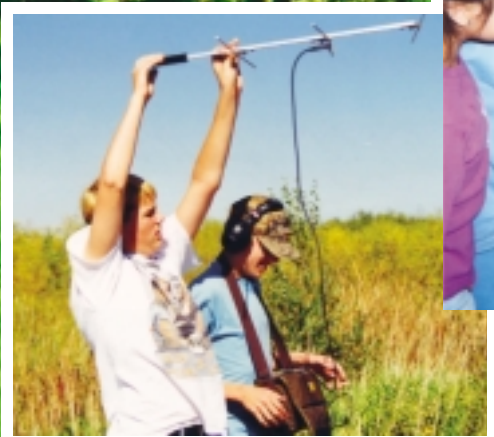


INTERNATIONAL WOLF

A PUBLICATION OF THE INTERNATIONAL WOLF CENTER
FALL 2004

Wolf Education in the 21st Century



INTERNATIONAL WOLF

THE QUARTERLY PUBLICATION OF THE INTERNATIONAL WOLF CENTER
VOLUME 14, NO. 3 FALL 2004

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International Wolf Center

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The Center also extends a special appreciation to Congressman James L. Oberstar (MN-08) and Congressman Martin Olav Sabo (MN-05) for their critical help in securing support for this issue.

Welcome the newest additions to the International Wolf Center.



Clockwise from top:
Nyssa (female) born 5-12-04;
Grizzer (male) born 5-5-04;
Maya (female) born 5-5-04.
See the latest on their progress
at www.wolf.org!

Photos: International Wolf Center

West Gate



Welcome Letter

Why This Special Issue on Education?

Welcome to this special wolf-education issue of *International Wolf*. As you open our pages, we open our thoughts to you about educating people about wolves. With wolves recovering in key areas of the United States and Europe, wolf education becomes increasingly important.

Not only are wolves inhabiting more areas of the country, they are also living closer to humans. Conflicts with human interests including livestock and pets are increasing.



L. David Mech

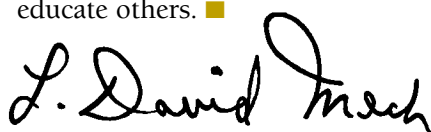
Some hunters are becoming concerned that wolves might kill too many game animals, and a few people fear for the safety of their children. All these concerns need to be kept in perspective, and it is only through public education that this can be done.

As with other wildlife, public agencies will manage wolf populations, and members of the public will disagree on what the proper approach will be. At present, several states are holding public discussions about wolf management and developing wolf management plans. Some people want wolves eliminated, while others object to any wolves being killed.

What is an objective and informed approach? Public officials must figure this out and try to accommodate the disparate wishes of the public. The better informed people are, the better public agencies can manage wolves to the greatest benefit for wolves and humans.

Thus, this special issue of *International Wolf* will help foster this effort. Because the International Wolf Center's mission is to advance the survival of wolf populations through education, this special issue of our magazine helps accomplish that mission straight on.

This issue of *International Wolf* is being sent not only to members, as usual, but also to educators and wildlife professionals in the various states where wolves live now or will soon. We hope each reader will find it valuable and use it to help educate others. ■



L. David Mech
Founder and Board Member, International Wolf Center

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We're Not in Kansas Anymore: The Rapidly Changing

When the Endangered Species Act was enacted in 1973, gray and red wolves were among the most prominent species listed. Managers planning ways to restore wolf populations recognized that success would depend on educating people about wolves. Wolves could never be restored if people continued to fear, hate and kill them as they long had. Wolf educators faced the challenge of reversing a tradition of wolf hatred that stretched back to medieval Europe.

Educators hoped to accomplish that goal by countering ignorance and falsehoods with facts. Sound science and wolf advocacy were nearly the same thing in those days, since to spread the truth about wolves was to show how badly they had been misunderstood and to make the case that wolves deserve a place to live.

Wolf educators fought old stereotypes with facts. They argued that wolves are no danger to humans. Educators explained that wolves evolved with wild ungulate populations and do not represent a threat to them. While educators acknowledged that wolves sometimes attack domestic livestock, they cited reassuring research showing that the percentage of such attacks was low.

Much early wolf education was conducted by wolf researchers, managers and their assistants—people with direct experience with wolves. Education often took the form of books and magazine articles based on scientific research. A number of sympathetic filmmakers added their efforts to the cause, and their

Because wolves living in developed areas inevitably prey on pets or livestock, some wolf educators have added a new message: we must set aside significant areas of wild lands where wolves can be wolves.

World of Wolf Education

BY STEVE GROOMS

films were aired on television.

Some of the most effective wolf education was accomplished with “ambassador wolves,” wolves habituated to humans that were taken on leashes into such public settings as schools and state legislatures. With infinite dignity and charisma, these ambassadors demonstrated the wolf’s better side. Ambassador wolves often have more emotional impact than any number of scientific findings.

The Two-Front War

Perhaps the most astonishing fact about the campaign to reverse American attitudes about wolves is how rapidly it achieved its goals. Wolf educators point to the early 1980s as a time when public opinion began to shift. Wolf hatred gave way to wolf tolerance and even wolf adoration.

In the Lake Superior states, wolves increased and occupied more habitats. The reintroduction of wolves into Yellowstone National Park created a robust wolf population that began dispersing into new regions. The Mexican wolf reintroduction in the Southwest and the restoration of red wolves in selected habitats along the eastern seaboard created more awareness of wolves in those areas.

With success came new challenges. Groups of ardently pro-wolf people arose, and some were as strident in advocacy as wolf haters had been in opposition. Their passionate advocacy sometimes thrust wolf educators into talking about the negative side of wolves. Wolf educators who had been fighting irrational wolf hatred found

themselves in a “two-front war,” arguing on the one hand that wolves are necessary animals, and on the other that they sometimes require management. Some pioneering wolf educators who had faced hostile groups of wolf-haters were suddenly being accused of supporting the “slaughter” of an endangered species. The politics of wolf education were becoming complicated.

The original wolf education message that “wolves are cool” became more nuanced and complex. The new message was based on the concern that wolf-human conflicts could inspire a resurgence of wolf

hatred. For some educators, the new message included endorsing lethal control of wolves that prey on livestock on the theory it is better to have depredating wolves removed legally by government agents than illegally by irate citizens.

Some research began to show that wolves have a dark side, further complicating the message of educators. Wolves sometimes adversely affect wild ungulate populations by preying heavily on the young. That can limit or greatly reduce local ungulate populations.

The use of ambassador wolves became controversial. In view of how



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Above: Some of the most effective wolf education was accomplished with “ambassador wolves.” This showed people the wolf’s better side.

Right: In the early years of wolf education, much of it was conducted by wolf researchers, managers and their assistants—people with direct experience with wolves.



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Many zoos, wildlife centers and wolf centers conduct educational programs.

well the public was accepting wolves, many educators believed the time had come to present a more nuanced and less sanitized view of wolves. Some educators worried that the image of a wolf on a leash sends the wrong message, encouraging people to regard wolves as handsome dogs. Still, some wolf educators continue to believe that ambassador wolves, properly used, convey a message more potently than any other educational technique.

Because wolves living in developed areas inevitably prey on pets or livestock, some wolf educators added a new message to wolf advocacy. If wolves are to live without forever coming into conflict with humans, they said, we must set aside significant areas of wild lands where wolves can be wolves.

Ever Greater Complexity

As modern wolf education moves into its fourth decade, complexity has become the norm. One example is the impact of geographic differences on wolf education.

In the Lake Superior states public attitudes toward wolves are remarkably positive. Having lived with wolves, people in the region know and tolerate wolves to an extent never seen before in a Western civilization. Wolf educators are able to present sophisticated, nuanced

views of wolves, even to school groups.

Wolf educators in major urban areas face entirely different challenges, as they are talking to people with little knowledge

about the natural world. Wolf educators in the urban East, for example, must confront old shibboleths about wolves eating humans and decimating deer herds.

In the American West, attitudes toward wolves are highly polarized. Some groups hate wolves and spread old myths about them. Other groups are ardently pro-wolf. Many Westerners who formerly gave no thought to wolves are taking an interest as wolves occupy territory from which they were extirpated many decades ago.

Wolf education is now being conducted through a far wider number of venues, formats, genres and agencies. Books about wolves proliferate, as do films and television shows. The abundance of animal shows on cable television means that wolf films air frequently, and wolf films are available for home viewing as DVDs and videotapes. Many zoos, wildlife centers and wolf centers conduct educational programs. Vast amounts of information (and misinformation) about wolves can be downloaded from the Internet. Colleges and schools now offer wolf education classes. Wolf tourism provides another way to learn about wolves. Animal rights and wolf advocacy groups spread their own vision of wolves.

