



When the earth was created, the wolves and the caribou held a big meeting around the Aklavik area. The wolves said to the caribou "Caribou should not be on earth any longer". The caribou responded: "As long as we've been here, we've been good and we've eaten well. We've done nothing to you. We've not destroyed your food. You have lived well off us. So what's wrong with us?" The wolves said: "That's right. There's nothing wrong with them. They don't get in anybody's way. So we shouldn't tell them what to do. Let them graze, and feed, and wander around. Let's not destroy them completely, because in the future we will need them."

from Ékwé Gulí (The Fate of Caribou), told by William Sewi

CARIBOU IN THE SAHTU

If one thing could be singled out that binds the people of the Sahtu most strongly to their land and heritage, it would be caribou. This animal has always been a staple of Dene subsistence, and its seasonal migrations have determined people's movements on the land.

There are two sub-species of caribou in the Sahtu - barrenground, *Rangifer tarandus granti* and woodland, *Rangifer tarandus caribou*. Within the woodland caribou, there are two ecotypes - the mountain and the boreal. Most people in the Sahtu, however, know their local caribou by their herd names such as Bluenose East, Bluenose West and Cape Bathurst (in the barrenland).

BARRENGROUND CARIBOU

Barrenground caribou have long legs ending in large, broad, sharp-edged hooves, which give good support and traction when traveling over snow, ice or muskeg. In winter, the pads between the hooves shrink, and the hair between the toes forms tufts that cover the pads, so the animal walks on the horny rims of its hooves and the hair protects the fleshy pads from contact with the frozen ground.

The colour of a caribou's coat varies seasonally. The old fur that has faded to very light beige over the long winter falls out in large patches revealing a new chocolate brown coat. When the moult is complete, caribou are uniformly dark brown with a white belly and white mane. Adult males also sport a white flank stripe and white socks above their hooves. In the fall, as white-tipped guard hairs grow out through the summer hair, caribou become a more uniform light brown. The exceptional warmth of the winter coat is the result of individual hairs which are hollow. The air cells in the hair act as an insulating layer.

Barrenground caribou have the largest antlers in relation to their body size of any deer species and are the only species in which females grow antlers. Antlers are shed and regrown each year. Calves have short spikes, but as an animal gets older, antlers increase in size and complexity. Adult males have the largest antlers and they may be shed as early as November, just after the rut. Younger males may retain their antlers until the following April, while females lose their antlers after calving in June.

BEHAVIOUR

Caribou are generally silent animals except after calving and during the rut. After calving, cows communicate with their young in short grunts. Males vocalize during the rut with a snorting, bellowing sound.

Another sound which caribou make, though not vocal, is the sharp clicking noise resulting from the movement of the tendons and bones just above the hooves. This noise is heard most clearly on calm cold days as large groups of animals journey across the tundra.

When migrating, they walk at about 7 km/hr, covering between 20 and 65 km a day. When startled, a caribou runs in a loose, even trot. The head is held high with the nose up and the tail erect. When galloping at top speed most caribou can outrun wolves, their major predator, but wolves close in quickly on any animal that stumbles or takes a wrong turn.

Caribou are excellent swimmers. Their hollow hairs enable them to float high in the water and their broad hooves propel them along at speeds of about 3 km/hr.



Bull caribou



top- caribou calf
above - caribou trail

The difference between caribou hide and moose hide is that caribou hide tends to get dried up easily when smoking so it is seldom tanned ...

Some women were telling me that to tan a white caribou hide, it is a lot of hassle trying to work on it. And at the same time, you have to keep it real clean so it won't get dirty.

You work on the hide like you would a moose hide, but you don't tan it. The white caribou hide is used for making white slippers or gloves.

*From oral narratives by Pauline Lecou, Fort Good Hope
From the Committee for Original People's Entitlement collection.*

Some writers believe the word "caribou" was derived from the Micmac "xalibu" which means "the power." The term for caribou varies in the Sahtu from community to community. In Deline, the term is "ékwe" and the people in Fort Good Hope say "éfé." European explorers naturally called these animals reindeer, or simply deer, the terms used for this species in the Old World.

Ékwé Deyúe ?ehdaralə
when caribou changes its clothes

Story told by Deline elder William Sewi

Ékwé (caribou) migrates to the barrengrounds, even though it doesn't have navigating tools. It still travels straight. It migrates to change its clothing, just the way a man would change his clothing when it wears out.

There is a kind of ékwé known in the Deline dialect as *bele yah* (eseleə in the K'ahsho Got'ine dialect). It looks like a two year old ékwé. And it is said that it is the boss of all ékwé.

Bele yah scouts up ahead of the herd. When it finds a good feeding ground, it goes back and rounds up the herd, and leads them to the area. Yes, it is the boss of all ékwé.

It is amazing how straight it travels. They say it is as intelligent as humans.

Along the migration route to the barrengrounds, there is a hill called Radú Dahk'ale (white outcrop). It has been said that this is where Ékwé changes its footwear.

The same as we humans do when our moccasins wear out, so it's been said that Ékwé changes its footwear on this hill. It is said that Ékwé sang a song on this hill. This song was not passed on.

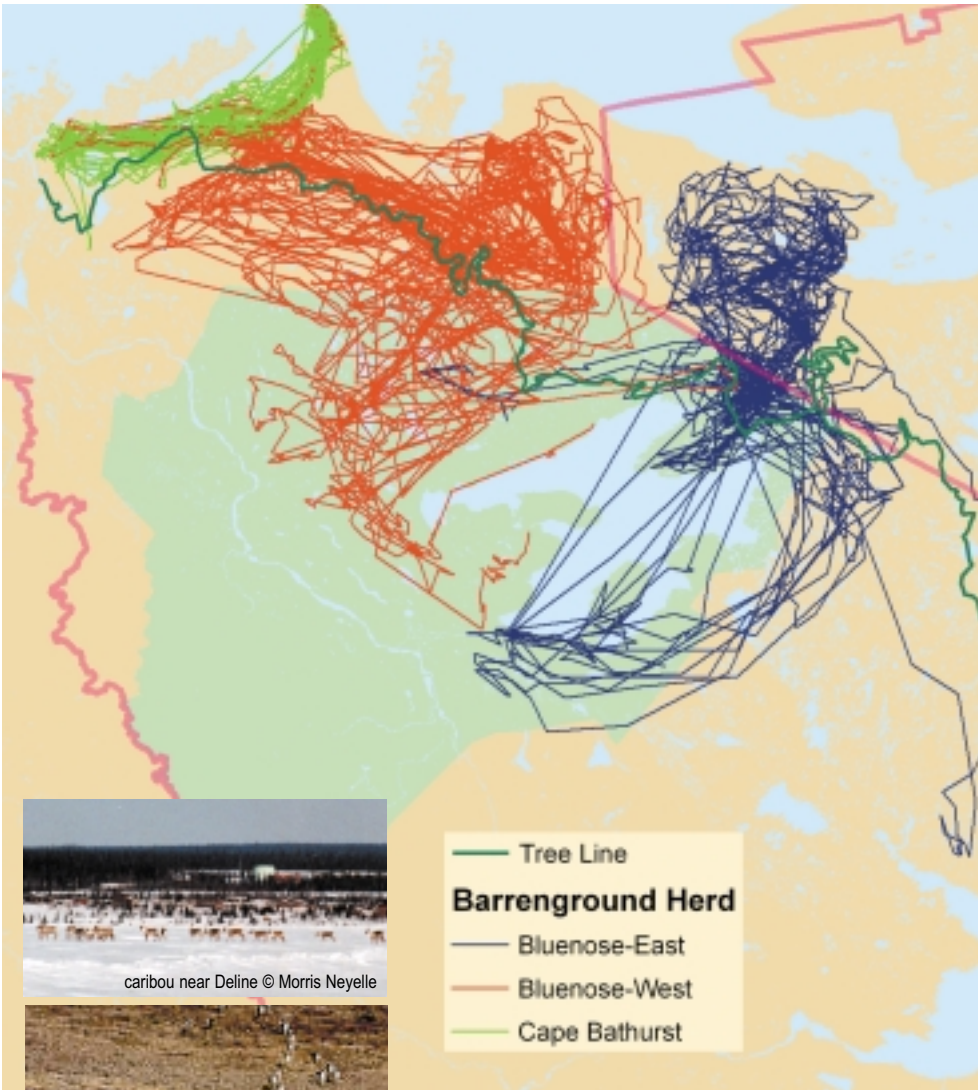
From that hill, Ékwé continues along on the barren-grounds. It goes a long way, all the way to its calving grounds.

