

# THE ONGTOWASRUK HERD OF WALES, ALASKA<sup>1</sup>

**Davis Ongtowasruk**

PO Box 535, Wales, AK 99783

with contributions by Faye Ongtowasruk, Amber Lincoln, and Patrick Plattet

## ABSTRACT

The Kinigmiut, or Wales people, have played a leading role in Alaska reindeer herding since the late nineteenth century. When reindeer were first brought to Port Clarence in 1892, territorial schoolteacher Tom Lopp encouraged the new industry and found ways to involve young Inupiaq men he knew from Wales (Fair 2003:49). In the first three decades of herding in Alaska, young Kinigin leaders, among others, worked as apprentices first to Saami herders from Norway who immigrated to Alaska to teach reindeer husbandry and then to Inupiaq herders who had been promoted to chief herder positions. The apprentices earned reindeer for each year they worked and built up their own herds. In 1927, the U.S. Reindeer Service implemented a new policy in which individual reindeer owners were encouraged to incorporate and form large reindeer companies (Simon and Gerlach 1992). The Cape Reindeer Company was incorporated in the Wales region. But like other reindeer cooperatives in the 1940s, the Cape Reindeer Company suffered reindeer losses and overvalued ownership shares (Olson 1969). After the company disbanded in the 1940s, reindeer herding ceased in Wales for over two decades. In the mean time, the Bureau of Indian Affairs (BIA) assumed responsibility for herding range management and implemented the Reindeer Revolving Loan program, in which deer were loaned and grazing permits allocated to Alaska Native individuals. As part of this program, the BIA established a “model herd” in Nome in 1965. Davis Ongtowasruk’s brother, Norman Ongtowasruk, participated as an apprentice and received a loan of 500 reindeer in 1971.

## THE BEGINNING OF REINDEER HERDING IN WALES

**Davis Ongtowasruk (DO):** Back when reindeer were first introduced, the people did use sled deer. My cousin in Wales does have a harness that was made by his grandfather, which his father kept. Skis and snowshoes were also used, as well as dog teams. In the history of herding in Wales there were many different owners in the community with different earmarks. Everyone had their own earmark. The more time they spent with the reindeer, the more they earned. That’s the way I understood it. That was how they kept the reindeer company, the Cape Reindeer Company.

Traditional food from the sea always subsidized [reindeer herding], and this also played a role in losing the herds in the past. They [Inupiat reindeer herders and owners] were gatherers of subsistence food. They would do a lot of migrating with the seasons, to where wildlife was. People would be in between marine mammal hunting and fawning season. They would have played a bigger role [in the herding] if they had [had] a larger ownership [of the herd]. But there might be other subject matters that played a role [in the decline of the Cape Reindeer Company]. I think caribou had a big impact also. Once the caribou

start coming in, there's nothing we can do to stop them and I think that's what happened in the past.<sup>2</sup>

**Faye Ongtawasruk (FO):** A long time ago, when Clarence [Faye's late husband] was a little boy, [his] parents used to [live] year-round in the tent, near Ikpik, Alaska. He used to tell me. I think that's why they survived from epidemic flu—those who took care of the reindeer—because they never mixed up with the people from the village. Lots of people died [from the 1918 influenza epidemic].

**DO:** [In Clarence's time] the reindeer were always with humans. Deer were also more tame from being with the people twelve months a year. But interbreeding with caribou did happen, and to this date, we do have some half caribou and half reindeer. So I noticed a change in the herd's bloodline due to interbreeding. Even though we have [snow]machines, the interception of caribou cannot be controlled.

**Amber Lincoln (AL):** Do you think that the reindeer are less tame because of inbreeding with caribou?

**DO:** It's probably because we're not with [the reindeer] more, like we should be. Because we could just go

out there, ride, check on them, look at them. It's [from] not being with the human herder. [Being] with [reindeer] is most important to making them used to being around people.

### DEVELOPMENT OF THE ONGTOWASRUK HERD

**DO:** Over the years the Ongtawasruk herd had three owners, my late brother Norman, my father Clarence who passed in 1992, and my mother Faye. Due to her age she transferred ownership to me in November 2012 (Fig. 1). Our herd had two different types of ear tags, but the ear-mark never changed. Our first color tags were white, then pink Temple Tags were issued.