Professional researchers and managers used to control the wolf

education message but no longer do. Increasingly, the voices doing most teaching about wolves are those of people who care about wolves or people who are professional communicators, not wolf researchers.

Wolf education and wolf advocacy are no longer automatically the same thing. Some wolf educators continue to see the world as hostile to wolves, so they continue to defend them vigorously. Other educators believe that the public has gotten beyond “Little Red Riding Hood” fairytales and is ready for a more complex and realistic vision of wolves.

Wolf education has changed radically in its short history. Because of increases in wolf numbers and wolf range, more people are learning about wolves from direct experience. The audiences interested in wolves have become larger and vastly more diverse. Similarly, there are more people doing wolf education—people with diverse backgrounds, motivations and views. There are more ways to communicate messages about wolves, including ways never imagined when the wolf was placed on the endangered species list.

Some wolf educators are nostalgic for the time when wolf hatred was rampant and the message of wolf educators was simpler and more passionate than it has become. But even they know that the bewildering complexity of modern wolf education is largely a result of the astonishingly effective job wolf educators have done. ■

The author wishes to acknowledge the help of wolf educators, including Les Lynn, Cornelia Hutt, Nina Fascione, Peggy Callahan, Anne Koenke, Doug Smith, Kent Weber, Dick Thiel, Norm Bishop, Jim Halfpenny and others. The insights in this article are theirs; the errors are mine.

Steve Grooms is a writer who lives in Minnesota.

At the

Productive wolf education should not only teach wolf biology but also foster discussion of moral and ethical issues inherent in wolf conservation.

Crossroads:

Toward a New Era in Wolf Education

Although wolf educators talk a good deal about the importance of moral values to wolf conservation, most wolf education programs focus predominantly on biology and devote little or no attention to values.

A few years ago, I attended a wolf seminar in Yellowstone during which I witnessed a revealing exchange. In a talk on wolf management, the instructor explained that it is often necessary to kill *individual* wolves in order to conserve wolf *populations*. Afterward, a student asked, "How can we justify the intentional infliction of suffering and death on a sentient animal *for any reason*?" "As I said," the instructor responded, "research shows that livestock depredation will rise to socially unacceptable levels unless managers are willing to kill offending wolves." Unsatisfied, the student responded simply, "That doesn't address my question."

Indeed, the instructor had not addressed the question, at least not directly. The student was asking a question about moral values—those deep-seated beliefs that concern "how we ought to live." Because the Yellowstone instructor did not recognize the moral nature of the question, he missed a valuable opportunity to help his students critically examine one of the many important moral issues in wolf conservation.

This exchange is emblematic of a pervasive contradiction in wolf

education. Wolf educators talk a good deal about the importance of moral values to wolf conservation. Yet most wolf education programs focus predominantly on biology and devote little or no attention to values. To understand this contradiction, we need to go back to the roots of wolf education in the field of biology.

The Virtues and Limits of Wolf Biology Education

From a historical perspective, wolf education might be more precisely termed wolf *biology* education. Wolf biologists founded the wolf education movement, taught most of the early programs, and established the science-based tools and standards that have

by JIM WILLIAMS

*Assistant Director for Education,
International Wolf Center*

guided wolf education ever since. As a result, today's wolf educators are all, in some sense, "biologists," if not by academic training then by their immersion in a professional community dominated by biology.

In large degree, emphasizing biology in wolf education makes sense. The wolf is, after all, an organism whose evolution, physiology, ecology and behavior can only be understood through the theories and methods of biology. On a practical level, biology-focused wolf education has advanced wolf conservation by tempering extreme pro- and anti-wolf views that are often based in part on misunderstanding of wolf biology.

But the wolf is not only an organism, and misunderstanding of wolf biology is not the only reason why extreme views of the wolf persist. The wolf is also the subject of human moral values whose great impact on wolf survival is sometimes independent of correct biological understanding. In our Yellowstone example, the student understood the instructor's science-based arguments but objected on ethical grounds, believing that individual wolves have moral standing that may supersede the value of population conservation.

Philosophers of science tell us that biology and the other "hard" sciences cannot answer such moral questions.

Despite this, the science-dominated wolf community continues to rely on science to understand and explain all things, including moral values. In wolf education, this misapplication of biology only further obscures already subtle and complex moral issues.

Wolves and Moral Values

Wolf education's failure to recognize and meaningfully examine moral values has broad implications. Wolf conservation is infused with conflicting moral values, and animal welfare is just one of several common moral themes. Other common themes concern the following:

Democracy: Wolf recovery is an antidemocratic imposition of elitist urban and suburban values on rural people, or the U.S. government unnecessarily constrains wolf recovery because it is beholden to politically powerful anti-wolf interests.

Virtue and vice: Wolves that play, cooperate, love and sing are the embodiment of virtue and the good life, or wolves that kill wastefully and mercilessly are the embodiment of evil and depravity.

Religion: Wolves are part of God's creation, and as such, we are obligated to protect them, or wolves are part of the wilderness that God intended man to subdue.

Spend enough time as a wolf educator, and you will encounter all of these moral themes and many more.

Political scientist Martin Nie argues in his book *Beyond Wolves: The Politics of Wolf Recovery and Management* that moral values like these are ultimately the basis of most



Lynn and Donna Rogers/www.bearstudy.org

sociopolitical disagreements about wolves. If Nie is correct and wolf education is failing to meaningfully address moral values, then the wolf education community's nearly exclusive focus on biology misses some of the core issues in the debate.

“Sound Science, Sound Ethics”

Ethicist William Lynn has offered a simple but profound solution to this dilemma. He terms it “sound science, sound ethics.” Sound science is the theory-rich, evidence-based knowledge that is relied on to ground our thinking about wolves in biological facts. Lynn argues that we need to *complement* sound science with a sound ethics equipped to illuminate the moral dimension of wolf conservation.

Easier said than done. Ethics is a distinct scholarly discipline, no less complex and demanding than biology. Wolf educators can no more simply begin teaching ethics competently than a carpenter could begin practicing dentistry. The wolf conservation community too often misses this crucial point, mistaking mere *conversation* about moral values for critical *analysis*. The result is that the discussions that do take place are often unproductive.

But what would sound ethics in wolf education actually do? Sound ethics must do at least five things for students:

- Identify and clarify the moral values that are often implicit and difficult to articulate.
- Examine the internal consistency of moral value systems.
- Examine the compatibility of moral values with the best available science.

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On a practical level, biology-focused wolf education has advanced wolf conservation by tempering extreme pro- and anti-wolf views that are often based in part on misunderstanding of wolf biology.

- Identify and remediate conflicting values.
- Develop and justify refined value positions that meet all of the above tests.

Educators of a scientific bent often ask whether this sort of approach can reveal a single right answer—an unambiguously “correct” moral value—and if not, whether such an approach has any practical worth. Most philosophers would not endorse the idea that we can reveal definitive moral truths analogous to biology’s hard and fast facts. But the assumption that moral values are, therefore, beyond rational analysis is incorrect. A sound ethics has the power to *refine* moral beliefs by identifying and eliminating inconsistencies, illogic and false premises. The prevailing moral beliefs on all sides of the wolf debate usually suffer from many such flaws. By eliminating them, we can raise the moral debate to a new level of rationality and integrity.

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Wolf biologists founded the wolf education movement, taught most of the early programs, and established the science-based tools and standards that have guided wolf education ever since.

A New Era in Wolf Education?

Incorporating a sound ethics in wolf education begins with improving the wolf education community’s knowledge of ethics. Improving knowledge of ethics requires formal training in ethics for wolf educators as well as the hiring of new wolf educators who already have strong training in ethics.

The good news is that there is a wealth of excellent scholarship on moral values and their role in conservation issues. If we in the wolf education community are willing to avail ourselves of this scholarship, we have the opportunity to offer enhanced educational programs whose sophisticated treatment of moral values *and biology* can do for the era of state wolf management what wolf biology alone did for the era of wolf restoration. Until we seize this opportunity, that student in Yellowstone will still be waiting for an adequate response to her question. Let’s not make her wait too long. ■

Wolf Education in

Can Ecotourism Improve Wolf-Human Coexistence?

by Christoph Promberger

During the past decade many people have become aware that the way we travel often destroys the reason why we travel. In many places the natural world has been damaged by an overabundance of visitors; local traditions and cultures have been converted into visitor attractions; and rich tourists display their latest-model cameras, clothing and mobile phones in often poor local communities.

