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Can People and Timber Wolves Co-exist? PAGE 4

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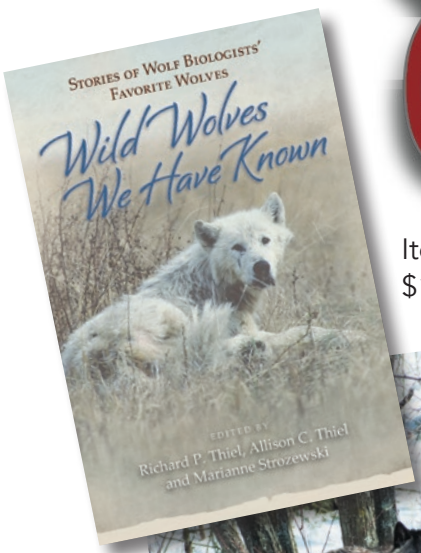

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THE QUARTERLY PUBLICATION OF THE INTERNATIONAL WOLF CENTER
VOLUME 23, NO. 4 WINTER 2013

Features

Can People and Timber Wolves Co-exist?

Reprinted with permission from *Minnesota Conservation Volunteer* magazine, this article was originally published in 1985. We reprint it to illustrate how little has changed in public attitudes toward wolves and wolf management over the past 25 years.

Clarke Anderson

Singing Dogs

The New Guinea singing dog, named for its unique howl, is a compact, handsome, athletic, short-haired canid that has been the subject of controversy and study. It has been classified as both a subspecies of wolf and as a type of primitive canine.

Tracy O'Connell

Wolf Totem Promises to be Epic

Take a runaway best-selling novel, turn it into a movie set in a vast, remote land, name a director unwilling to back down from a challenge and throw in 18 Mongolian wolves. That's the mix for *Wolf Totem*.

Tracy O'Connell

Departments

3 From the Executive Director
13 Tracking the Pack
15 Wolves of the World
20 Personal Encounter
22 Wild Kids
24 A Look Beyond

On the Cover

Red wolf at the North Carolina Museum of Life and Science. Photograph by Melissa McGaw

Freelance editorial photographer Melissa McGaw loves wolves and takes photos of the red wolf pair at the Museum of Life and Science in Durham, North Carolina. See other images of the pair on pages 20-21 and more of McGaw's photography at www.mcgawphoto.com.

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The International Wolf Center Honors the Legacy of Mary Lee Dayton

The International Wolf Center honors the legacy of Mary Lee Dayton, community leader, philanthropist and strong supporter of the Center, who passed away August 21. Her generosity of spirit and devotion to caring for wildlands and wildlife have few equals.

Mary Lee's advocacy for wolf education at the International Wolf Center brought the wonder of and respect for wolves to thousands of school groups in Minnesota and across the country. For this singular effort, the board, staff and supporters pay tribute to her long support of the Center and belief that one of the best ways to advocate for wolves is through thoughtful, unbiased and engaging education.

We extend our deepest sympathies to Mary Lee's family and friends. She and her husband Wally, who passed away in 2002, have left a gift for generations to come.

Pictured are Mary Lee and Wally with International Wolf Center ambassador wolf Malik as a pup in 2000.

CORRECTION

Ecotourism in Ethiopia—Turning Wolves into Honey, Fall 2013: In an effort to clarify the following sentence, "One family we spoke to said that for compensation of 20 million birr, it would move, but the government is offering less than 5 million," International Wolf *inadvertently changed its meaning, according to the author, by writing, "One family we spoke to said it would move only if the government paid it far in excess of the true market value of its property. However, the government refuses to do that and is offering the family far less than the amount it demands." Twenty million birr is the equivalent of $1.06 million (U.S.).*

International Wolf Center Earns 2013 Pinnacle Award

I have exciting news to share. The International Wolf Center has received the coveted Pinnacle Award from the Center for Interactive Learning Collaboration (CILC) for excellence in videoconferencing programming.

The Center's devoted education team spent months in 2006 creating our award-winning WolfLink™ videoconferencing program. Since then, the staff has worked tirelessly to create and perform these deeply engaging interactive learning programs for classrooms around the world. These programs are reaching the next generation and hopefully creating a deep respect for wolves.

Rob Schultz

CILC awards are based exclusively on post-program evaluations from teachers who have used the content in their classrooms or for their own professional advancement. The Center was chosen for this highest honor along with only 39 other education providers from across the country.

WolfLink™ has been popular with teachers because it solves a host of problems such as the rising cost of bus travel, the need to present engaging curriculum and a lack of available time to adequately cover the material. WolfLink addresses all three concerns in one custom program geared for each age group.

Through videoconferencing, the Center transforms into a global classroom where students can experience our programs without ever leaving their desks—a huge cost savings for schools. The curriculum is multidisciplinary, involving math, science, art, history, language arts and geography and conforms to state and national education standards. Lesson plans and learning resources make it easy for teachers to use, and the effect of these programs on kids so far has been nothing short of stunning.

While WolfLink™ has been most heavily used in classrooms, the customizable programs are also intended for other venues such as nature centers, nursing homes, hospitals and community centers, to name a few.

A major portion of the start-up funding for WolfLink™ was provided by a grant from the Legislative-Citizen Commission on Minnesota Resources and the Environment and Natural Resources Trust Fund, which allowed us to give hundreds of free programs to underserved Minnesota schools through June 2013. By sharing our good news about this remarkable program, we hope to inspire others to donate to make WolfLink™ programs available to these schools well into the future.

To see a short video on the WolfLink™ experience go to http://www.wolf.org/wolves/learn/wolflink.asp. I'm sure you'll find it very educational. ■

Rob Schultz, executive director

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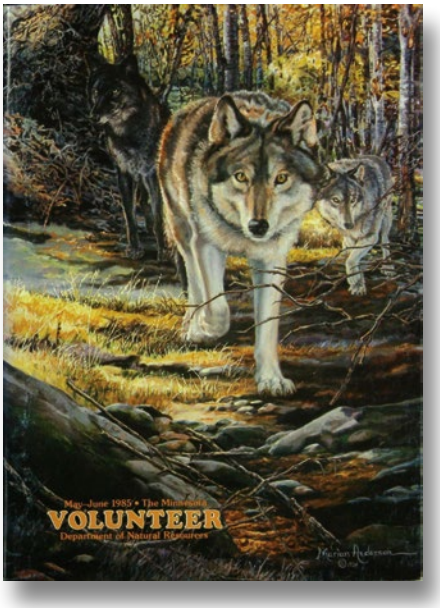
Can People and Timber Wolves Co-exist?

Tough, unresolved questions persist about the timber wolf's future in Minnesota

Dan Newcomb

by CLARKE ANDERSON

International Wolf *editor's note: The following article is reprinted with permission from* Minnesota Conservation Volunteer *magazine, published by the Minnesota Department of Natural Resources (DNR). The original article was published in the May–June 1985 issue, and we reprint it here to illustrate how little has changed in public attitudes toward wolves and wolf management over 25 years. The author, Clarke Anderson, was the news editor for the DNR Bureau of Information and Education. Milt Stenlund was an International Wolf Center board member. Stenlund died in 2008.*



Painting by Marian Anderson

Cover of the 1985 Minnesota Volunteer magazine in which this article originally appeared. Prints are available of the cover painting "Eyes of the Woods" by Marian Anderson. Visit www.marianderson.com/eyes_of_the_woods.html.

The most recent chapter in the legal struggle to determine the status of the timber wolf in Minnesota was written on February 19, 1985. On that day, the Eighth U.S. Circuit Court of Appeals supported a lower court ruling that said limited public trapping of the wolf violated the U.S. Endangered Species Act.

This decision effectively killed a plan under which the U.S. Fish and Wildlife Service (USFWS) and the Department of Natural Resources would jointly manage the wolf in Minnesota. As a result of the decision, the federal government would continue sole jurisdiction of the timber wolf in Minnesota; management is restricted to terms set forth in the Endangered Species Act. This means that only wolves preying on livestock could be trapped.

Until passage of the first Endangered Species Act in 1966, each state set its own policy on taking wolves. Except for Alaska and Canada, Minnesota has the only significant population of timber wolves in North America.

With a revised Endangered Species Act passed in 1969, the taking of wolves in the Superior National Forest virtually ceased. Result: Wolves began to increase more rapidly and expand their range into parts of Minnesota where they had not been seen since pioneer days.

Wolves have increased here since the mid-1960s; numbers have been stable at 1,200 since the mid-1970s. By the time of the 1969 Act, the DNR had substituted a Predator Control Program for the old bounty system in an effort to control wolves plaguing livestock raisers. Authorized trappers—"predator controllers"—were paid a $35 fee for each wolf trapped.

