

INTERNATIONAL WOLF

The background of the cover is a detailed oil painting of three wolves. On the left, a grey wolf looks towards the viewer. In the center, a darker wolf is shown in profile, looking to the left. On the right, a white wolf looks towards the viewer. The painting style is expressive, with visible brushstrokes. In the upper right corner, a crow is perched on a branch.

A PUBLICATION OF THE INTERNATIONAL WOLF CENTER
FALL 2003

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INTERNATIONAL WOLF

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VOLUME 13, NO. 3 FALL 2003

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"Alpha, Alpha, Beta, Omega" by Mary Roberson
Mary enjoys the outdoors and was recently featured in *Wildlife Art* magazine and in *Southwest Art* magazine's "Artist's To Watch" section. To view and purchase additional artwork, visit www.maryroberson.com, or call 208-788-3865.



Publications Director
Mary Ortiz
Magazine Coordinator
Carissa L.W. Knaack
Consulting Editor
Mary Keirstead
Technical Editor
L. David Mech
Graphic Designer
Tricia Hull

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PHOTOS: Unless otherwise noted, or obvious from the caption or article text, photos are of captive wolves.

Letters

Slanted comparison doesn't help wolves

Thanks for your excellent publication. I am a wolf center member and a wolf lover of 35 years.

While feeling great respect and a certain amount of kinship with the wolf, I believe we must see the species clearly. That's why I read with great interest Liz Harper's article in the Spring 2003 *International Wolf*, "Are Wolves Dangerous to Humans?" Well, the answer has always been, "yes, they are, to some varying degree." I think the article shows that.

I have a problem with one of her comparisons, however. It is an apples-to-oranges comparison. After citing the numbers and categories of wolf-human encounters, and wolf populations of 10,000 to 20,000 in Europe, and 60,000 each in the former Soviet Union and North America, she writes: "A person has a greater chance of being killed by a dog, lightning, a bee sting or a car collision with a deer than being injured by a wolf."

That's likely true, statistically, but is an ill-conceived comparison. Fact is, deer, dogs, automobiles, bees and lightning come into contact with human population centers far more often than wolves. In most wolf range, human population remains sparse. The same obviously is not true of most dog range.

For example, there have been rare reports of wolf sightings around a few Minneapolis-St. Paul suburbs. But there are millions of bees, hundreds or thousands of annual lightning strikes, thousands of dogs, deer and so on and so

on in the metropolitan area, and, by extension, most of the places people live.

So of course a person has a greater chance of mishap at the hands of the above-listed examples than at the hands of a wolf, because the average person lives in far closer proximity to those examples than to wolves.

We love the wolf, but that is no excuse for sloppy thinking, which in the case of this slanted comparison invites those on the other side to dismiss our wolf statements as emotional, subjective and poorly reasoned. ■

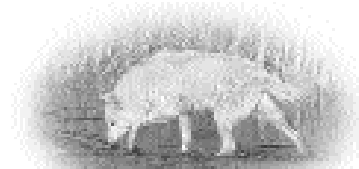
Steve Foss
Ely, Minnesota

Executive Director's reply

Your letter in response to Liz Harper's article is appreciated. It certainly is a good reminder for us not to use the tactics enemies of the wolf use to demonize it.

I would argue your point about the article slanting the comparison in the relative risks of deer, bees etc. and wolves to humans because human population centers aren't factored into the equation. If one were to look at the northern third of Minnesota, where the highest population of wolves in the contiguous United States is located, where we have cities like Duluth, Virginia, and Grand Rapids, and where we have millions of visitor days in the Superior National Forest, the statement about a greater chance of being killed by a dog, lightning, deer etc. still applies. My point is that the statistics "work" regardless of whether we are talking human population centers or the heart of wolf range.

Walter M. Medwid



From the Executive Director

A Changing Landscape

With the announcement by the U.S. Fish and Wildlife Service earlier this year categorizing all gray wolf populations in the contiguous United States (with the exception of the endangered Mexican wolf population in Arizona and New Mexico) as “threatened” versus the more protected “endangered,” wolves take a great step closer to a very different world. And while wolves have always shown a remarkable adaptability to change, we humans will have a far more difficult adjustment.

The 30 years during which wolves have been protected by the Endangered Species Act instilled in us a false sense that federal law would always protect wolves. Yet the intent of the act has always been that after appropriate recovery measures and confidence that viable populations of critical species existed and would continue to exist in the future, these species would be “delisted,” or removed from the endangered species list. When the American alligator and peregrine falcon were removed from the endangered species list, the change was largely accepted as a good thing, especially so in the case of the peregrine, for which strong federal protection remains.



Walter Medwid

But as wolves come closer to delisting, there is a far different sentiment since no such federal protections will remain once they are delisted. There is clearly apprehension about what that will actually mean when individual states initiate their own plans for managing wolves. By all accounts more wolves will be killed, and the circumstances under which wolves will be killed will be determined by the individual states’ management plans. The people doing the killing will no longer be agents of the federal government but rather private citizens or state employees. All those changes will test our sensibilities of what constitutes good public policy and a reasonable compromise among the various stakeholders. Fortunately, the Endangered Species Act provides for the federal government to make sure state management does not threaten wolf recovery.

Underlying all this is the good news that gray wolf populations in the western Great Lakes and Northern Rockies are doing well. But as long as they are doing well, conflicts with humans will undoubtedly increase. Some fear that unless we fund the “right” management programs, we run the risk of developing a backlash against wolves, for which they once paid so dearly.

We know that most Americans care deeply about the environment, and we know too that that caring extends to wolves. We know that there will be some voices calling for the eradication of wolves but also know that the public won’t tolerate extreme measures in the way we deal with the inevitable wolf-human conflicts.

The one thing certain is that as we adjust to a changing landscape for wolves and humans, efforts to strengthen our education efforts on behalf of wolves can take no time off. ■

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Ely, MN 55731-8129, USA

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Koani in her role as an ambassador wolf with the students of Wise River School in Montana

The Romance of Having



A modified climbing harness made for walking Koani. Note the wolf wrangling gear: gloves, 9/16-inch nylon tubular webbing and pepper spray clipped to the harness (at right).

Moments after a deer carcass was placed in Koani's enclosure, she sends a clear message that she's not about to share any of it.



Text and photos by P A T T U C K E R and B R U C E W E I D E

It's happened again. Koani is loose. It's always the same scenario: somehow she's gotten out of the pen or off the leash. She dances just out of reach, and I can see the gears in her brain turning: "What's first: Killing that dog down the road? How about those sheep in the pasture on top of the hill? Ooh, look! What's that little human doing in the driveway?" Before mayhem ensues, I wake up, and relief floods through me. Twelve long years and no disasters. And that is what it's like to live with a wolf.

To begin with, we never dreamed of "owning" a wolf. Born in captivity and socialized to humans from the age of 2 weeks, 3-month-old Koani came to live with us as part of an ABC documentary about wolves we'd been hired to consult on. For a variety of reasons we ended up with a wolf. Feeling an obligation to give her life in captivity purpose, we founded Wild Sentry and embarked on a life of traveling ambassador wolf programs. Twelve years, 1,387 programs and 182,456 people later, there's no question that Koani has succeeded in changing many hearts and minds, and that has kept us going through some tough and grueling times.

Before embarking on reasons why owning a wolf is not as romantic as you may imagine, let me state

humans and to protect humans from. We would not find it romantic to cage this alien or fasten a collar around its neck.

By acquiring a captive wolf one takes on a legal and moral responsibility. The first and primary rule of life with a wolf is that no socialized wolf can ever be allowed to run unleashed or initiate human contact without supervision by a qualified caretaker. Wild wolves avoid humans. A captive wolf is less shy and therefore more dangerous.

A captive wolf requires special fencing—a fence 10 feet high with a 3-foot skirt and an outer 8-foot fence. Each animal needs a minimum of a quarter acre. Psychologically stable wolves need a canine companion—preferably another wolf of the opposite sex. A dog is a poor substitute but better than nothing. However, if a wolf and dog are kept together, don't be surprised to come home to a

evening, because it mimics a wolf's crepuscular activity patterns. These walks occur every day—including Christmas morning, Super Bowl Sunday, or after a hard day of skiing. Walks keep Koani sane, and we take this responsibility seriously. She doesn't, however, willingly walk at our side or at our pace. The leash, connected from Koani to our modified climbing harness, keeps her from attacking dogs or chasing livestock. Being attached to her is like being attached to a 100-pound cat. And while she enjoys these walks, we are constantly reminded that she'd enjoy them more if we'd let her go.

When a strange dog is encountered, we're jerked, sometimes to the ground, by 100 pounds of aroused muscle. From Koani's point of view, a dog is a territorial intruder. Denying contact with the dog is our responsibility. Even though we outweigh Koani by 40 pounds, she's amazingly strong and quick. A momentary lapse in attention can lead to the death of a neighbor's pet or worse. Though constant

vigilance may be good training for "living in the moment," there are cheaper, less dangerous ways to work toward Zen mastery than walking a wolf.

