INTERNATIONAL

NEW 2008–2009 RETAIL CATALOG INSIDE!

> A PUBLICATION OF THE INTERNATIONAL WOLF CENTER FALL 2008

WOLVES CHALLENGE VIDEO GAMERS, page 4 EASTERN COYOTES—ARE THEY HYBRIDS? page 7 NEVER CRY WOLF REEXAMINED, page 11



THE QUARTERLY PUBLICATION OF THE INTERNATIONAL WOLF CENTER VOLUME 18, NO. 3 FALL 2008

Features





4 WolfQuest: A New Breed of Video Game!

WolfQuest, a new educational video game created by the Minnesota Zoo and eduweb with content expertise provided by the International Wolf Center and other wolf biologists, merges the natural mystery and charisma of wolves with the immersive, compelling drama and action of video games.

Grant Spickelmier

7 Eastern Coyote: Coyote, Wolf, or Hybrid?

Eastern coyotes have been an enigma to scientists and laypeople for many years. Emerging data have shed new light on this potentially distinct species, which may be a hybrid between coyotes and a small type of wolf.

Jonathan G. Way

1 The Mixed Legacy of Never Cry Wolf

Farley Mowat's *Never Cry Wolf* is the most popular book written on wolves. But charges of falsehoods have swirled around the book, starting even before it was published. The author examines Mowat's loose approach to the truth and its effect on the book's legacy.

Steve Grooms

Departments

3 From the Executive Director



17 Wolves of the World



23 A Look Beyond

On The Cover

"Winter Wolf" art quilt designed and created by artist Toni Whitney. Quilting by Carol Rockwell.

For more information about Toni Whitney's designs, please visit Bigfork Bay Cotton Company at www.bigforkbaycottonco.com.

Order the wolf quilt kit at www.wolf.org.

Cover photography by John Stalowy, www.johnstalowyproductions.com.



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International Wolf is a forum for airing facts, ideas and attitudes about wolf-related issues. Articles and materials printed in *International Wolf* do not necessarily reflect the viewpoint of the International Wolf Center or its board of directors.

International Wolf welcomes submissions of personal adventures with wolves and wolf photographs. Prior to submission of other types of manuscripts, address queries to Mary Ortiz, publications director.

International Wolf is printed entirely with soy ink on recycled or recyclable paper. We encourage you to recycle this magazine.

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

Opportunity to Invest in Minnesota's Future

Minnesotans have an opportunity this upcoming election to make a significant investment in natural resources that will have an impact on wolves and the wildlands they need for survival. It is called The Clean Water, Land and Legacy Amendment, which passed

the Minnesota Legislature. The constitutional ballot asks voters to increase the state sales tax by 3/8 of one percent to fund wildlife habitat, clean water, parks and cultural heritage for 25 years.

This small portion yields big rewards for our wildlife habitat. Approximately \$250 million would be dedicated to habitat, water resources, parks and trails. "The biggest threat to long-term survival of wolves is viable habitat that hosts healthy prey populations, secure areas for dens and wide swaths of land that allow healthy dispersal of wolves, thus avoiding conflicts with livestock," says Nancy Gibson, an International Wolf Center board member.

Minnesota's northern forests are rapidly becoming fragmented due to large tracts of land being sold by the forest industry. Prairies face an even worse fate. Meanwhile, state funds are at an all-time low. This is the tipping point in the fight to preserve our land and water. It is the funding we badly need to protect our vanishing landscapes. We encourage voters to approve this amendment for wolves, wildlife and future generations.

For more information, visit http://www.yesformn.org.

CORRECTION:

In the Summer 2008 issue of *International Wolf*, credit for the content and quotations in the article "The Way We Were" was mistakenly omitted. The author based the content on and used quotations from interviews conducted by George Desort during the past four years while working on his feature-length documentary *Fortunate Wilderness, the Wolf and Moose Study of Isle Royale*, which premiered on Isle Royale on July 25, 2008. We regret the error.

From the Executive Director

ow two months into the job of executive director of the International Wolf Center, I am finding it very exciting with many good challenges ahead. Previously, I was the executive director of two environmental organizations for six years each and of a national trade association of small-business owners. I then spent 10 years consulting with a variety of nonprofits, mostly conservation and environmental groups. The activities and plans of the Center are always growing, and I will share just a few here.

As everyone knows, the past 10 years have seen the world and societies change dramatically as a result of the explosive growth and development of the Internet. Like it or not, we are now in a global economy. Fifty percent of students at Harvard established accounts



on Facebook when it was only four months old, and by some estimates, 98 percent of all college students have at least one account on social media networks-Facebook, MySpace, blogs, Wikis and so on. Newspapers are struggling because Internet advertising dollars are increasing at a rate of 25 percent per year. Internet demographers say even those of us 62 years and older spend an average of 45 minutes per day surfing the Web. Who'd have thought?

The International Wolf Center is on this train and in the process of installing a powerful new relational database and rebuilding our Web site

Marc Anderson

from the ground up for easier navigation and better organization. The reorganized site will also help us to better determine what information our visitors would like to receive. This development is a major transformation for the Center but an essential one to fully participate in all the Internet has to offer. Don't worry, though, the look and feel of our award-winning Web site will not change.

As wolves worldwide face great challenges, the Center remains a neutral, science-based organization to provide all stakeholders with the real facts about wolves. With this knowledge they and the general public will come to thoughtful, intelligent decisions about how best to recover and manage wolves. Throughout history, myths born of imagination and folklore have caused wolves to be feared and hated, when in actuality they are just another essential species fulfilling their place in the environment. Whenever an entire population is removed from an environment, it causes changes both up and down the food chain.

As the International Wolf Center launches a new chapter of growth, I am looking forward to working with you, our members and the Center team in the critically important role of increasing knowledge about the wolf. We could not do this without your concern and generous support. Thank you.

Man Chicken

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International Wolf

eo Game!

The tawny female scans the horizon, searching for prey. She knows from past experience that elk often frequent this valley during fall. She breaks into a slow lope, not 1 14 only scanning back and forth with her eyes but also using her keen sense of smell. Wait! She slows down as she picks up the scent of a cow elk nearby. It's fresh! She begins to pant as she follows the scent trail over a rise—there! She spots the herd grazing just next to a small stand of Douglas fir at the base of Amethyst Mountain. Now the real test begins. As the female runs toward the herd, they scatter in all directions. She scans the herd for weakness. As a single wolf recently dispersed from her natal pack, she doesn't have much of a chance of bringing down a healthy adult elk by herself. Even an old or weakened cow will test the limits of her strength and stamina. All the same, hunger drives her forward. If she doesn't succeed today, she doesn't eat, and that will only make it harder the next day for her to win her never-ending struggle to survive!

by GRANT SPICKELMIER

Images courtesy of Grant Spickelmier, Minnesota Zoo

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This description might seem like something from the journal entries of an experienced wolf researcher or possibly the story line created for a new IMAX documentary. Instead, this scenario is played out everyday firsthand by thousands of youths playing *WolfQuest*, a new educational video game available for free download from the Internet.

