

INTERNATIONAL COOPERATION IN MANAGING THE PORCUPINE CARIBOU HERD

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Abstract: The Porcupine caribou herd is a large population (160,000 in 1992) whose range encompasses over 300,000 km² in Alaska, the Yukon, and the Northwest Territories. Numerous communities depend on caribou from this herd for subsistence, and there has been intense interest in its continued well-being since plans for transportation corridors and potential petroleum development on its arctic tundra calving grounds were first put forth in the early 1970s. International concerns for cooperative management culminated in an agreement between the Governments of the United States and Canada, signed in 1987. However, field-level cooperation among state and territorial governments, U.S. and Canadian federal governments, academic institutions, and private consulting firms predated the formal agreement by nearly 2 decades. Biologists regularly exchanged personnel, data, equipment, and final reports through the informal Porcupine Caribou Technical Committee, which was ultimately formalized and recognized as the scientific advisory arm of the International Porcupine Caribou Board. American biologists continue to work out of field stations in Canada, and vice versa. All radiocollar frequencies and tracking data are shared. Even nonbiological agencies such as U.S. and Canadian Customs regularly cooperate to enable researchers to cross the international border nearly as freely as the caribou do.

The Porcupine caribou herd ranges from northeastern Alaska, across the Yukon Territory, to the MacKenzie Valley in the Northwest Territories of Canada. This vast area encompasses some 340,000 km² (over 130,000 mi²) of coastal tundra, high and rugged mountains, rolling hills, and broad forested valleys. Most of the range of the Porcupine herd is accessible only by aircraft, or by foot, boat, dogsled, snowmachine, or all-terrain vehicle from one of a dozen or so scattered Native villages. About once each decade, a few Porcupine caribou may wander as far as the Steese Highway or the Dalton Highway in Alaska. Otherwise, the Dempster Highway, which extends from near Dawson in the Yukon to Inuvik in the Northwest Territories, is the only road within the normal range of the Porcupine herd, and it crosses only a small portion of the winter range.

The Porcupine herd currently numbers about 160,000 caribou. For 2-3 weeks each year during late June and early July, nearly all of those caribou are gathered into a few huge aggregations on the arctic coastal plain or in the Brooks Range Mountains of Alaska. At other times, the herd is scattered in smaller groups throughout its entire range. Monitoring and managing such a population might seem like a formidable task, and often it is. Fortunately, that task has not been made more complicated by "turf" battles among various federal, state, territorial, and tribal governments, and their many agencies which

claim jurisdiction over the Porcupine herd or its habitat. In fact, management of the Porcupine herd is a major success story of international and interagency cooperation.

The importance of the Porcupine herd as an international resource with immense value for subsistence, sport hunting, nature appreciation, and scientific study was formally recognized with the signing in July 1987 of a document titled the "Agreement Between the Government of the United States of America and the Government of Canada on the Conservation of the Porcupine Caribou Herd." The agreement called for establishment of an International Porcupine Caribou Board, and in 1992 that board formally recognized the Porcupine Caribou Technical Committee as its scientific advisory arm. This report deals primarily with the Porcupine Caribou Technical Committee, its existence before and after signing of the official International Agreement, and how it stands as an example of effective field-level cooperation in managing a common resource.

International cooperation with Porcupine herd caribou goes back a very long way. American biologists in Alaska Territorial days flew surveys across the border into Canada and certainly realized that caribou herds like the Porcupine and Fortymile were truly international residents. Nobody paid much attention to the relatively remote Porcupine herd, however, until after the discovery of vast oil and gas reserves near Prudhoe Bay in Alaska and in the MacKenzie Bay region of Canada. Plans to link these two areas with a natural gas pipeline led to concerns about the integrity of the Porcupine herd calving grounds and summer range. Suddenly, U.S. and Canadian biologists, as well as a whole host of private consultants, converged on the range of the Porcupine herd and began to study its ecology and population dynamics in earnest. Those studies continued from about 1971 to 1977, when hopes for an arctic gas pipeline were finally abandoned. Concerns about the potential adverse affects of the newly opened Dempster Highway kept research going in Canada during the late 1970s. Agency biologists began to realize that the high level of cooperation they had enjoyed during the days of well-funded pipeline and highway studies was a good thing. Continued cooperation and sharing of information would obviously remain beneficial even when everybody went back to normal size budgets and basic monitoring. But normal budgets for basic monitoring aren't particularly conducive for international travel. Realizing that it would be easier to ask supervisors for permission to attend a meeting with a high sounding name, the Porcupine Caribou Technical Committee was born.

