



Wild Lands Advocate 11(5): 22 - 23, October 2003

Wolf Control, Keystone Species And Other Logical Conservation Conundrums

By Mark Hebblewhite

Wolves never seem to fail to elicit the broadest responses from humans compared to any other animal, and Alberta is no exception. Both praised and demonized for the same trait of killing efficiency, wolves truly epitomize the saying that beauty is in the eye of the beholder. What is it that makes wolves so controversial? What specifically is it about wolves that drives such a diverse array of public opinion?

I recently attended the international World Wolf Congress in Banff hosted by the Central Rockies Wolf Project. These sorts of questions were the focus of the Congress; indeed, the Congress theme was "Bridging science and community." Well-known wolf biologist Dr. Dave Mech posed a difficult question during a panel discussion about wolf control. He asked what it was about wolf control that made it the most controversial of the many subjects of wolf management. This question has present-day relevance for Alberta and Albertans.

Across much of their range in northern Alberta, wolf management is controversial. Boreal caribou are declining, and evidence is mounting that wolves may be the proximate cause. In the Eastern Slopes, groups such as the Wildlife Enhancement Society are making calls that the only solution to save Alberta's big game is a return to strong wolf control measures. Meanwhile, last winter in Calgary a candlelight vigil was held in memory of two national park wolves that were legally trapped outside the park in B.C. In this brief article I hope to review some of the findings from the conference that relate to some of these wolf management issues in Alberta.

Wolf control typically is directed at reducing the numbers of wolves to benefit species of ungulates so often prized by humans for their meat and impressive antlers. However, despite decades of wolf control research throughout North America, the evidence in favour of wolf control is not clear. In a comprehensive review by the U.S. National Academy of Science in 1997, the dozen or so scientists concluded evidence for wolf control increasing prey populations was muddled. In some populations it worked while in others, it did not. Poor study designs, weather, habitat differences or other predators could account for some of the confusion.

However, in other cases, such as the Yukon wolf control programs in the 1990s, it was clearer that wolf control, in combination with hunting moratoriums, increased both moose and caribou populations. Mounting evidence suggests that wolves can reduce ungulate numbers, especially in combination with other predators such as bears, cougars and humans. This much seems intuitive to some; however, it remains unclear how effective predator control programs are.

This scientific uncertainty is frequently used to argue against wolf control by conservationists. However, at the congress, we heard of a conservation conundrum that has indirect relevance for Alberta. Dr. Rick Page from Vancouver Island reported on a proposed management control to reduce wolf predation on the endangered Vancouver Island marmot, now down to about 30 to 50 animals in the wild at most. He asked what should we do for an endangered species such as the marmot, which might go extinct in the coming years, partly due to wolf predation?

In the ensuing discussion, panellists and the audience pointed out that the ultimate factors were likely large-scale forestry that was changing the marmots' habitat and urged that steps be taken to halt this in key marmot areas. However, even if these steps occur, it might be decades before recent clearcuts regrow, protecting high mountain marmot habitats.





What relevance might this have for Albertans? In discussions after the marmot debate, the example of Alberta's caribou came up. Research across northern Alberta paints a grim picture for caribou populations. Proximate causes seem to be high wolf predation on calves and females, but ultimate factors are likely forestry and oil and gas related.

Thus, Albertans may be asked in the coming decade whether wolf and other predator controls should be used to protect declining and threatened caribou. The sad facts of the matter are that such predator controls may actually be warranted based on available caribou data if we value caribou. (Similar stories are being told in B.C.)

As with marmots, threatened caribou may ultimately be impacted by forestry and oil and gas development, which increase food for alternate prey such as moose and make it easier for wolves to find caribou by providing wolves and other predators (including humans) with convenient travel routes on oil and gas roads. These ultimate factors lead to the proximate cause of the decline – wolf predation.

However, such wolf control efforts may have to be sustained, often for a very long time, if caribou are to recover. It will take decades for forests to grow in, and perhaps even longer for forests to reclaim seismic lines. Conservation implications of this are clear – better forest and oil and gas practices – but ultimately strongly suggest a protected areas strategy in key caribou ranges in the north.

