



**LAST**  
*of the*  
**GRAY**  
**GHOSTS**

by Cheryl Lyn Dybas



# THE SUMMER SUN SLIDES BEHIND A FIR-TIPPED RIDGE

in the deep boreal forest  
north of Thunder Bay.

It's 10 p.m., twilight this time of year.

Biologists John Fryxell and Jim Baker are driving five hours north of Thunder Bay on Ontario Highway 11. They pass the blue waters of Lake Nipigon, which drains into the Nipigon River, Lake Superior's largest tributary.

John is affiliated with the University of Guelph near Lake Erie and Jim with the Thunder Bay office of the Ontario Ministry of Natural Resources and Forestry (OMNRF). Both have journeyed far north on a quest to find a forest wraith.

They skirt sheer rock cliffs, then bank left onto Route 584 toward the railroad hamlet of Nakina, end of the line in this moss-covered land.

And so begins their search for a mysterious North Woods denizen, a pale being sometimes called the gray ghost that passes silently through the black spruce and jack pines.

The Anishinaabe people call it *adik*, but most know it by its Anglicized Mi'kmaq name, *qalipu* – caribou.

## HOME TO CARIBOU

Woodland caribou (*Rangifer tarandus caribou*) are medium-sized members of the deer family that once ranged the shores of Lake Superior, dipping south to the Mackinaw City area in Michigan.

For thousands of years, caribou were the dominant deer species in northern Ontario. Caribou represents an Ojibwe (or Anishinaabe) clan and

A caribou pauses shoreside on the Slate Islands in Ontario.



appears on ancient pictographs found in Quetico Provincial Park to the west of the Lake and among the Agawa Rock pictographs on its eastern shore.

Today, caribou don't exist along Lake Superior south of the international border. Even on the Ontario shore, these gray ghosts seem to be vanishing.

Two woodland caribou "ecotypes" roam the northern Ontario woods.

Thick-coated, both are well adapted to the northern forest. They have wide, round four-toed hooves that spread to negotiate deep snow or mushy peatlands, yet are sharp-edged for breaking through snow

crust for food. Their Mi'kmaq name means "to paw."

One Ontario ecotype, the forest-tundra woodland caribou, lives far north in the province and travels in large herds. They winter in the boreal forest and migrate to the Hudson Bay Lowlands, the most southerly tundra in the world, for spring calving and summer grazing. Their typical home range covers 200 to 4,000 square kilometres (125 to 2,485 square miles).

Forest-dwelling woodland caribou, the other ecotype, remain year-round in the boreal forest. Most roam far north of Lake Superior, but a sprinkling still live near the coast and on some islands. Their home range is 100 square kilometres (63 square miles) or less, making them non-migratory, unlike the forest-tundra caribou. The females also separate, rather than group, to birth their single calf – not twins or triplets as can happen with moose and white-tailed deer.

While forest-tundra caribou are more common in Ontario, the forest-dwelling woodland caribou need all the support they can get. Ontario lists the forest dwellers as threatened – not yet endangered, but on the trajectory.

Ontario MNR estimates the province's forest-dwelling caribou population at 5,000 animals. Their solitary nature makes them hard to count, so no one knows exactly how many once lived – or currently exist – here.

Since the late 1800s, more than 40 percent of Ontario's caribou range has been lost, mainly from human activity. Scientists believe that the herds of forest-dwelling

This page: The one haven of caribou beside Lake Superior remains the Slate Islands, where these photos were all taken. Facing page: A caribou snacks on trees and arboreal lichen on Pearl Island in the Slate Island archipelago.



BRENT WEST

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woodland caribou are ebbing northward by about 21 miles per decade and may be extinct in Ontario by 2100.

That downward spiral draws John and Jim north to Nakina and beyond. There they hope to uncover the secret lives of woodland caribou – those that still roam in the region.

### CARIBOU IN A COAL MINE

To know caribou, one must first know the boreal forest, aka the taiga. So closely connected are the forest and the caribou that, like watching canaries in a coal mine, scientists are assessing caribou populations to judge the health of both.

A true boreal forest is dominated by spruce, fir and pine with little undergrowth because of the dense evergreen canopy. Caribou rely on this terrain for food (they eat arboreal lichen off the trees and ground) and as protection from predators.

In 2014, John – along with a dozen or more researchers at Guelph and Trent universities, the Canadian Forest Service and the Ontario MNRF – released results of a four-year study of woodland caribou. The larger three-part “State of the Woodland Caribou Resource Report” will be the road map for developing a provincewide woodland caribou conservation policy.

