

Wolf Recovery



Wolves: The Missing Link

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Just the word strikes images and stirs emotions in many people. Visions of the wolf range from the supreme predator to the enemy of little girls with red riding hoods. Some admire the beauty of the wolf and value its ecological role in nature. Others condemn its predatory instincts and attacks on livestock.

The Wolf: A Realistic Portrait

The gray wolf (*Canis lupus*) is the largest wild member of the dog family. Adult males average 90 to

110 pounds in weight and five to six and one-half feet in length, whereas females average 70 to 90 pounds and four and one-half to six feet. Long legs, a deep, narrow chest, and blocky head are other characteristics. Coloration ranges from creamy white to patterns of gray to coal black.

Previous page: *Arctic Wolf*, Ron Parker
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The ecological role of the wolf is as the preeminent predator of the large ungulates: elk, deer, moose, bison, caribou, and Dall sheep. No other carnivore—not the coyote or mountain lion or grizzly bear—exerts the same kind of evolutionary pressure. Wolves prey upon the ungulates throughout the year but may supplement their diet with beaver and other small mammals during the summer. Although wolves are opportunistic predators, most of their prey turn out to be the young, the old, and those weakened by disease or infirmities. A wolf consumes about eight to 12 pounds of food per day, or the equivalent of about six to nine adult elk per year.

Recent studies in Minnesota and western Canada indicate that most wolves living near livestock areas where wild prey is available did not prey on livestock. Wolf depredations were not as widespread nor as serious as generally believed. Wolves killed, on average, about one of every 1000 livestock grazed. Nonetheless, a few ranchers sustained serious wolf depredations and monetary loss in a given year. Control of these few problem wolves resolved the conflict in most instances.

There have been no recorded cases of healthy, wild wolves attacking a person in North America.

As predators at the top of the food chain, wolves occur in relatively low densities of one wolf per 30 to 80 square miles. The basic population unit is the pack—a cohesive group of two to 16 animals. Most packs include a pair of breeding adults ("alpha" or dominant), other nonbreeding adults and/or yearlings that may be offspring from previous years, and the pups of the year. Packs occupy territories, or exclusive areas that are defended from other wolf packs. Territories vary tremendously in size (due to numerous factors) with 50 to 200 square miles being common.

Wolves advertise their occupation of a territory with two well known and complementary behaviors, howling and scent marking. Howling serves as a long-distance (six to 10 miles) but short-duration (one to two minutes) advertisement, whereas scent marking functions as a site-specific but long-duration (up to 15 days) notice.

The Historical Record: Relentless Persecution

Wolves once occupied a variety of habitats throughout most of North America. In the early 1800s, the explorers Lewis and Clark were impressed by the abundance of wolves in the West. As settlement progressed during the latter 1800s, frontiersmen decimated the vast herds of native ungulates--particularly the bison or buffalo. This drastic reduction in native prey forced wolves to shift more to livestock for food.

"All predators are bad" was the prevailing sentiment of the times, and a systematic program to exterminate wolves began in earnest in about 1915. Over the next 25 years, government agents killed some 25,000 wolves in the West. Efforts to eradicate the animal extended even into the national parks. In Yellowstone National Park, for example, agents killed at least 136 wolves--including about 80 pups--between 1914 and 1926. About 33 wolves were killed during this time in the Gros Ventre area on the eastern side of Jackson Hole, Wyoming. (In April, 1925, six wolf pups were taken from the last den. Two months later, the side of the mountain there slid, creating the famous Gros Ventre Slide!) This intensive campaign against all wolves and the loss of suitable habitat essentially eliminated the wolf from the West by the 1940s.

Future of the Wolf: Recovery in the Rockies

The gray wolf has been the major missing link in several National Park ecosystems in the West. A Recovery Plan for wolves in the Northern Rocky Mountains was approved in 1987. The recovery goal is to have at least 10 packs of wolves in each of three areas: (1) Northern Continental Divide, including Glacier National Park; (2) Central Idaho, and (3) Greater Yellowstone, including Yellowstone National Park.

Wolves from British Columbia and Alberta, Canada, have begun recolonizing Glacier National Park. A few apparently roam the central Idaho area. None are known to occur in the Greater Yellowstone, and natural recolonization is such a remote possibility that the Recovery Plan strongly recommends a transplant program to restore this native species back to Yellowstone National Park. With 30,000 elk in the summer and 20,000 in the winter, 2500 bison, and several thousand deer and moose, the park is ideal for wolves. The large wilderness areas adjacent to the park would provide additional habitat and serve as a buffer between the park and more settled areas.

Of course, there are several issues to be ad-

dressed. What if some wolves range far away from the park and prey on livestock? What about competition between hunters and wolves for elk and deer outside the Park? The Endangered Species Act appears to offer enough flexibility through special regulations to develop a responsible program for wolf recovery.

Perhaps it is an idea whose time is right. Recent public surveys reveal strong support for wolf restoration to Yellowstone from park visitors and moderate support from Wyoming residents, including sportsmen groups.

The biologist Paul Errington said: "Of all of the native biological constituents of a northern scene, I should say that wolves present the greatest test of human wisdom and good intentions." Recovery and management of the gray wolf in the Northern Rocky Mountains is a real challenge indeed. But if again a chorus of wolf song should ring skyward on a clear night in Yellowstone, it will signify a new understanding of nature, a willingness to work together, and a meeting of the challenge.

Who's Afraid of the Big Bad Wolf?

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Prologue: The Black Plague--14th century Europe. As the death toll rose into the hundreds of thousands, the survivors were unable to dispose of the bodies. Mounds of corpses piled up outside the cities and towns, and the predators and scavengers came. Imagine the horror of the survivors to see packs of these animals feasting on their children, husbands, and mothers. In the dusk, the eyes of the wolves glowed red and their mouths curved in a sinister grin. They fought over the bodies, and their howls and cries shattered the night. Surely these must be demons from hell.

As children, many of us were read fairy tales by our parents. On the whole, such stories as the "Three Little Pigs" and "Little Red Riding Hood," were scary and fun. They also helped to teach us to fear the big bad wolf. As adults, we see the fairy tales for what they really are: the teaching of morality, to the detriment of certain animals. Or do we see? Within European cultures, there are hundreds of stories with the Little Red Riding Hood theme, while the Native Americans' favorite morality character, the coyote or the little wolf, is neither scary nor bad, merely mischievous and silly. Where did this European-based fear of the wolf originate?

