



## PROPOSED EXPANSION OF NAHANNI NATIONAL PARK RESERVE

### Woodland Caribou Research

Parks Canada and the Nahanni Expansion Working Group have sponsored research studies related to the proposed expansion of Nahanni National Park Reserve. In the Dehcho region, these studies will help provide the information needed to propose a new boundary for Nahanni National Park Reserve. Additional studies may be required in the Sahtu Settlement Area.

#### WHY STUDY NAHANNI'S WOODLAND CARIBOU?

Woodland caribou are important as a food species for Aboriginal people from both the Northwest Territories and the Yukon. Populations of woodland caribou grow slowly and have difficulty living with human and industrial disturbance. This limits their ability to rebound from impacts. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) lists the northern mountain population — which includes Nahanni caribou — as a population of “special concern”.

Woodland caribou need large, safe areas to keep healthy populations that will last into the future. Parks Canada knows

that Nahanni National Park Reserve is not large enough to protect such a wide-ranging species and the different types of habitat they need. Most of the important calving, summer, and rutting ranges occur outside the existing park.

Understanding the critical habitat needed by woodland caribou within the Greater Nahanni Ecosystem will help the Nahanni Expansion Working Group make recommendations to Parks Canada and Dehcho First Nations about a new boundary for Nahanni National Park Reserve.

#### WHAT DID WE WANT TO LEARN?

- To understand the different ranges of woodland caribou herds in the Greater Nahanni Ecosystem.
- To better understand the movements and habitat needs of woodland caribou.
- To build upon previous caribou studies and help propose new boundaries for park expansion.

#### HOW WAS THE RESEARCH DONE?

- Several times over the past 10 years, Parks Canada staff and Territorial biologists have used a helicopter and net-gun to capture adult female woodland caribou in the border region between the southwest portion of the Greater Nahanni Ecosystem (NWT) and the southeastern Yukon.
- The caribou were fitted with either VHF radio-collars or satellite radio-collars.
- Collared caribou were either tracked by air-survey or location information was retrieved from satellites.
- Caribou locations were mapped and analyzed to determine movements and herd ranges.
- Dr. John Weaver also looked at 244 observations of caribou recorded by Parks Canada staff between 1977-1989. Most of these sightings were recorded within the seasonal ranges of the radio-collared animals.



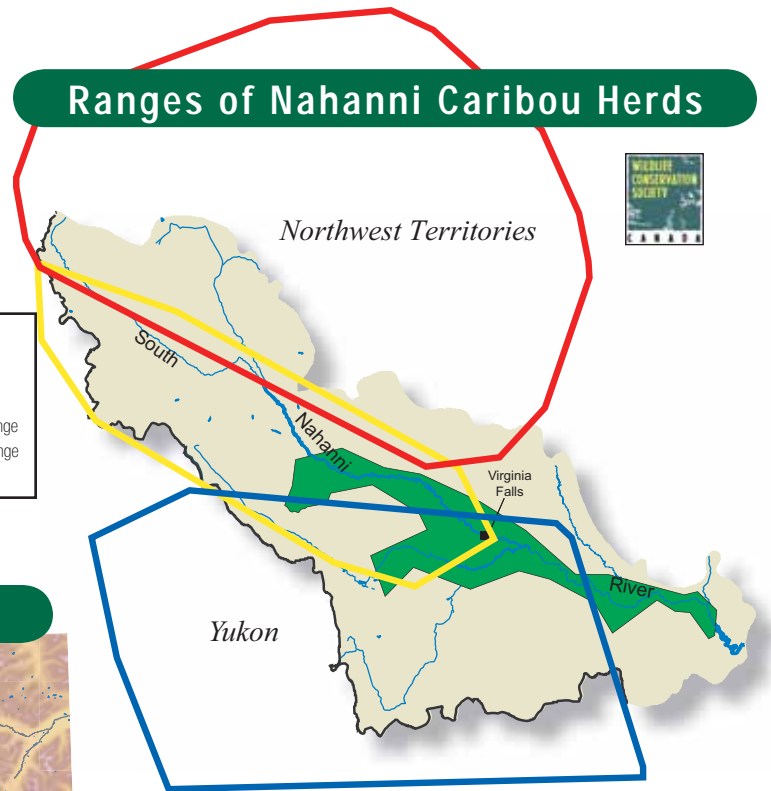
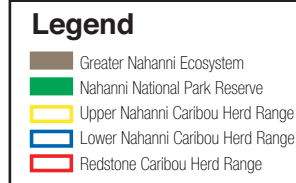
*A woodland caribou yearling faces the wind as snow begins to fall. Photo: Douglas Tate, Parks Canada.*



