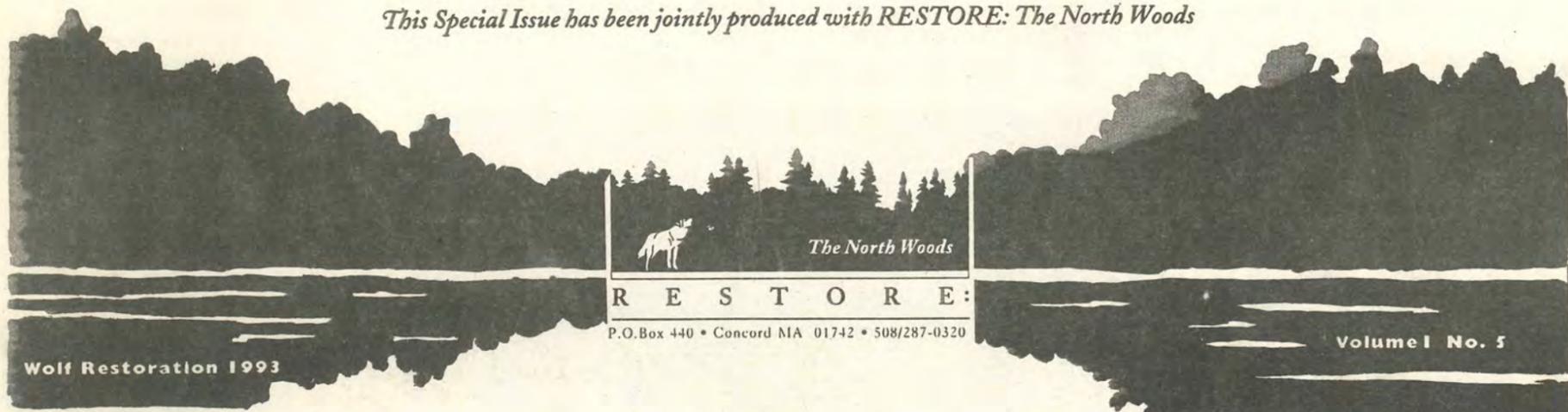


# The Northern Forest Forum

*This Special Issue has been jointly produced with RESTORE: The North Woods*



## WOLVES



*A pack of Eastern Timber Wolves crosses a woods road somewhere in the northwest corner of Maine. The animals trot lightly up between the poplars growing on a slope, and pause where the land falls away again. Below them, by the wide, floating leaves of the spatterdock, pickerel weed stands up in the shallows of the lake. A loon calls from out on the deep water. Two moose, feeding along the edge of the lake, shift their weight, and at their feet the water stirs. One moose leans forward, yanks up a mouthful of pickerel weed. In a wide splash, the water sheets away from its snout. Gradually, the daylight fades. The moon rises above the trees on the opposite shore. If you and I were standing on that far side, we might see the moonlight reflected briefly in the wolves' yellow eyes. What can turn this imaginary pack into true wolves, preparing for a real night hunt along the shore of a real Maine lake?*

SUSAN HAND SHETTERLY  
*"Of Wolves and Maine"*  
Maine Times, 3/30/90

**A Proposal for Restoring Wolves to the Northern Appalachians**

# Wolves—The Reflected Image of Ourselves

"We have doomed it to death, not for what it is, but for what we deliberately and mistakenly perceive it to be—the mythologized epitome of a savage killer, which is, in truth, the reflected image of ourself."

—Farley Mowat, *Sea of Slaughter*

The Howl of the Wolf is the quintessential Wilderness experience.

Once the most widely distributed mammal in the northern hemisphere, the wolf has now been exterminated from more than 95% of its former range in the lower 48 states. The disappearance of wolf has paralleled the disappearance of wilderness. We have achieved the dream of our grim Pilgrim ancestors—we have "redeemed the howling wilderness."

Instead of creating the Garden of Eden wolf-exterminators dreamt of, we have, today, a land of maimed ecosystems because where wolf (and cougar, lynx, wolverine, Atlantic Salmon, pine marten, caribou and passenger pigeon, to name a few) is absent, essential ecological relationships have broken down. We will never know the full ecological consequences of removing wolves from Northern Forest ecosystems.

What we do know is: without wolves Northern Forest ecosystems will remain incomplete. Hence, a necessary step to restoring ecosystem health is the restoration of wolves to the northern Appalachians and the Adirondacks.

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As if the loss of healthy ecosystems were not bad enough, we humans of the Euro-American cultural tradition have lost—if we ever possessed it—the spiritual connection to the natural world that sustains us. The willful, systematic, obsessive destruction of wolf symbolizes our culture's descent into alienation from our life-support system.

I believe that wolves have an inherent right to dwell in the Northern Forests and that we humans have a moral obligation to learn to coexist with these large carnivores. But, even if you do not believe wolves and other non-human species have rights, you surely must desire what is best for humans. I submit that what is best for humans is a healthy environment and a healthy spiritual relationship with the natural world that sustains us. Restoring wolves to this region is an essential step towards healing damaged ecosystems and damaged human psyches. Allowing wolves to return to their native haunts should not be viewed as an atonement of our collective guilt, but as evidence that we are recovering long-lost wisdom.

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Native Americans and wolves coexisted for thousands of years. Indeed, as Farley Mowat writes, even the earliest European visitors to North America did not view the wolf as evil incarnate: "Explorers, fur trappers, even

## Cover Photo

The cover photo was taken by Jim Brandenburg, author of a most visually beautiful book on wolves, *White Wolf*. We wish to thank Jim and our other fine photographers, George Wuerthner and Scot Stewart, for their assistance in producing this special Wolf Restoration 1993 issue of the *Forum*.

fishermen seemed neither to fear the animals nor to consider them a threat to life and limb. The fearsome legend of the all-devouring wolf, he of the slaving fangs and the blood-red eyes, came into existence on this continent only after Europeans settled down to 'taming this wilderness and turning it into the Veritable Garden of Eden for Man's delight and use,' which, presumably, it now is." (*Sea of*



The most important step towards wolf recovery in this region is the establishment of a network of ecological reserves that are buffered from human disturbance and persecution. Photo © George Wuerthner.

*Slaughter*, page 156)

Ironically, there is evidence that wolf populations initially increased after Europeans began settling the New World thanks to a new, abundant source of food—the domestic livestock of the colonists. In short order, wolves were condemned as the epitome of an evil that had to be "tamed." They became the universal scapegoat; depredations by feral dogs were blamed on wolves.

In 1630 Massachusetts Bay Colony enacted the first New World bounty—one shilling for every wolf carcass. In 1634 William Wood wrote in *New England's Prospect*: "There is little hope of their utter destruction, the Country being so spacious, and they so numerous.... in a word, they may be the greatest inconvenience the Country hath, both for the matter of damage to private men in particular and the whole Country in generall." A 1638 Massachusetts law stated: "Whoever shall [within the town] shoot off a gun on any unnecessary occasion, or at any game except an Indian or wolf, shall forfeit 5 shillings for every shot."

Colonists set out poisoned meat, set loaded guns with trip wires, and raided wolf dens and killed the pups. They organized regular hunts of areas suspected of harboring wolves. In fact, wolves

became a justification for draining and clearing swamps.

The last wolf was killed in Connecticut in 1837, in New Hampshire in 1887. New York paid six bounties in 1897. Wolves disappeared from Maine by 1909. Further west, two million bounties were paid on wolves shot, trapped, or poisoned in the United States (excluding Alaska) between 1850-1900. Today, six of the 24 sub-

Despite the degraded condition of the industrial forests of northern New England, wolves might well be able to survive if they did not have to contend with logging trucks, poachers and the residue of wolf-hatred that our culture retains.

Although more study is urgently needed, it is clear that the most important step towards wolf recovery in this region is the establishment of a network of ecological reserves that are buffered from human disturbance and persecution. The second step is to work cooperatively with Canada and other regions of the United States to expand existing wolf habitat to connect with Northern Forest ecological reserves. This will allow wolf populations to colonize new territory, and to return to the Northern Forests on their own terms, not as part of a scientific experiment by humans.

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As John Harrigan, Mollie Matteson and Michael Kellett persuasively demonstrate in this special "Wolf Restoration" issue of the *Forum*, there is a profound human yearning to bring wolves home. The old attitudes are dying away. We sense that, as humans, we shall not be complete until the natives return. There are compelling ecological, ethical and even economic justifications for restoring wolves. But, in the end, we don't need to justify the beauty, mystery and joy of the dance of life from which civilized culture has cut itself off.

Monte Hummel and Sherry Pettigrew of World Wildlife Fund-Canada, and authors of *Wild Hunters: Predators in Peril* quote Dick Dekker, a biologist who has spent years studying the wolves of Jasper National Park in Alberta: "I sat there with my binoculars and telescope, watching the wolves. It struck me that anyone who doesn't like wolves should have the chance to observe a pack in the wild. There is, in my opinion, nothing as happy, boisterous, and fun to watch as a pack of wolves that includes four or five pups having a whale of a time! There was no fighting, no snarling. That wild pack was relaxed, on its territory, had plenty of food, and they were the most playful animals you've ever seen."

Savage killer or playful animal—which is our reflected image?

—Jamie Sayen

species of *Canis lupus* that inhabited North America prior to the European conquest are extinct and most of the remainder are endangered.

There is not one documented case of a wolf killing a human in North America. In fact, they are so fearful of humans that they will even abandon a fresh kill if approached by a human.

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What will it take to restore wolves to the Northern Forest region? One approach would be to capture wolves from Canada, Alaska or Minnesota and release them here. This approach would be the quickest way to return wolves to the region, but it is fraught with problems that must be addressed forthrightly before proceeding. Efforts to reintroduce caribou to Maine and lynx to the Adirondacks have been expensive and have resulted in high mortality—all the caribou and most of the lynx have died.

Before an extirpated species can successfully return to its former range, there must be adequate food, suitable habitat and protection from human persecution. Today, populations of moose and deer could support wolves in northern New England, and it probably won't be too long before moose populations recover in the Adirondacks also.

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RESTORE: The North Woods



# An Introduction to Wolf Ecology

by Mollie Y. Matteson,  
M.S., Wildlife Biology

The wolf was once the most widely-distributed land mammal on earth. Its range covered North America, Europe, and Asia. It lived in habitats ranging from the Arctic tundra to the deserts of the Middle East and the American Southwest, from boreal forests to treeless plains. Today, however, the wolf is extinct over much of its former range, and in jeopardy over much of the territory it presently inhabits.

The scientific name for the wolf is *Canis lupus*. The official common name is gray wolf, despite the fact that not all gray wolves are gray in color, nor are they referred to as gray wolves in certain regions. In the eastern United States and Canada, forest-dwelling wolves are called timber wolves. In the Southwest, they are Mexican wolves, in the far north, Arctic wolves. To add to the confusion, unlike these others, the red wolf—a native of the southeastern United States, is a true, separate species. (In the mid 1970's only 17 red wolves were still in existence. Today they are making a comeback through a captive breeding and reintroduction program.)

The eastern timber wolf generally weighs between 50 and 100 pounds. Males are somewhat larger than females. The typical pelage color is a mixed gray, though a few individuals may be black or white.

Wolves live in social groups called packs, which consist of a breeding pair, or "alphas," and socially subordinate individuals—adult offspring of the alpha pair or other, usually genetically-related adults, juvenile offspring and pups. Packs normally number between 2 and 8 individuals, although much larger packs—over 20 wolves—have been reported.

The alpha pair breeds in late winter, and the female gives birth in a den about mid to late April. Litter size averages between 4 and 7 pups. The mother nurses the pups while the rest of the pack hunts and brings back meat for her. The pups begin to emerge from the den at 3 to 4 weeks, and as they are gradually weaned, the mother joins the other pack members in hunting. The adults carry meat to the pups in their stomachs. A pup nuzzling an adult's muzzle stimulates regurgitation of the

partly digested food, which the pups then consume.

By late summer, pups are mature enough to join the pack on hunting forays. Though they have not yet attained their adult weight, four month old pups have the frame-size of adults. They are full grown at 1 year, and physiologically capable of breeding at 22 months.