The wolf was mentioned throughout the literature of the American westward expansion movement. Most authors considered it of little value, in relation to their lives. These men and women reinforced the traditional images and myths of the wolf. Historian Hiram Chittenden wrote "Such was the wolf, an animal of little matter to man, yet one that he had to take account of because of its troublesome habits."¹

Accounts of the time recorded very little except a physical description, often generously laced with derogatory adjectives. According to Chittenden, "The wolf personified cowardice, beggary, craftiness, deceit, mercilessness, and all the group of evil qualities that are comprised in the term, wolfishness ... shark of the plains ... a cowardly (sic) animal, and attacked only the feeble and young."² Even Lewis and Clark were not totally objective. "[The prairie wolf] is lower, shorter in the legs, and thicker than the Atlantic wolf; the color which is not affected by the seasons, is of every variety of shade, from gray or blackish-brown to a cream-colored white. They do not burrow, nor do they bark, but howl; they frequent the woods and plains, and skulk along the skirts of the buffalo herds, in order to attack the weary or wounded."³

Lewis and Clark were kinder in describing the little wolf or coyote. "It is of an intermediate size between the fox and dog, very delicately formed, fleet and active."⁴ Osborne Russell, in his *Journal of a Trapper*, was one of the few who did not liken the wolf to something evil. "The Buffaloe (sic) wolf is from two to three feet high and from four to five feet long from the tip of the nose to the insertion of the tail its hair is long coarse and shaggy. Its color varies from a dark gray to a snowy whiteness. They are not ferocious toward man and will run at sight of him."⁵

"I'll huff and I'll puff, and I'll blow your house down." The wolf is a large canine, and when threatened, the hair on its back raises. Its state of readiness to defend lends great credence to huffing and puffing, and exhaling in snorts. "I still have a vivid picture of terribly gleaming teeth, bristling backs, and bulging muscles in readiness" wrote Enos Mills.⁶ Adding to the bristled back, the bulging muscles, Chittenden continued "... its unearthly and hideous howlings ... gave an impression of power out of all proportion to what it really possessed."⁷ Could a wolf have shook the rafters and raised the roof? Isolation in a wilderness area may have encouraged many imaginations to run wild.

"Who's afraid of the big, bad wolf?" The majority of those who left records spoke of isolated encounters with mad wolves or hungry wolves. Little wonder the impressions left behind were of fear! In William Drummond Stewart's "fictitious Auto-biography (sic) Edward Warren," he relates "On an evening of one of those days, I had for some cause, which appeared to me at the time sufficiently reasonable, begged of my friend Holmes to take his blanket, and make himself a welcome in some other hut ...; he consented, but as I afterwards found he had laid himself down on the ground to sleep I was roused by confused sounds, shouts, and the discharge of fire arms, as well as the deep roar of a bull, such as he emits in terror or in rage I belted a blanket around me and rushed out. Poor Holmes was seated on the ground, the side of his head and his ear bleeding and torn; a mad wolf was ravaging the camp. We did not get her, she had other lives to sacrifice elsewhere. Poor Holmes changed from that hour In November, a melancholy and wasted form set out ... and his bones were left, we could never learn exactly where There never has quitted my breast a reproachful remorse for the part I played him on that sad night."⁸

Great Plain's settler S N Hoisington recalled her encounter with wolves:
*She continued to worry until she got bed fast with the fever... I started to sit up nights with her. I would bring my revolver and ammunition and axe, and some good-sized clubs. The odor from the sick woman seemed to attract the wolves, and they grew bolder and bolder. I would step out, fire off the revolver and they would settle back for a while when they would start a new attack. I shot one through the window.... Finally the woman died After that the wolves were more determined than ever to get in. One got his head in between the door casing and as he was trying to wiggle through, mother struck him in the head with the axe.... Their howling was awful. We fought these wolves five nights in succession, during which time we killed and wounded four gray wolves and two coyotes. When Mr. Johnson arrived home and found his wife dead and his house badly torn down by wolves he fainted away....After the funeral he sold out and moved.*⁹

"What big teeth you have!" Most encounters focused on the mouth and "teeth as large as shears" as David Jackson Staples described them.¹⁰ This was natural in that at the times of observation the wolf's main concern was usually to eat. Uncle Dick Wootton "killed three or four during the night, and

the dead wolves were at once torn to pieces and devoured by the balance of the dirty gang of cannibals."¹¹

The stalking and killing of prey is well documented. Patrick Gass, a member of the Corps of Discovery, witnessed "The wolves in packs occasionally hunt these goats (antelope), which are too swift to be run down and taken by a single wolf. The wolves having fixed upon their intended prey and taken their stations, a part of the pack commence the chase (sic), and running it in a circle are at certain intervals relieved by others. In this manner they are able to run a goat down."¹² It is ironic that wolves were often blamed for the depletion of wildlife, especially the buffalo herds. Wootton emphatically stated "Their killing of the calves (buffalo) has had a great deal to do with the disappearance of the finest game animal we ever had in America."¹³ Several reports recorded that after picking off the stragglers, the young, and the ill wildlife, the wolves would move immediately to domestic animals. They killed sheep and calves, and hamstrung horses and oxen.

Hunger emboldened the wolves. Jacob Bartholomew "took after it with sword and revolver, emptying all barrels," and then was himself chased back to his wagon.¹⁴ If a fire and noise were not enough to keep starving wolves away from camp, precious ammunition was used. Later, strychnine was used liberally. This led to the death of other wildlife which ate of the poisoned meat meant specifically for wolves.

"What big eyes you have!" Stewart also noted the wolf's eyes. *There was light enough to distinguish a gaunt white wolf of unusual size ... who did not seem inclined to yield the path. My horse snorted and jumped aside. There was something terrible in the look of that wolf--the haggard eye ...; the lurid glare of the eyes was never turned toward me, but it passed slouching on. I knew not why, but a shudder came over me, and though I should have punished my horse...I felt as if I also quailed before this ghost-like beast who looked not right or left, but carried those terrible eyes, as if intent on some errand beyond.*¹⁵

Native American cultures portrayed the wolf very differently. Historian Thomas E Mails found "the wolf exemplified craft in war. Scouts wore his skin when on a war party, and in Indian sign language the gesture for a scout was the sign for wolf. The animal was highly respected, and all Indians regarded it as an ally."¹⁶ This deep respect

was shown in the Indians' response to its habits. Osborne Russell witnessed "when it comes near a Village and barks they say there is people near. Some pretend to distinguish between its warning the approach of friends and enemies and in the later case I have often seen them secure their horses and prepare themselves to fight."¹⁷ The Cheyenne Coyote Society prided itself on its imitation of the little wolf in endurance, cunning, and activity.

The Indians related the danger the white Americans inflicted on the wolf with their own lives. Author Joseph Kinsey Howard discovered "Every Indian on the plains hated the wolfer and would, if he could, kill one on sight; yet it has been said that few were ever shot from the front. ... Indian hostilities grew out of the fact that the poisoned bait ... killed the Indians' dogs, occasionally their ponies, and sometimes the Indians themselves."¹⁸

In spite of this respect for the wolf, the Native Americans did not hesitate to teach their children strong ethics using some of the natural characteristics of the little wolf, the coyote. After generations of close association with the coyote, the Indians weaved the coyote's habits into a finely tuned explanation of their world. Even today, "Coyote" is a popular character in American literature.