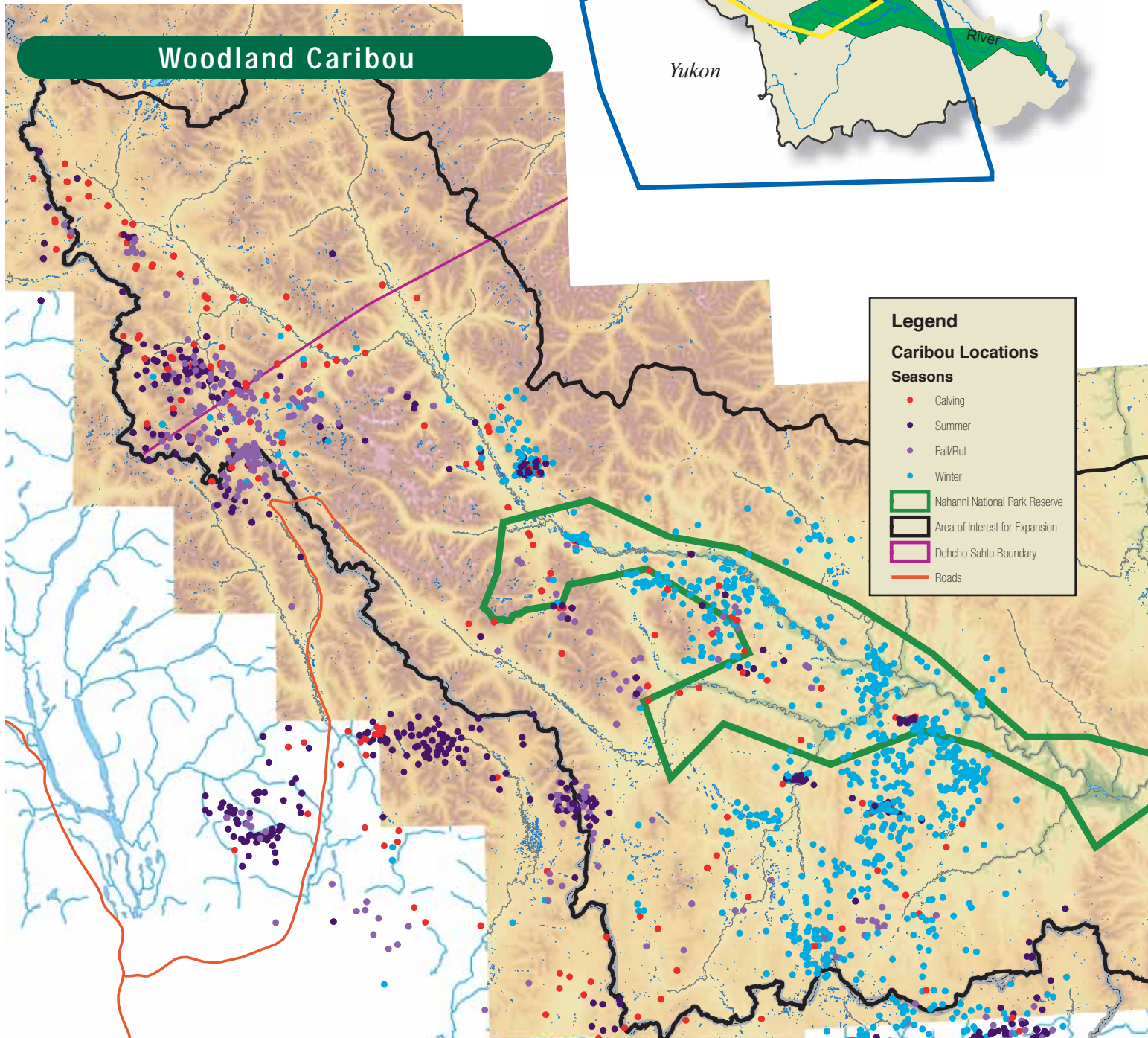
## WHO DID THE WORK?

- Dr. John Weaver, Conservation Biologist with Wildlife Conservation Society – Canada.
- Government of the Yukon: Environment, Fish and Wildlife Branch.
- Government of the Northwest Territories: Environment and Natural Resources Branch.
- Parks Canada staff.

