

A Caribou Year: Caribou Activities

Wintering Grounds - November to February

During winter, caribou switch to a diet primarily of lichens. Their favorite lichens grow on the ground in the boreal forest, sometimes in dense mats. Occasionally, lichens are also found on alpine tundra slopes. Caribou can smell lichens even under deep snow. Often, all the snow in a valley becomes cratered by caribou digging for lichens. Lichens are generally less abundant on the arctic tundra, which explains in part why Porcupine Herd caribou migrate south for the winter. Lichens are very rich in carbohydrates, which the caribou need for energy. However, lichens are very poor in protein, which animals need for growth. Consequently, caribou tend to lose weight all winter.

Caribou hair is excellent insulation. Caribou also have other adaptations that help them cope with the bitter temperatures of arctic winters. They use their specially adapted, shovel-shaped hooves to paw away snow to get at lichens. Still, winter is a hard time. Deep or crusty snow can make it difficult for caribou to move and feed, while the same conditions make it easier for wolves to run across the surface of the snow to hunt and kill caribou. Old, sick, or weak caribou often don't survive to spring.

Spring Migration - March and April

In late March, winter still grips the north but caribou instinctively know that spring is near. Females and their calves of the previous summer begin moving north first. Soon, however, male calves start falling behind, followed later by female calves and then many of the non-pregnant cows. By the time spring migration is in full swing in late April, pregnant cows are far in the lead and bulls are only just beginning to leave the wintering areas.

Deep snows can delay spring migration, but the drive to return to the calving grounds draws caribou ever northward. The caribou often follow rivers, where snow is harder packed and easier to walk on, or they may travel on windswept ridges. Caribou also follow in each other's trails. There is no "leader" to the migration. Older, more experienced cows are usually at the front, but leadership changes frequently because all of the caribou know instinctively where to go, and because no single animal can continue the tiring work to break trail for long. Because of the burdens of plowing through deep snow, spring migration trails are usually more concentrated than during fall. Not until they reach the shallower and harder packed snow of the coastal plain do the northward migrating caribou begin to fan out.

Snow is usually shallower and melts earlier on the coastal plain in the northern Yukon than in other nearby areas. Therefore, Porcupine Herd cows that have wintered in Canada and south of the Brooks Range in Alaska migrate first to the northern Yukon before following the coastal plain west to favored calving grounds in the Arctic Refuge.

Calving Grounds - May to Mid-June

Female caribou return to the same calving grounds year after year. Each population or “herd” of caribou has its own calving area. While small populations of caribou often calve in mountains or forested areas, calves of large, migratory caribou populations like the Porcupine Herd are typically born in treeless tundra where there are few large predators. The calving grounds of the Porcupine Herd stretch for over 100 miles, from the arctic coastal plain of the Yukon Territory in Canada across the border into northeastern Alaska. Many nutritious plants grow on the tundra calving grounds, and insect pests like mosquitoes and warble flies are scarce at calving time.

Because Porcupine Herd caribou migrate toward their calving grounds from the east, many cows are forced to give birth in Canada if late snowmelt slows down migration. In normal years, however, the majority of calves are born farther west in Alaska in the Arctic National Wildlife Refuge, where there is generally more nutritious forage and fewer predators. Therefore, calves survive better when calving occurs in Alaska.

Caribou mothers give birth to a single calf. Females typically give birth for the first time when they are three years old, but very well fed and healthy cows may give birth at age two, and cows in poor condition may not start having calves until they are four years old. Well-nourished adult cows give birth every year, but more poorly fed cows may skip one or more years between having calves. Caribou calves are very precocious so they can run and follow their mothers within a few hours of birth. Nevertheless, young calves are vulnerable to predators such as wolves, golden eagles, and grizzly bears. Caribou milk is rich in fat and full of nutrients, so calves grow quickly. When they are about three weeks old, calves begin to eat some of the same nutritious plants as their mothers. By then, the calves are also big and fast enough to have a better chance of escaping from predators.

Post-calving Groups - Late-June to July

The post-calving period occurs in the middle of the summer, after the new calves are born. This is the time when the plants that caribou eat are the most abundant and at their highest quality. By eating a lot of these plants, caribou grow during this time, and they also store the fat they’ll need to survive through the long winter ahead. Bulls put on fat and grow large antlers. Cows grow much smaller antlers and regain some of the weight they have lost during the winter and calving periods, but most of the nutrients they get from the plants they eat goes into milk for their calves. When the calves are three weeks to a month old, they begin to wander with their mothers in search of the best feeding areas.

The post-calving period is also the time of year when hordes of insects emerge and torment the caribou. To escape these pests, caribou travel to beaches and river deltas or run up onto mountains and ridgetops, where cool winds and lack of vegetation keep insect numbers lower than in calm valleys or out on moist tundra. Caribou drift about erratically between favored feeding areas on cool days or at night, and places where they can escape from insects on warm, still days. In addition, cows without calves, yearlings, and many adult bulls continue moving toward the calving area and eventually catch up with the mothers and calves. Caribou actually move about more now than at any other time of year, including during their migrations, but now their movements are haphazard and irregular.

As all these caribou move back and forth between feeding and insect-relief areas, they tend to encounter each other, gather together and mill about in larger and larger groups. These large groups offer extra protection from insects, at least for those caribou in the middle. After a few days of warm temperatures and little wind, nearly all the female and calf caribou in the Porcupine Herd, and often most of the bulls, can be found in a few very large groups, called aggregations, on insect-relief areas near the coast or

on high hills near the mountains. The remainder of the adult bulls will also be in a few large groups on mountain tops, though they may be a hundred miles or more away from the bigger groups containing the cows and calves.

Fall Migration - August to October

During August, insect pests become less abundant than earlier in the summer, and eventually disappear. Caribou still travel widely in search of the best feeding areas, but they no longer need to congregate in insect relief areas. Thus the large aggregations break up and caribou disperse widely. Mortality rates often increase as caribou come in contact with more predators. Sometime in late August or early September the caribou stop moving erratically and their travels become more directional. Often a storm or cold weather starts them moving south toward winter range. Fall migration has begun. Once again, larger groups form as caribou start moving in the same direction.

The rut, or mating season, in early October usually occurs when fall migration is still underway. Caribou are in the fattest and best condition of the year after the summer feeding and growing season. Bulls use their huge antlers to fight each other, and the largest, dominant males do most of the breeding. Fighting during rut puts a great strain on the dominant bulls and puts them in weakened condition before the harsh winter season. Smaller bulls usually come through rut in better shape, meaning they will stand a better chance of surviving winter and breeding in future years.

Fall migrations are often spread over a large area, with caribou moving in the same direction but along many parallel paths. By late October or early November, caribou from the Porcupine Herd have usually moved deep into the taiga or boreal forest, though in some years many will remain north of the treeline all winter.