

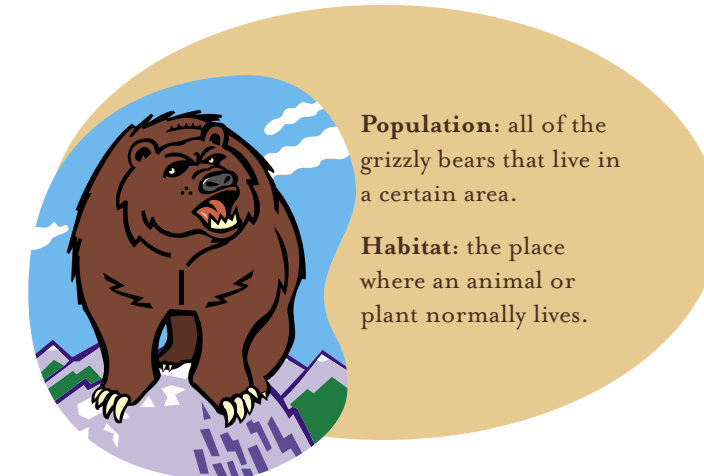
# Nahanni Grizzlies *where the grizzly walks, the land is still wild and free*

## Why study grizzly bears?

Although grizzly bears are powerful animals, their **populations** can be easily damaged. Grizzly bears reproduce slowly – especially in the North – and cannot recover quickly when people kill them or destroy their **habitat**. As humans have developed North America over the past 150 years, there have become fewer and fewer places where grizzly bears can live. Some of the best grizzly habitat left is in Northwestern Canada.

Grizzly bears use many different **habitats** over large areas. If grizzly **populations** and their **habitats** are protected, this may actually help protect many other animals and plants. Studying grizzly bears can help make decisions about how best to use the land and where to create protected areas.

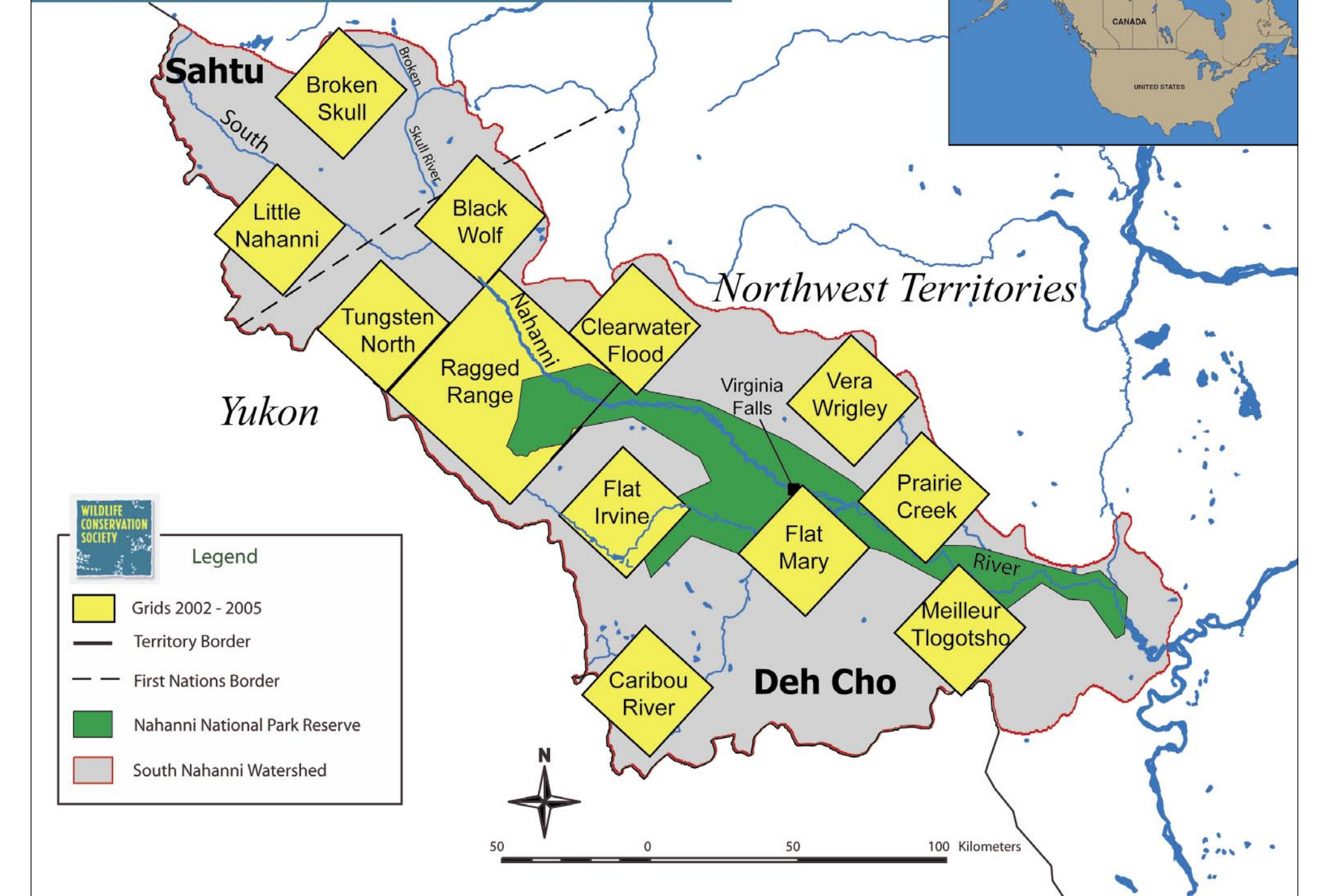
Where the grizzly walks, the land is still wild and free.