WolfQuest was created by the Minnesota Zoo and eduweb, a leading developer of online learning games, with content expertise pro-vided by the International Wolf Center and other wolf biologists, and funding by the National Science Foundation. Designed for teens and

preteens, *WolfQuest* merges the natural mystery and charisma of wolves with the immersive, compelling drama and action of video games. The main goal of *WolfQuest* is to promote interest in wolves and conservation by teaching about wolf behavior and ecology through exciting 3-D game play and intense social interactions both in the game and on the *WolfQuest* Web site (www.wolfquest.org).

Left: WolfQuest's game world is based on Digital Elevation Models of four square kilometers (1.4 square miles) of Specimen Ridge in Yellowstone National Park, an actual location where wolves hunt.

WolfQuest: Amethyst Mountain (the first episode) was released on December 20, 2007. Players start the single-player game as a lone wolf in Yellowstone National Park recently dispersed from its natal pack. They must quickly learn how to survive through trial and error, instinct, and experience. They must hunt elk, harass coyotes and avoid grizzly bears and aggressive stranger wolves, all while searching for another dispersed wolf with which they might start their own pack. In the multiplayer version, players begin with a pack of up to five wolves played by friends over the Internet. Multiplayer packs use a safe in-game chat function to talk to each other while working together to bring down prey and establish territories.

WolfQuest employs some of the latest in 3-D game technology to immerse the player in the world of the wolf. The game world is based on Digital Elevation Models of four square kilometers (1.4 square miles) of Specimen Ridge in Yellowstone, an actual location where wolves hunt. The flora and fauna in the game are representative of plants and animals that might be seen during a visit, and the game mechanics simulate as closely as possible real wolf movements and behavior.

By carefully balancing "fun" and "realism" in the design of the game, we hoped to attract and educate an audience of sophisticated gameplaying youths. Since the game's launch, over 170,000 people around the world have downloaded the game, including players from all 50 states and more than 200 countries. Among WolfQuest youth players (ages 10 to 19-about 56 percent of the total audience) in the United States, one-quarter are minorities, and nearly half are female, indicating that the game has reached groups typically underserved by science education. This has all been accomplished with almost no marketing budget, relying instead on the power of "viral marketing" to drive interest in the game.

Alongside the game, one of the most exciting and educational aspects of the *WolfQuest* project has been the vibrant and thriving community that



has formed on the *WolfQuest* Web site to discuss wolves and wolf issues. The *WolfQuest* online forum launched in July 2007 and has quickly become the central hub

In the multiplayer version of WolfQuest, players begin with a pack of up to five wolves played by friends over the Internet. They use a safe in-game chat function to talk to each other while working together to bring down prey and establish territories.

WolfQuest's game mechanics simulate as closely as possible real wolf movements and behavior.



WolfQuest players must hunt elk, harass coyotes and avoid grizzly bears and aggressive stranger wolves all while searching for another dispersed wolf with which they might start their own pack.

for *WolfQuest* fans. Actively managed by the *WolfQuest* project coordinator and several volunteer moderators, this forum has grown with the game launch and now has over 7,300 registered users (visitors must register if they want to submit a comment; they don't have to register to read the forum) and 200,000 posts (averaging over 900 posts a day).

Along with helping players find solutions to technical problems, the forum has become WolfQuest's most direct educational tool, allowing visitors to ask questions about wolves and to dialogue with other forum users and with wolf authorities about wolf issues. Current discussions include wolves being removed from the endangered species list, wolf pack hierarchy, wolf reintroductions, and the appropriateness of keeping wolves as pets. These discussions are primarily user generated and managed, with our project coordinator and wolf experts stepping in when appropriate to provide information and to guide the discussion.

The WolfQuest content team includes wolf researchers Dr. L. David Mech and Dr. Dan MacNulty, Jack Grisham, the chair of the Canid Taxon Advisory Group for the Association of Zoos and Aquariums, as well as experts from the Minnesota Zoo, the International Wolf Center (www.wolf.org) and Yellowstone National Park.

WolfQuest challenges many societal stereotypes about wolves, video games and science education. The game presents an objective alternative to both overly negative and overly positive stereotypes about wolves that have been reinforced through myth, media and misunderstandings. Wolves are not portrayed as blood-thirsty killers but instead as predators who must struggle mightily to bring down an elk and then defend their prey against persistent coyotes and bears. At the same time, those things wolves do that make humans un-

comfortable (such as their tendency to hunt weak animals in a herd) are portrayed with equal honesty.

WolfQuest is also a challenge to stereotypes about educational video games. Instead of relying on endless text to provide the "learning" in the game, WolfQuest strives to create learning through game play. Players learn how to survive as a wolf through trial and error, just as a real wolf does.

Finally, the *WolfQuest* game and Web site represent a new model for informal science learning. With an engaging forum and user-generated content including wolf art, stories, photos and videos hosted on the site, *WolfQuest* has created a safe and engaging arena where youths interested in wolves and wolf issues can dialogue directly with wolf researchers and scientists.

Today's young people are increasingly removed from nature. Saturated with media from infancy, few young people have more than an occasional encounter with natural environments or wildlife. The most critical goal of WolfQuest is to engage this teen culture immersed in digital media with wildlife conservation, utilizing video-game tools usually used to create fantasy worlds of make-believe to instead engage players with the real world of wolves and wolf conservation. WolfQuest invites players to enter an amazing world of wonder and adventure on their computer and then encourages them to explore and learn about the even more incredible real wolves the game is based on.

Grant Spickelmier is the assistant director of education at the Minnesota Zoo in Apple Valley and may be contacted at gspicke@mail.mnzoo. state.mn.us.





The eastern coyote started to appear in northern New England and New York in the 1930s and 1940s and currently inhabits all of the northeastern United States and southeastern Canada.

astern coyotes (coyotes living In northeastern North America) have been an enigma to scientists and laypeople for many years. This coyote started to appear in northern New England and New York in the 1930s and 1940s and currently inhabits all of the northeastern United States and southeastern Canada, ranging from wilderness to urban areas. The animals are often described as a big version of a covote or a small wolf, and many northern New Englanders still call them coy-dogs. Until recently, however, there was only speculation as to what this

Easter Coyote,

animal actually is. Now, emerging data have shed new light on this potentially distinct species.