The report lists 14 caribou ranges across Ontario, including two that cover the Big Lake neighborhood: the Nipigon Range around Lake Nipigon, and the Coastal Range, which features a slender 10 kilometre (6.2 mile) or so strip hugging the shore from the town of Nipigon to Sault Ste. Marie.

Of the 14 ranges shown on the study map, only the Lake Superior coast has slashes through it. The lines signal what scientists call “discontinuous distribution” – few to no caribou.

It wasn't always so, according to biologists Peter Gogan of the U.S. Geological Survey's Northern Rocky Mountain Science Center, and Jean Fitts Cochrane, now retired from the U.S. Fish and Wildlife Service. Peter and Jean first published a paper on the caribou's decline along Lake Superior in 1994.

Woodland caribou were extirpated from the Michigan mainland by 1912 and from Isle Royale by 1928. Caribou disappeared from Minnesota in the 1940s, save for sightings of two animals in northeastern



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Minnesota near the border during the winter of 1981-82.

In Ontario, woodland caribou gradually retreated northward from Lake Superior between 1900 and 1950, vanishing from the western shore by 1912. Near Lake Nipigon, they became scarce soon after the Canadian National Railway was constructed in 1910. Farther east, woodland caribou range was continuous south to Lake Superior as recently as the 1960s, extending to what is now Pukaskwa National Park.

“With several small populations of woodland caribou persisting, it might appear that these populations are viable,” Peter and Jean offered in their 1994 paper. But “the prognosis for most of the existing Lake Superior herds is actually bleak.”

The researchers predicted extinction for the Pukaskwa National Park herd within 25 years. That estimate is very close to correct, says Pukaskwa National Park biologist Christine Drake. Since 1974, the annual rate of the park's caribou decline has been 3.7 percent per year. In the late 1970s, 40 caribou roamed within the park boundary, says Christine. By 2009, that number was down to five, and in 2011, to three. They're likely Pukaskwa's last caribou.

“We don't know for sure if they're gone,” she says, “but no one would argue that the writing is on the wall.” Pukaskwa biologists are now investigating the possibility of translocating caribou from other locales to the park.

Such translocations have been tried in the past. In 1988, caribou were moved from the Slate Islands to Lake Superior Provincial

### 'Bou Clues

- Caribou are excellent swimmers; their hollow hair makes them extremely buoyant. They often flee into water to escape predators.

- There are several subspecies of caribou, from the diminutive, light-colored Peary caribou, with males that weigh in at about 240 pounds (130 kilograms), to the slightly darker barren-ground caribou, with males averaging 330 pounds (150 kilograms), to the largest of the caribou family, the dark-coated woodland caribou, with males reaching 460 pounds (210 kilograms).

- Yes, Virginia, reindeer are also caribou by another name. While the word caribou is used more in North America, the animals are better known as reindeer in Europe. We generally reserve the term reindeer for those that pull Santa's sleigh.



Top: This map shows 14 caribou ranges within Ontario. Ranges along Lake Superior have special conditions and are outside the province’s “Range Management Policy in Support of Woodland Caribou Conservation and Recovery.”

Park. That herd survived for a time, but it’s been five years since the last caribou was recorded there. The only caribou within the park boundary may be the ancient pictograph of one painted on the steep lakeside cliff.

Is there better news elsewhere along Lake Superior’s shores?

Yes, on the Slate Islands, says Steve Kingston, a biologist at the Ontario MNR office in Thunder Bay. In winter 1907, woodland caribou crossed the 12 kilometres (8 miles) or so from the Ontario mainland to the Slate Islands when the water froze and offered a rare ice bridge.

Today there are some 100 caribou on the Slates. At one time, that number may have been as high as 650. A shortage of food in 1990, though, caused a dramatic population drop.

Still, the Slates are touted as a place where people can see caribou – sometimes strolling through a campsite. *Backpacker* magazine called it the place “where canoes and caribou converge.”

On Michipicoten Island, caribou

translocated there from the Slates in the early 1980s have taken a good hoof-hold. A survey done in February estimates 300 to 400 caribou on the island.

Recent ice bridges, though, may have made these islands less than the caribou paradises they once were.

### A NEW NEIGHBOR

The Slates were once wolf-free, says Steve Kingston, “then an ice bridge formed in the winter of 1994, and again in 2014 and 2015, opening a wolf passage.”

In January 1994, a wolf was sighted on the ice next to Mortimer Island in the Slate archipelago.

That spring, wolf tracks were recorded on the island for the first time. “Signs indicated that two wolves were there,” Steve says.

By the summer of 1996, one wolf had disappeared. The body of the second wolf was found in 1999. A necropsy showed that caribou did not make up the majority of its diet. Beavers were its most frequent meals, but it also ate snowshoe hares, red-backed voles, birds, insects and, perhaps surprisingly, berries.