While Koani enjoys the stimulating smells and sounds of walking in a new place, transporting her there is hardly worth the energy or effort. Wolves don't possess the "filtering" apparatus of dogs. Because

a Wolf of Your Very Own

unequivocally that we love this animal. We love her as we would a psychopathic sibling who is in turn charming and frightening. We do not love her like a child or like our dog, Indy. We love her like you might love an adult being from another planet—an intelligent being, yet utterly lacking human moral values, and for whom you are entrusted with the responsibility to protect from

mangled dog. Place more than two wolves in a pen and the chance for injury increases. Wolves have their own rules of engagement, and for a variety of reasons they may seriously injure or kill a pen mate; this has nothing to do with right versus wrong or like versus dislike.

Wolves need physical and mental exercise. We walk Koani for one to two hours in the morning and early

Below: When directed to get in a car, Indy (Koani's dog companion) knew to get in the car—Koani didn't (maybe she thought I said "on"). ▼



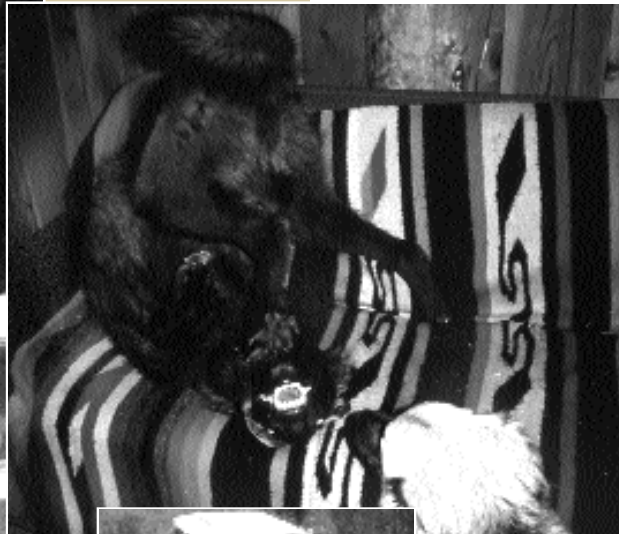
◀ Left: The first time we allowed Koani in the house, she jumped on the table. Moments later it toppled over.

Below: On occasion, when Koani is allowed in the living room, she acts in an undoglike manner, as exemplified by her behavior on the couch. ▼

Koani is a nervous traveler, she must be confined to a 4-by-6-foot kennel. The kennel doesn't calm her, but it does prevent her from jumping in our lap and attempting to wrest the steering wheel away when she sees an approaching semi. And when her bowels loosen from stress, it's in the kennel instead of on the upholstery.

Wolves are social animals. Isolation in a pen without stimulation is one of the crueler fates for captive wolves. But before you allow a wolf into your house, put the garbage up on

the refrigerator, place soap, food and any other substances that might smell interesting in the closet, and exchange heirloom furniture for junk from the secondhand store. Koani is a good wolf, but she's a really bad dog. Sure, all dogs are destructive when they're puppies, and there'll be occasional "mistakes" on the carpet. You can, however, depend on the fact that after consistent training, your dog won't wreak havoc when left home alone. To accommodate Koani's need for social contact and to keep our



▲ Above: Koani is on the cable run we clip her to when we stop for the night while on the road presenting Wild Sentry programs. The debris on the ground is what is left of a pillow she got hold of.

◀ Left: Loading Koani for a Wild Sentry program tour, or even to take her on a hike in the mountains, is always a chore. In 12 years, she has never once entered the van willingly.



We owe it to wolves to keep their numbers in captivity to a minimum.

Remember, your desire to be “close” to wolves is not their desire.

home intact, we dug a 40-foot tunnel from her pen to a living room enclosure.

Then there are vacations. We’ve yet to find wolf-sitters listed in the Yellow Pages. Since the Wild Sentry staff consists of two, we are in the same boat as private individuals when it comes to activities that require “going away.” Captive wolves need professional, as in expensive, care. In the 12 years we’ve lived with Koani, we’ve not been away together for more than four nights in a row, and that has happened only twice. My nightmares of her running loose really heat up when we’re away.

Why do we think we should be able to raise a wolf and other people shouldn’t? We don’t consider ourselves special. We just don’t think most people would make the personal and professional sacrifices we’ve made. Really, we guess, we think most people are smarter. To give us credit though, it’s not that we *wanted* to make the sacrifices. Again, we never dreamed of “owning” a wolf. We had one choice, and that was whether to become involved with the film project. Once we opted in, we started down a path of narrowing alternatives.

A decision to make a wolf part of your life is an “until death do us part” decision with euthanasia the only way to opt out. Should life with a wolf prove more demanding than expected, leaving it consigned to perpetual boredom in a pen, shipping it off to a refuge for ex-pet wolves, or turning it loose are cowardly alternatives and, in the latter case, also illegal. Look before you leap, and once you’ve leapt, be prepared to turn your life upside down or admit your mistake and kill your “pet.”

Could it be that Koani is an especially difficult wolf and that another might be easier to deal with? Possibly.

However, another might be more difficult. Wolves are born with a wide range of personalities with traits that don’t become apparent until adulthood. While environment makes a difference, it’s unrealistic to expect a wolf to fit into your life like a dog.

So are there any reasons to keep captive wolves? In the best of all possible worlds we at Wild Sentry say, “No.” Unfortunately, we don’t live in that sort of world. Because of this, we do believe captive wolves can serve important educational purposes. However, for these animals to fulfill an educational mission, they should only be part of not-for-profit organizations, exhibited by knowledgeable people, and in a program reviewed and sanctioned by professional educators and biologists.

Educators have an obligation to help their audiences understand that no matter how large and natural-looking an enclosure appears, it cannot provide the space and stimulation to fulfill the prey drive and social interactions that wolves experience in the wild. Their sacrifice is justifiable only in that it sheds light on human ignorance. We owe it to wolves to keep their numbers in captivity to a minimum. Remember, your desire to be “close” to wolves is not their desire. Responsible, sensitive people understand that caging wildness is an oxymoron.

We realize that we’ve concentrated on the negative aspects of living with a wolf. That’s because part of Wild Sentry’s mission is to discourage people from obtaining wolves for pets. However, as we stated early on, we love Koani. She has added a

dimension to our lives that could not have been achieved otherwise. Has it been worth it? Neither of us can speak for Koani. But we know that for us, the educational good she’s performed is tinged with sadness. Not a day goes by but what we’re made aware of our shortcomings when it comes to providing Koani with the life of a wolf.

Wolves are wild animals that have evolved over millions of years to take care of themselves. Wolves don’t need us to provide them with food, shelter or companionship. What they need from us is to leave them space on this increasingly crowded planet so they can provide these things for themselves. If you love wolves, work to ensure that this dream remains possible. ■

For more information relating to captive wolves and hybrids as pets:



Go to www.wildsentry.org, navigate to the education page, and click on *Can You Turn a Wolf Into a Dog?* (also available for \$2.00 in booklet form). Wild Sentry can be contacted at wolfwranglers@wildsentry.org, or P.O. Box 172, Hamilton, MT 59840.

Pat Tucker is a wildlife biologist, and Bruce Weide is a writer and storyteller. Both have directed Wild Sentry: The Northern Rockies Ambassador Wolf Program for more than a decade. They recently received the National Conservation Achievement Award for their educational work from the National Wildlife Federation.

The authors thank Diane Boyd and Megan Parker for their review of this article.

A World Without Carnivores:



Jerry Murray

The grizzly bear has been eliminated from almost all of its historic range in the 48 contiguous states.

After decades of work and tens of millions of dollars, one can assert that the gray wolf has been recovered across the northern Midwest and the Northern Rocky Mountains. At the end of 2002, wolf populations there were distributed over about 5 percent of the species' historic range and included about 4,000 animals. Notwithstanding specific issues that fuel debate about the species' future, wolf recovery represents a stunning conservation success. Recently I have wondered if wolf recovery offers instruction for conserving other large carnivores.

In the United States the progress in wolf recovery is an anomaly; most other species of large carnivores have fared poorly. The grizzly bear has been eliminated from much of its historic range. The wolverine is extinct across the Northeast and greatly reduced elsewhere. The mountain lion has a tenuous hold on habitats east of the Mississippi River. The lynx was recently listed as threatened. The jaguar is absent from the Southwest. Long-term prospects for restoring wild populations of red wolves seem bleak. Even where suitable habitat remains in the United States, proposals to reintroduce large carnivores generate significant and polemic resistance despite the success of gray wolf reintroductions.

Much of the worldwide conservation movement is rooted in the United States, and the rest of the world often looks there for leadership. U.S. institutions and individuals have promoted and funded international efforts to conserve large carnivores. Despite this, throughout the world many such species are faring poorly. Fuller (1995) completed a review of 30 large carnivore species and found that 22 were considered endangered by the United States or the World Conservation Union. Our success with gray wolf recovery has apparently not catalyzed similar success with other large carnivores.

So what can we learn from wolf recovery that would help efforts to conserve other large carnivores? Let's measure it against several tenets that I believe guide most successful recovery efforts.

Research and monitoring are critically important. For several decades wolves have been the focus of intensive research and monitoring. These efforts have yielded knowl-

edge that has served to counter outrageous claims that were foisted upon the public by those who opposed wolf recovery.

A large-scale approach is desirable. Wolf recovery efforts have been based, at least tacitly, on a large-scale or landscape approach. Recovery efforts in the Great Lakes region and the Northern Rocky Mountains are based on the belief that spatially segregated populations occurring across a large landscape (e.g., Montana, Wyoming, and Idaho) require interchange with one another to ensure the long-term genetic health of each.