It has been said that Ékwé rears its young as people do. When it licks its young one, it is actually changing its diaper.

There is an inscription in the skull of Ékwé. It is written in a strange language. They say that one day in the future, someone will be able to interpret the inscription.

Whenever it rains, Ékwé feeds good, and that's how Ékwé gets fat. Like if we ate dry food, for example, we wouldn't like it! But if the food is boiled, it is very good for us.

Long ago when it rained, people used to exclaim, "Haaay, it's raining! That's great, Ékwé is going to be fat!"



Caribou on the Move

This map of caribou migration patterns over the past five years is the product of a satellite collaring program initiated by RWED in 1996. The project was a model of cooperative management, with the support and involvement of aboriginal representatives. It was co-funded by the Inuvialuit Land Claim Implementation funds, Gwich'in Renewable Resource Board, Sahtu Renewable Resources Board, GNWT, and the Nunavut Wildlife Management Board. The project leaders were Resource Wildlife and Economic Development biologists John Nagy and Alasdair Veitch.

By mapping migration patterns and studying the genetics of samples from caribou antlers that have been dropped by cows on calving grounds, scientists have confirmed the existence of three separate herds in the northwest mainland of the Northwest Territories and Nunavut. These are known in English as the Bluenose-East, Bluenose-West, and Cape Bathurst herds. This map shows the two herds that migrate through the Sahtu Region.

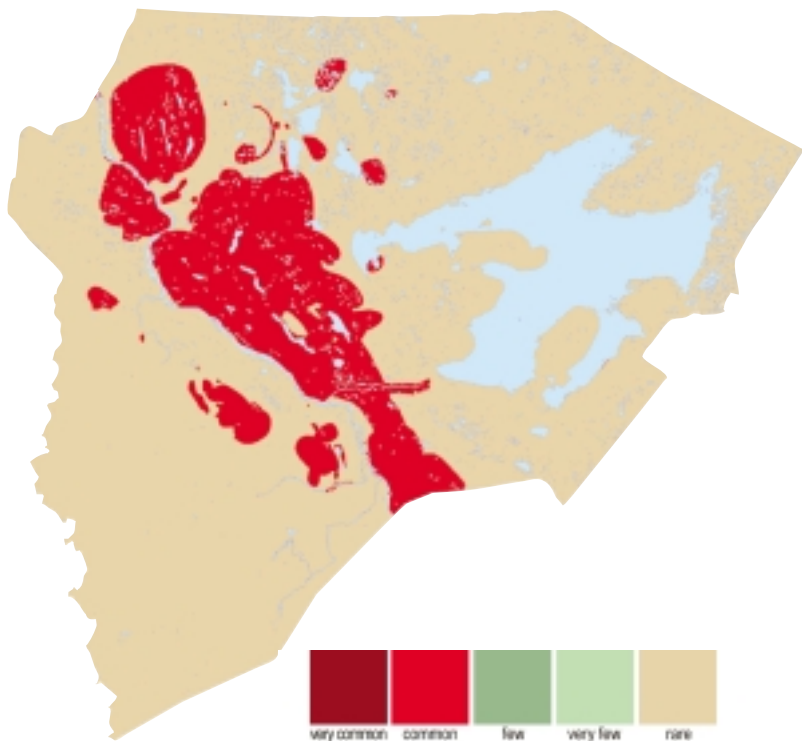
Having sorted out the existence of the three herds, it now becomes possible to get population estimates and other information specific to each herd. Along with traditional knowledge about caribou, this information will assist in monitoring the health of the herds over the long term.

CARIBOU POEMS by Carla Kenny, Grade 5, Deline - 2001

I	II	III
caribou, caribou	we love caribou,	caribou soup, caribou soup
come to my land	we will hunt them,	you are so good
caribou, caribou	we will eat them,	caribou soup, caribou soup
we love you	you will be in our stomach,	you are so yummy
caribou, caribou	you will die.	
we will catch you	caribou are good to eat	
caribou, caribou	they are healthy for our heart.	
we will cut you up		
caribou, caribou		
we will eat you.		

CARIBOU PARTS CLASSIFIED BY FOOD GROUPS

<u>Milk and Milk Products</u>	<u>Meat and Alternatives</u>	<u>Bread and Cereals</u>	<u>Fruits and Vegetables</u>
soft ends of bones	meat, heart, liver	heart, liver, kidneys	stomach contents
stomach contents	kidneys, brain, blood	bone marrow	eyes, liver
intestines		intestines	
		web covering stomach	



There are two ecotypes of woodland caribou in the Sahtu Region, which are differentiated by habitat use. Boreal woodland caribou are non-migratory and remain in forested regions outside the Mackenzie Mountains year-round. Mountain woodland caribou migrate between forested and alpine habitats throughout the Mackenzie Mountains and parts of the Mackenzie Valley.



Above map: coloured lines shows the yearly movement of individual mountain woodland caribou through the Mackenzie Mountains
Data obtained by RWED from caribou fitted with satellite collars.



Boreal woodland caribou

WOODLAND CARIBOU

Woodland caribou that live in the boreal forests of Canada (boreal caribou) are a type of caribou that is considered to be different from the large, migratory barren-ground herds, and from the woodland caribou that live in the Mackenzie Mountains, which are known as "mountain caribou." However, genetically both boreal and mountain caribou are in the same subspecies. They just have a different "lifestyle" whereby the boreal caribou live in small, rather isolated groups and prefer areas of old growth conifer forest.

One thing that we know about boreal caribou is that they are sensitive to activities associated with oil and gas exploration and extraction, particularly the cutting of seismic lines through the forests in which the caribou live.

Extensive research in northeastern Alberta done by Alberta's Boreal Caribou Research Program (BCRP) have found that wolves can travel much faster through the forest along seismic lines than through the bush, especially during the summer. This increases their efficiency at finding and killing radio-collared caribou.

As a result of this increased risk of predation, the radio-collared caribou were more likely to be found in habitats that were at least 250 meters from seismic lines. The areas within 250 meters of seismic lines can therefore be considered to be areas of habitat loss for caribou, just as if those patches of habitat had been cut, burned by forest fire, or otherwise altered.