Many people still fear wolves and hold to the historic perspective that they are bad. But to many more, the fear of living with the wolves has now become the fear of living without them. Despite their presence in our stories, tales, and lives, wolves are nearly gone. Today, the National Park Service and other environmental organizations are fighting to reintroduce the wolf into its natural habitat. But fear can be insidious and overwhelm even the good.

Epilogue: "Everybody will live happily for ever and ever after--everybody, that is, except the wolf."

Walt Disney's Peter and the Wolf.

¹Hiram Chittenden, *The American Fur Trade of the Far West* (Lincoln, 1986), II, p 819.

²*Ibid.*, p 818.

³Coues Elliott, ed., *The History of the Lewis and Clark Expedition* (Dover, 1893), I, p 297.

⁴*Ibid.*

⁵Osborne Russell, *Journal of a Trapper* (Lincoln, 1955), p 129.

⁶Enos Mills, *Wildfire on the Rockies* (Lincoln, 1986), p 73.

⁷Chittenden, II, p 819.

⁸William D Stewart, *Edward Warren* (Mountain Press, 1986), p 157.

⁹Joanna L Stratton, *Pioneer Women: Voices from the Kansas Frontier* (New York, 1981), pp 80-81.

¹⁰Merrill J Mattes, *The Great Platte River Road* (Nebraska State Historical Society, 1969), p 251.

¹¹Howard L Conrad, *Uncle Dick Wooton* (Lincoln, 1980) p 75.

¹²Coues, III, pp 1107n-1108n.

¹³Conrad, p 74.

¹⁴Mattes, p 252.

¹⁵Stewart, pp 428-429.

¹⁶Thomas E Mails, *Mystic Warriors of the Plains* (Doubleday, 1972), p 96.

¹⁷Russell, P 130.

¹⁸Joseph Kinsey Howard, *Montana: High, Wide, and Handsome* (Lincoln, 1986), pp 122-123.

Interpreting Wolves: A Unique Challenge

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Interpreting wolves is a unique challenge. Audiences are never disinterested, but often have firmly entrenched misconceptions. In working with the public, two widely divergent perceptions of the gray wolf (*Canis lupus*) are usually immediately apparent. Many people can only imagine the slaving beast of lore--"Little Red Riding Hood," "The Three Little Pigs," the wolf at the door, etc. Others are in the opposite camp and think the wolf would make a fine pet. Dispelling these preconceptions is essential if the National Park Service is to convey the real message to the public.

Probably the single most comprehensive source of accurate information is Barry Lopez' *Of Wolves and Men*. However, so much other information is available that sometimes it is difficult to decide what to leave out of a program given time constraints.

A bit of history, including the wolf eradication programs; a little biology, including pack behavior; and something about predator/prey relationships will fill an hour quite readily. Most interpreters would like to add something of Indian legends, pioneer lore and current attitudes. Sticking with the facts and avoiding political controversy is essential. Adding slides is helpful, but few are available. Good wolf photographs are rare and expensive. A few dedicated and environmentally concerned photographers are willing to assist the National Park Service in interpreting wolves in the parks, but it takes diligence and persistence to locate these people and gain access to their work.

The message to the park visitor should include two strong points:

1. Healthy, wild wolves are not dangerous to humans. Unlike the bear, wolves go to great lengths to avoid human contact. In the few areas where wolves still roam free, only the occasional lucky visitor will hear a wolf howl. Only very rarely will wolves be sighted.
2. Wolves make terrible pets. Wolf-dog hybrids are often equally difficult. Like all wild animals, wolves need space and freedom. They can dig to great depths to escape fences, and their behavior in captivity can be damaging to possessions and even to those who seek to befriend them.

In the national parks, we provide the world weary with a respite from the hassle and hustle of urban life. Part of that service includes an almost indefinable quality of wildness, of returning to another age, another time. Among the mountain peaks, the crystalline lakes and the wide expanses of untamed land, is a feeling unavailable to most people in their day to day lives. Part of that feeling is the knowledge that wild animals still roam free in the parks. Knowing that the grizzly is out there, that the bald eagle soars, that the mountain lion, bighorn, bison, and wolf are just around the bend, sets the National Parks apart. The edge of fear, the excitement of the undefined noise in the night, and the exhilaration of seeing and hearing wild animals in nature is a large part of the attraction of the parks.

Wolves strike a special chord, and can help convey the message that wild places are sterile and sad without wild animals. Protecting the wild places and the wild animals within them is basic to the National Park concept. The message to the American public should contain the idea that parks need all their available original inhabitants. Wholeness is essential to the sense of wilderness expected in the parks, and which the parks owe the public.

Yellowstone: Fires and Wolves

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Nearly thirty years ago, an old timer told me, "Only fools and greenhorns predict Rocky Mountain weather!" Trying to predict the effects of Yellowstone's 1988 fires on wolf recovery could make fools of us, too. There are lots of variables in the process.

Fortunately, dozens of scientists are responding to the unique opportunity to study the effects of the

1988 fires on the Yellowstone ecosystem. They will study the fires' effects on the park's soils, hydrology, aquatic systems, plants in forested, shrub and grassland communities, insects, small and large mammals, birds, and even fire history, management, policy, socio-economics, and public opinion. Their findings will add to the decades of baseline data on Yellowstone's living resources that tell us Yellowstone, as L David Mech put it, "...is just magnificent wolf country."

But back to Rocky Mountain weather. The summer drought of 1988 was unprecedented and unpredictable, although some scientists see it directly related to global warming. Burning conditions seen in 1988 were outside the experience of anyone.

Similarly, nearly a hundred years ago, a summer drought in 1886 preceded the Hard Winter of 1886-1887. In that winter, 90 to 95 percent of range cattle died on overstocked ranges when early snows piled up, thawed, then froze into an ice cap in the Yellowstone area. Yet, the following season's grasses were lush and green from the abundant snowmelt.

If there is a highly visible loss of large grazers--deer, elk, and bison--in Yellowstone in the winter of 1988-1989, some observers may decry the absence of wolves. Those observers may say the wolves could have prevented the buildup of those grazer populations to their current high levels. On the other hand, elk numbers at Riding Mountain National Park, Manitoba, have fluctuated with the presence of wolves. So, too, have moose numbers fluctuated wildly at Isle Royale in the face of wolf predation.

Then there is predicting the political climate. Who would have supposed a couple of years ago, that some conservative members of Congress would have supported wolf restoration in Yellowstone? Yet, that has happened. The 1988 fires of Yellowstone have cooled in the winter snows, and the heated presidential debates have cooled after the election. New players will emerge, and new agendas will be drawn.