Consequently, ways to develop a more sustainable tourism have been explored, and the term *ecotourism* was coined to describe these efforts. Ecotourism is also called nature tourism, sustainable tourism and

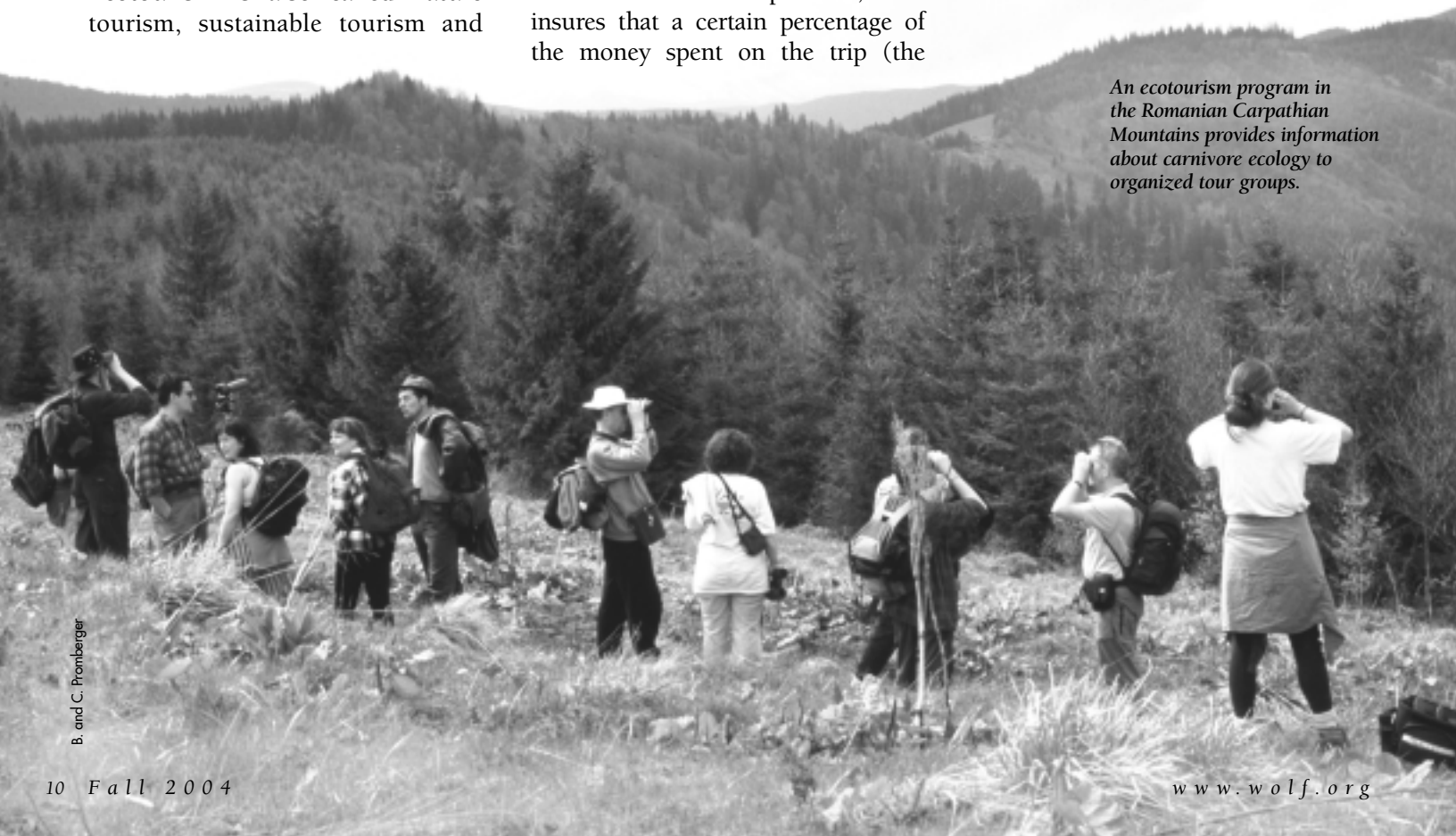
responsible tourism, but they all mean the same: respect for nature and for the people that live there.

The term ecotourism has been widely misused, however. A three-day trip from Europe to a South American national park with immense consumption of fossil energy represents ecotourism as little as a safari lodge owned by a multinational company whose profits leave the area. True ecotourism causes minimum impacts on the environment throughout the entire trip (including the environmental costs of traveling to the destination), includes information and education components, and insures that a certain percentage of the money spent on the trip (the

literature talks about 25 percent) remains in the local community.

As part of the Carpathian Large Carnivore Project, an international research and conservation project, I developed an ecotourism program in the Romanian Carpathian Mountains. The Carpathians form the most important stronghold of large carnivores in Europe, with 3,000 wolves, 5,500 brown bears and 2,000 lynx living together with some 5 million people in an area of about 70,000 square kilometers (about 27,300 square miles). The program worked through Western travel agencies, which sent organized tour groups to the area. All services within Romania were provided by local businesses, and with the exception of the travel agencies' overhead and the costs for transport to Romania, all money remained in the local communities. We

An ecotourism program in the Romanian Carpathian Mountains provides information about carnivore ecology to organized tour groups.



Action



Participants in an ecotourism program in the Carpathian Mountains learn that lynx and other carnivores don't live only in remote wilderness areas.

trained local guides to provide good information about carnivores and nature to the visitors, and each group was accompanied for two days by project staff in the field who explained carnivore ecology and our research.

As a result of the tourism program local people are more aware of carnivores and feel they have something that other people will travel far to experience. Local citizens are also more aware that the way they use or overuse their natural resources may influence future economic opportunities. After a week in the Carpathians, visitors from western Europe learn that wolves and bears don't live only in remote wilderness areas and that people in Romania can live successfully with carnivores.

Christoph Promberger has led the Carpathian Large Carnivore Project for the past 10 years and is currently engaged in the development of a Large Carnivore Centre in Romania. He also runs a horse-riding center, where people are taken out on horseback to view the fantastic scenery of the Carpathian Mountains. For more information, go to www.clcp.ro and www.equus-silvania.com.

Hunter Outreach: Face to Face Education

by Dorothy McLeer
and Nancy Warren

Every November, as if Muslims making a pilgrimage to Mecca, hundreds of thousands of hunters take to the north country of Michigan and Wisconsin to participate in the generations-old tradition of white-tailed deer hunting. During this popular season, these states have experienced rises in wolf shootings. To help curtail this illegal activity, the Michigan Department of Natural Resources (MDNR) created a program in the mid-1980s called *Hunter Outreach* to meet hunters face to face with information about wolves.

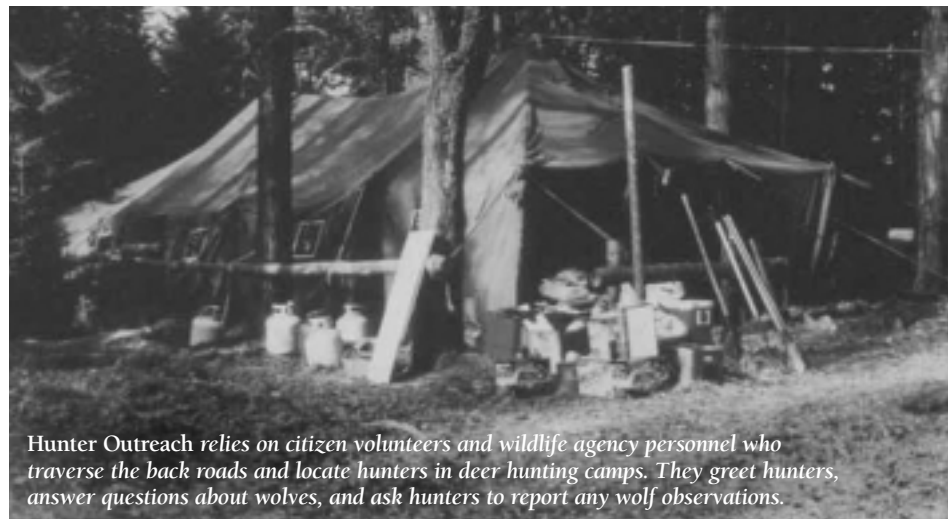
This program relies on citizen volunteers and wildlife agency personnel who traverse the back roads during the few days before the opening day of the season and locate hunters in deer hunting camps. Armed with packets of wolf information provided by the MDNR, the Timber Wolf Alliance and the National Wildlife Federation, they greet hunters, answer questions about

wolves, and ask hunters to report any wolf observations.