Young wolves often remain in the pack for several years, assisting in the care of younger siblings and learning more about how to hunt and survive in their particular environment. Since the evolutionary goal of all creatures is to ensure the passing on of their genes into the next generation, subordinate wolves must "choose" (it is not necessarily a conscious decision) between staying with the pack and possibly achieving alpha status in the future, or striking out to begin their own pack.

Dispersal offers both hazards and advantages. In areas where most of the available habitat is already occupied by packs, dispersal may be difficult due to competition for resources or outright harassment and threat from resident wolves. Dispersal also means traveling through terrain that is unfamiliar, and thus it can be more difficult to find food, and exposure to potential danger is higher. Dispersal into areas of very low wolf density means it may be more difficult to locate a mate. Nonetheless, wolves seem to have an uncanny ability to locate other wolves across huge patches of land, as demonstrated by events in recent years in Montana. To the population as a whole, dispersal serves to maintain genetic diversity and allow expansion.

Although it is not easy to say precisely what wolves "look" for in establishing a new territory, packs that succeed in reproducing and surviving over a period of time usually have two basic things available to them.

**\*Adequate prey base.** In the eastern United States, prey species include white-tailed deer, moose, and in the summer, beaver.

**\*Adequate security.** Humans pose the greatest threat to wolf survival and safety. For wolves to persist in an area, there must be a minimum of human access (roads), a certain level of tolerance among human residents, and concomitantly, adequate legal protections. Wolves are killed primarily because of human hatred and fear. Real



Alpha male and alpha female. Photo © Scot Stewart

or perceived, competition with people for prey—namely wild game and domestic livestock—has formed the basis for resentment of the wolf.

Of course, habitat fragmentation and destruction can diminish both prey base and security, and thus are the ultimate threat to wolves, as they are to most wildlife species.

The relationships between wolves and their prey are much more complex than once thought. Wolves do not "wipe out" their prey, but neither do they necessarily take only the weak and the sick. Most scientists have abandoned the simplistic notion of a "balance of nature" in which predators always keep prey in check, and herds stay smaller and healthy. However, there can be no doubt that as a top predator, wolves play an important role in the natural ecosystems they inhabit.

Wolves are opportunists, and so will take the most vulnerable members of the prey population. Generally these are the old, the young, the diseased and the crippled. Gray wolves that have recolonized the west side of Glacier National Park in Montana and adjoining wildlands have had no discernible effect on deer, elk, and moose numbers over the ten years or so they have lived there.

While wolves do not seem to cause prey declines, it appears they can extend a period of low prey numbers, after poor weather or forage conditions have already forced a population decrease. Human hunting may also diminish prey populations, a situation which wolves

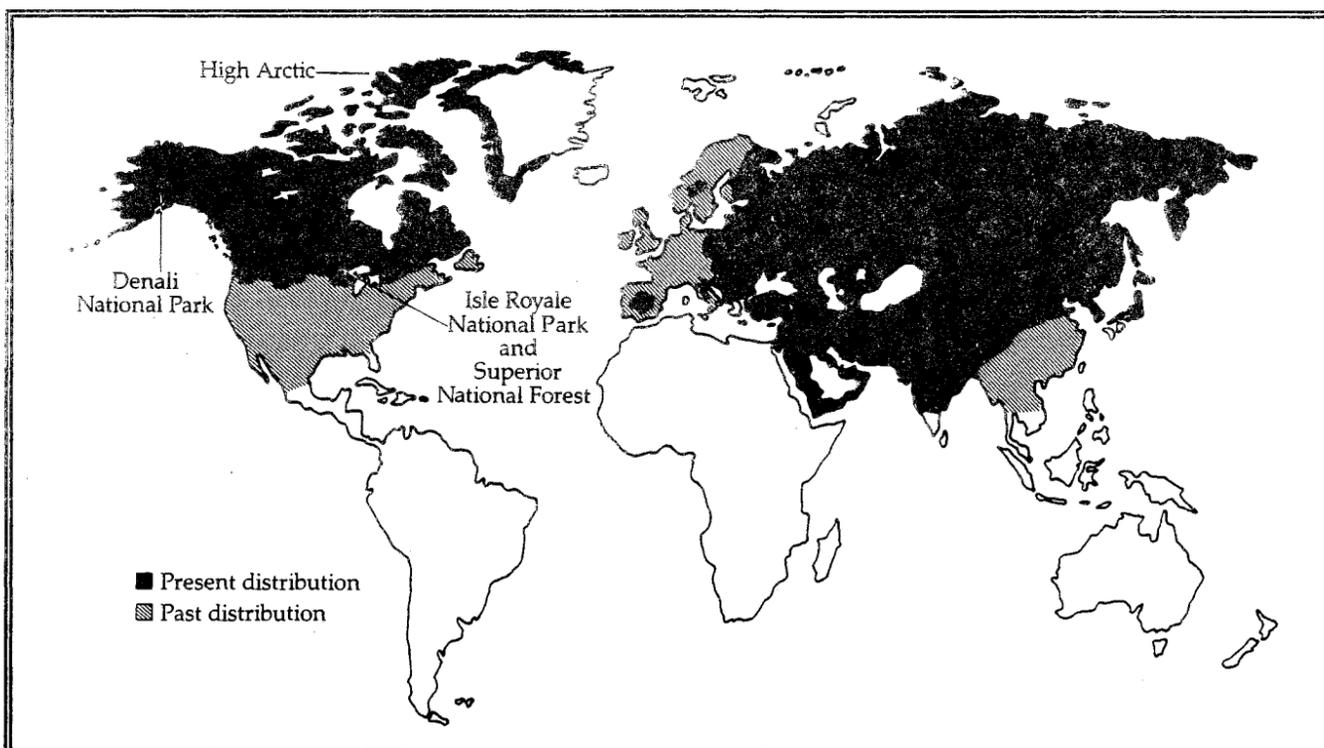
may exacerbate, and for which they usually take all the blame. Biologists refer to the condition in which prey populations are held down for extended periods by predation as a "predator pit." While hunters and game managers may view a predator pit as undesirable, it may be what the plant species require to rebound from their own "predator pit." (For example, young aspen which are chewed down every year during periods of moderate to high prey numbers may be able to grow beyond the point of vulnerability during a predator pit event, so that when prey numbers finally do increase, the aspen are already good-sized trees.)

Keen senses, endurance and speed, and cooperation with other members of the pack make the wolf a successful predator. Wolves can hear sounds up to 6 miles away under the right conditions. Their eyesight is sharp, and their sense of smell is about 100 times better than that of humans. Wolves have powerful jaws capable of crushing large bones. They can run between 20 and 40 miles per hour and can chase prey long distances. On their territorial perambulations, packs can travel tens of miles (30 to 50) in a day. Some have been reported to move distances of over one hundred miles in a day.

It should be remembered that prey species are similarly adapted to escape from wolves, and are by no means "sitting ducks" whenever a wolf comes along. Deer and moose can run swiftly and are capable of delivering deadly kicks at wolves, beaver escape into water, and all have their own set of finely-tuned senses to warn them of potential danger. Finally, as with most prey species, their reproductive potential is much higher than that of their predator. Losses to the population are usually quickly recouped.

In summary, the wolf is a highly adaptive animal, capable of living in a wide variety of environments and preying on a diverse array of species, typically large ungulates. Their intelligence and flexible behavior allows them to learn from new situations and to pass on this knowledge to their offspring. The only situation with which they have proven unable to cope is persistent persecution from humans. Whether and how much this changes will determine the success of wolf recovery efforts in the North Woods.

Mollie Matteson, a native of Vermont, now works for wolf restoration in the greater Yellowstone Ecosystem.



# Restore Wolves to the Northern Forest

## A Proposal

by Michael J. Kellett

Three hundred years ago, the eastern timber wolf lived throughout the Northern Forest of Maine, New Hampshire, Vermont, and New York. This and other subspecies of the gray wolf inhabited most of the United States and Canada, preying on deer, moose, caribou, and smaller animals. For millennia, wolves and native North Americans lived together in peace.

When European settlers arrived, they brought their Old World hatred and fear of wolves. They believed the wolf to be ruthless and bloodthirsty, decimating herds of deer, wiping out livestock, and killing humans. They began zealously hunting wolves down and exterminating them wherever they lived.

This anti-wolf crusade was all too successful. By the 1960s, wolves still occupied much of their Canadian range, but the only major wolf population left in the United States was in the vast wilderness of Alaska. The last wolves in the lower 48 states stubbornly fought extinction, retreating to the remote forests and bogs of northern Minnesota.

After twenty-five years of protection, the eastern timber wolf has made a comeback in Minnesota. Wolves are gaining a foothold in Wisconsin, Michigan, and the northern Rocky Mountains. Across the nation, there is growing public support for helping the wolf recover in other parts of its native habitat.

In its *Recovery Plan for the Eastern Timber Wolf*, the U.S. Fish and Wildlife Service (USFWS) has identified large areas of the Northern Forest as having potential for wolf restoration. However, instead of working toward this goal, the four state governments have either given no support to such a program or opposed it.

The time has come to change this situation. The people must speak out and demand action.

### The Northern Forest: A Potential Wolf Population Center

The *Recovery Plan for the Eastern Timber Wolf* was issued in 1978, and revised in 1992. Its primary objective is "to maintain and reestablish viable populations of the eastern timber wolf in as much of its former range as is feasible."

Significant progress has been made since the plan was originally issued. A Minnesota wolf protection program has been in place for years. Steps have been taken to promote wolf recovery in Wisconsin and Michigan, which are experiencing natural immigration from Minnesota.

Yet, the long-term survival of the eastern timber wolf is far from assured. The subspecies is still limited to a tiny portion of its original range, and listed as "endangered" outside of Minnesota. In its *Recovery Plan*,

*The FWS recognizes the desirability of establishing and maintaining separate, viable population centers of the eastern timber wolf. Such a distribution gives greatest protection against catastrophic loss of the last remaining population segments and best assures the perpetuation of this (or any) endangered species.*

The *Recovery Plan* identified several areas that "deserve serious investigation as potential [wolf]

reintroduction sites." In the Upper Great Lakes, the areas include northern Wisconsin and the Upper Peninsula of Michigan. Another grouping of sites was identified in the Northern Forest region—the Adirondack Park in New York, and northern Maine and New Hampshire.

The original 1978 *Recovery Plan* also included the White Mountain region of New Hampshire, but it was deleted from the 1992 revision because of political opposition. Neither plan identified the Northeast Kingdom of Vermont, an undeveloped and sparsely populated adjacent to northern New Hampshire. This area could have potential for wolf recovery and deserves a hard second look.

The Northern Forest region has great potential to become a "viable population center" of the eastern timber wolf. Yet neither the USFWS nor the state governments have seriously assessed the feasibility of a Northern

Forest wolf restoration program. The time has come to initiate such a study.

