

Much Too Short a Visit

Several woodland caribou that entered northwestern Montana from Canada last spring met a grim fate. Will future incursions by these native-but-now-absent big game animals last longer? **BY DANIEL PERSON**

IN EARLY MARCH 2012, biologists drove cattle trucks into the Purcell Mountains in southern British Columbia, then backed into a makeshift corral to allow the cargo to stretch their knobby, bell-bottomed legs.

The woodland caribou had begun as a group of 20, captured in northern British Columbia and transported south to within 40 miles of the Montana border. One animal died en route, and after being let off the truck, the 19 that remained were tranquilized and loaded onto helicopters that, like whirling Noah's arks, whisked the animals, two at a time, to higher ground and deeper snowpacks.

In winter, woodland caribou need two things more than all else: deep snow and arboreal (tree) lichen. The snow keeps predators at bay. The lichen, named old man's beard for the way it hangs from the moist subalpine fir and Engelmann spruce trees of the Inland Northwest, is for eating.

The Purcells, which dip into Montana, have historically contained both, providing habitat for a healthy, if not large, population of woodland caribou.

But during the 1990s, the number of animals there dropped drastically. By the early 2000s, biologists in British Columbia began to fear that, without new stock to increase genetic diversity and boost herd size, woodland caribou would cease to exist in the southern Purcells. ▶▶

TO THE TIMBER Most people think of caribou only as the tundra, or barren-ground, subspecies found in Alaska and northern Canada. But another subspecies, the woodland caribou (shown here), is native to southern Canada and the northern parts of Washington, Idaho, Montana, Minnesota, and New England. The specific woodland caribou ecotype native to northwestern Montana is the mountain caribou. These animals have evolved to move up-elevation in winter, using their snowshoe-like hooves to stay atop deep snow that bogs down wolves and mountain lions. When British Columbia tried to augment its caribou herd in the southern Purcell Mountains last year, five of the animals sneaked south over the international border.

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That's an outcome Montana biologists know well. The animals, a subspecies related to the caribou that migrate across the Alaskan arctic plains and the reindeer of northern Scandinavia and Russia, were once found as far south in North America as Lolo Pass in the Bitterroot Mountains. But by the mid-1980s, when the woodland caribou in Montana came up for consideration for endangered species protection, it appeared that not a single one remained to be protected.

Today, two generations removed from the last known resident herd, caribou are an animal that Montanans never knew they lost.

The disappearance of caribou is especially notable given the recovery of other species in Montana once on the brink of disappearance: grizzlies, wolves, and bald eagles. "The woodland caribou is the only historically native big game species that we're still missing," says Jim Williams, regional wildlife manager in Kalispell for Montana Fish, Wildlife & Parks.

Montana's experience with caribou is one the Canadian government does not want to see play out in the southern Purcell Mountains. And so came the trucks and the 19 caribou to join 14 already living there.

Off the helicopters and out from under sedation, the caribou ambled away, trudging through fresh powder into a stand of trees. Video of the release shows snow matted onto the caribou's coats, making them look like the ghosts they have become across much of their American range.

But something interesting, if not totally

unexpected, occurred after the caribou's release. Five of the transplants made a quiet pass across the wooded international border into Montana. For most of the animals, the visit was tragic: Three were killed by predators, while another almost perished from tick paralysis. Only one, a bull, returned to Canada unscathed.

The five animals' cross-border journey told British Columbia biologists that they needed to find ways to keep future transplanted caribou from moving south, where more predators live. But for Montana biologists, the reappearance of caribou—if only for a few short weeks—was a tantalizing glimpse into the possibility of restoring a big game species that once called at least a small part of the state home. As biologists plan to transport another batch next winter (see sidebar, page 14), all eyes will be watching to see whether, in trying to avoid Montana's fate with caribou, the Canadians will in fact reverse it.

LOST IN OLD-GROWTH

No one knows how many caribou roamed the mountains of far-western Montana before European settlement. But an exhaustive report by FWP biologist Tim



WRONG WAY Last year Canadian biologists hoped the 19 caribou they released in the southern Purcells just north of the Montana border would follow local caribou to higher elevations, where fewer predators lived. Instead, many took off downhill and perished.

Manley in 1986 definitively shows that the population consisted of more than the occasional straggler from the north.

For Tobacco Plains Indians like the Kootenais, oral tradition suggests they regularly hunted caribou in the Yaak drainage. There are also the place names—such as Caribou Mountain in the southern Purcells and Caribou Creek near Libby. The Kootenai name for Logan Pass in Glacier National Park—"Bigfeet was Killed"—likely refers to the woodland caribou's huge hooves. (In the 1920s, members of the Kai'na Band of the Niitsitpi reportedly killed a bull caribou near the pass.)

During ensuing decades, reports of caribou came in fits and starts. A herd of between 8 and 12 was seen near Lolo Pass in the 1930s, and a herd of 35 was reported in the Yaak drainage in the 1940s. The most documented sightings of caribou in Montana came in the 1950s, unfortunately for reasons heralding the animal's coming demise.

