INTERNATIONAL WOLF

A PUBLICATION OF THE INTERNATIONAL WOLF CENTER
SPRING 2012

Wildlife and Environmental Disasters: Surviving Wind, Flood and Fire in Red Wolf Country

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Wolf 258's Long Trek Across Alaska and the Yukon PAGE 8

Recovered Collar Details Canadian Wolf's Journey Through Minnesota PAGE 11

Montana Wolf Hunt Report PAGE 13

INTERNATIONAL
WOLF
THE QUARTERLY PUBLICATION OF THE INTERNATIONAL WOLF CENTER
VOLUME 22, NO. 1 SPRING 2012

Features

Wildlife and Environmental Disasters: Surviving Wind, Flood and Fire in Red Wolf Country

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Cornelia Hutt

Wandering Wolves

Wolves are intrepid travelers, especially those dispersing to new areas. In this issue of *International Wolf*, we present the journeys of two dispersing wolves.

Wolf 258's Long Trek Across Alaska and the Yukon

John Burch

Recovered Collar Details Canadian Wolf's Journey Through Minnesota

Tim Davis

Montana Wolf Hunt Report

Montana's wolf management plan allows for an annual harvest of 220 wolves. The wolf harvest—originally slated to run from September 3, 2011, to December 31, 2011—was extended through February 15, 2012, because hunters had not yet reached their quota.

Jess Edberg

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On the Cover

Photo by Greg Koch.

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International Wolf welcomes submissions of personal adventures with wolves and wolf photographs. Prior to submission of other types of manuscripts, address queries to Tom Myrick, magazine coordinator.

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

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Who Speaks for Wolf 2011

Biologist/Journalist Receives 2011 Who Speaks for Wolf Award

The International Wolf Center Board of Directors has announced Hank Fischer of the National Wildlife Federation as the recipient of its 2011 Who Speaks for Wolf award.

The annual award is given to an individual who has made exceptional contributions to education about the wolf, placing the wolf in the broader context of humankind's relationship to nature.

Photo courtesy of Hank Fischer

"Hank Fischer has combined his expertise on wolves with a meaningful plan for the long-term survival of the species," said Nancy Gibson, International Wolf Center board member. "He has guided the public debate to the understanding that healthy wolf populations need wildlands for long-term survival."

Fischer's work with the National Wildlife Federation has focused on a new tactic for wolf population survival—a market approach to buy grazing allotments, which has turned opponents into partners and helped relieve wolf and livestock conflicts. (To read more about Fischer's conservation efforts, download the winter 2009 issue of *International Wolf* at wolf.org/wolves/news/pdf/winter2009.pdf.)

"As a result, nearly 600,000 acres of former grazing lands are now designated as habitat for wolves, grizzly bears and other wildlife," says Gibson. "Fischer has skillfully used his degrees in wildlife biology and journalism to accurately reveal the struggle facing predators. With radio commentary, numerous presentations, collaborative efforts, and his book *Wolf Wars*, he has earned respect from all sides that debate the controversies surrounding wolves."

Other award winners since 2000 include: Ron Refsnider, U.S. Fish and Wildlife Service; John Virr, philanthropist; Red Wolf Coalition Executive Director Kim Wheeler; and Dr. Chip Hanson, a wolf veterinarian in Ely. Current Center board and staff members are not eligible for the award. ■

From the Executive Director

"We're here to put a dent in the universe."

—Steve Jobs, entrepreneur and inventor (1955-2011)

After 25 years of helping the Center teach the world about wolves, I likely have left "dents" in the wolf universe—most of them good, I hope. It is time for me to retire and spend much more time with my husband, Gene, my family and friends. You can still find me searching for animal tracks with my grandkids and heading out any dark night to howl for wolves. I hope to spend many days of my retirement outdoors, where my world feels whole and in balance.

Mary Ortiz

Life is change. Some wolf populations have gained a healthy foothold over the past 25 years. Yet, the survival of wolves still sits in tentative balance in many places around the world.

Education is a powerful tool for facilitating change and advancing the survival of wolf populations. Purposely, we are reaching out to children in this issue by the returning the Wild Kids pages (pages 22-23) to our magazine. The future of wolves, all wildlife, wildlands and even humanity is in our children's hands. Let's continue to teach them well.