Local human populations are important. Wolf recovery efforts have been built on recognition that the needs and concerns of local citizens are critically important. All wolf reintroduction projects have been conducted according to the provisions of section 10(j) of the Endangered Species Act (ESA). This section authorizes the use of a nonessential/ experimental approach that allows management (including lethal control) of reintroduced animals to be tailored to local sensibilities.

Controlled human use of the carnivore species should be an option once recovery has been achieved. For some time there has been the expectation that once wolves recovered, then state agencies would allow recreational harvests. While such harvests may appear to address public concerns about wolf management, given the ecological robustness of the species it is fair to question whether such harvests would ever be truly effective at limiting wolf population size and distribution.

Cooperation across cultural, ideological and political boundaries is required. Because wolf recovery has been connected to large landscapes, its history is replete with examples of such cooperation. For example, a multi-agency field team is implementing the Mexican wolf reintroduction effort. Moreover, the U.S. Fish and Wildlife Service's Mexican wolf recovery coordinator is working closely with tribal entities and the Mexican government.

Recovery efforts must continue until the ecological effectiveness of the species is assured over a significant portion of the species' historic range where suitable habitat exists. More wolves will have to be restored to more places for wolf recovery to serve as instruction for this tenet, which is probably the most chal-

At the end of 2002, wolf populations in the northern Midwest and the Northern Rocky Mountains were distributed over about 5 percent of the species' historic range and included about 4,000 animals.

Does Wolf Recovery Offer an Alternative?

by MIKE PHILLIPS

Mike Possis, Wild Thing Photography



lenging and important of all. It is here that wolf recovery in the United States is proving to be uninspiring.

In response to the gray wolf's improved conservation status, the U.S. Fish and Wildlife Service recently finalized a vision for the future of wolf recovery based on the concept of gray wolf Distinct Population Segments (DPS), of which they recognized three: Eastern, Western, and Southwestern. Gray wolf DPSs are areas that support wolf populations, are somewhat separated from one another, are significant to the overall conservation of the species, and are subject to slightly different recovery criteria. The Service's vision is important because it represents their first effort to define their legal obligations to recover wolves under the ESA. The Service's definition of recovery is important because further recovery activities will be difficult to implement once the species is removed from the list of endangered and threatened wildlife (i.e., delisted).

For many, a shortcoming of the Service's vision is that throughout the Eastern and Western DPSs, areas that contain expansive tracts of suitable but unoccupied habitat, the Service intends to accept wolf population

levels that may prove to be inadequate for recovery as defined by the ESA. For example, in the Western DPS the Service intends to initiate the delisting process immediately because the recovery objectives that were developed primarily for Montana, Wyoming and Idaho have been met. Many consider it inappropriate for the Service to apply delisting criteria that were developed primarily for a three-state region and according to the Service's own scientific review were only ever minimally acceptable, to the Western DPS, which includes all or portions of six states that were never considered during recovery planning. Many conservationists will argue that recovering the gray wolf in such a manner is unwarranted and has no basis in science or law.

These people will claim that the goal of wolf recovery should not be the restoration of arbitrary population targets for small portions of the species' historic range. Rather, to conform to relevant legal and scientific standards, the goal should be the achievement of functional densities of the species over a significant portion of suitable habitat within its historic range. To achieve this, they will argue, the Service needs to restore more wolves to more places.

There is at least one place ideally suited for this purpose. Studies have revealed that the Southern Rocky Mountains represent the best remaining unoccupied wolf habitat. This region contains millions of acres of publicly owned wild lands from south-central Wyoming through western Colorado to northern New Mexico. The region supports robust populations of native ungulates and could easily support a self-sustaining population of wolves. Not surprisingly, polls reveal that a majority of registered voters in Colorado and New Mexico support wolf restoration there.

If we are unable to restore the gray wolf to a significant portion of the

species' historic range where suitable habitat exists, then one can conclude that wolf recovery offers scant instruction to those striving to recover other species of large carnivores. If we are unable to restore more wolves to more places, then we should not expect others, usually working with far fewer resources, to do better with the recovery of other large carnivores.

Some of the poorest people in the poorest countries are now making the greatest contribution to conserving large carnivores and biological diversity in general. For example, many of these poorer countries have set aside a much greater percentage of protected areas than the United States has (4.5 percent), including Botswana (15 percent), Costa Rica (12 percent), Rwanda (12 percent), and the Lao P.D.R. (10 percent). Asians, Africans and Latin Americans are living daily with tigers, leopards and jaguars. In contrast, many United States citizens resist the return of the wolf to even our most remote regions.

We must do better. If we can't, then wolf recovery will not serve as instruction or inspiration to those working to conserve other species of large carnivores. If that proves to be the case, then we must accept some of the responsibility if populations of large carnivores elsewhere continue to decline and eventually vanish. ■

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Mike Phillips is the Executive Director of the Turner Endangered Species Fund, in Bozeman, Montana.

Is it good policy to reduce wolf numbers to improve ungulate populations? That simple question, unfortunately, has no simple answer.

If wolves could live on a diet of mice, humans would tolerate them better than they do. But wolves have been shaped by evolution to hunt and eat ungulates—such hooved animals as caribou, elk, deer and moose. Those are exactly the game animal species so many humans are passionate about hunting.

Some humans are not happy to share that ungulate prey base with wolves. Game populations are rarely abundant enough to please hunters, even in regions with no wolves. Where wolves are present, hunters frequently blame them for what they perceive as inadequate ungulate populations.

Disappointed hunters sometimes demand wolf control, the practice of killing wolves to enhance ungulate populations. Many state game agencies and even such thoughtful game managers as Aldo Leopold once accepted the need for wolf control to increase populations of popular ungulate species.

Wolf control is much more controversial today. In recent years Alaska has suffered from exception-

ally acrimonious wolf control wars. If wolf numbers continue to increase in the Rocky Mountain region, hunters there might request wolf control to boost ungulate populations in Idaho, Montana or Wyoming. Wolf advocates will vigorously oppose such proposals.

Is it good policy to reduce wolf numbers to improve ungulate populations? That simple question, unfortunately, has no simple answer.

Critics of wolves describe them as killing machines with the ability to decimate game

populations. For example, a Web site currently on the Internet compares wolves to piranhas. The site's author claims wolves kill for "lust," asserting that wolves will destroy "every available animal" before turning cannibalistic and devouring each other.

Some humans are not happy to share the ungulate prey base with wolves.

Wolf Control Controversies

by STEVE GROOMS



Wolf advocates reply that predator and prey species have evolved over the millennia to coexist. Indeed, the very nature of predator-prey relationships requires parity; if either side held a big advantage, the relationship would collapse. Vigorous ungulates can almost always escape or fight off wolves. To a remarkable degree, wolves target compromised animals—those that are sick, injured, old or very young. That leads to the comforting observation that by eliminating less fit ungulates, wolves enhance the gene pool and improve the survival chances for fit individuals.

And yet the impacts of wolf predation are not always so simple or benign.

The most-studied predator-prey relationship is on Isle Royale, where wolves and moose have coexisted without outside interference since 1949. Researchers there have learned that weather events can affect the vulnerability of moose to wolves. Fluctuations in moose numbers affect

the quality of the browse, which then affects the health of the moose herd. The Isle Royale experience suggests that weather, habitat quality and predation combine in complicated ways to change wolf and moose populations.

Predator-prey relationships are even more complex everywhere else. Isle Royale moose contend with only a single predator, whereas ungulates in Alaska are eaten by wolves, black bears, brown bears and humans. Multi-predator ecological systems are difficult to study and tricky to manage.

Research in Alaska suggests that combined wolf and bear predation can limit ungulate populations to levels significantly lower than the habitat should be able to sustain. Predators sometimes suppress ungulate populations by taking high numbers of juvenile ungulates, especially moose and caribou calves. Alaska's managers describe some imperiled ungulate populations as being caught

in a “predator pit” that pins them at low levels for many years.

Wolves can even contribute to the extirpation of local ungulate populations, as was shown by a study in Minnesota's Superior National Forest. Deer survived for many years in a region that had marginal habitat. Then a combination of wolf predation and several successive severe winters eliminated the deer. Deer have not returned to that area decades later, although it seems possible that deer would have disappeared from such poor habitat sooner or later even without wolf predation.

If predation can limit ungulate populations, is it possible to improve game numbers by eliminating predators? The answer is a qualified yes. Research in the Yukon and British Columbia shows that killing wolves can improve survival rates of juvenile caribou and moose, leading to higher overall populations. The increases are not automatic. In 11 tests of wolf control in Alaska, higher game populations occurred in only three cases.

Moreover, the effects of wolf control do not seem to last long. Research in Alaska and Canada shows that after wolf control is stopped, ungulate mortality rates return to pre-control levels. Alaska's managers have talked optimistically about how temporary wolf control could result in a win-win situation, producing strong and stable popula-



Jerry Murray

Research in Alaska suggests that combined wolf and bear predation can limit ungulate populations to levels significantly lower than the habitat should be able to sustain. Predators sometimes suppress ungulate populations by taking high numbers of juvenile ungulates, such as moose calves.