Meanwhile, the 1964 Wilderness Act and the 1973 Endangered Species Act are the law of the land. They express the American people's desire to conserve both wild lands and wild creatures, including top carnivores like bald eagles, peregrine falcons, grizzly bears, mountain lions, and wolves. Americans are heeding Thoreau's dictum that, "In wildness is the preservation of the earth."

Will wolves return to Yellowstone? I'm not willing

to predict. Only fools and greenhorns do that. But I'm willing to educate park neighbors about how wolves make a living, and how Minnesotans and Canadians get along with wolves in their parks. I'm willing to listen to park neighbors' concerns and seek ways to mitigate problems they may identify. Then I'm willing to live with negotiated decisions about restoring wolves to Yellowstone.

Of Wolves in Alaska: Interpretation in an Interagency Context

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One of the most hotly debated public lands issues in Alaska is wildlife management because of its direct connection to the mystical "Alaska life-style" of little or no governmental control of the individual. Wildlife is managed for use as a major source of food for subsistence purposes for many rural Alaskans. Wildlife is also managed for Alaskan sport hunters, sport and subsistence fur trappers and non-residential trophy hunters. This same wildlife is also to be managed for "non-consumptive use" such as wildlife viewing, photography, and the wilderness experience.

The management of wolves enters into this complex scenario but with added weight of the classic stereo-types (killer, savage beast or the mouse-eating romantic animal of the Disney movie, *Never Cry Wolf*). Wolves in the north country provoke loud strains of high-pitched emotional verbiage. One either loves them or hates them; there is no middle ground.

For many years, Alaska residents felt like soldiers defending their lifestyles when the subject of "wolf control" reared its head. Conservation groups would shake their fists, encourage letter writing, and contribution giving. Nevertheless, the Alaska Board of Game was able to approve wolf population reductions through wolf control programs (shooting wolves from a low-flying plane) with minimal local public reaction.

Within the last ten years, however, the numbers and players have changed. With the finishing of the Trans-Alaska Pipeline in 1977 and the passage of the Alaska National Interest Lands Conservation Act in 1980, the state's social and political framework has been permanently altered. Alaska has, indeed, become of national interest. Consequently, no longer can the Board of Game automatically approve wolf control or other management proposals without

broad input of public opinion.

Wolf control proposals in the winter of 1984-85 by the Alaska Board of Game stirred the pot of public controversy. For the first time, the Board was faced with surprisingly loud and organized opposition to its proposals from within Alaska. This vocal opposition was then quickly met by rural and bush residents who felt their lifestyles were being threatened by an over supply of wolves and city slickers. The sport hunting community also joined this debate because of its perceived competition with subsistence hunters.

With the passage of ANILCA, the four major federal land agencies including the National Park Service now play a more visible and vocal role in decisions affecting wildlife on federal lands. For example, federal regulations for the NPS ban the practice of "land and shoot" (the use of aircraft) under the trapping regulations in the preserve units (where hunting is allowed).

What is the role of interpretation in this confusing battlefield of public opinion? Why even touch an issue with so much emotion and misunderstanding? What limits can or should the interpreter set to avoid the mine field of public reaction or the animosity of differing agency philosophies?

Interagency Interpretation

The Alaska Public Lands Information Centers in Fairbanks and Anchorage are uniquely suited to address wolf management in Alaska through interpretation because of their interagency mandate. Included in the ANILCA legislation of 1980 was a section requiring the National Park Service to consult with the state of Alaska and other Federal agencies to provide multiple agency visitor centers in four centralized locations of the state (Anchorage, Tok, Fairbanks, and a community in southeast Alaska). NPS manages the Anchorage and Fairbanks centers; the Alaska Division of Tourism, the Tok center; and the USDA Forest Service will manage the Ketchikan center which is still in the design stage.

Because the centers represent five Federal agencies (Bureau of Land Management, National Park Service, USDA Forest Service, U S Fish and Wildlife Service, US Geological Survey) and three State of Alaska agencies (Alaska Division of Tourism, Alaska Department of Natural Resources, Alaska Department of Fish and Game), they must include all aspects of wolf management. These complex requirements could leave one confused and pulled in many directions at once. They must represent each agency and yet not

advocate one agency's viewpoint over another. Their role is to educate and stimulate the public's interest in public lands issues and then redirect that interest to the appropriate location. Without some kind of guideline to use in presenting interpretive programs however, presentations could appear to be rather noncommittal and the consistency of oatmeal. What to do? There are three elements.

1. Present facts about the species. Factual information includes the basic biological information (to which everyone may **not** agree) as well as current, ongoing field research. Many interpretive programs mention two pieces of information that upset many wolf advocates because they conflict sharply with the romantic image of wolves. Folklore is fraught with stories of wolf predation on humans. Much of this is hyperbole and exaggeration. Nevertheless, as Barry Lopez in *Of Wolves and Men* has related, there **have** been some documented instances of wolf attacks related in the oral histories of Alaskan and Canadian Indians and Natives. This justifies neither the preemptive slaughter of wolves nor the claims that wolf attacks are all fiction.

Research done by L David Mech in northern Minnesota has documented instances where wolves have killed more prey than they have consumed (surplus predation). This contrasts very sharply with the romantic notion that wolves only kill what they need for survival. Surplus predation can be used by some as a way to judge a species of animals and its actions as bad (applying human ethics to a wild animal) or to dismiss the research that documents this behavior as prejudiced or tainted and therefore suspect. Neither stance is necessarily correct.

2. Know the policies of wildlife management agencies. The second element is to be familiar with the policies of all agencies or interest groups involved with the issues and the legislative mandate or focus for these agencies or groups. Just because the interpreter's values and beliefs match that of the agency by which they are employed does not justify ignorance of other viewpoints. The one aspect that will get interpreters in trouble is the advocacy of an issue when they do not know all the players or do not bother to understand someone else's point of view.

One interpretive technique is to play devil's advocate on points raised by visitors. The interpreter must know the various positions of all the players and make sure that the audience knows that the speaker is not representing one agency over

another. Wolf control measures in Alaska are repugnant to many people and yet the Department of Fish and Game is mandated, and is under tremendous pressure, to maintain a harvestable level. What should another agency do, realistically, in this situation?

3. Know personal values. The final element is to know your personal values and beliefs well enough to see when they have begun creeping into your presentations. Nothing will polarize an audience more than to have a particular viewpoint presented that is cloaked in the appearance of a "balanced program." People are attending a program like this to learn something new and be exposed to different viewpoints, not to hear someone expound on why wolf control should or should not occur.

