lead dog remembers the trail. The reason people sometimes get lost today is they depend on other sources, like a GPS, or have nothing.”**

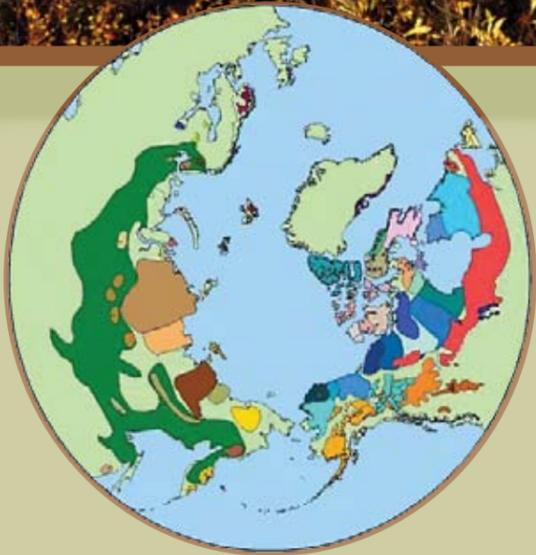
When Donald finished sharing his stories with the group he thanked them all for their efforts to protect the caribou and wildlife. **“Keep up the good work. I always want to be able to hunt.”** And he reminded everyone present, **“Always try to do the right thing. It’s never too late to learn.”**



CARMA: CONNECTING CARIBOU & PEOPLE AROUND THE ARCTIC



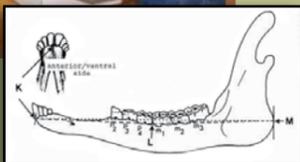
CIRCUM- ARCTIC RANGIFER MONITORING & ASSESSMENT



Did you know that there are **60 caribou herds** around the circumpolar Arctic? They are shown here by different colors.



Explaining the manual on measuring caribou body condition, in Yakutsk, Russia.



Rangifer is the scientific first name for caribou & reindeer:

Rangifer (genus) **tarandus** (species)

Want to know more about CARMA and how your village can participate?

Please contact:

Don Russell
Northern Research Center
Yukon College
Whitehorse, YT
Canada

don.russell@ec.gc.ca
(867) 456-2695

CARMA is an international group of researchers, land managers, and Native communities studying and sharing information about caribou around the Arctic.

THE WORLD IS CHANGING

In the last several hundred years there have been dramatic increases in the world's human population, global temperatures, carbon dioxide emissions, extreme weather events, fertilizer and pesticide use, land and resource development, and species extinctions—among other disturbing events. And research has shown that many of the negative consequences of these changes are concentrated in the Arctic. (See other articles in this issue, and in past issues of Caribou Trails.)

CARMA wants to determine how all these global changes are affecting caribou and reindeer around the circumpolar north, as well as the people, communities and cultures that depend upon them. To do this they are collecting traditional knowledge and local observations; conducting biological field studies; and using remote sensing to gauge arctic-wide changes.

ASKING THE SAME QUESTIONS ALL AROUND THE ARCTIC

In order to compare information from different parts of the Arctic, **CARMA** has developed a standard set of questions to be asked by researchers, land managers and participating Native communities. The basic questions address:

- How important are seasonal ranges to caribou?
- What causes herds to grow or decline?
- What is the role of predators?
- How important is human harvest, and how does it affect herd growth or decline?
- How might people and caribou respond to change?

CARMA has also developed manuals and kits for communities and researchers across the Arctic can use to make sure that everyone is recording information in the same manner.

These manuals address:

- Body condition and health of caribou
- Methods for determining herd size, birth and death rates
- Recording environmental changes that affect caribou, such as the timing of green-up, decline of lichens, ice and snow extent, etc.

TRADITIONAL KNOWLEDGE RECORDED & SHARED

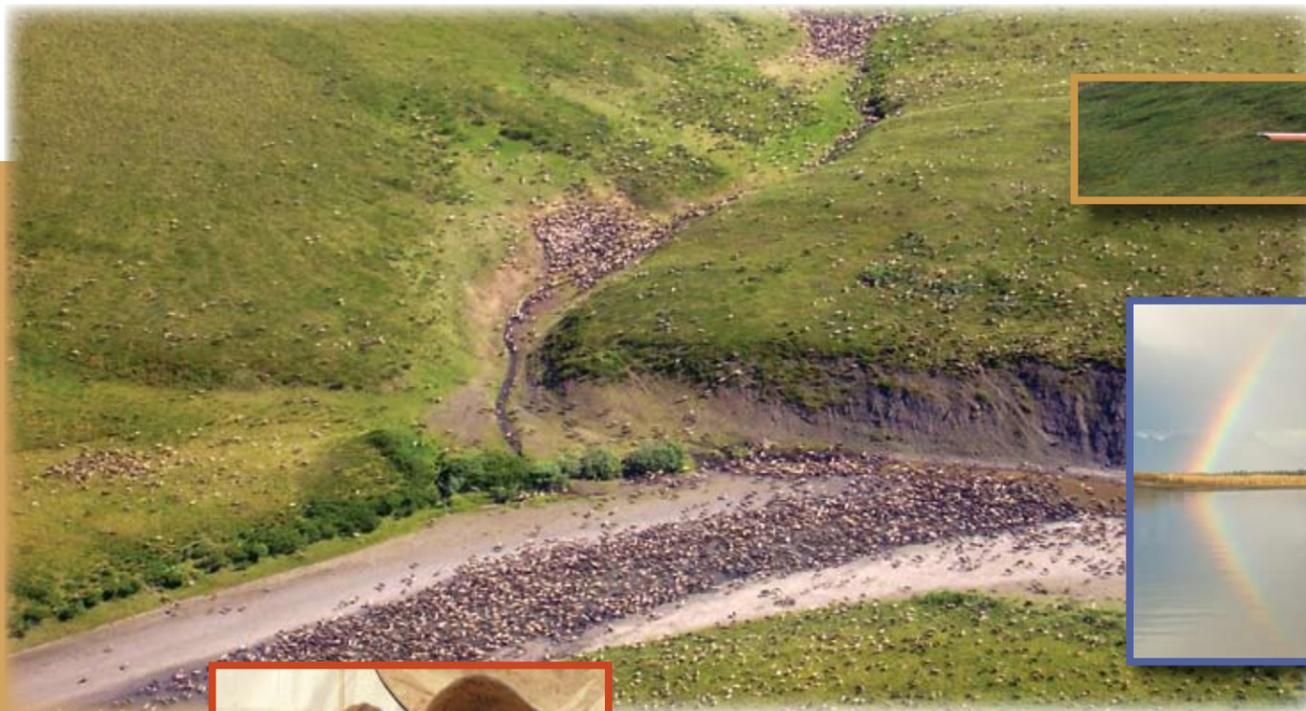


Six caribou-harvesting villages from Alaska (Anaktuvuk Pass) to eastern Canada are participating in a special video-based project called 'Voices of the Caribou People.' The knowledge of Indigenous People who have traditionally had a close relationship with caribou is documented and shared with other communities, scientists, policy makers, and the general public. The videos capture people's relationship with caribou, how that relationship is changing and why, and how change is affecting caribou and local communities.

WORKING NOW TO PROTECT CARIBOU IN THE FUTURE

CARMA serves as a centralized information gathering, storing and sharing center for all things relating to caribou across the Arctic. This will enable researchers, land managers, and indigenous people across the Arctic to work together to more effectively guide decisions that will protect the long term health of caribou and reindeer in the face of a changing world.

THE 'BOU ARE BUNCHIN!



Biologists from Barrow, Kotzebue, Nome, Bethel, Anchorage & Fairbanks gathered in a remote camp to assist with the photocensus.



KNOWING WHAT BUGS THE 'BOU

Jim Dau, ADF&G's Kotzebue area biologist has studied the Western Arctic Caribou Herd for over 20 years. He knows approximately where and when the mosquitoes, the warble flies and the bot flies will drive the caribou to the coast and then into ever-tightening bunches, as they become one large living mass trying to expose less surface area to the onslaught of insects.

A HERD OF BIOLOGISTS WAIT

In July 2007, Dau rounded up a herd of biologists and a small air force of pilots, and whisked them off to a remote site in the middle of northwest Alaska. Weatherports went up, gear was unpacked, temporary food shelves were stacked, water cans filled, and a small community of biologists settled in to wait.

They waited for conditions they knew they would dread: weather hot enough to produce hoards of insects; calm enough that the insects would drive both the caribou and the biologists mad; and in the right combination so the coastal fog didn't roll in and obscure everything.

SHOOTING CARIBOU...WITH A CAMERA

Dau flew daily reconnaissance flights in a Piper Cub, to check on weather and herd conditions, and to radio-track the fragmented groups of caribou scattered over several hundred square miles. The big, orange Fish & Game Beaver waited beside a field of fireweed, a large format U.S. Geologic Survey mapping camera tucked in its belly, with its dinner plate-sized lens focused straight down.

