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2003

## Conclusion


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Mech, L. David and Boitani, Luigi, "Conclusion" (2003). *USGS Northern Prairie Wildlife Research Center*. 326.  
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## *Conclusion*

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WOLVES CAN LIVE almost anywhere in the Northern Hemisphere, and almost everywhere they do, they are an issue. In the vast emptiness of the northern tundra or the Arabian desert, on the outskirts of a European town or in the safety of an American national park, in meager agricultural lands in India or mountains in rich Norway or Switzerland, wolves always attract people's attention. Wolves form a key part of many ecosystems, and they are considered charismatic creatures by most human cultures. Thus they polarize public opinion and make headlines year after year.

If we look back 60 years to the first landmark monograph by Young and Goldman (1944), or just 30 years to Mech's (1970) volume, we can see that both scientific knowledge of wolf biology and human attitudes toward the wolf have improved tremendously. The wolf has benefited from, and has often been a protagonist and a symbol of, the remarkable changes in the way Western societies regard conservation. However, much of this improvement paralleled the increasing distance between urban and rural cultures, and most of the changes occurred in urban populations.

These changes were useful in reversing some of the negative trends in conservation, such as the decline of some small wolf populations, but they also resulted in large portions of our societies having an increasingly idealized and possibly biased perception of nature and its dynamics. In short and crude terms, the number of people who love the wolf has increased, but the number of those who understand its ecological context has probably decreased. From the excesses of indiscriminate wolf killing we often moved to excesses of wolf protection.

We are now facing the difficult challenge of redirecting the vast support for wolf conservation toward more rational and contextual reasoning in which not only the wolf, but also the whole environment, including the legitimate interests of humans, is considered. After decades of advocacy for wolf conservation using all possible means to sell the goal of wolf recovery, it is now necessary to start advocating for compromise between wolf and human interests.

Scientific research plays a special role in this process, as it provides the basis for rational common ground. However, research efforts within the wolf's range have been diverse, with the majority of data pertaining to North America. So too have the ways in which scientific data have been used for management and conservation. Too often, particularly in Europe, we have seen management action taken without appropriate consideration for existing data, missing a precious opportunity to move conservation away from uninformed confrontation of opposing lobbies. We need to find more efficient ways for policymakers to use the available data or conduct management-oriented research. Society at large would benefit from increased use of and familiarity with scientific data, especially about the wolf, which has been idealized and misunderstood as few other animal species.

In the preceding chapters, we covered the historical reasons for the continuing battle over wolf conservation and management as well as the wolf's extraordinary biological adaptability, which makes it one of the most resilient animals in the world. Despite a remarkable amount of available scientific data and many excellent accounts of wolf management issues, it is hard to find

general conclusions on how to manage wolf-human conflicts. If any conclusion can be drawn, it is that every case is unique.

We and many of our colleagues around the world have been involved in wolf management for years, and each case is a different story, a unique blend of the attitudes and laws of the local people and the ecology of the local wolves. Therefore, there is no single solution to wolf-human conflicts—there must be many, one for every context. Nor is there any recipe for crafting solutions. The wolf has proved to be a particularly tough challenge for policymakers everywhere, the main reason being not so much the amount of conflict involved as the high level of emotion and prejudice pervading all confrontations. The difficulties of navigating through the many positions of stakeholders, lobbyists, public opinion, and politicians have been discussed elsewhere (Mech 2000b,c).

However, as we end a successful period of wolf management in which many small wolf populations have been restored to safe levels and new populations established, we can perhaps build on these experiences to look for common ground for future wolf management. If North America can claim the best data bases on wolf biology and ecology, Europe and Asia offer several living examples of the extent to which wolves can thrive in areas with high human density. There is an emerging need for a revised conservation philosophy to guide us into the next decades, based on wise management of the current positive trends of many wolf populations. If trench warfare was justified in the past, when we had to reverse the negative trends in wolf conservation, in the future we should adopt a strategy to suit the rapid emergence of new patterns of wolf-human coexistence.

The first point of this strategy will have to be the abandonment of the old prejudice that wolves are denizens of the wilderness and that they need wilderness to survive. Of course, in pristine areas wolves will be exposed to the full range of natural conditions, and they will have a life free from human influence. These areas should remain essential components of a broader conservation strategy, but the concept that wolves can or should be saved only in human-free areas is *passé*. Wolves appear to cope well with extreme wilderness, but they also inhabit crowded agricultural lands at the outskirts of towns and villages. The concept that wolves living near human settlements have a “degraded” life is strongly anthropocentric and the product of a stereotyped view of nature. This concept is often used to jus-

tify removing wolves from human-inhabited areas, as if to save them from a degenerate life, but it thus prevents wolves from exploiting another niche. We must forget about wolves being only beasts of the wilderness and focus on the wolf-human interface: this is the real challenge for conservation and is where wolf conservation most benefits overall biodiversity.

Second, we need to fully accept that wolves and humans can live an integrated coexistence in the same area, rather than having to be segregated forever in separate districts (nature reserves vs. human-dominated lands). Many good examples of wolves inhabiting multi-use landscapes can be found throughout most wolf range in Europe, the Middle East, and Asia, and increasingly in North America, with wolves now regularly visiting the outskirts of large cities in Minnesota, Montana, and Wisconsin. Appropriate local tactics for keeping the integration within sustainable limits must be found, but the overall strategy should be maintained, at least in areas lacking wilderness. Besides preserving existing wilderness against expanding human encroachment, it may well be that this is the only option we have for the future of wolves and many other large carnivores in increasingly human-dominated landscapes.