Jim Hammill, a now retired MDNR biologist and originator of *Hunter Outreach*, believes this program has been effective on several fronts. He says, "We believe that the presence of people afield during the firearm deer season deters those who may kill a wolf when no one is present. The observation reports submitted over time record a significant number of wolf sightings, helping greatly with winter population monitoring activities."

Recognizing a good thing, Wisconsin adopted *Hunter Outreach* three years ago when strong anti-wolf sentiment reappeared; the Timber Wolf Alliance now coordinates the effort with support from the Wisconsin DNR. This past deer season a dozen volunteers and forest service and DNR personnel took to the back roads and reached nearly a thousand hunters in northeastern Wisconsin and Michigan's western Upper Peninsula.

Dorothy McLeer and Nancy Warren are members of the Timber Wolf Alliance's Advisory Council and its volunteer Speakers Bureau. McLeer is one of the most involved of the Michigan Hunter Outreach volunteers, and Warren coordinates Wisconsin's Hunter Outreach.



Hunter Outreach relies on citizen volunteers and wildlife agency personnel who traverse the back roads and locate hunters in deer hunting camps. They greet hunters, answer questions about wolves, and ask hunters to report any wolf observations.

Elisabeth Duman

Can Attitudes Toward Wolves Change from Fear to Curiosity?

Experiences from an Educational Program in Norway

by Kristin Evensen Gangås

After decades of absence, wolves returned to the Stor-Elvdal municipality in southern Norway in the late 1990s, and their presence led to serious controversy. People asked questions about the chances of a wolf attacking children. Was it dangerous to walk in the forest, ski in wolf areas or pick berries? Words like “decreased quality of life” were heard more often.

In 2000, the Ministry of the Environment, for which I work, and local authorities started an educational program in Stor-Elvdal to help alleviate the controversy. The aim of the program was to increase knowledge about large carnivores. We did not take any political stance in the discussion. Lynx, bears and wolverines also occur in this area, so it was natural to treat all large carnivores as local species and to not make any of them “symbol species.”

People were invited to participate in outdoor activities like snow tracking, visiting old bear dens, radio tracking and looking at kills. We presented slide shows in schools and for the general public. The latest news about research was distributed in bulletins sent regularly

to every household in the municipality. People could join the researchers in the field, and school classes visited the college in the area that also runs a research station. We encouraged people to relate their experiences with large carnivores in the

bulletin, and quite a few took the opportunity. These efforts increased the understanding of how research works, and the divide between scientists and local citizens seemed to decrease.

When the project started, some folks claimed that it was just another manipulative project with a hidden agenda to make everyone have positive attitudes toward the wolf. But the children were enthusiastic and transferred this enthusiasm to their parents. When the project ended in December 2002, people asked for more, and some activities were continued in 2003 and 2004 and have become traditions.

The project was evaluated by NOVA (Norwegian Social Research). One conclusion was that people with no experience of conflict with carnivores found an opportunity to increase their knowledge without taking a political stance. Those who participated in project activities said that they increased their understanding of nature and also became more curious about large carnivores. In the first years after the wolf pack was established, the children expressed fear, and school staff hesitated to use their outdoor area because it was part of the wolves’ habitat. Today this is no longer an issue, and the school staff uses any area they find appropriate.

Our experience has been that people’s fear decreases over time as they become used to the presence of the wolves. But I think that citizens’ participation in the project activities and their increased knowledge accelerated the decrease in fear and controversy.

Norway now has similar projects, called “Living with Carnivores,” in eight other conflict areas. It will be interesting to see the results from these projects!

Kristin Evensen Gangås is a biologist with the Royal Ministry of Environment in Norway. This is her fourth year working on projects dealing with conflicts between large carnivores and local people.



Top: Children in Stor-Elvdal, Norway, participated in radio-tracking lynx and bears as part of a program to increase knowledge about large carnivores.

Bottom: Children in Stor-Elvdal, Norway, helped radio-collar a moose for a study on wolf-moose predation.

Wolves in Print Media: Information or Misinformation?

by Norm Bishop, International Wolf Center
Greater Yellowstone Ecosystem Representative

Many Americans use the popular media as their primary source of information about wolves. Unfortunately, what they get is often misinformation. Printed media such as national sportsmen's and livestock growers' publications and local newspapers in wolf country often spout what I call "barstool biology" to support their declarations and proposals against wolves and their recovery in the northern Rocky Mountains.

A popular theme among these writers is that wolves are a danger to people, especially children. Another is that as wolves return to the Rocky Mountain states, they will destroy elk and other game populations in unspeakably cruel and wasteful ways, and then turn to cattle and sheep, putting outfitters and ranchers out of business. They believe that anyone who appreciates wolves or supports their recovery is an eco-terrorist or bunny hugger who doesn't know the true destructive nature of wolves, hates hunters and hunting, and would take away the firearms used by hunters to feed their families.

Anti-wolf authors who spout "barstool biology" in printed media to support their opposition to wolves and their recovery provide golden opportunities to correct the record or clarify a misstated concept.

By misstating or misusing facts, anti-wolf authors provide golden opportunities to correct the record or clarify a misstated concept. I respond to misinformation published in the regional media through editorials and letters to the editor using credible, scientific sources. I avoid derogatory labels and keep my responses factual. I don't take on the emotional aspects

of articles by anti-wolf writers. The wolf literature and data compiled both before and since the reintroduction of wolves to Yellowstone and central Idaho—reports to Congress, environmental impact statements, annual reports and many scientific publications—help to refute the modern mythmakers and provide solid footing for correcting misinformation.

Norman A. Bishop was the principal interpreter of wolves and their recovery in Yellowstone National Park from 1985 to 1997. Since his retirement, he has continued to educate people about wolves.



Mike O'Connell

Education Goes Both Ways with Wolf Depredations

by Carter Niemeyer

Wolf depredations on livestock are emotional events that require thorough investigation and good communication. It takes only one phone call by an unhappy rancher for a depredation to turn political and be accompanied by a media circus.

I have built trusting relationships with ranchers by listening and being objective. Before I investigate a kill,

I listen to what the ranch family tells me. I always express empathy, but I also remind them that livestock die and can be killed in many ways. If I can establish that their animal was killed by wolves, I may suggest that we radio-collar a single wolf to find out how many wolves are in the area, and how problematic their presence could be.

My first objective is to stop the depredations. If that can be accom-

plished using nonlethal means, then wolves fare better, but I analyze each situation to see what kind of latitude the rancher will give me. I must abide by U.S. Fish and Wildlife Service policies, so I try to ensure that the rancher and I understand each other's positions.

I've found that trust and communication are the most important elements in resolving conflicts. In some cases wolves must die, but in all cases education goes both ways. Giving ranchers the opportunity to express their feelings about wolves (and about the govern-



Jenny Valdivia

ment) is the first step toward better cooperation and understanding among all of us.

Carter Niemeyer is the Idaho Wolf Recovery Coordinator for the U.S. Fish and Wildlife Service.



Above: Carter Niemeyer investigates wolf depredations on livestock. One aspect of his job is that sometimes wolves must be killed when nonlethal means do not stop the depredations.

Left: Niemeyer has found trust and communication to be the most important elements in resolving conflicts over wolf depredations.



Jonathan Chapman

Those promoting wolf conservation need to teach people not only about the ecological importance of this keystone species but also about who makes wildlife management decisions and how to reach and influence those people.

Educating for Change

by Nina Fascione

Education is the first step in wildlife advocacy. How can someone argue for a cause unless they are informed about the topic and understand how the political process works? Those promoting wolf conservation need to teach people not only why they should care about wolves—the ecological importance of this keystone species and the moral imperative to restore an animal decimated by human actions—but also about who makes wildlife management decisions and how to reach and influence those people.

There are examples from across the country of educated citizens aiding wolf recovery. Informed Oregonians recently defeated 10 bills that would have gutted protections for wolves in their state. In Vermont, wolf advocates halted proposed legislation that would have prohibited wolf reintroduction there.

And Alaska citizens have twice voted to ban the practice of aerial wolf control.

Advocacy brings together individuals whose voices might otherwise be lost. A single voice may not have much power, but there is strength in numbers. As with wolves, the chorus is heard not with a lone howl but the combined vocalizations of a pack. As Dr. Fred Harrington discovered and R. D. Lawrence stated in *In Praise of Wolves*, “when a pack calls in unison, the varying pitch of their voices may deceive a listener into believing that the number of wolves in the group is greater than it actually is.” Similarly, human activists can make more noise and consequently achieve greater conservation successes through the combined efforts of informed individuals. ■

Nina Fascione is the vice president of species conservation at Defenders of Wildlife.