How my family acquired the reindeer was through the BIA Reindeer Loan Program, which was 500 deer. I thought 500 was a fair number for our family and that was the number the BIA gave to every loan. If [any reindeer] dies on the trail to Wales, that [reindeer], they don't return. I think they just lost a couple. It was a revolving loan



*Figure 1. Davis Ongtawasruk handling a reindeer in his family's corral in Wales, Alaska, 1993. Courtesy of Faye Ongtawasruk.*

program. When we returned the loan, Tom Gray was the next person applying for it and he got the loan.

**FO:** When [Norman] was growing he stayed in Nome with Johnson Stalker family, he was in training.

**DO:** They used to have a model herd in Nome, owned by the BIA, and in that training, the herders learned to take care of the reindeer and they would spend time with them. There are even old posts that trainees used to use. They had a rope corral, that's how tame, how controllable, the reindeer were. Whenever it got foggy he would put the reindeer in the rope corral and they would stay there. That's what my other brother told me because he used to go spend time with my oldest brother [Norman] in Nome. That old rope corral is between Nome and Teller on the highway. You can see it from the road. I don't know if the posts are still standing or not but I've seen them there before. Right at Tissuk River.

**AL:** And how many years did he do that?

**DO:** I have no idea. I can barely recall Norman spending time there. I was little but he had to spend a year or two training, and everything they did was by foot. When my oldest brother first started herding his main transport was walking during the summer months and snowmobiles in the winter. In the winter, he still had to walk home due to unreliable machinery. Nowadays we have GPS technology, satellite phones, more reliable snow machines, four-wheelers, and if available, helicopter charters for summer round-ups.

## USE OF TECHNOLOGY

Herders in Northwest Alaska have worked with reindeer biologists and specialists from the University of Alaska Fairbanks to develop technology to assist the herders, including use of satellite collars so herders and biologists can track reindeer and caribou (Finstad et al. 2006). Davis describes how he uses this technology to herd.

**AL:** Do you guys use GPS on your snow machine? Or do you know where to go?

**DO:** I know where to go. I usually don't turn on my GPS unless I feel lost. I know where that signal is, it will show on the map, we've got different signals for each collar: triangle, square, circle, octagon, and star.

**AL:** So you can look at the computer and check the GPS and drive right up to the herd?

**DO:** Yeah.

**AL:** How many [reindeer] are collared?

**DO:** Seven.

**AL:** So even when you're not physically out there, you're still tracking them?

**DO:** I figure out the location of the herds when I'm not able to visually see them. I could monitor their location as far as whatever data I've got on the computer. We've got to have a password to receive this [information] and only the reindeer herders have that password. It's not publicly [available].

I usually like to keep updates on them, their location. Even right now, when I can't get out there, I got them. Basically they're down on the southern part of our coast, and that's usually a pretty safe area for us.

Each collar gives out a signal every five days and they're within a quarter mile of that GPS location. They could move because our data is one day behind.

**AL:** Do they often move within a day?

**DO:** [It] depends on predators [or if they] look for good feeding areas. One day I noticed, they moved 15 miles just looking for food. I think that was after a good rainfall this winter. They were looking in the higher elevations.

**AL:** How's the vegetation?

**DO:** It's pretty good; the only thing is that we're getting more and more late rainfalls that will freeze up their grazing areas.

**Patrick Plattet (PP):** So you were saying that you prefer to travel at night because it's easier.

**DO:** In the spring, when we have twenty-four hours of daylight, I travel at night. That's when the temperature drops and the snow gets more compact. When you get sunshine like this, it will start melting and it gets really hot. It puts a lot of stress on the machine and it tends to make the track spin out. I use more gas during the days when the snow gets soft and I've also got to cross creeks, water starts running. I've been lucky so far. I've even used a snow machine without snow on the ground. I travel 100 miles; I used to go 30 miles up, 70 miles back, zigzagging. When the deer start to get tired, I've got to be careful how much gas I have in my tank. I don't try to use a sled, because the snow is so soft. That really bogs me down, soft snow.

[Today, Davis mostly relies on tracking collared animals through GPS technology on his computer and by following them physically with snow machine. But when the herd numbers were as high as 2,000 animals—when his father was alive—they would hire helicopters to round up the reindeer for corralling in June (Fig. 2). After the Western Arctic Caribou Herd migrated into the Seward Peninsula and Norton Sound (Burch 2012), the



*Figure 2. Donny Olson and Davis Ongtowsruk taking a break from flying in the helicopter around Wales, Alaska, 1993. Courtesy of Faye Ongtowsruk.*

Ongtowsruks lost a number of reindeer to the caribou herd. This migration of caribou had devastating effects on many of the region's reindeer herders (Finstad et al. 2006; Schneider et al. 2005). Davis remembers when the caribou began entering the Wales region.]