The caribou's ornate antlers are what first draw the eye. But just as the Kootenai reference to "Bigfeet" suggests, nothing speaks to the caribou's identity more than its enormous hooves. Shaped like bisected dinner plates, the hooves use the same physics as snowshoes to keep caribou atop deep snow. When winter comes and most animals—including predators—head to lower elevations for easier mobility, caribou move uphill, where they browse on hanging arboreal lichen accessible only when the animals are standing on deep snowpack.

"These caribou have carved out a niche that no other ungulates have learned," says Joe Scott, director of Conservation Northwest, a nonprofit group monitoring efforts to bolster the southern Purcell herd. "They lose themselves in old-growth forests."

Which gets to why the 1950s were so devastating to Montana caribou. In the 1940s, severe winds flattened high-elevation spruce-fir stands across the state's northwestern region, followed by a spruce bark beetle epidemic. A decade later, in an effort to salvage the blown-down and insect-



BRANCH BROWSE Also known as old man's beard, horsehair lichen is a type of arboreal lichen favored by mountain caribou. By standing on deep snow in winter, the animals can feed off higher branches that are inaccessible at other times of year. Mountain caribou also eat the wispy strands of lichen when branches break off old-growth trees and fall to the ground.

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LONG, STRANGE TRIP In March 2012, British Columbia biologists trapped caribou from a large herd in the province's northern region. The animals were sedated and fitted with GPS satellite transmitters (top left) so their movements could be tracked. FWP biologists Tim Thier and Jim Williams (top right) were invited by their Canadian colleagues to help handle the large animals. The caribou were trucked south then helicoptered (above left) to release sites in the southern Purcells. Above right: Instead of sniffing the tracks of local caribou and following them to safe sites, as biologists had planned, the released animals ran off. "I think they woke up from sedation and said to themselves, 'That was awful; we're getting out of here,'" says Leo DeGroot, a caribou recovery project leader for British Columbia's Ministry of Environment.

killed timber for commercial use, logging was greatly expanded in the caribou's highland habitat.

In his 1986 report, Manley suggests that the increased number of loggers in the highlands was in part responsible for the growing number of caribou sightings.

And, like bugs under a rock, the exposed caribou scattered.

Cutting down old-growth forest removed the ancient trees where lichen grow. What's more, logging roads and early-growth trees and shrubs made the high-elevation habitat more hospitable to other ungulates like deer. They, in turn, attracted cougars and wolves, which caribou had once been able to avoid. "That gets to their very survival strategy," says Tim Thier, an FWP wildlife biologist in Eureka, a town just 6 miles from the Canada border.

"When you open up the forest canopy at higher elevations, you make it more conducive to deer, moose, and elk, which gives predators incentive to follow."

Forest fire has much the same effect. Large blazes in the early 20th century appear to have wiped out prime old-growth habitat used by caribou. By 1986, after decades of sporadic reports in Montana, biologists could not find a single caribou during four consecutive years of searching. While small populations in the Selkirk Mountains of northern Idaho and northeastern Washington received endangered species protection, Manley concluded in his report that Montana would have to start from scratch. "If caribou are ever to become established within Montana, then it would most likely have to be through re-introductions," he wrote.

PATCHES OF POSSIBILITY

In the 1990s, FWP biologists explored the possibility of relocating caribou to Montana and found suitable forested areas in the Whitefish and Purcell Ranges. "We don't have the habitat for caribou we had in the 1800s, but we still have some patches," Thier says. But the effort to transplant caribou into Montana didn't get far, partly because acquiring the animals is so difficult. "British Columbia barely has enough for its own recovery effort, much less extras for us," says Williams.

Meanwhile, between the time of Manley's report and the transplant of 19 caribou last March, things hadn't gotten much better for the species in the U.S.-Canada border region. A transplant of 103 caribou in the late 1980s and early '90s into the southern Selkirks, meant to augment an Idaho

LICHEN PHOTO BY JASON HOLLINGER; MAP: MONTANA OUTDOORS

CLOCKWISE FROM TOP LEFT: DAVE HEAGY, PROVINCIAL GOVERNMENT OF BRITISH COLUMBIA; FWP; TARA SZKORUPA, PROVINCIAL GOVERNMENT OF BRITISH COLUMBIA



PLAN B For its scheduled 2014 caribou transplant, British Columbia is taking steps to ensure that the released caribou stay at high elevations, where deep winter snow adds to their safety.

herd of 30, resulted in a net gain of only 18 animals. A mountain lion that biologists dubbed “Mr. Nasty,” responsible for killing at least three of the caribou and probably more, is partly blamed for the low survival rate. Then in 2009, an avalanche in Banff National Park wiped out most of the park’s herd, raising questions about that population’s viability.

Caribou advocates in northern Idaho contend that increased snowmobile and skiing activity harms that state’s remaining caribou. They say the winter recreationists cause the animals to expend precious energy while seeking areas with less human activity. In recent years only a few caribou have been counted in northern Idaho. Some local communities, claiming that caribou are

now extirpated (locally extinct), are petitioning to have the animal taken off the endangered species list in hopes of lifting logging and snowmobiling restrictions.