I recently reviewed available data on coyote mass (weight) throughout North America and found that the coyote living in northeastern North America is indeed the heaviest version of coyote. It is clearly heavier than the nearest subspecies of coyote, *Canis latrans thamnos*, found in the midwestern United States. While size dimorphism was observed between sexes (males being heavier than females), which is consistent with observations of other Canids, eastern coyotes were so big that females from the Northeast were 21 percent heavier than male coyotes from outside that region. Furthermore, although Bergmann's rule (i.e., larger size with increasing latitude) has been posited to explain the larger sizes of mammals in colder climates, findings from my study indicate that longitude (degrees west to east) accounted for greater than four times the amount of variation in coyote mass than did latitude.

Most of the studies in the northeastern United States measured coyotes heavier than 40 pounds,



It is obvious that the eastern coyote is indeed distinct when I compare the size and physical makeup of eastern and western coyotes; I see a more massive eastern coyote that looks very similar to the red wolves that have graced the covers of past issues of *International Wolf*.

which are rare in other parts of the country. I radio-collared a 55-pound female eastern coyote on Cape Cod, Massachusetts, that traveled with more normal-sized (smaller) eastern coyotes. I tracked her for over eight years and documented her giving birth to six litters before she left her territory, becoming nomadic until ultimately getting shot.

Theories as to why eastern coyotes are bigger include response to enhanced food supply or larger prey, genetic adaptation to prey, or their being coy-dogs (that is, a coyote-dog mix). Most of the evidence discounts these theories since medium-sized food (mice and rabbits) and deer are abundant throughout the United States, and coy-dogs reproduce in fall and give birth in winter instead of mating in winter and giving birth in early spring, like the normal wild canid cycle.

The most plausible scenario is that the eastern coyote is actually a hybrid between coyotes and a small type of wolf. Dr. Brad White's research team at Trent University reported that the wolves found in southeastern Canada may actually be the same species as the red wolf (*Canis rufus*, or *Canis lycaon* as proposed) found in the southeastern United States. This "eastern wolf" is smaller, weighing about 60 pounds, and is thought to be more closely related to the coyote than to the gray wolf because both are theorized to have evolved in the New World whereas the gray wolf originated in the Old World. Thus, White's research group theorized that the genetic similarity of the coyote and Canis lycaon might facilitate hybridization, especially when populations are low in an area. (In fact, the biggest threat currently facing the red wolf in the southeastern United States is hybridization with coyotes colonizing the periphery of the North Carolina red wolf recovery area.)

I have been collaborating with White's genetic team, and they recently finished analyzing the genetic results of about 75 of our samples from eastern Massachusetts. Perhaps not surprisingly, they did find evidence for hybridization. They found that our study subjects were mainly eastern coyote, but all also had western coyote and eastern/red wolf genetic influence as well. White believes the eastern covote should be classified as its own species because all of the samples from the Northeast (including from Massachusetts, New York, Maine, and New Brunswick) grouped more closely to each other than to western coyotes or wolves. Interestingly, biologists call these same Canids "Tweed wolves" in Ontario, and White notes that they are a product of hybridization between eastern coyotes and eastern wolves.

We are still trying to sort through this "canid soup" and have found variability within study areas with some "coyotes" having nearly pure red/eastern wolf and others having much western coyote DNA. We will likely not be able to officially call the eastern coyote a new species until we sample throughout the Northeast and determine where they become less "eastern coyote" and more "western covote" or "eastern wolflike." However, it is obvious that the eastern coyote is indeed distinct when I compare the size and physical makeup of eastern and western coyotes; I see a more massive eastern coyote that looks very similar to the red wolves that have graced the covers of past issues of *International Wolf*.

"coy-wolf" Ecologically, this behaves as one might predict for a 30-to-40-pound Canid. On average, it has a larger home range than most western coyotes (but smaller than wolves, at about 10 square miles), it travels long distances daily (10-15 miles), it eats a variety of food including deer but focuses on medium-sized prey such as rabbits and voles, and it is very social (when not killed by people), often living in families of three to five members (note: western coyotes have

also been found to be social where there is abundant prey). In short, it has ecological and physical characteristics that can be seen on a continuum of coyotelike to wolflike.

In addition to the eastern coyote, however, there have also been a number of apparently pure wolves that have made it to the northeastern United States in the past 10 to 20 years. These wolves seem to be either eastern, gray, or a hybrid of the two but have limited eastern coyote genes. Current wolf range in southern Canada is within 100 miles of the United States, a distance that wolves (or eastern coyotes) could travel in a week or two. Unfortunately, all of these wolves have been found dead before anyone could monitor them. Why is this the case?

Many believe it to be because northeastern states provide little protection to their similar looking cousins, the eastern coyote. All states have a liberal coyote hunting season, with most allowing unlimited, yearround killing. I have always found it peculiar that eastern coyotes, which look so similar to eastern wolves, are afforded virtually no protection while wolves are still on the endangered species list in the Northeast and are currently returning to the area on their own.

On average, the eastern coyote has a larger home range than most western coyotes (but smaller than wolves, at about 10 square miles), it travels long distances daily (10-15 miles), it eats a variety of food including deer but focuses on mediumsized prey such as rabbits and mice, and it is very social, often living in family groups of three to five members.



As a biologist studying the eastern coyote, I see an incredibly adaptable and family-oriented animal that is personable, social, sentient and an important member of the ecological community.

As a biologist studying the eastern coyote, I see an incredibly adaptable and family-oriented animal that is personable, social, sentient and an important member of the ecological community. I have a moral and ethical problem with the fact that most states (42 out of 49) treat them as vermin, especially since only a minority of people hunt, and wildlife watching is now a considerably bigger component of our economy.

The traditional wildlife management standpoint is that if a species is breeding and compensating for its losses, then so what if we kill lots of them? But just because coyotes can reproduce quickly does not mean they do not have feelings, for example, as when losing a mate. What if the mate is theirs for four or five years and then it is shot? I think these social, intelligent animals do feel loss. Accordingly, I believe very strongly that all states should have a strict bag limit on coyotes, which is in line with management for most wildlife species. Treating them otherwise sends the wrong message about the value of these animals both ecologically and aesthetically.

To add further ammunition to my argument is the issue of the wolf in the Northeast. We have a legal obligation to restore a species on the endangered species list to its native range. Many (including myself) now believe that the only way that wolves will likely return to the United States (either by natural recolonization or The eastern coyote is often described as a big version of a coyote or a small wolf. It is clearly heavier than the nearest subspecies of coyote, Canis latrans thamnos, found in the midwestern United States.

active reintroduction) is if they and their close kin (i.e., eastern coyotes) are better protected. How many more dead wolves (or large eastern coyotes) will it take to force people to pay attention to the fact that wolves are trying to recolonize the northeastern United States?