Biologists are examining the density of seismic lines across the Sahtu to determine the current oil and gas "footprint" in our region in light of what we know about such activity and its impact on caribou in Alberta. This information will be shared with the communities, with co-management boards, and with organizations with responsibility for environmental impact assessment.



Mountain woodland caribou

CARIBOU AND NUTRITION

Adapted from "Nutrition," by Jill Christensen, in People and Caribou in the Northwest Territories, Ed Hall, Editor (1989).

Caribou has long been a staple food for the Dene people of the Sahtu. Now, every community has at least one food store.

This is a mixed blessing. On the one hand it means that starvation, which was once common, is no longer a threat. On the other hand, stores are a source of many foods whose nutritional value is considerably lower and less complete than traditional country food. To this day, caribou remains a key source of nutrition for many people.

Caribou can provide nutrients that would require eating a wide variety of foods in a modern diet - not only meat, but also milk, bread, fruits and vegetables. The

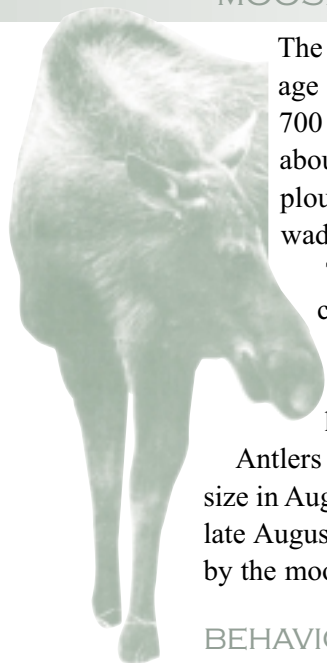
only essential nutrient that is not found in caribou is vitamin D. Traditionally, people had to use other food such as fish liver oil to get this.

Caribou will provide such a complete source of nutrition only if all the parts are eaten. Caribou liver is rich in vitamin C, but caribou muscle is not. If the liver isn't eaten, it is necessary to get vitamin C from another food source.

Caribou is leaner than most store-bought meats. Caribou fat is also better for you, since it is more "unsaturated." This means that those who eat it are in less danger of getting heart disease.

Eating country foods such as caribou can also prevent other diseases, such as diabetes which has become distressingly common in communities more dependent on store-bought food.

MOOSE IN THE SAHTU



The moose, *Alces alces* is the largest member of the deer family. Bulls average a weight of 500 kilograms; however, they may weigh as much as 700 to 750 kilograms. Cows are lighter in weight. Both sexes stand about 2 meters at the shoulder. Moose have long legs, well suited for ploughing through deep snow, walking over bushes and logs, and wading through muskeg.

Thick hides and warm coats insulate the moose against the winter cold. A fine undercoat of grey wool, and coarse, scaly guard hairs helps to retain heat. In spring, the old coat is shed and replaced with a short, dark brown coat. In late summer, the guard hairs grow longer and produce a rich, reddish, brown-black coat.

Antlers begin growing on mature males in April and reach their maximum size in August or September. They are covered with skin and hair, or "velvet". In late August, the blood supply to the velvet is cut off and it starts to shed, aided by the moose rubbing the antlers against trees.

BEHAVIOUR

Moose are unpredictable in their behaviour. They have excellent senses of hearing and smell, but relatively poor vision. When a moose perceives a threat, it often withdraws silently into the trees and stands quietly until the danger has passed. A startled or frightened moose will crash noisily headlong through the bush. Its antlers do not become entangled in dense thickets when it runs because it holds its head back so the antlers lie along the shoulders and the branches are pushed aside.

Moose are solitary animals and do not form permanent groups. The only social bond formed is between mother and calf. Moose may "yard" together in winter, but this is more of a temporary survival mechanism than a social one. When snow is very deep, it tends to restrict their movements to small areas which become well-packed and laced with trails.

STATUS IN THE NWT

Moose have always been highly valued in the Sahtu. Historically, Dene relied heavily on them for survival. The huge hides were at one time painstakingly prepared and sewn together to cover large, spruce-frame boats. Moosehide leggings, coats, hats and footwear were necessary apparel to ward off the severe cold. Moose meat was essential to people subsisting in remote areas and the hides were used for tents. A successful hunt was occasion for a feast, and the elders were honoured with the head, which is a delicacy.

Today, the moose is still an important resource in many Sahtu communities. With a single animal yielding as much as 300 kg of meat, it continues to be a staple food. In addition, the hides are usually home-tanned and used extensively for making moccasins, heavy winter mitts and handicrafts. Most hunters and trappers below the treeline still prefer handmade mukluks to manufactured winter footwear, and moosehide is essential for their soles, as caribou hide is neither thick nor tough enough.



Cow and bull moose



MOOSE ALONG THE DEHCHO

by Jonas Neyelle, Tulita

Dad used to tell us stories of people along the Dehcho (Mackenzie River) in summer. This was before my time. Some people only come to trading post to sell their furs and moved back to their chosen camp along the river. Usually the camps would be in a good fishing place. People would stay there for the summer making dry fish.

Dad said that in those days, moose were very scarce. If a hunter found a moose track they hunted it until they killed it or the animal got away. I must also mention Dad saying that once the hunter found signs of moose, the poor animal would have a very poor chance of getting away, because in those days there were many good hunters.

Perhaps this is the reason why the number of moose along the Dehcho went into decline. Dad said hunters would have to spend many hours and days checking out good areas for moose, sometimes coming home empty handed.

That was when the government put restriction on moose. People were not allowed to kill cow or calf moose. I don't know how long the restriction was in effect. After I was twelve or thirteen years old, we would only see one or two moose along the Mackenzie River as we travelled between Blackwater and Fort Norman.

Mackenzie Valley Viewer, September 2001



DALL’S SHEEP

Dall's sheep, *Ovis dalli dalli* are medium-sized, hoofed mammals, or ungulates. Rams weigh from 80 to 100 kg and ewes are smaller at 60 kg. Both rams and ewes grow horns throughout their lives.

They are graceful and agile in their rugged, mountainous habitat. The pliable centre of their hooves and a hard rim provide good traction on steep outcrops. Sheep have excellent eyesight and a well developed sense of smell.

BEHAVIOUR

Usually, rams that are older than 4 years roam in small groups of 3 to 10 individuals, but sometimes rams are found alone. Ewe groups tend to be larger and contain young rams, yearlings and lambs of the year.

Individual Dall's sheep confine almost all their movements to a particular mountain block that contains both the winter and summer range. Up to 300 sheep can use the same winter and summer blocks each year and from generation to generation. Therefore Dall's sheep are very slow to recolonize an area if the population is severely reduced. It also means that the sheep are very sensitive to intense human activity on their ranges.

DIET

Grasses and sedges make up about 70% of the diet of Dall's sheep. The leaves and stems of some shrubs and certain flowering plants are also selected and may be important seasonally. Lichens and mosses may be eaten in winter when the sheep often must paw through several centimetres of snow. Minerals from mineral licks are an essential component of the diet of Dall's sheep and well established trails lead to the licks.