New life is coming to the Center with the arrival of pups, just as I retire in May 2012. What a fitting time to move on! My first week of retirement will be spent bottle-feeding these young ambassadors, just as I have for every wolf in our pack.

I am proud to have been a part of the Center's important work, and I look forward to keeping in touch with the dedicated board and brilliant staff who will carry the torch forward. They will always find challenges in this work—it is the way of the wolf. But the future holds promise, as the Center continues "teaching the world about wolves" in new and better ways.

As Winston Churchill said, "Never, never, never, never give up." Our members, donors, volunteers and friends of the wolf must keep working to make the landscape sustainable for wolves and humans. Our human connection with our wild counterparts is just too important to lose. Please take the time to make your very own dents in the universe of wolves. You and others you teach will make a difference. ■

Mary Ortiz, executive director

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Wildlife and Environmental Disasters:

Surviving Wind, Flood and Fire

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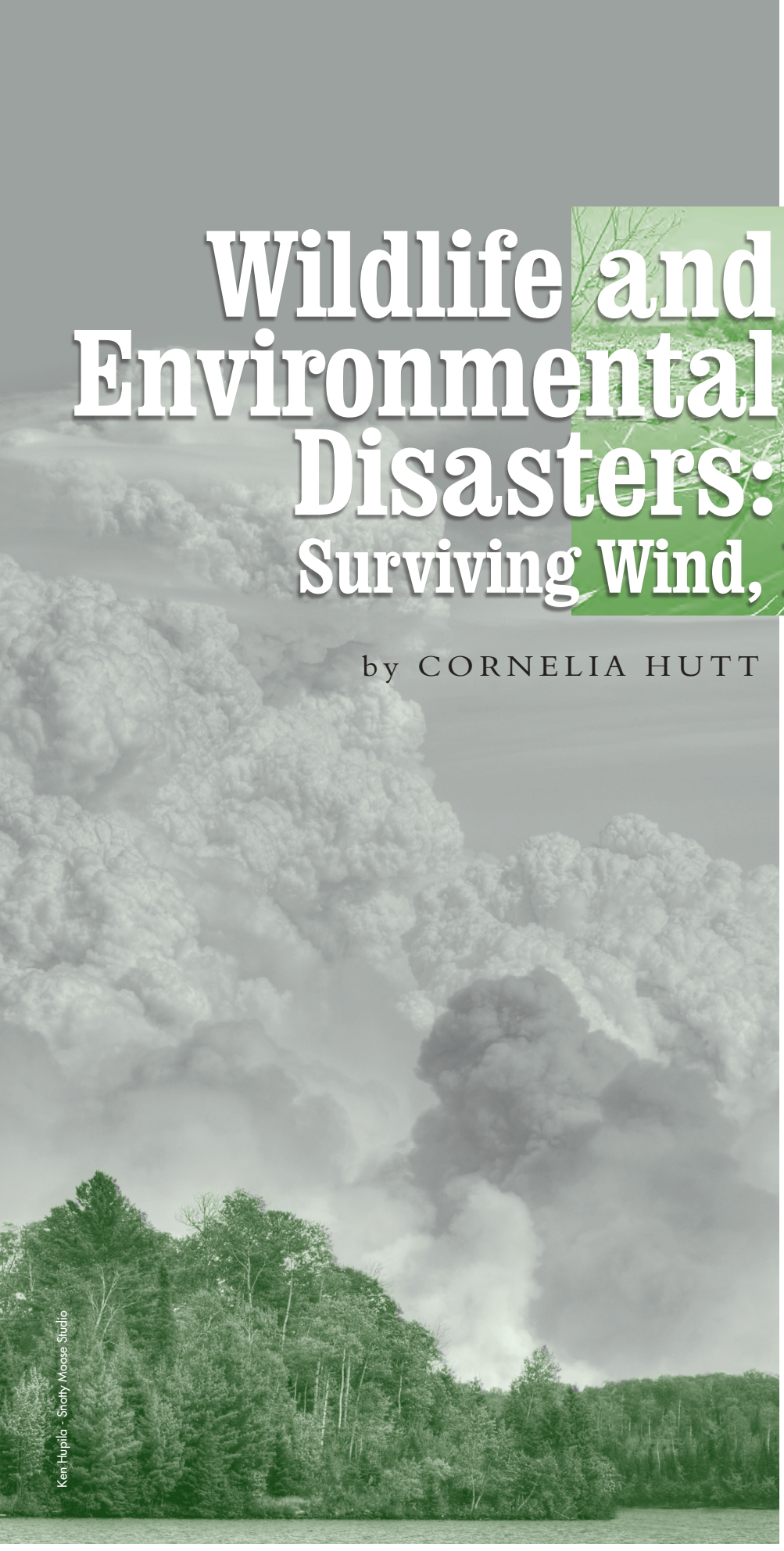