**DO:** We used to own over 2,000 at one time before the caribou took the remainder of what we had. We were down to 400 at one time. In recent years caribou migration has wiped out neighboring herds in my area. Somewhere in the 1990s or late 1980s, because I remember telling my dad there were caribou in the herd. One or two I exterminated. They'd be the ones always leading the herd. Usually they'd be on the left side, running single file.

**AL:** And can you tell them apart, physically?

**DO:** Yeah, their ears are real pointy and depending on the age of the animal, they're taller. You could see they don't have earmarks. They're real easy to [spot] because they don't seem to want to run in a bunch. When we're driving reindeer, they like to band together and run as a whole herd. It seemed like the leader of the caribou will be standing single file by itself. When they're fresh and strong, ready to run full power, they would be the fastest ones within the herd and they wouldn't have earmarks. That's how I pretty much know.<sup>3</sup>

**AL:** So do you shoot those ones?

**DO:** Yep. Protection of the herd, we can do that, as far as wildlife goes.

**AL:** So what's the biggest challenge right now?

**DO:** Caribou and wildlife. We get more wolves and everything else following the caribou, different types of animals. One time I found one wolf and all it did was eat the tongue [of one of our reindeer], I found the wolf tracks and I almost got it, but it ran away.

**FO:** Even sometimes ravens kill the young fawns. Those ravens are no good for fawning; they eat the eyes. I was so sorry for the fawns when ravens play with the fawns. You know when they're young they're really helpless.

**PP:** Among the 800 reindeer you have now, are there any special ones? Do you recognize them or give them names?

**DO:** You got to be with them day after day to do that. But I do recognize some of them. I gave one old bull a name, Thumper, because it had a limp on the right side. My dad or my oldest brother used to have one named "Ear Mountain Bull." We used to always notice that one because of its color and size. And we had another one named "Willy," darker color. He was standing out in the herd; a good-size animal, a good breeding animal.

## HERD MANAGEMENT

**PP:** You mentioned the size of your herd, I think you said about 800?

**DO:** Yeah, by approximate guess.

**PP:** Do you keep a count? Do you try to keep a good count?

**DO:** Yeah, we try to if they can get in the corral. But without the helicopter, we aren't going to get everything in, the way our corral is designed.

**PP:** What is your corral made of?

**DO:** Driftwood and wire fence, about 4-by-4-inch mesh.

**AL:** Who made that?

**DO:** Dad made the basic rebuilt, but my oldest brother made the first one. If you go to Wales you would see where the first corral was placed by the different color of the grass, in the pattern of the growth.

**PP:** And then it was rebuilt in another location?

**DO:** No, just a little bit [farther] down the beach. And our chute did wear out so my other brother he had to make a new one. My first brother, he somehow made it [the chute] fluted on the bottom, at the ankle, so the reindeer had less chance of turning around. We had to skip [shuffle] through that chute, [you could not lift your feet out of it]. That was how good of a design he made. Now days, we've got our problems, they always turn around when they see our heads or bright-colored jackets or something (see Fig. 3).

**PP:** They would try to escape.

**DO:** They'd try to go back in the pocket, making it a little bit more of a chore.

**PP:** Does the whole herd fit in the corral at once?

**DO:** No, we need to cut the herd in half. Because my father did make it more oval instead of round, we can't put any more than 500 in there or we try not to, especially in the past few years. But I did put a few posts in there, so I'm going to try a bigger herd, if we can drive them in there. I might phone a helicopter service, but it's [expensive].

**AL:** And you guys corral in June, right?



*Figure 3. Ongtowasruk corral chute with crew in Wales, Alaska, 1993. Courtesy of Faye Ongtowasruk.*



*Figure 4. Ongtowasruk corral crew in Wales, Alaska, 1993. Courtesy of Faye Ongtowasruk.*

**DO:** Middle of June or any time after middle of June when the corral is free of snow.

**AL:** And how long does corralling take usually?

**DO:** Depends on how many animals we put in the corral. We'd have a line of boys ready to wrestle, when they're too many [reindeer], too many to wrestle, or if we're short on help, we utilize the squeeze chute but it's a little slower. We usually wrestle the fawns, though.