K'éyeneyo means "place where sheep are chased down." It is an isolated mountain, south of the Gravel River, at the headwaters of the Moose Horn River. It is a good place to find ewes and lambs at this time of year. In the old days, sheep were chased down from the tundra plateau into snares of babiche. Sheep are famous for their climbing skill. In fact, Alfred Thomas of Fort Simpson said that the white sheep had a gummy substance that was exuded from between their toes when they were climbing or descending steep terrain, increasing their traction. But there is one cliff they cannot climb, north northwest of K'éyeneyo. It is called Pet'árenejo, or "mountain where sheep are run against a cliff." There they could be killed by hunters.

From *Snowshoes and Ptarmigan Feathers* by Norman Simmons with Maurice Mendo
Originally published in the Mackenzie Valley Viewer, October 2002



sheep hair



MUSKOXEN

Muskoxen, *Ovibos moschatus* are found on the arctic islands of the Northwest Territories, as well in the area north of Great Bear Lake up to the Arctic coast. Recently, they have increased in numbers and expanded their range into the Franklin Range.

Muskoxen are completely covered by hair, except for the horns, hooves, lips and nose. They have an under layer of short fine wool of exceptional warmth, known as qiviut, covered by a dark brown or black shaggy coat. Their diet consists of willows, sedges, rushes, grasses and willow herbs during the summer, and graminoids, crowberries, bilberries and willows in the winter.



BEARS

BLACK BEAR

Black bears, *Ursus americanus* are chunky in shape, 1.5 to 1.8 m long and almost 1 m tall at the shoulder. On average, males weigh 115 to 170 kg, while females are smaller at 90 to 155 kg. They are heaviest in the fall, when they may gain as much as 14 kg in a week.

Black bears have a broad head and short neck. Their eyes are small and black, their ears rounded and the snout long. In the Sahtu, the most common coat colour is black, with a tan muzzle.

DISTRIBUTION

In the Sahtu, black bears prefer habitat that combines forested areas, which provide seclusion and safety, with open spaces that provide berries, shrubs and grasses. Black bear densities are typically highest within river valleys.

DIET

Black bears are omnivorous and highly adaptable in their food habits. From May until late July, black bears forage on grasses and sedges along rivers. In early spring, they also depend to some extent on the carrion of winter-killed animals. Later on, they feed on eggs from nesting waterfowl on river banks, fish along streams, and dig up roots and tubers. In later summer and fall, berries are an important food.



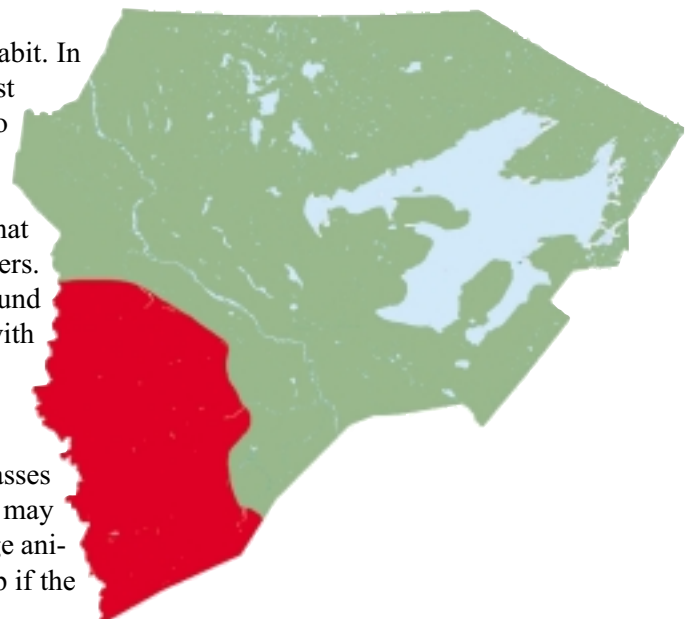
GRIZZLY BEARS

Grizzly bears, *Ursus arctos horribilis* vary considerably in size depending on the area they inhabit. In the Mackenzie Mountains, where winters are long and cold and the forage is sparse, the heaviest male recorded in a 5-year study weighed only 214 kg. Females are smaller than males and do not continue to gain weight with age as males do.

Grizzly bears are larger than black bears and more heavily built. They are usually recognizable in profile by the shape of the snout, which is long and upturned rather than convex like that of a black bear. Another distinguishing feature is the prominent hump of muscle on the shoulders. They have long shaggy coats with coarse guard hairs overlying a dense mat of underfur. Around the shoulders, the hair lengthens to form a ruff. Colour varies from light gold to almost black, with pale bears being the most common on the barrenlands.

DIET

Grizzly bears are omnivorous. In spring, they graze first on roots and then switch to new grasses and sedges as they emerge. During late summer and fall, they feed primarily on berries. They may also eat lemmings and ground squirrels, which they excavate from burrows. With respect to large animals, bears are opportunistic predators and will kill caribou, moose, muskoxen and Dall's sheep if the occasion arises.



HIBERNATION

Scientists differ as to whether or not bears enter a state of true hibernation, but the controversy may be largely a matter of terminology. Many smaller mammals enter a deep sleep from which they cannot be easily roused. While they are dormant, their body temperatures are much lower than normal. A bear's temperature, in contrast, does not drop more than about 5°C. Bears can awaken easily, but if undisturbed, may sleep for as long as a month without changing position. Smaller mammals awaken periodically to eat and expel body wastes. Bears cease all such functions during their hibernation.



Grizzly bear



Black bear sow and cubs

WOLVES

Wolves, *Canus lupus* are a member of the dog, *Canidae* family. Adult males average about 35 - 40 kg, while females are smaller, at about 30 - 35 kg. Length of males, from nose to the tip of the tail, varies from 1.5 to 2.0 m, with females from 1.4 to 1.8 m.

Wolf coat colour varies from pure white to black, with accompanying shades of cream and brown. The most common colour is grey. The wolf's coat is thick; composed of long, coarse guard hairs and short, soft underfur. In the Northwest Territories, the coat moults only once, in late spring. By winter, the short, new pelage grows into a silky coat with the underfur appearing in autumn.



DISTRIBUTION

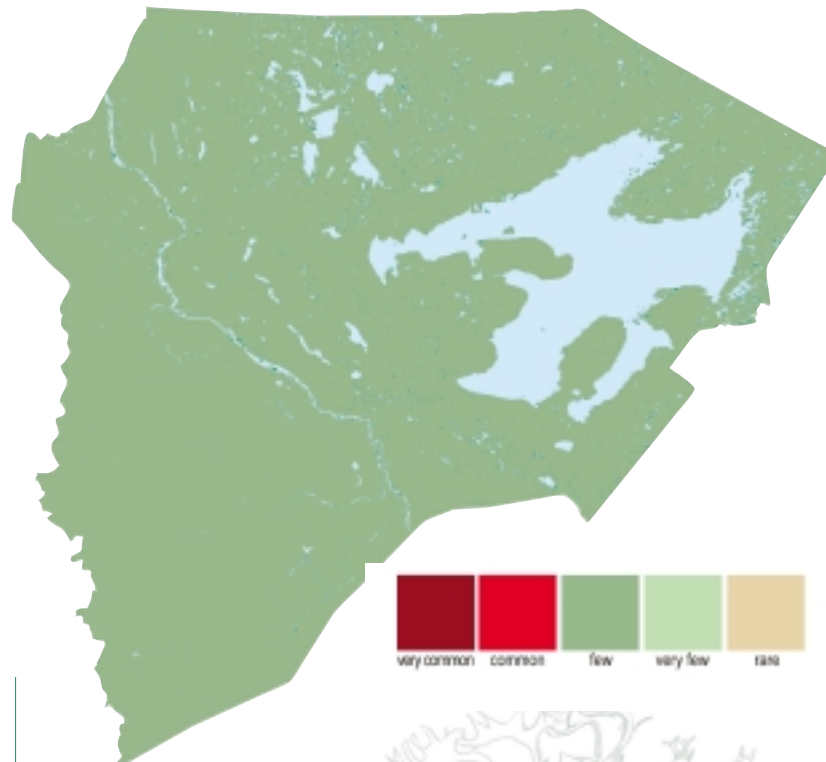
In the Northwest Territories, two different groups of wolves can be distinguished based on behaviour and distribution. Wolves that live below the tree-line or in the mountains are commonly known as timber wolves. They depend mostly on non-migratory prey like moose. Wolves that travel above and below the treeline on the mainland of the Northwest Territories are commonly known as tundra or caribou wolves. They depend largely on barren-ground caribou and do not maintain regular territories.