The technical committee was nothing more than the field-level biologists actively involved in management or research. Its first meetings dwelt on the findings of the gasline and highway studies. In spite of all the potential developments which might someday affect Porcupine caribou, the herd itself appeared to be stable, and there was no immediate management crisis or concern. Granted, there were occasional attempts to use data from the Porcupine herd to support other agendas, such as predator control, regulation of subsistence hunting, or preserving pristine wilderness ecosystems. Mostly, however, we just exchanged data and planned field work. The situation began to change by about 1979, as

word spread that there might be another huge petroleum reserve on the Porcupine herd calving grounds in the Arctic National Wildlife Refuge. Suddenly, committee meetings filled large rooms with people who had never seen a Porcupine herd caribou. As I recollect, those people all had dollar signs in their eyes. The working stiff biologists got a kick out of listening to strangers talk about how we would split up the millions of dollars of research money that would surely come as the coastal plain was explored for oil.

It came to pass that the coastal plain was explored for oil, and we did get money to do research, but never the millions that some folks had envisioned. During several technical committee meetings in the early 1980s, we pared back down to the working biologists, an occasional mid-level supervisor, and just a few interested academics or members of local special interest groups, depending on the venue of the meeting. After summer 1983, when congressionally mandated "Ten-oh-Two" research got under way, we generally ceased to call technical committee meetings at all because the field-level biologists were regularly working with each other in the field or exchanging data over the telephone and at other meetings like the North American Caribou Workshops. Also, with various cooperative research contracts signed and operating, we no longer needed the high sounding name to justify getting together.

Eventually, people involved with the International Porcupine Caribou Board remembered that there had once been a Porcupine Caribou Technical Committee, and wondered what had happened to this group and why it wasn't offering scientific advice to the parties to the agreement. Of course the members of the technical committee, the field-level biologists, had never disappeared (although some names and faces changed). We were actively advising the board on the biological status of the Porcupine herd. Nevertheless, the board decided it would be a good thing to formally recognize us, and the Porcupine Caribou Technical Committee now truly exists, officially. I don't think we've had a meeting since that official recognition, but that doesn't really matter, because we still function as we always have, which is informally but very effectively.

Now I'll give some examples of how that cooperation works. At any one time we have about 100-150 radiocollars on Porcupine herd caribou. Some of those collars are purchased by the Alaska Department of Fish and Game, some by the Canadian Wildlife Service (CWS), the Yukon Government, the Arctic National Wildlife Refuge, or the National Biological Survey. We work together so we all know what collars are out there and so the frequencies don't overlap. When any agency does a tracking flight, they listen for all the collars. Sometimes the Canadians will search for collared caribou on their side of the border while we look on ours, but usually one agency does the entire tracking flight. That means crossing the border. When we cross near a port-of-entry, we clear customs like anyone else. Unfortunately, there are no ports-of-entry north of Old Crow in the Yukon or Ft. Yukon in Alaska (often there's nothing open north of Fairbanks). When we cross the border between remote field camps, we make arrangements to clear customs by telephone. When we make near daily crossings during summer field work on the north slope, we keep

our own records and report monthly. My own out-of-state travel requires Governor's office approval, which I dutifully apply for if I'm travelling to meetings in Whitehorse or Dawson. For fieldwork, I have blanket approval to go into Canada at any time.

Crossing the border presents some other interesting logistic problems. There's hardly any place to purchase fuel. When we refuel in Old Crow, the Yukon Government usually lets us charge to their account. North of there, we use fuel caches put out by the Yukon Wildlife Branch, CWS, or Parks Canada. Or, we land on the road at Eagle Plains Lodge on the Dempster Highway and taxi up to the pumps. The Canadians and the State of Alaska use U.S. Fish and Wildlife Service fuel and lodging in Alaska. We have no trouble taking our agency aircraft or charter aircraft into Canada, and they bring their planes over here. For the past year, CWS has been chartering a plane and pilot from Fairbanks to do some highly specialized tracking and spotting work. This summer, the state will contract the CWS for the services of a highly skilled helicopter pilot and net-gunner team for caribou capture work.