While state agencies have effectively chosen to do nothing to protect pure wolves returning to the Northeast (as they continue to die at the hands of people), we have also had the amazing opportunity to witness the literal evolution of a species, the eastern coyote, in the past 50-odd years. I look forward to continuing to study this amazing animal regardless of whether we fulfill our legal and ethical mandate to allow its larger cousin to return to the Northeast.

Jon Way is the author of Suburban Howls (see www.easterncoyoteresearch.com), written from a biologist's perspective but intended for the layperson. The book describes his experiences and findings studying the ecology and behavior of the eastern coyote in urbanized Massachusetts.

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The Mixed Legacy of Never Cry Wolf



by STEVE GROOMS

For better or worse, the most popular book written on wolves is Farley Mowat's *Never Cry Wolf.* First published in 1963, Mowat's slim memoir about observing wolves in northern Manitoba has been translated into many languages and now has sales of many millions of copies. Like *To Kill a Mockingbird* and Anne Frank's diary, *Never Cry Wolf* has attained iconic status as a classic with special appeal to young people. It continues to be taught in schools nearly half a century after its initial publication and was even made into a Hollywood movie. The author and the publisher promote the book as a "true story."

Memoirs are not always accurate. Recent publishing scandals involving James Frey and Augusten Burroughs highlighted the ways some memoir writers misrepresent events. Misha Defonseca's lurid recollections of escaping Nazi-occupied Europe were recently exposed as bogus. Defonseca did not actually live with wolves, it seems, nor did she kill a Nazi soldier. She's not even Jewish.

Charges of falsehoods have swirled around Mowat's book, starting even before it was published. Those criticisms took on a new character with the 1996 publication of a scathing review in Canada's literary magazine *Saturday Night*. The cover featured a photo of Mowat with a Pinocchio nose. Author John Goddard repeated old criticisms and used Mowat's field notes and papers (which are now available to the public) to present many new examples of Mowat's loose approach to truth.

Is the most popular wolf book a pack of lies? And if so, what does that matter?

Charges of falsehoods have swirled around Mowat's book, starting even before it was published. Those criticisms took on a new character with the 1996 publication of a scathing review. There are too many errors in *Never Cry Wolf* to list here, but they include these:

- Although Mowat claims to have spent "two summers and a winter" studying wolves, his papers show his wolf observations lasted four weeks and totaled only about 90 hours.
- While Mowat depicts himself as a solitary figure in the wilderness, he actually was the junior member of two two-man research teams in the summers of 1947 and 1948. Mowat married just before the second project. Worried that his absence was destroying his marriage, Mowat abandoned the study to bring his wife to the study area.
- Mowat claims "revolutionary" observations about wolves that were, in fact, well-known to wolf researchers. Many of his observations seem lifted without attribution from the published works of Lois Crisler, Adolph Murie and others.
- Mowat asserts that wolves can live "largely, if not entirely, on mice." In fact, there is no credible evidence that wolves can sustain themselves on a mouse diet.

- Mowat defended his personal space against wolves, he says, by urinating to mark boundaries. The claim seems fanciful and has never been documented.
- Mowat writes that wolves can communicate complicated messages ("Caribou are approaching from the east!"), and Eskimos can translate these messages. This assertion is pretty much in the category of, "What is it, Lassie? Are you saying a cougar is chewing Timmy's foot?" A sheepish Mowat once admitted that this claim is a case where he "allowed my subjective streak some leeway."

According to Mowat, Canadian and provincial wildlife managers sought an excuse to exterminate wolves in the 1960s, although documents from the time tell quite a different story.

Just beneath the surface events of Mowat's book is a fable that unfolds predictably. *Never Cry Wolf* turns stereotypes on their head. Far from being slavering killers, wolves are depicted as loving, cooperative and noble. The three main wolves— "Angeline," "George" and "Uncle Albert"—are highly idealized versions of humans. Some readers might find Mowat's appreciation of Angeline bizarre: "I became deeply fond of Angeline, and still live in hopes I can find a human female who embodies

continued on page 13 (after catalog insert)

all her virtues." European humans are depicted as arrogant, foolish, and vicious. Occupying a sort of middle ground are Eskimos (now Yupiks and Inuit), humans who have escaped the worst influences of civilization.

Some context might help readers understand the origins of the book. Mowat served in the infantry in World War II, experiencing such horrific combat that he suffered from what was then called "shell shock" (PTSD). Combat left Mowat disgusted with his own species and bitter about the sort of civilization that could launch such a calamitous war.

Mowat might thus be the first person to publicly embrace wolves because of personal misanthropy. The pattern is familiar to any battle-scarred veteran of wolf management controversies. Some people who love and idealize wolves are motivated by contempt for the human race. For centuries, the nastiest human qualities have unfairly been ascribed to wolves. Now some individuals and groups ascribe greed and violence to humans, seeing wolves as noble and innocent victims of human persecution.

That hardly explains the wild popularity of *Never Cry Wolf*. The main appeal of the book is superb writing. *Never Cry Wolf* is a delightful read. It is highly engaging and funny. Mowat has strong convictions and a genius for creating vivid stories that promote his views.

Moreover, the picture he paints of wolves, while idealized, is more accurate than not. We'll never know how much Mowat learned by watching his Manitoba wolves, but his descriptions of wolf-to-wolf interactions around the den are credible. If all of that material was plagiarized, at least he plagiarized effectively. Readers cannot fail to respond to his sympathetic and memorable picture of wolf behavior.

Mowat's responses to his many critics are interesting. When criticized by the biological community or anyone prepared to pin him down on specifics, Mowat freely admits to using facts creatively. "Truth is largely subjective," he has said. "I never let the facts get in the way of the truth!"

And yet when speaking to readers, Mowat insists that he is trustworthy. The subtitle of his wolf book is "*The incredible true story of life among Arctic Wolves.*" Note that word *true*. He tries to have it both ways, being humble with experts while reassuring readers that he deserves respect as a reliable reporter.

Mowat's 1963 correspondence with Dr. L. David Mech reflects both tendencies. Responding to errors that concerned Mech in the pre-publication text of *Never Cry Wolf*, Mowat cheerfully grants that he himself is not a scientist: "I had hoped that my approach, which is that of the creative writer (perish the phrase) rather than that of a scientist, would be so obvious that there would be no danger of anyone deciding to use the work as a serious reference text."

But when Mech suggested warning readers that the book wasn't meant to be taken seriously as science, Mowat refused: "A foreword in which I explained that my story is . . . not entirely factual . . . would invalidate the point of the book, which is of course to establish in the public a more reasonable attitude toward the wolf."