BEHAVIOUR

Howling may be a wolf's message to pack members of its whereabouts. A howl may summon pack members to a nightly hunt or adults may howl to find a lost pup. It may also be that wolves simply enjoy howling, alone or in groups. People who have observed group howls attest to the wolves' obvious pleasure in the occasion and to the marvelous sounds of the wolf voices in harmony.

Throughout the winter, wolf packs travel many kilometres, feeding where they find prey and resting when they are tired, or when extreme temperatures and storms cause them to seek refuge. Winter travel routes include game trails, ridges, seismic lines and frozen waterways. In deep, fluffy snow, wolves find traveling difficult and will often use roads or snowmobile trails to ease movement.

Wolves accompany nearly all caribou herds most of the year. Under most circumstances a caribou can easily outrun a wolf. However, in most cases, wolves simply chase a large herd of caribou, on the alert for any animal caught off guard, that stumbles or appears weak. Old and ailing caribou, or a calf which hesitates a second too long, are often victims.



THE FATE OF CARIBOU/ Éfé Guli

told by William Sewi

© Alfred Masuzumi

Here's a good story. Long ago, when the wildlife were new, Ékwé and Dígai (wolf) met out on the barren-grounds, north of Aklavik. The leaders of both groups were old.

The old dígai leader said, "Ékwé should be wiped off the face of the earth." They were all sitting face to face, and no one said anything for awhile. Finally, old Ékwé asked, "What's the misunderstanding? Why don't you simply tell us what you don't like about us?"

Then Dígai said, "The purpose of this meeting is to wipe you from the face of the earth."

Ékwé asked, "What wrong are we accused of? All we look for is food for our survival. And the humans are surviving from us. In the future, people will depend on us for their food.

You, Dígai, are not like that. You are a conniving animal, and we predict that in the future you will kill humans. There will be packs of you attacking and killing humans. And you will also be killing us. This is how you will survive. You'll kill moose, and every other animal.

"You are a sly animal. When human kills game for his survival and covers it for safekeeping, you will steal his food. And when he's out trapping, you'll go along his trapline and take out the bait. That is how you will be spending your time. Yes, this is how you will be in the future.

"We ékwé, we are the good wildlife. We are on the earth only to look for our food. We can never disrupt anything in nature. This is our destiny until the end of the world.

"Whatever people eat, it becomes their flesh and blood. This can never be taken away from man.

"Yes, in the future people will be surviving on us for food, and you will also.

And then Dígai got up and said, "Yes, Ékwé speaks the truth. What he says of the future is true. And I believe him."

And so Ékwé won, and old Dígai was over-ruled.

Ékwé said, "Henceforth until the end of the world you will survive off of us. There'll be no need to bring this matter up ever again. And so, this meeting is over."

Originally published in the Mackenzie Valley Viewer, March 2001. Printed with permission.

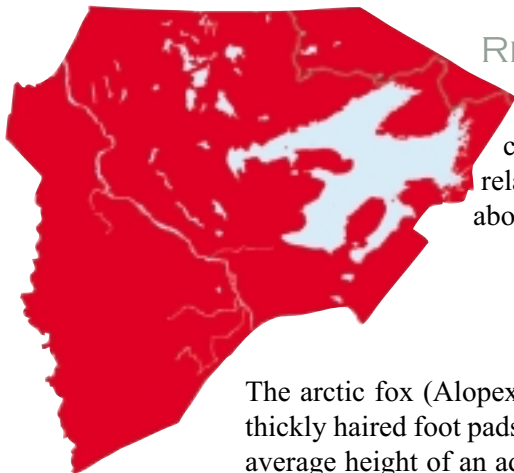


WOLVERINE

The wolverine (*Gulo gulo*) is the largest member of the mustelid family (otters, weasels, etc.) in North America. This squat, powerfully-muscled animal resembles a small, flattened bear. Wolverines are dark brown with a light grayish forehead and a pale stripe running from the shoulders along each side and crossing the rump. The wolverine's dense fur, with long guard hairs that do not ice up in winter, is highly prized for trimming parkas. Their large paws help them move on top of crusted snow. A wolverine has a dark bushy tail, a broad rounded head, small eyes and ears. Males average 1.2 meters in length and 0.5 meters in height at the shoulder. An average male weighs about 15 kilograms. Females are smaller, averaging about 0.9 metres in length and weighing about 10 kilograms.

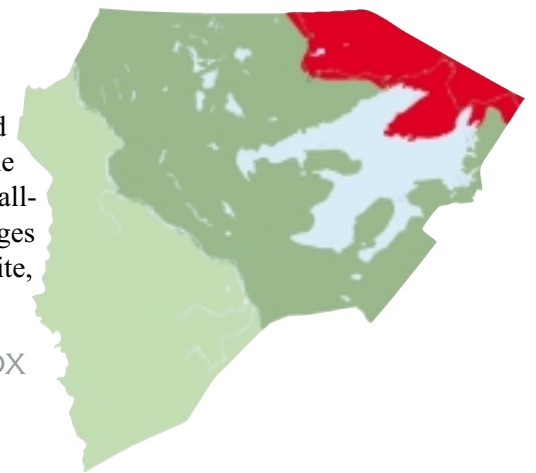


RED FOX



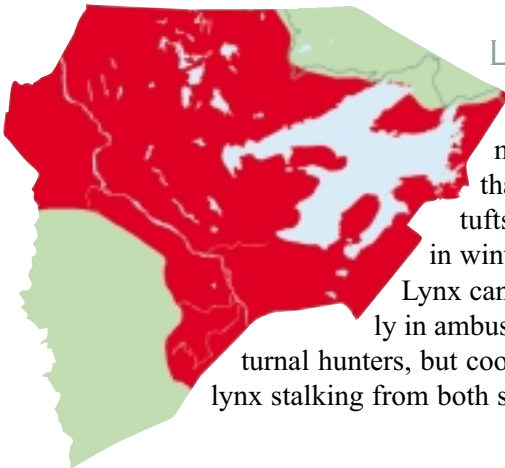
The red fox (*Vulpes vulpes*) ranges throughout the Sahtu below the treeline. The red fox is a small carnivore with an agile and lightly built frame. It is distinctive for its coat of long lustrous fur, and its relatively large and bushy brush (tail) and ruff (collar). A typical male fox weighs about 5 kg and stands about 35 cm at the shoulder, while the female tends to be slightly smaller.