But just over night. Sometimes six hours. I think I used to calculate, 100 [reindeer] an hour. A little slower if we use that squeeze chute. My father used to always charter a plane and get help from different villages, mostly from Teller. He'd send for at least five guys. We still send for a couple of people from Teller and Brevig from time to time (Fig. 4).

[A number of tasks take place during corralling, including counting, castrating, tagging, and "de-horning" the reindeer. Vaccinations and other veterinary care are also given to reindeer at this time.]

**AL:** Do you guys hire people or you pay them with meat?

**DO:** Usually, the younger ones nowadays just prefer cash. Some older people, long ago, they'd be paid with meat because that was their staple food.

## SELLING MEAT

**AL:** How many reindeer do you sell, how many do you cull, you said before maybe 20 [to] 50?

**DO:** It depends on orders, so I really couldn't give a real number. We used to have a meat buyer based in Nome, a reindeer plant but they shut down and sold that processing plant to the fish company.

**AL:** So now you could only sell meat in the village [i.e., Wales]?

**DO:** I do take orders from other villages.

**AL:** How does that work? Would they come and get the animal from you and process it after it was killed?

**DO:** Yeah, we'd gut it out, skin it out, we'd package it with meat wrap, put it on a plane and send it freight collect. Everything goes freight collect that they order.

**PP:** What reindeer do you choose when you slaughter?

**DO:** I would prefer a steer, a castrated bull.

**PP:** How old?

**DO:** Usually I try to get them less than a year or two years. And some of them prefer to eat the female meat over the male [meat]. They do have a different flavor. It's

noticeable, even my mom knows it. She'd always ask me, is that a bull?

**PP:** And of course you have to be careful because you can't take too many female reindeer out of the herd, if you want to regenerate.

**DO:** I always [take the] older females, I don't want to exterminate the fertile ones.

**PP:** Is the price the same?

**DO:** They're all the same, except the antlers. Depends on the time of the season, when we ship out the antler to the Koreans. We've got our buyer in Anchorage.

[Velvet antlers are harvested in June, immediately frozen, and then shipped to buyers who sell the product to Asian markets (Bucki et al. 2004). It is then processed into a tonic, which is considered by some to restore the body and reduce signs of aging (Robbins 1997).]

**PP:** When you have to sell meat, take a reindeer and slaughter it, how do you do that? Do you use a firearm?

**DO:** Yeah.

**PP:** So you first take that reindeer out of the herd?

**DO:** Scope them out and shoot them. I prefer to get them in the head, no body shots. I'll waste the meat if I get a body shot and they'll be all bloody. Some of them do not appreciate it, bloody meat.

**PP:** Do you use a lasso?

**DO:** In the corral. If we're going to try and get meat, then when they first come in the corral, we take them. Otherwise, the flavor changes the longer they stay in the corral. They have a bad taste after they sweat, so my dad tells me not to try and run them so hard and make them sweat because their flavor will change.

**AL:** So you shoot the animal and you cut it up and you give them cut up meat?

**DO:** Yeah, or we just sell it by whole, half, sometimes they could go quarter.

**AL:** Do you ship it frozen?

**DO:** Yeah. For everybody frozen, when it start[s] warming up in April, it would be soft but I would just cut it into smaller pieces, box it up and cellophane bag it, tape over it and the airline would take care of it. I did that a few times in April.

**AL:** You don't kill them in June?

**DO:** We could.

**AL:** How do you keep them cool?

**DO:** Freezer, chest freezer, I usually cut them up and put them in Ziploc bags. Package them and freeze them.

## USING REINDEER MEAT AND HIDES

**AL:** And how many do you guys eat just for your family?

**DO:** I don't know, it depends on what we want to put in our stomach, I guess. I like to change my diet, instead of reindeer day after day. But I could eat it every day if I have to. Right now, I could eat quite a bit of it. I was at Nome before I came here and I said, "I want to have reindeer soup. Go get some" and I made some.

**PP:** How do you eat reindeer meat, how do you prepare it?

**DO:** We boil and roast it and cut it into steak, make soup out of it. We boil bigger chunks and dip it in seal oil.

**PP:** Do you do anything with the bones? Do you eat the marrow?

**DO:** Oh yeah, that's a delicacy.

**AL:** What about the heart and liver? Those are special foods?

**DO:** Yeah, heart, liver, tongue.

**FO:** Seems like I fry liver.

**DO:** And that stomach, the "bible" or the "book," it's got a lot of folds in there. It's their digesting part, right next to the rumen, attached to the rumen. It used to be a delicacy for elders. They try and save them for older people. They used to call it "old people's food." I know you got to clean it out before you boil it.