The program concentrated on areas where farmers felt threatened by wolves killing their livestock. Elsewhere, in the non-agricultural, forested parts of northern Minnesota, timber wolves were either left undisturbed, taken by hunters, or trapped for their furs.

Each year, predator controllers took an average of 65 wolves. In addition, another hundred or so were trapped or shot illegally.

National Attention. In the early 1960s, concern with America's endangered wildlife accelerated interest in the timber wolf.

Some looked at the wolf as an animal without protection and expressed concern about its long-term survival in this country. Minnesota, with its native packs, became the focus of their attention.

At first, professional wildlife managers and north-country citizens alike were nonplussed. DNR officials were unconvinced by arguments that the wolf was threatened with elimination in Minnesota; in our state, the animal was not in such danger.

This appraisal, however, failed to reckon with the influence of those concerned with the wolf's future. These groups took their story to Washington where they reviewed the Endangered Species Act. The wolf was a name on that list.

Resident Species. Another aspect of the February 19 court decision involved wolf-management plans. DNR wildlife specialists objected to the transfer of the wolf from state to federal government control. They argued that the wolf was a "resident species" in the state. States traditionally and legally had the right to manage such species without interference from the federal government.

This decision meant that wolves could no longer be controlled under the state's Predator Control Program. Only federal agents could take wolves because the animal was on the endangered species list. All complaints about wolf predation were now referred to the USFWS regional office.

Ironically, the number of wolves in the Superior National Forest had begun to decline; numbers dropped 40 percent from 1972 to 1977. Their chief prey, deer, showed the results of several bad winters, deteriorating habitat caused by a maturing forest, increased fire protection, and reduced logging.

Outside the Superior, however, wolves continued to increase. Contacts with people became more frequent and some farmers experienced livestock losses from wolves.

In 1981, the worst livestock depredation year, the USFWS verified that wolves killed livestock on 38 out of 11,000 farms that had livestock in wolf range—three-tenths of 1 percent. Farms

with verified wolf damage between 1979 and 1984 numbered 12, 17, 38, 27, 28, and 19. For farmers who suffered losses, the wolf threat was very real. But actual figures put the question of wolf depredation in another perspective.

Eventually, in July 1978, the USFWS issued a news release. Control efforts had failed, the agency said. It proposed that the DNR be allowed to kill or live-trap wolves "without waiting for inevitable depredations to occur...Thus authorized persons could take wolves that pose an imminent threat to domestic livestock."

Since it was not possible to station enough DNR wolf control agents throughout northern Minnesota, the announcement implied that landowners could be authorized to shoot or trap wolves on their farms.

Furthermore, the USFWS proposed that timber wolves could be live-trapped on farms and sent to a forest either in Minnesota or in other states with suitable habitat. The USFWS had already tried this technique, but without success. Trapped wolves released in new habitat had either been killed by packs defending their territories or had returned to the farm where they had been originally trapped. Nor did other states want wolves brought inside their boundaries.

Protecting Wolves. Perhaps the least convincing complaint endured by state wildlife officials during the years of the wolf debate, however, was the charge that Minnesota had done nothing to protect the animal.

These complaints ignored facts. For more than 15 years, the DNR had fought to have the bounty repealed. In 1965, it finally succeeded when Governor Karl Rolvaag vetoed an appropriation bill for bounty payments.

A year earlier, the DNR, exercising legal authority, eliminated use of snares for taking wolves. These measures, together with a ban on aerial hunting, brought about a steady increase in the wolf population and expansion of its range.

When some northern farmers demanded a return to the bounty system, the DNR resisted. Instead, it persuaded the state legislature to try a predator control program. Under this program, fees were paid only to authorized trappers to take wolves in areas where depredations were occurring.

Despite these charges, a thriving population of timber wolves remained in the state. The DNR's management program recognized that, while the wolf was an aesthetic asset in the BWCA and in the Superior National Forest, it was still a threat to some farms to the west. A control program in farm areas would prevent people from illegally killing the animals.

Outlook. Until these basic realities of management and control are accepted, the outlook for the wolf in Minnesota is guarded, and that is a tragedy.

The Minnesota wilderness could not be the same without the timber wolf. No one who has sat at a campfire on the shore of a wilderness lake and has heard wolves calling will ever forget it. Their resonant howls tell us something—that Minnesota is their home, that they have lived here eons before humans set foot on the North American continent, that they have a right to be here.

The wolves are also telling us that they have co-existed with people these many centuries and can continue to do so—providing we are willing to let them. ■

John P. Hart

A workable plan for living with the wolf in Minnesota

(The following editor's note appeared in the Minnesota Conservation Volunteer *magazine in 1985): Milt Stenlund has been involved with the timber wolf in Minnesota for almost 40 years. As a wildlife biologist with the Department of Conservation between 1948 and 1953, he conducted the first major field study of the wolf in Minnesota. His research resulted in a master's degree at the University of Minnesota and a technical bulletin on the wolf published by the Department in 1955.*

A former DNR Regional Director in Grand Rapids, Stenlund is now retired. The Volunteer *asked him to comment on the subject of wolves and people co-existing in northern Minnesota.*

You have studied the wolf in Minnesota for many years. How do your conclusions on how the wolf should be managed jibe with U.S. Fish and Wildlife Service proposals?

In 1968, I offered the first general outline for a wolf-management plan to the U.S. Forest Service and to the Department. The conclusions I reached in that report are, for the most part, still valid.

Since then, several government agencies and private organizations have done tremendous amounts of research and planning. The result of these studies is debatable. One certain result is that they raised many conflicting opinions. These different views eventually ended up as federal court decisions, which gave the wolf full federal protection, this in spite of the USFWS recommendations that, in Minnesota, the state be given control.

Specifically, what do you propose for the wolf in Minnesota?

The following arrangement will, in the long run, serve the wolf and people's interests best.

Establish a sanctuary in northern Cook, Lake, and St. Louis counties. Here, no wolves could be taken for any purpose other than research. The sanctuary would serve as an invaluable, ecologically undisturbed area—except for canoeists—and as a base for data comparison with outside areas.

Immediately south of the sanctuary, set up a control zone in which wolves could be taken, but only if they were attacking livestock or frequenting settlements. This provision would have allowed taking those wolves that roamed Babbitt recently and took dogs.

South of this control zone would be a large area in which the above provisions would be in effect. But in addition, a fixed number of wolves would be taken by hunters or trappers under a permit system. This would have a psychological deterrent on people who, at present, are killing wolves and leaving them in the woods.

A major difference between this and the USFWS program is this: Wolves would be taken before they killed livestock, not after. The program would, of course, be strictly controlled, and trappers selected, registered, and monitored.

But federal laws prohibit people from taking wolves.

Today's total protection proponents are naive if they believe no wolves are being killed because of existing federal laws. If a number of wolves in the zones I have mentioned were taken legitimately by hunters and trappers, those who now kill wolves would be less inclined to do so.

Protectionist groups are concerned with the wolf as an endangered species. Has the wolf ever been endangered in Minnesota?

I don't believe so. If it ever came close, it was 40 years ago when a $35 bounty was paid and wolves were hunted from airplanes. Then the state supported a wolf control program—the only viable population left was in Superior National Forest. Now its range has expanded south and west to cover almost the entire northern forest.

Your final assessment of the advantages of a sound wolf-management program for Minnesota?

Intelligent management of the wolf and an educated public will allow a healthy timber wolf population to thrive as a unique natural resource in Minnesota. Alone among the lower 48, our state can remain a symbol of wilderness capable of supporting this most interesting large predator. ■

Ray Sinclair

The Singing Dog

Wolf Descendant? Fido's Forbearer?

by TRACY O'CONNELL

It's shy, rare and lives above 7,500 feet (2,500 meters) in the mountains of an exotic island. What is it? No one is sure. The New Guinea singing dog, named for its unique howl, is a compact, handsome, athletic, short-haired canid that has been the subject of controversy and study, odd given its comparatively low numbers. Some research on these animals calls into question the well-established conclusion that dogs descended directly from wolves. This alternate hypothesis that dogs and wolves have followed parallel tracks, descending from a common ancestor, is highly controversial.

Singers, as they are known by their fan base, have been classified over time as either *Canis lupus dingo* or *Canis familiaris dingo.* In the former instance they are seen as a subspecies of wolf and in the latter as a type of primitive canine, sharing a category with other "pariah" dogs like the wild domestic dogs that scavenge outside African villages.

