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To: Joint Committee on caribou recovery

From: Robert A. Ruttan

Box 42 RR# 2 Tawatinaw AB

T0G 2E0

Subject: Joint Proposal on Caribou Management

Attn: Interim Chair Grant Pryznyk

Sirs

As a wildlife management biologist who has had many years of experience with and observation of barren ground caribou in northern Saskatchewan and the original NWT, I have become increasingly concerned about the apparent decline of the Bathurst (Inlet) herd which I studied several times in the 1960's. I am also concerned about the argument about the numerical status and condition of the herd. A joint proposal has been offered by two governments. It is directed to the recovery of the herd and consists mainly of serious restriction of hunting by user groups. Although this proposal will be given a public hearing in March of this year, I feel I must comment on certain parts of the proposal and offer a different approach and some recommendations for dealing with the declining caribou population. My ideas come from many years of experience on the land with all the main caribou herds and from Elders who have now passed on, and have a strong sense of the connection that has existed over many years between the people, the caribou and the land. I hope my thoughts may be of value to the people in government and First Nations who are responsible for future care and management of caribou.

This submission is written in plain language as much as possible so as to communicate clearly with all readers. If anyone wishes to discuss any topic in more depth, I will happily supply additional information in excruciating detail.

Approaching the problem

The TLICHO government and ENR propose to develop a 'recovery' program for the next three years, and then make a survey of the Bathurst calving herd. I am happy to hear that they are really trying to make a plan that could help these caribou, but I must say very strongly that a <u>comprehensive studies of the whole herd has to come first before a recovery or management plan is developed.</u> I also find that emphasis has been placed on restriction of hunting by user groups, and of female caribou. This suggests that the proponents believe that over-hunting has caused the decline. Hunting restrictions are only one of the possible tools used for management of a wildlife population and should only be used when the annual kill is known to be larger than annual increment or when an increase in a herd is desired. At this time there is not enough

reliable information concerning either the annual kill or the annual increment to warrant serious restrictions on user groups.

It is unlikely that the impact of hunting on Bathurst caribou can be properly evaluated or measured since some Ahiak and Bluenose caribou occur on the Bathurst winter range and mix with Bathurst caribou. The winter kill by hunting must therefore include an unknown number of Ahiak and Bluenose caribou, so no one knows how many Bathurst caribou are harvested during winter. From my experience with the Bathurst Inlet herd I doubt that hunting pressure has had a noticeable effect on caribou numbers. When I observed the rapidly growing numbers and counted the herds during the 1960's I felt called upon to warn that a crash decline could not be avoided unless the herd was greatly reduced by systematic hunting (see Kiumajut (Talking Back):Game Management & Inuit Rights 1900-1970 by Peter Kulchyski and Frank James Tester UBC Press 2007). At that time the critical winter habitat had already been much reduced by wildfires and it was clear to me that it could not continue to support such a very large population. Since the 1960's the winter habitat has been subjected annually to wildfire plus extensive fragmentation and loss from mineral developments and the winter roads that support them. In addition some northern people have noticed that low flying aircraft, especially helicopters used in mineral exploration, frighten caribou and cause them to run when they should be feeding or resting. Given these conditions I am amazed that the herd has continued to survive as well as it has.

Recommendations

Studies which cover the status, population trends and condition of both the herd and its habitat should be conducted before management decisions are made. Such studies would also provide the base for measuring the success of future management actions. The joint proposal recommends that three years of restricted hunting be followed by a survey of the calving herd that would presumably evaluate the effects of the three years of restricted or reduced hunting. Without a better knowledge of the present size and structure of the herd, a re-survey of the calving herd at any time would not provide an accurate evaluation of any three year management program. In fact, valuable time would be wasted, restrictions would be placed that may not do any good, and the proposed survey of the calving group, after three years, only provide inaccurate or questionable results A three year study that begins with an assessment of the present status of the <u>whole herd</u>, <u>not just the calving herd</u> would provide information concerning the progress of the decline and some idea for a workable management program.

This is no time for mistakes and the continued use of the calving ground census is the worst mistake made over and over again. Since the number of calving females change every year they cannot be taken as a measure of herd size or trend. Every year there are a different number of cows having calves. Some cows are not bred, some are weak and lose their calves, some are hunted or are taken by predators. These females join up with the non-breeder part of the herd that goes to a different area during the calving season. The non-breeder segment consists of bulls and cows that did not breed (or had lost their calves) along with their calves of the previous year, which I call yearlings.

Time frame

Time being so important, I also believe that thoughtful studies of the herd by government and First Nations people should and could be started in 2010 and continued through 2011 and 2012 so that at least the first stages of a realistic management plan might be made and set in place by 2013.

