

Grey Wolf

Canis lupus

The Grey Wolf is one of the world's most successful land predators. Like early human hunters, wolves work together to take down Moose and other prey species much larger than themselves. Group hunting efforts like this require strong social bonds and the society of the wolf pack is one of the most complex of the North American mammals.

The Grey Wolf is an unusually variable species, with geographical differences in size, shape and colour. At one time, it had the greatest natural range of any living mammal other than the human. With the spread of agriculture and human habitation the wolf has disappeared from most of the continental United States, Europe, Scandinavia, the Middle East and India. Today, healthy wolf populations are found in circumpolar regions of the world, including Canada, Alaska, Scandinavia, and the Soviet Union.

DISTRIBUTION

Wolves inhabit the entire Yukon except for the icefield ranges of Kluane National Park. Their distribution is closely linked to the ranges of three wild ungulate species - Moose, caribou, and Dall's Sheep.

Where these prey species are most abundant, wolves are most common. In the Teslin burn area, considered the best Moose range in Yukon, wolves reach their highest density of 9 per 1000 square kilometres. In the Northern Yukon where Moose are rare and caribou unpredictable, wolves are at their lowest density of 3 per 1000 square kilometres. The total Yukon population is about 5,000 wolves.

CHARACTERISTICS

The subspecies occupying Alaska, Yukon and adjacent parts of British Columbia and Northwest Territories, is the largest race of wolf in North America. Yukon adult male wolves average 43 kilograms, and females 37 kilograms. Individual weights can vary from 21 to 55 kilograms.

Compared to a domestic dog of similar weight, a wolf is longer, taller, and has a larger foot. Its long legs allow it to travel great distances in search of prey, with minimal energy loss. During winter, the wide foot acts like a snowshoe, improving the wolf's mobility.

Wolves in Yukon range in colour from nearly pure white to jet black. About half are a mixture of grey and white, with some tan colouring on the ears and shoulder. Another third are dark wolves; black, chocolate-brown, or dark grey. Less than five percent are white or cream coloured wolves. These colour proportions are generally similar throughout Yukon, but some areas, a single colour phase dominates. For example, most wolves in the Tatshenshini River valley are dark; wolves in the Tagish Lake area are generally light grey.

THE WOLF PACK

A wolf population is composed of separate social units known as packs. Each wolf pack defends its home range, or territory, from other packs and lone wolves. The pack is a family unit made up of one pair of breeding adults (alpha members) and a number of subordinate wolves (beta members), which include sub-adults (1-2 years old) and pups. The average pack size in Yukon is four to seven wolves. The largest pack observed by biologists included 39 wolves, and was likely a short-term merging of two or more packs with related alpha members. During the 1950's, packs of fifty to sixty wolves were reported on the large lakes between Carcross and Atlin, B.C.

The breeding habits of wolves are based on highly specialized social behaviours. In each pack only the dominant pair breeds. But since it is the ultimate goal of all wolves to breed and reproduce, there is continual competition for dominance. When a wolf competes for the breeding position but fails, it will usually leave its old pack in search of a new one and another chance to reproduce. This dispersal of unsuccessful breeders is an important feature of wolf ecology. It reduces internal pack conflict and encourages the genetic mixing which keeps a healthy population. Studies have shown that Yukon and Alaska wolves may travel up to five hundred kilometres in their search for breeding opportunities.

The reproductive rate of wolves is relatively high - ten times greater than that of the northern Grizzly Bear. Although they rarely achieve breeding status before two years of age, wolves are capable of breeding as yearlings. The average litter size is four to six pups. The high reproductive rate of wolves is related to their high mortality or death rate. The oldest wolf aged in Yukon was 12 years old, but it is a rare wolf that survives more than three or four years. Injuries inflicted from Moose hooves, caribou antlers, or sheep horns are often fatal. Many sub-adult wolves die when they first leave their natal pack. Travelling alone, they face increased risks from hunting injuries, starvation, other wolves, and humans.

PREDATION

Wolves must eat meat to survive. The main prey species of Yukon wolves varies by region. In the southern Yukon, Moose are the most important prey, followed by Woodland Caribou, then sheep. On Yukon's North Slope, migratory Barren-Ground Caribou are the main prey of wolves. In the Porcupine River drainage in the Northern Yukon, Moose are more important to wolves than caribou.

