

# Reindeer: Vehicles of Change

by Jim Dau

In Alaska, reindeer are known in both fact and fancy. To most Alaskans, reindeer still equate strongly with Santa. To some sportsmen, they are a small caribou-like critter that cannot be hunted. For rural residents of northwestern Alaska, reindeer mean good meat! For some, reindeer also mean money.

Mention reindeer to a herder and watch his eyes go distant. His mind is speeding over ridges and tundra that he has searched many times, and his eyes are silently saying, "I wonder where the deer are...?"

"Reindeer" means different things to different people. In northern Scandinavia, "ren," or reindeer, is almost synonymous with an entire culture--the Saami or Lapps--who originated reindeer husbandry thousands of years ago. In the Soviet Union, "reindeer" describes both wild reindeer, the equivalent of North American caribou, as well as semidomestic.

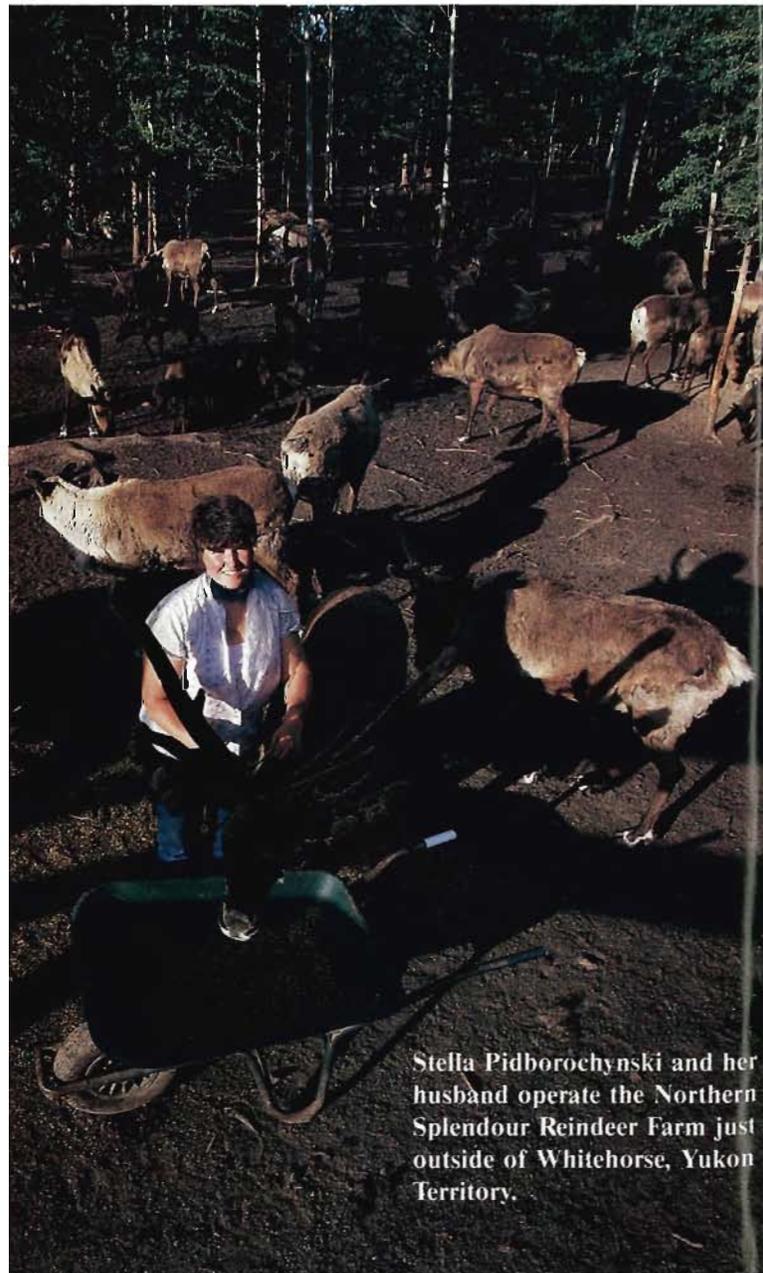
## History

Siberian reindeer were first introduced to Alaska near Teller, on the Seward Peninsula, in 1891 by Reverend Sheldon Jackson. From 1892-1902, approximately 1,280 Siberian reindeer were introduced into Alaska. Lapp herders were also brought to Alaska to teach reindeer herding to Alaskan Eskimos.