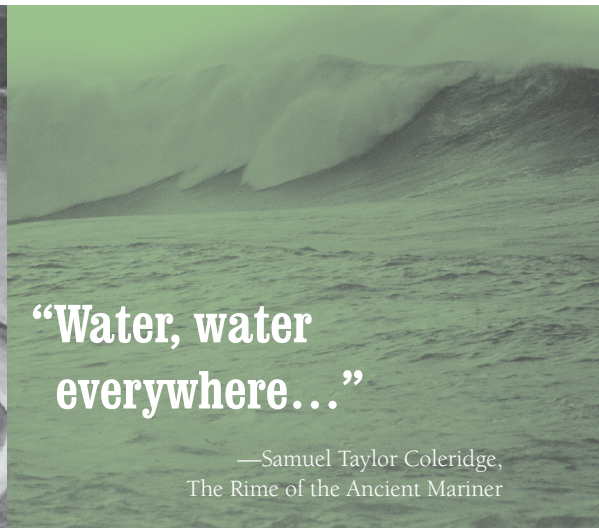
Ken Hupila - Snotty Moose Studio

Pagami Creek fire, massive smoke plume from burnout operation on June 4, 2011, east of Stomper Road.

The Winds of August—Hurricane Irene, 2011

Reminders and memories of Hurricane Isabel (2003) linger in coastal northeastern North Carolina, and so last summer, the region braced for the worst as Hurricane Irene churned through the Atlantic on its way to making landfall along the famous Outer Banks beaches. Wildlife managers reviewed their detailed disaster plans and dared to hope the storm bearing down on red wolf country would not leave behind an ecocatastrophe. As the surf began to build and the sky flattened to gunmetal gray, residents boarded up houses. Tourists, under a mandatory evacuation order, took to the crowded highways and headed inland. In the red wolf restoration region, a short distance west of the Outer Banks, local folks pondered what to do as they gazed out over the low-lying wetlands and the soybean and cotton fields. Should they stick it out or play it safe? In the picturesque town of Columbia on the banks of the scenic Scuppernong River, business owners and residents studied the normally lazy, meandering stream and cast worried glances at the

in Red Wolf Country



"Water, water
everywhere…"

—Samuel Taylor Coleridge,
The Rime of the Ancient Mariner

***Red wolf,* Canis rufus.**

retaining wall separating the postcard-pretty boat harbor from downtown.

Many people wisely chose to leave. But what of the red wolves, black bears, bobcats and all the other creatures in northeastern North Carolina's rich ecosystems? Certainly they had no possessions to lose, no real estate to batten down, no keepsakes to cram into a car and no vehicles to transport them to safety. However, nature is way ahead of humans in responding to impending crises like storms and flooding. "The wolves just hunker down and wait it out," as Red Wolf Recovery Coordinator Dr. David Rabon, U.S. Fish and Wildlife Service, puts it. And if they have to flee, they can. Transportation is not a problem for a highly mobile, terrestrial predator that is also an excellent swimmer.

In the Wake of the Deluge

Irene lashed the region with wind and rain, leaving Columbia with three feet of muddy river water swirling through the streets and over floors of downtown businesses. The Red Wolf Coalition office escaped relatively unscathed even though the front steps were washed away. "Rufus," the Coalition's red wolf mount, and his small cousin, a coyote, surveyed the sodden aftermath of the storm from their fixed vantage point in the office display window. Over at the desk, the phone rang, and emails came winging in as people inquired anxiously about the wild red wolves in the five-county red wolf recovery area: "Are the wolves all right? Did they make it through the storm?"

This time, the answer was reassuring. The red wolves weathered the hurricane just fine, or at least evidence from the transmitters on the radio-collared wolves in the wild population confirmed they had indeed hunkered down and waited it out. Everyone was relieved, but no one was complacent. For one thing, Irene had been downgraded to a Category 2 storm when it made landfall. For another, the violent wind and heavy downpours moved out of the area without lingering overlong.