Western awareness of singers dates to more than 200 years ago when one was captured and killed for study by European scientists, and only a handful of photos of them in the wild exists. Nothing more was known until nearly 60 years ago when a pair was captured and sent for study to Australia's Taronga Zoo. As zoo populations of singers proliferated in the United States and abroad, some private individuals sought to obtain the animals as well. The United Kennel Club started accepting the animals in its registry in 1996, but reportedly stopped last year because the singers were by then considered a subspecies of wild dog, not a domestic breed.

They are also popularly referred to by other monikers, among them bush dingoes and New Guinea wild dogs. *Mammal Species of the World* lists these animals as "*Canis lupus dingo*, provisionally separate from *Canis lupus familiaris*." Dr. Alan Wilton and co-researchers in a massive genome study of canids, published in *Nature* in 2010, stated that singers are genetically matched to Australian dingoes.

Janice Koler-Matznick is an animal behaviorist who for 20 years has doubted the domestic dog descended directly from *C. lupus*, based on behavioral traits. Writing in 2008 in *Anthrzoos,* Koler-Matznick argues instead that rather than having the gray wolf as a sole ancestor, today's pet dog likely springs to a good extent from smaller wild dogs, which would be much easier to domesticate. She recalled how this line of thinking brought her to singers: "I wanted to study the most primitive dog, the one that had been subjected to the least artificial selection," believing that it should be most like the gray wolf if *C. lupus* was indeed its ancestor.

Koler-Matznick got her first three singer pups in 1995. "Their behavior amazed me and was significantly different than that of the domestic dog and wolf puppies," she noted. A couple years later she brought together all the singer owners she could locate, and they formed the New Guinea Singing Dog Conservation Society (NGSDCS) to promote appropriate care and stewardship of these animals and to set ethical breeding practices that

Joan Dalgliesh

Cassie, a female singing dog, hunts birds by walking on hind legs.

Lynn Jackson

Zlin Zoo

Singular aspects of singer anatomy and behavior include a lack of dewclaws and inability to lay the ears flat against the head.

reduce the effects of inbreeding, since all domestic singers today are descendants of just a few pairs. A second organization, New Guinea Singing Dog International, is dedicated to education, preservation, rescue, responsible ownership and search for new bloodlines, according to its Web site.

Koler-Matznick is also the singer liaison to the Canid Specialist Group within the International Union for the Conservation of Nature (IUCN). She has collaborated on the cognitive testing of singers with Dr. Brian Hare, associate professor of evolutionary anthropology at Duke University, where he founded the canine cognition group.

Another behaviorist studying singers is Dr. Alice Moon-Fanelli. She operates an animal behavior consultancy, working with horses, dogs and cats. She owns a singer and is on the conservation society's board. In addition, she writes extensively about singer behavior in the organization's newsletter.

Moon-Fanelli, drawing on observations of the singer she shares her home with, has noted that he is quite focused on predation. Yet in spite of what seems to be a food focus, the animal shows no resource guarding or dominance or submissive behaviors in its interaction with other animals, perhaps reflecting a lack of pack mentality.

Meanwhile, Koler-Matznick's singer's ethogram consists of more than 240 behaviors, some of them apparently unique to this canid, such as the head toss, tooth gnash, cheek rub, forward summersault and what is typified as hind-foot kick wrestling demonstrated by pups. YouTube videos show the singers' feats of athleticism, such as leaping into trees and bounding from branch to branch. Singular aspects of singer anatomy and behavior include a lack of dewclaws and inability to lay the ears flat against the head. Singers have a flexible spine and can spread their legs sideways to 90 degrees, comparable to the Norwegian Lundehund.

Singers' eyes are highly reflective, and their pupils open wider than those of other canids, allowing them to see more clearly in low light. The animals have a wide range of subtle tail positions, facial expressions and head movements, so keen eyesight would be an advantage to ascertain the gender and frame of mind of another singer in the wild, where they travel alone or in pairs, eating small rodents, birds and fruit. They play rough, are aggressive with others of the same sex and have a strong predatory drive in captivity that requires supervision when other animals are present.

The distinctive and melodious howl of singers is characterized by a sharp increase in pitch at the start and very high frequencies at the end. An individual howl averages three seconds but can last as long as five. Females bear one to six pups during summer in the Southern Hemisphere.

Singers are believed to have come to New Guinea with humans as long as 5,500 years ago from Asia. Called throwbacks to the Stone Age because they have lived in island isolation for millennia, singers have been domesticated by some highland tribes to assist in hunting and as pets. They have also been hunted for food. Some local myths mention them as bringers of fire and speech or as the spirits of the deceased. More recently, highland natives have kept poultry and raised their own dogs, so singers have not been part of their lives. Hybridization with village dogs can be a barrier to studying and classifying wild singers as well as to perpetuating the purity of the line, as it has been with other canids. Despite their rarity, interest in them remains high. Dr. Adam Boyko, dog geneticist at Cornell University, is sequencing the entire singer genome.

No one had seen singers in the wild for decades, leading to the belief that they are extinct in their native habitat, and the most recent photo of a singer in the wild was from 1987. However, another photo has now surfaced, this one from August 2012, giving rise to the belief that singers are extant in their native land—or that the photo was a hoax perpetrated with the help of Photoshop. Nonetheless, the NGSDCS has sent trail cams in an effort to verify the photo, and an expedition is being put together for 2014 to find, study and capture some specimens based on the presumed locale of the 2012 singer. If found, these animals would insert new bloodlines into the inbred, captive population and could further answer the question: What is it? ■

Tracy O'Connell is an associate professor of marketing communications at the University of Wisconsin-River Falls and a member of the International Wolf Center's magazine and communications committees.

To hear and see the singers on YouTube, go to:

http://www.youtube.com/watch?v=ttwt6xDO0M0

http://www.youtube.com/watch?v=bt6-gygNcaw

Wolf Totem

Promises to be Epic

Landscape: iStock Photo/Petrichuk
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Movie Board: iStock Photo/Sage78

by TRACY O'CONNELL

Take a runaway best-selling novel, turn it into a movie set in a vast, remote land, name a director unwilling to back down from a challenge and throw in 18 Mongolian wolves. That's the mix for *Wolf Totem*, the English name for a Chinese film based on the eponymous novel written in 2004.

The semi-autobiographical tale set during the Cultural Revolution of the 1960s traces a young Chinese man's experiences in Inner Mongolia, where he is sent to educate shepherds but instead is captivated by the native culture and wolves. The wolves become a reflection of the strong, fierce, shrewd and loyal Mongolian character, contrasted with the less favorable view he holds of his own people. The lead character attempts to raise a wolf pup.

Development on the movie adaptation began in 2009. It is being filmed, with a $30-million-plus budget, and its release is expected in 2014. Some are surprised the Chinese government is allowing the making of the film, which is critical in its assessment of Chinese culture.

French director Jean-Jacques Annaud in 1997 produced *Seven Years in Tibet*, starring Brad Pitt. Annaud, along with the film, was banned in China because of the movie's content, relating to the life of the Dalai Lama. Annaud is treading with greater cultural experience and wisdom now, realizing that what he had seen as a 50-year-old Chinese conflict was by no means forgotten, and he is positive about his current interaction with the Chinese government, which continues to ban his earlier work. But the 68-year-old director is drawing not only on his experience working across cultural lines but also with exotic locales and wild animals. His 1988 movie *The Bear* relied in part on animatronics in some scenes, but this time around Annaud is refusing that suggestion despite an accident during a photo shoot with the lead, live bear. That encounter resulted in the director's needing to wear a shunt for two months to drain an injury. This brings us to the Mongolian wolves.

Enter Alan Simpson, a Scot who has trained animals for television and more than 150 films. He got his start as an extra on *Cry in the Dark,* starring Meryl Streep. *Cry in the Dark* was filmed in Australia, where he was able to work with the dingo trainer; he later worked with Creative Animal Talent in Vancouver, British Columbia. Today he keeps wolves at his Alberta, Canada, compound, called Instinct for Film.

A 2009 adventure took a Canadian film crew and Simpson's pack of North American wolves to Siberia for five months to film a French movie called *Loup* (French for "wolf"); the result was documented in *Wolves Unleashed*, a book and 90-minute video that is currently making the round of film festivals. It depicts Simpson, the wolves and others on the shoot battling temperatures of -60° C (-76° F) and being subjected to other challenges that reviewers call jaw-dropping.

Because Mongolian wolves are significantly different in appearance than the ones Simpson keeps in Alberta, he had Chinese zoos provide him with pups before they were 21 days old so they could imprint on him. Training started in fall 2011, with filming of scenes taking place to capture the growth of the wolf pup being tamed by the movie's lead character. The film has been described as violent because the shooting will involve split-screen techniques in which wolves and prey will be filmed separately and the footage spliced together to give the impression of a hunt.