### Needed: A Wolf Recovery Study

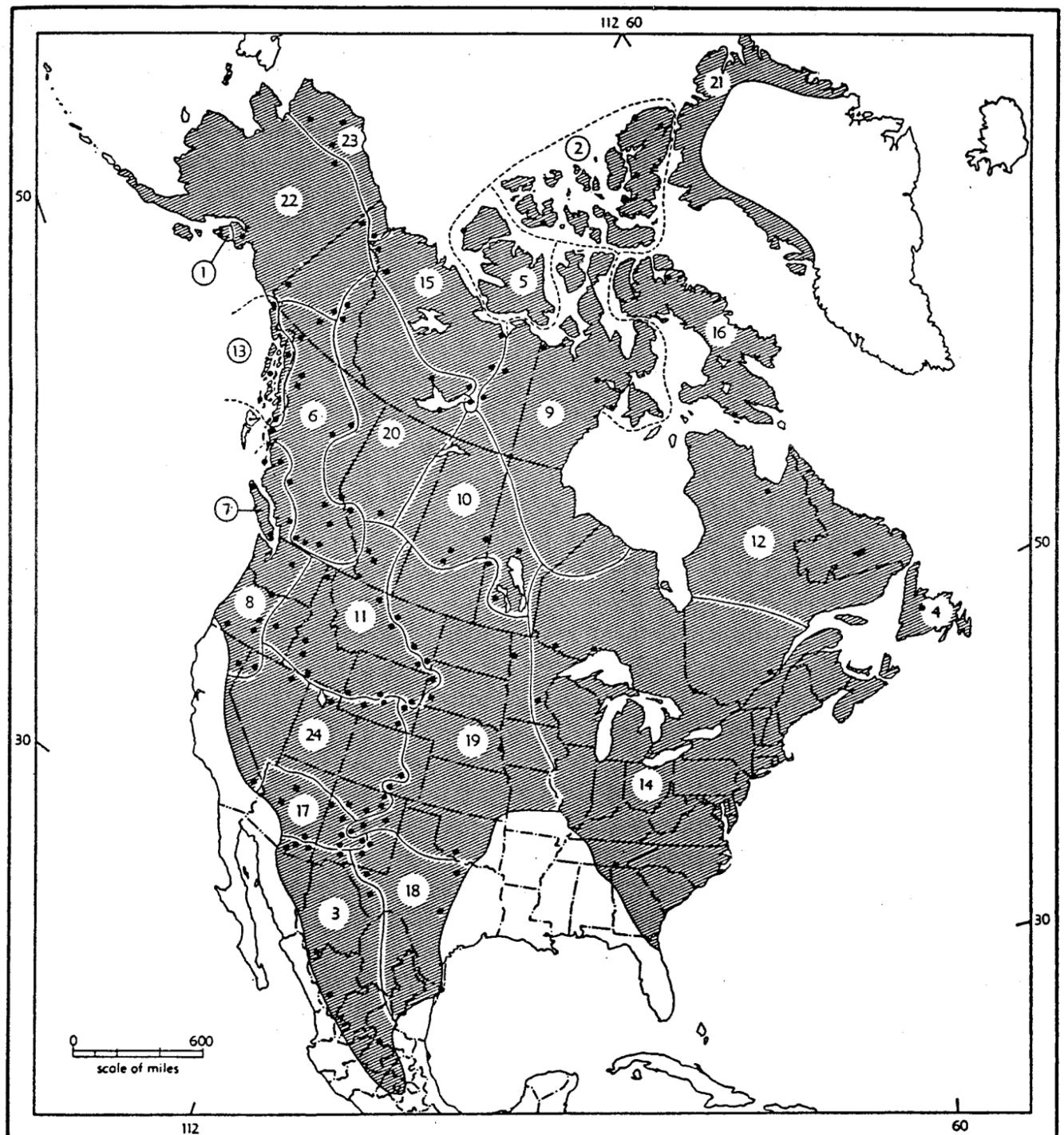
When the draft *Recovery Plan* was released in 1976, the four Northern Forest state governments responded with a marked lack of enthusiasm. In Maine, the Commissioner of the Department of Inland Fisheries and Game (now Wildlife) opposed wolf recovery. He wrote to the USFWS wolf recovery team:

*Considering the current financial picture, the potential detrimental effect upon established native wildlife populations, and prevailing attitudes among our hunters and trappers which would make a wolf introduction socially unacceptable, I do not feel we can support the implementation of your proposed program in Maine.*

The people of the Northern Forest

region have never been given the opportunity to make their own decision on wolf recovery. Instead of eliciting public comment when the draft was released, state agency officials assumed that most people were opposed to wolf recovery and that no additional funds would be available. Media coverage was minimal, and most focused on negative reactions of the agency and a few individuals.

An open public debate is long overdue. The U.S. Fish and Wildlife Service should prepare an Environmental Impact Statement (EIS) on the feasibility of restoring the eastern timber wolf to Maine, as it is doing for Yellowstone National Park. This study should be done in cooperation with other federal and state agencies, and with the involvement of private landowners, colleges, and universities. Most important, it should ensure full public involvement.



Former Range of the 24 North American Subspecies of *Canis lupus*

- |                     |                      |                        |                       |
|---------------------|----------------------|------------------------|-----------------------|
| 1. C.l. alces       | 7. C.l. crassodon    | 13. C.l. ligoni        | 19. C.l. nubilus      |
| 2. C.l. arctos      | 8. C.l. fuscus       | 14. C.l. lycaon        | 20. C.l. occidentalis |
| 3. C.l. baileyi     | 9. C.l. hudsonicus   | 15. C.l. mackenzii     | 21. C.l. orion        |
| 4. C.l. beothucus   | 10. C.l. griseoalbus | 16. C.l. manningi      | 22. C.l. pambasileus  |
| 5. C.l. bernardi    | 11. C.l. irremotus   | 17. C.l. mogollonensis | 23. C.l. tundrarum    |
| 6. C.l. columbianus | 12. C.l. labradorius | 18. C.l. monstrabilis  | 24. C.l. youngi       |

(Source: The Mammals of North America, volume 2, E. Raymond Hall & Keith R. Kelson, The Ronald Press Company, New York, 1959, page 849.)

## The Benefits of Wolf Restoration

The restoration of the wolf to the Northern Forest would provide many benefits. These include:

**Restoring Healthy Ecosystems:** Human exploitation has severely degraded the ecological integrity of the Northern Forest. Most major predator species, including the eastern timber wolf, cougar, bobcat, and lynx have been exterminated or greatly reduced in numbers. This, along with continuing forest fragmentation, has caused rising populations of deer, moose, beaver and other prey species. As a result, many of these prey populations are exceeding the carrying capacity of their habitats and conflicting with human activities.

Moose populations have been rising rapidly, especially in Maine and New Hampshire. In Maine, four people and over 600 moose lost their lives in moose-car accidents during 1991. That same year, at least 192 moose were hit by cars in New Hampshire. The state has printed bumper stickers saying "Brake for Moose: It May Save Your Life."

The beaver has also been increasing in numbers. New beaver dams and ponds have caused flooding of woods roads and hampered logging operations. Some Maine forest industry

landowners have reportedly begun an extermination program.

Today, the Northern Forest deer herd is larger than it was before European settlement. Deer are damaging forests and farm crops, particularly in the southern parts of the region. There have been as many as 3,400 deer-car collisions per year in Maine. In the northern portions of the Northern Forest, where populations were originally very small, unnaturally high numbers of deer are exceeding the availability of winter shelter, resulting in major die-offs during severe winters.

The restoration of wolves to the Northern Forest would be an important step toward controlling the populations of prey species. Wolf predation would not eliminate these species, but it would help keep them in check. By removing unfit individuals, wolves would improve the overall health of the population. As they did for thousands of years, wolves and their prey would once again co-exist, to the benefit of the entire ecosystem.

**Benefits to Local Economies:** There is growing recognition of the economic value of wolves and other endangered species. In northern Minnesota, wolves help create a mystique of wild, untamed nature that draws large numbers of recreationists to the region. For example, over one million people visit the Boundary

Waters Canoe Area Wilderness in the Superior National Forest, which is the heart of wolf country. This and other backcountry tourism has allowed for the development of a significant "eco-tourism" economy.

A 1992 National Park Service study predicted that wolf recovery would provide a net benefit of \$43 million per year to the Greater Yellowstone region of Idaho, Montana, and Wyoming, largely from increased tourism revenues. With 70 million people living within easy reach of the Northern Forest, a significant number would probably be more likely to visit the region if they knew they might hear the howl of the wolf.

A healthy "eco-tourism" industry would help offset the "booms and busts" of the resource extraction-dominated economy that currently dominates much of the region. The people of the Northern Forest could benefit economically, while protecting the natural health and beauty of the region and preserving their way of life.

**A Focal Point for Ecological Restoration:** The wolf, and countless other species of wildlife in the Northern Forest—the caribou and eastern cougar, bald eagle and spruce grouse, timber rattlesnake and spotted turtle, Atlantic salmon and dwarf wedgemussel—can thrive once again, but only if we restore and preserve their habitats. The return

of the wolf to its rightful place in the Northern Forest could be the beginning of the long process of restoring the entire region to ecological health.

The *Maine Times* recognized this in a February 9, 1990 editorial:

*Wolves and the undisturbed habitat they need could become an important element in the fight to preserve large tracts of forest land in northern Maine, and the presence of a federal agency such as the U.S. Fish and Wildlife Service could even tip the balance in preservation's favor. For that reason alone, we welcome the wolf to the debate over the future of the Maine Woods; advocates of the forest's preservation have gained a potentially powerful ally.*

## Shattering Myths and Informing the Public

Despite increasingly positive attitudes toward the wolf, the general public still has many misconceptions. Government agencies are often hesitant to support wolf recovery because they believe the people are against it. This is particularly true in the Northern Forest, where there has been little public debate on the issues.

This problem can be overcome. In Wisconsin and Colorado, grassroots activists have had major success in building public and government support. They accomplished this by shattering myths, informing the public, and organizing wolf activists across their states.

Questions that are likely to be asked in the case of Northern Forest wolf recovery include:

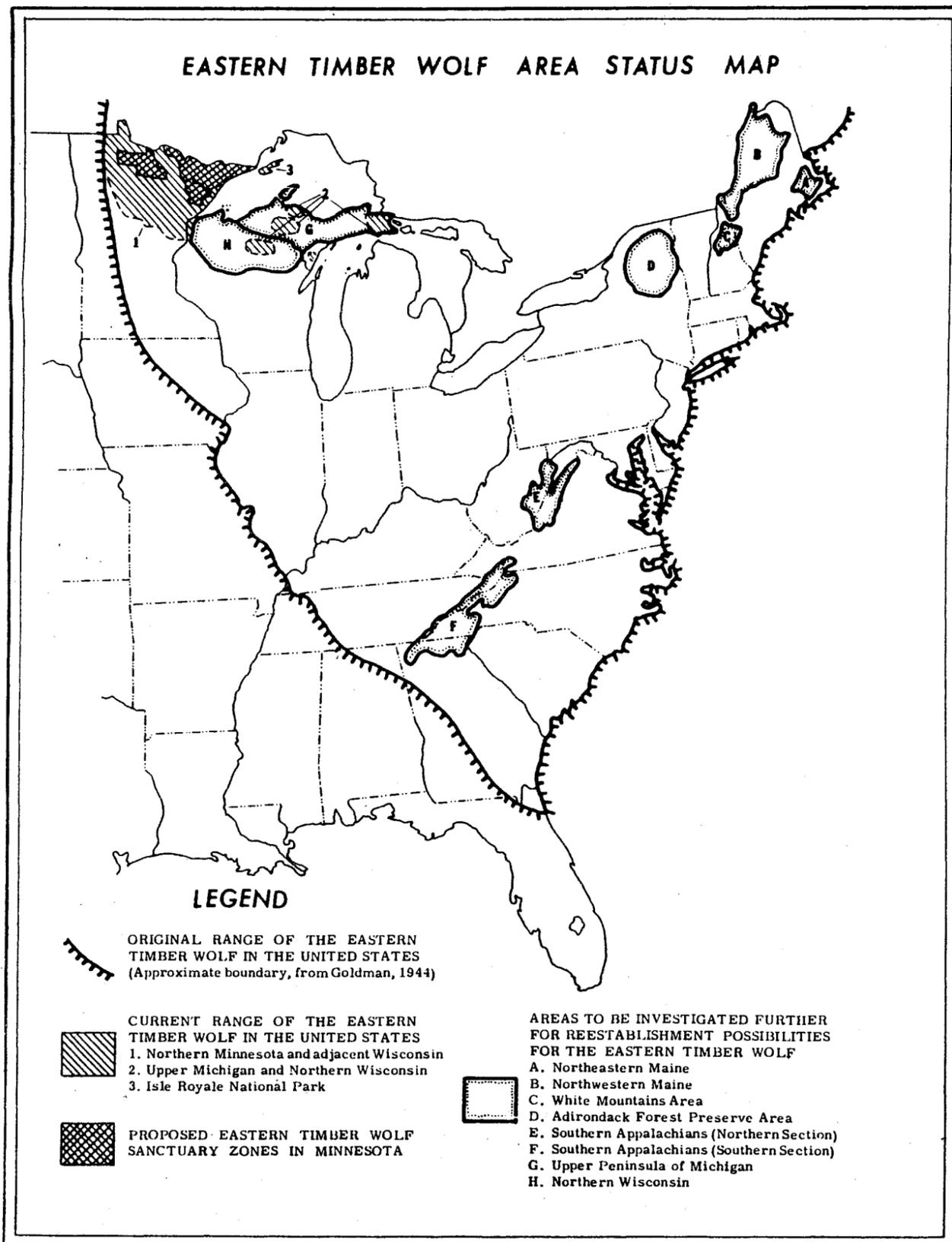
**Would people of the Northern Forest states support wolf recovery?** Public support for wolf recovery is growing across the United States. Public opinion surveys have shown strong approval for recovery efforts in Minnesota, Wisconsin, Michigan, Yellowstone National Park, and elsewhere. The Michigan survey showed that "deer hunters revealed the greatest sympathy, concern, ecological appreciation and outdoor recreational interest in the wolf of any group examined. . . ." Even the Arizona Cattle Grower's Association has lent its support to the recovery of the Mexican wolf.