At that time, caribou were scarce and moose nonexistent in northwestern Alaska. Important marine mammals, such as bowhead whales and walrus, had been depleted by commercial hunting. Also, whalers, miners, and missionaries were introducing western culture to the Eskimos. Jackson saw reindeer as a stable source of red meat for residents of northwestern Alaska that could also serve the Eskimos as an avenue into the cash economy.

Jackson's visions of helping the Eskimos were quickly confounded. Prior to the 1920s, the Lapp herders and mission churches benefited more from the fledgling industry than the Eskimos. During the 1920s, white entrepreneurs came to dominate the industry.

Despite the inequitable ownership of reindeer among Eskimos, white businessmen, and mission churches, reindeer thrived in Alaska. At their peak in the early 1930s, federal records indicate there were over 640,000 reindeer in Alaska.



Stella Pidborochynski and her husband operate the Northern Splendour Reindeer Farm just outside of Whitehorse, Yukon Territory.

**Top: Villagers from Shaktoolik prepare to “fish” reindeer from the main holding pocket into the “warm up” pockets (they’re called warm up pockets because when herders standing at the chute get cold during a winter handling, they move to the smaller pockets where action gets the blood moving).**

**Bottom: Cliff Weyiouanna moving reindeer near Shishmaref; the “steam” from the deer indicates extreme cold.**



All photos by Richard Hartmier



Although it is generally accepted that this estimate is high, there is no doubt that reindeer were extremely abundant. Herds were located along the entire coast from the Mackenzie River to Bristol Bay, on many islands from the Aleutian Chain to the Bering Sea, and in interior Alaska as far south as Cantwell.

The 1930s marked the beginning of a 20-year period of decline for Alaskan reindeer herds. The decline was partially due to natural factors.

As the reindeer population increased in Alaska, so did populations of predators. Herds which had originally sustained only limited predation lost increasingly more reindeer each year to bears and wolves. The high density of reindeer caused overgrazing and may have predisposed the herds to the effects of parasites and diseases.

During the 1930s, the number of caribou increased and caribou began to reoccupy traditional ranges where they had been absent for years during the low period of their population cycle. Reindeer herds had been established in much of this “vacant” caribou range. Migrating caribou swept away entire herds of reindeer as they passed through their old homelands.

The decline in number of reindeer was partly due to the political and financial upheaval that characterized the reindeer industry in the 1930s as well. Dealings with shrewd non-Native businessmen drove local Eskimo herders to despair. Herding practices suffered and some reindeer simply wandered at will. This compounded the effects of overgrazing, losses to predators, and disease. It also generated many controversies regarding the ownership of reindeer.

Markets for reindeer that had been established in the lower 48 states collapsed due to the Great Depression, and local markets were inadequate for the number of reindeer being produced. Tensions between Native herders and non-Native reindeer businessmen intensified.

The magnitude of the reindeer decline was also, in part, the result of poor recordkeeping. As reindeer husbandry deteriorated, the proportion of deer in each herd that escaped corralings increased. “Estimates” of herd size tended to be liberal.

In 1937, as a result of lobbying efforts and a complex federal investigation, Congress passed the Reindeer Act. This act made it illegal for anyone less than 25 percent Alaskan Native to own Alaskan reindeer. In 1940, the federal government bought all of the reindeer owned by non-Natives and redistributed them to the Native herders whom Jackson had originally intended to benefit.

By 1940, the herds had declined to approximately 250,000 reindeer, and by 1950 only 25,000 remained. Since then, the number of reindeer in Alaska has stabilized at approximately 25,000-30,000.

Currently, most reindeer occur in the vicinity of the Seward Peninsula where 13 herds are located. There are probably fewer than 5,000 reindeer in other herds on islands in the western portion of the state.

## The Difference Between Reindeer and Caribou

Reindeer closely resemble caribou; they are the same genus and species (*Rangifer tarandus*). Even so, there are differences between them.

Most caribou herds are migratory; reindeer are not, though they will make seasonal movements that are modest by comparison. Caribou have longer legs and are rangier than reindeer. As a result, caribou are much faster than their semidomestic counterparts. The coat of most reindeer is nearly identical to caribou; however, reindeer show more variety in color and range from dark brown to white or spotted. Reindeer are privately owned whereas caribou are a public resource.

Reindeer are approximately four to six weeks ahead of caribou in the annual cycle of rut, fawning, and antler shedding. Even so, reindeer and caribou interbreed. Some reindeer/caribou hybrids stay in reindeer herds, but they tend to be more wild than pure reindeer and often join with caribou herds. If hybrids stay with a reindeer herd, they are usually butchered because they are difficult to control. It has never been determined how many hybrids survive in caribou herds.