Recent Yukon studies have shown that Moose-killing wolves tend to concentrate on calves and older age Moose whenever they are available. However, any Moose can be vulnerable to wolf predation, depending on the terrain, snow conditions, and its response to attack. Generally, a Moose that remains stationary can successfully defend itself from wolves, while a Moose that flees is attacked from the rear and often brought down. By backing into a thicket of trees, a Moose can fend off wolves with its powerful front hooves. Nearly all adult wolves have one or more broken and healed ribs from such encounters.

On average, a wolf pack will test ten Moose before it makes a successful kill. A pack of seven wolves will kill a Moose every five to six days, taking two to three days to eat most of it. They will often return a week or two later to finish off the scraps, bones, and parts of the hide.

In northern Yukon, wolves follow the Barren-Ground Caribou of the Porcupine Herd throughout the year, with little or no territorial behaviour. Studies in central Yukon found that wolves were also the most important predators of Woodland Caribou. More than 50% of calves were killed by wolves before they reached six months of age. Unlike Moose, caribou cannot fight off wolves. Instead, they respond to attacks by outrunning the predator. However, since caribou can run only short distances, persistent wolves are often successful, especially if they find the caribou in large open areas like frozen lakes or the wind swept tundra. An average wolf pack will kill a caribou every three days during winter, spending one day or less feeding on the carcass.

Sheep hunting wolves are found mainly in the mountain ranges of southwest Yukon. In the Kluane Game Sanctuary and National Park, some packs subsist almost entirely on Dall's sheep. They travel across large areas of the Park in their search for isolated groups of wintering sheep. Wolves attack sheep by surprising them from above and running them downhill into deep snow, or onto ice where the hard hooves of sheep are a disadvantage. Although they tend to kill the old age ewes and rams, wolves can also kill rams in their prime. Ewes and lambs appear to be less vulnerable to wolf predation because they form larger groups, and will travel shorter distances from escape terrain. A pack of wolves will kill and consume an adult sheep in 24 to 48 hours, eating all but the horns and hooves. It is thought that wolves hunt sheep regularly when Moose and caribou are limited or not available.

A YEAR IN THE LIFE

Winter

For most Yukon mammals, winter is a time of hardship and reduced food supplies, but not for the wolf. When cold temperatures and deep snow sap the energy of their hoofed prey (ungulates), wolves enjoy their greatest killing success. As a result, a wolf's winter weight can be as much as five kilograms higher than its summer weight.

During the winter the wolf pack is a smooth functioning cohesive unit. In the deep snow, wolves travel in single file to minimize energy loss. Pups, nearly adult size by now, travel with the pack at all times, watching and learning the skills of the hunting adults. Travelling as much as 40 kilometres in a day, the pack can move through its thousand square kilometre territory in less than a week. Pack members mark the borders of their territory with urine scent, and howl to warn neighbouring wolves away. As winter progresses, most ungulates bunch together on their winter range. Wolves respond by concentrating their hunting in these prey-dense areas.

In early March the breeding period begins. Aggression in the pack increases, until either the alpha members maintain their dominance and breed, or new breeders emerge.

Spring

In early April pregnant females begin searching for suitable dens in preparation for birth. After a sixty three day gestation period, on average four to seven pups are born, usually in mid-May. Other pack members remain loosely attached to the den, bringing food to the mother wolf and her pups. This tie to

the den restricts the movements of wolves during spring. Unlike the winter, they no longer travel great distances in search of prey. By late spring Moose and caribou are giving birth to their own young. Their calves make up the bulk of the wolves' diet during this period.

Wolves take on a leaner, ragged appearance in spring as their thick winter fur is shed and replaced with a shorter summer coat.

Summer

As summer progresses the ungulate species become more difficult to kill. Cow Moose with calves can escape predation by wading into lakes and rivers. Month-old caribou calves and the lambs of Dall's sheep are remarkably quick and agile. Although large mammals continue to provide the most food, small mammals are also important in the summer. In many areas wolves prey on beaver, muskrat, and snowshoe hare. On Old Crow Flats in the northern Yukon, waterfowl are a common item in the diet of denning wolves.