Based on positive attitudes elsewhere, Northern Forest residents would also be likely to approve of a wolf recovery study. But they have never been asked what they think.

**Does the Northern Forest have adequate wolf habitat?** According to the *Recovery Plan for the Eastern Timber Wolf*, the most important habitat requirements for wolf survival are: "(1) large tracts of wild land with low human densities and minimal accessibility by humans, and (2) the availability of adequate wild prey, largely ungulates [deer and moose] and beaver." Although more study is needed, the potential recovery sites in the Northern Forest that were identified by the USFWS—northern Maine and New Hampshire and the Adirondacks—appear to meet these requirements.

**Does wolf predation decimate deer populations?** There is ample documentation that this is not the case. The U.S. Fish and Wildlife Service has found that in Minnesota, where deer and wolf populations have lived together for a very long time, "with the possible exception of local areas where deer habitat is already in poor condition due to the aging of the forest, wolf populations are having little or no effect

*Continued on Page 6*





Wolf Pack. Photo © Scot Stewart

# Wolves in Maine: The Debate Has Begun

by Michael J. Kellett

On April 5, 1993, the University of Maine Student Chapter of The Wildlife Society sponsored a panel discussion, entitled "Wolves in Maine: A Discussion of the Issues." This account is based on my interpretation, which I hope is an accurate reflection.

I took part in the discussion on behalf of RESTORE: The North Woods. Others on the panel included Hewlette Crawford, a member of the board of directors of the Sportsman's Alliance of Maine; Gary Donovan, Director of the Wildlife Division of the Maine Department of Inland Fisheries and Wildlife (MDIFW); Ken Elowe, a biologist from MDIFW; and Dan Harrison, Professor of Wildlife at University of Maine. Paul Jacques, a state legislator from Augusta was unable to participate due to other commitments. About 100 students, faculty members, and members of the public attended the discussion, which was held in Brewer, Maine.

If the discussion that took place is any indication, an honest, open debate over Maine wolf recovery has finally begun. Instead of taking rigid stands, participants raised legitimate issues and concerns. Among these:

\*More information is needed on a number of issues, including whether Maine has an adequate wolf habitat and a sufficient prey base, the historical distribution of wolves and coyotes in the Northeast, the relationship between wolves and coyotes and implications for Maine wolf recovery, the possible impacts of recovery on prey populations and other predators, and the attitudes of landowners and the public toward wolf recovery;

\*The Maine Department of Inland Fisheries and Wildlife is not unalterably opposed to wolf recovery, but wants answers to these and other questions, assurance that the already-tight budget is not overextended, and clear support from the public on the issue before it considers taking action;

\*The U.S. Fish and Wildlife Service has not followed up on its broad-based *Recovery Plan*, and will probably not do so without support from the State of Maine and additional funding to undertake the project;

\*The University of Maine and other academic institutions are interested in doing more research on the issue, but do not have adequate funding to do so;

\*The Sportsman's Alliance of Maine is reserving judgement on wolf recovery while the group considers the available information;

\*The most likely source of funding for wolf recovery is the federal government, and this will most likely require an appropriation by the U.S. Congress.

On at least one point there was virtual unanimity—no further action on Maine wolf recovery is likely to be taken by either the state or federal governments until there is a strong base of public awareness and support.

## Reintroduction Proposal

Continued from page 5

on deer numbers and hunter success rates." In much of the Northern Forest moose—whose populations are rapidly rising—not deer, would probably be the major food source for wolves.

### Are wolves a threat to humans?

There is no authenticated record of a healthy, wild wolf seriously injuring a human anywhere in North America. Dogs, raccoons, horses, and other animals that are commonly in contact with people present a much greater danger.

### Would a wolf recovery program restrict private land use?

Wolf recovery would have little or no impact on private lands. The federal government has virtually no control over private land management, except in the case of activities that use federal funding or require federal authorization (like filling wetlands). Landowners could not be forced to manage for wolf habitat, but they could be assisted if they wanted to do so. There are probably many private landowners who would be honored to share their land with a magnificent creature like the wolf.

### Would wolves be a serious threat to domestic animals?

In Minnesota, which has both a large wolf population and a major livestock industry, wolf predation on livestock is very limited. An average of just 27 out of 7,200 farms in Minnesota wolf range are affected each year, with annual reimbursable damages averaging only \$26,762. This would probably be a similarly small problem in places like the Adirondack Park and northern Vermont. In the Maine Wildlands, which have only minimal agriculture and sparse human settlements, wolf-livestock conflicts would probably be negligible.

### Is wolf recovery compatible with logging activities?

The wolf is able to co-exist with ecologically sustainable logging operations, as long as road density and human disturbance are low, and the prey base is adequate. The U.S. Fish and Wildlife Service argues that "properly designed timber harvest can increase local deer numbers and thus benefit wolves." Minnesota's Chippewa and Superior national forests sustain significant wolf populations, despite high levels of logging.

**Has the coyote replaced the wolf in the Northern Forest?** Coyotes fill a different ecological niche than wolves, in terms of social structure and prey base. Where they come into contact, the wolf generally drives out, or even preys on the smaller coyote. In Minnesota, wolves and coyotes have lived for many years in quite well-defined, separate territories. If wolves recovered in Maine, there is a distinct possibility that they would drive coyotes out of some of their current range.

**Did the wolf originally live in the Northern Forest?** There are numerous historic references to "wolves" in the Northern Forest region, dating back to Colonial days. A few people have said that these might really have been coyotes that were mistaken for wolves.

Few, if any, wolf and coyote biologists believe this. The U.S. Fish and Wildlife Service recognizes the Northern Forest as part of the "original range of the eastern timber wolf in the United States" in its *Recovery Plan for the Eastern Timber Wolf*. The Maine Department of Inland Fisheries and Wildlife classifies the wolf as one of several "species of wildlife that were once indigenous to Maine but have not been documented as indigenous for the past 50 years."

**Could wolves return to the Northern Forest on their own?** Natural populations of wolves still live in Ontario and Québec. Based on studies, wolves could easily range as far south as the Northern Forest region. Indeed, the immigration of Canadian wolves may account for the occasional reports of wolf sightings in the Northern Forest.

Unfortunately, there are major physical barriers to wolf migration between the Canadian wolves and the Northern Forest. The St. Lawrence

Seaway, a wide waterway that is never allowed to freeze, would be extremely difficult for a wolf to cross. Even if a wolf made it past this barrier, it would have little chance of surviving the wide swath of densely populated, heavily roaded, and intensively farmed land just north of the United States border. Finally, the rare wolf that was able to safely reach the Northern Forest would probably be shot or hit by an automobile in the absence of any protection program for the species.

Perhaps given adequate protection, wolves could someday repopulate the Northern Forest. More likely they could not. This is an important issue that deserves careful consideration in a Northern Forest wolf recovery study.

## The Time Has Come for Action

Growing numbers of people believe that the howl of the eastern timber wolf has been gone too long from the Northern Forest. They share a vision of wolves once again ranging across the region in healthy, self-sustaining populations. They believe the restoration of this magnificent creature to its rightful ecological place is not only an ecological necessity, but a moral responsibility.

The first step toward making this vision a reality is for the USFWS to begin a comprehensive wolf recovery study. But elected officials and government agencies will not act unless the public demands action. Wolf advocates must provide the leadership to build this base of citizen support. The time has come to speak out.

Michael J. Kellett is the Executive Director of RESTORE: The North Woods.

### Status of the Eastern Timber Wolf in the United States

State	Population	Classification
Minnesota	1,550-1,750	Threatened
Wisconsin	40	Endangered
Michigan (Isle Royale NP)	13-14	Endangered
Michigan (Upper Peninsula)	6	Endangered
Maine, NH, NY, VT	0	Endangered
Other eastern U.S. States	0	Endangered

Source: U.S. Fish & Wildlife Service, *Recovery Plan for the Eastern Timber Wolf* (1992)



Wolf, 15 Ravens and deer carcass. Photo © Jim Brandenburg

## How Should a Northern Forest Wolf Recovery Study Be Done?

*In the Recovery Plan for the Eastern Timber Wolf,*

The FWS . . . recognizes that vastly insufficient information exists concerning the ecological and social realities of reintroducing the eastern timber wolf in to areas from which it has been extirpated for a considerable length of time. Prior to any reintroduction, thorough studies are needed that would determine the status of prey species, the adequacy of habitat factors such as available space and long-term food supplies, the probable effects on other wildlife populations in the area, the probable reaction of local human residents in the surrounding area, and the chances that the eastern timber wolf could survive human antagonists.

*The U.S. Fish and Wildlife Service (USFWS) should begin such a study process for the Northern Forest region. This should be done in consultation with the U.S. Forest Service, National Park Service, other federal agencies, and the governments of Maine, New Hampshire, Vermont, and New York. It should involve the colleges and universities of the region, private landowners, other interested parties and, most important, the public.*

*A Northern Forest wolf recovery should be modeled on one now underway for the Yellowstone National Park region of Idaho, Montana, and Wyoming. As with Yellowstone, the USFWS would be directed by the U.S. Congress to prepare an Environmental Impact Statement (EIS), and provided with the necessary funding. The EIS process would be guided by the National Environmental Policy Act (NEPA), and would include identification of issues and problems, gathering and analysis of the best information available, assessment of a reasonable range of alternative actions, and recommendations on a proposed action.*

*NEPA also requires that a Northern Forest wolf recovery study provide for full public review and participation. This would include regular informational mailings and updates, public meetings, opportunities for written input, and the chance to comment on the draft EIS before the final EIS is prepared. No action could be taken by the USFWS or other agencies until the completion of this entire process.*

*The Recovery Plan for the Eastern Timber Wolf (1992) has a comprehensive outline describing various aspects of the recovery program. The section on how Maine and other Northern Forest recovery efforts would be accomplished (slightly edited here for brevity and readability) reveals a well-conceived, detailed, and achievable plan.*

**GOAL: Re-establish wolf population in Adirondack Mountains (New York), northwestern Maine/adjacent New Hampshire, and/or northeastern Maine.**

- I. Determine where re-establishment is ecologically sound
  - a. Consult vegetation and ownership maps, land use maps and plans, and local biologists to define and select all suitable areas for transplant
  - b. Determine potential prey densities in the selected areas
  - c. Determine human densities and use patterns in the selected areas
  - d. Determine possible impact of transplants on public health
  - e. Estimate effect of establishing wolves on other wildlife and domestic animals
  - f. select most inaccessible areas with adequate food supply and minimum human population
- II. Gain public support for re-establishing the eastern timber wolf
  - a. Obtain cooperation from appropriate State and Federal agencies
  - b. Obtain support of local people
    - (1) Contact selected individuals and key groups for support
    - (2) Publish facts of situation in news media
  - c. Obtain approval of key legislators
  - d. Develop management practices to be applied when wolf populations are re-established (*These should be agreed upon and announced before transplants take place*)
  - e. Hold public meetings and seek support
  - f. Determine legal implications of transplant
  - g. Conduct intensive public education campaign

- III. Stock wolves in new areas
  - a. obtain permits from appropriate State and Federal agencies
  - b. Obtain disease-free wolves from nearest viable population
  - c. Deliver wolves to release point
  - d. Effect non-traumatic release of wolves
- IV. Monitor restocking efforts and population levels in new areas
  - a. Train local biologists to radio-track
  - b. Radio-track transplanted wolves daily for first week and at intervals of twice per week for next 2 months and appropriate intervals thereafter
- V. Close coyote seasons during big game season in wolf area
- VI. Develop and implement plans for habitat improvement and maintenance for appropriate prey species to maintain wolf populations

Only after the entire process—which could take a year or more—is complete and a final EIS is published, can any action be taken by decision-makers.