Mature female reindeer and caribou usually give birth to a single offspring each year. Reindeer fawns are usually black while caribou calves are reddish brown; however, this generalization is occasionally reversed, perhaps as a result of the mingling that has occurred between reindeer and caribou for over 50 years.



reindeer fawn

John Hyde

One of the biggest distinctions that most residents of northwestern Alaska make between reindeer and caribou is that reindeer are much better to eat!

## Reindeer Herding: The Annual Cycle

When reindeer were first introduced to Alaska, Eskimo herders adopted the ways of their Saami tutors. They tamed sled deer and trained herd dogs, kept herders with their deer

almost constantly, and traveled with their herds to live on summer and winter ranges. Today, with the advent of snow machines, airplanes, helicopters, radio telemetry equipment, ATV's. and skiffs with outboards, most herders work out of their villages, although some use permanent camps as well (this change has occurred in Lapland, too).

Reindeer herding is a difficult business. It is fraught with uncertainties about prices, markets, weather, predators, caribou, costs, the availability of equipment and spare parts, and bureaucrats. Most of it is physically strenuous--I never really knew what "walking tired" was until I became a reindeer herder (it's about lots of miles and little sleep).

Reindeer herding means being out when it's cold and windy, finding your way home after the fog has settled in, wet feet, waiting for weather, bugs, and, always, finding the deer. It also means gloriously long spring days filled with sun and the "unk'ing" of newborn fawns, the quiet rustle and clicking of thousands of hooves, and the calls of countless geese and cranes.

Reindeer herding means money: income and expenditures. Most of the reindeer herders I've known couldn't fathom another livelihood, despite occasional grumblings to the contrary. They've all seemed to spend an inordinate amount of time thinking about those long spring days and thousands of reindeer! In essence, reindeer herding means life attuned to the seasons.

## Spring

April through mid-June in northwestern Alaska is a busy time for herders. Starting in early to mid-April, females begin giving birth to their fawns. Like caribou, reindeer fawns can rise on wobbly legs within a few hours after birth. Within a day they can teeter along behind their mother, and after three to five days they can travel with a herd. Reindeer (and caribou) produce some of the richest milk known, so fawns grow quickly.

Herders must guard their herds constantly during fawning because newborn fawns are extremely vulnerable to predators. Brown bears are the most significant predator, although wolves, ravens, wolverines, and golden eagles kill fawns, too. With the exception of wolves and bears, predators primarily take fawns.

In years past, many reindeer herders tended to kill any and all bears that wandered near their herd (it is legal to kill bears in defense of life and property). Today, most herders try to chase bears away from their herds; they kill them only as a last resort.

As a herder, I chased many bears away from the deer, but I remember one bear in particular. It was early afternoon in late April. The sun had climbed high into a cloudless sky making me warm and the snow soft.

As I approached the deer, I wasn't surprised to find bear tracks leading up the mountain. Even from a distant ridge, the tight ball of reindeer and broad swath of tracks left little doubt that a bear had been doing some herding of its own.

I followed the tracks and soon overtook the bear. I kept my snow machine close behind it for several miles as I wanted to leave no doubt in its mind that it had made a serious mistake. The bear tired quickly in the heat and soft snow, so as we crested

a long ridge I stopped my machine to let it get ahead. I immediately lay back on my seat, eager to let my eyes rest on the intensely blue sky and relax from the snow glare.

Far up and directly overhead, thousands of Sandhill cranes spiraled slowly upward on the rising thermal air currents. Although the flock seemed to fill the sky, my attention had been focused totally on the bear so I hadn't been aware of the birds before I stopped. Their calls were musical, especially after the roar of the laboring sno-go. The warmth of the sun (and chronic lack of sleep) combined with the birds' slow-motion soar and calls were mesmerizing. Bliss on the back of a sno-go!

Perhaps 10 minutes had passed when it occurred to me that I should probably make sure the bear was still heading toward the Flambeau River. Rather than the dark spot of bear I expected to see climbing the next ridge, I looked into the little eyes of the bear quietly sitting dog-like about 50 feet in front of my sno-go! His head hung as if slightly bored and wondering, "C'mon...it's gettin' hot out here...we gonna play this game or what?"

During fawning, maternal females move relatively short distances. Males and females without fawns, however, break into small groups and travel extensively as they search for newly emergent vegetation. It is all a herder can do to keep his herd together and in position for the spring handlings.

