

# The Alaska/Newfoundland Caribou Connection

by James L. Davis



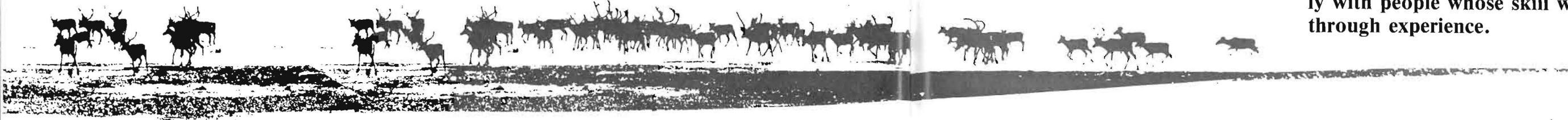
Alaska and Newfoundland might be on opposite ends of the continent, but they are close together in their concern for caribou management. Indeed, there is a Newfoundland connection for much of what we know today about caribou ecology in Alaska.

In late October 1989 I was one of a group of 16 Alaskans who traveled to the northeastern-most point of the continent—the island of Newfoundland in the Canadian provinces of Newfoundland and Labrador—to reinforce this connection. The group was made up of biologists representing various state and federal agencies, private consulting firms, and the University of Alaska. Our goal was not to set some Guinness record of long-distance travel but to attend the Fourth North American Caribou Workshop (NACW) in St. Johns, Newfoundland.

Though far away, this workshop held real significance for the well-being of caribou in Alaska. Changes in Alaskan (and North American) caribou management, or proposals for change, are frequently initiated from findings presented and discussed at the NACWs, or at similar scientific meetings.

John Hyde





**Newfoundland's highly successful caribou program was made possible by contributions of university-trained biologists working closely with people whose skill was acquired through experience.**

I learned about the importance of the NACWs back in 1987 when my colleague, Dr. Ray Cameron, and I served as organizers of the third workshop, which was held in Alaska. We concluded that frequent contact is necessary among those involved in caribou management because of frequent and rapid changes in caribou populations, scientific understanding, and in user expectations. Hence, there is clearly need for a forum with a focus on caribou research and management in North America. That forum should complement the irregularly scheduled International Reindeer/Caribou Symposia and the scientific literature. Major goals should be to facilitate the timely exchange of preliminary data and to promote discussion of ongoing projects and issues. This requires that NACWs continue to attract researchers, managers, and users who would otherwise be unable or unwilling to communicate by other means. Further, workshop proceedings should be published so that contributions are readily available. (Limited numbers of Proceedings from the Third NACW are available, free, from the Division of Wildlife Conservation, ADF&G, Fairbanks).

The Newfoundland workshop entailed three days of oral presentations on caribou taxonomy and evolution; ecology and breeding biology; population dynamics and demography; computer modeling; and radio/satellite telemetry. In addition, about three dozen informal presentations with booths were available for perusal and discussion with the authors. No less valuable were the informal conversations after hours, and the post-conference field trips to observe caribou and their habitat, and to discuss management dilemmas in Newfoundland.

A real highlight for me was a discussion of the George River Caribou Herd which inhabits Labrador and northern Quebec. That case history is loaded with potential implications for Alaska. Currently the largest in the world, this herd grew from about 5,000 in the 1950s to about 680,000 in the mid-1980s and has since stabilized or begun to decline. For years, vocal caribou biologists argued about the size at which the herd would peak, and whether the peak would be determined by winter forage or predation. Apparently, the peak was determined by summer forage.

Alaskan biologists are following the case history of the

George River Herd closely. Several Alaskan caribou herds (for example, the Western Arctic, Porcupine, Delta, Alaska Peninsula, and Mulchatna) are at or near historic population highs. Insight about the consequences of peak numbers may be learned from the George River experience.

A second particularly interesting case history involved the mountain caribou herds in southeastern British Columbia. The herds there have declined to extremely low levels, with little prospect for recovery. Historically the caribou had prospered there, interacting with their primary predator--the wolf. However, recent, natural range extension by moose into the area has created abundant alternate prey for the wolves. This appears to have upset the previous balance between the caribou and the wolves; wolves have prospered while reducing the caribou to near extinction. In the past, while caribou declined the wolves also declined because of lack of alternate prey.

Attending the NACW in Newfoundland paid a double dividend for me as a caribou biologist. Not only was I updated on current thinking and studies about caribou and their management in North America, but also for the first time I was able to see first-hand the caribou and the habitat that had heavily influenced my views of caribou ecology and management in Alaska. If the truth be known, much of our caribou management "wisdom" has been influenced by Newfoundland's long and outstanding experience with caribou and its contributions to the scientific literature of caribou. Even now when I think I have reached some profound insight about caribou ecology based on observations in Alaska, I learn that the Newfoundlanders had already made the discovery.