Mowat's standards for truth, then, are those of the crusader and reformer. Secure in his conviction that he has superior truth to communicate, he feels entitled to disregard bothersome facts that interfere with his message. He grants himself permission to create new facts to suit his purpose. For Mowat, the end—selling a certain message—justifies the means.

Did Mowat's book "establish in the public a more reasonable view of the wolf"? *Never Cry Wolf* appeared in 1963, a dark time for wolves. Gray wolves occupied only 3 percent of their original range in the lower 48 states. Only a few hundred wolves lived in Isle Royale and northern Minnesota. Minnesota still had a bounty on wolves. Most people in North America feared and hated wolves, considering them incompatible with normal human activity in modern America. The main appeal of the book is superb writing. *Never Cry Wolf* is a delightful read. It is highly engaging and funny.



Forty-five years after the appearance of Mowat's book, a stunning reversal has taken place. Most North Americans regard wolves favorably and believe that they deserve to be part of our wildlands.

While there is no objective way to measure the social impact of this or any other single work of art, *Never Cry Wolf* enjoyed sensational popularity at just the time when North Americans changed their hearts about wolves. Mowat's little memoir with all of its abundant flaws—surely encouraged millions of readers to see wolves positively.

Little in life is all bad or all good. Works of art often have complicated legacies. *Never Cry Wolf* is a deeply flawed book that portrayed wolves in a positive light at a time when wolves needed all the friends they could get. Thus, *Never Cry Wolf* has an oddly mixed legacy of truth and falsehood.

But all these years after the book's publication, surely it is time for educators to refine their presentation of the book. Call it a great read. Call it an essentially accurate portrayal of wolf behavior. But don't call it science. The wolf is popular enough now that we do not need to distort the truth to persuade people that wolves deserve to be part of our wild animal communities.

Steve Grooms has been writing about wolves for thirty years. His prize-winning book, The Return of the Wolf, has recently been updated.



Tracking the Pack

The Process of Forming an "Ambassador" Wolf Pack

by Lori Schmidt, Wolf Curator, International Wolf Center

7 isitors to the International Wolf Center in Ely, Minnesota, or to the Center's Web site at www.wolf.org are familiar with the Exhibit Pack, comprised of four gray wolves: two arctic subspecies and two Great Plains subspecies. The Center's wolves are spayed and neutered, so pups must be acquired from another source. Obviously, the arctic and Great Plains subspecies and the new pups are not genetically related, so how do they come to form a pack? (In the wild a wolf

pack forms when a male and female dispersed from separate packs in the same region meet, mate and produce pups.) The answer to this question has two components: one, the influence of hormones on the wolves; and two, socializing the pups to the adults through daily contact.

Center staff have a great deal of experience socializing wolf pups not only to their human caretakers but also to the wolves who will be their future packmates. Living in a social pack is inherent to wolves' nature. The Center provides the wolves the opportunity to live in a pack, and the wolves display the behavior. This behavioral display is influenced in part by the presence of a hormone called prolactin. Prolactin is a nurturing hormone and is responsible for parental behavior in mam-

Wolf Care Staff member Sherry Jokinen holding

Denali to greet Maya.

mals. Both male and female wolves produce this hormone and demonstrate many parental behaviors when



pups are present, including facial licking, greeting, whining and regurgitation, a form of pup feeding.

MACKENZIE 1993-2008

International Wolf Center Experiences a Death in the Pack

acKenzie, one of two wolves in the International Wolf Center's Retired Pack, appears to have died in her sleep on Wednesday, May 21, 2008. She was 15 years old. Wolves in the wild may live 8 to 10 years. Captive wolves sometimes live as long as 14 to 16 years.

A Great Plains subspecies of the gray wolf, MacKenzie was the dominant female in the Center's Exhibit Pack from the time she was a pup, and continued as the dominant female when she was moved to retirement in 2002. Wolf Curator Lori Schmidt said, "MacKenzie has

been with us since she was 10 days old and helped teach about her wild counterparts to over 650,000 people at



the Center and a countless number on the Web. She lived a long life and was very important to our staff, board, volunteers, members and others across the world."

MacKenzie will be cremated and her ashes spread at a location in the Ely area to be determined by Center staff members. Donations will be accepted for the Wolf Care Fund in her name and will be used for wolf care needs. They may be mailed to the International Wolf Center, 1396 Highway 169, Ely, MN 55731, or contributed online at www.wolf.org.

Dr. Chip Hansen of the Ely Veterinary Clinic, with Vermilion Community College student Kristen Flowers, examining Denali.





On July 18, 2008, the U.S. District Court in Missoula, Montana, granted a preliminary injunction that reversed the federal government's March 28 delisting of the Northern Rocky Mountain wolf population. For more details, see www.wolf.org.

wen Brier

With all pack members stimulated to care for the pups, the pack bond is likely to be stronger, and pup survival may be enhanced.

Prolactin has a definite yearly cycle, increasing during spring, when pups are normally born, and decreasing as winter approaches. The Center's 2008 pups were acquired from the Wildlife Science Center in Forest Lake, Minnesota. From the time the pups arrived on-site, the adult wolves were stimulated by their presence, and that stimulation increased the production of prolactin.

The second component to successful pup introduction is socialization. Pups being socialized to humans require about three months to establish a trusting bond with their human caretakers. This bond must be strong enough to allow the necessary veterinary care to occur with minimal stress. During socialization, pups are immersed in human contact for 24 hours a day; humans feed, clean and interact with the pups to reduce fear avoidance be-

havior. But it is critical that the adult wolves begin bonding as well. This is accomplished by letting the adult wolves observe and sniff the pups through a hardware cloth fence to establish their first bond. This protected daily interaction continues during the first three months of the pups' lives until they reach

Grizzer and Maya sniffing a pup blanket presented to them by Wolf Curator Lori Schmidt as part of the acclimation process.

a minimum weight of 30 pounds and are physically strong enough to interact with the adults face-to-face.

To read about the introduction of the new pups this year, please log on to www.wolf.org and review the archived logs for August 2008.



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MARCH 2008 - MAY 2008

REP WOLVES ARKANSAS STATE

A Howl on the Campus

Arkansas State University (ASU) has a new mascot—the red wolf! After lengthy consideration by ASU Chancellor Dr. Robert Potts and the selection committee, the university recently made the exciting official announcement. The mascot was unveiled on campus at a special celebration. Go red wolves!

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by Cornelia Hutt

WOLVES IN THE MIDDLE EAST WOLVES IN IRAQ

Hyperbole and Hope

"New Danger Menaces Iraqis"

"Southern villagers arm themselves to fight off an enemy that strikes at all hours, with bloodthirsty ferocity."