But what if Irene had come ashore as a Category 5 hurricane? What if it had stalled over the region? What if it had followed closely behind another storm? What if another hurricane had pounded the area two weeks after Irene weakened and died off New England? What then? Would the outcome have been different for wolves and other resident wildlife?

Seasonal Flooding and Red Wolves

No one knows the answers, but the questions concern wildlife managers and red wolf advocates. All they can say is, "Well, we got through this one. It could have been worse." And that's true. The overall impact of storms and seasonal flooding on the ecosystems and wildlife communities in northeastern North Carolina has not been calamitous. Since animals do not have personal property to worry about, all they have to do is survive. The general thinking is that certainly some die, but as long as healthy populations remain present, the death of one animal does not raise an alarm—that is, unless that animal is a red wolf, particularly a breeder. Gray wolves exist in comparatively large numbers throughout the Northern Hemisphere, but coastal North Carolina is the only region in the red wolf's historical range where approximately 130 of these wild, rare predators live. Imperiled species like red wolves are especially vulnerable to the effects of natural disasters, and small, isolated populations stand the chance of being wiped out in a single event. It's fortunate that most hurricanes occur in late summer and early fall when wolves are not denning and when the pups are nearly fully grown and able to travel.

Red wolf, standing tall, alert.

Cory Waters, USFWS

"By this time the heat was extreme, and the crackling roar of the flames was almost upon them. Red Fox led his family around to the farther side of the big beaver-house, but himself kept watch where he could see everything. The smoke was now volleying down upon the surface of the pond in great bursts, the water was smitten here and there with red brands that hissed as they fell, and the tongues of flame that ran up the tall trunks of pine and fir seemed to leap bodily into the air in order to set fire to the trees ahead of them. The whole southeastern sky was now like a wall of molten and blazing copper, stretching to the zenith and about to topple down the world. Against it, a last despairing barrier already beginning to crumble, stood black and defiant, the water-side fringe of trees."

—Charles G. D. Roberts, *Red Fox*

Climate Change—Tempest in a Global Teapot or a Warning?

Seasonal hurricanes have not significantly affected wildlife in northeastern North Carolina, and certainly wildlife does not affect hurricanes. However, what about humans? Do people have an effect on hurricanes? Some of the best science tells us that climate change is raising ocean water temperatures, and warmer oceans are spawning grounds for ever more powerful storms that occur more frequently. It's hard to discount the ominous possibility that massive flooding from a monster storm could cause lingering damage to the set of living conditions that allows the region's animals and plants to thrive in the wild.

And more bad news is that the National Oceanic and Atmospheric Administration (NOAA) identified North Carolina as one of three states with the most significant vulnerability to sea-level rise, wind-driven tides and hurricane-driven surges. Sea-level rise is predicted to continue into the next century at an accelerated rate. A glance at a map shows the huge Albemarle-Pamlico estuarine system surrounded by land that has little slope. Therefore, even small, incremental increases in sea level could mean inundations of large expanses of land, including wildlife habitat. Additionally, tectonic forces are causing the land in northeastern North Carolina to sink very slowly, thus making the sea-level rise potentially greater than in areas where the coastline is stable or even rising. The current rate of sea-level rise in the region is twice the global average, according to four universities that studied the impacts to coastal resources as sea level rises and as hurricane activity increases and intensifies.