Personal Encounter

Eyes on Wildlife

Text and photos by Becky Rennie

In the early 1990s, wolves returned to the northern edge of Otter Tail County, Minnesota. Rumors abounded, and speculations piqued the interest of my students. "Do we really have wolves here?" some asked. "What are they like? Are they mean?" These questions and more were addressed to me by students. "I don't know very much about wolves except that they are on the endangered species list," I replied. Our facts were limited and sketchy, and our opinions on whether it was desirable to have wolves return were based solely on the few things we had read or heard from others.

On a 1994 field trip to the Ely, Minnesota, area to study water quality, my students asked if we could visit the International Wolf Center to find out more about these mysterious animals. We did visit, and we learned. We sat in awe of the captive wolves; we knew it was a special opportunity to see a real wolf!

This was not an end to the questions, only the beginning. That visit sparked the design and implementation of *Eyes on Wildlife*, a high school science curriculum designed to provide authentic research opportunities for students. It was important to me, as a teacher, to nurture the natural curiosity these students had

about wolves. It was also important to me for these students to learn the facts and various opinions about wolves—to talk and work with people knowledgeable about this controversial animal.

A major goal of conducting wildlife research with students is to help them understand more fully their responsibility for better ecosystem management. Students who get to know a wildlife population well and share the information they have gathered in an objective way with experts and the community become empowered and believe they can make a difference in local and world problem solving.

Eyes on Wildlife, a high school science curriculum, provides research opportunities for students, such as using radio telemetry to track radio-collared wolves.



With program funding we traveled to Ely to learn about tracking radio-collared wolves, howling and other important information. We learned about the causes of the wolf population decline, the management plan to increase the population and the issues the plan raised. The staff at Vermilion Community College and the International Wolf Center prompted students to look at all sides of the issues and taught them to respect the concerns of various stakeholders. We learned that there are no easy solutions, but to get any solution at all, we need to work together. This philosophy became a cornerstone of the *Eyes on Wildlife* program.

Since those early years, students have conducted track pad and howling surveys in our area and have visited the Agassiz



Students learn how to locate radio-collared wolves by using triangulation.

National Wildlife Refuge and Camp Ripley to observe research biologists capturing and radio-collaring wolves. We study the habitat, make plaster casts of wolf tracks, collect scats and talk with field biologists about discoveries they have made about wolf behavior. Students receive the tracking data and plot the movements of the animals using GIS. This past winter we saw a wolf for the first time running through the woods at Camp Ripley! Once again, the students knew they had seen something not

everyone gets to see. But this was even more special; this wolf was not a captive wolf, this wolf was free.

We continue to study wolves every year. It is a success story in wildlife management and a constant reminder to us of how humans so dramatically affect the ecosystem. Are we making an impact on how students view wildlife management and the wolf in particular? I think so. I asked former students for their thoughts. Here are some of the responses:

Andy: "I thought of wolves as animals that run about causing mischief. But after the trip, I thought of them as animals that keep to themselves. The survival of the wolf is important because they help maintain the natural food chain."

Rachel: "When you study a particular animal in depth, you have a better understanding of how complex the ecosystem is and how it is all interrelated, how changes in animal populations affect people, and how what we do determines whether animals in the food chain live or die."

Patrick: "I have lived in the woods all my life, but I didn't realize that



Student participants in Eyes on Wildlife observe research biologists capturing and collaring wolves.



everything in nature is so closely knit together, that every animal is affected by every other animal. I have learned basic ecology, how things work in wildlife."

One of our project cooperators is Gary Huschle, a wildlife biologist with the U.S. Fish and Wildlife Service. "This project has far reaching benefits for our nation's conservation efforts," he says. "Students involved in this project will have a much greater appreciation for the environment, all aspects of a field research project, the professionals that care for it, and the role that public policy plays in conservation. . . . The success of this project will be measured when these students become community leaders and resource professionals." ■

Becky Rennie has been a science teacher for 24 years and has always strived to make education meaningful for students by linking with professionals in the community to provide authentic opportunities for students.

For more information:

- 🐾 Eyes on Wildlife: <http://www.mnstate.edu/regsci/eyes/project.html>
- 🐾 WISE: <http://wise.berkeley.edu>
- 🐾 International Wolf Center: <http://www.wolf.org>



Agree or Disagree?

Overview:

Students will differentiate between beliefs, values and attitudes, and then conduct a survey.

Directions:

The following definitions will be helpful for this activity:

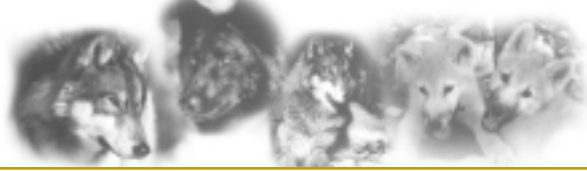
Belief: an assumption based on information. It may be right or wrong. Example: Where there are more prey, there are more wolves.

Value: a worth attached to an object, event, idea or place. Example: Wolves are magnificent animals.

Attitude: a position based on a belief or a value with a predicted behavior. Example: Wolves should be controlled and managed.

Instruct students to write a list of five belief statements, five attitude statements and five value statements related to wolves. Have students develop a survey to ask at least 30 other people whether they agree or disagree with each statement. Students will then report survey findings to the class. Be sure students phrase their findings properly, for example, "X percent of survey respondents agreed that..." instead of "X percent of people think that...."





Tracking the Pack

The International Wolf Center: Where Wolves Meet the Web

by Lori Schmidt, Wolf Curator,
International Wolf Center

The mission of the International Wolf Center is to advance the survival of wolf populations by teaching about wolves, their relationship to wild lands and the human role in their future. This mission is accomplished through exhibits, on-site educational programs, adventure programs, outreach education, teacher workshops, curricula, our quarterly magazine and our Web site. Our ambassador wolves are an important component of the Center's exhibits and educational programs and can now be seen on the Web.

Through a cooperative effort with ElyMinnesota.com, a company that offers Web services to Ely residents and visitors, three Web cams are maintained at the Center. Two cameras record the daily activities of the Exhibit Pack (Shadow, Malik, Grizzer, Maya and

Nyssa), and one camera offers a glimpse into the world of the Retired Pack (MacKenzie, Lucas and Lakota). You can view the wolves through these cameras by clicking on the "Watch Live Wolves" link on the Center's home page, www.wolf.org. Because the wolves are free to come and go from camera view, in summer you are most likely to see them when they are most active: before 8 a.m. and after 6 p.m., when temperatures are cooler. During the other seasons,

The ambassador wolves are an important component of the Center's exhibits and educational programs and can now be seen on the Web at www.wolf.org. News of the wolf care program is delivered via the wolf log section.





wolves may be visible any time of the day. Log in to see the wolves on the ledge rock in front of the exhibit or taking a swim in their pond.

News of the wolf care program is delivered on the Web via the wolf log section. These descriptions report the physical, behavioral and logistical details

of the ambassador wolves. Readers can even relive Shadow and Malik's puppy days through archived nanny notes posted near the wolf logs. These logs describe their growth, their development as yearlings, their testing of their older pack mates for status and the incidents that resulted in MacKenzie, Lucas and Lakota's retirement. These logs can also be a valuable resource to other facilities dealing with similar captive wolf issues, sharing and

collectively learning from the ambassador pack.

Look for Nanny Notes in summer 2004 as the Center begins the socialization process of three wolf pups preparing to join the Exhibit Pack. Weekly growth rates, behavioral development and vocalizations will be recorded and posted on the Web site for all to share. There may even be a live Web chat or two. Stay tuned, and see you on the Web. ■



Wolf Words

Overview:

Students react to statements in journal or essay form.

Directions:

Provide these statements to students and have them select one to respond to.

- In *A Sand County Almanac*, Aldo Leopold wrote, "The last word in ignorance is the man who says of a plant or animal, 'What good is it?'" React to this statement. What did Leopold mean? Do you agree or disagree?
- In 1854 Chief Seattle said, "If all the beasts were gone, man would die from a great loneliness of the spirit. For whatever happens to the beasts soon happens to man. All things are connected. . . . Whatever befalls the earth befalls the sons of the earth." What does Chief Seattle mean by these words? Do you agree or disagree?
- Barry Lopez writes in *Of Wolves and Men* that "in the wolf we have not so much an animal we have known, but one we have imagined." In what ways is this true? Is this positive or negative?
- Wolves are the subjects of myths, legends and fables. Explore the differences. Write a myth, legend or fable using the wolf as a central character.

**Wolf
Earth
Connect
Fable**

Wolf Watch Aboard the MV HYAK



Travel the protected waters of SE Alaska's inside passage. This remote area of mountainous islands, old growth timber and tidal estuaries is home of the Alexander Archipelago Wolf.

