A Model Dilemma

WHEN GAME MANAGEMENT GOALS AND CARNIVORES COLLIDE

By James M. Peek

Credit: Patricia Peek

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Reconciling management of large mammalian carnivores and the game they eat is where the rubber meets the road for the North American Model of Wildlife Conservation. The hunting community has become polarized around this issue. Some hunters view game-eating carnivores such as wolves, cougars, coyotes, and grizzly bears as plagues akin to tuberculosis and small pox. Others see the long-term efforts at conservation of these species as the best evidence that the Model works. The dilemma lies in balancing the Model's dual goals of sustaining game populations while protecting large carnivores.

Wolves clearly illustrate the problem. In the late 1980s, wolves were beginning to re-colonize the Montana side of the North Fork of the Flathead River in Glacier National Park, where they were protected from hunting. Yet wolves next door in British Columbia were not protected. Some biologists therefore assumed that the U.S. re-colonization would take place more rapidly if hunting were banned in B.C.

Despite facing criticism, Ray DeMarchi, then the game manager in Cranbrook, British Columbia, decided to keep the wolf season open—a decision he based on extensive experience and scientific data. He had observed that at times when the wolf season was closed, whole packs somehow disappeared, yet when the wolf season was open and pelts could be sold, the animals persisted. In other words, when wolves had commercial value their populations survived, but when they were not hunted and freely preyed on game species, they vanished. Presumably those wolves were illegally killed by frustrated game hunters—most likely some of the same people who allowed breeding populations of wolves to survive when they could be legally harvested. In effect, wolves re-colonized the Flathead country and beyond *in spite* of the open seasons in B.C.

This case demonstrates some of the realities of managing predators in North America. People need an incentive to participate in the management and conservation of large mammalian carnivores. Hunting and trapping seasons provide one such incentive, but the North American Model specifies that there can be no commercial exploitation of wildlife resources. In some cases, that prohibition could actually *contradict* the goal of protecting and maintaining populations of large carnivores, particularly when hunters demand protection of prey (or game) populations.

Predators on the Rebound

In general, wildlife managers have been largely successful in maintaining and expanding predator populations across North America. As most wildlife managers know well, coyotes have expanded their range in the eastern part of the continent, the cougar is omnipresent across its western range and may be expanding eastward, black bears have been retained or restored across most of their available range, and extensive efforts are underway to restore and properly manage wolves.

Some of these efforts have generated significant controversy among hunters. Yet hunters and trappers have contributed extensively to a better understanding of the ecology and management of large mammalian predators. Fees for licenses and tags and excise taxes on arms and ammunition, for example, have funded much of the predator research done by state wildlife agencies. These funds have also supported research on game species and led to management decisions regarding harvest quotas, hunting seasons, methods of take, and sex and age ratios for harvest. Such regulations have enhanced game populations and habitats, thereby also benefitting the carnivores that prey on ungulates, small mammals, and other game.

Understanding Mortality

Predation is a major mortality factor for game species and plays a significant ecological role, whether by depressing population levels or altering behavior of prey. Some factions lobby to address this issue by suppressing predator populations. Alaska, for example, emphasizes human game harvest by minimizing wolf and bear populations in certain areas and allowing the hunting of females with cubs in the

hope that moose calf survival will improve. Even assuming that a habitat can sustain more moose, does the potential public backlash against such ethically questionable harvest outweigh the potential advantage? Efforts in Idaho to reduce cougar populations with extended harvest and multiple bag limits have caused similar concerns. There is evidence that such practices can increase predator mortality to levels where breeding individuals are dramatically reduced or temporarily eliminated from large areas. Such politically motivated harvest methods do not serve the hunter's cause in the long run or exemplify the intent of the Model.

Just because nature takes its course and predators eat prey does not mean that we need to reduce predator populations. Instead, we need to expand our understanding of what makes prey unduly vulnerable, and assess whether predation or hunter harvest is the primary cause of decline in ungulate species. Unfortunately, current studies of the effects of predators on big game often stop at marking newborn calves, lambs, kids, or fawns and then monitoring their survival rates and causes of mortality. This tells us the "whats" but does not get at the "whys," which have to assess prey vulnerability and its causes.

We also need a better understanding of the complex relationships of prey to their habitats. Many species of native ungulates, for example, are well known for persisting at high density on deteriorated habitat. Deer, elk, and moose can alter their diet and habitat use patterns according to winter severity and summer drought. Without predator species to keep these animals in check, the biodiversity of over-grazed habitats can be severely compromised.

Facing pressure from sportsmen to keep game populations high, game managers may feel little incentive to assess carrying capacity, impose bag limits, or support predator protection. Yet contemporary management needs to occur in a broader context, balancing the goals of game availability, habitat preservation, predator survival, and broad public use. In this way, professional wildlife biologists can meet their obligation to serve the entire wildlife resource.

Spreading the Word

Though funding will ultimately dictate what can be done, all those with an interest in wildlife resources can play a significant role. I believe that the hunting community should lead the way, as it has traditionally done, in promoting more involvement and support for the North American Model and its goals, being careful to use and promote methods acceptable to the non-hunting public. Wildlife biologists also have an obligation—often unstated and difficult to carry out—to make it clear that it is in the best interests of hunters to promote wise conservation practices for large mammalian predators as well as for game species. And the public at large must play an active role in supporting and funding wildlife conservation, as the collective input of non-hunters can have important consequences for how and where both game and predator species will exist.

Credit: Andy Gehrig/iStockphoto

Eyes intent on an unknown prize, a trio of seemingly hungry wolves suggests the majesty and the peril of charismatic predators. Wolves symbolize the debate over how to balance predator and game populations. Wise management must accommodate both.

I contend that the only way wildlife agencies can address the controversy over conservation of the large mammalian predators effectively over time is by learning all they can about population dynamics and sharing that information with the vested interests. While there are those who will argue with the science and attempt to insert undue political influence into wildlife management, it's ultimately the science that will quiet the shrillest voices and serve to integrate large mammalian predators into the management of the rest of the wildlife complex. ■

This article has been reviewed by subject-matter experts.