The arctic fox (*Alopex lagopus*) has a compact body with short legs, short ears, dense fur, and thickly haired foot pads which provide traction on the ice as well as protection from the cold. The average height of an adult male is 25-30 cm at the shoulder, with the female being slightly smaller. The adult male fox weighs about 3-4 kg. Like many arctic animals, the arctic fox changes colour with the seasons to stay camouflaged. In the winter, their coat turns to a brilliant white, although some may have blue-grey patches, while in the summer it turns brown.



ARCTIC FOX

LYNX



The lynx (*Lynx canadensis*) is the only wild felid found in the boreal forests of the Northwest Territories. It is a medium-sized animal (10 kg for males and 8.5 kg for females) set on solid legs, those at the rear noticeably longer than the front, with large paws, a fairly small head, and a very short tail. The coat is long and thick with distinctive tufts on the ear tips. Long fur on the feet aids movement over soft snow. "Sideboards" become especially noticeable in winter, and may develop to a nearly full ruff. Its colour ranges from grey to brown.

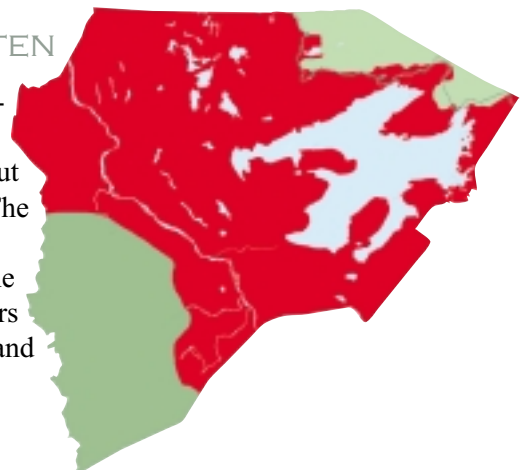
Lynx can climb well and are good swimmers. They have acute vision and will stalk prey over long distances or wait patiently in ambush before making a final, typical cat-like bound from as close as possible. They are usually solitary animals and nocturnal hunters, but cooperative hunting has occasionally been observed, with rabbits being driven towards a waiting ambush, or a pair of lynx stalking from both sides of joint prey.

MARTEN

The marten (*Martes americana*) is found within the boreal forest of the Northwest Territories. It is a medium-sized member of the weasel (*Mustelidae*) family, and is closely related to fishers, badgers and weasels.

Martens that are found in the Northwest Territories are larger than those found further south. They are about the size of a house cat, with the adult male weighing about 1.5 kg, and measuring about 75 cm in length. The adult female is about three-fourths the size of the male.

The fur of the marten is soft and thick, varying in color from yellowish-brown to reddish or dark brown. The martens' throats are pale buff; their tails and legs are black. Two vertical black lines run above the inner corners of their eyes. In winter, long hairs grow between the toe pads on the martens' feet. These keep the feet warm and enable them to travel on snow.



WOLVERINE



RED FOX



ARCTIC FOX



MARTEN

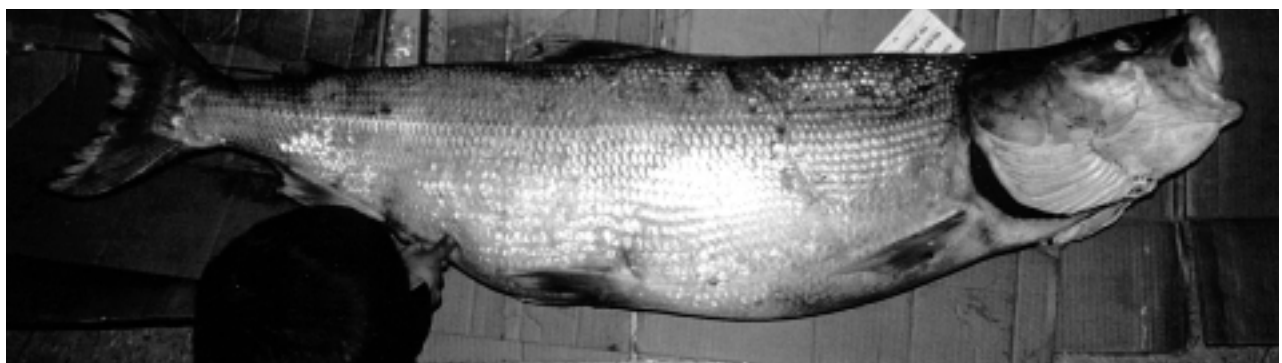


FISH OF THE SAHTU

The freshwater fish inhabiting the waters of the Sahtu have unique and diverse histories. Many species now in this area survived under harsh conditions in northern portions of unglaciated Alaska during the last ice age (ending about 10,000 years ago) while the majority survived in southern areas of the United States.

Fish are cold-blooded creatures, typically with scaly bodies and paired fins, that breathe by means of gills. Fish are excellent indicators of water quality and the presence or absence of certain species can provide immediate clues as to the conditions within a given area. Contaminant studies reveal further information about the aquatic environment. Due to the wide consumption of fish in the Sahtu, contaminant studies on several fish species are done to monitor environmental and public health.

Fishing remains one of the most important cultural and social activities for the people of the Sahtu. While wildlife may be absent from some areas during certain portions of the year, some fish species always remain accessible and thus have played a major role in the well being of the original inhabitants. World-renowned recreational angling by residents and visitors (a 33 kg Lake Trout was caught in Great Bear Lake in 2001) further reinforce the benefits and need for strong, sustainable fisheries, resource management and research.



Mackenzie River 'Coney', Fort Good Hope © Robert Kershaw

Bodo and the Big Fish *Told by Peter Baton, Deline Elder*

My Grandmother told me this story of Bodo and the Giant Fish, She says once the fish in Mackintosh Bay go bad they disappear. That is what happened one time, so we had a hard time.

Bodo went to check his hooks by knife point. He only caught a very skinny fish. He then thought to himself that other people might be using medicine to keep the animals away, so catching this little fish made him angry because there are people and dogs to feed and they are not catching any animals. He put his hook back in the water and caught a fish, but the hole was too small, so he had to use his knife to make the hole bigger. He then got the fish out. It was so big that he had to cut it up and bring some home. My Grandmother said Bodo told them to get two dogs and go to the hooks and pick up the rest of the fish. My granny says that the trout was so big that it had horns about the size of a thumb and the guts were out in a separate pile for the dogs. It was just fat.

That is what my granny has told me about Bodo and the Giant Fish.



Residents of Fort Good Hope have long relied on fish from the Mackenzie River as a source of food for themselves and their dogs. Accelerated oil and gas development in the Mackenzie Delta has many people concerned about possible negative impacts on the fisheries resource. As the fisheries resource is perhaps one of the most valuable of all renewable resources in the Mackenzie Delta and the one most likely to be negatively impacted by oil and gas development, it is one that should be monitored for changes.

From the Department of Oceans and Fisheries/Sahtu Renewable Resources Index Netting Study

Photos top to bottom
Ice fishing on Great Bear Lake © George Tackazo
Mackenzie River fish camp © Robert Kershaw
Matthew Perriot, Loche Lake © Robert Kershaw
Jeffery Jackson checking net © Robert Kershaw

KEY FISH SPECIES IN THE SAHTU

ARCTIC GRAYLING / T'áe



The arctic grayling is a beautiful fish: dark blue on the back and purple grey on the sides. A distinctive characteristic is its large, sail-like dorsal fin, which is coloured a blackish blue with violet spots. Average weights are from 0.5 to 1 kg (1 to 2 lbs.), but the world record arctic grayling was caught in the Great Bear Lake area and weighed 2.7 kg (6 lbs.).