A SMALL AIRFORCE TAKES TO THE AIR

It took over a week of waiting but finally the call came in, "The bou are bunchin!" Within minutes the entire crew was airborne. Dau directed the Beaver crew to one group after another. The Beaver's pilot flew a slow and steady grid over each bunch as the camera snapped hundreds of overlapping photos. Another Piper Cub and a Cessna 185 located the remaining far-flung groups of caribou, and radioed in their location to the Beaver or counted the smaller groups by eye.

It was a laborious amount of flying with only brief and infrequent stops to refuel, grab a bite to eat, and relieve themselves. They took to the air at two in the afternoon, and wrapped up all but a few groups by four in the Arctic morning. Fourteen hours and the first part of counting the herd was done.

SOLVING A JIGSAW PUZZLE

Next, the giant film canisters were sent off for processing, and several months later 500 9"x 9" black and white photos arrived. Once again the biologists gathered, this time to pour over dozens of photos spread across tables to arrange the jig saw puzzle of photos, mark overlap lines, and eliminate any duplication in the photography. No double counting!

LET THE COUNTING BEGIN!

Under contract to ADF&G, Don Williams of Ambler then spent eight hours a day throughout the winter of 2007/08 peering through a magnifier at each of the photos and counting. Each caribou. Every caribou. One by one. Don has done most of the counting for the last three Western Arctic Herd population censuses—enough times that he says he's beginning to feel he knows each animal personally!



(Above) The wide-format camera mounted inside the plane.

(Right) A hole is cut away in the plane's belly for the huge lens to protrude.

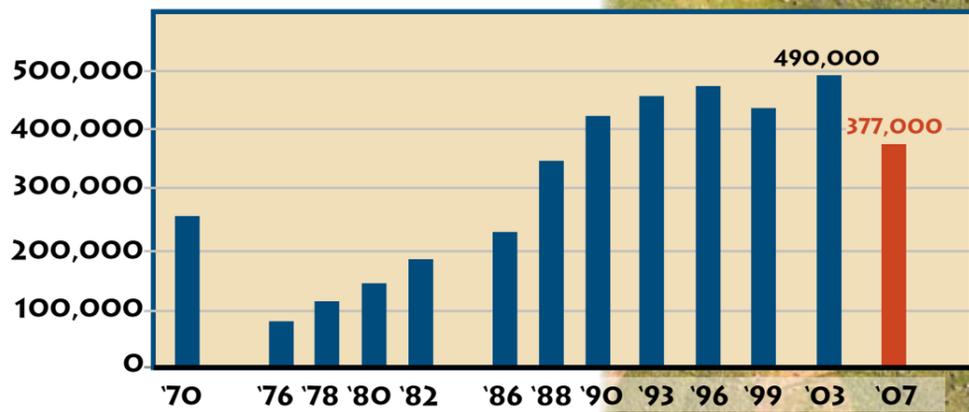


Organizing a jigsaw puzzle of photos, and eliminating overlap.



Don Williams of Ambler, the state's finest caribou counter.

MAKING SENSE OF THE CENSUS



**FROM 490,000
DOWN TO 377,000
CARIBOU**

RESULTS FROM 2007 PHOTOS—377,000 CARIBOU

The photos were taken in July 2007, but it took until June 2008 for Williams to count every caribou, and for Dau to be sure they'd photographed the entire herd, and to adjust for a few other factors. The population estimate based on the 2007 photos came in at 377,000 caribou—a decline of 113,000 animals since the last count in 2003. While concerned about the results, Dau is not convinced that it's downhill from here for the herd.

He is pretty confident about the accuracy of the estimate. "We radio tracked collared caribou extensively from July through mid-May and determined that almost the entire herd (99%) was present during the photography," he said. "Photo quality was generally good, and we hired the most experienced caribou counter in the state to count the photographs."

DOWN FROM 2003 COUNT OF 490,000

The Western Arctic Herd numbered 242,000 caribou in 1970, and then plummeted to 75,000 by 1976. The herd steadily increased until peaking at 490,000 animals around 2003, and may have increased further before its current decline. The loss of 113,000 animals from a herd of nearly half a million caribou in four years doesn't entirely surprise—or alarm—caribou biologists, but they are definitely taking notice.

IS WINTER THAW-FREEZE A CAUSE FOR DECLINE?

Dau is still not sure whether the decline is the beginning of a long downward trend, or the result of several individual mid-winter thaw-freeze events. It could be both. In December 2005, temperatures rose above freezing and rain soaked the snow cover for two days. "When cold temperatures returned, the herd's winter range was encased in a thick layer of near impenetrable ice, and caribou died in droves," said Dau.

A similar warming event in January 2007 brought four days of rain, and Dau anticipated another large die-off. Instead, the prolonged warming period, coupled with high winds, eliminated the snow cover and dried the surface vegetation. No subsequent ice crust formed and the availability of critical winter lichens actually improved. "It's a fine line whether these thaw-freeze events are good or bad for caribou," Dau explained. "Weather—both summer and winter—has been a wild card in recent years, and it's playing Russian roulette with the caribou."

LICHEN DECLINING BUT HERD STILL LOOKS HEALTHY

A twenty-five year study conducted by Bureau of Land Management biologists has documented a decreasing amount of lichens in the herd's winter range on the eastern Seward Peninsula and Nulato Hills. Dau is not sure if this is impacting the herd yet, noting, "The health of the caribou tell us a lot about range quality and, in recent years, caribou have gotten very fat during summer and maintained good body condition throughout winter when weather was not unusually severe." He also adds, "In 2007 adult cow mortality was low and calf survival was high, which suggests the herd size could stabilize or even grow slowly."

WONDERING WHETHER IT'S THE WEATHER

Despite the reduction in numbers, the herd is clearly still very large. Nonetheless, Dau said this latest count signals the need for caution regarding large scale resource development in the herd's range. "It's certainly not lost on us that other large caribou herds in Alaska and Canada are now declining as well. These declines may just be a coincidence, but we may also be entering a phase when conditions are less favorable for caribou than during the past 30 years."



ADF&G veterinarian, Kimbelee Beckman, collected tissue samples from ten caribou at Onion Portage in 2007. (The meat was shared with elders in nearby Ambler.)

Lab tests are still being analyzed, but so far all indications are that the Western Arctic Caribou Herd is one of the healthiest in Alaska.

Biologists question if recent icing events could be the cause for the decline.

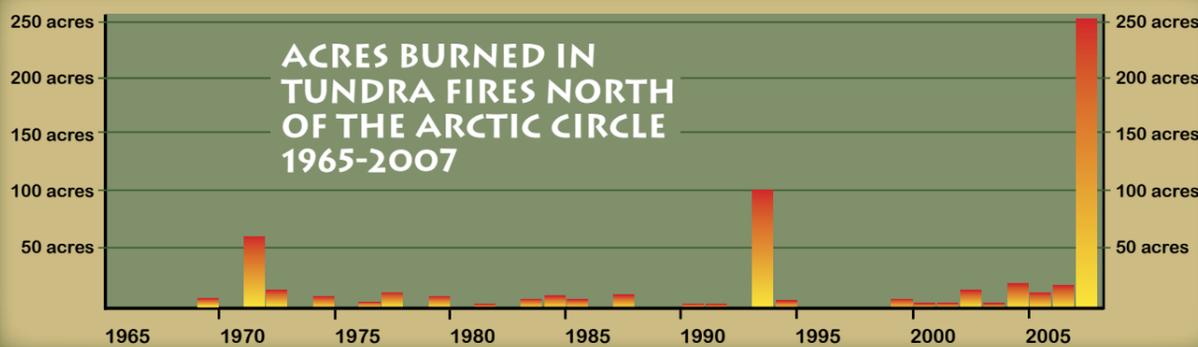
COUNTING AGAIN IN 2009

Everyone is eager to know what is happening with the herd. The next Western Arctic Caribou Herd census was originally scheduled for 2010, but has now been pushed forward to summer 2009.



THE EFFECTS OF TUNDRA FIRES ON CARIBOU HABITAT

Summer fires have always been common in the boreal forest, but now fire may be becoming more frequent in the tundra of the North Slope, Noatak Valley and the Seward Peninsula. What does this mean for caribou habitat?