*You can see how this process works, and help with the important gray wolf recovery effort by contacting the U.S. Fish and Wildlife Service and asking to be put on the mailing list for the "Yellowstone National Park and Central Idaho Gray Wolf EIS":*

U.S. Fish & Wildlife Service  
 Yellowstone N.P. & Central Idaho  
 Gray Wolf EIS  
 P.O. Box 8017  
 Helena, Montana 59601  
 (406) 449-5202

# Ecological Issues for the Reintroduction of the Timber Wolf

Dr. Steve Trombulak  
Biology Department  
Middlebury College

What are the real issues involved in the reintroduction of wolves in the Northeast? Forget for a moment the concerns that it isn't politically feasible, that most people aren't in favor of it, and that the economic costs of such an effort are too great. Forget social and political rhetoric. Let's look for a moment at ecological reality.

The first question that we need to answer is "why should we reintroduce the timber wolf at all?" The answer to this question can only come after an appreciation of what we ought to be working towards for forest ecosystems in the northern Appalachians. Essentially, the pattern of human culture *versus* nature that has dominated the last 500 years is not one that can be maintained over the long term. It is a pattern based on short-term extraction of resources for short-term gain with the expectation that any shortages or

problems can be solved by an expanding frontier, technology, and a free-market economy. Eventually something is going to give, and it's likely to be first the integrity of the ecosystems in which we live followed shortly by human society.

What we must do to avoid this fate is adopt cultural traditions that operate on long-term principles, work with the laws of nature, and promote the well being of the world on which we depend. Such a body of traditions will embrace the idea that we must protect and restore healthy, intact ecosystems—ecosystems that include their full complement of species, which in the northeastern US. includes the timber wolf, *Canis lupus*.

From the perspective of the wolf, forest ecosystems include only three important things: (1) plants, (2) animals that eat plants, and (3) wolves. Under natural conditions, these three elements adjust to each other to form a balance. When the wolf is removed, the balance is altered and the ecosystem begins to change. To understand the role played by wolves in natural ecosystems, one only has to look at systems where the wolf has been removed. On the Kaibab

Plateau in Arizona and Utah the wolf was hunted out in the 1930s. As a result, the deer population exploded and stripped the area of food, which quickly led to massive starvation and death among the deer. The same is true in southeastern Alaska in the 1960s. In the northeastern states, deer populations have, in many areas, been too high for many years, and now in some areas, moose and beaver populations are reaching such levels that they are now considered to be a nuisance!

In short, we should reintroduce the wolf because the wolf belongs in a healthy forest ecosystem, and we need to return our forests to their original healthy condition. But this leaves a set of additional questions: What aspects of the wolf's ecology must we be cognizant of in planning for its reintroduction? How can we expect conditions of our occupancy to change in the presence of the wolf? What lessons must we learn from other attempts to reintroduce species to their former ranges? Answers to some of these questions emerge from an exploration of the ecology and natural history of the wolf as we understand it

from areas where they are still found.<sup>1</sup>

**Genetic makeup:** One of the purposes of reintroducing a species is to restore the genetic diversity that was originally found in the area. However, restoration of genetic diversity is more complex than simply reintroducing any random group of individuals of a species. In many cases the genetic diversity within a species, often reflected in the physical differences among subspecies and races, is as great as between species. Therefore, care must be taken in any reintroduction to involve individuals that represent as closely as possible the original genetic stock that was extirpated.

With respect to the timber wolf, this is fortunately an easy issue to address. The subspecies of the timber wolf that was extirpated in the Northeast was *C. l. lycaon*, the eastern timber wolf. This subspecies had the most extensive range of all the subspecies in North America, extending from Hudson Bay to Florida and west to Minnesota and Manitoba. Although it is extinct over most of its range, populations are still found in eastern



*"The wolf is a superb symbol of the complex and wild world of ancient times. It was at the top of the food chain in many different habitats, from barren tundra, through dense forests, to arid canyons and deserts. It was found all over the world, and it is now extinct in much of its former range. We now have also to ask ourselves; is there room on the planet for large predators such as bears, big cats, and*

*wolves? These animals have always competed with us, and they always will. They need plenty of space. Our generation is playing God. We have the choice to preserve land for the wolf and even to reintroduce it to its former habitats—or we can relegate it to zoos and storybooks."* —Robert Bateman, Foreword to *The Way of the Wolf* by L. David Mech (1991) Photo © Jim Brandenburg

Canada and northern Minnesota. Individuals from these populations are likely to be genetically indistinguishable from those that were extirpated.

**Habitat preference:** If timber wolves were reintroduced, where would we expect them to establish themselves? Although timber wolves historically are known to have inhabited all habitats in North America except the tropical forests and arid deserts, they are primarily creatures of temperate forests. It is likely that they would establish themselves primarily in forests throughout the region.

Less is known about how tolerant they are of managed forests. In other words, how will they respond to forests of even-aged monocultures? Given the wide range of habitats in which they are found, it is most likely that they would include within their range any forest type that supports populations of herbivores on which the wolves can live. They are tolerant of a fair amount of human presence, as long as the humans aren't hunting them. For example, in many areas wolves are known to frequent garbage dumps when they can't obtain food through other means.

**Food habits:** What would wolves eat here? Wolves are carnivores. They will eat whatever prey is large, abundant, and available. In the Northern Forest region this would primarily be white-tailed deer, moose, and beaver. Although they have been known on occasion to eat small mammals, birds, insects, berries, carrion, and garbage, these cases are unusual and probably occur only when other sources of food are unavailable and the wolf is extremely hungry.

One question that is critical is the level of prey availability necessary to minimize the attack of wolves on domestic livestock. Sheep, goats, and cattle have all been killed by wolves in other parts of the wolf's range. However, the occurrence of wolf attacks on livestock does not automatically mean that the reintroduction of wolves to the Northern Forests would lead to economic disaster for farmers. Questions that need to be answered include the role that more careful monitoring of livestock at critical times of the year and the role of sheep dogs in offsetting these potential losses.

**Species interactions:** After the timber wolf was extirpated from this area, several new species became more abundant, including the coyote, beaver, opossum, woodchuck, and raccoon. Some of these changes might have occurred because of habitat changes brought about by human development even if the wolf had not been removed. Once the wolf is reintroduced, however, these species may face serious pressures from a new upper-level carnivore. It is extremely likely that the abundance of the coyote would substantially decrease. Many cases have been reported throughout the timber wolf's range of wolves killing and eating coyotes, which are quite a bit smaller than the wolves. Similarly, beaver would certainly decrease since they are a regular part of the wolf's diet throughout its range. However, it is unlikely that either of these species would be driven locally extinct. Wolves, coyotes, and beaver have all had extensive ranges throughout North America—with substantial overlap—for many millions of years. Wolves operate instead to provide a check on populations, rather than as a determinant of species distribution.

The effect of wolves on smaller mammals such as opossums, woodchucks, and raccoons is unknown. Likely it would depend on availability



*"Those unable to decipher the hidden meaning know nevertheless that it is there, for it is felt in all wolf country, and distinguishes that country from all other land. It tingles in the spine of all who hear wolves by night, or who scan their tracks by day. Even without sight or sound of wolf, it is implicit in a hundred small events: the midnight whinny of a pack horse, the rattle of rolling rocks, the bound of a fleeing deer, the way shadows lie under the spruces. Only the ineducable tyro can fail to sense the presence or absence of wolves, or the fact that mountains have a secret opinion about them."—Aldo Leopold, "Thinking Like A Mountain," A Sand County Almanac (1949) Photo © Jim Brandenburg*

of preferred prey. Since all three of these species hibernate during the winter when wolves are most likely to face food stress, it is unlikely that they would be seriously affected by wolf predation.

**Interaction with humans:** Perhaps the most serious concern for most people is whether wolves will have a direct impact on humans. Certainly the risk to domesticated animals is greater; livestock, dogs, and perhaps cats are more likely to be killed because they simply don't have the skills to overcome wolf attacks. However, this is probably the extent of the risk humans face from wolves. Following extensive investigation in northern Europe, Asia, and North America, several researchers have independently concluded that there are no verified cases of a healthy, wild wolf ever attacking a human. The few cases in which wolves have been known to attack humans are all attributable to a wolf with rabies, a danger we face from

domestic pets as well. All of the myths, legends, and fairy tales notwithstanding, we run more of a risk from our own domesticated animals than we ever have from wolves.

**How should a reintroduction program be carried out?** In comparing many hundreds of cases of species reintroductions, Griffith et al.<sup>2</sup> determined that several features played the biggest role in influencing the success of the effort: whether or not the species was a game animal, the number of animals released, the quality of the habitat into which it was released, where within the historic range it was released, whether the individuals released were wild-caught or captive-reared, and whether it faced serious competition from other species already in the area.

How should a wolf reintroduction program be carried out in the Northern Forests to maximize the chances of success? Based on the conclusions of Griffith and his colleagues, we should

focus efforts on releasing wild-caught wolves in a region or regions of the Northern Forests where large expanses of forest are present and population densities of preferred prey, particularly moose, are high. Given the importance of the pack's social structure to the behavior of wolves, it would probably increase the chances of success if several individuals from the same pack were released together. Lessons from the ongoing attempt to reintroduce the red wolf to Florida will be especially instructive for similar efforts with the timber wolf and must be explored.

<sup>1</sup>A useful summary of the biology of the wolf can be found in L. David Mech's book *The Wolf: The Ecology and Behavior of an Endangered Species* (1971, University of Minnesota Press).

<sup>2</sup>Griffith, Brad, J. Michael Scott, James W. Carpenter, and Christine Reed, 1989, "Translocation as a Species Conservation Tool: Status and Strategy," *Science*, 245: 477-480.

# This Animal Deserves to Stand on its Own

by John Harrigan

Has the world become so mercenary that the life or death of a species must rest on its supposed worth as perceived by humans? Apparently so. We have all seen the advertisements that seek to justify concern over the Amazon rain forest by pointing out that its plants and wildlife may harbor cures for everything from Alzheimer's to cancer. The ocean is only worth saving because it gives us fish, never mind rain. Everything must be on a "what does it do for people?" train of thought.

Now comes the Eastern timber wolf, that age-old inhabitant of the natural scheme of things that was deemed evil and rapacious by European settlers and has been persecuted to the point that it is extinct in all but 3 percent of its ancestral range.

New Hampshire outdoor writer Jeff Fair, well known for his tireless work in the successful effort to restore loons to this state and for his writings on everything from black bears to moose, has an excellent article in this month's *Appalachia*, the twice-yearly journal of the Appalachian Mountain Club and its affiliates. In it he bemoans the loss of the wolf in the East and belittles the closed minds that refuse to consider the rightness of at least the notion of restoring this animal to its former home, northern New Hampshire included.

What bothers Mr. Fair, who also happens to be a hunter, is what bothers a lot of other hunters: namely, that various state and federal agencies assume that hunters are against coyotes, fishers, foxes, cougars and wolves because these animals take animals that hunters regard as "theirs."

This assumption is totally out of step with the times, yet is catapulted into official "policy" that deems the wolf recovery effort "unfeasible." The official reasons advanced to back up this "unfeasible" tag are (a) public opinion, and (b) indirectly, hunters' license fees and their political clout.

Thus the idea of restoring wolves into at least apart of where they belong is rendered not only unjustifiable in economic terms (lots of legislative hearings, perhaps court fights, certainly more damage claims by sheep-owners), but also as an outright detriment (public anger and anxiety, lots of license dollars). In short, wolves don't fit into the economic picture.