Other timely Alberta wolf management issues can be found further south along the eastern slopes of the foothills near where I do research on wolf and elk population dynamics. Concerns over the viability of wolves in national parks such as Banff have prompted debate about wolf harvests adjacent to parks. This occurs at the same time that the hunting and outfitting industry is concerned over prey (primarily elk) declines in these same areas.

Discussing this issue, I was privileged to take part in a panel discussion with members of the Alberta Professional Guides Association and the Alberta Trapping Association, a B.C. rancher, a Parks Canada biologist, Dr. Carolyn Callaghan of the Central Rockies Wolf Project, and a representative from the Defenders of Wildlife (Canada).

In the panel discussion, several things became clear. First, not as much is known about wolves in the foothills as in the Rockies. There may very well be sustainable wolf harvests outside the parks because habitat quality and productivity is much higher in the lower elevation foothills. However, we do not know for sure, and research is now underway by Nathan Webb and Dr. Evelyn Merrill at the University of Alberta to understand foothills wolf ecology. This research will benefit from active collaboration with the hunting and trapping community, as well as conservation groups.

Next, many panellists agreed that a critical factor was conservation and restoration of ungulate winter ranges to conserve intact predator-prey systems. **Wolf conservationists often miss the point that the best way to protect wolf populations is by conserving prey populations.** I cannot emphasize this last point enough. Thus more effective partnerships with organizations such as the Rocky Mountain Elk Foundation and Nature Conservancy to protect and enhance winter ranges should be an important priority.

Finally, I think many panellists agreed that access management affects both human and wolf predators, and steps should be continued to slow down the wave of increased access crashing down on the Eastern Slopes.

Reflecting back on these discussions and the controversies surrounding wolf control issues, I am left with one final thought. Perhaps one reason why wolf control is so controversial is the seeming self-





contradictions within the conservation movement, as perceived by those groups that value big game animals more than wolves. Conservation-minded groups often argue against wolf controls because of the meagre scientific justification for the effectiveness of such wolf control measures. It makes sense: if we are not sure it will work, we argue against it using this scientific uncertainty.

What seems contradictory is similar scientifically weak arguments about the keystone role of wolf predation. In such large-scale conservation projects as Y2Y or the Wildlands project, the keystone role of wolves and other predators is the foundation upon which wolf conservation is built. Wolves have keystone impacts on the ecosystem by reducing prey numbers, which benefits willow, songbirds and biodiversity.

However, the scientific basis of this claim for wolves is presently quite weak in the scientific literature. The reason is simple: the experiment you would do to test for the "keystone" role of predation is the exact same as for wolf control. You would compare biodiversity in areas with and without (wolf control) wolves. Therein lies the potential lurking inconsistency. To a hunter, being told that there is no science to support wolf controls at the same time as we argue for the keystone role of wolves to justify wolf conservation is a great logical conservation conundrum.

What lessons may be taken from this discussion? Presentations at the Congress and this example really highlight the fact that the interpretation of the impact of wolves on prey depends quite clearly on the ethical perspectives of the person. The "keystone" role of wolf predation is becoming clearer, both through experimental wolf reductions and through research on the trophic effects of wolves.

Different groups will interpret these "facts" based on widely different ethical and value systems. To someone who values big game or derives an income from hunting, the interpretation may be to reduce wolf numbers. For the conservationist, it might be to protect all wolves. These different groups will interpret the picture of a dead elk completely differently. How will we resolve these divergent interpretations that result from different value systems?

I believe that conservationists and hunters must find common ground and then build together to conserve not just wolves, but their prey as well. The more prey, the more wolves: it's that simple. It became evident in the panel discussion that we all have much in common: protection of winter ranges, habitat enhancement projects and access management are all subjects on which we should agree.

These conclusions helped bring what might have been a widely disparate group together in a first careful discussion. What is needed is more of these discussions. In this context, I believe the World Wolf Congress successfully met its goal of starting to build a bridge between science and community.

(Mark Hebblewhite is a Ph.D. candidate at the University of Alberta, Department of Biological Sciences, where he is working on wolf and elk population dynamics on the Eastern Slopes of Banff National Park centred on the Ya Ha Tinda. Mark was one of the first two Canadians awarded the Canon-National Parks Science Scholarships for the Americas.)

The opinions in this article are solely those of the author and do not necessarily reflect those of the University of Alberta, funding partners, or even others at the panel discussion. They are just my personal insights on the matter.