CLIMATE WARMING AND FIRE

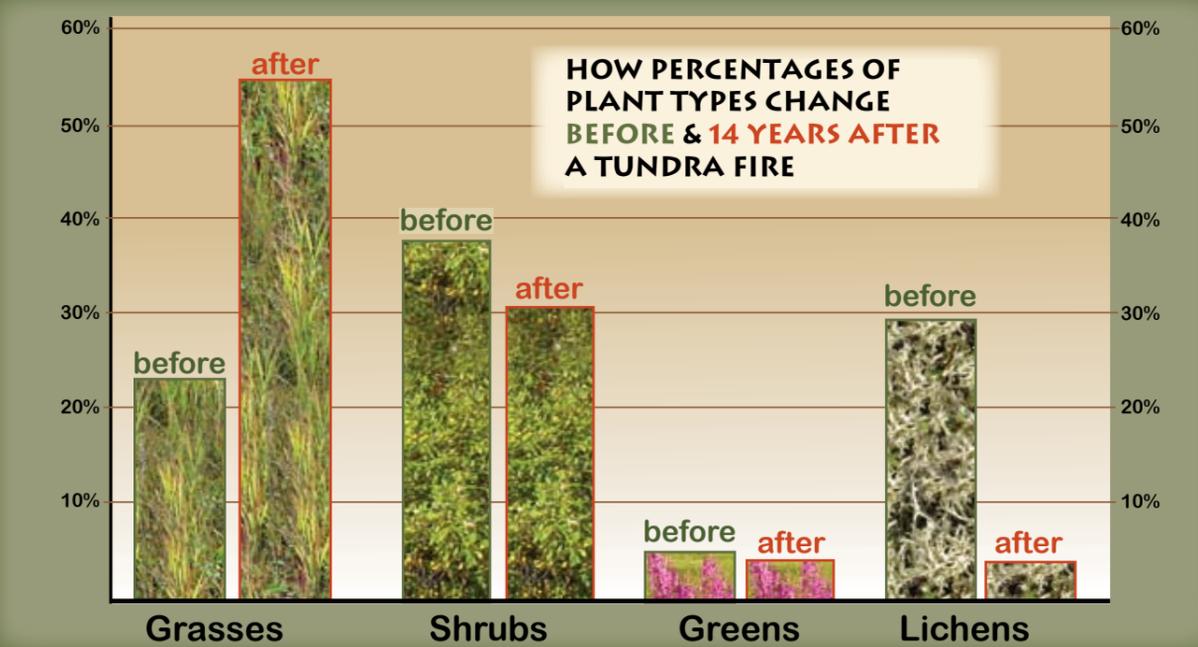
One of the predicted effects of a warming climate is increased fire in Alaska. The statewide fire seasons of 2004 and 2005 were record setting. In 2007, the North Slope had its largest tundra fire ever just north of Anaktuvuk Pass. This fire was larger than all of the recorded fires on the North Slope since 1950 combined, and continued to burn into September when nearby lakes had already frozen.

LICHENS VULNERABLE TO FIRE

Fire can speed up the changes to soils and vegetation that are already occurring because of climate warming. A warmer climate makes spruce forests and tundra more susceptible to wildfire—and lichens are especially vulnerable. Grasses grow back quickly after a fire, often increasing to a greater amount than before the fire. Lichens are very slow to regrow in burned areas, often taking decades. Fire also warms and thaws the top layer of permafrost, allowing grasses and shrubs to send their roots deeper, giving them a competitive edge over lichens.

AVOIDANCE BY CARIBOU

Biologists have long known that caribou avoid burned boreal forest for decades. Recent studies by BLM, NPS and Fish & Game confirm that caribou also avoid burned tundra areas in mid-winter—often for many decades. Caribou particularly avoid the interior portions of large burns. The wide-ranging habits of caribou usually allow them to locate suitable unburned winter range.



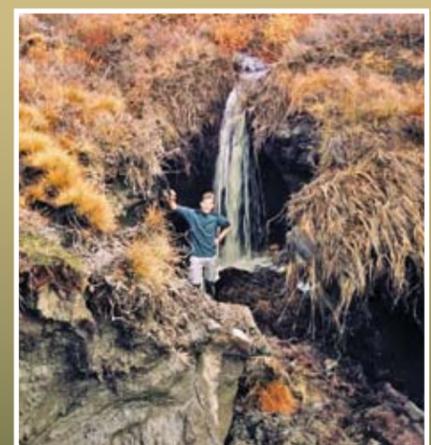
1973



2001

These two photos from Nimrod Hill overlooking Imuruk Lake were taken at the same location, 28 years apart. Note how the lichens and low-growing tundra plants have been displaced by grasses and shrubs. This is a result of a tundra fire that warmed the soil and lowered the permafrost level, resulting in a loss of lichens.

For more information on the effects of fires and a warming climate on the tundra contact:
 Kyle_Joly@nps.gov
 907-455-0626



Dramatic changes such as this tundra gully have occurred due to tundra fires warming the permafrost.



CURRENT HEALTH OF THE HERD

Biologists use a variety of tools to assess the health of the herd.

ONION PORTAGE, SEPTEMBER 2008

COLLARS: This year, with the help of students from Elim and Koyuk, 26 collars were placed on caribou:

- 20 satellite collars (8 on bulls, 12 on cows)
- 6 VHF radio collars (all on cows)

Both types of collars have a VHF transmitter, which makes it necessary to radio-track the caribou by air to receive the line-of-sight signal. The signal quickly and accurately directs biologists to groups of animals so they can visually survey the number of calves born, the number of yearlings that survived the winter, the ratio of bulls to cows, the percentages of deaths, and to photograph the entire herd for a population census.

The satellite collars also transmit a signal via satellite that can be intermittently downloaded onto a computer, pin-pointing the location of animals at anytime throughout the year. This information reveals the herd's migration routes and timing, and their seasonal ranges throughout the year. These collars are more expensive but provide extremely useful information.

BLOOD SAMPLES: Blood was drawn from 74 caribou, which will be analyzed to determine if there is any inflammation in muscles, organs or ligaments from infection or injury. Malnutrition does not cause inflammation and cannot be measured this way. The samples taken in 2007 showed that 25% of the herd had some level of inflammation; the highest yet reported. None the blood samples tested positive for brucellosis.

CALF WEIGHTS: This was the first year of weighing calves, which will be repeated in the future. A trend of increasing or decreasing calf weights over time is one of the tools biologists use to help them assess the overall condition of the herd.

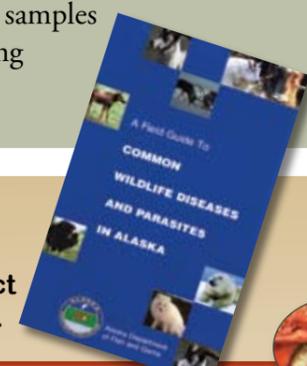
OBSERVATIONS: Fish & Game biologist, Jim Dau, thought the condition of the animals they handled and observed from Sept 8-16 was average to fat, with very few skinny or extra-fat animals compared with other years. On the last day, three limping caribou were observed that appeared to have hoof rot. Blood samples were collected from two of these animals for further testing; both had a swollen foot and one had an open lesion. Several hunters reported or turned in samples of caribou with a condition called besnoites, or 'sand paper' caribou (described below).



ONION PORTAGE, SEPTEMBER 2007

TISSUE SAMPLES: ADF&G veterinarian, Dr. Kimbelee Beckman, collected tissue samples from ten caribou at Onion Portage in 2007. She assessed the overall muscle mass of the animals, the amount of fat on them, and if there were any abnormalities. She looked for parasites, and collected tissue samples that will be used to determine if there were bacterial infections or the presence of any contaminants such as heavy metals. Blood samples were also collected to assess any abnormalities at the cellular level.

Lab tests are still being analyzed, but so far all indications are that the Western Arctic Caribou Herd is one of the healthiest caribou herds in Alaska. The results of the analysis of the tissue samples collected will be presented by Dr. Beckman at the upcoming Caribou Working Group meeting, December 10-11, at the Dimond Center in Anchorage.



SOME COMMON CARIBOU DISEASES

The information below is from this Fish & Game booklet. Contact your local Fish & Game office if you would like a free copy.



WARBLE FLY LARVAE

The adult warble fly lays eggs on the caribou's legs and lower body. The eggs hatch into larvae, which penetrate the skin and travel under the skin to the caribou's back. They grow there until early summer when they break through the skin, drop to the ground and hatch into flies.

When laying their eggs the warble flies harass the caribou and interfere with their feeding. The entire herd migrates to the Cape Lisburn area every summer to escape this intense harassment.

The meat from affected animals is completely safe for humans to eat.



HOOF ROT

This disease comes from a common bacterium in the soil that typically enters through a break in the skin above the hoof. Outbreaks of hoof rot are thought to be related to especially rainy summers. While the abscess typically occurs just above the hoof, abscesses can also form in the liver, lungs or mouth.

Avoid contact with the abscesses, and discard the infected leg. The meat is fine to eat if thoroughly cooked.



SAND PAPER CARIBOU

The technical term for this condition is besnoitiosis. It is caused by a parasite which enters caribou through feed contaminated by the droppings of wolves, foxes, bears and other meat-eaters. It is passed back to these carnivores when they eat the caribou.

Infected caribou lose hair on their lower legs and face. The skin may also become thicker and rough due to many little cysts or bumps under the skin or in the membrane around the bones—but are not in the meat.

Cook the meat well, and don't feed uncooked infected meat to dogs.