In the Sahtu, the grayling is particularly common in the Mackenzie, Great Bear and Anderson drainages. During the summer, they can be caught in cold, swift rivers and in bays of some larger lakes.

LAKE TROUT / Sahba

Lake trout are coloured with light spots on a darker background and a light-coloured belly. The background colour may vary from light green or grey to dark green, brown or black.

The lake trout is found throughout the Mackenzie drainage systems. Although most angling has occurred on Great Bear Lake, “lakers” are plentiful and provide spectacular sport in hundreds of fast-flowing rivers and streams. The best trophy recorded was a world record catch from Great Bear Lake weighing 33 kg (74 lbs). Many others have come close to this, and 13 to 18 kg (30 to 40 lbs.) fish are common.



JACKFISH (PIKE) / ?óhda



Pike, or jackfish, prefer warm, slow, heavily-vegetated rivers, or shallow, warm, weedy bays of lakes. They occur throughout most of mainland Northwest Territories. They have a long body with a dark green to brown colour along their back. The sides are lighter and marked with 7 to 9 irregular vertical rows of yellow to white, bean-shaped spots. Pike generally run between 2 and 7 kg (5 to 15 lbs.), but many pike weighing 13 to 18 kg (30 to 40 lbs.) have been taken

LAKE WHITEFISH/ Luge wá

The lake, or humpback, whitefish occurs mainly in lakes, although some are taken in larger rivers and some in lakes with brackish waters. It is a large and somewhat egg-shaped fish with silver sides that may shade to dark or olive brown. The snout overhangs the lower jaw and has two flaps between the openings of each nostril.

The whitefish is mainly a bottom feeder, eating freshwater clams, snails, insects and invertebrates. Some may feed on plankton. Spawning takes place in the fall on rocky reefs in lakes or the shallows of rivers.



WALLEYE / ?éhch'íq



The walleye is a member of the perch family and has sharp teeth and two dorsal fins on its back, the front one supported by large spines. Walleye are olive-brown flecked with gold, shading to a white belly. The large, silvery eyes are distinctive.

Also known as doré or pickerel, walleye are plentiful in smaller lakes to the south, but are less common in the Sahtu.

Walleye generally run up to 2.5 kg (5 lbs.). They are easiest to fish in the spring when they are running in the rivers

INCONNU / Sih

Fur trade voyageurs gave this “unknown” fish its name. Locally called Coney, it is a member of the whitefish family. With large scales, dark back, silvery sides, and deeply forked tail fin, it resembles a large hering. Still unknown to many anglers, it is found in the tributaries throughout the Mackenzie River Valley. Weights can average 4-9 kg (9-20 lbs) although some have been reported over 32 kg (70 lbs).





BIRDS OF THE SAHTU

There are four major North American flyways: Atlantic, Mississippi, Central and Pacific Flyways. The Sahtu straddles both the Pacific and Central flyways.

Bird migration is usually thought of as a north-and-south movement, with the lanes of heavier concentration following the coasts, mountain ranges and principal river valleys. Generally, the great routes of migration do conform very closely to major topographical features when these happen to lie in the general direction of the travel to be performed. It happens to work out nicely in North America where the coasts, mountain chains and many of the larger rivers do not depart from a north-and-south alignment. As a result, birds use the Mackenzie Valley, River and Mountains to navigate their way north and south.

Over 90 percent of the bird species in the Sahtu and throughout the Northwest Territories are migratory. In all, 41 families and over 200 species of bird spend time in the Sahtu.

The Sahtu also acts as a “production line” for numerous species. The abundant lakes, ponds and wetlands in the forested portion of the Northwest Territories provide important breeding and nesting habitat for a number of duck species and for other aquatic birds such as geese, loons and grebes.

The Sahtu also contains northern breeding range for species of song birds .

The terms "migration route" and "flyway" are to some extent theoretical concepts. Migration routes may be defined as the lanes of individual travel from any particular breeding ground to the winter quarters of the birds that use them. Flyways, on the other hand, may well be conceived as those broader areas in which related migration routes are associated or blended in a definite geographic region. They are wide arterial highways to which the routes are tributary.



Since 1995, The Tulita Renewable Resources Council, the Government of the Northwest Territories' Department of Resources, Wildlife and Economic Development, and the United States Fish and Wildlife Service have collaborated on a duck banding research project at Willow Lake in Sahtu Settlement Area. Each year, a waterfowl biologist, two assistants and two summer students set 18 funnel traps in August (for an equivalent of 423 trap-nights). Barley is used as bait, around 2300 kg (5000 lb). The primary goal for this site project is to band mallards northern pintail and all other ducks prior to the start of the fall hunting season.

In 1993, standard leg bands were placed on 1348 ducks: 435 American green-winged teals, 312 American wigeons, 298 mallards, 296 northern pintails, 6 blue-winged teals and one American black duck. This total number of ducks banded is similar to the nine-year average for the Willow Lake banding station.

SOME KEY SAHTU SPECIES

ARCTIC TERN

Terns are slender birds with long narrow wings, forked tails, and a pointed bill. The arctic tern (*Sterna paradisaea*) is grey and white with a black cap and red bill. Though it is primarily a sea bird, spending most of its life over the ocean and along the coast, it moves inland during the breeding season and may be found nesting virtually anywhere in the Northwest Territories, near open waters.

Terns are skillful and agile fliers, earning their living by diving into the water in search of small fish. They undertake spectacular migrations, leaving their breeding grounds in the north to fly to the Antarctic Ocean where they winter for a short time over the pack ice. As daylight hours in the Antarctic decrease, the terns start their return journey up the Atlantic and Pacific coasts following the sun as it returns north.



CANADA GOOSE

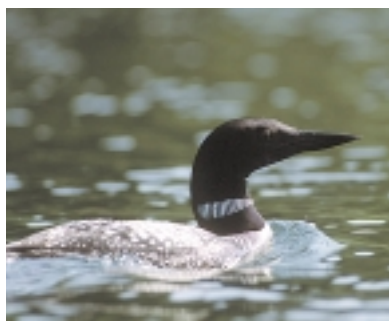
Although there are many subspecies that vary in size and colour, the Canada goose (*Branta canadensis*) is always readily identified by its black head, black neck and white cheek patch. It breeds throughout the mainland Northwest Territories as well as on some of the arctic islands.

Canada geese are the earliest of all waterfowl to nest. They arrive in the north while the land is still snow-covered and begin nesting as soon as the nest sites are clear. Although they prefer to nest on the ground near water, they employ a greater diversity of nest sites than all other waterfowl. These include marshes, tundra, islands, cliffs, abandoned nests in trees and tops of muskrat or beaver houses.

GYRFALCON

The gyrfalcon (*Falco rusticolus*), the Northwest Territories' ceremonial bird, is the world's largest falcon (50-63 cm tall). The colour of their plumage varies from dark grey throughout the mountains and southern tundra of the NWT to light grey or white in the east and on the Arctic islands.