Where wolves are present, hunters frequently blame them for what they perceive as inadequate ungulate populations.

tions of both ungulates and wolves. In the real world, however, that theoretical ideal has not been validated.

Advocates of wolf control have argued that it brings stability to predator-prey systems, minimizing the boom-bust cycle. Achieving that kind of stability is not easy. And it is open to question whether stability is a desirable goal, since the normal tendency of natural systems is for predator-prey relationships to oscillate.

A curious feature of Alaskan wolf control is the way predator control has targeted wolves although in some studies predation by brown bears had more impact on young ungulates. Bears benefit from a cultural resistance to the sort of lethal control often directed at wolves. Alaskan managers are currently contemplating moving bears from areas of special concern during the calving season, hoping the

bears will not return until young ungulates have grown large enough to escape most predation.

Perhaps the main difficulty with wolf control is that it is necessary to kill a great many wolves to have much effect. The fertility and adaptability of wolves allow them to replenish their numbers unless from 28 to 50 percent or more of the fall population is removed, year after year. That's a lot of dead wolves. Killing that many wolves is difficult and increasingly controversial.

As with many controversies, both sides might be right and wrong. Wolf predation is not as universally benign as wolf advocates often believe, and in specific situations it can suppress ungulate populations for many years.

Killing wolves can improve local ungulate populations of particular interest. But wolf control doesn't work as well or for as long as fans of wolf control have believed, and it comes at a high price, not the least of which is a great deal of bitter debate.

Wolf control might belong to that category of appealingly simple remedies that don't work as well as people hope they will but that seem to do enough temporary good to continue to be popular. The only thing for sure is that wolf control controversies are not going away any time soon. ■

*Steve Grooms has been writing about wolf management since 1976. He is the author of the book *The Return of the Wolf*, and serves on International Wolf magazine's advisory committee.*



Ungulates in Alaska are eaten by black bears (pictured), wolves, brown bears and humans.

Wolves have been shaped by evolution to hunt and eat ungulates, such as caribou.

Wolves Fascinate Darren Bennett

A 13-year-old with cystic fibrosis, Darren knows he will not live to old age, but through the Make A Wish Foundation, the Salt Lake City, Utah, boy finished a week's wolf study at the International Wolf Center in March.

He and his family discovered facts about wolves during lectures and discussion, from the air during a radio telemetry flight, and from the ground, where they howled at nearby wolf packs and observed their sign. It was an adventure vacation tailored to a family. And to a boy. "I knew some facts, and I learned some," said Darren.

The week drew together the family and the Center staff, allowing them to do what they do best for someone who really appreciated it. "We take a lot away from this, too," said Assistant Director Gretchen Diessner.

Center intern Jess Edberg was the family's guide. She came away changed by the experience. "It made me realize how short life really is," she said.

Diessner said the experience she and the staff had working with the Make A Wish Foundation was surprising and pleasant. "Working with Make A Wish has been kind of incredible," she said.



Penny and Corey Roeder shared their experiences on a "Tracking the Pack" adventure vacation with their friends back home in Iowa.

Passing on the Lessons

It's hard to say whether Penny and Corey Roeder got more pleasure from their adventure vacation at the International Wolf Center or from their presentation to friends back home in Iowa. The Roeders came to Ely and the Center at the end of January for a "Tracking the Pack" adventure vacation. Since then, wolves have been more prominent in Penny's thoughts. "We found out very in-depth information on wolves, information we wouldn't have come by in our normal lives," she said. As dog owners and dog lovers, they were particularly interested in comparing their animals' behaviors to wolf behavior. Corey said the vacation allowed them to "to gain an

appreciation of the majesty of the wolf, and of the environmental concerns, and just keeping this creature around."

Sharing that knowledge with a group of 35 to 40 Rotary club members in Maquoketa, Iowa, in April allowed them to cement the perspectives gained in wolf country and to pass on insights to those who live outside that world. The experiences at the Center and their presentation to the Rotary club will remain with them a long time. "I think about what I learned, how wolves connect with our lives," Penny said.



Thirteen-year-old Darren Bennett and his family learned a lot about wolves during their week at the International Wolf Center. From the left, front row: father Darren Bennett, Darren Jr. and Cathy; back row, Drew, Alexandria, Christy and Audrey.

Sue Foss

A White Wolf Wedding

Weddings, of course, are an expression of individual personalities. Most people marry in church, some in courthouses, others in people's homes or yards. But Jacen and Jennifer James of New Lenox, Illinois, weren't having any of the standard fare. The couple made their vows last January at the International Wolf Center, standing at the windows in front of the wolf viewing center. Jacen and Jennifer, landowners near Ely and inveterate kayakers, hikers



Deborah Sussex

and snowshoers, decided such a wedding was perfect for them. In fact, they had wanted to hold it outside in the snow but deemed such an arrangement impractical.

In attendance were 50 family members and friends scattered about the auditorium seats. Arctic wolves Malik and Shadow were there, too, outside the glass. The wolves were active as the guests prepared for the ceremony and then settled down as the service began, with one wolf lounging on the greeting rock. Jacen and Jennifer had group wedding pictures taken outside in front of the running wolf sculptures and treated the wedding party to dogsledding in the woods. Jennifer believes every trip the couple makes back to the Center will be a renewal of their vows. "Having the wedding at the Wolf Center adds meaning to the commitment," she said.

Thanks to Steve Foss for the preceding three Notes from Home.



Sylvain Macchi

Les Loups du Gévaudan in south-central France is an educational and rehabilitation park with approximately 130 wolves from Mongolia, Poland, Siberia and Canada.

Les Loups du Gévaudan Visits the Center

Early this year, the International Wolf Center welcomed Sylvain Macchi, a representative of Les Loups du Gévaudan in south-central France. Macchi has been following wolves and searching for wolf information since reading an article in 1980. This was his third visit to the International Wolf Center since 1992. Every day, Macchi walked many miles of wolf country in the Ely area and was finally rewarded. "I finally saw a wild wolf in close range! It was a beautiful black wolf!" he exclaimed.

Les Loups du Gévaudan is an educational and rehabilitation park with approximately 130 wolves from Mongolia, Poland, Siberia and Canada. Eighty Mongolian wolves were given to the park by the Brigitte Bardot Foundation

after being taken from poachers. "There are about 30,000 wolves in Mongolia under no protection," noted Macchi. "The southern Mongolian wolf is smaller than the wolf in Minnesota and more yellow red." Les Loups du Gévaudan park is named after the "Beast of Gévaudan," who killed over 100 people from 1764 to 1767. Originally thought to be a wolf, it is now believed to have been a human with large dogs. For more information on the park, visit www.loupsdugevaudan.com.



Sylvain Macchi

INTERNATIONAL WOLF CENTER

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The first hand account of one woman's
crusade to reintroduce wolves to the wild—

The Return of the Mexican Gray Wolf

Back to the Blue
BOBBIE HOLADAY

The return of the Mexican gray wolf to Arizona's
Blue Range in 1998 marked a major victory both
for an endangered species and for one determined
woman. Retiree Bobbie Holaday had formed the
citizens advocacy group Preserve Arizona's Wolves
(PAWS) in 1987 and launched a crusade on the
animal's behalf, sparking a controversy that pitted
environmentalists against ranchers and neighbors against neighbors. This book tells for
the first time the inside story of her 11-year effort to bring the gray wolf back to the Blue.

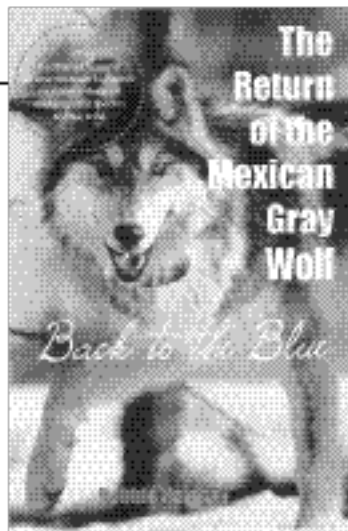
"This world-renowned endangered species reintroduction would not have succeeded
without Bobbie Holaday's leadership. This is the only book to document from first hand
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—Elizabeth T. Woodin, former Chair, Arizona Game and Fish Commission

270 pp., 32 color photos. \$18.95 paper/\$45 cloth. For more info, <http://www.uapress.arizona.edu/books/bid1500.htm>.
All royalties go to the Mexican Wolf Trust Fund administered by the Arizona Game and Fish Department

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Tracking the Pack

Ten Years and Making Tracks

*Text and photos by Lori Schmidt,
Wolf Curator, International Wolf Center*

As the International Wolf Center celebrates the 10th anniversary of its flagship facility in Ely, it's a great time to review the changes that have occurred in wolf pack dynamics.

The history of the ambassador wolves at the Center dates back to 1989, when the Center operated a summer-only exhibit in the U.S. Forest Service's Voyageur Visitor Center. The display included four wolves born in 1989: Raissa, Bausha, Ballazar and Jedadiah. These four served the early educational needs of the Center and later moved on to other exhibits. Some visitors may remember the curator who slept in the tent next to the wolf pen; yes, that was me. During the summer of 1989, 1990 and 1991, my dog Maggie and I slept under the stars and even survived an infestation of forest tent caterpillars. This opportunity to camp out arose more out of necessity than desire. Nighttime security was an issue during the early years due to a lack of a secondary chain-link fence.