## Ranges of Nahanni Caribou Herds



## Woodland Caribou



## WHAT ARE THE MOST IMPORTANT THINGS WE LEARNED?

Three different herds of woodland caribou use the Greater Nahanni Ecosystem: (1) Redstone herd, (2) Upper Nahanni herd, and (3) Lower Nahanni herd which consists of the Coal and LaBiche groups.

### Redstone Herd

This is one of the largest herds of woodland caribou in the Northwest Territories and may number 5,000-10,000 animals.

Satellite tracking of collared animals during 2002-2005 showed that they used the headwaters region of the South Nahanni River as a traditional calving area in late May and early June.

They used the upper reaches of Clearwater/ Cathedral/ Wrigley Creeks as a traditional area during the fall rut and winter.

Both of these areas are outside the present park boundary.

### Upper Nahanni Herd

The Upper Nahanni caribou herd ranges over 17,500 km<sup>2</sup> across the northern and centre sections of the Greater Nahanni Ecosystem.



*Two curious woodland caribou yearlings. Photo: Douglas Tate, Parks Canada*

In 2001, biologists estimated 940-1,140 animals in this herd.

Aerial and satellite tracking of collared caribou 1995-2001 showed that during calving, most animals moved into the upper part of the Greater Nahanni Ecosystem (Little Nahanni River basin). This is outside the current national park boundary.

While there, the caribou used many habitats: subalpine open woodland, spruce-lichen woodland, subalpine shrubland, and alpine tundra.

During summer and the fall rut, they remained in this same area.

Between mid-October and mid-November, they migrated down the main South Nahanni River valley into Nahanni National Park Reserve.

In most years, this caribou herd wintered in the spruce-lichen woodlands along the South Nahanni River valley above Virginia Falls and lower reaches of the adjacent Clearwater-Cathedral Creek basin.

During spring migration, they re-traced their fall migration routes.

The Upper Nahanni caribou herd has remained true to these traditional seasonal areas and migration routes over the years.

### Lower Nahanni Herd

The Lower Nahanni herd (made up of the Coal River and LaBiche groups) ranges over nearly 32,000 km<sup>2</sup>, straddling the Yukon-Northwest Territories border (about 45% on the NT side).



*Researchers prepare to attach a radio collar to a captured caribou cow. Photo: Parks Canada.*



**DID YOU KNOW?**  
Relative to their body size, caribou have larger antlers than moose?



Based on aerial surveys carried out by Yukon biologists in 1993 and 1997, it's likely that this herd numbered about 730-880 caribou at that time.

Satellite tracking of collared caribou 2000-2005 showed that during summer and the fall rut, most of the caribou lived on high alpine plateaus and subalpine basins in southeast Yukon. However, some animals did spend the summer along the territorial divide.

After the rut, caribou migrated as far as 240 km eastward from southeast Yukon over the divide and into the Greater Nahanni Ecosystem.

In harsher winters, animals moved earlier and further east to a core winter range centered on the confluence of the Flat River and the South Nahanni River in Nahanni National Park Reserve.

Most caribou locations at this season were in the spruce – lichen woodlands at 400-900 m elevation.

During spring migration, collared members of the Lower Nahanni caribou re-traced their fall migration routes.

The expansive boreal forest in the southwest sector of the Greater Nahanni Ecosystem, located in a 'snow shadow' sheltered from winter storms from the southwest, provided crucial habitat for this trans-border herd from November to May.

## WHAT WILL BE DONE WITH THIS INFORMATION?

We now know a great deal more about the most important areas for the three distinct caribou herds in the Greater



*Caribou near Rabbitkettle River in early spring. Photo: Douglas Tate.*

Nahanni Ecosystem. We will use this information to help propose a new boundary for Nahanni National Park Reserve that will better protect woodland caribou and the habitat they need to survive.

## DO YOU HAVE QUESTIONS?

**Please contact us! Your questions, views and opinions are very important. Your voice will be heard.**

**For more information, please contact:**

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The information and maps in this fact sheet are from:

Parks Canada. In Press. Nahanni National Park Reserve of Canada Nah?à Dehé Report on Research and Monitoring 2004 & 2005. Unpublished Report.

Weaver, J.L. 2006. Big Animals and Small Parks: Implications of Wildlife Distribution and Movements for Expansion of Nahanni National Park Reserve. Wildlife Conservation Society Canada Conservation Report No. 1. Toronto, Ontario.

Aussi disponible en français

Cat. #R63-342/4-2006E ISBN: 978-0-662-44756-6  
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