It is perhaps worth pointing out



Dead wolf shot by coyote bounty hunter, Upper Peninsula of Michigan, 1974. Photo © Scot Stewart.

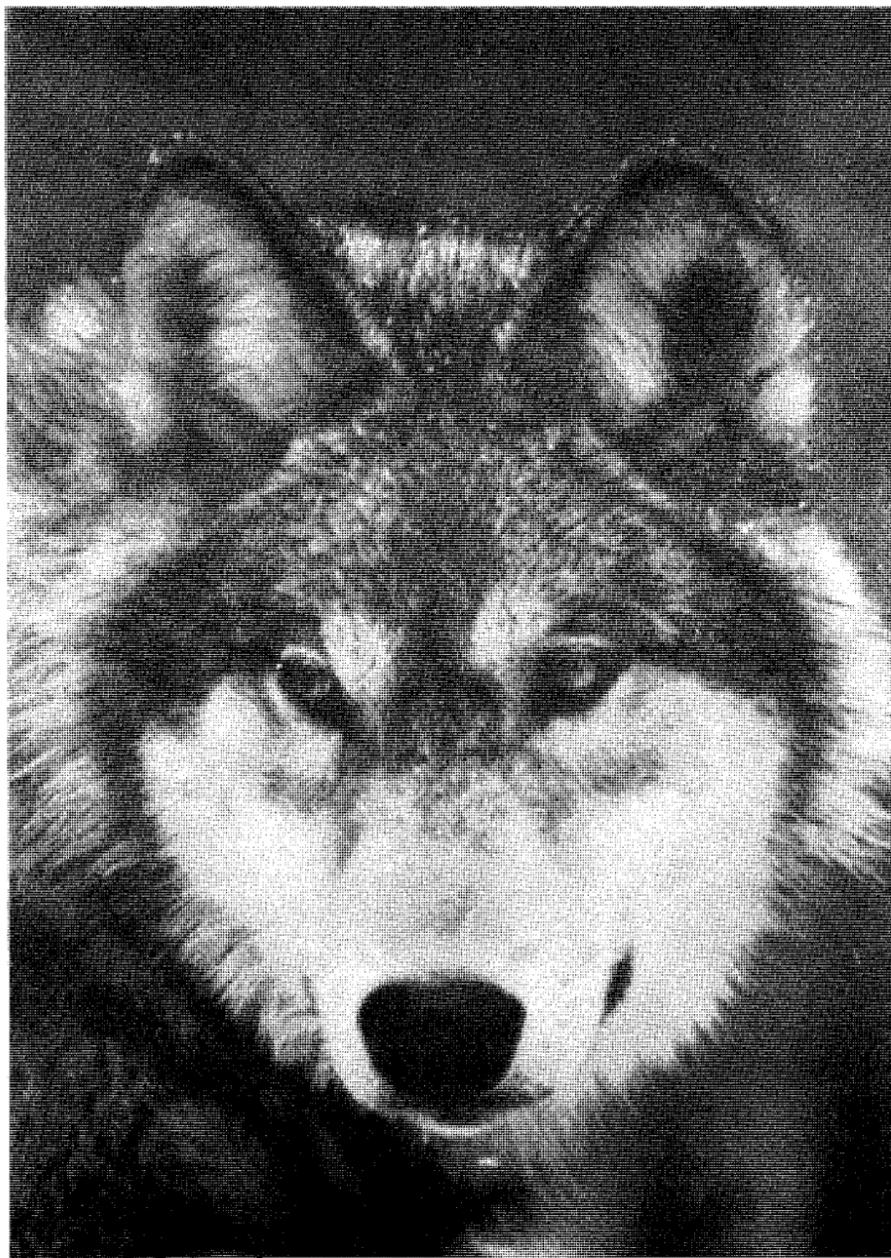


Photo © Scot Stewart

that in virtually every case in which a formerly scarce creature has been restored (buffalo, eagles, peregrine falcons, moose), tourism and the local economy have benefited.

It might also be worth pointing out that a lot of people think wolves may just come back into their ancestral range on their own, without fiat or bureaucratic meddling. Indeed, one was seen and watched for a good part of 1991 in the upper ends of Indian and Perry Stream in Pittsburg, and wildlife workers who camped north of Baxter State Park in Maine for six weeks were constantly finding the tracks of what, by the process of elimination, had to be a

wolf. Northern New England is only a couple of hundred miles from known wolf territory, and these animals are known to range 50 miles a day.

Wolves, and all that they personify, are in. Bureaucrats, if they don't catch the wave, may be out.

*John Harrigan, a lifelong hunter, wrote this editorial for the Coös County Democrat on January 6, 1993. John is a well-known outdoor columnist for the New Hampshire Sunday News. He also serves as a representative of landowners on the Northern Forest Lands Council.*

## Public Supports Yellowstone Wolf Reintroduction

Numerous surveys have demonstrated the popularity of wolves with the public. Even within the regions in which wolves exist, or are proposed for reintroduction, a majority favors their recovery. During the summer of 1992, I personally witnessed the broad-range support the wolf has among the American public when I worked in a Defenders of Wildlife wolf information/advocacy booth in Yellowstone National Park. Visitors from all over the country, as well as around the world, stopped by our booth to learn about the issue of wolf recovery in the Greater Yellowstone Ecosystem. We presented them the opportunity to sign a "ballot" either affirming or rejecting the notion of restoring wolves to the region. Out of a total of 35,260 votes, 34,289 were "yes" and only 971 were "no." We also generated over 800 on-the-spot letters to the US Fish & Wildlife Service and Congress.

On numerous occasions, visitors from outside the region were surprised to learn that Yellowstone didn't already have wolves. They assumed that an area of relatively wild, undeveloped country as large as the Yellowstone region would of course have wolves. We had to explain to them that even though the majority of people both in and outside the Yellowstone area wanted wolves, a vocal, powerful minority—the livestock industry—was keeping recovery from occurring.

The most encouraging sign for the future was the fact that the demographic group most consistently supportive of wolf recovery was children. Many were better educated than their parents about ecological systems and the need to protect all species, not just the ones that are useful to humans. This, more than anything, convinced me that there is hope for wild wolves and wild places.

—Mollie Matteson

## Northern Maine and New Hampshire: Optimal Wolf Habitat

The *Recovery Plan for the Eastern Timber Wolf* identified two areas in northern Maine and New Hampshire as potential wolf habitat. They encompass a total of 13,800 square miles (8.8 million acres). This is the largest expanse of undeveloped forest land in the eastern United States.

Large paper corporations, timber management companies, and families own most of these lands. Unlike private lands elsewhere in the country, however, there are virtually no public roads, a small human population, and few local governments. Despite intensive logging activities, there are still large second-growth forests and significant prey populations.

Northern Maine and New Hampshire appear to have the optimal combination of extensive habitat, ample food supply, and minimal human-wolf conflicts. Wolf survival requires habitat with a road density of no more than 0.95 to 1.0 mile of roads per square mile; this region has 0.5 miles per square mile or less. Wolves need an adequate prey base; this region has a deer herd of several hundred thousand, and rapidly growing moose and beaver populations. Finally, wolves need room to roam; this region comprises an area five times the size of Yellowstone National Park with a human population of only 15,000 people, mostly along the periphery.

The major barrier to wolf recovery in northern Maine and New Hampshire is a lack of habitat political will, not habitat.

—MJK

## Vermont's Role in Wolf Recovery

Vermont was not mentioned in the *Recovery Plan for the Eastern Timber Wolf*. Yet the U.S. Fish and Wildlife Service may have been too hasty in writing off Vermont's potential for providing wolf habitat.

The Northeast Kingdom region has several hundred thousand acres of undeveloped forest land, much of this in large tracts owned by the forest products industry. The human population is small, and the deer and moose populations are significant.

Most important, the region is adjacent to potential wolf habitat in New Hampshire. If wolves are restored to Maine and New Hampshire, they could very possibly range into northern Vermont.

These issues have never been thoroughly studied. Any feasibility study of a wolf recovery program in the Northern Forest should include an assessment of the potential role of Vermont in that program.

—MJK

# Wolf Recovery and The Adirondack Park

The *Recovery Plan for the Eastern Timber Wolf* identifies the Adirondack Forest Preserve in northern New York as one of the areas that "deserve serious investigation as potential reintroduction sites." In "Responses to Public Comments on the Draft Revised Recovery Plan for the Eastern Timber Wolf," the U.S. Fish and Wildlife Service states:

*The Service . . . believes that the Adirondack Forest Preserve is likely to have sufficient suitable habitat for a reintroduction site. However, the Plan clearly identifies the need for extensive studies of habitat, prey, human use patterns, and wolf impacts prior to selecting a reintroduction site. Such studies will provide the information the Service needs to decide if sufficient suitable habitat is present in New York.*

The Adirondack Council, a non-profit conservation organization, has supported a study of the feasibility of wolf recovery in the Adirondack Park. In its October 1988 publication *Biological Diversity: Saving All the Pieces*, by George D. Davis—Volume 1 in the series *2020 Vision: Fulfilling the Promise of The Adirondack Park*—The Adirondack Council discusses the issue of "Wildlife Restorations":

*Forest Preserve status or other stringent protection for the . . . sites described above will go a long way toward preserving the considerable biological diversity of today's Adirondack Park. But what about those species lost in the nineteenth century's rush to exploit the Adirondacks? The extinction of the moose, wolf, cougar, wolverine, and lynx is a significant loss of biological diversity.*

*Unlike most other areas of our increasingly exploited planet, the Adirondacks are wilder today than they were in 1888. The public has acquired nearly two million acres in the last century. This land is now part of the state's Adirondack Forest Preserve, which must remain "forever wild. . ."*

*Could the restoration of wildlife species once native to the Adirondacks be successful? . . .*

*What about the moose? . . . the wolf? . . . the wolverine? . . . the cougar? Only sound biological studies can give us a good indication of whether or not the restoration of these species might work. . . . We recommend that such feasibility studies be undertaken at once by the SUNY College of Environmental Science and Forestry in cooperation with the NYS Department of Environmental Conservation.*

*Three research projects. . . . found that eastern timber wolves were unlikely to repopulate an area if the public road density exceeded . . . 0.93 miles per square mile . . . of habitat. . . . In the Adirondack Park we have identified a contiguous area of 2,230,000 acres with an interior public road density of only 0.08 miles per square mile, including a core area of 440,000 acres that is essentially roadless.*



Photo © Scot Stewart

*Even when the exterior boundary roads are included in the calculation, the public road density factor for this large area is only 0.10 miles per square mile, well below the critical factor indicated by research. . . .*

*It would seem prudent to preserve or enhance the inaccessibility and wildness of this area until biological studies and public opinion have determined the feasibility of restoring the wolf, the moose, the wolverine, and perhaps other former Adirondack inhabitants to this potentially suitable habitat. Land ownership patterns and uses that maintain wildness must be preserved in at least the core area. . . .*

*The Adirondacks may once again be wild enough to be called home by species whose original habitat was destroyed by careless human intervention a century ago. If so, the Adirondack Park will have led the way again, showing other states and nations that wildness can be restored and preserved, and that humans can live in harmony with the natural world."*

To date, no wolf recovery feasibility studies have been done in New York, and none is planned. There is little likelihood that state and federal agencies will undertake such studies in the future, unless there is demonstrated public support.

An example of this lack of initiative is offered by the September 19, 1992 minutes of the New York State Conservation Council:

*The U.S. Fish & Wildlife recovery plan for the eastern timber wolf in the Adirondack mountains was discussed. Some of the questions that must be answered are: Is the grey wolf native to NYS? What is the public*

*opinion on introducing the wolf? What would be the deer/moose/wolf relationship? Are the Adirondack's large enough and is the prey base adequate? It was stated that there is no money allocated to support the U.S. Fish & Wildlife plan at this time and*

*that the wolf cannot be restocked without DEC approval. A decision on wolf restoration in NYS is not likely for a decade or more.*

The questions raised above are legitimate, but answers will not be forthcoming until a study is conducted.