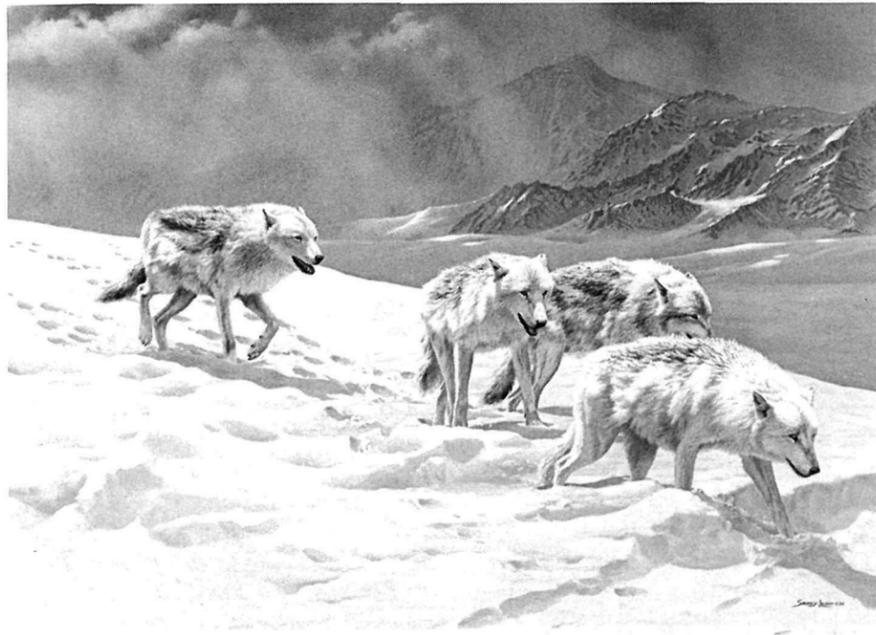
An interpretive program that will challenge one's abilities in this area is the town meeting format. Each member of the audience has a role to play that is defined on an index card he or she is given before the program starts. All aspects of an issue should be represented and each person encouraged to speak out for "his cause." In the case of wolf management in Alaska, one might include the following roles - sport hunter, fish and game manager, visitor, news reporter, tour company owner, and trapper. The goal should be to come to a group consensus about a particular question regarding the subject at hand (e g "should wolf control occur in the preserve units of Alaskan national parks?"). The interpreter's role is to weave the thread of reality and communicate the complexity of natural resource decisions throughout the program.

The interpreter begins by explaining the background to date and gives a brief synopsis of each viewpoint. Then the fun begins with the interpreter acting as a moderator and the issue brought to the floor. The interpreter may need to add additional information to participants' statements and to provide provocative comments to prod discussion if the pace lags. The conclusion needs to be comprehensive, enlightening and include some observations made during the program. Participants can be encouraged as a part of closing to contribute one thing new they learned from the program.

Interpreters should be alert to the need to correct misinformation about the subject at hand. Wolves are not endangered as a species in Alaska and have never been endangered. Whether they can or will be in the future is open to debate. These types of discussions, however, can be an opportunity to educate and expand perspectives.

Celebrating the Wolf

Controversy has led to fame for the wolf. Wolves are one of the most popular images in wildlife art; depicting the spirit of wilderness. The National Park Service traveling exhibit, **Celebrating the Wolf**, consists of 18 original matted and framed prints by several artists. It will be on display in the Rocky Mountain Region through 1989, and then in the Midwest and Pacific Northwest Regions for 1990. The exhibit will be available for at least 6 years. Check with your regional traveling exhibit coordinator for more information.



Racing the Storm - Artic Wolves, John Seerey-Lester Reprinted courtesy of Millpond Press

Other Footsteps, Bonnie Marris Reprinted courtesy of The Greenwich Workshop



From Timber's Edge, Rod Fredrick Reprinted courtesy of The Greenwich Workshop



Spring Mist - Gray Wolf, Ron Parker Reprinted courtesy of Millpond Press



The Fishing Lesson, Bonnie Marris Reprinted courtesy of The Greenwich Workshop

White-tail and Wolves, Ron Parker Reprinted courtesy of Millpond Press



A visitor who was encountered at an NPS special event at the Arch in St Louis insisted that he has seen wild wolves in Missouri. The ensuing discussion provided an opportunity to talk about the red wolf reintroduction, wolf signs, wolf sightings in the field, coyotes and the *Canis* nomenclature, the wolf restoration proposal for Yellowstone National Park and wolves in Minnesota--all from an essentially incorrect statement!

Interpretation of a controversial subject like wolf management in Alaska must give the visitor an accurate and truthful picture of the complexity of the issue, the varieties of conflicting opinion, and assist in identifying how the visitor might influence decisions related to the controversy.

With a subject like wolves in Alaska, however, an interpretive program would be remiss in only touching on the political rhetoric. What about the romance, the beauty, and the primeval nature of wolves? Bob Weeden, a professor at the University of Alaska Fairbanks summarizes those features:

The world needs an embodiment of the frontier mythology, the sense of horizons unexplored, the mystery of uninhabited miles. It needs a place where wolves stalk the strandlines in the dark, because a land that can produce a wolf is a healthy, robust and perfect land.

Wolves in the Classroom: Using the Wolf to Expand the Bounds of Interpretation

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Interpretation
Yellowstone National Park

One very important facet of the Director's Wolf Education Task Force is the wolf environmental education program. A series of classroom activities about wolves has been prepared for each of three different age levels (grades K-4, 5-8, and 9-12). These activities will be packaged with an already published information booklet on wolves suitable to the targeted age group. Included with each package will be a full-color wolf poster for hanging in the classroom and a bibliography of books, films, videos, recordings, and other wolf related resources. The plan is to publish 50,000 of these "Wolf-Pacs" and distribute them to interested classroom teachers free of charge.

As you might imagine, all this will cost quite a bit of money, money which we are still in the process of raising. It's probably fair to question

the wisdom of our committing significant resources to a program that will yield no immediate tangible benefits to park visitors. Of course I believe the answer is YES, or I wouldn't be writing this article!

Looking through the first issue of Interpretation for inspiration and a slant on how to write this article, I found just what I was searching for in the articles by Walt Dabney on Freeman Tilden and Ron Thoman on interpretation for the future.

Tilden spoke of the need for interpretation to set a moral tone for our country. He felt that we should be giving visitors glimpses into their own environmental potential by showing them how we can live with nature rather than against it. The wolf environmental education program gives us just such an opportunity.

In our rush to settle and subdue the American Wilderness, Americans made little room for predators like the grizzly and the wolf. We have tried to recognize our past mistreatment of nature and rectify it somewhat through such legislation as the Endangered Species Act and the National Environmental Policy Act. By working towards wolf recovery, National Park Service interpreters can help lead Americans toward an environmental outlook that draws from our nobler instincts. Even so, there are still a lot of people out there who hate wolves--period. Environmental education enables us to attack our prejudices toward the wolf by working with the most open-minded segment of our population: our children.