And then came the Purcell transplant.

The first of the five caribou that migrated to Montana last spring announced its arrival in particularly grim fashion: a mortality signal from south of Eureka. As originally reported by the *Missoulian*, Thier, Manley, and Williams snowmobiled to the area to recover what they expected would be a carcass. Instead they found an alive but paralyzed caribou. The animal was rushed to a veterinary clinic in Eureka, treated for a tick-borne disease, and then taken back to Canada.

Excitement surrounded the next caribou to cross the border. It was pregnant, leading some news reports to herald the possibility of the first documented caribou birth in Montana in decades. But the birth never occurred. The pregnant cow broke a leg and was killed by a predator, likely a lion. Its radio collar led biologists to three-quarters of the animal’s body. “It was just heart-breaking,” Thier says. “Here was this cow just days from giving birth.”

The third and fourth visiting caribou were killed by wolves. Only the fifth, a bull, managed to make it back to Canada alive.

BC biologist hopeful about 2014

The silver lining to last year’s disappointing caribou release was how much Leo DeGroot and other wildlife biologists learned and can apply to their next attempt. “In 2014 we plan to use a different source population,” says DeGroot, a mountain caribou recovery project leader for British Columbia’s Ministry of Environment. “We’ll also pen the released animals with local caribou for a week or so to force them to rub noses, so to speak, and bond.”

In 2012, biologists used the northern ecotype of woodland caribou captured in the northern part of the province. “Removing 20 didn’t make near the dent in that large herd as it would have if we had taken that many from the smaller herds of the mountain ecotype,” DeGroot explains. Most northern woodland caribou don’t venture to high elevations during winter, preferring to dig through snow to find ground lichen. DeGroot says he hoped the released animals would bond with local mountain caribou at the release site in the southern Purcells and follow them to higher

elevations, learning to feed on tree lichen.

Unfortunately, the local caribou were scared off by helicopters landing to unload the first group of transplants. “We thought the new caribou would smell the locals and follow,” DeGroot says. “But instead they came out of sedation and took off, ending up 10 miles away the next day.” The same thing happened with the second group. Instinctively, some headed to lower elevations, where they eventually ran into cougars or wolves.

For the next effort, scheduled for March 2014, biologists have two strategies for making sure released caribou stay at the safer higher elevations. One is to use the mountain ecotype rather than the northern ecotype. The other is to plow a road to a high-elevation site and release the caribou from a truck into a 2-acre corral where several resident caribou will be placed beforehand. “After a week or so of letting those caribou get to know each other, we’ll open the corral,” says DeGroot. “The resident ones should know where to go, and hopefully the transplants will follow.”

—Tom Dickson



BC biologist Leo DeGroot

Caribou north of the border hardly fared better. Just 7 of the original 19 lived through August, according to British Columbia biologists. About half of those that died were killed by lions or wolves and the rest perished from accidents or unknown causes. Clearly disappointed Canadian biologists told reporters they will try to make sure the next set of released caribou fare better. For one thing, they said, they’ll take efforts to keep the animals from migrating to Montana, where lower elevations mean higher predator densities.

ROADBLOCKS AHEAD

Thier shrugs off the notion that the caribou’s hard luck in Montana means the state’s mountains are no longer suitable habitat. “Whenever you release animals, it’s typical to put them in the best habitat, but they’ll go here, they’ll go there, they’ll go to places that aren’t too good,” he says. “The areas where they ended up weren’t good habitats.” He explains that predation of the released caribou came in low-elevation areas of Montana and British Columbia, outside of what biologists consider suitable habitat.

That’s not to say Thier disagrees with the Canadian biologists’ plan to prevent the immediate southward journeys seen last spring. He envisions a slower and more sustainable recovery of the animals. “It’s our hope that this population builds and, as it builds, that caribou move into some appropriate habitat in Montana,” he says. “To a huge degree, this is a last best effort. [The Canadian biologists] are putting all they can into it. If it doesn’t succeed in Canada, we’ll need to figure out why it didn’t work there,” before even considering transplant efforts in Montana.

Others, like Scott, are not as optimistic for Montana. One of the major challenges in caribou recovery is their slow reproduction rate. Even under the best-case scenario, he says, a decade of herd growth wouldn’t be enough to spill into Montana. The addition of climate change and the loss of old-growth forests may create a more permanent setback to the animals, not just in Montana, but across the Inland Northwest.

“They’re amazingly adaptable. But we’ve put some significant roadblocks in their way,” Scott says. “We have some work to do if we want to keep them around.”



FINGERS CROSSED Montana biologists are closely monitoring the movements of caribou released north of the border. “We’re helping any way we can,” says Jim Williams, FWP regional wildlife manager in Kalispell. “But it’s really up to the caribou themselves. If the population there gets large enough so that some start making their way across the border, that would be great. On the other hand, if they can’t survive in British Columbia, the likelihood that they’ll survive here in Montana is very slim.”

CLOCKWISE FROM TOP LEFT: FWP; DONALD WILSONS.COM; JIM WILLIAMS/FWP