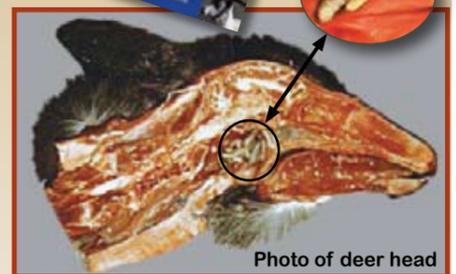


Photo of deer head

NOSE BOTS

The female bot fly deposits her larvae in the nostrils of caribou. The larvae migrate to the caribou's sinuses and airways at the back of the throat, where they grow to approximately one inch in length over the winter. The caribou then sneezes them out in the spring.

Just like warble flies, the bot flies are extremely irritating to the caribou when trying to lay their eggs, and interfere with their feeding.

The meat from affected animals is completely safe for humans to eat.

TAKING A CLOSER LOOK AT THE WESTERN ARCTIC COAL PROJECT

BALANCING JOBS & MONEY WITH CARIBOU & SUBSISTENCE

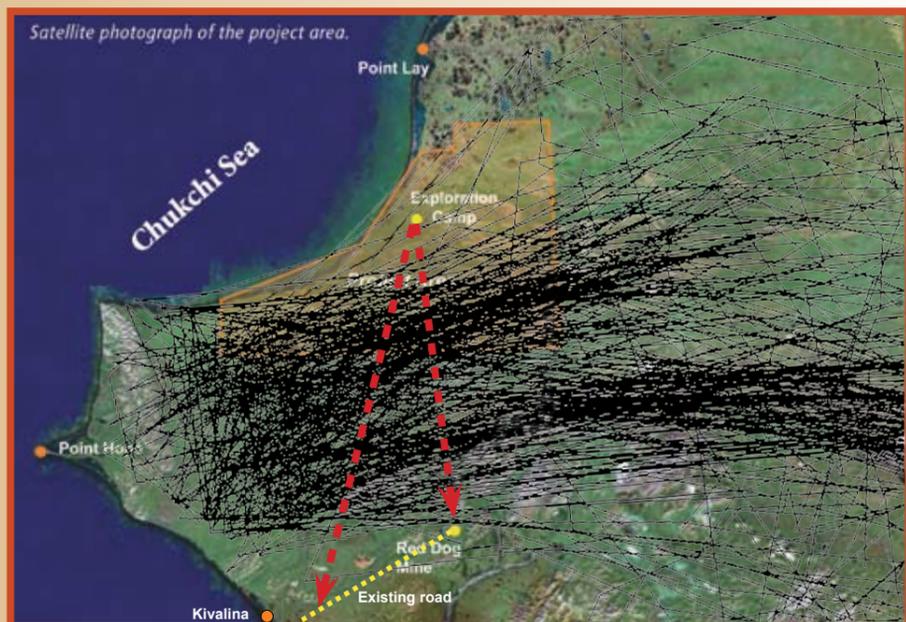
In July 2006, BHP Billiton, a Canadian exploration company, signed an agreement with the Arctic Slope Regional Corporation (ASRC), to determine if there is enough coal on ASRC lands in the Pt. Lay - Pt. Hope area to develop a large mining operation.

BHP Billiton is also looking at ways to transport the coal out of Alaska. These include possibly building a deep water port at Cape Sabine, or building a road or railroad to Red Dog or the existing port south of Kivalina.



The satellite collars that are placed on caribou at Onion Portage—with the help of village students—tells us where and when the caribou travel throughout the year.

Each black line below shows the movement of a satellite collared caribou between 1987 and 2006. The red dashed lines show generalized routes for a possible railroad or road.



“There is not a worse place for this herd to construct a north-south obstruction.”

—Jim Dau
ADF&G caribou biologist

The entire Western Arctic Caribou Herd treks to this location in July to escape the hordes of summer insects. Caribou hunters need to speak up and require that this critical habitat is protected.

CARIBOU & THE CONCERN ABOUT CUMULATIVE IMPACTS

Possible development projects within the range of the herd are growing! Generally, one project alone would not disrupt the health of the entire herd. But the combined impacts of multiple projects—called **cumulative impacts**—within the range could seriously affect the herd and future subsistence. These are potential projects that need to be studied in combination with other possible projects in order to protect the future of the herd.



WESTERN ARCTIC COAL PROJECT
Development of this coal resource could lead to several different possibilities:

- Deep-water port construction at Cape Sabine
- A road to Red Dog Mine and increased travel to Red Dog Port
- A high voltage powerline to Red Dog Mine

HARD ROCK MINING
Additional mining prospects exist across the western Brooks Range

RED DOG MINE & PORT EXPANSION
Possible mining of additional deposits and port expansion

NOATAK ROAD & AIRPORT
Possible road from Noatak to Red Dog, and jet-sized airport north of village, with increased traffic

GOLD EXPLORATION ON OMAR-SQUIRREL RIVERS
Exploration camp established with potential for mining development.



ROCK CREEK & BIG HURRAH MINES
Open-pit cyanide-leach gold mine in operation, with second site planned

NATIONAL PETROLEUM RESOURCES (managed by BLM)

NPR-A SOUTH
BLM is planning for coal and natural gas development in the herd's calving grounds and summer range

NPR-NORTH
Lands in the herd's calving grounds and summer range have been leased by BLM for development. Development could include oil, gas, and more projects.

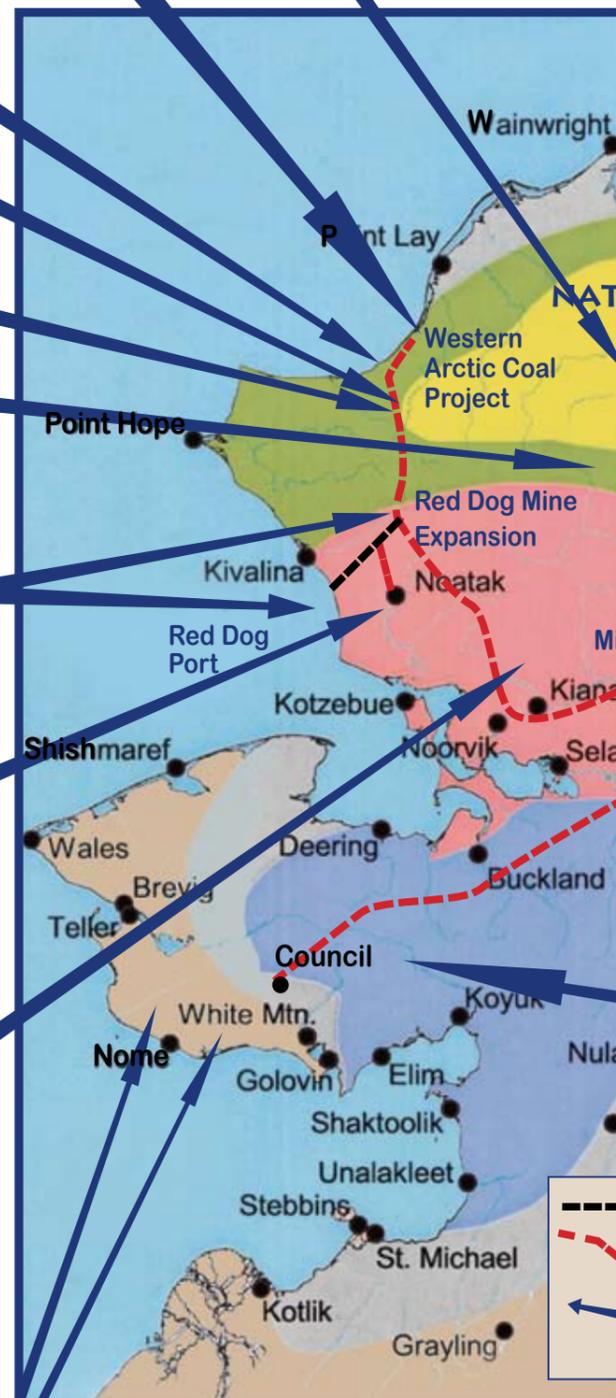


Photo by Jim Dau

IMPACTS

herd keep
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uses. Below
nation with
f our caribou.



© John Schoen

RESERVE (NPR-A) DEVELOPMENT

led by BLM)

NPR-A NORTHWEST

herd's summer
ve already been
M for oil and gas
Drill pads, roads
people are likely.

NPR-A NORTHEAST & TESHEKPUK LAKE

Large tracts have been recently leased for oil and gas development, but lands east and north of the lake won't be leased for 10 years.



OILFIELD ROAD & DALTON HWY SPUR ROAD MAY EXTEND NEAR TO NUIQSUT

There are plans to connect the Prudhoe Bay road system to the NPR-A across Colville River near Nuiqsut, and discussion about a possible road from Dalton Hwy to provide access to oil & gas lease lands.