Using the wolf to set Tilden's "moral tone" will be a long and arduous task, one where success will be difficult to measure. An environmental education program about wolves can also produce more immediate as well as powerful results. Didn't someone once say that, "Hell hath no fury like impassioned school children?" The power of students writing letters using their number 2 lead pencils on paper with big lines has been amply demonstrated many times in the past.

The 1971 Wild Horse and Burro Act was passed unanimously by Congress simply because of the tens of thousands of letters received by legislators from children telling them to "save the wild burros!" Never mind that wild horses and burros are exotic animals that have caused significant habitat damage on our public lands. These school children, with the necessary media attention, spoke out clearly to "save the burros!" So we did.

More recently, Montana students were successful in

getting their state to designate the grizzly bear as their official state animal. This happened despite the fact that many of their parents held little love for the grizzly. While adults might have been uncomfortable with their children embracing an animal they view as an unwelcome and dangerous nuisance, their voices were drowned by thousands of youngsters who wrote their state legislators urging that the grizzly become a symbol of their state and its wilderness heritage.

Ron Thoman spoke of the need for interpreters to speak and work for preservation. We can do no greater good for preservation of the wolf than to use environmental education to break down the negative stereotypes found in "Little Red Riding Hood" and "The Three Little Pigs."

As interpreters, we need to become more skilled at reaching those nobler instincts of which Tilden spoke, and if not urging people directly to action on behalf of preservation, then at the least, we should speak forthrightly of the various alternatives and the penalties of inaction. As members of an agency with a proud tradition of public service, we really can't do anything less.

The wolf environmental education program together with the other initiatives of the Wolf Education Task Force is an important step in that direction.

Interpreting the Eastern Timber Wolf at Voyageurs National Park

Niel De Jong
Assistant Chief of
Interpretation
Voyageurs National Park

Sunday, January 17, 1988, was a typical winter day in International Falls, Minnesota. COLD! After a week of training in sunny Arizona, it was going to take an adjustment to go from 80 degrees above zero to 20 degrees below.

I went through the opening procedures at the visitor center. The top priority that day, as it is most cold winter days, was getting a fire going in the wood stove. While loading the stove, I glanced out the window over the frozen, snow covered bay. There amongst a sea of white, not more than 250 yards in front of the visitor center, was a solitary patch of rusty brown lying on the ice. My curiosity aroused, I set up a spotting scope to get a better look at it. It looked like a deer. I walked out on the ice to confirm my suspicions. There it was! A large, what appeared to be recently killed, deer. Around the carcass

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were splatterings of blood, several sets of human tracks, and what looked like large dog tracks. My first sighting of a wolf-killed deer! I ran back to the center and spoke to the maintenance man on duty. He said the kill had been reported a couple of days earlier. A research team had already been at the site and verified that the animal had been killed by two wolves.

As interpreters, we have all experienced teachable moments. That deer carcass proved to be a teachable three and a half months! Visitors coming into the center would be drawn to the spotting scope and ask "What is that out there?" The response, "A deer killed by wolves" generated a whole series of additional questions. This presented interpreters with a perfect opportunity to explain the role of wolves in the park's ecosystem. Researchers made available information gathered from past and ongoing research. This in turn was passed on by interpreters to the visitors.

As the winter wore on, crows and ravens scavenging on the carcass provided the answer to the question, "Why do you leave it out there on the ice?" In late winter, when the first patches of open water began to appear, an occasional bald eagle was seen on the kill. Even the fact that wolves were never spotted at the carcass offered a valuable teaching opportunity. It is not unusual for wolves to abandon kills that are close to areas inhabited by humans.

Probably the most rewarding experiences involved children with family and school groups. During the winter and early spring months most of our visitors are locals. Many of these local children are raised to believe that wolves are a menace, killing domestic and wild animals and endangering human life. The interaction of all living things within the environment and the role that death plays in the natural cycle of life was clearly demonstrated by the carcass.

It was interesting to notice the change in the carcass over the three and a half months that we were able to observe it. Right after the kill, the animal was pretty much intact. By the time the ice melted, all that was left was the skeleton and hide. We observed the birds as they tore the flesh from the hide and bones. Over the course of three and a half months, they moved the hide more than ten feet away from the skeletal structure. Even after the few remains of the carcass sank to the bottom of the bay, it proved to be a valuable interpretive tool. Interpreters conducting evening

programs about the wolf were able to relate what they had observed during the winter.

Voyageurs National Park offers interpreters the opportunity for personal experiences with wolves, or at least contact with researchers who have had first hand experience with the animals. Interpreters have worked very closely with researchers, often accompanying them in the field to "howl," live-capture, radio-collar, and track wolves. Relating these personal experiences and anecdotes during interpretive activities has proven to be an effective means of educating park visitors to the significant role that wolves play in the Voyageurs National Park ecosystem.

Nature Puts the Wolves of Isle Royale on Notice

Peter Gorner
Staff Writer
Chicago Tribune

For forty years, the predator and its prey have been left alone in the Nation's most protected wilderness sanctuary. Fate marooned them on their tight little island and, free from human interference, they have danced to nature's complex, unforgiving tune.

The wolves of Isle Royale. And the moose.

Pristine. Inviolable. Natural.

But after four decades, something new and evil seems to have infiltrated Michigan's remote Isle Royale National Park in Lake Superior. The wolves are dying. No one knows why. Soon they may all be gone.

A worried biologist, Rolf Peterson, the wolves' watchman for 18 years, wants to save them. If he can't, he wants to know he tried.

"They may be dying of natural causes or from some exotic disease. We just don't know," says Peterson, a wildlife ecology professor at Michigan Technological University in Houghton.

Unless something is done, America may lose the most famous wolves in the world.

Between 1980 and 1982, their population crashed from a high of 50 animals to 14, Peterson says. There simply were too many wolves on the island. They died of malnutrition and killed each other over territory.

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In 1983, they bounced back from 14 to 24, the same number seen 27 years earlier when we first started observing them. But in 1987, the number abruptly plummeted from 24 to 16.

Now there are only 12¹, the fewest ever recorded. The latest slide is the most troublesome. As the numbers decline the likelihood of extinction on the island rises geometrically.

Emergency intervention would seem to be called for. Yet the crisis is causing debates among scientists and park officials about what to do. If anything, Peterson explains:

The guiding philosophy of Isle Royale has been to let nature work undisturbed. We've never before been allowed to examine the wolves directly. What I'm proposing now is very drastic.

If what we're seeing is natural--a cyclical decline in the food supply, for example, or too much genetic inbreeding that has weakened their reproductive capacity--I would not argue for intervention.