By mid-summer the pups are spending much of their time outside the den, wrestling with their litter mates, nursing, and resting in the sun. The mother wolf will often move the pups to another den area, called a rendezvous site, several times until late summer.

Fall

Wolf pups are half grown by the first snows of fall. The pack members begin to travel together more frequently, accompanied at times by the pups. Wolves are not yet restricted by snow depths and move freely throughout the mountains and valleys in search of prey. Hunting improves in the fall, as ungulate species are distracted by their breeding period, pay less attention to predators, and are generally weakened by the effort. The male ungulates are especially vulnerable to wolf predation during the rutting period.

WOLVES AND PEOPLE

Of all the wildlife species on our planet the wolf has been the most feared and hated. The origin of this image problem may stretch back many thousands of years, to the first time a group of early human hunters watched a pack of wolves feeding on a deer carcass and wondered "Is this why the hunting is poor?" When humans began to keep livestock, the antagonism towards wolves was set in stone.

Early Yukon First Nations respected the wolf in the way that one great hunter respects another. When large wolf packs were spotted, they may have been a cause for concern. But there was a positive side to wolf predation. In times of need, when a hunter came upon a pack of wolves feeding on a freshly killed Moose out on a frozen lake, he would take over the carcass and remove the meat for the use of his own family. To maintain the respect, such a hunter would thank the wolves for killing the moose for him.

The wolf is a major crest of many Yukon First Nations. In the southern Yukon, most First Nation people belong to one of two clans: the wolf clan and the crow clan. The division plays an important role in the rites of birth, death, marriage, and achievement.

When non-First Nations people arrived in Yukon, they brought with them the attitudes and methods of predator control practiced in southern Canada and the U.S.

Yukoners will always have tough decisions to make regarding the management of this controversial species. But such decisions are only made after careful study, and with a strong concern for the wolf's long term survival.

VIEWING OPPORTUNITIES

The sighting of a wolf outside of a zoo and off the television screen is a memorable experience by virtue of its rarity. But even in Yukon, you will have to spend a fair bit of time in the bush before you will get a good look at one. Sightings from the roadway are not very common, but they do happen.

In the southern and central Yukon, you will have a better chance of spotting wolves if you spend time out on some of the more remote rivers and lakes. Remember that Moose pursued by wolves will often head for water. Keep an eye out for kill sites on the shoreline.

In northern Yukon, the treeless Arctic tundra allows for clear long distance views. Firth River rafters and hikers in Ivvavik and Vuntut National Parks may catch the migration of the Porcupine Caribou Herd if the timing is right. If you are lucky enough to see the herd pass by, watch for wolves trailing along behind. You can often make contact with wolves by imitating their howls, by yourself or with a group of people. Calm, quiet evenings are the best times to try this. Good places to howl include rivers, lakes and open meadows where sound will carry for a distance. A wolf howling in return will produce one of the most enjoyable sounds of Yukon wilderness.

IDENTIFICATION

If you see a large wolf-like animal near Whitehorse or one of the smaller communities, it may be one of the husky type dogs common in Yukon. Generally, wolves carry their tails low, while these dogs carry theirs high in the air.

Once you get out of town and into the bush, the only other animal you might confuse with a wolf is a coyote. A wolf is about twice the size of a coyote and has a stockier build. If the animal's colour is black or creamy white, it's a wolf you are looking at. If it has a long thin face, long ears, and a light build, it's a coyote.

DID YOU KNOW?

Yukon's wolf population is comprised of about 40% pups, 20% yearlings, and 40% adults.

A wolf that hunts caribou kills the equivalent of fifteen to twenty adult size caribou in a year.

A wolf that hunts Moose kills the equivalent of six to eight Moose each year.

In mid-summer, adult wolves of both sexes sometimes bring food from a kill site to the pups by carrying it in their stomachs. At the den site, when the pups bite at the corners of the adults' mouths, the food is disgorged.

The recent introduction of Wood Bison into Yukon has provided wolves with another large prey species. It has taken wolves a while to adapt to hunting the largest land mammal in North America, but wolf killed Bison have recently been documented.