Beginning in early June, the herds are gathered and driven into corrals for the spring handlings. In the past, deer were rounded up by herders on foot. Now, spring roundups are conducted using helicopters aided by snow machines, ATV's, and occasionally walkers.

Spring handlings are held to mark fawns to their owners, and sometimes to castrate bulls. Ownership is denoted by ear notches; each herd has its own notch which is registered with the Reindeer Herders Association. Spring handlings are also conducted to harvest velvet antlers which are sold to the Orient.

Herders get their herds through the corrals as quickly as possible during the June handlings to minimize injuries, especially to fawns, and to reduce the stress associated with keeping frightened deer in close quarters during warm weather. As a result, spring handlings often become marathons of endurance as people work around the clock to process the deer.

## Summer

Following breakup, access to reindeer ranges is extremely difficult. Unlike the early Saami and Eskimo herders, herders today spend little time on foot with their reindeer (this is now true in much of Scandinavia, too). This isn't because herders have become lazy. It is simply that the demands of the 20th century, even in northwest Alaska, just don't allow the time that it takes to herd on foot.

Once, Johnson Stalker, an old reindeer hand, and I were dropped off to bring in two groups of reindeer to a corral. No helicopter was available, and 4-wheelers had not yet been developed, so we were elected to bring them in the old fashioned way.

Plan A was to fly us out as close to the deer as possible. Each

of us would then drive a herd two to four miles to a pass where we would meet and continue on together. For me, this meant driving my group across the Kougrouk Road and Nome River, then turning them south before they went into the Sinuk drainage. I had a small bunch of deer, perhaps only 100 animals, and many of them were bulls. Small groups of deer are harder to control than groups numbering 400-1,000.

I worked the deer down the hill to the road and they balked. Knowing that a good herder must have more patience than the deer, I waited. I knew that if I kept a little pressure on the group, they would cross the road and river...eventually.

Pretty soon, in a thundering cloud of dust, rocks and noise, up wheeled a microbus thrashed in the style for which Nome's roads were famous. It was almost midnight and the sound really carried. This got the deer's attention, but everything would have been all right if the driver hadn't spotted my deer. When he did, the bus fishtailed to a stop and unloaded about 20 people, all talking loudly and armed with cameras.

I'm sure that everyone there got identical photos of that encounter: small white specks of reindeer heading up a hill with the heels and elbows of a herder in hot pursuit.

Eventually, I caught the deer, turned them around and brought them back down to the road. They balked. You know the rest of the story, only this time the microbus was headed back into town. It wasn't until I had driven the deer to the road for the fourth time that they crossed it.

By some miracle, we stayed out of the Sinuk. When we reached the pass where Johnson was to meet us with his herd, tracks were all that remained. It had taken me four hours to go what we had thought would take about an hour. We walked all that night with Johnson and his deer just one to two hours ahead of us.

When I got to the end of the ridge I was following, the deer stopped. It's always hard to drive deer down a steep slope, and this one was worse because it was covered with alders. I was beat. When the deer started lying down, I figured it was time for a mutual truce and followed suit.

I woke up cold and damp with dew. It was only a couple of miles or so to Fred Norman's camp, and that's where I headed. The deer weren't going anywhere; they were still tired, too. I got to Fred's about an hour after Johnson had arrived.

Fred had spent a lot of years alone. He was as close to a genuine hermit as I've ever known. Johnson had herded with Fred for the old government 'Model Herd' but hadn't seen him in over 10 years. When Fred answered his knock, Johnson said he looked as if he were staring at a ghost!

"Johnson!" he said, "You still alive?!" Long thoughtful pause. "Is James alive, too...?" (James Smith was another oldtime reindeer hand they had worked with.)

Fred barely noticed when I showed up, tired and dripping from wading the Nome River; he had already been overwhelmed for the day. This story has a happy ending: We eventually got the two herds together and through the corral, and Fred, Johnson (and James) are all still alive.

*(Continued on page 36.)*

## Reindeer

(Continued from page 21.)

During the summer, most herders try to keep track of their herds using ATV's, aircraft charters, and skiffs. This is challenging when mosquitoes, warble and bot flies, and other biting insects drive the frantic deer miles in search of coastlines, gravel bars, snowfields and ridge lines where breezes or cool temperature offer some relief. The deer are virtually impossible to control when under severe harassment by insects. Days that are both warm and calm enough for insects to be bothersome are relatively few on the Seward Peninsula, though.