This past frigid winter again provided an ice bridge and researchers in June confirmed two, possibly three, wolves on the Slates. This fall they may attempt to radio-collar them.

To date, when wolves have ventured to the Slate Islands, it’s been for relatively short periods.

On Michipicoten Island, however, a new story may be developing.

Wolves likely made their way to Michipicoten in winter 2013-14, the first time an ice bridge to the island had formed there since 2009.

In midsummer 2014, a camper spotted two wolves. Months later, a naturalist photographed tracks of three wolves on an island beach.

Ontario MNR wolf biologist Brent Patterson, also of Trent University, visited the island in mid-February with other researchers. They found and radio-collared a pack of three wolves, a male and two females. Snow-tracking evidence indicated that a male and one female bred in February, and by summer researchers had confirmed a litter of pups, though the number remains uncertain, Brent says. Trail cameras revealed that a fourth wolf (not a pup) appeared by March.



MICHAEL HULL



“We don’t know whether this fourth wolf was there all along, or if it only crossed and joined the group this winter,” says Brent.

After the long winter of 2014-15, with several feet of snow blanketing the island, it wasn’t surprising that during a June trip to Michipicoten, the scientists found many caribou killed by malnutrition as well as some by wolves.

That may indicate more caribou than the island can sustain, Brent says. “The poor condition of caribou, coupled with few sightings of cows with calves, suggest that caribou numbers are likely above the island’s carrying capacity.”

If wolves reduce caribou numbers on the island, Brent says, “it will be interesting to see if and how caribou condition improves, and how kill rate by wolves declines with decreasing caribou numbers. ... We will be monitoring changes in vegetation growth and plant communities as wolves affect caribou, and possibly beaver, numbers over time.”

The effect on beavers, and hence on the island environment, may be greater because their numbers are “unprecedented” on Michipicoten, Brent adds. The beavers currently have a stronger effect on the forest than the caribou.

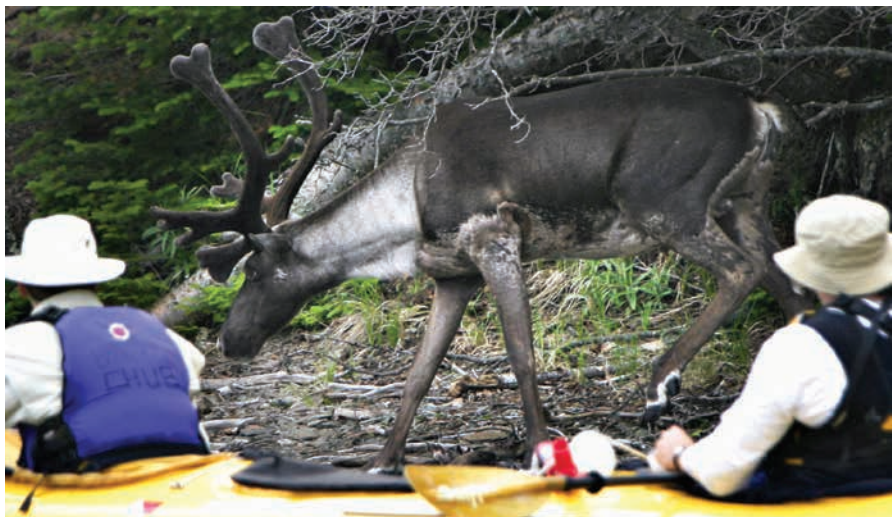
Similar predator-prey interactions have taken place between wolves and moose on another Lake Superior island, Isle Royale, where the remaining wolf pack is down to three.

Interaction with people, though it does occur, is minimal for Lake Superior island caribou.

Not many people venture across the Lake to visit these islands, beyond a few summer kayakers or canoeists or the occasional overnight sailboater or powerboater.

Looking at the islands’ paths, one would think humans had bushwhacked hiking trails through the woods, but the trails are made by caribou as they search for lichen.

“Caribou are frequently seen swimming between the islands or walking along the mainland,” says Evan McCaul of the Ontario MNRF in Thunder Bay. “Recreational users – including power boaters, sailors and kayakers – often report observing the animals.”



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## THE HUMAN INFLUENCE

Wolves and other species may have an influence on caribou numbers, but for the extremely habitat-dependent woodland caribou, the dismantling of the boreal forest creates the true crisis.

Findings in the 2014 “State of the Woodland Caribou Resource Report” echo across the 14 identified Ontario ranges. Threats to caribou include habitat degradation and fragmentation from human activities such as logging and mining.