—MJK

## White Mountain Wolves?

The original U.S. Forest Service (USFWS) *Recovery Plan for the Eastern Timber Wolf*, issued in 1978, listed the "White Mountain Area" of New Hampshire as an area that deserves "serious investigation for reintroduction possibilities." The *Recovery Plan* notes that:

*This area is almost entirely composed of White Mountain National Forest. It is a little less than 2,500 square miles in extent and contains a low population level.*

The U.S. Forest Service has also recognized the potential for the White Mountains to provide wolf habitat. In the 1986 *Final Environmental Impact Statement* for the White Mountain National Forest (WMNF) *Land and Resource Management Plan*, the Forest Service states:

*Most of the WMNF area which is occupied by white-tailed deer and moose can be considered as wolf habitat. None of this habitat is presently occupied. The wolf is considered to be extirpated.*

The White Mountain region appears to have significant potential for wolf recovery. The White Mountain National Forest itself has 300,000 acres protected as wilderness and non-motorized management areas. The forest is also adjacent to a much larger area, encompassing parts of northern New Hampshire and Maine, that was identified in the FWS *Recovery Plan for the Eastern Timber Wolf* as having potential for wolf recovery.

Unfortunately, nothing has been done to facilitate the reoccupation by wolves of this large block of potential habitat. In fact, according to the 1992 revision of the *Recovery Plan*:

*Correspondence received from the states since the original Recovery Plan was approved and distributed has led the FWS to delete some of the originally proposed study areas of Maine, the White Mountains, and the southern Appalachians from areas to be considered for re-establishment potential.*

Few people in New Hampshire realize that the White Mountains region is considered potential wolf habitat. Little effort was made to ask the people of the state for their opinion when the 1978 *Recovery Plan* was published. More important, the public was never consulted when the White Mountains were deleted from the 1992 revision of the plan.

Given the lack of public input, the validity of this decision is highly questionable. The issue should be reconsidered, but this time with full involvement of the public.

—MJK

# People Like the Timber Wolf—Results of Recent Investigations

Over the last ten years there have been a surprising number of studies regarding the opinions of people about wolves. The results of these studies are startling. Far from the anti-wolf attitudes of the past, the studies show that most people today have positive feelings for wolves. Indeed, several studies have found overwhelming public support for wolf protection and restoration. They also seem to indicate that outside the grazing and farming industry, public support for wolves rises as public awareness rises.

In the past, probably the strongest argument against wolf recovery was that the public would oppose it. Today, that argument is rapidly losing credibility.

## Minnesota

*The Public and the Timber Wolf in Minnesota*, S.R. Kellert, Yale University (1985).

“One of the most consistent results was a strong positive perception of the timber wolf among all sample groups except farmers.”

“This favorable image was particularly evident in the relation to the outdoor recreational and wilderness values of the wolf.”

“Most respondents (except farmers) indicated a strong desire to see a timber wolf in the wild, said it would be wonderful to hear this animal howl, and expressed a view of the timber wolf as symbolic of nature’s wonder and beauty (even farmers agreed with this view).”

“Most regarded the wolf as an essential aspect of Minnesota’s wilderness, and said it was important for them to know this animal existed in Minnesota even if they never actually saw a wolf in the wild.”

## Michigan

*“Public Views of Wolf Restoration in Michigan,”* S.R. Kellert, Yale University, *Transactions of the Fifty-sixth North American Wildlife and Natural Resources Conference* (1991).

“The study found considerable support for the wolf and its restoration to Michigan’s Upper Peninsula. Substantial appreciation and affection for the wolf was found among the general public, including most residents of the Upper Peninsula.”

“Deer hunters revealed the greatest sympathy, concern, ecological appreciation and outdoor recreational interest in the wolf of any group examined.”

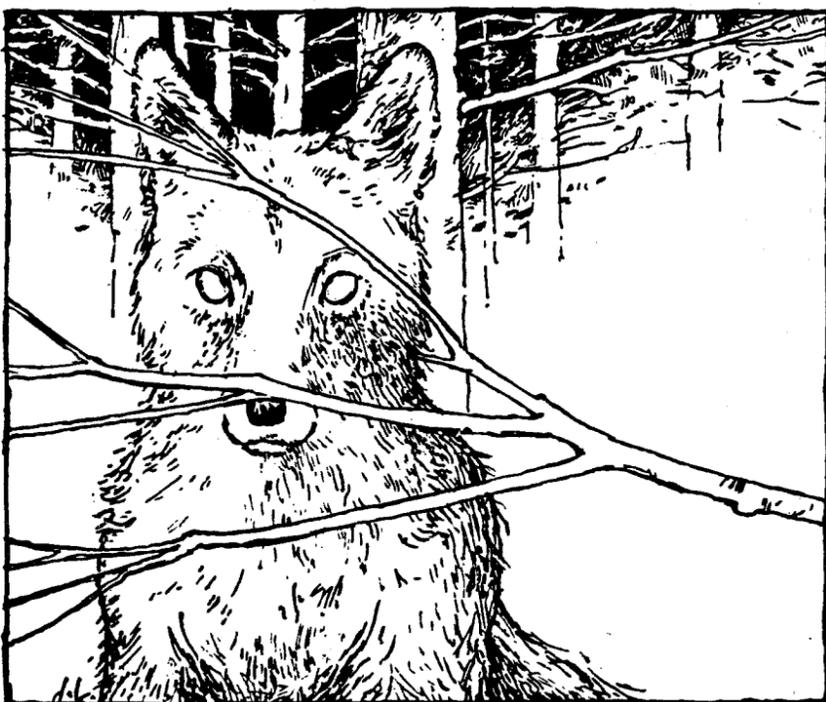
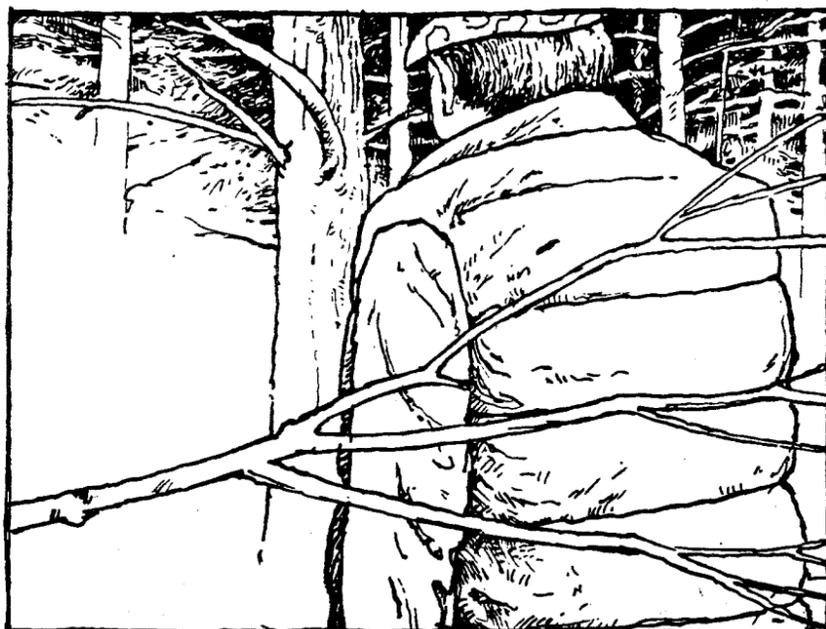
“Strong hunter support for wolf restoration is important to note and should be a critical element in any wolf recovery program. The historic role of sportsmen in Michigan wildlife conservation and management suggests this group could be a powerful ally in any broad-based effort to garner public support for restoring the wolf.”

“In conclusion, the result of this study strongly suggest proceeding with major efforts to restore the wolf to Michigan’s Upper Peninsula. A well-orchestrated and tailored restoration program, focusing on prevailing public attitudes and perceptions could, in contrast to the 1970s, result in the 1990s in successful restoration of this animal to its rightful ecological place in the wilds of northern Michigan.”

## Yellowstone National Park

*Park Visitor Attitudes Toward Wolf Recovery*, D.S. McNaught, MS Thesis, University of Montana (1985).

“A large majority of Park visitors would favor a return of wolves to Yellowstone.”



“Respondents advised reintroduction . . . three to one.”

“Six to one, Park visitors indicated that a presence of wolves would improve the Yellowstone experience.”

“The data on every item encourage the restoration of wolves to the Park. . . . Aesthetic, cultural, legal and ecological arguments support wolf reintroduction in Yellowstone.”

## Rocky Mountain States and Alaska

*“Public Perception of Predators, Particularly the Wolf and Coyote,”* S.R. Kellert, Yale University (1985), *Biological Conservation* 31:167-189.

A random sampling of National Cattlemen’s Association, American Sheep Producers, National Trappers Association, and Rocky Mountain States and Alaska revealed:

42% liking the wolf  
38% disliking the wolf

In the Rocky Mountain Region:

50% liking the wolf  
30% disliking the wolf



### “Attitudes of Hunters and Residents Toward Wolves in Northwestern Montana,”

P. Tucker and D.H. Pletscher, *Wildlife Society Bulletin* 17:507-514 (1989).

*“I hope wolves continue to inhabit the North Fork [of the Flathead River, near Glacier National Park]:”*

Main groups	Agree	Disagree	No opinion
Check station hunters	58.3%	24.1%	17.7%
All residents	71.5%	17.5%	10.9%
Resident hunters	63.1%	23.1%	13.8%
Resident nonhunters	76.5%	14.3%	9.2%

# To Learn More About the Wolf...

## Books

Bass, Rick, *The Ninemile Wolves*, Clark City Press, 1992.\*

Brandenburg, Jim, *White Wolf, Living With an Arctic Legend*, NorthWord Press, Inc., 1988.

Lawrence, R.D., *In Praise of Wolves*, Henry Holt and Company, 1986.

Leopold, Aldo, "Thinking Like a Mountain" in *A Sand County Almanac*, Oxford University Press, 1993 (1949).\*

Lopez, Barry, *Of Wolves and Men*, Charles Scribner's Sons, 1978.\*

Mech, L. David, *The Wolf: The Ecology and Behavior of an Endangered Species*, University of Minnesota Press, 1981 (1970).\*

Mech, L. David, *The Way of the Wolf*, Voyageur Press, 1991.\*

Mowat, Farley, *Never Cry Wolf*, Bantam, 1984.\*

Thompson, Bruce, *Looking at the Wolf: Biology, Behavior, Biases*, Roberts Rinehart.\*

\*Available from *Dave Foreman's Books of the Big Outside* catalog, Ned Ludd Books, P.O. Box 85190, Tucson, AZ 85754-5190 (602) 628-9610.

## Periodicals

*International Wolf*  
International Wolf Center  
5930 Brooklyn, Suite 200  
Brooklyn Center, MN 55429-2518

*Wolf!*  
P.O. Box 29  
Lafayette, IN 47902-0029  
(317) 567-2265

*Wolves and Related Canids*  
P.O. Box 1026  
Agoura, CA 91301

## Educational Materials

The single best source of wolf educational materials is probably the Timber Wolf Alliance of the GSigurd Olsen Institute. The Institute publishes a booklet, *Beyond Little Red Riding Hood: A Resource Directory for Teaching About Wolves*. Includes a comprehensive listing of books, curricular materials, and video and slide programs available from the Institute and elsewhere. Also provides a listing of wolf organizations.

Timber Wolf Alliance  
Sigurd Olson Institute  
Northland College  
Ashland, WI 54806  
(715) 682-1223

Some examples of materials listed in this booklet:

*Discovering Wolves* by Nancy Field. A workbook for upper elementary

students that takes a "hands-on" approach to teaching (\$4.95).

*Wolf Pac*. Teacher resource materials that include six booklets such as "Zoobooks on Wolves," "Wolf Recovery in the Northern Rocky Mountains," and "The Wonder of Wolves" (\$8.50)

*Timberwolf*. A 19 minute video designed for elementary students, with scenes including the birth and growth of wolf pups (\$75; rental, \$7.50 for one week).