-Los Angeles Times, Monday, March 17, 2008

I turns out, the danger menacing Iraqis in that doomsday headline isn't really all that new. In fact, it has been around for centuries.

The unpredictable, ferocious, bloodthirsty enemy described in the article is . . . the "Arabian" wolf.

And what a wolf! By comparison, the slavering beast that devoured Little Red Riding Hood's grandmother was a lapdog. According to the article, this subspecies "is among the most impressive predators in the Middle East. It grows up to $6^{1/2}$ feet long and stands as tall as $3^{1/2}$ feet, weighing up to 120 pounds." That's impressive, all right. Even the brick house of the third porker in "The Three Little Pigs" might not have withstood the expelled breath of a huffer and puffer like that.

According to the article, the people in a region 145 miles southeast of



Baghdad are struggling to bring a crisis under control. Citizens with assault rifles, pistols and full ammo belts are waging all-out warfare against marauding packs of brazen wolves, "vicious and stubborn grays" that "hunt strategically, organizing themselves into packs and communicating via howls at different tones." The headline notwithstanding, the article does not say the wolves are directly threatening people, but the determined predators allegedly attack livestock day and night, ignoring confrontation by armed humans. Groups of men and women exchange shifts to keep watch for "ferocious" wolves believed by local children to be like the fairy tale witch Saloueh. "I have passed 60 years and I have never seen such wolves!" declared one beleaguered farmer.

From a human perspective, these troublesome canid adversaries are bad, but it's questionable how big they are, at least by wolf standards. A brief check reveals the Arabian wolf (Canis lupus arabs) is diminutive and delicate compared to the Goliaths of lupine lore and the Los Angeles Times. Adapted to the hot, arid ecosystems of the Arabian Peninsula, Canis lupus arabs stands 26 inches tall at the shoulder and weighs about 40 pounds. Arabian wolves typically do not live in large packs, and some sources say they rarely howl, although no one knows for sure. While Canis lupus pallipes, another widely distributed gray wolf subspecies in the Middle East, is

According to a Los Angeles Times article, the "Arabian" wolves attacking livestock in Iraq weight up to 120 pounds. Yet the Arabian wolf (Canis lupus arabs) weighs only about 40 pounds, and Canis lupus pallipes (shown here), another widely distributed gray wolf subspecies in the Middle East, while larger than Canis lupus arabs, does not reach 120 pounds.



larger than Canis lupus arabs, even it does not approach the titanic proportions of the ravening beast described in the article. Contrary to popular belief, it's uncommon for wolves anywhere to weigh 120 pounds or more. Some individuals certainly do, but they live principally in northern latitudes.

The shame is that exaggerations, hype and inflammatory adjectives obscure what is doubtless a sober and serious reality for rural people near the Iraqi town of Samawah. Villagers may indeed be losing unacceptable numbers of valuable sheep and goats to aggressive wolves, conceivably more now than in years past. To be fair, speculations as to why this is happening actually do appear in the article, but unfortunately they are smothered by sensationalist verbiage. Rainfall has been sparse, and the natural prey of wolves in this arid region may be scarce. Additionally, the high fences now in use by nomadic herdsmen to protect livestock could force wolves to seek food near villages and hamlets. Domestic animals are vulnerable, but education campaigns and management strategies to minimize conflicts between wolves and humans are nonexistent.

Meanwhile, concerned about their own safety and afraid for their children, the rural people near Samawah employ a timeless response to understandable fear and real loss from predators. They kill wolves when they can, by any means they can. Their worries about their livelihood are legitimate, and their problems need pragmatic solutions based on accurate information from the body of ever-evolving scientific data about wolf behavior under various conditions and circumstances. Instead of reinforcing the mythical "dog of the Devil" image, the Los Angeles Times would have served the public better by resisting the temptation to serve up the old stereotypes and images of "bloodthirsty ferocity," offering instead a rational informational article focusing on a serious problem.

Source:

🏟 Hassan Halawa and Borzou Daragahi, "New Danger Menaces Iragis," special to the Los Angeles Times, Monday, March 17, 2008, A-5.

Two Tales of Two Wolves

"The Wolves in the Well"

Once upon a time near a small village, two wolves fell into a well. No one knows for certain what happened, because there were no witnesses, but it was said that perhaps village dogs were chasing the wolves when they tumbled into the well. Nevertheless, upon hearing a chorus of barking near the well, the villagers gathered to see what was causing all the commotion. Discovering the plight of the wolves, one of the villagers volunteered to descend into the watery depths. One wolf was dead, but the other was miraculously still alive. The villagers pulled the wolf out of the well, and rather than kill it, they agreed to set it free.

"The Wolf That Fell Into the River"

Once in the not so very long ago, a wolf trying to jump across a chasm slipped and fell into the river below. Wolves are strong and agile, capable of bounding leaps across formidable barriers. But sometimes a stumble or a miscalculation results in grave misfortune. Steep embankments on either side of the great river made the wolf's efforts to climb ashore futile. But a shepherd tending his flock nearby saw the wolf's disastrous plunge. Instead of turning away, thus abandoning the helpless animal to almost certain death, the shepherd summoned

officials from the local fire station. Using a rope, they pulled the wolf from the river. Then they released it unharmed, returning it to freedom in the wild.

hese two stories might sound like wildly implausible modern fables—but they aren't. They are true right down to and including the surprise endings. Both of these events were reported recently by researcher Amir Mahdi Ebrahimi, who studies wolves in northwestern Iran. Wolves in this vast and diverse country are not legally protected, and rural people in particular have no tolerance for predators. The village where the wolves fell into the well is located near Shahre Kord in central Iran. The second wolf was pulled from the Zangmar River in northwestern Iran near the city of Maku (see map).

Ebraĥimi, a member of the IUCN Canid Specialist Group, estimates a population of 1,000 or more wolves in Iran, but no definitive census has been done. While the small gray wolf subspecies Canis lupus pallipes occupies southern Iran, Ebrahimi believes two other subspecies range throughout a variety of regions and ecosystems. For example, he thinks the slightly larger subspecies Canis lupus cubanensis (also known as the Caspian Sea wolf or Caucasian wolf) inhabits the forests, mountains and steppes of his study area in the Northwest. These wolves prey mainly on Persian wild goats, wild sheep, red deer, roe deer, wild boars and hares-but rarely on livestock. They will also consume fruit such as watermelon, and they scavenge garbage near villages and towns. Though much more work needs to be done on wolf taxonomy, Ebrahimi speculates that the larger wolf of northeastern Iran is probably Canis lupus lupus, or the Eurasian wolf.