In 1993, Lucas, Lakota, MacKenzie and Kiana were born and served as the first year-round wolf exhibit at the Center, accompanied by the

grand opening of the new facility and the *Wolves and Humans* exhibit. For a few years visitors enjoyed watching the pack dynamics of these four littermates, but in 1998 Kiana passed away. Her death was not only a loss to the wolves but to the visitors' experiences and the dynamics of the pack. The three remaining littermates remained on display, but plans were made to add more wolves to the pack.

In 2000, a pair of arctic pups, Shadow and Malik, were born and joined the other ambassador wolves, creating the Center's largest pack. As time went on, these pups matured into strong, healthy adults while the 1993 litter of MacKenzie, Lucas and Lakota began to show signs of age. The natural aging process reduced their ability to keep up and compete with the younger wolves, so by the end of 2002, all of the 1993 litter had been moved to an adjacent, more protected enclosure to form the Retired Pack.

Jedadiah, a male from the 1989 litter, sleeps in a pine bed at the summer-only exhibit at the U.S. Forest Service's Voyageur Visitor Center.

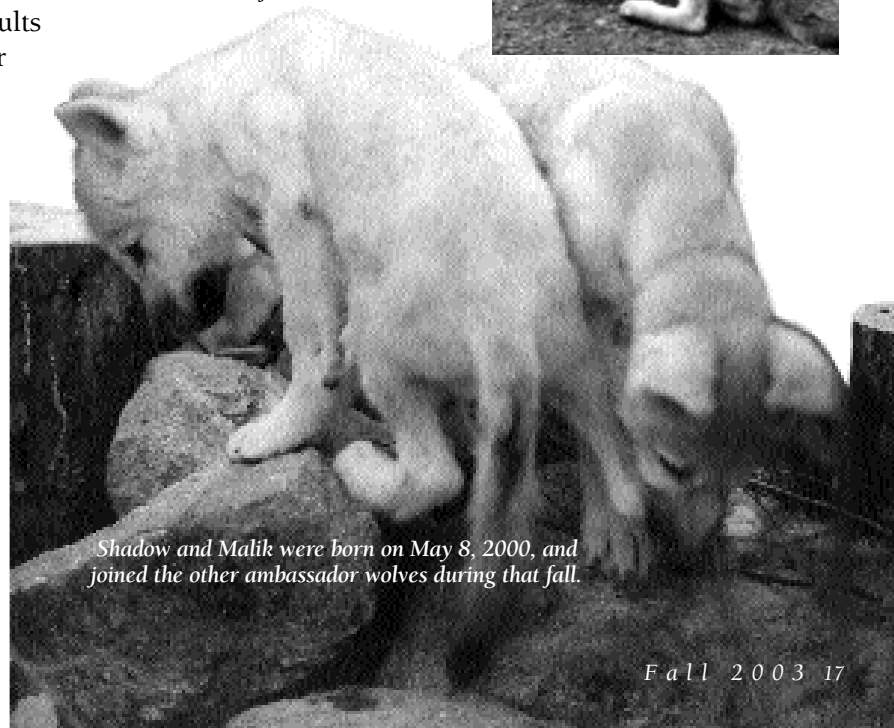


The Center will be adding pups to the Exhibit Pack during summer 2004 to join Malik and Shadow. Who knows what the new pack dynamics will be? ■



Born in 1993, MacKenzie and Lakota were young pups when the Center opened its new year-round educational facility.

Kiana was one of four littermates who served as the first year-round wolf exhibit at the Center.



Shadow and Malik were born on May 8, 2000, and joined the other ambassador wolves during that fall.

Wolves of the World

WOLVES IN THE UNITED STATES

Gray Wolf Downlisted to “Threatened” Throughout Most of the United States

by Ralph Maughan

On March 18, 2003, the U.S. Fish and Wildlife Service announced its long expected downlisting of wolves from “endangered” to “threatened” in most of the lower 48 states. (Wolves have no special federal classification in Alaska). Prior to this action the wolf was “threatened” in Minnesota

and “endangered” in all of the rest of the lower 48 except Wyoming and most of Montana and Idaho, where wolves were reintroduced under a special rule—“experimental, non-essential”—that afforded them the same protection as wolves now classified as “threatened.”

On paper the federal government’s reclassification of wolves is a sweeping decision. However, the only immediate effect of the reclassification is that it will be easier to kill wolves that attack livestock. Western livestock owners will now often be able to shoot wolves that attack their livestock rather than waiting for the government to do it.

Ever since wolves were reintroduced to central Idaho and Greater Yellowstone in 1995 as “experimental, non-essential populations,” livestock owners could shoot wolves that were attacking their livestock, but the naturally recolonized wolves of northwest Montana were always “endangered.” In the Montana endangered zone, only the government could lethally “control” wolves.

On the ground this seems to have been a distinction that made no difference. The government aggressively killed northwest Montana wolves, while in the experimental reintroduction area both the government and livestock owners legally killed wolves. However, the total percentage of wolves killed was no higher in the experimental areas than in the northwest Montana “endangered” area.

Wolves wandering into western states outside of Idaho, Montana and

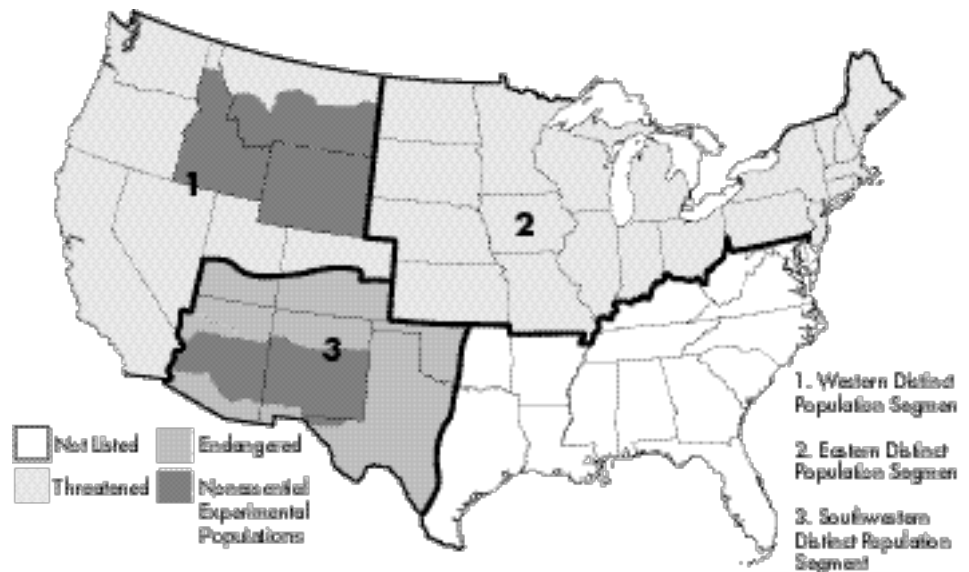
Mike Possis, Wild Thing Photography

The U.S. Fish and Wildlife Service’s reclassification keeps the door open to a gray wolf reintroduction in southern Colorado.

Wyoming automatically gained “endangered” status, but, nevertheless, the only two such wolves officially detected (one in Oregon and one in Utah) were returned by the government to Idaho or Wyoming experimental population areas. Other wolves probably exist outside of the experimental population areas but have not been officially noted. Still others have been illegally or accidentally killed in Utah and Oregon.

Under the new rule, most of the West (except the Southwest) is included in the Western Distinct Population Segment (Western DPS). DPSs are populations more or less distinct from others. The Western DPS includes all of Montana, Wyoming and Idaho, along with Washington, Oregon, California, Nevada, northern Colorado and northern Utah. One victory was the addition of Nevada and California to the Western DPS. No changes will be made to the central Idaho and Greater Yellowstone experimental populations.

Mexican wolves presently in the Southwest will also remain classified as an experimental population. The Mexican wolf reintroduction program has struggled because no Mexican wolves remained in the wild. Thus, the reintroduced Mexican wolves had to learn to contend with living in the wild without the benefit of wild parents. Moreover, the reintroduction rules limited the areas where wolves could legally roam in Arizona and New Mexico to artificial boundaries that some people considered bizarre. No such limitations apply to their cousins in the Northern Rockies.



Status of the gray wolf in the continental United States

The new rules also create a Southwestern DPS and an Eastern DPS. The Eastern DPS is controversial because it includes all of the East and all of the Midwest too. Wolves are doing very well in the upper Midwest, but there is bitter disappointment that these states were lumped with the eastern states in the new Eastern DPS. Obviously the Midwest and the East are different parts of the country. Wolf supporters had hoped for a wolf reintroduction in a truly Eastern DPS.

Opinions on the new Southwestern DPS are mixed because some feel that it represents de facto abandonment of the Mexican wolf. On the other hand, the classification keeps the door open to a gray wolf reintroduction in southern Colorado. Moreover, gray wolves in the Southwestern DPS will remain endangered, although no wolves presently exist other than those in the Mexican wolf experimental population.

The real test for the existing wolf populations

in Idaho, Montana and Wyoming will come not with the reclassification but with the proposal to “delist” and turn them over to what appears to be hostile state management.