When the deer are free of their insect pests, they feed voraciously on the rich store of the tundra. The fawns thrive and soon venture far enough away from their mothers to enjoy an occasional romp with a buddy!

"I remember watching a bunch of deer on that hill over there one summer," Larry (the herder in Nome) said as we pulled coffee, tea, some leftover moose meat, and a couple of cookies from our sno-go's. "They were mostly laying down or eating a little. Two fawns started chasing each other, first to one side of the herd, then the other. Pretty soon, one of the mothers realized her fawn was missing, so she ran after them to see which one was hers. Then, the other female ran after the three of them looking for her fawn. The fawns kept going back and forth, and every time they did they'd pick up a few more adults. Pretty soon, that whole bunch of deer was running back and forth on the hill, certain that something was after them! Those fawns had a pretty good time!"

Many herders supplement their incomes during summer through seasonal jobs or commercial fishing. During all seasons, herders must juggle their herding responsibilities with subsistence activities. During summer, limited access to the herds may make it easier for herders to accept employment, fish, or pick berries and greens, but it never keeps them from wondering where their deer are.

### Fall

Reindeer begin the rut in late August and September. The rut proceeds unaffected by herding because poor traveling conditions prevent herders from reaching their deer. This is an extremely vulnerable time for herds located near the base of the Seward Peninsula because this is a migration corridor for the Western Arctic Caribou Herd. This caribou herd numbered over 343,000 as of July 1988. Even small segments of the herd can number over 10,000 animals; more than enough to engulf an entire herd of 1,000-2,000 reindeer and take them away...forever.

Once freeze-up occurs and the ground is dusted with snow, herders are out traveling their ranges via snow machine, searching for deer. Most herders put a minimum of 4,000-5,000 miles on their snow machines each winter; some herders occasionally double that! Snow machines used for herding usually last only a year or two years.

Most herders butcher some steers and old females in early fall to satisfy demands for fall-fat meat, and to generate income for new snow machines, parts, etc. Villagers look forward

to the fall slaughter because it means an opportunity for employment, and certainty of good meat.

### Winter

Between late November and the end of January, the herds are again gathered and driven into corrals. Before the deer are brought in, though, days of hard labor are spent shoveling snow from the working pockets, gates, and chute of the corral. Many villagers take this opportunity to earn some money during a period that offers few jobs.

Winter corralings are held to separate deer from neighboring herds which have mixed, to castrate bulls, and to inoculate the deer against parasites and a reproductive disease called brucellosis. As the deer pass through the chute, they are given an annual shot for parasites and their ear tag number is read. If they have not been vaccinated against brucellosis (determined from the university computer recordkeeping system or from a notch on the ear tag), they are inoculated.

After the deer has been marked and inoculated, it is released from the chute. Deer from neighboring herds are released into separate holding pens. Once handling is finished, the neighboring herders drive them to their own range.

Winter handlings are almost as much a social event as a husbandry requirement. The week spent shoveling out the corral gives villagers time to drop by for a visit. Cold temperatures and the nature of the work require men to break for hot coffee, fresh doughnuts, and lunch. The large number of people and huge quantities of food eaten to stay warm and working all day mean that meals are usually prolonged. These activities provide time to talk about snow conditions, subsistence activities, reindeer, and to gossip!

At some corrals, evenings are spent in enthusiastic games of pinochle. The stakes are usually to make and serve morning kuukpiak (coffee) to everyone in camp. This is no small chore when several pots of brew must be served cup by cup through a maze of wall-to-wall sleeping bags ("C'mon, Rudi, wake up! you take cream and sugar?") Worst of all, losing at pinochle means being the first to stir from the deep sleep of physical exertion long before sunrise.

After the winter handlings, herders settle into a routine of keeping their herds together and watching for predators and caribou. Gradually, the days of intense cold and brief daylight warm and lengthen until the snow gets soft and wet. Rivers run full with overflow, geese and cranes arrive in clamoring flocks, and the first wobbly fawns appear to begin the cycle anew.

### Challenges and the Future

A reindeer herder once remarked to me, "Two problems reindeer herders always gonna have: warble flies and bureaucrats..." Other long-standing challenges include conflicts with wildlife, such as predators and caribou, marketing reindeer products beyond northwestern Alaska, and optimal use of range.

Along with these historical problems, new challenges have developed. Helicopters and sno-go's have made it much easier for herders to find and control their herds but have also forced

them to seek ways to minimize stress on the deer. Vaccines and treatments protect the herds from parasites and bacteria but require comprehensive records of inoculations. New markets promise herders added income, but they may require meeting new food quality standards.