Field work

Studies of the herd could begin each year as early as April or May 2010 with aerial and ground observation of Bathurst caribou as they migrate from wintering grounds to spring calving and non-breeder areas. This is a very good time to collect sex and age ratio samples but observers should remember that pregnant cows and their yearlings usually lead the spring migration by several days. Non-breeders including adult bulls, "dry" cows and their yearlings usually follow slowly, but they move faster during the warmest weather. During the calving season both the calving and non-calving parts of the herd could be carefully examined again and more sex and age ratios could be recorded.

Sex and age ratios can provide reliable information for finding out net productivity. Net productivity is the percentage of yearlings in the herd. It can also be used along with the total numbers of the herd to decide the allowable kill. It can be an important indicator of the trend in herd numbers if calculated in two or more years.

A great need exists for information about range conditions. Surveys of spring migration routes would provide an opportunity to know how the caribou have adjusted their migration routes to meet changing conditions and their response to industrial developments. Wintering areas and migration corridors would be identified and mapped so that the range could be checked in the summer for damage, amount and quality of lichen and shelter available there for wintering caribou

A recount or census and study of the whole herd should be conducted in June 2010 and in the next two years, if necessary, to determine the size and trend of the herd. The trend is usually indicated by the annual increment which is the number of calves that survive to one year, and are added to the herd in spring. It is usually stated as the percentage of the herd that is made up of yearlings.

The recount or census methods would be the same as previously applied to calving herds but should be conducted on both the calving herd and the non-breeders while calving is going on and before the herds leave the non-breeder and calving areas. I found that most calves are born between June 1 and June 15, which leaves little time for survey work. Calving group studies to witness calving success and loss to predators could also be done at this time.

Estimates and other observations of post-calving aggregations could also be made if those groups are identifiable and if weather conditions permit. However, I found that such observation can be very difficult after calving. Fly season begins immediately and can cause large groups of caribou to disappear quickly and travel long distances overnight.

Outlook for the future

Given the conditions outlined above I doubt that any noticeable recovery of the population will occur for a very long time, if at all. Consequently the approach to future management should be one of thoughtful maintenance of existing populations. This would be based on ongoing observation of the existing conditions within the herd and its habitat d as well as the impacts of hunting, industrial development and even global warming

Looking back, the decline of the Bathurst herd from the inflated population numbers of the 1960's and 70's would seem to be unavoidable. The annual losses of winter habitat and lichen growth from wildfires, plus the recent habitat losses and disruption of migration patterns from mineral development and heavily used winter roads have been severe. In addition there is the unknown impact of climate change by global warming. I expect that the herd will have to be held steady at a smaller size or it will continue to decline. Therefore future research should be increased and devoted to managing a healthy, productive but much smaller herd in the habitat that remains. If the indigenous people are to be supported by using caribou as their main resource, every effort should be made to stop all forms of habitat destruction, and to harvest the caribou without waste. Research and long term management programs in the future must include First Nations people whenever possible and to keep the herd under surveillance, much as their ancestors did, thus becoming once more the "stewards " of the caribou.. The caribou supported and nourished the people of the north for countless generation. Now it is time for the people to help them.

Conclusion

This is the substance of my comments on the decline of the Bathurst caribou herd, condensed to avoid confusion by the details explained above. The problem is real, and it is urgent. This cannot be stressed too strongly. It is also complex and will not be solved by the make-do answers and half-way solutions that have passed for data-gathering and management .in the past years. The solutions can only be found by assessing the true extent of the problem, facing the information unflinchingly, telling the truth (however painful) to the people who have entrusted the care of this important resource to government agencies and taking brave action to solve each problem as it appears.

Reliable data can only be obtained by real, on-the-ground surveys that evaluate the entire herd, its environment, and the factors that act to influence it year around.. This represents a departure from relying on convenient simulation programs that are only as good as the data fed into them. This is not speculation on my part, for the evidence is before you at this time, staring you in the face. The elephant in the room is the reality that the "user" group (the people who actually rely on the caribou), have lost faith in current wild life management, as can be seen from the recent explosion of uproar in the public press

Public confidence can be restored if the necessary studies are carried out with total transparency and with the co-operation and assistance of all the First Nations, Metis and resident groups who are directly affected by the outcome. If done this way, there will not be any question about the status of the herd and any remedial action will find more support from the public. The cost of the action I urge will be high and the work will be hard, but the results warrant it. There can be no better investment in the future than to save this precious resource before it slips away.

Yours in the Eyes of the Creator

Robert A. Ruttan

Wildlife Management Ecologist

(Semi-retired)