One of the most challenging things about training wolves for film, Simpson said in an interview with *Sina English*, the English-language online Chinese news magazine, is maintaining a predictable environment while introducing new elements to acclimate them to change. Wolves are naturally suspicious animals, and even a change of shoes can be enough to set them on alert, Simpson stated. Training them requires vast amounts of time and patience, he added. Although he and his six-member Canadian crew have been working with the pack since the pups were a few weeks old, only three wolves have allowed human contact. Diet is another issue. If you overfeed a wolf, you have had it, Simpson said: "They will wander off and not train for days. That can be a bit tricky with a movie's schedule."

Director Annaud noted that each day they might only get 20 seconds of usable wolf footage. ■

Tracy O'Connell is an associate professor of marketing communications at the University of Wisconsin-River Falls and a member of the International Wolf Center's magazine and communications committees.

The film has been described as violent because the shooting will involve split-screen techniques in which wolves and prey will be filmed separately and the footage spliced together to give the impression of a hunt.

Arnoud ten Haaft

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Robert and Lois Beh
Chris Bening
Joan Ghrist
William Hornaday, Jr.
Jon and Jodie Janda
Kenton Klein
Katherine Meredith
Sarah Ohlrogge
Bill and Fran Osmundson

In memory of Freda Sanders:
Jean V. Ruth

In memory of Carol Ann Smith:
Julie Kleive

Honorary

For all the good work you all do to educate young people in regard to the wolf, thank you!:
Mary Wojciechowski

In honor of Fazil Bhimani:
Miriam Bhimani

In honor of Lynn Cook's birthday:
Barbara Cook

In honor of Malik's, Shadow's and Grizzer's birthdays:
Betty Magnuson

In honor of Uncle Jerry and Aunt Debbie:
Vicki Kapaun

In honor of Sarah Deets:
Deborah Hinchcliffe and Jerry Sanders

In honor of Nancy Gibson:
Naomi Pitterman
Julie Steiner

Happy Birthday Rebel Wolf:
Cheryl Flinn
Ray and Hazel Vernon

In honor of Jerry Sanders:
Joan and Dick Hinchcliffe

In honor of Kathy Shaw:
Ashley Cumings

In honor of Jeff Tisman:
Eric Ablett

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Neil Hutt


Karen S. Belcher

Thank You!

Wolves and Humans at the Crossroads—
A Success Story

After more than a year of planning, the 2013 International Wolf Symposium is now in the record books. Experts from 18 countries covered more than 100 topics about wolves. We expected 350 attendees. Nearly 500 showed up!

Mike O'Connell

2013 INTERNATIONAL WOLF SYMPOSIUM

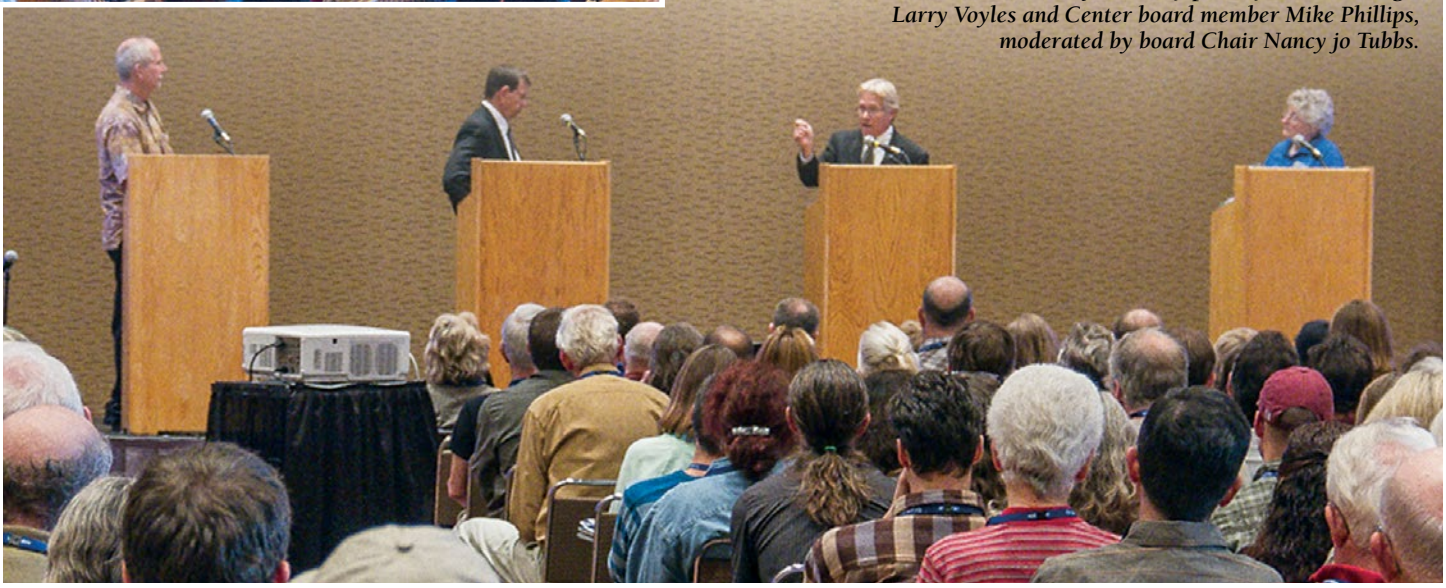
Wolves and Humans at the Crossroads

Panel Discussions

The panel discussions tackling such difficult issues as wolf recovery and hunting were particularly well attended and engaging. At the end of the wolf hunting debate, Alistair Bath, an associate professor from Memorial University of Newfoundland in St. John's, engaged the audience in a conflict resolution exercise. Professor Bath, a human-dimensions specialist in natural resource management, placed attendees with opposing viewpoints into small groups and led them through the process of consensus building. Discussions were lively but perfectly civil, and although this provided only a small taste of how consensus is created over days and weeks, the exercise was highly engaging and encouraging.

Debate About Wolf Hunting/Trapping and Working Toward Consensus, moderated by Alistair Bath, top photo.

Mexican Wolf Recovery plenary



Debate About Wolf Recovery plenary with Ed Bangs, Larry Voyles and Center board member Mike Phillips, moderated by board Chair Nancy jo Tubbs.

Film: The Life of Wolf 06 *with filmmaker Bob Landis*

Ray Coppinger on Dogs' Relationship to Wolves

Special Events The public was invited to enjoy rare footage of Yellowstone's Wolf '06 narrated by cinematographer Bob Landis and was kept in stitches by author Ray Coppinger's whimsical lecture on the dog's relationship to wolves. Another special highlight was the introduction of the book *Wild Wolves We Have Known* at the Saturday night banquet, where wolf-expert authors read selections and autographed books. Several people were also honored that night for their tremendous contributions to wolf survival and education. Receiving the Center's Who Speaks for the Wolf Award were author Carter Neimeyer, wolf watcher Laurie Lyman, and Jimmie Mitchell, director of the Little River Band of Ottawa Indians Resource Department in Michigan.

Eighteen author/editors of Wild Wolves We Have Known

Editor and Center board member Dick Thiel

(Right to Left) Dave Mech, Rolf Peterson (both Center board members) and John Vucetich at a book signing following the banquet

An Evening of Awards

Center board member Nancy Gibson awarding Carter Neimeyer

Jimmie Mitchell

Laurie Lyman receives award from Center board member Debbie Hinchcliffe

Center board member Rolf Peterson receiving Erich Klinghammer Award from Wolf Park Curator Pat Goodman

While hundreds of wolf enthusiasts inside the DECC in Duluth, Minnesota, were finding insights into the future of wolves worldwide, the public was also learning about wolf issues. No fewer than 18 news articles, plus television and radio spots, covered the symposium. In these news accounts one question continued to come to the forefront: What was the focus of the symposium?

An answer was provided by International Wolf Center board Chair Nancy jo Tubbs in her welcome remarks about Wolves and Humans at the Crossroads:

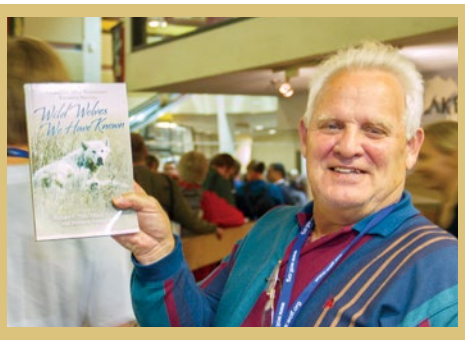
"A crossroad is a point where paths intersect, and we stop to ponder the best route to our destination. As any adventurer knows, a road may bring challenge, beauty, detours, failure or hard-won success. A crossroad, like this symposium, is also a meeting place to talk and listen to each other's hypotheses about how people and their policies and wolves and their behaviors might travel together on alternative roads to the future.