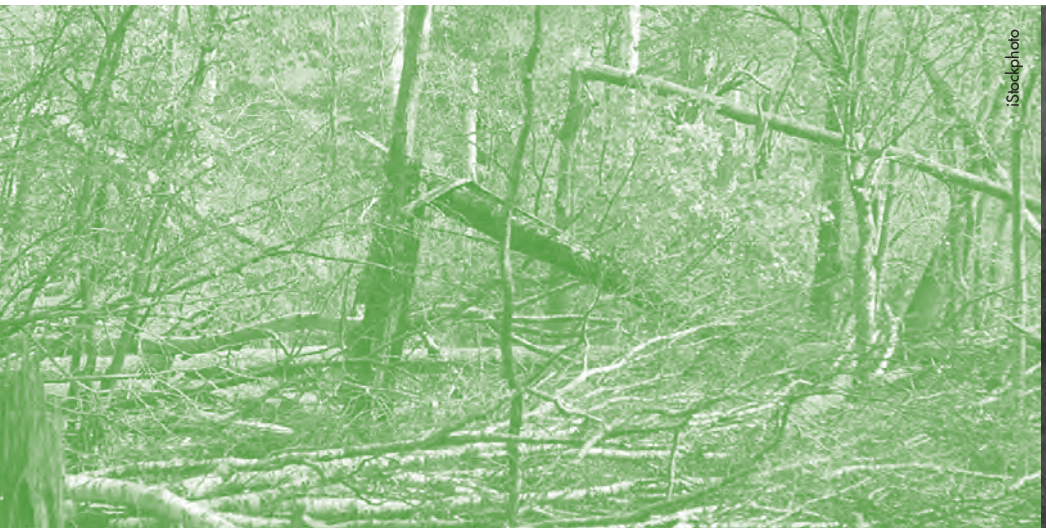
The jury is still out about the link between climate change and the magnitude and rate of sea-level rise. But a drive through red wolf country will convince even skeptics that coastal erosion and land loss are occurring and are measurable. Drainage canals remain brimful, and residents of Columbia, 35 miles (56 kilometers) inland from the Outer Banks, have adopted a grimly humorous outlook. "Don't worry about the current real estate slump," they advise. "Wait around awhile, and Columbia will be prime beach-front property."

The Towering Inferno—Wildfire

Wildfire is terrifying. Just ask the wolf-study team who, like the character Red Fox in the book, had the good sense to seek safety on an island in the Boundary Waters Canoe Area Wilderness when a lightning strike ignited the huge Pagami Creek fire in northern Minnesota's Superior National Forest. During the weeks the fire raged, the International Wolf Center in Ely fielded anxious inquiries from people concerned about wild wolf packs.

One difference between fire and flood sometimes lies in the cause. People don't directly trigger hurricanes in red wolf country or anywhere else, for that matter. That's fortunate. Given the monumental carelessness, indifference and sometimes outright malevolence of some people, catastrophic human-caused weather events would probably surpass the destructive power of conflagrations started by unattended campfires—and arson.

People occasionally start blazes where red wolves live, but usually it's lightning that ignites fires like the Pains Bay fire on the Alligator River National Wildlife Refuge in May 2011 before Irene unleashed her fury. The compacted soil of the region called "pocosin" burns like peat or like coal deep in a mine. Once a fire starts, it's difficult to extinguish, and the intensity of these infernos often makes escape and survival for wildlife hard, especially if high winds whip the flames and increase the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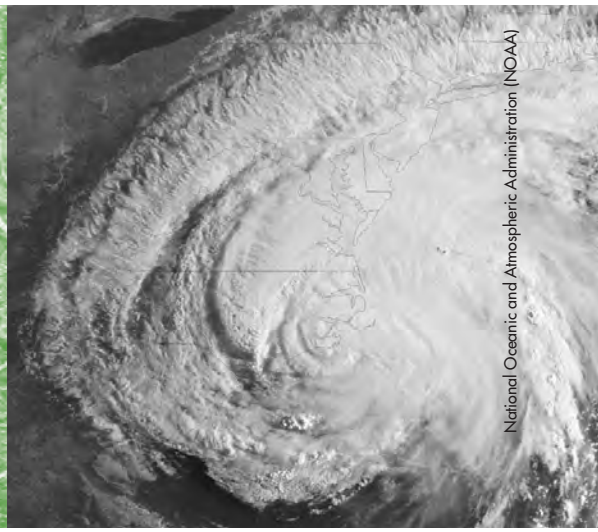

National Oceanic and Atmospheric Administration (NOAA)

speed of the fire's spread through the stands of pine and mixed hardwood. True, fire can benefit forests and grasslands. But fire also causes habitat destruction and fragmentation, both of which can have significant long-term effects on wildlife.