Third, we need a shift in our long-standing conservation paradigm, from measuring success in terms of wolf numbers toward new goals in which success means expanding wolf ranges rather than numbers. Demanding that wolf populations be allowed to continue to increase is not only a false conservation goal, but also a counterproductive tactic that is bound for short-term failure. It is strategically preferable to promote wolf range expansion and to accept reduction of unacceptable levels of conflict through scientifically planned and managed culling rather than through uncontrolled poaching. Full protection of wolf populations living near, or interspersed with, human settlements leads sooner or later to surplus wolves being killed, legally or illegally. Opposing wolf killing altogether implies accepting that all wolves will eventually be removed from these areas, whereas accepting some wolf control will allow wolves over much larger ranges (Mech 1995a). This vision requires a fundamental shift in the way wolves are perceived by folks who consider every wolf a symbol of the conservation battle or an animal with special rights among all other species. In the end, this approach probably will yield many more wolves than we could afford to keep in a few fully protected areas, no matter how large.

Fourth, we should make an extra effort at all levels of

management to keep the objectivity of scientific data separate from our legitimate emotional bonds with wolves. Far too often confrontations on wolf issues mix scientific data with emotion. Both are important, but they belong to two different stages of the negotiating process that leads to the final political decisions. Scientists are particularly touchy on this issue, as they often feel they could lose credibility if they also act as conservation advocates. On the contrary, scientists are morally obliged to be advocates for the conservation of the species they are working on (Bekoff 2001); their knowledge of ecology and their training in the use of criticism make them an irreplaceable force to inform and facilitate the decisions of all other stakeholders. However, scientists advocating conservation must strive continually to separate their feelings from their research and their objective knowledge.

Finally, a fifth point of the revised strategy is that methods of wolf management should be independent of a society's wealth. The outcome of a conservation strategy cannot depend on the amount of money a country is able to pay to sustain wolves, but must be the result of a philosophical acceptance of wolf-human coexistence. The recent recovery of several wolf populations in Europe and North America has brought a great variety of responses at local levels, depending on old and new attitudes toward wolves. Each society has its own body of cultural and technical means to achieve rational wolf management and will rely on traditional and modern methods to prevent wolf damage to livestock, to increase the level of tolerance toward damage, and to control wolf populations. Whatever the outcome of this strategy, there will be countless variations of possible compromises between the wolf's needs and people's expectations, depending more on social and political factors than on technical means.

Wolf conservation tends to focus discussions on the management of the animal, often with little regard for the rest of the environment in which a wolf population lives, but wolves are just one of the many elements of the environment, and their conservation is often best accomplished by managing several other components of the ecosystem in a holistic approach. Wolves should be saved and managed as part of the whole context, not because they are singled out as special species.

A central challenge that we will have to face as conservation proceeds into the coming decades is to revise the ways we sell conservation efforts. In the recent past, wolves were labeled a flagship species or an umbrella, in-

dicator, or keystone species, depending on what conservation market one was trying to penetrate. Some of the authors of the foregoing chapters may not agree, but we think arguments can be made that wolves do not necessarily deserve any of these labels (Linnell et al. 2000).

A flagship species is an attraction to nearly all society's strata, but wolves are not welcomed by all factions of society. With a few rare exceptions, the rural world opposes wolves, so the animal's flagship role is restricted primarily to urbanites or to local areas. Wolves are certainly a powerful flagship species for the conservation movement, particularly that of affluent societies with strong lobbies in large cities, but a true flagship species should be able to move an entire society toward a goal.

Neither are wolves a good umbrella species (i.e., a species, usually high in the ecological pyramid, whose conservation necessarily fosters that of the rest of the chain) in that they can live well on a variety of food resources and in areas with an impoverished prey base. Wolves are not a keystone species (*sensu* Simberloff 1998) either, in that they are not essential for the presence of many other species (e.g., herbivores flourish in areas devoid of wolves). And wolves are not necessarily indicators of habitat quality or integrity because they are too generalist to be good indicators of the presence of a pristine trophic chain.

The above labels have been very useful in many circumstances and have contributed significantly to wolf recovery. They may still be useful in the future, but we should be aware that they are shortcuts to "sell a product" rather than good scientific grounds on which to build conservation. In the near future, when hopefully the primary concern of wolf conservation will be the management of recovered populations, we will need to abandon the use of inappropriate labels and turn to more substantial concepts and solutions for conservation.

Such an approach will be particularly important as we attempt to address the difficult issues of expanding and increasing wolf populations using such unpopular tools as zoning, delisting, and population control. Labels have been of tremendous help in engaging emotions and obtaining quick support for wolf recovery, but managing expanding wolf populations will require solid and consistent arguments rather than emotional pressures. We will need to change the values, strategies, and tactics of wolf conservation, as well as using different mechanisms for conflict resolution and decision making. The temporal and spatial scales on which we have considered

conservation actions in the past 30 years need now to be expanded to incorporate longer-term strategies: the fast responses needed to reverse negative trends at local levels should be replaced by more thoughtful and concerted efforts that expand across national boundaries.

If we give up using the old labels, we are left with the

true core of wolf conservation, which is the understanding of the animal's biology and the acceptance of the creature for its intrinsic aesthetic and ethical values, even though it means tolerance for some inevitable conflict.

We hope this book will help shape this new attitude toward the wolf.