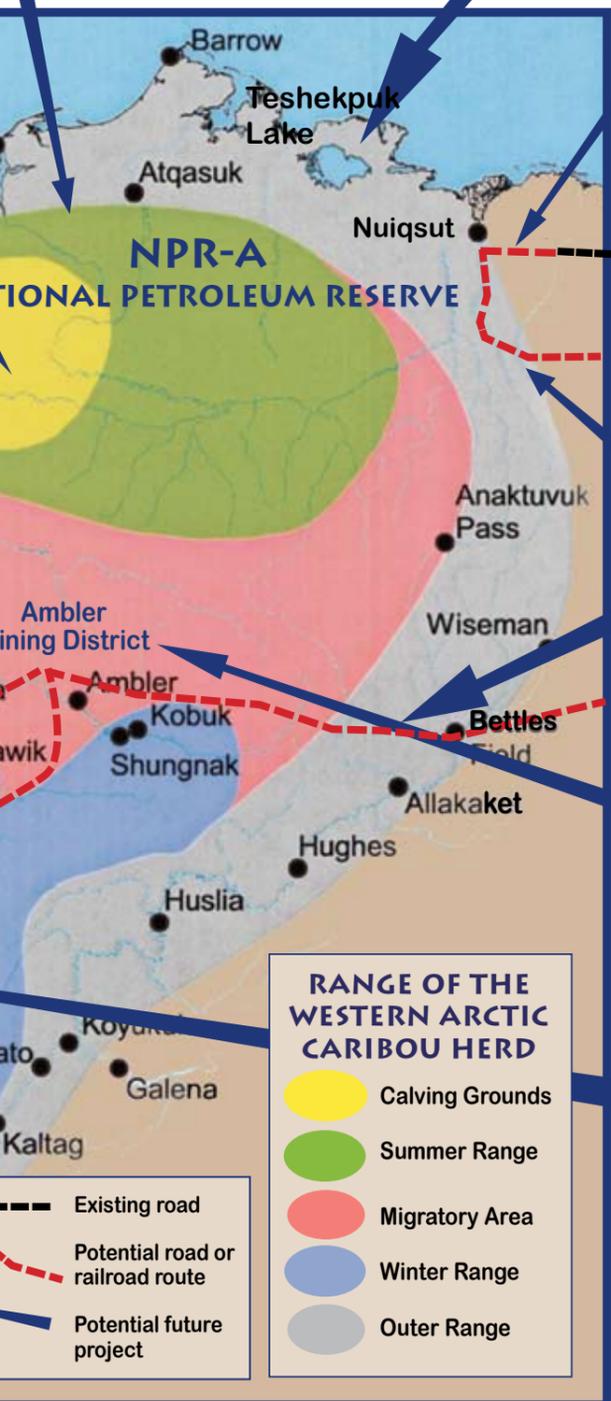
A WIN (FOR NOW) FOR THE TESHEKPUK CARIBOU HERD!

Following a lawsuit and tremendous public pressure, including extensive comments from the Western Arctic Caribou Herd Working Group, the Bureau of Land Management postponed gas and oil leasing on land directly east and north of Teshekpuk Lake—critical caribou habitat—for 10 years. However, they leased 1.5 million surrounding acres to oil and gas developers.



The Teshekpuk Caribou Herd is a critical food source for the communities of Barrow, Nuiqsut, Wainright, Anaktuvuk Pass and Atqasuk. The lands surrounding Teshekpuk Lake provide critical calving and insect relief areas, and migration corridors for this herd. While 86% of the Northeast portion of the National Petroleum Reserve (NPR-A) will be opened

to oil and gas development, leasing of some—but not all—of the lands critical to the Teshekpuk Caribou Herd will be postponed for 10 years. A portion of their calving grounds have been opened to development, but with some protection against excessive disturbances.

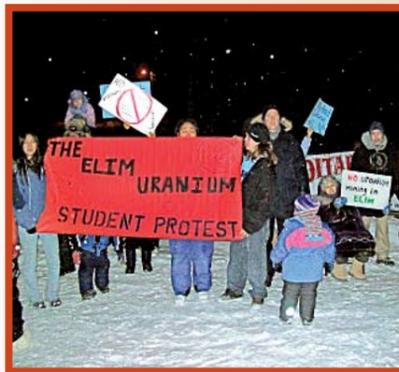
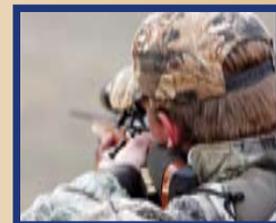


POSSIBLE DEVELOPMENT OF AMBLER MINING DISTRICT

Could include a road or railroad from Dalton Highway to mine; a road from Ambler mine to Red Dog; or a road to Nome's road system near Council.

TAKING AIM AT THE UPS AND DOWNS OF ROADS

There are serious discussions taking place about a road from Fairbanks to Nome, and other new roads. Roads can offer less expensive transport of goods, services and people, but they also present obstacles to migrating wildlife, invite heavy traffic, and open up easy access to many more hunters.



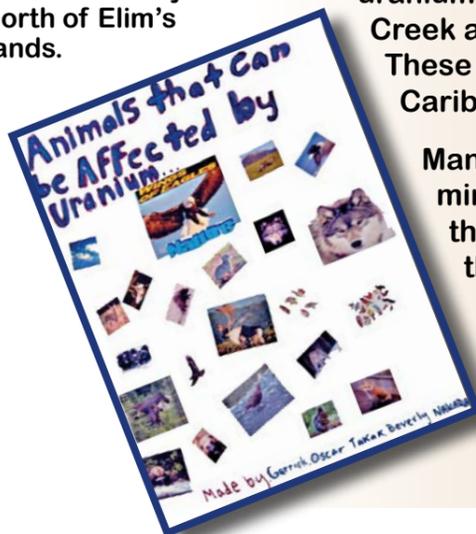
ELIM STUDENTS & RESIDENTS PROTEST A POSSIBLE URANIUM MINE IN THEIR BACKYARD

Triex Minerals has been conducting exploratory drilling for uranium in the Death Valley, McCarthy's Marsh and Boulder Creek areas of the central eastern Seward Peninsula. These same areas are in the heart of the Western Arctic Caribou Herd's winter range.

Many local residents fear that a large-scale uranium mine and its associated roads and ports will impact their water, land and subsistence foods, and disrupt the caribou migration to their area. The students have taken action.

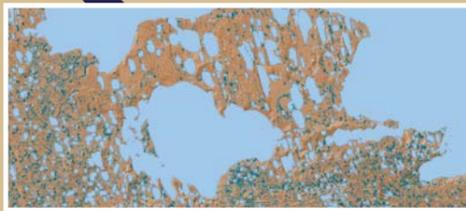
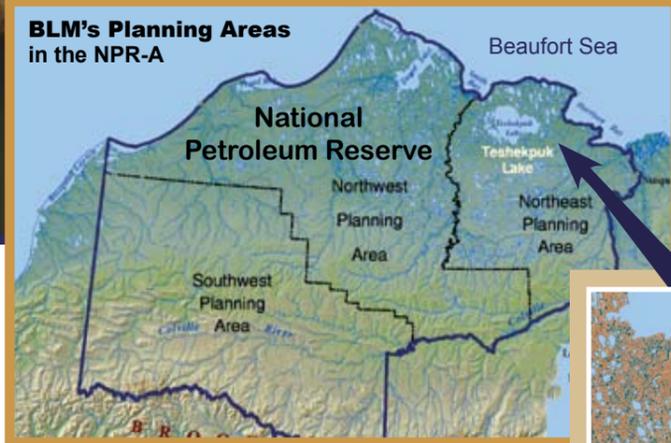
View their student blog at:

<http://elimuranium.wordpress.com>



THE TESHEKPUK HERD

ALASKA'S MOST UNIQUE CARIBOU HERD?



Teshekpuk Lake—where the herd returns each spring to calve. Note the narrow corridors through wetlands the herd must travel to seek relief from summer insects along the Beaufort Sea coast.

WHAT MAKES THIS HERD SO UNIQUE?

NORTH SLOPE HOMEBODIES

Four caribou herds use Alaska's North Slope in summer: The Teshekpuk Herd, the Western Arctic Herd, the Central Arctic Herd, and the Porcupine Herd. Typically however, only the Teshekpuk Herd toughs out the winter on the coastal plain of the North Slope, while the three other herds migrate south each fall to the shelter of timber.

WHEREVER THEY ROAM THEY ALWAYS COME HOME

Despite the fact that the Teshekpuk Herd usually winters on the North Slope they are also known for making occasional unexpected fall migrations. During 1996-1997 most of the herd migrated as far south as the Seward Peninsula. During the winter of 2003-2004 approximately 1/3 of the herd traveled 250 miles east of their normal range and wintered near the Canadian border.

Regardless of how far they may have traveled during the rest of the year, or other herds they may have mixed with, Teshekpuk caribou return to the Teshekpuk Lake area each spring and summer. Cows give birth around the perimeter of the lake in early June. Then most cows, calves and bulls travel through narrow corridors on either side of the lake to reach the Beaufort Sea coast in search of relief from intense summer harassment by insects. The need to escape the bot flies, warble flies and mosquitoes is critical if the caribou are to stay healthy and gain enough weight to survive the winter.