For additional information:



Visit the News & Events section of the International Wolf Center’s Web site at <http://www.wolf.org>.

Ralph Maughan is the president of the Wolf Recovery Foundation and a professor of political science at Idaho State University, where he specializes in interest groups, parties, public opinion and wildlife politics.



Don Zippert

Under the new federal rules, Mexican wolves in the Southwest will remain classified as an experimental population.

WOLVES IN THE NORTHEAST

"The Table Is Set"

by Neil Hutt

The table is set for the wolf in northern New England and it should be no great surprise if the guest appears. The question is whether we want to help him find the dining room.

— John Harrigan,
"Woods, Water and Wildlife,"
New Hampshire Union Leader and
Sunday News, July 16, 2000

Timber wolves have been missing from the Northeast for over a century, but Vermont farmer Eric Paris isn't complaining. "I have gotten along real well without them," he says. "I can't imagine what good wolves will do."

Paris is not alone in his resistance to the return of the wolf. While many people would accept natural wolf recovery, they firmly oppose a formal reintroduction program. In the hard-ball debate over wolf recovery, opponents list the negative impacts on pets and livestock, tourism, hunting and trapping, and forest resource jobs. To the argument that wolves benefit ecosystems by curbing the overpopulation of animals like beaver and deer, the detractors have a ready answer.

They insist the robust eastern coyote fills the niche left by the wolf. I t's true, the opponents admit, that 26 million acres of deep undisturbed woods with abundant natural prey stretch from New York's Adirondack Mountains through Vermont, New Hampshire and Maine. But most of it is private land.

They have a point. Some biologists and wildlife officials doubt wolf recovery would



Jerry Murray

An argument in favor of returning wolves to the Northeast is that they benefit ecosystems by curbing the overpopulation of animals like beaver and deer.

succeed in a region lacking large tracks of federal land. For wolves to thrive, both private landowners and state wildlife agencies would need to be supportive. However, both Maine and New Hampshire, states with large areas of suitable wolf habitat, have passed laws forbidding reintroduction without the approval of the state legislatures. In addition, the U.S. Fish and Wildlife Service's recent decision to downlist the wolf from "endangered" to "threatened" in the Northeast means less protection for wolves that might disperse into the region from Canada.

Add to all that the question of which wolf—red or gray—is the most appropriate species. Evidence based on a Canadian genetic study suggests that red wolves (*Canis rufus*) rather than gray wolves (*Canis lupus*) may have populated the Northeast a century ago. However, not all biologists accept the results of this research. In addition, some experts predict red wolves might hybridize with coyotes and are less likely than gray wolves to prey on moose. Some scientists and wildlife managers believe a wolf from the Laurentide region of Quebec is the best choice for the region. This wolf is large



Mike Possis, Wild Thing Photography

Wolf recovery in the Northeast faces many obstacles, including the question of which wolf—gray (above) or red (right)—is the most appropriate species for the region.



Barron Crawford, U.S. Fish and Wildlife Service

enough to kill moose and may in fact have once lived in northern Maine as well as in Canada.

Those biologists may get their wish. A small pack of wolves reportedly lives south of the St. Lawrence River in Quebec close to the Maine border. If true, it appears that wolves have once again defied the odds. Wolf experts have long believed the St. Lawrence Seaway, kept open all winter by icebreakers, is too formidable an obstacle to dispersal from Canada's main wolf population and reduces chances of wolves establishing packs in New England.

But wolf advocates are optimistic. Michigan biologist Jim Hammill, who is conducting tracking workshops in Maine, does not agree that it is impossible for wolves to find their way to the Northeast from Canada. "Personally I wonder about that," he says. "These animals are just more capable than I ever would have imagined many years ago."

If Hammill is right, several environmental groups stand ready to ensure that the wolves will be afforded some protection. Some organizations are threatening to sue the U.S. Fish and Wildlife Service over its decision. In addition, the groups have petitioned the U.S. Department of the Interior to designate a new recovery region in Maine, Vermont, New Hampshire and New York and to designate the wolf there as endangered. ■

The author acknowledges the following sources of information:



www.boston.com, November 21, 2000.



Portland Press Herald Report in Maine, Today.com, October 29, 2001.

Neil Hutt is an educator and International Wolf Center board member who lives in Purcellville, Virginia.

As A Matter Of Fact

Is the maned wolf really a wolf?



Ralph Schmode

No, the maned wolf is not considered to be a wolf. In fact, despite the name, maned wolves are not even closely related to wolves and are not in the genus *Canis*. The Latin name for the maned wolf is *Chrysocyon brachyurus*. They live in the South American grasslands and scrub forests of Brazil, northern Argentina, Paraguay, eastern Bolivia and southeastern Peru and have long legs that allow them to see better in the tall grasses of the savannah. ■

New Question

In what year did the International Wolf Center's present building open?

CORRECTION

The photograph on page 23 of the Summer 2003 issue of *International Wolf* was mistakenly credited to Jerry Murray. The photograph was taken by Mike Possis, Wild Thing Photography.

Book Review

by Jakki Harbolick

Wolves: Behavior, Ecology and Conservation

**L. David Mech and Luigi Boitani, editors
University of Chicago Press, 2003**

Anyone even remotely interested in wolf ecology, environmental science or conservation dynamics will discover the ultimate resource in the eagerly anticipated *Wolves: Behavior, Ecology and Conservation*. Edited by legendary biologists L. David Mech and Luigi Boitani, this newest work is the defining compilation of more than forty years of meticulous research. In a collaborative effort, twenty of the leading specialists in the field of wolf study share the authorial responsibilities with Mech and Boitani. The result is an unprecedented scientific analysis of the wolf that could serve as the model for any ethological investigation.

Sounding a bit dry? It's not. In fact, *Wolves* is extraordinarily engaging. Although different authors have

written each chapter, the overall style is consistent, smooth and utterly down-to-earth. The material is thoughtfully organized, making for ease of use. The introduction, for example, contains a preliminary synopsis of each chapter and shows how each one relates to the others.

Laypersons will be pleased to find that concepts are explained and given meaning within the greater context, thereby weaving, through science, a tapestry of incredibly detailed information that really is more than the sum of its parts. Certainly, much of the data is highly technical, but the book will appeal to both the general public and the scientific community because the complexities are balanced by clear explanations, occasional anecdotal accounts and detailed graphics in the form of photography, illustrations, graphs and charts.

Mech and Boitani have made unvarnished objectivity a significant part of their mission. Researchers, scientists, naturalists, students, conservationists, wolf enthusiasts,



agriculturists and even individuals harboring anti-wolf sentiment will be able to respect and use this work because of its scope and integrity.

For some, these might be the laurels upon which to rest, but beyond culminating years of work, this incredible book represents a jumping off point for all the work that will follow. The authors provide insight and answers, reference nearly 2,000 sources of further information, and still acknowledge the many questions that remain and the need for continued study and investigation. What needs to be done next? Responsible, balanced conservation, providing for wolves and humans alike, tops the list. The authors "hope [to] promote a much better understanding of the wolf and foster ecologically sound wolf management. Together, research, public understanding, and proper management should help minimize the inevitable conflicts between wolves and humans and better the chances for wolf conservation worldwide." ■

Jakki Harbolick is a language arts and writing teacher. She lives in Leesburg, Virginia, with her husband, Pete, and their two children.

Wolves: Behavior, Ecology and Conservation will be released late this year. After its release, the book can be purchased at the International Wolf Center's store online at www.wolf.org.

West Gate

News and Notes

WOLVES AND BISON are the subject of a new book to be released later this year. *The Buffalo Wolf: Predators, Prey and the Politics of Nature* by Lu Carbyn will be published by Smithsonian Institution Press.

WOLF-LIVESTOCK CONFLICTS in Minnesota almost doubled in 2002 compared with 2001. In 2002, 99 complaints were verified at 86 farms, 155 wolves were captured, and 138 were euthanized.

WILD LANDS were endorsed by 71 percent of the public, according to a Zogby International poll. Such a majority of Americans

believe that at least 10 percent of all U.S. land should be protected as wilderness.

WOLF BIOLOGIST Erik Zimen, author of several books and articles on wolf behavior, passed away on May 19, 2003. Dr. Zimen was a founding member of the Wolf Specialist Group and remained in the group through 1982.

NEBRASKA WOLF. A wolf shot near Spaulding, Nebraska—the first in 90 years—proved to have originated in Minnesota, Wisconsin, or Michigan. Killed as a coyote on December 15, the animal weighed about 100 pounds.

WISCONSIN WOLVES near state management goal of 350. Before the 94 packs produced their pups in spring 2003, the estimated population stood at 335 to 354. The Wisconsin wolf management plan calls for maintaining the population at about 350 outside of Indian reservations.

ISLE ROYALE WOLVES have increased slightly since last year, according to Dr. Rolf Peterson. The highly inbred population now stands at 19 compared with 17 last year. Moose, the wolf's almost exclusive prey on the Lake Superior island, decreased from 1,100 to about 900.