**PP:** Do you eat some parts raw, sometimes?

**DO:** Yeah. You could eat them raw, frozen. We use fat for Eskimo ice cream, you might have heard about that.

**FO:** Out of reindeer fat, I make Eskimo ice cream. I mix it with salmon berries, sometimes just the blackberries or blueberries mixed with blackberries and cranberries. We mixed them up with our hands, that reindeer fat is really good.

**PP:** And do you do that for special occasions?

**DO:** The reindeer fat is used for Eskimo ice cream, *gamaamaq*. Seal oil and water is whipped into a cream, [and] berries or plants are added to the cream. We use it for special occasions like birthdays, feasts, or gatherings.

**PP:** Do you keep the fur?

**DO:** I do sometimes, there really doesn't seem to be a market for that. But I do dry some out and keep some handy just in case somebody wants some.

**PP:** Do people still process the fur?

**DO:** Nope, I haven't seen that introduced to the herders. I'm pretty sure they could make some good deer hide, though.

**AL:** Shishmaref never tanned reindeer hide?

**DO:** One time I brought 30 hides. My brother-in-law, he was managing the plant over there.

**FO:** When my mother was alive, she used to make mukluks out of sealskin for reindeer herders.

**PP:** And those are particularly useful in spring. When the snow melts, the boots done out of sealskin?

**DO:** Yeah the bottoms, the soles, Mom used to use male sealskin, for the purpose of waterproof boots. Sealskin is more waterproof than reindeer. And then the upper part would be sealskin or reindeer, if they do have the fur. They used to even use calfskin. In them days, they preferred the white or spotted [reindeer fur] for mukluks.

[But today], I use boots made by manufacturers instead of mukluks.

**AL:** Would that mobile slaughterhouse be useful for you?

[The reindeer herders of Northwest Alaska have worked with University of Alaska scientists to develop a mobile reindeer-processing unit. This mobile slaughterhouse would enable herders to butcher reindeer that could be U.S. Department of Agriculture (USDA)-inspected and approved meat, which is worth more money and can be sold commercially.]

**DO:** I'm thinking about it but I sure hate to see higher priced meat for Native people. I see this processed meat on the market that's inspected in our village. They'll have bags, \$17 a pound. I know it's just so ludicrous though because [reindeer herding] is supposed to be there to help our people, not make them pay such a high price for our product. And I feel bad for our people when they buy that inspected meat for just stew meat.

I brought the price of meat up a little bit over the years as the cost of living increases because I'm not even getting a gallon of gas per pound of meat. [But] I think the product helps them [Wales' residents]. They'll buy it in our community anyway; they don't need to pay the freight. They make a request for an order and I try and get it if I can.

## ASPIRATIONS FOR THE FUTURE

**AL:** So, Davis, what do you hope will happen with the herd?

**DO:** I just want to try and keep it continued at least in our community, even if we lose our herd. I would want to see somebody try and obtain reindeer if anything is lost. Either here or another village, we could try to re-establish a herd. Try to keep [reindeer] in the communities with some

type of product [that] they can buy and hopefully save a little bit. Without having to fly food in, they could save a little bit of money and it might be a little bit more healthy.

**AL:** Who will herd after you?

**DO:** I'm not real certain, as long as I have somebody interested that could fix things and make sure the corral is operable. They have to do it at their own willingness. That's pretty much what I was trying to do. I wasn't the owner when my parents had the herd. I did it for them, because I had interest. Hopefully, I can find another person who would have the capability to do things on their own without being told. If they will enjoy it. Probably one of my nephews. But I would prefer our herd name not to change. I would always like it to be Ongtowsruk. That would be my request for our future, if the herd will survive in the long term.<sup>4</sup>