Three years ago, International Wolf relayed a report from Kaveh Hatami of the IUCN Wolf Specialist Group confirming "new hopes for wolves surviving" after decades of no positive wolf news in the country (see "New Hope for Wolves in Iran," Spring 2005, 18–19). Now the heartening reports from Ebrahimi reinforce this hope. "I think, "said Ebrahimi, "that these two stories indicate that human attitudes toward wolves are gradually changing, at least in some areas."

The author thanks Amir Mahdi Ebrahimi, member of the IUCN Canid Specialist Group, for the information contained in this article.

Other sources:

- Wolves, by Nancy Gibson, Voyager Press, 1996.
- http://en.wikipedia.org/wiki/ Arabian_Wolf
- http://en.wikipedia.org/wiki/ Canis_lupus_pallipes



wolves in scandinavia "Far Traveler"

The movement down the trail would seem relentless if it did not appear so effortless. The wolf's body, from neck to hips, appears to float over the long, almost spindly legs and the flicker of wrists, a bicycling drift through the trees, reminiscent of the movement of water or of shadows.

- Barry Lopez, Of Wolves and Men

• xcept in late spring and during summer, when social activities are centered on raising pups, a wolf pack travels far and wide to hunt and patrol its territory. Lone wolves travel, too. Youngsters practice independence by hunting alone for small prey. Dispersers leave the natal pack to find mates and unoccupied space to raise families of their own. Capable of moving along at a ground-eating pace of 5 to 7 miles per hour depending on the terrain, the great predators are easily able to travel up to 45 miles in 24 hours. Supremely adapted for their nomadic lives, wolves have narrow chests and long, slender legs enabling them to maintain a steady trot for long distances. Elbows that turn inward



keep their feet tracking in a straight line under their bodies, and the long muzzle pulls in ample air for the wolf's cooling system as well as oxygen for energy.

Despite all that, the approximately 150 wolves that comprise the population in central Scandinavia have generally remained isolated from other wolves farther to the north in Finland, Russia and northern Sweden and Norway. Living on the border of Norway and Sweden (though nearly 90 percent of the population is in Sweden, with 18 litters born there in 2007), these central Scandinavian wolves are the progeny of only three founders that arrived from Finland or Russia after wolves were considered extinct in Scandinavia. However, after 1990, no immigrant wolves from the larger Finno-Russian population made contact with the central Scandinavian resident population.

Until July 2007.

That's when personnel at the Dalarna County Governor's Office in Sweden examined the remains of a tame reindeer killed by predators near the established wolf population. Scats from the kill site were sent to the Scandinavian Wolf Project (SKANDULV) genetics lab. DNA analysis revealed that not only was the reindeer killed by a wolf, but the wolf was a wayfaring stranger!

The journey and arrival of the immigrant wolf are exciting news for two reasons. First, a trend in outsiders moving into the established population would ease concerns some biologists have about inbreeding. Second, the methods by which this wolf was tracked and its origins (the Finno-Russian population to the north) demonstrate the tenacity both of the wolf that made the linear 800kilometer (497-mile) journey and the people who documented the trek through snow tracking and DNA analysis of scat found farther north in Sweden (see map).

Wildlife research biologist Dr. Scott M. Brainerd of the Norwegian Institute for Nature Research (NINA) mentioned a second immigrant wolf, which was discovered in January 2007 about 125 kilometers (70 miles) north of Oslo, Norway. Brainerd's comment reflected the excitement the two "immigrant wolves" have generated: "We are certainly seeing that wolves can bridge the gap between the southern Scandinavian population and the Finno-Russian population in both directions!"

For the full article about the "immigrant wolf" and about wolf management and biology in Norway and Sweden, visit the Scandinavian Wolf Project's excellent and informative Web site (SKANDULV) at http:// skandulv.nina.no/skandulv%20new/ STARTSIDER/START%20ENGLISH/ index_english.htm.

Also, for an interesting article about wolves in Finland, visit http://www. hs.fi/english/article/Scientists+ baffled+by+disappearance+of+wolves+ from+Finnish+forests/113523537 8872. The author thanks Dr. Scott M. Brainerd of the Norwegian Institute for Nature Research (NINA) and Dr. Olaf Liberg, DVM (Swedish University of Agricultural Sciences) and Coordinator of SKANDULV, for their help in preparing this article. Cornelia Hutt is an educator and International Wolf Center board member who lives in Purcellville, Virginia.





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A Fowl Day on Little Sag

Text and photos by Steven Spickerman

A n article on the BBC News World Service caught my eye this past winter: "Wolves taking to the water to hunt waterfowl—behavior that has never been seen before." Noted wolf expert L. David Mech said, "I'd never seen wolves trying to catch waterfowl before and this was interesting to see." And the memories came flooding in to me like a northern river at ice-out.

It was 1994. My wife, Landis, young daughter, Kaleigh, and I were on day 5 of a 10-day canoe trip in

While canoeing in the Boundary Waters Canoe Area Wilderness in 1994.

Steve Spickerman, his wife, Landis, and daughter, Kaleigh, startled a wolf probably lying in wait to catch a merganser. the Boundary Waters Canoe Area Wilderness in northern Minnesota. Mist rose off Little Saganaga Lake as we paddled into a chilly October dawn. For Kaleigh, age four, this trip was her first extended backcountry foray. We had the place to ourselves, running into only one other group in nearly a week of paddling. The autumn weather was spectacular for paddling; at night the temperatures were in the 30s, during the day, near 70. I had even ventured a swim the previous evening.

Our plan that day was to travel east, passing through Mora Lake in route to the Frost River and points beyond. The portage from Little Sag to Mora is at the end of a narrow, tapered channel along a tumbling stream. As we pulled into the channel, a brood of seven to eight common mergansers pushed up the channel in front of us. We were not in a hurry and didn't want to disturb the mergansers any more than necessary, so we kept quiet and paddled into the portage slowly.

Sudden movement to our left caught our eye. In a bed of reeds, perhaps 15 feet from our canoe, 5 feet from the mergansers and 10

feet from shore, a wolf appeared! We had been watching the mergansers for three to four minutes, long enough for Kaleigh's interest to become focused elsewhere, and had not seen the wolf up to that point. It simply rose where it had been crouched, nearly fully submerged in 12 to 16 inches of water. A bound

or two put the animal on shore, where it shook and for a brief moment

glanced back at us, then melted into the hazel, birch and fir. As we sat there in disbelief, the merganser family took the chance to scoot around us and head to open water. It was then that we figured out the wolf had been waiting in ambush for a fowl breakfast.