SMALL HERD STILL FILLS LOTS OF FREEZERS

The herd had only 11,800 animals in 1984 but has grown rapidly since then. The 2002 census estimated 45,000 animals. A photocensus was conducted this summer and the photos are still being counted, so an up-to-date population will soon be available.

Despite the fact that this herd is considerably smaller than the Western Arctic Herd, it sustains a harvest rate of up to 10% of its population. Another way of putting it is that up to 4,500 caribou a year end up in freezers or drying racks in Barrow, Nuiqsut, Wainright, Anaktuvuk Pass, and Atkasuk. This makes this herd an extremely important source of meat for these North Slope villages.

DO OIL AND CARIBOU MIX?

The Teshekpuk Lake area has been at the center of the debate surrounding expansion of oil and gas development on the North Slope. The oil industry has identified this area as having substantial oil and gas reserves, while biologists and subsistence hunters recognize it as crucial habitat for caribou and waterfowl. For many years the North Slope Borough and many local residents, along with the Western Arctic Caribou Herd Working Group, resource agencies, and environmental groups, spoke out against leasing the Teshekpuk Lake area for oil and gas development. BLM pushed ahead with leasing all lands in the NE Planning Area of the NPR-A—until a lawsuit stopped them. A recent decision opened 86% of the NE Planning Area area to oil and gas leasing, but delayed leasing for 10 years in areas east and north of the lake that are most crucial to the Teshekpuk Caribou and waterfowl. Part of the calving area south of lake was leased but some protections were added.



THE CLOCK IS TICKING...

A recent decision will protect crucial caribou habitat around Teshekpuk Lake—for ten years. So the caribou basically have a 10 year reprieve, but we do not! What will we—caribou hunters, biologists and land managers—do in the interim? We have ten years to learn as much as we can about the needs of this herd.

We need to ask the hard questions right now. Are some areas so critical that they need to be protected to insure the future existence and health of this herd? Do we know what recommendations to make to protect this herd if development does occur? Are there lessons we can learn from how the Central Arctic Herd has reacted to industrial development?

How can we make sure that the challenges and choices are understood by everyone who will be affected? How can we prepare now to make sure that our voices are heard and respected when the development issue returns in ten years? The clock is ticking...

BIOLOGICAL MONITORING

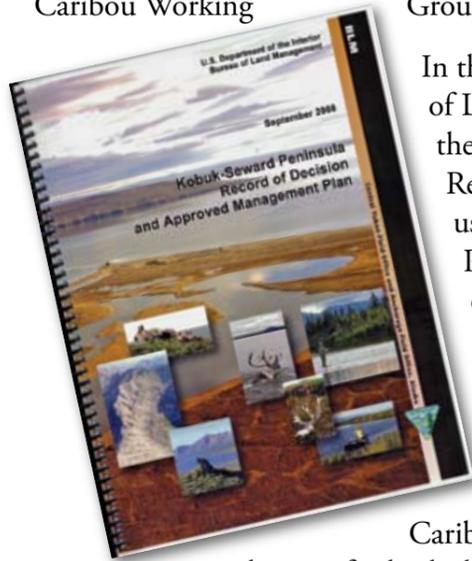
Biologists use satellite and radio collars to track herd movements, determine how many caribou are born and die yearly, and locate groups of caribou for a photocensus to estimate population size. When the animals are collared, blood samples are taken to check for disease, and a general health assessment is done.

CARIBOU BITS

MAKING SENSE OF ALPHABET SOUP

DNR, BLM, EIS, RMP, NPR-A, ROD What's a caribou hunter to do!

It can be as intimidating as learning a new language, but just as we have mastered other terms and abbreviations that once were new—like hp, .30-06, V-8, cc's—we can learn this new language, too. Fortunately, the Caribou Working Group has gotten a head start.



In the past several years the Bureau of Land Management (BLM) and the Alaska Department of Natural Resources (DNR) have written land use plans and Resource Management Plans (RMP) that will guide development on the lands they manage. Sometimes these plans also require that they produce an Environmental Impact Statement (EIS) before the final Record of Decision (ROD) is reached. The

Caribou Working Group met with planners for both these agencies, and provided extensive oral and written recommendations on how these lands should be managed so as not to impact the Western Arctic Herd.

In some cases the group feels they were effective in getting protections for caribou habitat included, but in too many cases the group remains concerned that resource development interests have outweighed those of caribou. But the Caribou Working Group maintains strong relationships with these agencies and will continue to monitor the progress of these plans. The group will also alert you when your personal comments are needed to protect caribou.

Stay tuned. And stay in touch with your Caribou Working Group representative.

POINT HOPE INCIDENT TO BE DISCUSSED

Given the extensive—and sometimes inflammatory—coverage by the press, most people are aware that this past July a number of caribou were shot outside of Point Hope but not all were completely salvaged. There have been conflicting reports of number of caribou killed, and the investigation by the Alaska State troopers is still on-going.

Point Hope's mayor, Steve Oomittuk, was quoted in the Anchorage Daily News as saying, "We were taught to respect our animals. We don't like it when something like this happens," he said. "There was a lot that were cut up and the meat was taken, but there were some that only some meat was taken and there were some that hadn't even been touched."

What exactly happened, who is responsible, and how the situation will ultimately be handled is yet to be determined. Nonetheless, the Caribou Working Group will discuss the incident at its upcoming Dec. 10-11 meeting in Anchorage. Roy Ashenfelter, chair of the Caribou Working Group, feels that this is an important issue for the group to tackle. He explains, "The point will not be to put anybody in a defensive position, but rather to give them an opportunity to speak. The group need to open themselves up to a dialog, as well as develop a process where we can react more quickly to any unforeseen management issues affecting the herd."



A National Park Service study found airborne contaminants in Burial Lake in the Noatak Preserve, and Matcharak Lake in Gates of the Arctic National Park.



GENERALLY—BUT NOT ENTIRELY—GOOD NEWS

Between 2002 and 2007 the NPS conducted the Western Airborne Contaminants Assessment Project (WACAP), described in Caribou Trails in 2005. Researchers sampled and analyzed air, snow, lichen and lake fish from eight western parks, looking for the presence of pesticides, industrial compounds, and contaminant metals carried on global air currents. While results show that in many cases northwest Alaska parks are less contaminated than in the Lower 48, there is still some cause for concern.

HIGH LEVELS OF PESTICIDES AND MERCURY IN LAKE TROUT

The average amount of mercury found in lake trout from Burial Lake exceeded the amount considered safe for human consumption. Mercury is a toxin that can cause neurological problems in fetuses, infants and children. Researchers note that some of this mercury may result from natural bacterial action in the surrounding wetlands, but still has a negative effect on human health. Lake trout live with year-round exposure to mercury, unlike migrating salmon, which remain very healthy to eat.

Results also show that lake trout in both Burial Lake and Matcharak Lake have enough contamination from the pesticide dieldrin to increase the risk of cancer, birth defects and reproductive problems in some people. However, researchers emphasize that the risk to human health is only for those eating lake trout regularly over the course of a lifetime, and does not apply to eating salmon, which remain an extremely healthy food source for people.

CARRIED ON THE WIND

Most of the contaminants found in Alaska have been carried on global air currents from as far away as industrial sources in Europe, Asia and the Lower 48. The study did not test for contaminants from other sources.

Want to know more?

For more information visit:

www.nature.nps.gov/air/Studies/air_toxics/wacap.cfm

or contact:

Colleen Flanagan

Air Resources Division, National Park Service, Denver, CO
(303) 969-2011, Colleen_Flanagan@nps.gov



TAIKU • QUYANNA • BAASEE' • THANK YOU!

Our thanks to some folks who have contributed to the success of the Caribou Working Group and the welfare of caribou.



COLIN 'BROWNIE' BROWN FORMER WORKING GROUP MEMBER, TRANSPORTER SEAT

"I have a hard time expressing in words what a wonderful, caring group of people it was that served on that working group."



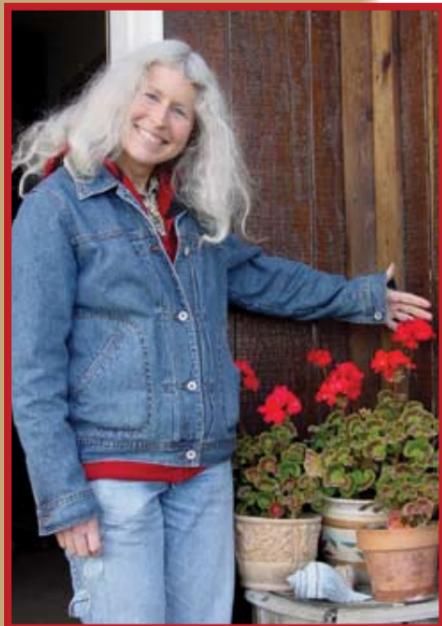
Colin fishing on the Thamalaklane River, Botswana, where the kids taught him that the fish preferred local worms over his fancy lures!