*The Wolf: A Howling in America's National Parks*. A 20 minute video, narrated by Robert Redford, that covers the history and habits of wolves, and

the role they play in our national parks (\$24.95; rental, \$7.50 for one week).

*So, What Do You Think About Wolves?* A 29 minute slide/tape program that shows the wide spectrum of attitudes toward wolves by people living in the Lake Superior region, each in their own words. The program lets you make up your own mind (\$90 plus tax; \$7.50 for one week).

*Wolves and Humans, Volume I: Wolf Vocalizations*. Recorded in the Superior National Forest, listeners learn about wolf communication and follow the developments of howling during a wolf's first year of life (\$12.95 plus \$1.50 postage and handling).

## Personal Presentations

Mission: Wolf  
Kent & Tracy Weber, Directors  
P.O. Box 211  
Silver Cliff, Colorado 81249  
(719) 746-2919

A non-profit organization dedicated to wolf preservation in the wild. Has a traveling education program that brings a wolf to groups in order to change archaic "big bad wolf" images and to increase appreciation for this predator.

Wolf Hollow  
North American Wolf Foundation, Inc.  
Paul C. Soffron, Founder/Director  
Route 133  
Ipswich, Massachusetts 01938  
(508) 356-0216

This non-profit educational facility is committed to the preservation of the gray wolf. Provides an opportunity to the public to learn about wolves, and to observe live wolves in as natural a setting as possible.

—MJK



## Recovery Hearing

*Far from the feedlot's cry  
Far from the pain of the  
slaughterhouse  
These men talk of the horror  
of wolves  
the suffering of the sheep  
the suffering of the deer—  
so, shot from planes or  
poisoned in their dens,  
the wolves go.  
Death at every turn.  
Sport herds and  
grazing allotments.  
Let's burn the guys in suits.  
Let the soft wolves go.  
Let the soft wolves go.  
GARY LAWLESS*

## WOLF QUIZ

*Whether you favor or oppose wolf reintroduction, you ought to know what you are talking about. The following quiz tests your knowledge of Canis lupis.*

(1) How many years ago does evidence of the presence of wolves appear in the fossil record?  
(a) 15,000 (b) 150,000 (c) 15 million (d) 150 million

(2) How long ago does evidence of the presence of humans appear in the fossil record?  
(a) 10,000 years ago (b) less than 100,000 years ago (c) Less than 1 million years ago (d) more than 10 million years ago

(3) True or False: All breeds of modern dogs are derived from wolves?

(4) How long ago were wolves domesticated as the ancestral dogs? (a) 12,000 years ago (b) 20,000 years ago (c) 35,000 years ago (d) 48,000 years ago

(5) How far can wolves leap in a single bound?  
(a) 10 feet (b) At least 16 feet (c) 22 feet (d) At least 29 feet

(6) How far away can wolves smell prey?  
(a) 100 yards (b) 1.5 miles (c) 5 miles (d) 10 miles

(7) How far away can wolves hear a raised human voice?  
(a) Less than half a mile (b) 2 miles (c) at least 4 miles (d) over 6 miles

(8) How far can wolves travel?  
(a) 25 miles a day (b) 60 miles a day (c) 125 miles a day (d) 200 miles a day

(9) Over how large of an area can a wolf pack roam?  
(a) 50 square miles (b) 500 square miles (c) 2500 square miles (d) 5000 square miles

(10) How many genetically distinct subspecies of wolves were present in historical times?  
(a) 8 (b) 24 (c) 32 (d) 48

(11) How many of these subspecies are now extinct?  
(a) none (b) 1 (c) 7 (d) 13

### Extra Credit

(12) How many bounties were paid on wolves shot, trapped or poisoned in the United States (excluding Alaska) between 1850-1900?  
(a) 100,000 (b) 500,000 (c) 1 million (d) 2 million

(13) How many verified cases are there of healthy wild wolves attacking humans in North America?  
(a) None (b) 100 (c) 1,000 (d) 10,000

# WOLF RESTORATION

## A PLAN OF ACTION

*Making the vision of Northern Forest wolf recovery a reality will require major citizen activism, public awareness and support, and congressional wolf study legislation. RESTORE: The North Woods has an action plan that includes the following:*

### Organize citizens for action

- Establish a Wolf Activist Network to share information and reach out to new activists through a periodic newsletter, action alerts, and other informational materials.
- Hold a series of wolf activist workshops in the region.
- Work with conservation, sports, animal welfare, student, and other groups to create an alliance for wolf recovery.
- Work with outfitters, tourism businesses, Chambers of Commerce, landowners, and other institutions to gain support for a wolf recovery study.
- Once a study is underway, ensure that wolf advocates attend public meetings, write letters, and involve others in supporting wolf recovery.

### Build public awareness and support

- Distribute this special issue of the *Forum* to people throughout the Northern Forest region, to interested people nationwide, and to the media.
- Prepare additional informational materials, such as brochures, articles, slide shows, and posters.
- Hold a series of public presentations, participate in various events, and use other approaches to directly reach the public.

### Pass wolf study legislation

- Directly approach governors, state legislators, and state agency officials to gain their support for a wolf recovery study.
- Directly approach members of Congress to gain their support, and identify one or more members to introduce authorizing and funding legislation for a wolf study.
- Show state and federal public officials that there is broad public support for a study through petitions, letter-writing campaigns, public opinion surveys, and other means.



Photo © Jim Brandenburg

# What You Can Do To Help Restore Wolves to the Northern Forest

1. **Learn more about the wolf.** Read this publication and others of interest (see "To Learn More About the Wolf"). Get a copy of the *Recovery Plan for the Eastern Timber Wolf*:

Craig Johnson  
U.S. Fish and Wildlife Service  
Division of Endangered Species  
Bishop Henry Whipple Federal Building  
1 Federal Drive  
Fort Snelling, Minnesota 55111-4056  
(612) 725-3276

2. **Tell others about wolves.** Make sure your friends, children, and relatives are aware about this important issue. Write letters to the editor of your local newspaper. If you are a teacher, obtain curricular materials on the wolf (see: "To Learn More About the Wolf").

3. **Become a part of the Wolf Activist Network.** You will receive information, periodic updates, and action alerts. We also need your help on a number of activities. Contact:

RESTORE: The North Woods  
P.O. Box 440  
Concord, MA 01742  
(508) 287-0320

4. **Help arrange a wolf presentation.** If you are involved in a local conservation group, school or college, church, civic organization, youth group, or other institution, arrange for RESTORE to speak about wolf recovery. Invite a wolf organization like Mission: Wolf (see: "To Learn More About the Wolf").

5. **Help gain the support of your organization.** Contact conservation, sports, animal welfare, and other groups of which you are a member and tell them that you support their involvement in Northern Forest wolf recovery.

6. **Call or write to your state wildlife agency.** Ask them to support a U.S. Fish and Wildlife Service (USFWS) wolf recovery study:

Norman Trask  
Acting Commissioner  
Dept. of Inland Fisheries and Wildlife  
State House Station 41  
Augusta, ME 04333  
(207) 289-3371

Donald A. Normandeau, Ph.D.  
Executive Director  
Fish and Game Department  
2 Hazen Drive  
Concord, NH 03301  
(603) 271-3421

Kenneth Wich Director  
Dept. of Environmental Conservation  
Division of Fish and Wildlife  
50 Wolf Road  
Albany, NY 12233-4750  
(518) 457-5690

J. Timothy Van Zandt  
Commissioner  
Department of Fish and Wildlife  
Waterbury Complex, 10 South  
Waterbury, VT 05677  
(802) 244-7331

7. **Call or write to your governor.** Ask him to support a USFWS wolf recovery study:

Governor John McKernan  
State House  
Augusta, ME 04333  
(207) 289-3531

Governor Howad Dean  
Pavilion Office Building  
Montpelier, VT 05602  
(802) 828-3333

Governor Stephen Merrill  
State House, Room 208  
Concord, NH 03301  
(603) 271-2121

Governor Mario Cuomo  
State Capitol  
Albany, NY 12224  
(518) 474-8390

8. **Call or write to your members of Congress.** Ask them to support federal legislation to authorize and fund a USFWS wolf recovery study:

TO WRITE U.S. SENATORS

The Honorable \_\_\_\_\_  
U.S. Senate  
Washington, DC 20510  
(U.S. Capitol Switchboard: (202) 224-3121)

ME—George Mitchell, William Cohen  
NH—Judd Gregg, Robert Smith  
NY—Alfonse D'Amato, Daniel Moynihan  
VT—James Jeffords, Patrick Leahy

TO WRITE MEMBERS OF THE U.S. HOUSE OF REPRESENTATIVES

The Honorable \_\_\_\_\_  
U.S. House of Representatives  
Washington, DC 20515  
(U.S. Capitol Switchboard: (202) 224-3121)

ME—Tom Andrews (1st Distr.), Olympia Snowe (2nd Distr.)  
NH—Richard Swett (2nd Distr.), William Zeliff (1st Distr.)  
NY—Contact your town or city voting clerk  
VT—Bernard Sanders (At large)

## Answers to Wolf Quiz

1-c; 2-c; 3-True; 4-a; 5-b; 6-b; Depending on the wind, at least 1.5 miles. 7-c; 8-c; Wolves are capable of traveling as much as 125 miles in a day. 9-d; The range of a wolf pack can be as much as 5000 square miles (in Alaska), and as little as 50 square miles in northern U.S. 10-c; At least 32, 24 in North America and 8 in Europe and Asia. 11-c; At least 7, 6 in North America and 1 in Europe. 12-d; 13-a. Yep, that's right, not a single case!

## SUBSCRIBE TO THE FORUM

\*A one-year subscription to the Forum costs \$12 (US) or \$20 (Canadian) for six issues.

\*We will send you a freebie if you can't afford to pay on the condition that you become actively involved in the search for sustainable natural and human communities.

\*We urge our more affluent subscribers to send us \$24 or more to sponsor a freebie.

\*Please consider becoming a lifetime subscriber with a donation of \$1000 or more.

\*\*Enclosed is \$\_\_\_\_\_ to cover \_\_\_\_\_ subscription(s).

\*\*\_\_\_\_\_ I can't afford a subscription right now, please send me a freebie. I promise to roll up my sleeves and get to work on behalf of the Northern Forest Communities.

\*\*\_\_\_\_\_ Here's some extra cash to cover the cost of freebies.

\*\*\_\_\_\_\_ Enclosed is \$1000 (or more). Please sign me up as a lifetime subscriber.

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_

State \_\_\_\_\_ ZIP \_\_\_\_\_

Contributions to the Forum are tax-deductible. Please make checks payable to Earth Island Institute and send to:

The Northern Forest Forum, POB 6, Lancaster, NH 03584

## Support Wolf Restoration

### Support RESTORE: The North Woods

RESTORE: The North Woods, a non-profit [501 (c) (3)] organization is working to Restore Wolves to their former range in the Northern Forest. For more information on how you can help speed the day when the howl of the wolf signifies the recovery of the ecological integrity of the Northern Appalachians, contact:

RESTORE: The North Woods  
P.O. Box 440  
Concord, MA 01742  
(508) 287-0320

Although few environmental groups use limited financial resources as frugally or efficiently as RESTORE: The North Woods, its Wolf Restoration Campaign is a full-time challenge.

Please contribute as generously as your means permit. Remember, all contributions to RESTORE: The North Woods are tax-deductible.

Enclosed is \$\_\_\_\_\_ to help RESTORE Wolves to the North Woods. Please let me know what else I can do to help bring wolves home.

Name \_\_\_\_\_

Address \_\_\_\_\_

Town \_\_\_\_\_

State \_\_\_\_\_ ZIP \_\_\_\_\_

# Help Us Restore Wolves to the Northern Appalachians



Photo © Jim Brandenburg

## **the good news**

*Roads disappear, and the caribou wander through.  
The beaver gets tired of it, reaches  
through the ice, grabs the trapper's feet,  
pulls him down.*

*Wolves come back on their own,  
circle the state house, howl at the sportswriters,  
piss on the ATVs.*

*Trees grow everywhere.*

*The machines stop,  
and the air is full of birdsong.*

**GARY LAWLESS**