A Clouded Future, Cautious Optimism

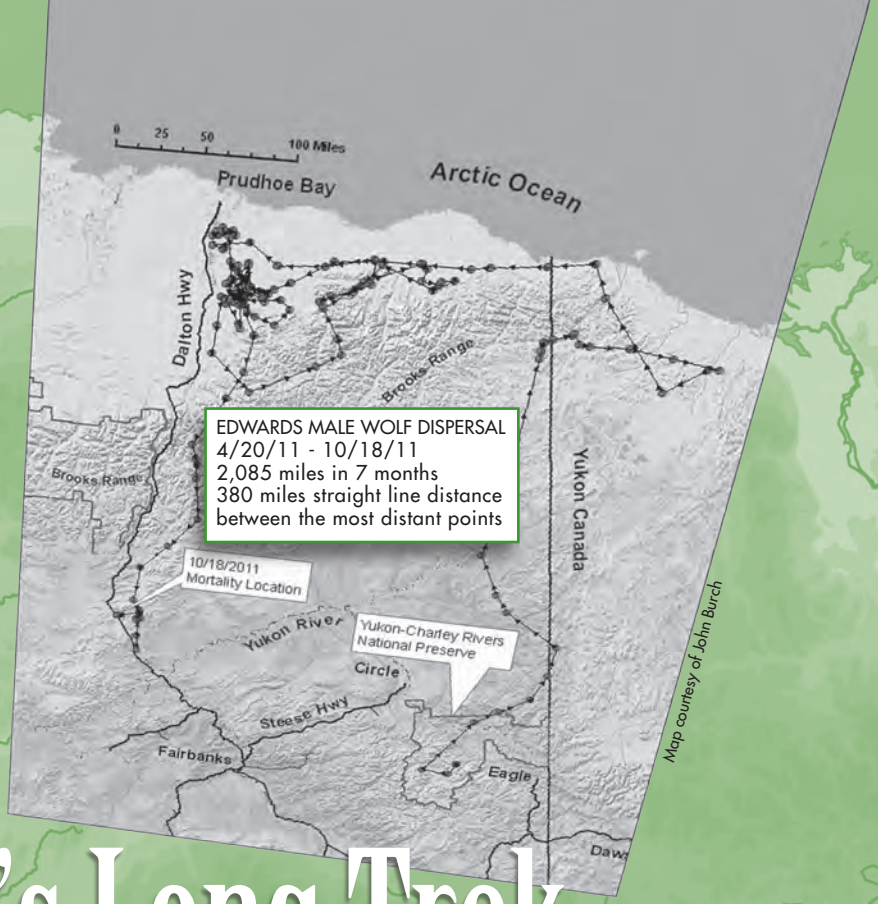
But in the end, it is sea-level rise that many experts consider the greatest potential threat to red wolves in northeastern North Carolina and the one most likely to cause their eventual demise in the wild. Options for additional red wolf release sites are limited due to dense human population in the eastern states and the scarcity of large tracts of undeveloped land within the red wolf's historical range. Human development has certainly increased throughout the gray wolf's range as well, but public lands and wilderness areas in the western United States and Canada offer suitable options for expanding that animal's territory.

Given that red wolves are tough enough to have survived seasonal flooding, hurricanes and wildfire since their 1987 reintroduction in North Carolina, it would be tragic if they vanished into extinction because encroaching seawater were to drown their habitat. Despite the challenges, one hope is the ambitious recovery plan for the red wolf under the Endangered Species Act. The plan mandates a total of three recovery sites establishing a stable population of at least 220 wolves. Whether that can be accomplished remains unknown. But no matter what the future for red wolves, the pioneer red wolf program mapped the uncharted territory of wolf reintroduction and recovery. The successful effort to restore gray wolves to the contiguous 48 states is indebted to the work of red wolf managers, who paved the way. Given our enormous technological capabilities to destroy the natural world and given nature's forces, which we cannot control, the red wolf remains a highly endangered animal. However, our challenge is to protect real wildlife in real environments. And that includes the red wolves of northeastern North Carolina. ■

Cornelia Hutt is chair of the board of directors of the Red Wolf Coalition, the only nonprofit advocating for the long-term survival of endangered red wolves. Please visit the Web site at www.redwolves.com and support the work of the Coalition.


Greg Koch

Wolf pups, approximately eight weeks old.



Map courtesy of John Burch

Wolf 258's Long Trek Across Alaska and the Yukon

EDITOR'S NOTE: Wolves are intrepid travelers, especially those dispersing to new areas. In the past few months, world-famous Wolf OR-7, born in northeastern Oregon and wearing a satellite GPS collar, dispersed southeast to California, where at this writing he roams eastern Lassen County.