## NOTES

1. This paper is compiled from three sources (listed at the end of this note), primarily Davis Ongtowsruk's memories and experiences of working with his family's reindeer herd in Wales, Alaska. He is the current owner of the herd. In March 2013, Ongtowsruk gave a presentation in the *Ranges of Uncertainty* panel at the Alaska Anthropological Association meetings in Anchorage. Ongtowsruk outlined the history of his family's involvement with herding and described contemporary herding techniques, innovative technology, and corralling methods. He also highlighted challenges facing herders in Northwest Alaska. Shortly after the meetings, Ongtowsruk and his mother, Faye Ongtowsruk, sat down with panel conveners Plattet and Lincoln in Anchorage to elaborate on these topics. This paper is excerpted from this ninety-minute discussion. To elaborate on topics within the discussion, Lincoln added sections of Ongtowsruk's public presentation. In April 2014 in Wales, Alaska, Lincoln and Ongtowsruk made corrections to the compiled paper and added details for clarity. Lincoln's editorial additions are indicated with brackets.

Ongtowsruk, Davis

2013 "The Ongtowsruk Herd." Paper presented at the Alaska Anthropological Association meetings, Anchorage.

2014 Taped interview. A. Lincoln, interviewer. Wales, Alaska. 3 April. Transcribed by A. Lin-

coln. Transcription on file with interviewer, University of Alaska Fairbanks.

Ongtowsruk, Davis, and Faye Ongtowsruk

2013 Taped interview. A. Lincoln and P. Plattet, interviewers. Anchorage, Alaska. 25 March. Transcribed by A. Lincoln. Transcripts on file with interviewers, University of Alaska Fairbanks.

2. Discussing early twentieth-century reindeer herding in the Barrow region, Karen Mager (2012) demonstrates that herders identified reindeer emigrating to caribou herds as the most serious challenge to herders. Focusing on the Seward Peninsula, Schneider et al. (2005) also stress the difficulty caribou herds pose to past and current reindeer herders.
3. Descendants of herders in the Barrow region also distinguish caribou from reindeer based on certain traits (Mager 2012). Many of these traits are similar to the ones noted by Ongtowsruk.
4. Davis Ongtowsruk's discussions demonstrate the breadth of knowledge required of modern reindeer herders in Alaska and highlight the challenges they face. Many of the topics touched on in this paper warrant more attention. We hope that Ongtowsruk's perspectives add to the conversations about indigenous strategies for ensuring sustainable northern communities.

## REFERENCES

- Bucki, Carrie, with Greg Finstad, and Tammy A. Smith  
2004 *Reindeer Roundup: A K-12 Educator's Guide to Reindeer in Alaska*. AFES Publication MP 2004-07. Reindeer Research Program, University of Alaska Fairbanks.
- Burch, Ernest S., Jr.  
2012 *Caribou Herds of Northwest Alaska, 1850-2000*. Edited by Igor Krupnik and Jim Dau. University of Alaska Press, Fairbanks.
- Fair, Susan W.  
2003 Early Western Education, Reindeer Herding, and Inupiaq Drawing in Northwest Alaska: Wales, the Saniq Coast, and Shishmaref to Cape Espenberg. In *Eskimo Drawings*, edited by Suzi Jones, pp. 35-76. Anchorage Museum of History and Art, Anchorage.

- Finstad Greg L., Knut K. Kielland, and William S. Schneider  
2006 Reindeer Herding in Transition: Historical and Modern Day Challenges for Alaskan Reindeer Herders. *Nomadic Peoples* 10(2):31–49.
- Mager, Karen H.  
2012 “I’d be foolish to tell you they were caribou”: Local Knowledge of Historical Interactions between Reindeer and Caribou in Barrow, Alaska. *Arctic Anthropology* 49(2):162–181.
- Olson, Dean F.  
1969 *Alaskan Reindeer Herdsmen: A Study of Native Management in Transition*. Institute of Social, Economic and Government Research, University of Alaska, Fairbanks.
- Robbins, Christopher S.  
1997 An Overview of World Trade in Cervid Antler with an Emphasis on the United States and Canada. Traffic USA Report for the World Wildlife Fund. Online at <http://www.traffic.org/mammals/>
- Schneider, William, Knut Kielland, and Gregory Finstad  
2005 Factors in the Adaptation of Reindeer Herders to Caribou on the Seward Peninsula, Alaska. *Arctic Anthropology* 42(2):36–49.
- Simon, James, and Craig Gerlach  
1992 Reindeer Herding, Subsistence, and Alaskan Native Land Use in the Bering Land Bridge National Preserve, Northern Seward Peninsula, Alaska. Report to National Park Service, Alaska Regional Office, Shared Beringian Heritage Program, Anchorage.