"The issues are many: recovery plans, successes and failures, delisting, hunting and trapping, genetic research, human tolerance and the very understanding of what wolf recovery means and does not mean. Controversies on these topics may well unite us or send us onto separate paths. Our collective work will make all the difference."

Individual Sessions

Wolves and Wilderness Bus Tour to the International Wolf Center educational facility in Ely, Minnesota, with the Center's Information Director Jess Edberg presenting.

Special thanks to our volunteer photographers Darcy Berus, Judy Hunter (Center board member), Ann Rasberry and Kelly Godfrey.



Resilience and Inherent Rank Order Displays

by Lori Schmidt, Wolf Curator, International Wolf Center

Since introduction of our 2012 pups, the Wolf Care staff witnessed the increased activity that young wolves bring to a pack as well as Luna's resilience as she recovered from a serious bone-density problem.

As previous Tracking the Pack columns addressed, Luna had significant medical conditions that caused concern about her future in the pack. While Luna will likely have issues for the rest of her life, she has proven to be quite resilient. Luna maintains dominance over both Denali, a 5-year-old packmate, and Boltz, her pupmate. What's remarkable about her dominance is that in the fall of 2013, she only weighed 82 pounds (37 kilograms). One gets a sense that attitude might play a bigger role than size with Denali at 138 pounds (63 kilograms) and Boltz at 110 pounds (50 kilograms). Attitude also could have helped Luna overcome some of her physical limitations and almost certainly still plays a role in her keeping her tail high and retaining her position at the top of a rally, when young pack

Despite her smaller size, Luna has the highest tail as she scruff-grabs Denali.

International Wolf Center

International Wolf Center

Aidan (right) shows Boltz which one of them is the pack leader.

members jaw spar, wrestle, squash and chase each other. These rally behaviors also stimulate the 5-year-old adults to join in the activity.

Wolves generally reach maturity between 18 and 24 months, and it's this young-adult period that results in the most intensity within a pack structure. Young adults that have spent their pup-hood practicing dominance skills might try to implement these skills by looking for opportunities to climb rank. In the wild, young adults often disperse to find a mate and become the dominant pair of their own territory. In captivity, where dispersal options are limited, rank-order maintenance seems to be more intense.

The Center has managed captive wolves since 1989, providing staff members with an abundance of experience watching young adults engage in tests of dominance. In 2006, Grizzer tested Shadow for status and discovered that Shadow was a very strong pack leader.

International Wolf Center

Shadow (right) shows a maturing Grizzer that there are limits to his behavior (January 2006).

The test was soon over, and Shadow maintained his status as a pack leader from 2002 until 2010. Boltz recently tested Aidan with similar behavior, but Aidan is also a strong pack leader. This winter will see the maturation of Boltz and Luna and the establishment of a rank order within the Exhibit Pack.

Check in at www.wolf.org for the weekly wolf logs featuring both the Exhibit and the Retired Packs. ■

Wolves of the World

Ihor Dovhanych

Autumn graces the mountains of Transcarpathia, Ukraine

The Wolves of Ukraine

By Alan E. Sparks and Yaroslav Dovhanych

Irena K. has had a long day. Up at 5 a.m. to milk the cow and mollify the noisy roosters with a few grains of corn, Irena finds it nearly impossible to keep the mud from invading her doorstep with her homemade broom of sticks. A spring thaw has come early to Transcarpathia—the southwest corner of Ukraine spanned by the Carpathian Mountains—where her house sits perched on the edge of an upland valley. She lost one of her dogs to wolves last month; her husband is away in the Czech Republic, sending back money when he finds work; and the kids are off seeking modern lives. The fate of their small farmstead and livestock now depends entirely on her, with the help of her one remaining canine guard.

Nighttime brings impenetrable darkness and a silencing light snow. The day's work is done and Irena has finished her prayers. She has just extinguished the last candle next to the household icon, when suddenly her dog starts jumping and scratching frantically outside the door. The latch gives way and in rushes a pandemonium of canine, snow and cold. "Out! You know you're not allowed in the house," she scolds. Irena chases the animal into the kitchen, grabs it by the scruff, drags it scratching across the floor and throws it out. She locks the door, but then has a tinge of doubt. What will she do if she loses this one as well? Well, he is fierce, the descendant of generations of dogs that can take care of themselves. He'll be ok. He will protect the sheep and will certainly bark up a storm if there is trouble.

Dawn brings the crowing of the roosters. A blanket of fresh snow covers the ground, and when Irena goes out she sees canine tracks everywhere. But where is her dog? She plows a path to the rickety barn. The dog is nowhere to be seen. After Irena milks the cow and returns to the house, she discovers her protector cowering under her eldest's empty bed.

Her dog had not been alone. Irena K. had thrown out a wolf.

In Ukraine hundreds of wolves (and other large predators) are taken from the wild as pups and illegally sold as pets, which are then often kept in far from ideal conditions. This female wolf was rescued from abusive conditions and kept at a research facility.

Maryna Shkvyria, Ph.D., Department of Fauna and Systematics of Vertebrates, Schmalhausen Institute of Zoology NAS of Ukraine

We have added details descriptive of local customs and conditions to the story above, and while we cannot confirm the animal was a wolf, the story is accepted as plausible by wildlife experts in Ukraine and illustrates a proximity of wolves and people that has been common there for millennia. Although historically often associated with its immense neighbor to the east, Ukraine does not feature the vast, sparsely populated expanses of Russia. In fact, relative to most wolf country in the United States, Ukraine is densely populated, e.g., about three times as densely populated as Minnesota. Yet wolves are now found throughout the entire country, from the heavily forested Carpathian Mountains in the southwest to the open steppes of the east. The country is also home to Europe's two other large carnivores, European brown bears

Fences help protect livestock kept in pens at night, but dogs are at least as important.

Ihar Dovhanych

Maryna Shkvyria, Ph.D., Department of Fauna and Systematics of Vertebrates, Schmalhausen Institute of Zoology NAS of Ukraine

A pine forest in the Polisskyi Nature Reserve, near the border with Belarus in north-central Ukraine. The reserve is home to wolves and lynx and their natural prey: roe deer, red deer, wild boar and moose.

(*Ursus arctos arctos*) and Eurasian lynx (*Lynx lynx*), although their range is confined to the Carpathian region. Officially, 2,500 wolves live in Ukraine, but most experts believe there are far fewer. Some researchers suspect half as many, while some wolf advocates claim there are only 1,000. Wolves are counted by district game managers, usually in December before winter and hunting have taken their full toll, and it is also believed the numbers are inflated by multi-counting wolves that wander between districts, as well as by politics.

The wolves of Ukraine are "Eurasian wolves," a subspecies of gray wolf, *Canis lupus lupus*, which prior to the 20th century ranged over most of the vast supercontinent—from Western Europe and Scandinavia eastward through Russia, Central Asia, southern Siberia, Mongolia, the northern Himalayas and China—but now reduced in extent due to persecution and loss of habitat, especially in the west. The Eurasian wolf is believed to descend from canids that migrated from the North American continent across the

The wolf population in the Chernobyl zone is thriving, now at around 200 wolves and gradually increasing.

Bering Strait when it was land or ice, possibly in multiple waves beginning at least two million years ago. After evolving into wolves, some migrated back to North America, possibly also in multiple waves. As in the New World, the average size of wolves in Eurasia varies geographically, generally increasing toward the north. The Ukrainian wolf is of intermediate size, most adults weighing between 34 and 59 kilograms (75 to 130 pounds). Average pack size (around five) and territory sizes—between 160 square kilometers (62 square miles) on the steppes and 300 square kilometers (116 square miles) in the lowland forests—tend to be smaller than those of most wolves in northwestern North America.

Wolves in Ukraine are adapted to a wide variety of habitats. The country spans the transition between two of Eurasia's most extensive natural ecosystems: the temperate forests of north-central Europe and the grassy open steppes of central Asia, with a forest-steppe zone in between. The forests of the northern plain—a region known as Polissia, which extends into Belarus and includes many lakes, low hills and a large wetland known as the Pripet Marshes—are comprised mostly of pine, oak and birch, while beech, fir and spruce dominate the Carpathian Mountains in the southwest; the forest-steppe zone in the country's center consists of rolling open grasslands and farmlands interspersed with stands of mixed, mostly deciduous trees (oak being most common). In the south and east are the treeless plains.