Although we do not know that wolf's precise route, *International Wolf* presents here details of two other dispersing wolves whose routes we do know.

Veer.com

by JOHN BURCH

Wolf 258 was an impressive wanderer. In early May 2011, this male wolf left Yukon-Charley Rivers National Preserve, Alaska, and headed out on a 2,000-mile (3,219-kilometer) journey over seven months through northeastern Alaska and western Yukon Territory, Canada. But this wolf's journey was not unique. Probably hundreds of wolves every year throughout wolf range take similar trips. What was unusual about 258's journey was that the wolf was wearing a GPS collar, allowing us to track his movements almost daily.

We captured 258 on November 5, 2010, via helicopter darting in Yukon-Charley as a part of long-term monitoring of the preserve's wolf population that began in 1993. We captured him because he was paired with Female 227, a wolf we had followed via telemetry since 2007. The female had bred in the Edwards Creek pack for at least two years. However her pack had dwindled to nothing, so for the past two years 227 had traveled alone most of the time in her home range. She had briefly paired one other time, but that association did not last long. After 227 finally paired again in August 2010, we captured her mate and numbered him 258. He was a 103-pound (46.72-kilogram), 2-year-old male in excellent condition. The pair had traveled widely throughout its home range for a few months before 227 died (probably of starvation) in February 2011. Wolf 258 continued to travel alone throughout the pair's home range but then left to begin his long journey.

Although we do not know where 258 originated, genetic work may help us rule out or confirm some likely possibilities. His natal pack may have been next door, or he could have come from far away. His latest route took him across interior Alaska's forested hills, over the Brooks Range, then east across the open tundra into northern Canada and the Arctic Coast. He then returned to Alaska west across the North Slope to the Dalton Highway. Aside from a brief foray east, 258 appeared to have settled down about 30 miles (48.3 kilometers) southeast of Prudhoe Bay. However, in late September he decided to continue traveling, this time heading south of the Brooks Range almost to the Yukon River. On October 18, 2011, he met his demise a mile (1.6 kilometers) east of the Dalton Highway. His movements suggest he was reluctant to cross the Dalton Highway; he may have never seen a road before.

Dispersing wolves take a risk when they leave their natal pack. Resident packs are territorial and often kill intruders. Thus a dispersing wolf, especially one that covers hundreds of miles, must travel a gauntlet through the territories of many other packs.

Whenever either a male or female wolf disperses, it is looking for a new place to live and for a mate. If dispersing wolves of the opposite sex meet and find an area unoccupied by resident wolves, they breed, produce pups and start a new pack assuming there is

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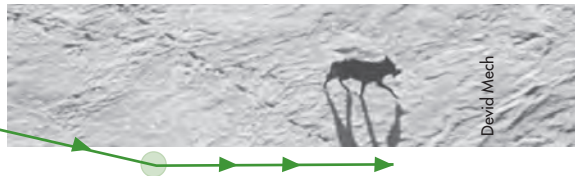


Seth McMillan retrieves the carcass of Wolf 258 that likely died of starvation.

enough prey in the area. Sometimes a dispersing wolf can be accepted into an existing pack as a breeder, replacing a former breeder that died. An uncommon scenario is that a dispersing wolf is accepted into an intact existing pack. Exactly how this all transpires between individual wolves we don't know. However, wolves' sense of smell is at least 13 times greater than that of humans, and possibly a dispersing wolf can tell from urine marks that the resident pack lacks a breeding wolf of the same sex. The bottom line: Dispersing is risky but worth it if successful.

We use two types of radio collars to track wolf movements. The first is a conventional radio collar that has been used for decades. It transmits a pulsing signal that must be tracked from an airplane equipped with a receiver and antennas to locate the wolf.

The second, a Global Positioning System (GPS) collar, is one we have used on wolves in Yukon-Charley beginning in 2003; this is the type 258 was wearing. These collars can be tracked from aircraft like the others, but the big difference is that GPS collars also collect a location every day and transmit it via satellite to the biologist's email.