6 day, 5 night trips, meals, lodging, daily shore excursions into the best wolf habitat.

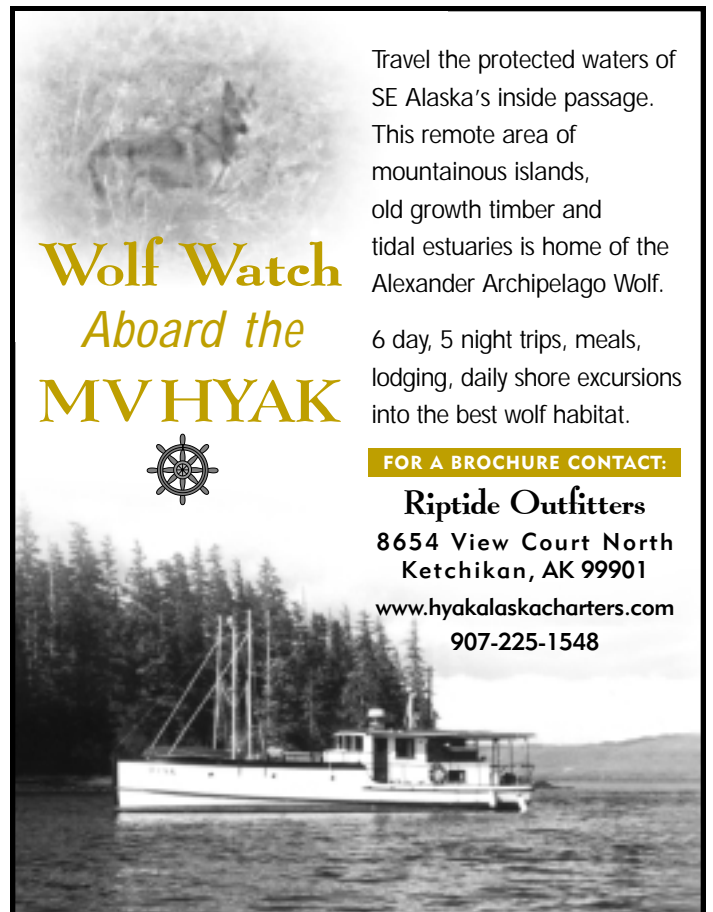
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In Memory of
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Jean Ruth
In Memory of
Catherine Peabody:
The Callahan Family
Erica Cardozas

*Nyssa curls up with Grizzer
for warmth and security.*



International Wolf Center

Thank You

Teaching Resources

Wolves for the Classroom: The Wolf as a Keystone for Teaching Essential Skills

compiled by Neil Hutt

Bookstores, libraries and online sources offer an almost limitless array of books and films about wolves. Wolf Web sites compete for attention. What are the best resources? Below are some suggestions for all audiences—teachers and students, parents, the general public. These selections are most appropriate for middle school, high school and beyond. In addition to teaching about the wolf, many of these resources encourage students to examine their individual and collective responsibility toward animals and the ecosystems that sustain them.

Through these books, videotapes and Web sites, the wolf becomes a collaborator in helping young people to practice active stewardship of the earth. Invite the wolf into your classroom to help students develop essential skills such as

- reading for information and pleasure
- organizing information
- learning by listening, viewing
- reflecting on learning
 - using technology to discover information
 - thinking logically, critically and creatively
 - asking questions
 - distinguishing between fact and opinion
- building vocabulary
- conducting research and crediting sources
- taking responsibility for the earth and its resources.

 Denotes items available for purchase online at www.wolf.org.

Books

These books contain accurate information and are fun and fascinating to read. Some are out of print, but they can be purchased from used-book vendors on selected Web sites for a fraction of the original price.

GENERAL INFORMATION

Wolves: Behavior, Ecology, and Conservation,

edited by L. David Mech and Luigi Boitani, University of Chicago Press, 2003.

The ultimate resource for anyone interested in wolf ecology, environmental science or conservation dynamics.

The Way of the Wolf,

by L. David Mech, Voyageur Press, 1991.

Wolves,

by Nancy Gibson, Voyageur Press, 1996.

Return of the Wolf,

by Steve Grooms, NorthWord Press, 1999.

The Wolf Almanac: A Celebration of Wolves and Their World,

by Robert H. Busch, Lyons Press, 1998.

The Company of Wolves,

by Peter Steinhart, Alfred A. Knopf, 1995.

The Great American Wolf,

by Bruce Hampton, Henry Holt and Company, 1997.



Of Wolves and Men,

by Barry Lopez, Scribner Classics, 2004.

Wolves of the World,

by Todd Fuller, Voyageur Press, 2004.

HISTORY OF THE WOLF IN NORTH AMERICA

War Against the Wolf: America's Campaign to Exterminate the Wolf,

edited by Rick McIntyre, Voyageur Press, 1995.

Wolf Wars: The Remarkable Inside Story of the Restoration of Wolves to Yellowstone,

by Hank Fischer, Falcon Press, 1995.

A Society of Wolves: National Parks and the Battle over the Wolf,

by Rick McIntyre, Voyageur Press, 1996.

ARCTIC WOLF

The Arctic Wolf: Ten Years with the Pack,

by L. David Mech, Voyageur Press, 1997.

Wolves of the High Arctic,

by L. David Mech, Voyageur Press, 1992.

RED WOLF

Journey of the Red Wolf,

by Roland Smith, Cobblehill Books, 1996.

Another Country: Journeying Toward the Cherokee Mountains,

by Christopher Camuto, Henry Holt, 1997.

UPPER MIDWEST

The Wolves of Minnesota: Howl in the Heartland,

edited by L. David Mech, 2000.

Keepers of the Wolves: The Early Years of Wolf Recovery in Wisconsin,

by Richard P. Thiel, University of Wisconsin Press, 2001.

Wolves of Minong: Isle Royale's Wild Community,

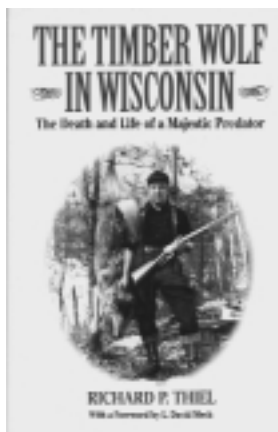
by Durward L. Allen, University of Michigan Press, 1993.

**🐾 *The Wolves of Isle Royale:
A Broken Balance,***

by Rolf O. Peterson,
Willow Creek Press, 1995.

***The Timber Wolf in Wisconsin:
The Death and Life of a
Majestic Predator,***

by Richard P. Thiel,
University of Wisconsin Press, 1993.



ALASKA

The Wolves of Denali,

by L. David Mech et al.,
University of Minnesota Press, 1998.

The Wolves of Mount McKinley,

by Adolph Murie, University of
Washington Press, reprint, 1985.

**NORTHERN ROCKIES AND
YELLOWSTONE NATIONAL PARK**

🐾 *The Wolves of Yellowstone,*

by Michael K. Phillips and Douglas
W. Smith, Voyageur Press, 1996.

***The Yellowstone Wolves:
The First Year,***

by Gary Ferguson, Falcon Press, 1996.

***The Return of the
Wolf to Yellowstone,***

by Thomas McNamee,
Henry Holt, 1997.

The Ninemile Wolves,

by Rick Bass, Houghton Mifflin, 2003.

🐾 *Yellowstone Wolves in the Wild,*

by James C. Halfpenny,
Riverbend, 2003.

SOUTHWEST

🐾 *The New Wolves:*

***The Return of the Mexican Wolf
to the American Southwest,***

by Rick Bass, Lyons Press, 1998.

***The Return of the Mexican Gray
Wolf: Back to the Blue,***

by Bobbie Holaday,
University of Arizona Press, 2003.

NORTHEAST

***The Return of the Wolf:
Reflections on the Future of
Wolves in the Northeast,***

edited by John Elder, University Press
of New England, 2000.

EASTERN CANADA

***Wolf Country: Eleven Years
Tracking the Algonquin Wolves,***

by John B. Theberge with
Mary T. Theberge,
McClelland and Stewart, 1998.

WESTERN CANADA

***The Buffalo Wolf: Predators,
Prey, and the Politics of Nature,***

by Lu Carbyn,
Smithsonian Institution Press, 2003.

STORIES

***Tales of the Wolf: Fifty-One Stories
of Wolf Encounters in the Wild,***

compiled by Denise Casey and Tim W.
Clark, Homestead Publishing, 1996.