Gyrfalcon's do not build nests. Eggs are laid and incubated by the female on a cliff ledges or, more usually, in the nests of other species such as ravens and golden eagles. Gyrfalcons nest in April in the Mackenzie Mountains and in May over the rest of their range. The same nesting ledge is frequently used in successive years.



LOONS

Loons are heavy-bodied birds with strong pointed bills, webbed feet, and short stiff tails. The legs are attached far back on the body, and while this makes loons awkward on land, it facilitates swimming and diving. Loons sit low in the water and dive from the surface. They can remain submerged for several minutes if necessary, and can swim very rapidly underwater. Loons are fish eaters, catching their prey while in underwater pursuit. When taking off, they must flap and run across the water's surface a lengthy distance before becoming airborne.

Four species occur in the Northwest Territories: the common loon (*Gavia immer*), the Arctic loon (*Gavia arctica*), the red-throated loon (*Gavia stellata*), and the yellow-billed loon (*Gavia adamsii*). The common loon is found throughout the Northwest Territories during the summer season, with the exception of the Arctic Islands. Both the yellow-billed and Arctic loon can be spotted above the tree-line during the summer season, while the red-throated loon can be found along the arctic coast throughout the summer months.



PEREGRINE FALCON

The peregrine falcon (*Falco peregrinus*) is one of the swiftest birds in the world, able to pursue its prey in high-speed aerial chases, reaching speeds close to 320 km-h in a downward dive. In the arctic, peregrines prey on birds varying in size from small songbirds to ducks and ptarmigan. The falcon swoops down on its prey at high speed and kills it in midair using bill and talons, or stuns it with a blow and kills it on the ground.

Peregrine falcons breed throughout most of the Northwest Territories on high rocky cliff ledges usually near the sea or some smaller body of water, habitat of its prey

PTARMIGAN

All three North American species of ptarmigan are found in the Sahtu: willow (*Lagopus lagopus*), white-tail (*Lagopus leucurus*) and rock ptarmigan (*Lagopus mutus*). Though the species are quite similar in appearance, the willow ptarmigan is a little larger and has a heavier bill. In summer, the brown of the willow ptarmigan is more reddish, while that of the Rock Ptarmigan is paler and more yellowish. In winter, both are white and have black tail feathers however the rock ptarmigan males have a black line through the eye.

As its name suggests, the rock ptarmigan frequents higher, more barren hills than the willow ptarmigan. In the winter, the willow ptarmigan seeks sheltered areas.



RAVENS

Ravens (*Corvus corax*) are the most commonly seen bird year-round in the Northwest Territories. They are large black birds with a thick bill, a shaggy ruff at the throat, and a wedge-shaped tail. In flight, they alternately flap and soar like a hawk.

Ravens are found in a variety of habitats, but are partial to cliffs and rocky mountainous country where they soar and perform acrobatics on the updrafts. They also congregate in settlements where tall buildings permit the same activities. Garbage dumps too are preferred spots as the raven is a scavenger and carrion-eater. Ravens are often seen in the company of wolves feeding on the remains of caribou on frozen lakes in winter.



ROUGH-LEGGED HAWK



The rough-legged hawk (*Buteo lagopus*) is a large hawk (48-60 cm tall), it is a common summer inhabitant of the mountains and the tundra of mainland NWT and the southern Arctic archipelago. Winters are spent throughout the USA.

It is the only arctic hawk whose legs are completely feathered to the base of the toes. It has a broad tail and wings, and flying overhead can be identified by its distinctive black wrist patches. The adult plumage is variable in colours and marking but usually displays a dark patch or shield on the belly and a light tail with a distinct dark edge. A breeding pair builds a large stick nest on cliff ledges or on the ground, and may maintain several nests that are reused in subsequent years. Two or three eggs are laid in late May.

SANDHILL CRANE

Sandhill cranes (*Grus canadensis*) are extremely large birds that are nearly a metre long, with a wingspan of up to 2 m. In flight, they can be identified by their outstretched neck, long trailing legs, and characteristic wing stroke (a quick jerk or flap of the wings upward). Adults are ash-coloured with a bare red patch on the forehead and crown. The voice is a deep incessant kr-r-r-oo, which sounds a bit like a piece of machinery in need of oil. Sandhill cranes may be found throughout most of the Northwest Territories, as far north as Banks Island.



SHORT-EARED OWL



The short-eared owl (*Asio flammeus*) is a medium-sized owl with a brown back, and buffy-yellow head and breast, streaked with brown. Its ear-tufts are small and not usually visible. Unlike most owls, it is active throughout the day, cruising low, over open country, seeking out voles and lemmings. They are common during the breeding season in areas such as tundra, marshes, grasslands, and low scrub country. They breed throughout the mainland.

LESSER SNOW GOOSE

The Lesser Snow Goose (*Chen caerulescens caerulescens*) has two colour phases, white and blue, and were once thought to be separate species. In the white form, adults are white with black wingtips. In the blue form, they are dark grey accompanied by a white head. They have wingspan of about 90 cm and its average weight is 2.2 to 2.7 kg, the male being larger. In the Sahtu, lesser snow geese breed entirely above the treeline.



SNOWY OWL

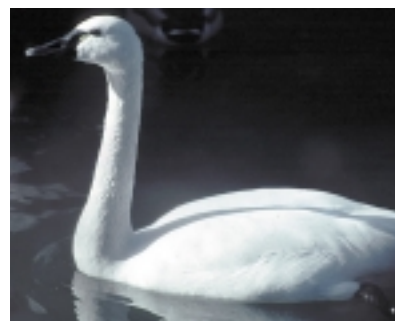


The heaviest of North American owls, the snowy owl (*Nyctea scandiaca*) stands nearly half a metre tall, with a wingspan of almost 1.5 m. Unlike most owls it is active in the day during the arctic summer, as well as at night. As is the case with most diurnal birds of prey—those that are active during the day—the female is larger and heavier than the male. The average weight of the female is 2.3 kg compared to 1.8 kg for the male. The feathers are sometimes pure white, but more generally they are barred and spotted with dark brown, particularly on the female. As an adaptation to its arctic environment, the snowy owl has completely feathered legs and toes. They usually nest above treeline.

TUNDRA SWAN

The tundra swan (*Cygnus columbianus*), formerly known as the whistling swan, is one of the largest birds found in the arctic. It has a wingspan of over 2 metres and a weight of 5-8 kg. It is completely white, with the exception of a slight rusty stain on the head and neck of some birds. The bill is black with bare skin extending back to the eye and sometimes a yellow or orange spot in front of the eye along with black legs.

Tundra swans generally arrive in the Northwest Territories by about mid May. They nest on the mainland above the treeline, as well as on some of the arctic islands and wetlands in the Sahtu.



GRAY JAY



The gray jay (*Perisoreus canadensis*), 25 to 33 centimetres in length, is slightly larger than a robin. Its tail is long and its wings short and rounded. The throat, cheeks and breast, as well as an area round as a penny covering the forehead, are pearl grey. The back of the head is dark grey, the shoulders, back and tail lighter grey, sometimes with a bluish sheen. The legs are black, and light grey "whiskers" surround the base of the black bill.

The gray jay's fearless and venturesome behaviour towards men living and working in the forest has earned it many informal names. "Whiskey-Jack" is the best known, said to come from the mispronunciation of the native name "wiss-ka-tjon" or "wis-ka-chon" turned into "whiskey-John".