The CWS has paid my way to Vancouver to work with their University of British Columbia computer modelling consultants. Several times they have paid all my expenses to come to the Yukon to assist in caribou capture projects. I've stayed in two different Canadian DEW-line stations during fieldwork. I was once invited to Ft. MacPherson, Northwest Territories, to address the Porcupine Caribou Management Board (which is the entity that implements comanagement in Canada). That led to an interesting situation a couple of years later in Alaska at a meeting which was jointly sponsored by the Porcupine Caribou Management Board and the Alaska Porcupine Caribou Commission, which represents Alaska Native interests. Canadian Gwitch'in elders ended up defending my research with radiocollars against complaints raised by Alaskan Gwitch'in. Out of that discussion and numerous other exchanges among biologists and Natives, came a better understanding that we are all really working toward the same endconservation of the caribou.

We don't just cooperate on projects that are already underway. Federal and state/territorial agencies from both sides of the border plan research together and even write joint proposals. Naturally, different agencies sometimes have their own agendas or their own special mandates, but we really do try to coordinate so that everybody benefits as much as possible from everyone else's work. We share all data, and even ship specimens such as blood and tissue samples back and forth. It's not uncommon for CWS to purchase radiocollars and have them sent to my office so that Fish and Game or the Fish and Wildlife Service can put them on caribou. We inform each other about unusual caribou movements so in turn we can inform our hunters. So far, we've been lucky and harvest has not adversely affected the Porcupine herd. We haven't needed to seriously discuss harvest restrictions or quotas, but I think we all feel the framework is there to make rational and equitable decisions if the need ever arises.

I'll finish now with an odd example that shows how effective informal relationships, based on trust and common concerns, can be. A few years ago, some experimental collars were placed on caribou near Prudhoe Bay. Those collars emitted standard signals for radio-tracking, but they were also equipped with remote controlled tranquilizer syringes so the caribou could be immobilized with a minimum of stress (i.e., no chasing). Unfortunately, some of the caribou didn't stay near Prudhoe Bay. It was suspected that one had wandered east and was probably in northern Canada. That raised all sorts of problems, because the drug in the collar was dangerous to humans, and hunting season was open in Canada. The risks actually weren't great, because the syringes would be nearly impossible to set off accidentally, and the collars were clearly marked with all kinds of safety warnings, not to mention that the odds of that particular caribou being shot were very small. Nevertheless, Canadian officials became very concerned. When those of us working on the Porcupine herd learned about the problem (which was not one of our projects), I made a few telephone calls, and within 24 hours was on my way to the Yukon with fax copies of collecting permits authorizing me to remove the collar by any means practical, up to and including shooting the caribou from the air in a National Park. Fortunately that wasn't necessary. The collar had another experimental feature, whereby a blasting cap in the attachment bolt could be remotely detonated to make the collar drop off to the ground. That feature worked perfectly. Early the next morning, the Yukon Forestry Service let me borrow an idle fire-fighting helicopter from Old Crow (for free), and the collar was retrieved.

In about 2 weeks I'll fly north to begin this year's calving ground surveys. I'll go over radio-frequency lists with my colleagues from the National Biological Survey and make several telephone calls to CWS in Whitehorse first. I'll land several times in Canada and let the Royal Canadian Mounted Police in Old Crow know, by telephone, after the fact. Later in the summer a mixed crew of U.S. and Canadian biologists will capture and weigh about 100 cows and calves. Then another international crew will do an aerial photocensus of the Porcupine herd. We'll do more capture work during the fall, in Canada. Then we'll work together all winter to analyze data, prepare reports, and plan still more cooperative work. The politics of resource development in the North have often been contentious, and the U.S. and Canadian sides have not agreed on what to do about oil development on the arctic coastal plain. That hasn't affected field-level cooperation on caribou research and management, and hopefully it never will.

WESTERN PROCEEDINGS

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