



BY BRAD BADELT

THOSE WHO KNOW

The Bathurst caribou herd once numbered 500,000. In less than two generations, that's fallen to 20,000. Governments have restricted hunting while researchers seek out-causes of the decline. Now, a new study, with Tłı̨chʼo elders taking the lead, is looking where Western science hasn't. ↔

COURTESY PETTER JACOBSEN

The Bathurst caribou herd is in decline. The Boots on the Ground project seeks answers for why.



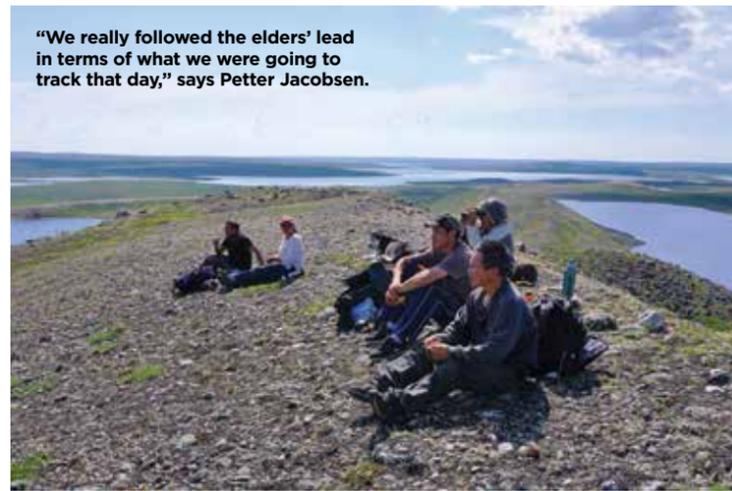
PHOTOS COURTESY PETTER JACOBSEN

“The elders have lived on the land all their lives, they’ve interacted with caribou all their lives.” Petter Jacobsen

three weeks in western Nunavut, near the caribou’s post-calving migratory route. From a cabin on Contwoyto Lake, they travelled by boat and on foot, sometimes hiking more than 20 kilometres in a day to follow the herd. At more remote sites, they set up overnight camps using canvas wall tents.

Each day, the elders looked for indicators of the caribou’s health—everything from the colour of the animal’s hide to the length of its tail—as well as changes in the environment. Research assistants followed closely behind, recording these observations and using a GPS and digital camera to log notable locations along the caribou’s migration route. “We really followed the elders’ lead in terms of what we were going to track that day,” says Jacobsen, who is now compiling those observations into a final report.

The program is largely based on how Northern Indigenous people gathered information in the past, even before contact, says John B. Zoe, the Tłı̄chǫ Research and Training Institute chair. Those observations had to be reliable, he says, “because their lives depended on it.”



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THE BARRENLANDS have changed dramatically over the past half-century. Snow is melting several weeks earlier. Mid-summer water levels in lakes and rivers are down. And higher temperatures are drying out vegetation that helps sustain caribou as they migrate.

These are some of the key observations made by Tłı̄chǫ elders over the past two summers as part of Boots on the Ground, an innovative caribou-monitoring collaboration between governments and industry that puts traditional knowledge at the forefront. By drawing on the elders’ historical experience, the project aims to uncover clues to the Bathurst caribou’s mysterious decline. The herd is a vital part of Tłı̄chǫ life, but over the past three decades its number has shrunk

from more than 500,000 to less than 20,000 today—an astonishing drop that scientists have been unable to fully explain.

Boots on the Ground is one of the few field-monitoring programs in the world that directly engages elders. “The elders have lived on the land all their lives, they’ve interacted with caribou all their lives,” says Petter Jacobsen, a traditional knowledge researcher with the Tłı̄chǫ Government. “When you have a culture that’s been focussed on a particular piece of land and the movement of animals on it for hundreds and thousands of years, they’re going to have a very in-depth understanding of it.”

For the past two summers, two teams of six—a Tłı̄chǫ elder, young hunters and traditional knowledge researchers like Jacobsen—spent

THE MARRIAGE of traditional knowledge and Western science has never been an easy one. Until fairly recently, wildlife research has been the domain of scientists with specialized degrees, who focussed largely on collecting field data and crunching numbers.

“Twenty years ago, a lot of people in natural sciences didn’t give much thought to traditional knowledge,” says Henry Huntington, Arctic science director with Ocean Conservancy. “Worse, some thought it was just folklore.”

One of the biggest barriers, Huntington says, was that biologists weren’t trained to conduct interviews, which is how traditional knowledge is often gathered. “Interviewing is typically a social science method, whereas wildlife is a natural science,” he says. In some

remote communities, language can be an obstacle. Nowadays, it’s common for wildlife biologists to work in tandem with a traditional knowledge expert and a translator.

Huntington argues there’s been a big shift in the value placed on traditional knowledge over the past two decades. The reason? Aside from the immediate institutional knowledge, it offers a depth of time, or “the unique ability to understand the landscape 50 or 100 years ago, or even longer,” he says. “It also provides a year-round perspective, whereas field research is often carried out only in the summer.” Traditional knowledge tends to be more holistic—seamlessly connecting the dots between climate, habitat and individual species, unlike academic research, which is often narrowly focussed. ➔

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