***Wolf Songs: The Classic Collection
of Writing About Wolves,***

Robert H. Busch, editor,
Sierra Club Books, 1994.

🐾 *The Mountain Wolf's Gift,*

by Kevin Strauss, audio recording, 2003.

***The Wolf, the Woman,
the Wilderness:***

A True Story of Returning Home,
by Teresa Tsimmu Martino,
New Sage Press, 1997.

Hungry for Home: A Wolf Odyssey,

by 'Asta Bowen,
Simon and Schuster, 1997.



Videotapes

Because these great predators are among the most elusive animals, good documentary films are vital components of any education program about wolves. Each of the following films depicts wolves in the wild. They bring to the viewer the reality and complex nature of these flexible, intelligent and tenacious animals. Most are available for purchase, either online or in bookstores.

**🐾 *Wolves: A Legend
Returns to Yellowstone,***
National Geographic, 2000.

Wolf Pack,

National Geographic Television, 2003.
(Not produced for public sale at this time. Watch for televised reruns.)



**Canid Cinema: The Good,
the Bad and the Misleading**

Overview:

Students compare and assess film portrayals of wolves.

Directions:

Many people will never have a chance to see a wolf in the wild. Thus, many people learn what wolves look like and how they act by viewing films about wolves. Because of cost, time and other factors, different films reflect differing levels of realism in their portrayals of wolves.

View several films (or film clips) about wolves with students. You may wish to use some of the videotapes listed in the resource section on this page. Have students discuss and write about the effects of these films on the viewing public.

Discuss:

What is anthropomorphism? How does giving human characteristics to wolves or other animals enhance or detract from a film? Peter Steinhart says in his book *The Company of Wolves* that "we will always have difficulty separating what killing means to wolves from what killing means to humans." What do you think Steinhart means? Many documentaries on wolves do not show the close-up details of wolves killing prey. What decisions would you make in that regard if you were a filmmaker?



Was That a Wolf?

Produced by Bruce Weide and Patricia Tucker, Lonewolf Productions, 1992.

 **Wolves,**
IMAX, 2000.

Wild Wolves with David Attenborough,
PBS Home Video, 1997.

Following the Tundra Wolf,
narrated by Robert Redford,
Peace River Films, 1975.

 **White Wolf,**
National Geographic, 1988.

Wolves in Yellowstone,
an animated tale for children
based on the book by Randy Houk,
Alan Weiss Productions, 1995.

Web Sites

The wolf resources in cyberspace cover every topic from biology and ecology to recovery and management issues and back again. Some sites are informational while others are maintained by wolf advocates and political activists. Many of the sites will open windows on the world of wolves and other species and to endangered habitats as well. Some of the Web sites listed are "wolf specific," while others deal with biodiversity, species conservation and other environmental issues. Some contain teacher guides and activities.

www.wolf.org.

International Wolf Center. A great resource for students and teachers, this site includes online wolf tracking! Its site also includes access to hundreds of scientific articles about wolves. Be sure to check out the curriculum *Gray Wolves, Gray Matter*.

www.projectwild.org.

An interdisciplinary conservation education site.

www.kidsplanet.org.

Defenders of Wildlife's online wolf curriculum.

www.fieldtripearth.org.

The North Carolina Zoo's interactive Web site. Click on "All Field Trips" on the home page. This will take you to "Red Wolves of Alligator River."

www.searchingwolf.org.

Contains a comprehensive list of videos, books, articles, wolf education materials and more.

www.sinapu.org.

Native Carnivores in the Southern Rockies.

www.forwolves.org.

The Wolf Recovery Foundation.

www.northland.edu/soei/timber_wolf.asp.

Timber Wolf Alliance.

www.timberwolfinformation.org/kidsonly/kidsonly.htm.

Timber Wolf Information Network kids' site.

www.wolfsonalaska.org.

Wolf Song of Alaska.

www.redwolves.com.

The Red Wolf Coalition.

www.californiawolfcenter.org.

California Wolf Center.

www.defenders.org.

Defenders of Wildlife.

www.nywolf.org.

Wolf Conservation Center.

www.usgs.gov/education.

U.S. Geological Survey (USGS) education page.

www.fws.gov.

U.S. Fish and Wildlife Service (USFWS). Click on "Kids/Educators" for activities and a comprehensive list of links to environmental education sites.

<http://endangered.fws.gov/kids/heyteach.htm>.

USFWS endangered species activities.

<http://mexicanwolf.fws.gov>.

Mexican Wolf Recovery Program reports.

www.r6.fws.gov.

Western gray wolf status reports.

www.yellowstone-natl-park.com/wolf.htm.

Yellowstone Wolf Report Page.

www.nps.gov/yell/nature/animals/wolf/wolfup.html.

Greater Yellowstone Ecosystem Wolf Pack Territories. Click on "Kids' Stuff" for activities.

<http://www.windowsintowonderland.org>.

Electronic field trips in Yellowstone National Park. ■

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

www.wolf.org
the world's best
resource for
wolf information



Crunch the Numbers

Overview:

Students calculate wolf population predictions.

Directions:

Instruct students to imagine a hypothetical situation in which 10 wolves are introduced to a large island with 1,000 deer. For both species, students can assume a 50/50 split male and female.

Assuming no reproduction or deaths from other causes, how long would it take for the wolves to eat all the deer? (Students will need to research average kill rates.)

Assuming average reproduction rates and no deaths, predict the number of wolves on the island in three years? The number of deer? (Students will need to research average reproduction rates.) Accounting for both average kill rates and average reproduction

rates, predict the total population numbers for both species after 10 years.

Discuss:

Brainstorm the many factors that could influence the wolf and deer numbers on the hypothetical island. How can you measure those influences to factor them into the calculations? In what ways could humans influence the populations if they also lived on the island?



Educational Messages

What Should We Teach About Wolves?

Wolf education encompasses an enormous number of topics, only a portion of which can be included in time-limited educational programs. The International Wolf Center has developed a list of priority learning objectives to ensure that all students learn the basics about a few key topics. Complementary emotional and behavioral objectives outline the way we would like our students to feel and behave as a result of our educational programming.

This reference guide was developed by the International Wolf Center education staff and board education committee in collaboration with teachers, researchers and other education experts. Given limited time and resources, wolf educators may wish to select subsets of these points to create meaningful learning experiences for their audiences. Keep these objectives handy, and refer to them when designing activities for various audiences.

Recommended Learning Objectives

Students should *know*...

- **the wolf's natural history**

Adaptations: Wolves possess an array of physical and behavioral adaptations that help them survive in a variety of habitats.

Behavior: Wolves are social animals with distinctive behavior patterns.

Distribution: Wolves historically inhabited much of the northern hemisphere but today inhabit some two-thirds of their former range. In the 48 states where most wolves were eradicated wolf populations are recovering in several areas.

- **the wolf's place in the ecosystem**

Habitat needs: Wolves can live in a wide variety of habitats; their primary requirements are a sufficient prey base and tolerance by humans.

Relationships with other species: Several species are closely affected by wolves, especially prey, scavengers and other carnivores.

Relationship to wild lands: Wolves conflict less with humans in wild lands; large-scale biological corridors and networks of interconnected preserves are most effective for wolf conservation.

- **the nature of the wolf's interactions with humans**

Cultural: Cultural values color how humans understand, value and treat wolves; wolves are viewed differently in different cultural traditions.

Geographic: Conflicts often arise in areas where wolves and humans both live; habitat fragmentation and loss are causing ideal wolf habitat (wild lands) to disappear.

Historical: Intentional poisoning and eradication efforts caused the wolf population to drop in many parts of the world; both wolf range

and population numbers were significantly affected by humans.

Economic: Economic realities affect human decision-making about wolves; wolves affect human economic realities mainly through predation on livestock, pets and game animals.

Political/social: Wolf survival depends on political decision-making processes; wolf issues magnify existing political and social issues. As wolf populations increase in the United States, federal protection will be lifted and management returned to the states, raising new questions about population sustainability, habitat, conflict with humans, and the nature of recovery.

Recommended Emotional Objectives

Students should *feel*...

- informed about wolves, their environment and their relationship to humans;
- inspired to learn more about wolves and wild lands;
- awed by the complexity of the environment;
- respect for the wolf as a wild animal and for its place in the environment;
- optimistic about coexistence between wolves and humans;
- reassured that the wolf is rarely a threat to human safety.

continued on next page

What Should We Teach About Wolves?

continued from page 25

Recommended Behavioral Objectives

Students should *act* by...

- learning more about wolves and their relationship to wild lands;
- communicating about wolves and their relationship to wild lands;
- building conflict-resolution skills to objectively participate in the survival of wolf populations and wild lands;
- taking a broader interest in environmental issues;
- using talents, resources and skills to support agencies and organizations whose activities align with their values.

