

porcupine caribou

Porcupine Caribou Herd, Being Caribou expedition, Apr.-Sept. 2003. [KH]



The Porcupine Caribou Herd is a large group of migrating caribou that has been important in northern Yukon for thousands of years. First Nations people have relied extensively on the herd for survival. The Gwich'in, Inuvialuit, Inupiat and Northern Tutchone cultures and economies are dependent on the Porcupine Caribou.

The Porcupine Caribou Herd ranges over much of northeastern Alaska, Northern Yukon and a small part of northwestern Northwest Territories. Every year the herd gives birth to young on the coastal plains of northern Yukon and Alaska. In fall, snow on the coastal plains gets compacted by strong winds, making it difficult for caribou to dig for food so they begin to migrate south. The caribou don't always migrate along the same routes in fall or end up

over-wintering in the same place. People don't know all the reasons why caribou might select different migration routes and wintering areas in different years, although snow conditions play an important role. Although the Porcupine Caribou Herd covers a huge area, the survival and well-being of the herd depends on migrations between and within winter, spring and summer ranges. Changes of movements within seasonal movements can greatly affect the condition of individual caribou and hence the productivity of the entire herd (www.taiga.net).

The Porcupine Caribou Herd winters in north-central Yukon and Alaska. The Peel and Porcupine River watersheds contain important wintering range for the Porcupine Caribou. Caribou may spend up to eight months here in fall, winter and early spring, feeding on lichens.

Porcupine caribou usually head for the mountains in winter because the snow there is not as deep as in the valleys. Common wintering places include a large area in the Ogilvie Mountains and Hart River basin as well as the Richardson Mountains to the north (Porcupine Caribou Technical Committee, 1993). However, Gwich'in elders report that the Porcupine caribou sometimes travel as far as the headwaters of the Wind River, in search of snow that is soft all winter where they can dig to lichens and grass. Gwich'in elders also report that female caribou with calves often stay in the vicinity of Hungry Lake, west of the Wind River, while the bulls move on. In the winter of 1908-09 it was noted that Porcupine caribou were found from the headwaters of the Stewart River over to the Bonnet Plume River and all the way down the Bonnet Plume River. In some years,





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also, the Porcupine caribou have been known to mix with woodland caribou herds. When spring-time comes, however, the herds will separate again and go in different directions (Gwich'in Renewable Resource Board, 1997).

Map 14 shows the locations of a handful of radio-collared cows in different years. It shows that in general these individual cows spent time in the Ogilvie Mountains west of the Wind River and along the Dempster Highway. Keep in mind that the locations represent only a few individuals and that in winter Porcupine caribou tend to be spread out in smaller groups. Like the Gwich'in elders reported, caribou do spend time in the Wind, Bonnet Plume and Snake River watersheds, but may not use these areas every year. Sixteen years of data on Porcupine caribou distributions indicate that in winter they

do move as far to the east as the Northwest Territories border east of the Snake River, however this only occurs in less than 20% of those 16 years. Similarly, in an analysis of 8 years of data for the spring period, Porcupine caribou were distributed as far as the Snake River in less than 20% of those years (Porcupine Caribou Technical Committee, 1993). In those particular years, however, these three watersheds may play a very important role in the survival of the herd.

Surveys flown in 1978, as part of investigations conducted for Foothills Pipe Lines (Yukon) Ltd., showed that in that winter there were concentrations of caribou in the vicinity of Quartet Lakes, in the headwaters of the Little Wind River, and along Royal Creek (Thompson and Roseneau, 1978). That same winter, small

numbers of Porcupine Caribou were even found in the mountains along tributaries of the Arctic Red River in the Northwest Territories (Thompson and Roseneau, 1978). Some believe that the Snake River watershed, which falls within the rainshadow of the Wernecke Mountains, has low snow conditions in winter and therefore provides a good alternative for caribou in years that snow depth is too much in other regions.

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Conservation of the Porcupine Caribou Herd

The Porcupine Caribou herd is the largest caribou herd in the Yukon. Nevertheless, in recent years concerns over the survival of the herd have been raised. During the 1970's and 1980's the herd increased at about 5% a year to peak at 178,000 in 1989. Since 1989 however, the population has been dropping by about 3 to 4% per year (Porcupine Caribou Management Board website). Currently the population size is estimated at 123,000, down 55,000 from its peak (2001 Porcupine caribou Census Results). The cause of the decline is not entirely understood, but poor weather conditions in the early 1990's are thought to have played a significant role. Other factors, such as over-harvesting, have also been considered.