WOLVES KILL COUGAR. A pack of wolves in Yellowstone National Park killed a female cougar in early April east of Mammoth Hot Springs. Biologists expect that the cougar's two 4-month-old kittens will starve to death as a result. ■



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Personal Encounter

Of Wolves and Bears: Observations of a Tundra Wolf Pack and a Barren-ground Grizzly

by Paul Frame

We finally found her. At the top of the hill we had just climbed, the radio signal from the collar on female wolf 349 was coming in pretty well. We set up our spotting scopes to scan the area below before continuing because we didn't want the wolves to see us and move before we had a chance to get the data that we'd come to the sub-arctic to collect. Two days before, 349 and her pups had moved from the den where we'd been observing them, and we had been searching ever since. We had hiked more than 12 miles over open tundra, listening for her radio signal from the top of each

ridge we crossed. For the last 3 miles, we had heard the signal, faint at first, until we crested this last hill and were looking down on a lake and stream set in a little valley about half a mile wide. Somewhere down there was 349 and, most likely, her pups.

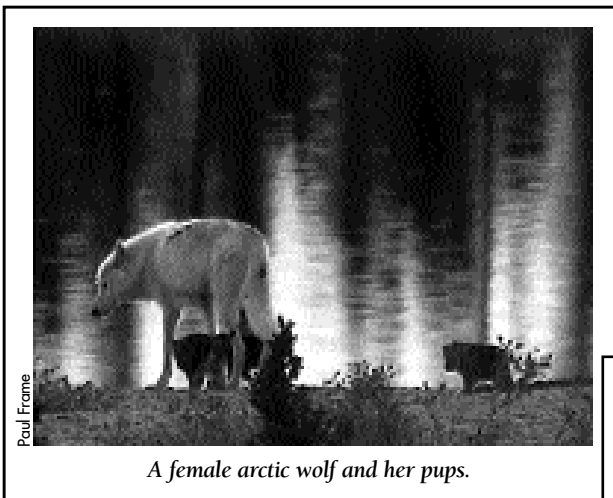
As we set up the scopes, a non-collared wolf climbed the hill on the far side of the valley. It was heading for something large and brown, which I first thought was a musk-ox the wolf was going to attack. But when I put my scope up, I saw that the brown "thing" was a barren-ground grizzly feeding on a caribou carcass.

We watched the wolf walk seemingly unnoticed behind the bear and suddenly bite it on the rump. The bear turned on the wolf, which jumped out of the way and moved off a bit to one side but stayed within 100 feet

of the bear. A strategically placed raised leg urination told me this was the breeding male of the pack. The bear, looking a bit concerned, continued to feed while the wolf circled at what it must have felt was a safe distance. After three minutes, Tuffy, as this wolf came to be known, lay down about 50 feet from the bear as though waiting his turn to feed. The bear wasn't at all comfortable with this and moved off, thankfully away from us. The wolf fed for four minutes and then trotted back down the hill, disappearing behind some shrubs.

This den, Aylmer Lake West, was the seventh of eight wolf homesites that research assistants Lorna Ruechel and Gudrun Pflueger helped me observe in the central Canadian subarctic during summer 2002. We were collecting data for my master's thesis at the University of Alberta, which looks at several aspects of tundra wolf den ecology. We had seen a bear within a few hundred feet of another wolf homesite, but this interaction between the two predators was the first we had witnessed.

We set our camp up 30 feet from a sandy beach on the western shore of Aylmer Lake, 3 miles from Tuffy's and 349's rendezvous site. We had our sleeping tents off the beach because barren-ground grizzlies, the only bear species on the tundra, walk along shore-lines looking for food, and it's best to stay out of their way. Nevertheless, because of the view, we did have our cooking tent on the beach about 300 feet from the sleeping tents. This tent is a



A female arctic wolf and her pups.



Tuffy, a male arctic wolf, was observed harassing a barren-ground grizzly feeding on a caribou carcass.

10-foot-square screen enclosure that gives mealtime respite from the constant swarms of mosquitoes and blackflies on the tundra. Because there are no trees to hang food from, we kept it in bear-resistant containers stored near the cooking tent, well away from the sleeping area. Each of the 52 mornings I woke up on the tundra, one of the first things I did was scan the area for bears. Usually the first place I checked was the food cache.

The morning after we watched Tuffy harass the bear, I scanned and saw the screen tent collapsed on the beach. Hmm, it could have been the wind, but the tent had withstood stronger winds than had blown that night. I walked to the beach and found fresh bear tracks 30 steps from my tent. The bear had walked right past our beached boat, only hesitating briefly to investigate before continuing on to the screen tent. At the downed and ripped tent, I observed wolf tracks on top of bear tracks. Both



Frame listens for 349's radio signal on the tundra.

Lorna Ruechel

sleeping through the visit made clear how important keeping a clean camp and following the guidelines for safety in bear country are, for this bear could have been inside one of our tents before we would have heard it.

I had known there was a bear in the area before it visited camp because I had seen tracks near the den of 349. It is quite possible the bear that left tracks at the wolf den was the same bear I saw Tuffy bite near the rendezvous site, and that visited our camp. It may be that some of these grizzlies learn to follow wolves to scavenge their kills, as the bears do in Yellowstone National Park. It makes good sense for a bear, since taking over a wolf kill provides a rich food source otherwise not easily available. Additionally, a bear hanging around a wolf den may catch a pup to snack on.

We saw bears twice more while observing this wolf pack. We first saw the bear moving along a stream heading toward the rendezvous site, which was also our destination. When the bear winded us, it ran fast in the opposite direction. (We hadn't showered for a week, but I don't think this was the only reason the bear ran.) When we arrived at the site, we found that the wolves had moved. We headed for the natal den to check the radio signal and found the wolves there. Later, as we returned to our camp, we saw the bear again, this time heading toward the wolf den.

It seems this bear was an unofficial member of the Aylmer Lake West pack, spending much of its time near the wolves and their kills. However, we'll never know for sure if this was the case. What we do know is that a bear left tracks near the den and was seen near the rendezvous site feeding on a caribou likely killed by wolves. Both the bear and



The cooking tent before it was downed and ripped by a bear.

Paul Frame

wolves visited our camp on the same night; however, we don't know what the timing of each visit was. From the last two sightings, it seemed the bear was seeking out wolf homesites.

My thesis research is about wolves and wolf homesites. However, with little studied wildlife populations such as this one, noteworthy observations often come unexpectedly. These observations are anecdotal but warrant further research on the relationship between these two predators of the tundra. ■

Paul Frame is currently working on a master's degree at the University of Alberta, in Edmonton, Alberta, Canada, in collaboration with the Government of the Northwest Territories, Department of Resources, Wildlife, and Economic Development. Previously he volunteered for the International Wolf Center and worked as a technician for Dr. L. David Mech in Ely, Minnesota, and worked on the Mexican Wolf Reintroduction and the Northern Rockies Wolf Recovery Project for the U.S. Fish and Wildlife Service.



"A strategically placed raised leg urination told me this was the breeding male of the pack."

Paul Frame

had visited our food containers, which were undisturbed. From there, the tracks continued up the beach away from camp. Each of the four previous nights at this camp, wolves had visited us, as indicated by fresh tracks on the beach. However, this was the first time a bear had visited the camp. That it appeared uninterested in us while we slept was reassuring. However, our

Adapting to Your Environment

by Jessica Edberg, International Wolf Center Intern

Imagine lying under the stars in your cozy sleeping bag near a crackling fire. You are just turning in after a long day of hiking in the woods. The stream nearby is gurgling, and the peepers are chirping, but there is a chill in the fall air. You curl tighter in your

sleeping bag and turn toward the fire for warmth. How do wild animals stay warm on brisk, fall nights without a fire or sleeping bag? How about during the long winter nights soon to follow?

Wolves and other wild animals have special adaptations or tools that

help them keep warm or cool while living in the wild. Fur is a great attribute that not only insulates wolves but also protects them.

Wolves possess two types of fur. The *guard hairs* cover the surface of the fur layer and have two main purposes. They help protect a wolf's skin, and they act as a raincoat. The moisture from rain or snow hits the guard hairs and sheds off. Guard hairs act as a barrier for the other type of fur, the *underfur*. The underfur layer does the same job as our own winter parka. It insulates the wolf during the long, cold winter months. It starts growing in late summer and sheds in late spring so the wolf can stay cool during the summer.

When the weather is harsh, wolves don't have a heated home to go into like we do—they have to find shelter in nature! During inclement weather wolves may find a stand of fir trees to hunker down in and get out of the wind. On cold days they curl up in a tight ball and cover their faces with their thick, fluffy tails to keep the cold air out and body heat in. On a sunny winter day they may find a nice spot out of the wind to catch the radiant heat from the sun's rays. Hot, buggy days may send a wolf to the shady refuge of the forest or into a burrow to escape the biting insects common in summer. Cooling

WORD FIND

See if you can find the words listed below. Words may be vertical, horizontal, diagonal, forward or backward!