Transcarpathia is Ukraine's least developed and populated region, providing the wildest habitat for wolves. In a legacy from Communist times, most undeveloped land is owned by the state. Between 350 and 400 wolves are believed to roam the mountains today, having expanded from a low point during the 1970s, after a period of severe wolf control following World War II had reduced the population to perhaps 20 and extirpated wolves from much of eastern half of the country. The Transcarpathian wolves are part of a larger population of around 3,900 wolves distributed throughout the Carpathian Mountain chain, from Romania to Poland. The region is mostly forested, but during the snowless season livestock graze on mountain meadows that spread across many slopes and hilltops. Wolves are opportunists and will prey on vulnerable livestock, dogs, small animals such as hares (*Lepus europaeus*) and rodents and will also scavenge human refuse. But the primary diet of most wolves most of the time in Ukraine consists of the wild ungulates of the region: roe deer (*Capreolus capreolus*), red deer (*Cervus elaphus*) wild boar (*Sus scrofa*), and where they are found in the north, occasionally moose (*Alces alces*).

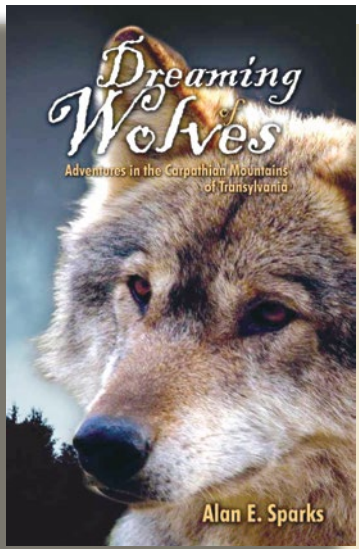
The steppes and forest-steppes are largely settled and farmed, and this is where conflicts between wolves and people are greatest, even including occasional attacks on humans (five or six are reported each year) usually by wolves that are rabid. But there is one intriguing exception where the landscape is reverting to the wild and conflicts are nil: a 2,600-square-kilometer (1,004-square-mile) region—spanning the northern border with Belarus—with almost no people. Originally a circle with a radius of 30 kilometers (18.6 miles), but since adjusted to reflect measured radiation levels, the Chernobyl exclusion zone was created in 1986 after the nuclear plant explosion. The entire population—some 200,000 people—was eventually

Ihor Dovhanych

A mountain house near Rakhiv, Ukraine. Many people who live on the high mountain slopes raise sheep on the pastures and still do without cars.

Dreaming of Wolves: Adventures in the Carpathian Mountains of Transylvania, by Alan E. Sparks

by Cornelia N. Hutt



If the Carpathian Mountain region of Romania is not on your bucket list of travel destinations, it will be after reading Alan Sparks' award-winning book about wolves, culture and folklore of Romania and the author's often hilarious adventures struggling with the language and his daily chores—kitchen duty, wolf-pen cleaning and chopping firewood, as well as tracking wolves in the shadow of Dracula's Castle. Sparks writes brilliantly of Old World ways and the relationship of rural Romanians with nature and predators. These are people who, like the resourceful Irena K. in his accompanying article about Ukraine, must coexist with wolves. Their elusive presence is always felt in the deep mountain forests and valleys. The narrative sweeps the reader along as companion and fellow traveler with the author—a literary trip no one should miss. ■

required to evacuate, and all but around 200 mostly elderly residents remain excluded today. Nevertheless, although radiation can negatively affect individuals, and studies have found genetic abnormalities in field mice, insects and birds, as well as a reduction in the density and diversity of insects and birds in the most contaminated areas, what was a disaster for people has apparently been a boon for populations of many species of wildlife. Populations of wolves, wild boar (these first two especially), roe deer, red deer, foxes, badgers, raccoon dogs, ferrets, moose, beavers, lynx and brown bears are all believed to have increased significantly (the latter four from almost none), and European bison (*Bison bonasus*) and Przewalski's horses (*Equus ferus przewalskii*) have been successfully reintroduced.

With an abundance of prey—one study showed that 60 percent of the diet of the Chernobyl wolves consists of beaver—the wolf population in the Chernobyl zone is thriving, now at around 200 wolves and gradually increasing. This is the highest wolf density in all of Polissia and is about the same as would be expected for an undisturbed

region of this habitat. Thus the radiation is not adversely affecting the wolf population as a whole. Neither have wolves been observed with noticeable mutations, although most animals born with significant mutations would probably not survive long.

Like everywhere wolves and people coexist, there are conflicts and a range of attitudes about wolves in Ukraine. Yet negative attitudes prevail. There is no firm evidence that wolves are limiting wild ungulate populations at unhealthy levels (although poaching could be) or reason to believe livestock depredation is greater than elsewhere (studies in neighboring Romania have shown about a 1.2 percent loss to both wolves and bears), but negative views are being fed by recent dramatic press reports of wolves more frequently visiting settlements, depredating livestock and dogs and attacking people. Hunting and forestry spokespeople have been issuing dire warnings about wolves running amuck, and beliefs may even be colored by the turbulent history of Ukraine, as wolves were observed scavenging the barely buried corpses of war as recently as World War II.

Thus, while a few environmental advocates are calling for greater protections, and while Ukraine officially accepts EU goals for ensuring a viable wolf population, many are calling for increased control of wolves. Until recently, hunting of wolves was unlimited, but a law passed in 2010 restricts the wolf-hunting season, from early November to late March, with no limits, but also with former bounties eliminated. Regardless of law, poaching is believed to be high. Wolf pelts can fetch more than $100—a very significant incentive for hunters in Ukraine. Farmers and shepherds also occasionally kill wolves that might be causing trouble, regardless of season and usually by the illegal use of strychnine. Most experts agree that at least half of the wolves in Ukraine are killed by humans each year (research estimates range from 30 to 70 percent).

Poaching of wild ungulates along with gradually rising wolf populations are increasing conflicts between wolves and people, while development and resource extraction is fragmenting wild habitat. Although an old nation—the foundations of Ukraine go back to Kievan Rus' in the 10th century A.D.—Ukraine is a young country, having achieved independence only with the collapse of the Soviet Union in 1991. Today largely because of its recent legacy from Communist rule, the Ukrainian economy is struggling, and resources for conservation and ecological research are scarce. In 2012 per capita GDP was about $7,600 (U.S), and the official rates of poverty and unemployment were 24 percent and 7.4 percent, respectively, but in reality each is much higher. To ensure a secure future for wolves and the diverse natural ecosystems of Ukraine as well as improve the lives of people who live with predators, Ukraine will be challenged to provide the resources and implement the strategies of protecting livestock, compensating livestock losses, educating the public and providing economic incentives via ecotourism that have been effectively applied in many countries of the West. ■

Alan E. Sparks has lived and travelled extensively in Central and Eastern Europe, writing and working on wildlife research and ecotourism projects. He is the author of Dreaming of Wolves: Adventures in the Carpathian Mountains of Transylvania.

Yaroslav Dovhanych is manager of the Zoological Laboratory of the Carpathian Biosphere Reserve, based in Rakhiv, Ukraine.

Wild wolves are hard to spot in the dense forests typical of Ukraine.

Maryna Shkyryia, Ph.D., Department of Fauna and Systematics of Vertebrates, Schmalhausen Institute of Zoology NAS of Ukraine

Personal Encounter

A Lesson in Vulnerability

by T. DeLene Beeland

What is a personal encounter?

What does it mean to have a personal encounter with a wolf? Does spying on a wolf napping in an enclosure within a wildlife park or zoo count? Does it mean glimpsing the flank and muddy hindquarters of a wolf as it trots away from you down a road in Denali National Park? Must the wolf also see you for it to be an encounter? Or might it mean experiencing a personal revelation about wolves, or how we think of them or their management while seeing or laying hands on an individual of a species that is both revered and reviled?

What does it mean to have a personal encounter with a wolf? What do we want it to mean? I've never succumbed to romantic or stereotypical notions about wolves. They aren't mystical. They aren't magical. They aren't angels or devils. To me, they are simply interesting creatures because they are large mammalian predators with complex social behaviors and complex ecological interactions.

So what does it mean to have a personal encounter with a wolf? For me, an encounter implies that at least one of the participants is changed by the meeting; maybe it's an attitude that shifts, or an awareness that is born, or maybe a new discovery is made. — T. D. B.

The first time I encountered a wild red wolf it occurred to me that I'd never been so near to a large predator while it was so meek and vulnerable. The contrast of how I expected the animal to behave versus how it did on that particular day was a revelation that I still carry with me today.