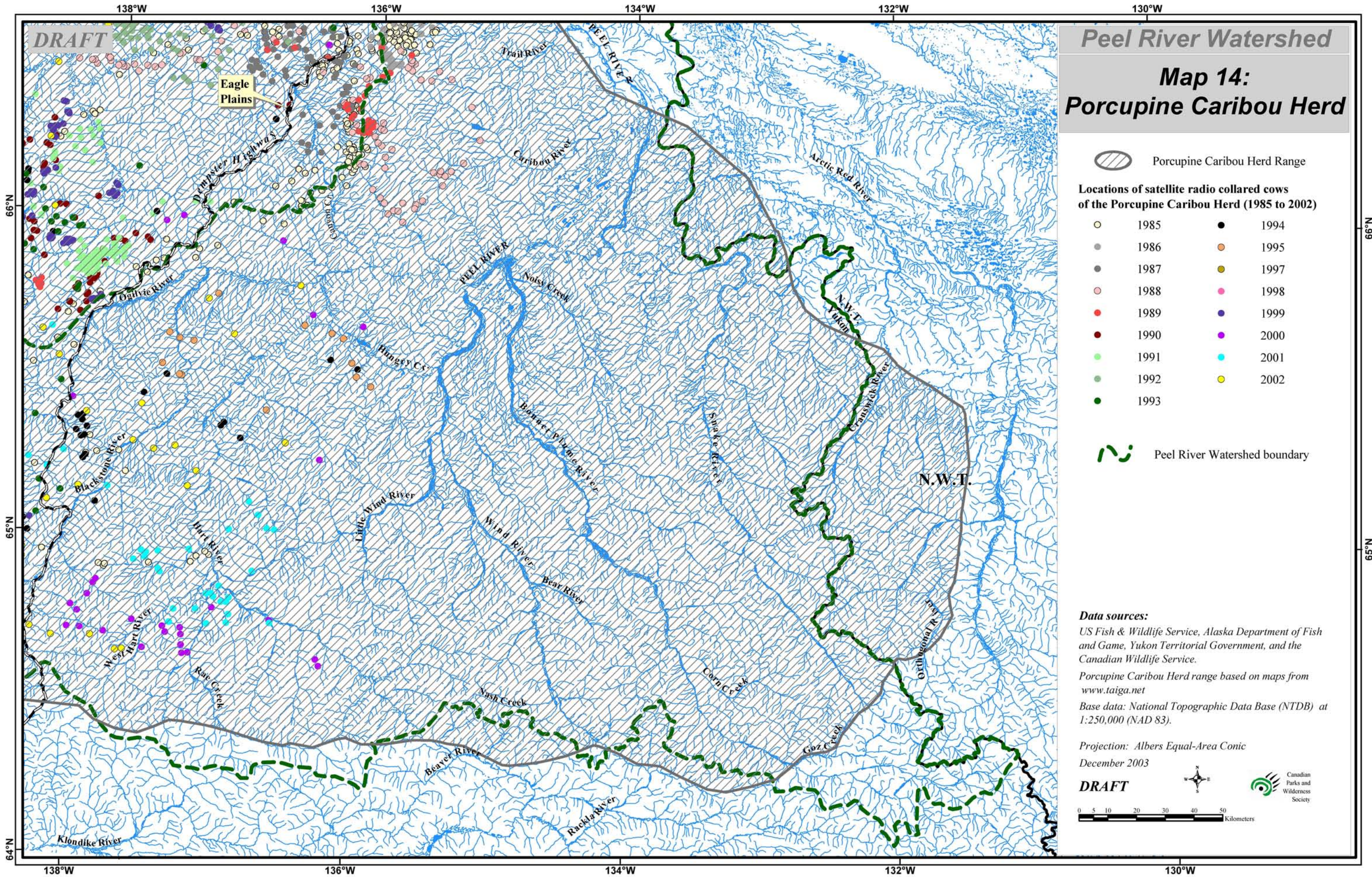
In addition to these concerns, the threat of impacts from oil and gas development is very real. One of the most critical calving grounds for

the Porcupine Caribou Herd is commonly known as the 1002 Lands. Roughly 80-85% of the Porcupine Caribou cows give birth to their calves here. Although this area falls within the Arctic National Wildlife Refuge, the United States government is attempting to allow industry to drill for oil here. This type of development could disrupt the calving patterns and cause further declines in herd numbers. The Porcupine Caribou Management Board, First Nation organizations and environmental groups have been actively advocating permanent protection of the area for many years (Porcupine Caribou Management Board website).

In recent years, the Yukon Government has opened up large parts of the wintering grounds of the Porcupine caribou to oil and gas exploration. Each year for the last few, the government has invited oil and gas exploration companies to nominate areas within a government-determined "Call for Nomination

Area" where they might wish to conduct their exploration work. One such nominated area is then picked and companies are invited to bid on the rights to explore for oil and gas in that region. Map 27 illustrates the 2001 Call for Nomination Area and the subsequent successful bid area that was awarded in 2002.





Peel River Watershed

**Map 14:
Porcupine Caribou Herd**

Porcupine Caribou Herd Range

Locations of satellite radio collared cows of the Porcupine Caribou Herd (1985 to 2002)

- | | | | |
|--|------|--|------|
| | 1985 | | 1994 |
| | 1986 | | 1995 |
| | 1987 | | 1997 |
| | 1988 | | 1998 |
| | 1989 | | 1999 |
| | 1990 | | 2000 |
| | 1991 | | 2001 |
| | 1992 | | 2002 |
| | 1993 | | |

Peel River Watershed boundary

Data sources:
US Fish & Wildlife Service, Alaska Department of Fish and Game, Yukon Territorial Government, and the Canadian Wildlife Service.

Porcupine Caribou Herd range based on maps from www.taiga.net

Base data: National Topographic Data Base (NTDB) at 1:250,000 (NAD 83).

Projection: Albers Equal-Area Conic
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