Colin 'Brownie' Brown lived 30 years in Galena, where he operated Yukon Eagle Air. He first learned about the Caribou Working Group when he flew two representatives to Kotzebue for one of the group's meetings and found himself recruited. "They needed a warm body for the transporter seat and I was hooked." Colin served six years with the group, gently presenting his perspective on issues, while listening and learning from others. "I have a hard time expressing in words what a wonderful, caring group of people it was that served on that working group. I will always be in their debt and remember them for the patience they had with me and the knowledge they imparted to me."

Colin and his wife, Julie, recently traded life in Alaska's chilly Interior for Botswana, Africa, where Colin has made a two-year commitment to the Flying Mission Services organization, and Julie is teaching. Colin recently wrote, "Right now I'm sitting in Maun, Botswana waiting for the evening temperatures to cool from today's high of 104 F!" To read Colin and Julie's account of their time in Africa—and to see some wonderful African wildlife photos—go to www.yukoneagleair.blogspot.com. The Caribou Working Group wishes you well in Africa, and thanks you for your service to Alaska, Colin!

RANDY MEYERS FORMER BLM NATURAL RESOURCE SPECIALIST & BOTANIST EXTRAORDINAIRE!

"I always enjoyed listening to the 'caribou round table,' where representatives shared their observations of caribou during the past 6-12 months."



Randy has been attending meetings of the Caribou Working Group even before the group was officially formed. "As a BLM natural resource specialist and botanist, I went to the initial co-management meetings in Kotzebue in the mid-1990's. People saw how successful the various marine mammal commissions in Alaska had been, and thought a Western Arctic Caribou Herd Working Group might be the logical next step for grassroots involvement in caribou management." Randy had a passion for studying tundra vegetation, especially lichens, and was eager to share her knowledge with the group. "The group was always interested to learn more about what lichens were and why the caribou needed them, and the condition of the herd's winter range in the Buckland River Valley and northern Nulato Hills."

Randy recalls fondly the many meetings she attended over the years. "I always enjoyed listening to the 'caribou round table,' where representatives shared their observations of caribou during the past 6-12 months. Another highlight was the guest speakers—a wide range of backgrounds, countries and topics, but always a connection to caribou."

Randy has retired from BLM but she hasn't slowed down a bit. She is now busy training for and running marathons, traveling for family visits, tackling long-delayed projects, and even learning to surf! The group will miss her friendly smile at their meetings, but many will still see her busy in her backyard Kotzebue garden.

JEANIE COLE FORMER BLM REPRESENTATIVE TO THE CARIBOU WORKING GROUP

"This is a great group of individuals with the interests of the local subsistence user and the caribou in their hearts."



Jeanie Cole was new to Alaska and to BLM-Alaska, when she attended her first Caribou Working Group meeting in Nome, in 2000. She immediately saw that the group offered her a unique opportunity to gain insight and appreciation for a variety of perspectives on the importance of caribou. "The group sounded exciting, so I asked my boss if I could get involved. It gave me a project to focus on in my first year at BLM-Alaska, and it helped me to learn more about the local situation and people. I really appreciate the group's acceptance of me in spite of my inexperience in Alaska!"

Jeanie continued as BLM's representative to the group for four years, where her appreciation for northwest Alaska, caribou and the efforts of the group grew. "I really enjoyed working with the Caribou Working Group. They are a great group of individuals—and very professional—with the interests of the local subsistence user and the caribou in their hearts."

Roy Ashenfelter, current chair of the Caribou Working Group, adds, "Jeanie was very active organizing and funding our meetings, and when she moved to developing BLM's Kobuk-Seward Peninsula Resource Management Plan she made sure that the Caribou Working Group's concerns were responded to. We miss Jeanie at our meetings."



Kotzebue meeting,
April 2008.

Noatak/Kivalina AC
meeting, May 2008.



GROUP FORMS TO ADDRESS HUNTING CONFLICTS IN UNIT 23



THE GROUP'S CURRENT RECOMMENDATIONS, WITH MORE ANTICIPATED IN THE FUTURE:

- 1) Propose to the Alaska Board of Game that the dates during which aircraft cannot be used for big game hunting in the Noatak Controlled Use Area (CUA) be extended to August 1 - September 30. This change will ensure that the restriction on aircraft will be in effect when caribou are migrating in the CUA, even when the timing of migration changes from year to year. The Board of Game will consider the proposal in November 2009. If passed, it would take effect in the 2010 hunting season.
- 2) Request that the Alaska State Legislature give authority to the Big Game Commercial Services Board to regulate the number and location of hunter transporter services in Alaska. (The Board currently only regulates the number and location of guide services.)
- 3) Request that the National Park Service, US Fish & Wildlife Service, and Bureau of Land Management—all of which are starting planning processes for the lands and activities they manage in Unit 23—work together to address hunting conflicts through their management of commercial guide and transporter businesses.

Fall hunting is always a big topic of conversation in Northwest Alaska, and talk often turns to concern over conflicts between local subsistence hunters and non-local hunters who come to Game Management Unit 23 to hunt. A cooperative group has formed—called the Unit 23 Working Group—to seek ways to reduce and resolve these fall hunting conflicts.

REDUCING CONFLICT THROUGH DISCUSSION

The Unit 23 Working Group is a newly formed 21-member group that includes representatives from the regional and tribal governments and organizations within Unit 23; NANA Corporation; land and wildlife management agencies; the Big Game Commercial Services Board and other organizations representing hunters, guides and transporters; the region's five Fish and Game Advisory Committees; the Northwest Arctic Subsistence Regional Advisory Council; and the Alaska Board of Game and Federal Subsistence Board.

The purpose of the group is to work cooperatively to find solutions to hunting conflicts that will preserve the Inupiaq values of the region, including opportunities for local hunters to take caribou as needed, while also providing reasonable opportunity for non-local hunters to hunt caribou in the unit.

DEVELOPING RECOMMENDATIONS

The Unit 23 Working Group first met in April 2008, and again October 29-31, 2008 in Kotzebue. Their primary objective will be to develop advisory recommendations to the regulatory agencies and boards who manage hunting, land use and wildlife in Unit 23, and to promote solutions to conflicts—such as increased hunter education and improved communication between local and non-local hunters, commercial service businesses, and agencies. The group plans to meet for just 2-3 years, and to move quickly on making recommendations.

RECOGNIZING CHANGING CONDITIONS AND NEEDS

In its discussions, the Working Group has recognized that fall hunting in Unit 23 can change from year to year. For example, the number of non-local hunters coming to the region reached its highest level in fall 2006, but declined in 2007. The timing and location of the caribou migration can also change from year to year. The herd has declined from a high of 490,000 in 2003, to 377,000 in 2007. In recent years, new hunter education materials that address meat care have seemed to help address meat waste.

Solutions to hunting conflicts will need to take into account these types of changing conditions. Building strong communication between the local representatives, agencies, and types of businesses represented on the group will help the region respond to changing conditions, while keeping conflicts low.

REACHING OUT TO EVERYONE

Hearing from the public is an essential part of this Unit 23 cooperative planning process. At each meeting the working group welcomes comments from the public, and toll-free telephone comment lines are provided for people wishing to call in. Radio broadcasts of the meetings can be heard on KOTZ radio on the AM/FM airwaves or at www.kotz.org. Members of the group also met with the Lower Kobuk and the Noatak/Kivalina advisory committees in May 2008. A meeting with the Upper Kobuk advisory committee is planned in Shungnak in January 2009.

For more information, including a list of Unit 23 Working Group members, meeting agendas and summaries, go to:
www.wildlife.alaska.gov/index.cfm?adfg=planning.unit23

To submit comments or for more information contact the group's facilitator:

**Jan Caulfield, janc@gci.net
907-523-4610**

2009 meetings:

**January 29-31
and April 2-4**

**NW Arctic Borough
Chambers,
Kotzebue.**

Please join in!

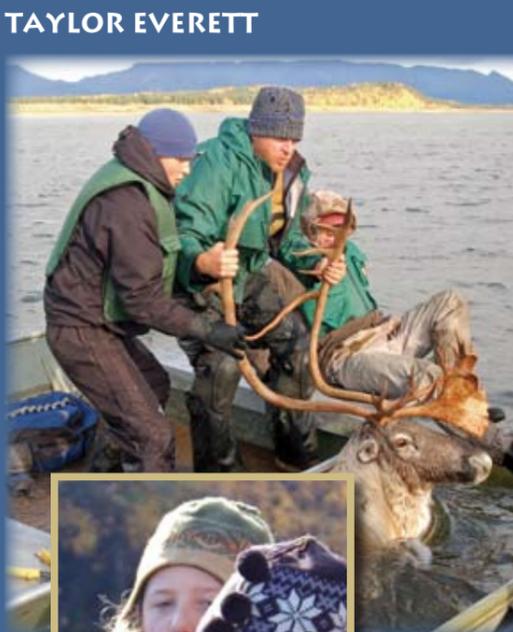
HANDS ON ACTION FOR KOTZEBUE STUDENTS AT ONION PORTAGE, 2007!