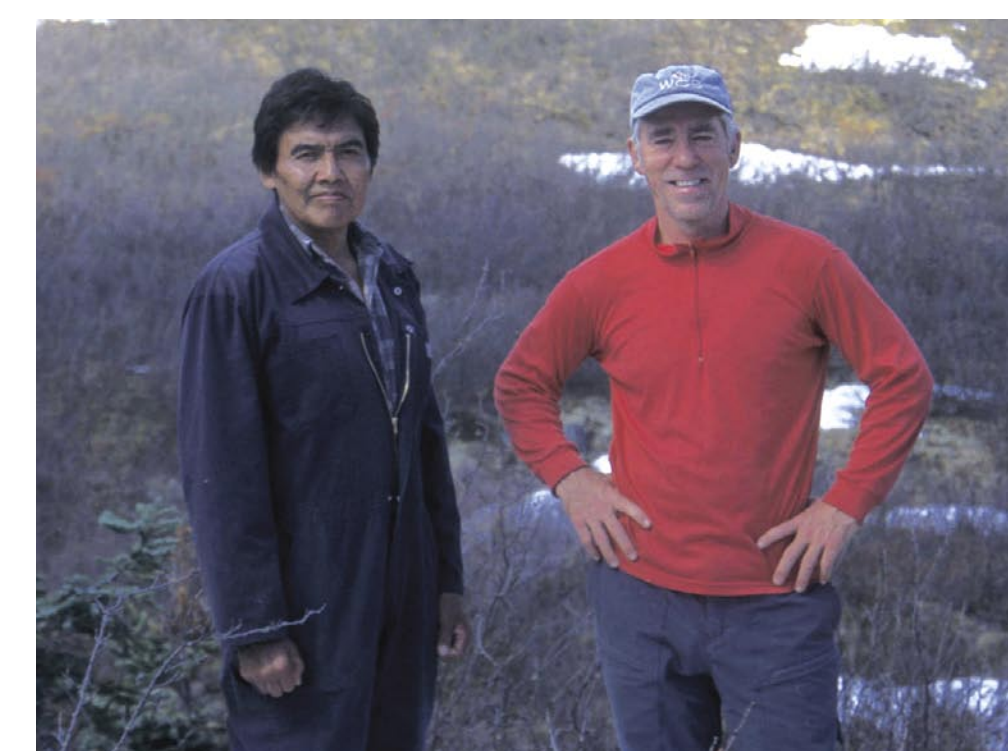
Nahanni National Park Reserve is too small to support a healthy population of grizzly bears. It needs to be expanded to better protect grizzlies and the habitat they need.



## Grizzly Bear Survey Areas in the South Nahanni Watershed



MARK FRITCH, UNIVERSITY OF MONTANA AND JOHN L. WEAVER, WCS



## Who did the research?

Dr. John Weaver is a Senior Biologist with Wildlife Conservation Society – Canada. He has been doing the grizzly study with the help of Nahanni Park Wardens and people from local Dehcho and Sahtu communities.

## How did we study grizzly bears?

In the late 1990s, Canadian scientists found a way to study bears without capturing them. They do this by collecting the bear's hair at a **hair-snagging station**.

There is nothing for the bears to eat at these stations, so they don't get used to being fed and become dangerous to people.

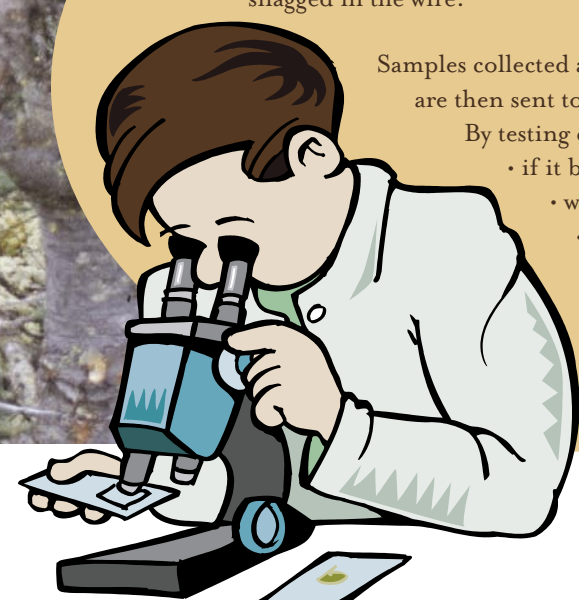
The study team also collects bear hair on trees along the rivers where bears naturally rub on the bark.