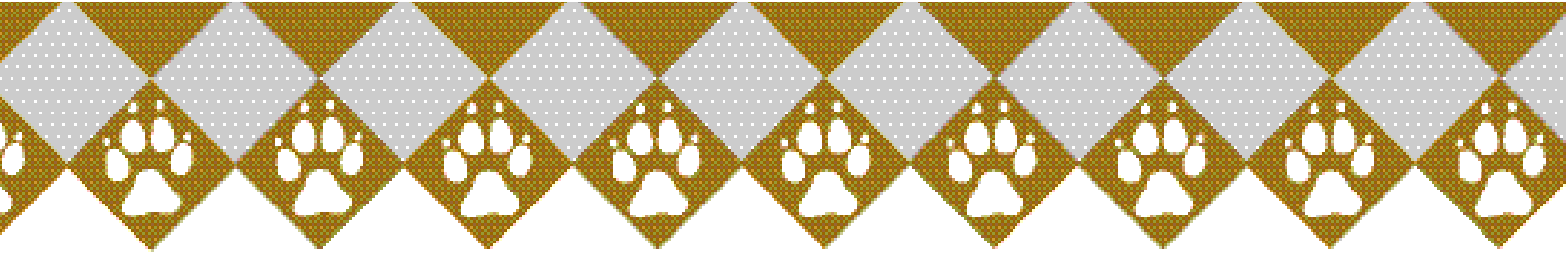
I	N	S	U	L	A	T	I	O	N	F	L	J	G	O
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H	E	B	O	Y	M	D	F	H	T	K	C	H	R	E
J	E	M	I	L	P	E	V	S	H	G	Y	J	D	I
U	R	N	U	N	D	E	R	F	U	R	O	K	H	Z
Y	F	W	A	R	M	T	H	N	V	B	L	L	A	F
D	S	A	B	O	Y	V	C	O	A	T	U	W	I	X
R	E	T	N	I	W	N	C	T	J	K	D	H	R	Q

COAT
COLD
FALL

FREEZE
GUARD HAIR
INSULATION

SPRING
SUMMER
WARMTH

WINTER
UNDERFUR



Lynn and Donna Rogers, www.bearstudy.org

off in water is also a great option. To avoid the heat of the day, during summer wolves move more at night.

Wolves have adapted well to their environment. The amount of fur they grow is regulated by where they live.

A wolf inhabiting North Carolina doesn't need as much underfur as a wolf in Alaska. These adaptations are similar to our own. We humans have developed clothes such as parkas, hats, mittens and boots for winter, and shorts, tank tops and sandals for summer—not to mention having houses with heating and air conditioning! What other adaptations can you identify that help wolves survive a life in the wild? ■

On cold days wolves curl up in a tight ball and cover their faces with their thick, fluffy tails to keep the cold air out and body heat in.

WOLF WORK

PERSON: Dr. Michael Nelson

JOB TITLE AND DESCRIPTION:

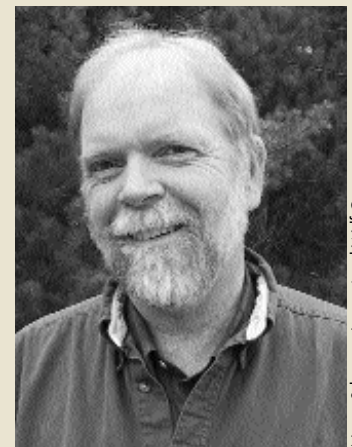
Wildlife Research Biologist. Responsible for conducting field research and gathering data, directing the experiential education of technicians (helpers), publishing the research conducted, and directing and maintaining the field headquarters.

TRAINING REQUIRED: Minimum of a master's degree in a wildlife field with training in fieldwork. A Ph.D. is most desired for this position.

SKILLS NEEDED TO DO THE JOB:

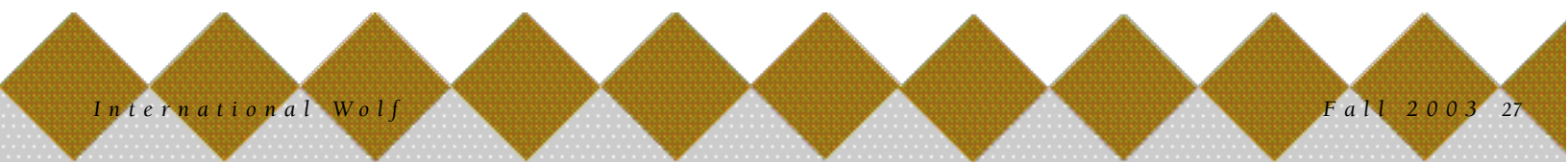
Physical ability to work in the field (snowshoeing, snowmobiling, hiking, canoeing) and an awareness of limitations. Ability to adapt to technological advances and learn new skills. Good communication skills for working with the general public and giving presentations and speeches.

ADVICE TO KIDS: Involve yourself in outdoor activities and studies of the natural world—rocks, plants and animals. Ask questions about things in nature, and go outside and investigate!



Nancy Schwartz, International Wolf Center

Michael Nelson is a wildlife research biologist for the U.S. Geological Survey, working out of the Kawishiwi Field Laboratory near Ely, Minnesota.



A Look Beyond

Who Should Pay for Wolf Recovery and Conservation after Federal Delisting?

by Nancy Weiss

At some time in the future, the gray wolf will be delisted from the federal Endangered Species Act, and wolf management will be turned over to individual states. When this happens, who should pay for continued wolf management, conservation and recovery? Interviews revealed a broad—but not universal—view that costs should be shared by the federal and state governments and private citizens who support wolf restoration.

Montana State Senator Jim Elliot is blunt. “The states don’t have money, period. And they don’t have money because, frankly, the federal government doesn’t give it to them. . . . If they want us to ‘take in the washin’,’ so to speak, I think that we should get paid for ‘the washin’.”

Jan Holder, a cattle rancher from Arizona, in the Mexican gray wolf recovery zone, runs a predator-friendly beef operation. She suggests shared costs, with the private portion from wolf supporters, since “there isn’t as much support for this type of program in a state like Arizona, which is very agricultural and very rural.”

Wildlife ecologist Nathan Varley has lived in Yellowstone National Park his whole life and worked for the park’s wolf reintroduction project. Varley sees a chance for innovative thinking. “[The wolf is] a good place to start and get non-consumptive users into game management [that] can be applied to other species, case by case. The more non-consumptive,

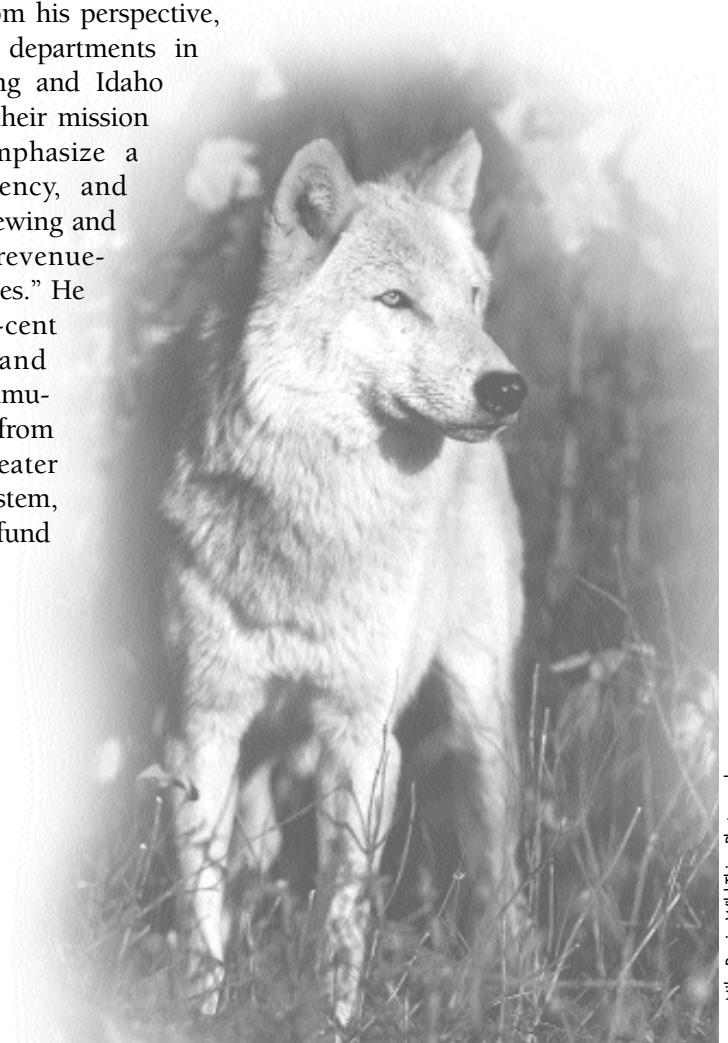
non-game type of use that comes with that money, the more changes that we can see in wildlife management in general. Wolves should be the pilot program.”

California business veteran and outdoor enthusiast Barry Braden has worked as volunteer field staff with Defenders of Wildlife’s Wolf Guardian program, and with the Nez Perce tribe in Idaho. From his perspective, “Fish and Game departments in Montana, Wyoming and Idaho need to overhaul their mission statements to emphasize a broader constituency, and include wildlife viewing and eco-tourism as revenue-producing objectives.” He backs a one-half-cent tax on goods and services in the communities that benefit from travel to the greater Yellowstone ecosystem, as well as a trust fund

that would let wolf and outdoor enthusiasts help pay for management costs.

Despite the broad range of perspectives, a consensus seems to be within reach on how to fairly and appropriately cover the costs of continued management, conservation and recovery of wolves. As this dialogue ensues, the wolf continues to provide lessons in communication, problem-solving and working together. ■

Nancy Weiss is the Western Director of Species Conservation for Defenders of Wildlife.



Mike Possis, Wild Thing Photography