But if some disease, such as canine parvovirus, has been transmitted from the mainland, it would seem consistent with endangered species policy to get rid of it. I'd trap and inoculate every wolf on the island, if that were the case.

Parvo is terribly virulent. It attacks the digestive tract, and the animal quickly wastes away. Dogs are forbidden on the island. But if private boaters illegally sneaked them in, the virus could have spread to the wolves.

It's entirely possible that man is not to blame. Island ecology is notoriously unpredictable, and nature may just finally be taking its course. If we find the wolves have been weakened genetically, we have a big decision to make about whether to let things proceed normally.

But we'll never know what's going on, unless we step in. And we must do it soon.

The National Park Service has given Peterson permission to act immediately. He will humanely trap at least six of the remaining wolves, conduct physical examinations, draw blood samples for viral and genetic analysis, and strap on radio collars so he can keep track of the animals.

He has submitted a two-year \$70,000 proposal to the NPS, overseer of the wolves. Recently he was

granted \$20,000, enough to intervene, he says, but not enough to monitor the animals adequately once he lets them go.

The mortal threat facing the wolves will bring sadness to wolf lovers and elation to wolf haters. For decades, the Isle Royale wolves have lived free--from traps and snares, poisons, shotguns and strafings from airplanes.

As the wolves prospered, so have the 1600 moose on the wind-lashed 210-square mile island, 73 miles off Houghton, Michigan, and 18 miles from Ontario's Sibley Peninsula--the largest land mass in the Earth's largest freshwater lake.

In this unique microcosm of natural law, what happens to one species has direct influence on the other. If the wolves vanish, the moose will multiply and overburden their food supply, causing a massive die-off. "Isle Royale has the greatest moose density in the world," Peterson says. "Their food supply is tight."

Yet, seemingly amid plenty, the wolves mysteriously continue to die. The end may be looming for what long has been among the most serendipitous and remarkable wildlife sagas of modern times.

The story of the island of wolves is known throughout the world and has helped change dramatically the public image of the wolf from vermin to perhaps the most romantic symbol of conservation.

Isle Royale--or Minong, as the Objibwa Indians called it, the "place of blueberries"--has influenced literature read by millions. The Michigan wolves helped galvanize wildlife proponents to demand the federal protection of all species threatened by extinction, a campaign that resulted in the Endangered Species Act of 1973.

Lonesome and forlorn, Isle Royale forms the nucleus of an archipelago created by volcanism and terraced like a washboard by the glaciers of the Ice Age. Since 1940, the island, basically a northern forest, has been an authentic wilderness park, 45 miles long, 3 to 9 miles wide.

There are no roads, 175 miles of hiking trails, campgrounds and a small lodge. Blanketed by fog and heavy winter snows and whipped by thunderous storms, the park is deserted six months a year.

The tourist season, June through Labor Day, attracts about 15,000 visitors, not a large number by

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national park standards. Not particularly scenic and plagued by summer festivals of biting black flies, ticks, and rapacious swarms of mosquitoes, the island lures only the most dedicated nature lovers.

They go, knowing that rarely, if ever, will they catch a glimpse of their timid, elusive quarry. Still, they come by the thousands on the off chance that as dusk falls and shadows play over the poplars and the cold green lake pounds the rocky beaches, they may hear the songs of the wolves.

"The grand opera of primitive nature," Durward Allen calls it. Allen, a Purdue University wildlife biologist, in 1958 founded the continuing wolf ecology study on Isle Royale. On his retirement in 1975, Allen turned the work over to Peterson, his former graduate student, who has been studying the wolves since 1970.

The crisis on the island threatens to throw into turmoil the landmark thirty-year-old study, longest in the history of ecology, that has helped preserve North America's endangered "apex predator"--the great wild dog that fears nothing but man.

Isle Royale, because of the primitive survival pattern replayed there, has in the minds of many become the very symbol of what a national park is supposed to be. No public land is more firmly protected by the NPS, which controls tourism by limiting the camping spots and the number of boats providing commercial service to the island.

The animals made it there on their own.

The moose came first. Between 1900 and 1905, for reasons known only to them, moose started to swim over from Ontario. By the 1920s there were thousands on the island, the largest moose herd ever known. As might be expected, the animals started eating the island down to its precambrian bedrock.

Twenty years later the moose were starving. They scrounged for every bud, twig and leaf. So many moose died in the winter of 1935 that the stench was noticeable to visitors who came that spring. A fire the following year, however, opened a third of the island to new growth. The moose began to flourish. They were hanging on.

Then, in the winter of 1949, upper Lake Superior froze, forming a rare bridge of ice that briefly linked the island to the Sibley Peninsula. On a cold February night, a pack of perhaps seven

Ontario timber wolves romped and meandered across the bridge to Isle Royale.

No one really knows how many there were. But they must have been a socially organized pack--a tightly knit family that knew how to live and work together--or else they never could have survived.

Allen was delighted when he learned what had happened. "The event introduced the greatest of all experiments in predator-prey relations," he wrote in his eloquent memoir, *Wolves of Minong: Their Vital Role in a Wild Community* (Houghton Mifflin, 1979).

Would the wolves massacre the moose herd? Or would they hold it to a level that the annual renewal of vegetation could support? Nobody knew nature's plan. Allen wrote, imploring the public to understand what Isle Royale represented:

The plan was established long before there were men to meddle and confuse. Human retribution, by methods that out-brutalize the innocent carnage of the wild, has brought many of our flesh-feeding mammals and birds to the edge of oblivion.

In an age when science has become respectable, one must ask: Can we now apply some intellectual maturity? Is it not time to outgrow the idyll of the lion and the lamb and learn about the wolf and the moose? They need no one to lead them, but only a place to be left alone.

Allen left them alone, except for aerial spying by himself and a hand-picked, exceptionally rugged and dedicated coterie of Purdue graduate students, whom science promptly dubbed "the Wolfmen." Over the years, they would meticulously document the complex adventure they witnessed and write papers and books that helped change the face of wildlife biology.

Even before his first dissertation was published, the first Wolfman, L David Mech, became famous for his findings on predator tactics and prey selection. Mech has gone on to become regarded as the world's leading expert on *Canis lupus*, the eastern gray (or timber) wolf, and studies the nation's only major population--an estimated 1200 animals in northern Minnesota.

Each winter, when they could see through forest cover on the island, Mech and succeeding Wolfmen took to the air in a single-engine plane, knowing that they would quickly become ill from the dizzying aerobatics required to chase after wolves and moose.

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But chase them they did for hours on end--over the ice and woods, the island lakes, bays, ridges and trails--determining who was doing what to whom, and trying to figure out why.

The scientists logged tens of thousands of hours in the air. Year after year, they charted and photographed the rosters of the wolf packs, their territories, social actions and cooperative hunting behavior. They counted the moose and noted their foraging, breeding and survival strategies.