LOIS MILLER



TAYLOR EVERETT



TAYLOR EVERETT



ERIN NELSON



REID MAGDANZ



RACHEL LONG,
ELSA JOHNSON



FIELD CAMP FASHION!



ELSA JOHNSON



LOIS MILLER



MEGHAN
NEDWICK



DONALD NEAL

KOYUK GIRLS DAZZLE AT ONION PORTAGE, 2008



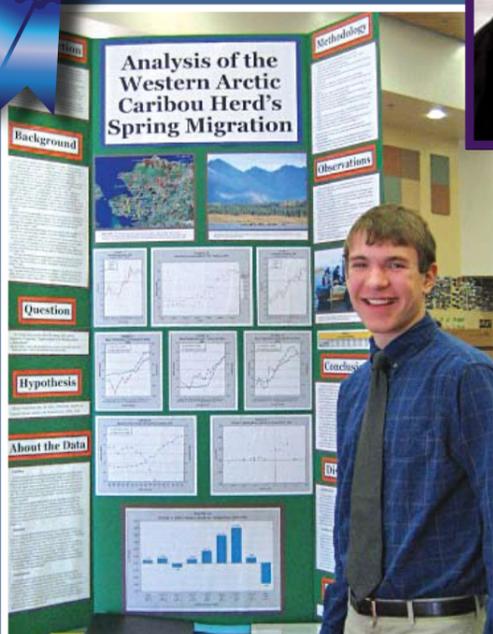
CECELIA NASSUK, DORIS ADAMS & COLLEEN ADAMS



COLLEEN, DORIS & CECELIA POSE WITH THEIR TEACHER, JESSICA STREYLE (FAR RIGHT), AND THE REST OF THE TEAM.



Congratulations
to Kotzebue's
Reid Magdanz!



REID MAGDANZ, LOIS MILLER, DONALD NEAL WITH KOTZEBUE DISPLAY

ONION PORTAGE CARIBOU GO TO ATLANTA, GEORGIA!

Following their time at Onion Portage in September 2007, Meghan Nedwick's students downloaded location information on the caribou they collared and tracked them throughout their seasonal migration, and created a number of large displays about caribou. Student Reid Magdanz did a further investigation and analysis of the herd's spring migration, which won him a first place award at both the regional and state 2008 Alaska Science & Engineering Fairs. Reid then traveled with his Onion Portage project to Atlanta, Georgia, where he was one of Alaska's representatives at the 2008 Intel International Science and Engineering Fair.



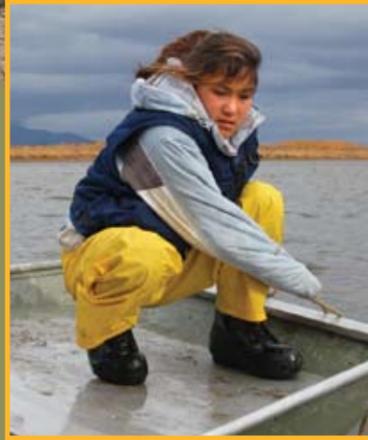
KIANA STUDENTS MAKE A SPLASH AT ONION PORTAGE IN 2007



STUDENTS WATCHING
TISSUE SAMPLING
JOHN NAGY



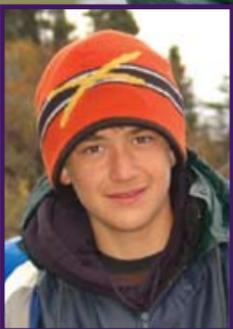
GUNNER SCHUERCH, OWENS MORRIS
DEREK STALKER IN BACKGROUND
JOHN ATORUK



KRISTY WALTON



ELY CYRUS



LEE STAHELI



DEREK BARR, SIERRA SAMPSON



JEANNE GERHARDT-CYRUS



JACLYNNE RICHARDS



MARISA ATORUK



DEREK BARR, SIERRA SAMPSON

**ELIM STUDENTS SHINE
AT ONION PORTAGE,
2008**



**BEVERLY NAKARAK
GARRICK TAKAK**



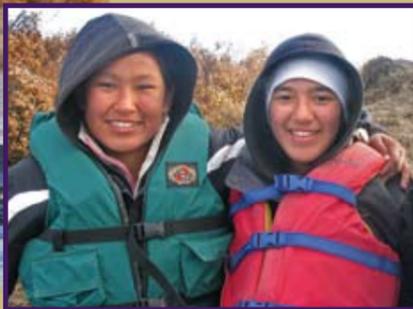
GARRICK TAKAK, JOSH JEMOWOUK



**FREDDY MURRAY
SHANNON AMAKTOOLIK**



JULIA & SHANNON AMAKTOOLIK



**JULIA AMAKTOOLIK
BEVERLY NAKARAK**



JULIA AMAKTOOLIK



MARK VACHAVAKE, SHANNON AMAKTOOLIK



FREDDY MURRAY, GARRICK TAKAK



GARRICK TAKAK

SOMETIMES TRADITIONAL LAW AND WESTERN LAW ARE THE SAME

“Our elders and folks, they always told us not to get what we don’t need. We select what we need and not over shoot what we don’t need. You don’t kill them and leave them. You must get only what you need.”

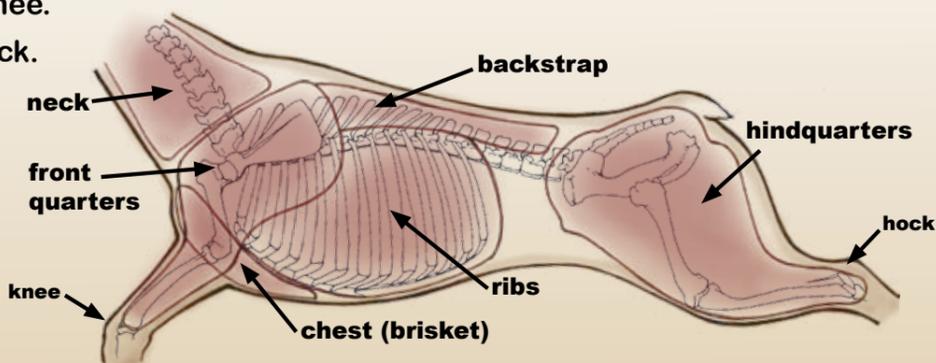
—Daniel Sipahk Foster, Sr., A Selawik elder

Some people hunt for meat, some people hunt for trophy antlers, and some hunt for both, but the law about caring for the meat is the same for everyone.

If you shoot a moose, caribou, sheep or muskox, Alaska State law requires that you salvage:



- All of the neck meat.
- All of the chest meat (brisket).
- All of the meat of the ribs.
- The front quarters to the knee.
- The hindquarters to the hock.
- All of the meat along the backbone (backstrap) between the front and hindquarters.
- All of the meat must be suitable for human consumption.



“We were brought up to respect the land and subsistence living, and our natural resources. We listened to our elders, and you didn’t waste caribou. When I go out and see animals wasted it hurts me, it hurts you, and it also hurts the future of the caribou.”

—Jacob Ahwinona, Nome Elder

WORKING FOR YOU & CARIBOU - PLEASE JOIN US! ALTERNATES NEEDED!

Wainwright, Atqasuk, Barrow
Nuiqsut & Anaktuvuk
Point Hope & Point Lay
Kivalina & Noatak
Kotzebue
Buckland, Deering & Selawik
Lower Kobuk
Upper Kobuk
Koyukuk River
Middle Yukon River
Northern Seward Peninsula
Nome
Elim, Golovin, White Mountain
Southern Seward Peninsula
Reindeer Herders Association
Conservationists
Hunting Guides
Transporters
Anchorage Advisory Committee
Fairbanks Hunters

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Bob Hannon, 963-3221
Joe Schuster, 248-3181 or 301-2638
Steve Flory
vacant

The following agencies support the work of the Caribou Working Group, and provide technical information to the group, but they are not voting members.

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Bureau of Land Management, Fbks. Shelly Jacobson, 1-800-437-7021 or 474-2200, shelly_jacobson@blm.gov

**NEXT MEETING
DEC 10 & 11, 2008
DIMOND CENTER
ANCHORAGE**

PLEASE BRING ANY QUESTIONS OR CONCERNS YOU HAVE ABOUT CARIBOU TO:

- Any of the representatives on the Caribou Working Group
- Roy Ashenfelter, Chair, 443-4323, rashenfelter@kawerak.org
- Phil Driver, Vice-Chair, 664-4524 or 441-0379

PLEASE BRING ANY COMMENTS OR SUGGESTIONS FOR 'CARIBOU TRAILS' TO:

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