It was the summer of 2009, and I was visiting Sandy Ridge, an outdoor facility maintained by the U.S. Fish and Wildlife Service (USFWS) Red Wolf Recovery Program. Sandy Ridge is tucked into the swampy woods of Alligator River National Wildlife Refuge in coastal North Carolina. Deer flies and mosquitoes feasted on my bare legs and arms. I was in the beginning stages of field reporting for a book on red wolves. Although I'd previously seen several captive red wolves, I don't feel I truly encountered one until I followed a recovery team biologist into one of Sandy Ridge's fenced pens. He had just shown me several captive red wolves, which are used for breeding, but we'd stood safely outside the pens and gazed inward. Then he motioned for me to follow him into a pen where they were temporarily keeping a wild red wolf. She had been captured for treatment of a terrible bout of mange that had denuded most of her fur. Upon recovery, she would be released.

She heard us coming and sought refuge in a metal dog box. The biologist and I trod lightly over dried oak leaves and shards of deer bones as we approached the faux den. When he lifted the lid, light poured into the dank cavern, and the ill, tense wolf lifted her head. She pointed her nose downward and raised her eyes skyward. Bubbles of saliva edged her tongue as she panted in the sweltering heat. Her coat was oddly short; the hairs were still growing back. Her forelegs were pocked with sores where the mange had caused her to lick and scratch at her skin until it bled. Her amber eyes met mine for a long moment before flicking away.

If I walk back into that memory today I can still see her tiger-stone-colored eyes boring into mine; her gaze penetrating mine. She wasn't simply looking at me—she was looking back. There was intelligence there, which I did not doubt. But there was something else. I know we're not supposed to anthropomorphize, but it's in equally poor judgment to ignore what's staring us in the face; her gaze vibrated with raw fear. She was so scared by our presence that she defecated.

It's difficult to say why this particular encounter had such a lasting effect on me. Maybe because it shattered once and for all, for me, the popular but misinformed notions that wolves are relentlessly fierce, malicious and bloodthirsty, that wolves are either purely good or purely bad, or that wolves are instruments of mysticism or magic. Or maybe it's because this poor wolf was so exposed and vulnerable. When her gaze met mine, I knew instantly that she and I were both aware of that fact.

While she likely did not comprehend it, I also knew that she wasn't alone in her fragility. Her entire species is vulnerable—vulnerable to mortality due to human actions, vulnerable to hybridizing itself out of exis-

Photos: © 2009 Melissa McGaw

tence as we know it and vulnerable to extinction.

After that particular encounter, I returned to red wolf country four or five more times over more than a year to learn more about how red wolves are managed, what threatens them and what their future might hold. I was fortunate enough to cradle zoo-born red wolf puppies in my hands and place them in a wild den, where they would be raised by an adoptive red wolf mother. I saw red wolves trapped, and radio collars bolted around their necks. I witnessed red wolves released, scrambling back into the tall canes and crowded woods they knew to be home.

There were multiple positive encounters with red wolves, and so it is ironic that the red wolf encounter I feel connected to the most deeply centers on an injured individual. I'm honestly not sure why that is. Maybe it's synecdoche.

You see, just as the mange-ridden red wolf would not have survived without the helping hands of biologists, her population—the only wild population of red wolves in the world—will also not survive without the guiding management of the Red Wolf Recovery Program. It's as if her injuries and the care she required at the hands of humans were a metaphor for the deep injuries red wolves have suffered and the human management they now depend on to survive into the future. ■

T. DeLene Beeland is a science and nature writer living in Asheville, North Carolina. She is also a member of the Red Wolf Coalition board of directors (www.redwolves.com). Her articles have appeared in several publications including the Charlotte Observer, *Slate.com, and Wildlife in North Carolina. Her blog, Wild Muse, covers research and books concerning ecology, evolution and the environment (http://sciencetrio.wordpress.com). More information about her book* The Secret World of Red Wolves: The Fight to Save North America's Other Wolf *can be found at www.delene.us. Beeland also recently established Friends of the Red Wolf (www.friendsofredworlf.org), to support the recovery of wild red wolves.*

She wasn't simply looking at me—she was looking back. There was intelligence there, which I did not doubt. But there was something else.

Wild Kids

Meet the Pack

Boltz

Boltz, a Great Plains subspecies of *Canis lupus*, is the youngest male of the International Wolf Center's ambassador wolves at 1.5 years. Wolf Care staff originally named Boltz "Bolts" because of the way he would dart through the wolf yard. The "s" at the end of his name was changed to a "z" during the 2012 Name the Pups contest. Boltz was known to be timid throughout his first year but has gained confidence and frequently, yet unsuccessfully, challenges his packmate Luna over food possession. Although Boltz and his packmate Aidan have similarly colored coats, it is easy to identify Boltz by his intense yellow eyes. Soon Boltz will likely attempt to gain status in the male rank order, but Aidan is a strong pack leader and will likely show Boltz some limits.

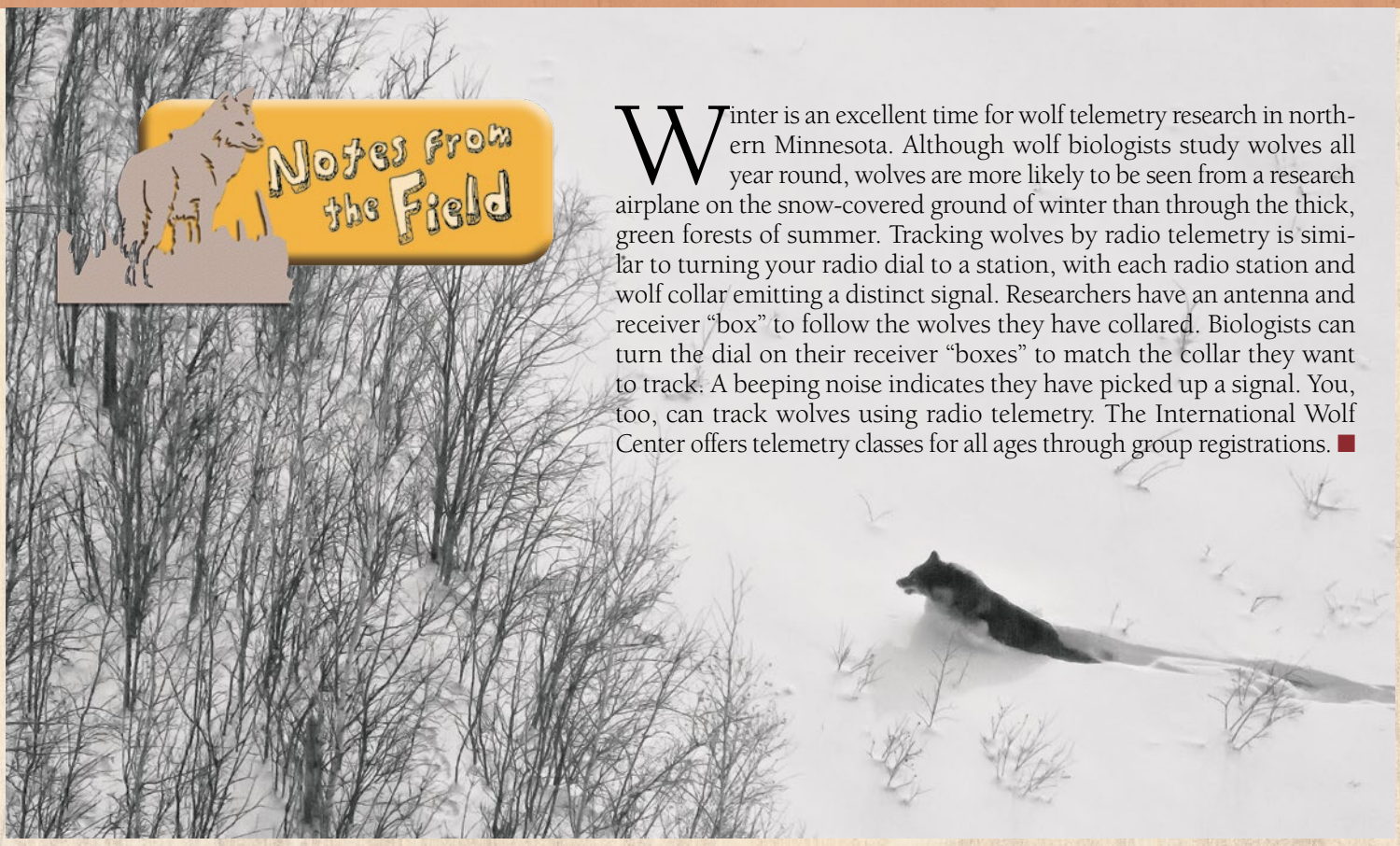
Judy Hunter

Vocabulary

Biologist: A person who studies living things, life processes and/or the animal and plant life of a particular place. Biologists also study the relationship of living things to one another.