Perhaps Newfoundland's greatest contribution was early recognition that caribou management must be firmly rooted in the study of population dynamics. The uninterrupted increase of caribou in Newfoundland from less than 6,500 in the late 1950s to more than 55,000 in 1989 attests to the merit of this approach. Population dynamics is the process by which births, deaths, and dispersal (that is, emigration and immigration) change population size over time.

Unfortunately, the population dynamics approach to caribou management did not catch on in Alaska until the mid-1970s.

Most definitely, the Newfoundland connection helped demonstrate that Alaska's major statewide caribou declines in the early 1970s were heavily influenced by deaths clearly outnumbering births. Recognition that deaths were being most influenced by hunting and predation triggered a change in management strategies that resulted in rapid and dramatic population increases from 240,000 in 1977 to more than 750,000 in 1989. That's the good news. The bad news is that too much of anything can be bad. After a decade and a half of continuous growth, many Alaska herds are now so large that they may be unsustainable--or at least the vigor and/or size of individual caribou will be detrimentally affected.

Prior to the mid-1970s, caribou management in Alaska was heavily influenced by three long-standing viewpoints that proved to be counter-productive. Most pervasive was the long-held view that caribou are a wilderness species that cannot persist once man has encroached. Unstated was the mechanism that caused caribou to decline whenever man was present. Implied was an almost occult belief that caribou were simply unadaptable to man-caused changes--they simply declined in numbers with the white man's intrusion.

The second major view was that frequent and large-scale emigration of caribou from one herd and immigration to another was the primary influence on herd size. In other words, emigration/immigration more frequently explained changes in herd sizes over time than the balance between births and deaths.

The third view was that habitat (that is, range condition) was invariably the limiting factor that kept ungulates like caribou from being more abundant.

All three views considered together caused many wildlife managers to infer that caribou were not manageable. Caribou simply did not behave like other populations such as moose and deer, which were thought to change through the balance of births and deaths.

A parallel in Newfoundland's and Alaska's caribou experience is highlighted by the influence of people on caribou and their management. Newfoundland's highly successful caribou program was made possible by contributions of university-trained biologists working closely with people whose

skill was acquired through experience. As a team, they possessed the requisite theory, hard work, dedication, and practical experience. Dr. Tom Bergerud, now with the University of Victoria, is credited with contributing much of the scientific knowledge about Newfoundland caribou.

Tom worked closely with individuals like long-term game warden Mike Nolan, whose training came from experience. Mike is credited with 'nursing' the Avalon Peninsula Caribou Herd from near extinction to a present healthy population of over 7,000. He spent untold hours on snowshoes patrolling for poachers and illegal cabins within the Avalon Peninsula Herd's range. Mike's bag of tricks included walking with snowshoes on backwards to fool poachers. And he personally purchased (while on a very meager income) the first snowmachine in Newfoundland to use on his patrols.

During a visit to Mike's home, while listening to Tom and Mike reminisce about the good old days, I noticed that Mike's wall held an Honorary Doctor of Philosophy Degree from Memorial University in Newfoundland. The degree had been awarded for his contributions to wildlife conservation.

The Honorary Degree prompted me to reflect on a life-long Alaskan from Galena, Sidney Huntington. Sidney recently received an Honorary Ph.D. from the University of Alaska, in large part due to his contributions to Alaska during his 16-year tenure on the state Board of Game. One of his accomplishments, during the mid-1970s, was to help implement a management program, including restrictive harvests, that helped reverse the decline of the Western Arctic Caribou Herd. The herd, 240,000 strong in 1970, had decreased to as few as 75,000 by 1976. Today, it numbers over 350,000.

Mike Nolan and Sidney Huntington, though from opposite ends of the continent, are partners in caribou conservation. Their contributions and knowledge are but a small part of what was communicated at the Fourth NACW and, yes, there really is a Newfoundland/Alaska connection!

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Mark Newman

The decade of the 1990s will be a particularly exciting and informative period for caribou biologists and others interested in caribou. Many North American herds are now larger than at any time in the memory of caribou biologists. Much of the theory and speculation about what happens when caribou populations are high will be tested in the 90s.

Alaska now has more caribou (750,000 or more) than at any other time since before 1930, and the number is still growing. Arguably, there are as many caribou in Alaska now as at any other time since written records have been kept. Certainly there are more caribou than at any time since the department was created with statehood in 1959. Hence, caribou-related phenomena currently being observed and studied constitute new ground.

Even more exciting for caribou management is the challenge of integrating the constantly changing human value judgments regarding wildlife with the new caribou ecology facts that are becoming known.



Tracks indicate where caribou have grazed during the winter.

John Hyde



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