A balanced approach to wolf education ideally creates students who develop a deep understanding of both the biological and social dimensions of the wolf's life and future. Audiences will come to believe that as individuals and collectively, they are responsible for helping to ensure long-term survival of wolf populations and wild lands. By modeling respect for diverse opinions and voices, objective education portrays the wolf as a salient, intriguing animal, neither good nor bad. Because we cannot fully understand wolves without understanding their role in the environment, wolf education must address the preservation of wild lands as an important component to wolf survival. ■

www.wolf.org

*the world's best
resource for
wolf information*

Educator Workshops

Wolves engage learners of all levels like few other subjects can. The International Wolf Center's *Gray Wolves*, *Gray Matter* workshops help classroom teachers, naturalists, curriculum specialists and youth leaders gain new knowledge, skills and resources for teaching about wolves effectively and objectively.

In a recent workshop, for example, the International Wolf Center partnered with the Leopold Education Project to offer three days of curriculum training, wolf experiences and reflections on the classic writings of Aldo Leopold. The workshop was sponsored by the Kenosha Chapter of Pheasant's Forever with a generous donation.

Gray Wolves, *Gray Matter* workshops focus on teaching ideas and background information for presenting wolf management controversies to students in grades 6 through 12. The workshop materials help teachers develop their students' understanding of stakeholder perspectives, the ecological impacts of wolf recovery and the role of human values in public policy decision making. Participants experience a variety of teaching techniques as well as opportunities for discussion and reflection. Graduate credits are usually available, too!

Workshops are being scheduled around the country. Sign up for our *Rendezvous e-Newsletter* for educators to receive the latest updates on workshops and teacher resources: http://www.wolf.org/wolves/learn/educator/edu_main.asp. ■



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Janine Newhouse



Will the Real Wolf Please Stand Up?

Overview:

Students examine their perceptions, thoughts and feelings about wolves and the origins of their knowledge about wolves.

Directions:

Have students draw a picture of a wolf in the center of a sheet of paper. Say the word "wolf," and give students three to five minutes to write any words or phrases that come to mind. Discuss with students the meanings of the words *fact*, *fiction* and *opinion*. Have students divide another sheet of paper into three columns headed by these words. Ask them to place their "brainstorm" words in one of these three categories. Students then total the responses in each category to get an idea of the basis of their knowledge and beliefs about wolves. Divide the class into groups, or "packs," to discuss their concept maps and compare them. Discuss the

basis of personal beliefs and how they influence our perception of information as fact or fiction.

Discuss:

On what do we base our beliefs and perceptions? How might knowledge and the acquisition of information change someone's beliefs? Can you think of some once firmly held beliefs that have been proven wrong?



MINNESOTA ZOO
Changing how you see the world

Two new additions to the Mexican Wolf population!



On May 13, 2004, Mexican wolf pups were born at the Minnesota Zoo. This is the second year in a row the Minnesota Zoo has had successful breeding of this endangered

species. The pups have joined their parents and seven brothers and sisters (last year's litter) in the exhibit, making for exciting viewing. Be sure to stop by the Wolf Gazebo on the Northern Trail next time you visit the Minnesota Zoo!

Join us for Autumn Howl at the Minnesota Zoo October 21–24, 2004 • 9–4 daily

Learn about the Zoo's conservation efforts with the Mexican Wolf Program. Talk to the Zoo keepers who care for the wolves. Costumed characters from the International Wolf Center and other kids' activities make this a fun, educational event for all ages.

For more information about Autumn Howl, Family Zoo Adventure classes and event schedules, please visit us at www.mn zoo.org or call 952.431.9200.

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A Look Beyond

Of Wolves and Wild Lands

by Andrea Lorek Strauss,
National Information and Education Director, International Wolf Center

The wild lands surrounding Yellowstone National Park, known as the Greater Yellowstone Ecosystem (GYE), are rapidly being changed by residential population growth and commercial development. In fact, the twenty counties in the GYE are growing faster than any state in the country, faster even than Arizona and Florida. Commercial development of land for ski areas and oil and gas extraction continues to change the landscape for wolves, their prey and other wildlife.

Northeastern Minnesota is another area where wolves have a strong presence, and the Ely area—the heart of wolf country—has been named in *MSN Money* magazine as one of the top 10 emerging second-home markets in the United States. This will no doubt spur even further interest in home building and all the associated infrastructure.

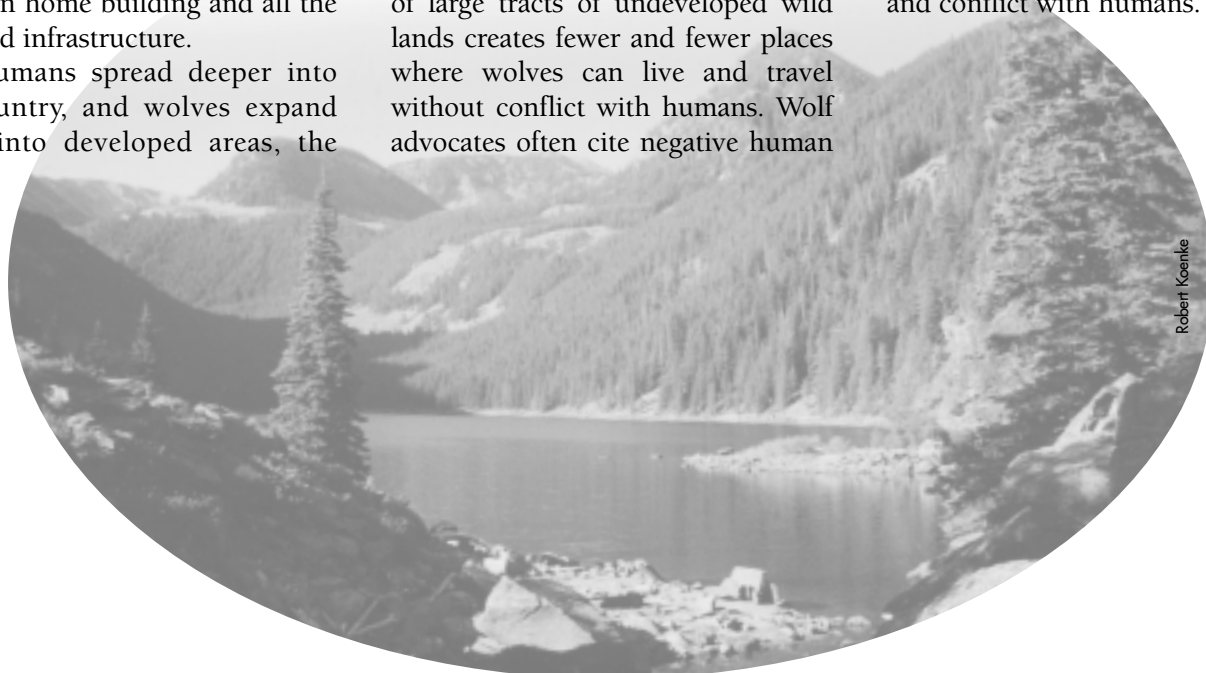
As humans spread deeper into wolf country, and wolves expand deeper into developed areas, the

two are on a collision course. Livestock and pet damage by wolves is well documented, and research is now confirming the displacement of wildlife by roads and human-built structures. Imagine being an elk spending your summer in Yellowstone National Park, then migrating to a nearby valley for the winter only to find that where last year's trees and grasses grew now stands a three-bedroom home on a fenced-in, 20-acre "ranchette"!

With human land-use patterns rapidly changing, wolf education must also be land-use education. One of the primary reasons that species become endangered is habitat loss and fragmentation. For the present, there is enough wild land to prevent endangerment of wolves. However, the increasing rate of urbanization and suburbanization of large tracts of undeveloped wild lands creates fewer and fewer places where wolves can live and travel without conflict with humans. Wolf advocates often cite negative human

attitudes as the wolf's biggest barrier to survival, but perhaps those with positive attitudes toward wolves and wilderness who build the ranchettes or second homes and use the increased networks of roads create just as much of a barrier to wolf survival.

Unless every citizen makes the connection between their actions and the environment, wolf populations will grow into a shrinking wild landscape that leaves little room for them or other wildlife. The choices our society makes about land use—collectively and as individuals—affect wolves on every level. Instead of focusing on preserving individual wolves, wolf education should focus on the need for preserving enough wild lands to allow wolf populations a place of their own to function naturally without being forced to compete and conflict with humans. ■



Robert Koenig