Canis lupus: The scientific name for the gray wolf.

Telemetry: The use of electronic equipment to locate a radio signal. Researchers use telemetry equipment, such as receivers and antennas, to locate signals emitted from radio collars placed on animals.



Winter is an excellent time for wolf telemetry research in northern Minnesota. Although wolf biologists study wolves all year round, wolves are more likely to be seen from a research airplane on the snow-covered ground of winter than through the thick, green forests of summer. Tracking wolves by radio telemetry is similar to turning your radio dial to a station, with each radio station and wolf collar emitting a distinct signal. Researchers have an antenna and receiver "box" to follow the wolves they have collared. Biologists can turn the dial on their receiver "boxes" to match the collar they want to track. A beeping noise indicates they have picked up a signal. You, too, can track wolves using radio telemetry. The International Wolf Center offers telemetry classes for all ages through group registrations. ■

Dan Newcomb

Cris Cross

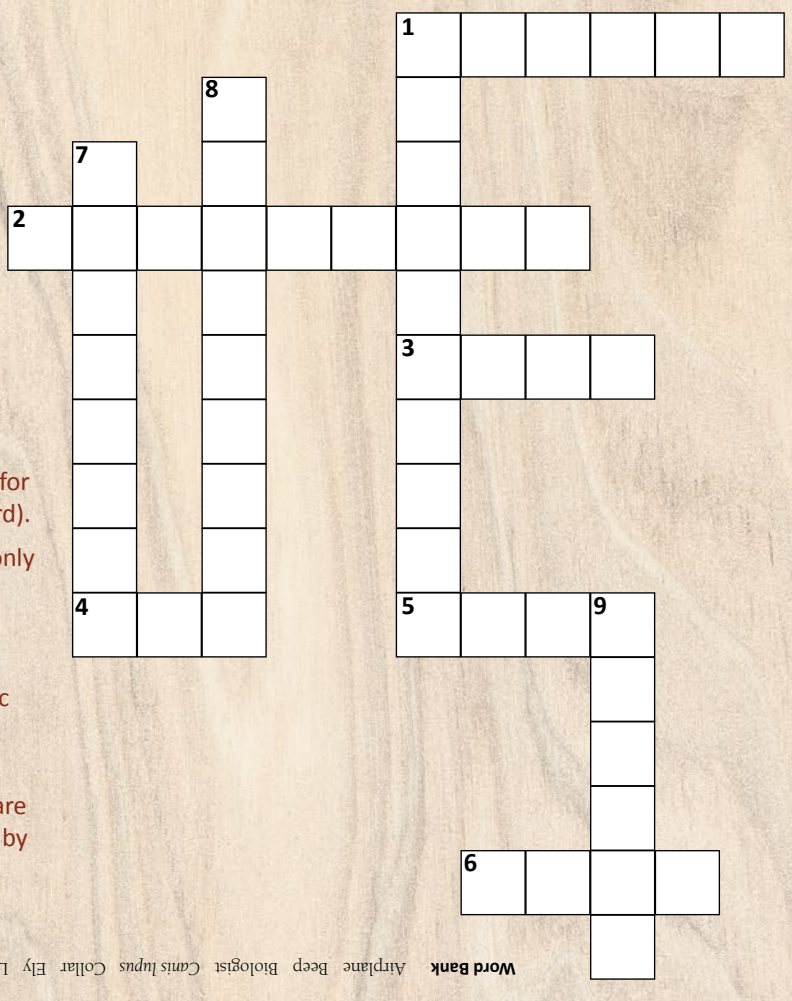
Fill in the squares with the answers or definitions using the clues below. For help, use the word bank.

Across

1. The piece of equipment worn around a wolf's neck for radio telemetry.
2. A person who studies life.
3. The name of the only female wolf in the Exhibit Pack.
4. The city where the International Wolf Center is located.
5. This white layer allows for wolves to be more visible in winter.
6. The sound researchers hear when they locate a collared wolf.

Down

1. The scientific name for the gray wolf (one word).
7. Researchers commonly use this vehicle in the winter to track radio-collared wolves.
8. The use of electronic equipment to locate a radio signal.
9. The season wolves are best seen from the air by researchers.



Word Bank Airplane Beep Biologist *Canis lupus* Collar Ely Luna Snow Telemetry Winter

A Look Beyond

Unintended Consequences of the Endangered Species Act

by Nancy Gibson

The 1973 landmark legislation establishing the Endangered Species Act (ESA) has been the salvation of many high-profile species, including the bald eagle, the American crocodile and, of course, the gray wolf. Culturally speaking, our society tends to place a high value on such charismatic animals. We want to protect what we love. It's only natural. However, keeping our most cherished animals on the endangered species list means there isn't room, money or time for all the other species that need protection.

The ESA is now 40 years old, and the wolf was one of the first high-profile yet divisive species to be listed. While other species like the bald eagle have moved peacefully past recovery, the wolf continues to get its day in court because recovery means that hunting and trapping are reinstated as a form of management. This has not been the case with other recovered species except for the alligator. When initially listed in 1973, the wolf population in the lower 48 states was estimated at 750, all in Minnesota and Isle Royale. That number has grown to about 6,000 across Minnesota and seven additional states. Certainly the current population and range pales in comparison to the likely carrying capacity of the wolf. However, the ESA was arguably never intended to restore the wolf to its historical range or even to a majority of the suitable habitat that still exists but only to keep it from extinction.

During the past 10 years, the U.S. Fish and Wildlife Service (USFWS) believed that delisting the Midwest wolf population was biologically justified, yet the USFWS Web site states that over the same period $62 million was spent on behalf of wolves across the country. Much of the recovery budget was spent on litigation expenses; there is no litigation budget. The $62 million does not include money spent on the Mexican wolf (*Canis lupus baileyi*), a subspecies of the gray wolf (*Canis lupus*), or on the red wolf (*Canis rufus).*

Lawsuits opposed to delisting, repeated proposals and final rules to delist as well as enforcement and consultation have all sucked up the small recovery budget. In the end, these lawsuits have negative consequences for other rare species that deserve protection under the ESA. Due to delays and lack of funding, other species are in danger of extinction. Do we care what happens to them? Certainly some lawsuits are valid. Issues surrounding listing and delisting of endangered wildlife deserve proper time for public input, scientific expertise and legal judgment as well as to be free from politics.

Ron Refsnider, former Midwest endangered species listing and delisting coordinator, said, "Special interest groups can, have and still do hijack the ESA's citizen lawsuit provision to promote their own special interests—frequently interests that don't fall under the provision of the ESA, like conserving large charismatic carnivores, preventing hunting or trapping or wildlife welfare. While these may be valid concerns, promoting them via the ESA creates a threat to other rare species and to the Act itself."

If and when the wolf wars ease, there will be larger fights that go unnoticed. Powerful oil and natural gas interests already flood the airwaves with warm and fuzzy stories about the positive attributes of drilling. But those landscapes house many at-risk wildlife species in need of a group to tout their habitat requirements. Sprague's pipit, the greater sage grouse, Jemez Mountain salamanders, sturgeon and nine species of bats all face the tenacious lobby of a well-funded energy and agricultural campaign. These species may not capture our interests with the benefit of public hearings or lawsuits, but they will have the critical backing of the ESA tasked with completing recovery plans for an ever-growing list of species and a budget already stretched too thin to accomplish its limited goals. The ESA was a monumental win for wildlife advocates, and it needs to work or face the risk of seriously being amended or repealed. The recovery of the high-profile wolf, while not perfect, is still a success we all applaud.

It has been 27 years since wolves became my focus. I will never forget my first sighting of a wild wolf or the emotion of watching a plane taking off in Canada with wolves destined for Yellowstone National Park and central Idaho. Wolves and humans formed an important bond. That bond is needed for the lynx and grizzly bear but more so for the many lesser-known animals that play a key role in the ecological web, offer genetic diversity and act as monitors of the clean air and water needs they share with humans. Now is the time to diversify our efforts. ■

Nancy Gibson is a member and former chair of the International Wolf Center board of directors. She authored the book Wolves, *and won the Willard Munger Award for environmental stewardship. Gibson was the naturalist on the Emmy-Award-winning PBS show Newton's Apple.*

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