On snowshoes, the Wolfmen patiently combed the island, collecting wolf droppings from hundreds of miles of trails and analyzing the contents. They tracked down the often scanty remains of kills, performing field autopsies when possible. In spring, they hauled in reeking moose "floaters" released by Lake Superior. Even these carcasses were considered part of the puzzle to be pieced together.

What emerged was a startling mosaic that proved for the first time what the scientists had suspected: the wolves were highly selective in their killing. They managed the moose herd with enviable efficiency.

Wolves, the scientists learned, are not normally skilled moose hunters. The lashing hooves and unholy fury of a 1600-pound male moose make it one of the most dangerous creatures in nature. Yet the wolves devised straightforward smash-and-grab tactics that enabled them to kill, on average, a moose every three days in winter. But not just any moose. They approached and "tested" a dozen animals for each one they got serious about.

Time and time again, the biologists saw that a healthy moose ordinarily need only stand its ground in defiance to run off any pack of wolves. But a sick old moose, infested with parasites, its lungs filled with tapeworm cysts the size of golf balls, will not stand in defiance.

When wolves encounter such an animal, they stare at it intently, whereupon some clause in the primordial contract is invoked. The ailing moose turns on its heels and flees. The wolves follow patiently, tearing at the moose's flanks when they can. Then they wait, as exhaustion, shock and stiffening muscles take their toll. Finally surgically--or brutally, depending on one's perspective--the predators move in to make the kill.

The wolves also have been quick to solve the problem of too many moose calves for the land to support. Selection is rigid once again. A savvy

mother moose often can save her youngster by pushing it ahead of her and challenging the wolves. If they can divert her, it's curtains for the calf. But those calves that do manage to reach a year of age probably will enjoy another seven or eight years before being given "physicals" by the wolves.

Which may be part of the wolves' problem now, Peterson says.

Most of the moose were born after the wolf crash in 1981. They are a robust 7 years old or less. They're only beginning to enter the age when they become vulnerable. We may be seeing a desperate holding action. If the wolves live long enough to stay in the game for another year or so, they may be able to make it.

The wolf story, however, has proved more complicated than merely the killing of the old and helpless. Even after decades of study, scientists still haven't completed the puzzle.

The wolves occasionally may kill more than they need to, including healthy young moose if they can. They have been seen ganging up on an interloper wolf, yet inexplicably often let it live. Biologists can only document such behavior; no one knows why it occurs.

Yet by generally singling out only the unfit--the very young and very old--the wolves had kept the balance of nature on Isle Royale. On average, the island vegetation will support 1000 moose, which in turn will support 24 wolves. It was supposed to stay that way forever.

The Purdue scientists also were among the first to document the other side of the wolves: playful, affectionate family animals that generally mate for life, give food to pack members unable to hunt, and display a highly complex pattern of communication.

Wolves are genetically programmed to adhere to a strict dominance hierarchy: "They have rules," notes Allen. A breeding pair, known as the alpha male and female, lead each pack, often for its lifespan. More than genes seem to be involved, however. Warm, often ecstatic, devotion bonds the alpha animals. They seem to fall in love.

And dominance, the Wolfmen proved, does not depend merely on fang and claw. Exciting ceremonial huddles and rallies precede a night of moose hunting. The response by the pack members to their leader indicates (even in captive settings) that the alpha

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male and female rule through love and respect as much as fear.

When packs get too large because of a surplus of food, subordinate wolves split off and form new packs. When food is plentiful, wolves breed. When food is sparse, wolves die. In such a way is the natural balance maintained. Such scientific findings belied centuries of folklore and sworn testimonies by generations of bounty hunters. Wolves were nothing but wanton, ruthless and senseless killers, so it was said, and wolves threatened and murdered humans. They were a menace that had to be utterly destroyed, and indeed they were massacred to the edge of extinction as official government policy with an unreasoning hatred never before inflicted upon any wild animal in North America.

But the Wolfmen, and wolf preservationists worldwide, argue that the slaughter was unmerited and revealed a terrible meanness in the human spirit. Wolves, in truth, are so terrified of humans that when Peterson traps them on Isle Royale, he must do so with great care. Trapped wolves rarely defend themselves. They may go into shock, and even die.

The Isle Royale scientists kept only one gun on the island--for moose emergencies. Peterson has been chased and treed by a furious moose, but never confronted by a wolf. Mech routinely ran off packs. Once, he reported, he investigated a fresh kill as no fewer than 18 wolves watched, whining nervously. Absorbed in his work, Mech looked up to find himself completely surrounded. Yet the wolves scattered when he yelled at them.

There are people today who refuse to believe anything good about wolves, Peterson says, but the science is very clear. Moose are among the toughest animals that wolves hunt. Yet after looking at literally thousands of wolf-killed moose, I have no doubt that there's a strong selection for vulnerable prey. This, in turn, favors the healthy animals and keeps the herd in balance.

Even now at Isle Royale this may again be proved. It doesn't matter how many moose there are, until they reach a certain age and physical condition, the wolves are completely unable to bring them down.

For thirty years, the Isle Royale research project has been designed to study wolves in a natural habitat, not to save them, and it has been conducted by scientists, not wildlife managers. Peterson nonetheless admits to anguish as the population

has dwindled. He can stand by no longer.

If we find that the wolves' only problem is starvation, the most common public response will be: 'Feed 'em.'

There is a vocal army of lupofiles, people who love wolves, that will demand we give the wolves anything--granola bars, dog food, whatever they'll eat. But if food is the issue, and the wolves can hang on until the natural food supply is restored, they should make it.

Eliminate disease and food, and that leaves genetics. If there's something bizarre going on genetically, I don't know how we could save the wolves. However the scientific value of studying the mechanism would be enormous.

There may be intense political pressure to restock the island if the wolves die. "They're the reason people come to Isle Royale," Peterson admits. Restocking would be no easy task, however. One could not merely take a group of captive wolves and drop them in the wilderness. Only a cohesive pack that has learned the requisite hunting skills since puphood would know how to set up shop.

"Moreover, if there is some disease on the island," Peterson notes, "it will kill the new wolves, too."

But these issues can wait. Peterson must act quickly if a treasured American wildlife legacy is to be preserved; if future generations will have their chance to travel to an island in upper Lake Superior and hear what Durward Allen calls "the jubilation of wolves."

That's Peterson's aim.

I think the public still values the predator-prey relationship.

Most people probably have no desire ever to go to Isle Royale. But I believe they would like to think that a place still exists in this nation where wolves and moose are interacting without human meddling.

That's been the real value of Isle Royale for 40 years. I think that's worth saving.

¹By the latest count, there are only 9 wolves remaining on Isle Royale. Ed.

About This Issue

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Editors' Note

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