Climate change is another major factor. Black spruce, jack pine and other coniferous trees – hallmarks of the boreal forest – are shifting north, with caribou right behind them.

Of particular concern to those tracking caribou health in Ontario is proposed mining operations in the Ring of Fire region some 500 kilometres (310 miles) north of Thunder Bay in the heart of woodland caribou territory.

Already, though, long decades of mining

## Peek a 'Bou

A few groups lead tours to the Slate Islands, where caribou are the stars. These photos (top, left) were taken during tours by Wilderness Inquiry, out of Minneapolis.

When Peter Frey visited with the group, the caribou seemed out of a fairy tale. “It’s like these mythical creatures that you hear about via Santa. You hardly think you’ll see one, or that they are going to be that much different from deer or elk.”

On his tour, Michael Hull saw a caribou swimming 500 feet from their kayaks. Later, he spotted a large hoof print (facing page) at the campsite.

“Okay, there have been caribou here,” he was thinking, when “one walked right through the campsite, right through everybody. All of us kind of moved back and gave him room ... not cause a fuss and make him feel like he had to defend himself.”

Loss of the caribou would diminish the local wilderness, says Michael. “We’re in their home, and we’re in this beautiful place. ... There’s a beauty in that in the sense of the interconnectedness.”

– Connie LeMay

For group tour info: Wilderness Inquiry, [wildernessinquiry.org](http://wildernessinquiry.org) or Naturally Superior Adventures in Wawa, [naturallysuperior.com](http://naturallysuperior.com).





KERRI FRENCH / OMNRF

In winter 2014-15, Ontario Ministry of Natural Resources and Forestry researchers visited Michipicoten Island Provincial Park, using helicopters to spot or tag caribou and wolves. Top, from left, are Brent Patterson, Rob Burns, Evan McCaul and Bob Elliot. Center: Park Superintendent Bob Elliot (left) joins Evan McCaul in the search. Bottom: A caribou on the Slate Islands sports the beginnings of velvet-covered antlers.

and timber harvest closer to Lake Superior have altered the mix of tree species. Fire suppression in human-populated areas has altered the natural life cycle of the forest. Minnesota’s northern forest, once boreal, has been considered “transitional” for a century, with aspen and birch dominating where conifers once reigned.

Auden, not far as the caribou roams from Nakina and where John and Jim are also studying the animals, is a human-altered area with a well-developed road network. It’s been logged since the 1940s, resulting in a younger-growth, mixed coniferous-deciduous forest. It also has more moose, illustrating that moose and white-tailed deer can do well in areas disturbed by human activity or naturally caused fires.

“Higher deer and moose densities are found in disturbed landscapes relative to pristine ones,” says Brent, adding that they seem to be associated with higher wolf abundance.

Wolves encounter, and attack, moose more often than the wider-ranging woodland caribou, he adds. Moose tend to travel within 40-square-kilometre (25-mile) ranges. As the forest changes, the stage is set for a “perfect storm” of factors to collide, changing the relationship among habitat, predator and prey.

“Caribou, moose and wolves are in a complex dance in the northern forest,” Brent says. Where will they be when the music stops?

## SEARCHING FOR CARIBOU

The day after John and Jim’s arrival at Nakina, it’s 6 a.m., broad daylight, and they’re setting out for their research sites. So far, they’ve seen not a wisp of a gray ghost.

A few hundred yards into the forest off a backcountry dirt road, a thick carpet of what looks like dried-out pine needles covers an area the size of a suburban yard. But it’s not pine needles. It’s hair from a moose long gone: a wolf kill. The moose was small, likely young.

Some have proposed culling wolves to protect caribou, but wildlife managers say that would trade one caribou problem for another. Without wolves, deer would soon overtake the landscape.

For John and Jim, Auden is lands’ end for a research day in the field – still with no stirring of a caribou. Tomorrow and the next day, they will try another route – also to no avail.

Early the fourth morning, the two head back to Thunder Bay, driving through the boreal forest, then south on Highway 11 into stands of mixed coniferous and deciduous trees.

“We’re out of ‘caribou country,’” laments Jim. “It’s very unlikely we’ll see one here.”


Suddenly, something darts across the highway. It stops ever so briefly to glance at the car before vanishing into roadside birches. Here where fir trees are few, it’s not Caribou who has come to send off the researchers. It is Wolf.



The articles of ecologist and science journalist Cheryl Lyn Dybas have appeared in many publications, including *National Geographic*, *National Wildlife*, *The Washington Post* and *Canadian Geographic*.

BRENT WEST



 Find the 3-part caribou report at [www.ontario.ca/environment-and-energy/woodland-caribou](http://www.ontario.ca/environment-and-energy/woodland-caribou)