My friend's tongue-in-cheek remark about warble flies and bureaucrats was based in truth. Oestrid flies will never be eradicated. However, the physiological costs of parasitism and harassment by adult flies have been substantially reduced by annual inoculations of herds against all parasites, including warble and bot flies. Likewise, government agencies are a fact of life.

Bureaucracies have provided many benefits to the industry, but not without costs. Benefits include: a vaccine against brucellosis; drugs to treat reindeer against parasites; radio-telemetry to locate herds and track movements; range rotation plans; improved corral designs; a computer recordkeeping system; individual consultation on range management; and funding to purchase vaccines, treatments, and experimental equipment such as pneumatic squeeze chutes. The University of Alaska Reindeer Project has been especially active in conducting applied research for the industry.

The costs of dealing with various government agencies include planning handlings to accommodate researchers' schedules, and continually training new agency personnel as they "pass through" the reindeer phase of their professional careers.

Perhaps the frustrating aspect of bureaucratic involvement in the reindeer industry stems from the mosaic of land ownership that has evolved in Alaska over the past 20 years. This has resulted in a nightmare of paperwork that each herder must satisfy to renew his grazing permit.

A single herder may have to satisfy requirements of the Bureau of Land Management, National Park Service, his village corporation, the Regional Native Corporation, and the State of Alaska Department of Natural Resources. In addition, the Alaska Department of Fish and Game, the U.S. Soil Conservation Service, and the Bureau of Indian Affairs restrict the use of wildlife habitat for reindeer herding, limit the maximum number of deer that can be grazed on each range, and dictate the terms to receive and return loans of reindeer, respectively.

Marketing has challenged the industry ever since there were more reindeer than needed to satisfy local demands for meat. The challenges lie in establishing and promoting reindeer meat in areas outside Alaska, areas where people eat little besides domestic beef, pork, and poultry; dealing with the high costs of shipping large quantities of meat from remote portions of a relatively remote state; satisfying state and federal food quality requirements developed primarily for domestic animals in the lower 48 states; developing new meat products and by-products; and overcoming the public perception that eating reindeer is tantamount to eating "Rudolph," "Dancer" or "Blixen."

Husbandry techniques will always challenge herders in Alaska. Alaskan herders were quick to improve upon some of the techniques that were introduced by the Lapps. Corral design is a good example of this. Perhaps one of the newest challenges

is maintaining good husbandry practices while participating on the various boards and committees that herders, as community leaders, usually serve on.

Conflicts between wildlife and reindeer will continue to challenge herders and wildlife managers. Multiple use is a common denominator for federal and state public lands. This means that reindeer will have to coexist with brown bears, wolves, moose, muskox, and caribou. Herders and biologists from the Alaska Department of Fish Game, National Park Service, and Bureau of Land Management are working hard to overcome the legacy of confrontation that characterized their relationship in the past.

Biologists routinely fly over large tracts of land, using radio-telemetry equipment, to monitor the distribution and movements of Western Arctic Herd caribou. They notify the Reindeer Herders Association when caribou are near reindeer ranges and report the location of reindeer when they observe them. In return, herders provide wildlife managers with detailed information on caribou and other species such as muskox or furbearers they encounter on their ranges. Both herders and managers are realizing benefits from the spirit of cooperation that is developing.

Today, nearly 100 years after Sheldon Jackson introduced reindeer to Alaska, the industry is unique in that it is profit-oriented, yet meshes remarkably well with traditional subsistence lifestyles. Reindeer are the best animals, perhaps the only animals, suited for agriculture in northwestern Alaska. The industry is based on a renewable resource--the grazing range itself--for which the deer are uniquely adapted. Therefore, the industry is consistent with Alaska's long-term goal of moving away from a nonrenewable, petroleum-based economy.

Reindeer are part of the fiber that binds villages together, and which makes northwestern Alaska unique. The herders I know are certainly unique! At times, I'll bet even Santa Claus is a bit envious of some of them. I wonder if he knows where his reindeer are right now!

#### Acknowledgements

I would like to thank all of the herders and their families who have befriended me over the years. I'd also like to thank Dr. Bob Dieterich for introducing me to reindeer and the industry. I especially want to thank Larry Davis for letting me follow him and learn about reindeer, herding, and traveling in northwestern Alaska.

For more information on the history of reindeer, see *Eskimos, Reindeer and Land* by Stern, et. al. (1980, University of Alaska, Agriculture/Forestry Experiment Station).

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# ALASKA'S WILDLIFE

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