To make a hair-snagging station, biologists pile up logs, brush, and moss. Then they pour a mix of rotten cow's blood and fish oil over the mound. A single strand of barb wire is stapled at knee-height on surrounding trees to enclose the mound. When bears crawl under the wire to check out the delicious smells, their hair gets snagged in the wire.

Samples collected at the hair-snagging stations are then sent to a laboratory for further testing. By testing each hair sample, scientist can tell:

- if it belonged to a black bear or grizzly bear,
- whether the bear is male or female,
- exactly which bear it is,
- how different individuals are related to each other, and
- what the bear has been eating.



## Research findings

### How many grizzlies live in Nahanni?

Weaver and his assistants have collected grizzly bear hair across the South Nahanni River **watershed** for many years. They compared the number of grizzlies visiting the hair-snagging stations in Nahanni with the number found in other parts of western Canada. They found that there are about 15-20 grizzlies per 1000 km<sup>2</sup> in the South Nahanni **watershed**. Nahanni National Park Reserve itself would only provide **habitat** for fewer than 80 grizzly bears. Many of these grizzlies spend time outside the Park Reserve as well.

### Where do grizzly bears live in Nahanni?

Different places in the Nahanni **watershed** support different numbers of grizzly bears. Surveys done in June found more grizzlies in the higher mountains than in the forests closer to the valley bottom. Grizzlies use the main South Nahanni River valley during spring and late summer.

### How far do grizzlies travel?

The study team collected hair from the same grizzlies at different locations in Nahanni. For example, they collected hair from a male bear near the Prairie Creek mine site one year and from the same bear the next year near the Yukon border...70 km away!

Grizzly bears must have room to roam freely to find specific foods they need at different times of year. Male grizzly bears in Nahanni have **home ranges** larger than 1000 km<sup>2</sup>. That's about 15 times the size of the town of Fort Simpson! By comparison, a moose might only have a **home range** of 10 km<sup>2</sup>. Female grizzly bears usually have smaller **home ranges**.

### What do Nahanni grizzlies eat?

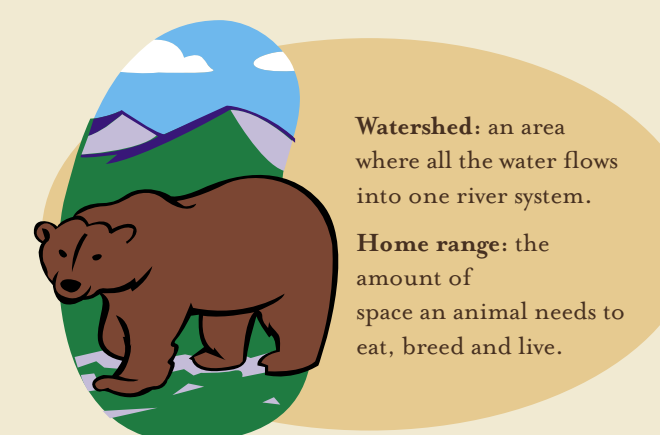
The hair collected by the study team also shows what Nahanni grizzlies eat.

First, scientists found out the chemistry of different plant and animal foods that grizzlies usually eat. Then, they compared the chemistry of these foods with the chemistry of the bear hair. This showed that Nahanni grizzly bears eat mostly plants like horsetail, sweet-vetch, soapberries, and blueberries. Male grizzlies eat a small amount of meat (less than 10% of their diet).

### What does testing grizzly bear hair show?

Grizzly hair testing showed that compared to other bears in North America, there are a lot of differences between individual Nahanni grizzlies. This means that the population is healthy.

Grizzlies in the Mackenzie Mountains have not been affected as much as in other places by development and roads. This means they can still travel long distances and keep up the high level of differences between individual grizzlies. These differences are important for the long-term health of the grizzly population.



## What will be the future of Nahanni grizzlies?



Too small and too narrow – that is the problem with many national parks and protected areas around the world. Nahanni National Park Reserve is a good example of this problem. It is so narrow in some places that a grizzly bear (or a caribou) can walk across the Park Reserve in a couple of hours! The Park Reserve is simply too small and too narrow to protect much of its wildlife.

Yet, there is a great opportunity to protect more of Nahanni. The Dehcho First Nations and other people in the Northwest Territories and across Canada are interested in protecting the entire **watershed** of the South Nahanni River. This would help protect the land, the waters, and the wildlife in this spectacular area for future generations.



The study was funded by Parks Canada, the Wildlife Conservation Society (WCS), the Kendall Foundation, the Wilburforce Foundation and the Canadian Parks and Wilderness Society – NWT Chapter.

Nahanni River Adventures, Dehcho and Sahtu communities, the Dehcho First Nations, and the Government of the Northwest Territories also supported the project.

The Wildlife Genetics International lab in Nelson, BC, did the testing of the bear hair.