The entire encounter lasted no more than a second or two but is still deeply imbedded in my family's memory. Kaleigh, who was not looking at the wolf when it rose and was just learning left from right, unfortunately looked right when I whispered, "look left." Despite having paddled perhaps thousands of miles of border-country waterways and living within the boundary of a national forest with a healthy wolf population, she has to this day never seen a wolf in the wild. For my wife and me, who have lived in many wild places, from southern Utah to Alaska, the encounter remains as one of our top wildlife experiences. Just this past weekend, I sat around a campfire next to a border-country lake with family members on yet another Boundary Waters paddling trip, and the story of the merganserhunting wolf came up.

David Mech said to the BBC, "I'm interested in the challenges these animals overcome to hunt their food. I've been intrigued with how the wolf manages to solve problems in so many different ways, with so many different prey species." For me, the opportunity to encounter one of our nation's premier wildlife species in a special place with my family, well, the memory can't be duplicated.

Steven Spickerman is a plant ecologist for the Chequamegon-Nicolet National Forest in northwestern Wisconsin. He lives with his wife and daughter on a farm surrounded by national forest lands, where they grow certified organic vegetables and fruits. Look Beyond

Harvesting Wolves in Small Populations: Can It Be Done?

by Richard P. Thiel

While the gray wolves in small populations scattered within a half-dozen states hugging the Canadian border and now removed from the federal endangered species list, is it possible to hunt and trap wolves without endangering them again? Pressure has been building in several states to do so.

As a professional wildlife biologist who has spent his 30-year career working for a state agency and had the privilege of working toward the (successful) recovery of wolves, I say, "YES!" Such an undertaking will surely be highly scrutinized by a skeptical public, for the stakes are understandably high. After all, 30 years ago most of these states had no wolves. How, you ask, can I say "yes" to this?

First, I must explain a state of mind peculiar to most wildlife biologists. We focus our attention on the *population level*, not on the *individual*. We recognize that individuals constitute the population. But individuals come and go within populations (meaning, of course, they are born, and they die), and in most cases we do not focus on individuals. We confine our work to the population level.

We have lots of very good population data on wolves, ranging from true wilderness settings like Isle Royale National Park, where wolf mortality is totally natural, to legally harvested populations managed in much of Canada, Russia and Alaska. What we know is this:

 Wolves have high reproductive rates. Each reproductive pack produces an average of six pups in a single litter each year, nearly doubling a wolf population annually. This allows wolf populations to respond quickly to changing prey populations or to expand into areas from which they have been absent.

- Wolves that reach adulthood (2 years old) have fairly long life spans (4 to 8 years), adding stability to reproductive output because many of these adults (although not necessarily all) are experienced breeders throughout their adult lives.
- Wolves are remarkably resilient to mortality. Most mortality is confined to young animals. Wolf populations

can withstand yearly human-caused death rates of about one-third (35 percent) of the existing population before they either stabilize or show declines.

Great expertise exists among biologists working in various state agencies in managing harvests of wildlife. Modern-day wildlife management actually had its roots in the 1920s and 1930s, framing harvests of small game (rabbits and squirrels), upland game (grouse, turkeys), waterfowl and big game (deer, elk, etc.). The profession has a pretty good track record. In Wisconsin, for instance, 8,157,403 white-tailed deer were harvested between 1986 and 2005. In that same time the state's deer herd *nearly doubled*.



Before seasons are established in most of the states with wolves, legislative approval and public hearings would be held. I anticipate these processes could take years before harvests actually take place.

So what would a wolf harvest look like? To be sure, each state's seasons, the structures of such harvests, and harvest objectives will differ according to the goals expressed by each individual state. Goals may include:

- Maintaining a statewide wolf population size range,
- Reducing or minimizing wolfhuman conflicts (as, for instance, in areas with chronic livestock depredation problems), and
- Providing recreational opportunities for persons interested in trapping or hunting wolves.

Each state would classify the wolf within the framework of existing categories of harvested species, such as a furbearer, big-game animal and so on. The methods of taking wolves would be variously restricted (as in traps, snares, game callers, pursuit with trained dogs, shot over bait, etc.), as would the type of firearms that may be legal, and the number of participants that may be allowed to actively assist in a hunt. A season would also be established confining the harvest to certain times of year and possibly even certain hours of the day. The harvest could even be terminated within 24 hours if harvest quotas are achieved prior to the end of the normal season length.

One of the most critical aspects of a harvest framework is determining an annual harvest quota, or the number of wolves that are to be taken. The quota would depend on the primary goal of the harvest. Harvest quotas would be factored into the known framework of wolf losses (both natural and human-caused) experienced by that population.

Here, too, wildlife biologists can draw from numerous experiences harvesting other small wildlife populations. Anticipating that harvest numbers would be smaller than the number of applicants for permits, most states would probably enact some type of random draw to fill the quota permits from a pool of applicants. Due to the novelty (not many people in modern-day United States have any previous experience harvesting wolves) and the sensitivity of harvesting wolves (indeed, some readers are probably horrified), I believe that some states would require successful permittees to attend a training clinic to brief them on ethics, the season structure and methods of legal harvest, and procedures to follow in registering harvested wolves for collecting biological data as conditions of receiving a harvest permit.

Initially, most states will be very conservative about harvest quotas and gradually "tweak" their season structures as they evaluate and gain the necessary experience. Say a harvest goal of 10 wolves is established in a specific region. Under the regulations, 1 wolf can be taken per permit during a 30-day season. To attain the harvest goal, 20 permits are issued. In the first year 5 wolvesor half of the goal-are taken. The next year biologists could increase the number of permits, lengthen the season, or both until the actual harvest falls in line with the harvest goal. Meanwhile biologists also monitor year-to-year population trends to ensure that the wolf population is not being adversely affected by harvests. If and when problems are detected, adjustments in the season are warranted.

In conclusion, each state will likely develop wolf harvests unique to its management goals. We can expect that wolf harvests will be goaldriven, that seasons will be established, restrictions on the methods of take will be instituted, special licenses or permits will be required and in most cases the number of permits issued will be controlled, and harvest quotas will be established. Harvests will be monitored to ensure that goals are met and that the wolf population is being professionally managed for long-term survival in a manner that is compatible with the interests, desires and concerns of all those states' citizens.

Dick Thiel works as a wildlife educator with the Department of Natural Resources at Sandhill Wildlife Area in central Wisconsin. From 1980 to 1989 he led the wolf recovery effort in Wisconsin, and now coordinates wolf monitoring activities in Wisconsin DNR's West-Central Region. He has written two books on Wisconsin's wolves and is presently chairman of Timber Wolf Information Network, a regional wolf education organization. His views expressed here are his own and do not reflect the opinions or stance of the Wisconsin DNR.