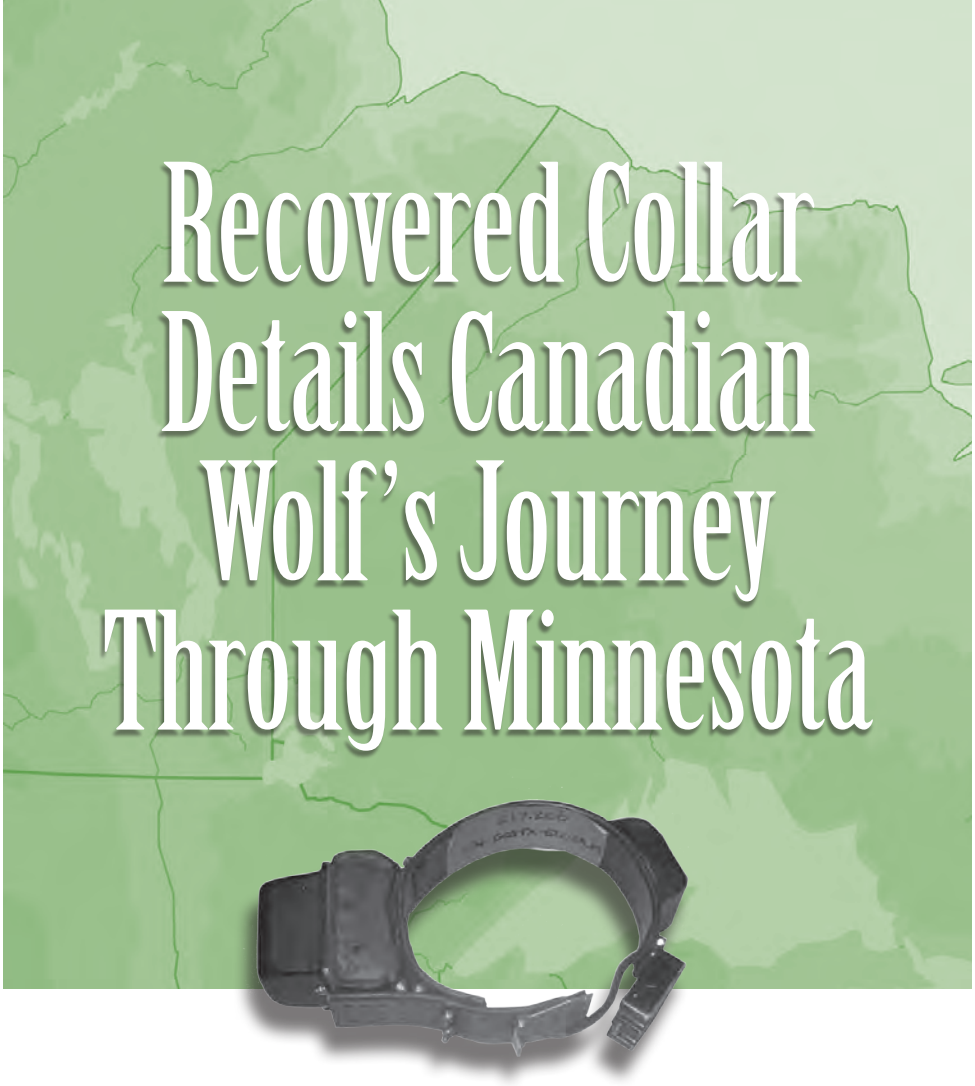
Many wolves disperse each year. Some travel hundreds of miles while others end up in an adjacent home range. With 258's dispersal, we could follow his route because of his GPS collar. In the end, 258's luck ran out; it looks like he probably starved to death —a risk many dispersing wolves take. ■

Source:

Burch, J. 2011. *Annual report on vital signs monitoring of wolf* (Canis lupus) *distribution and abundance in Yukon-Charley Rivers National Preserve, Central Alaska Network: 2011 report.* Natural Resource Technical Report NPS/CAKN/NRTR—2011/485. National Park Service, Fort Collins, Colorado. A download of the full report is available at: https://irma.nps.gov/App/Reference/DownloadDigitalFile?code=434746&file=YuchWolvesNetworkMonitoring2011AnnualReport.pdf.

John Burch is a wildlife biologist for the U.S. National Park Service and has studied wolves in Alaska for 25 years.

Recovered Collar Details Canadian Wolf's Journey Through Minnesota



by TIM DAVIS

For the 10-hour drive from Winnipeg to Thunder Bay, I had thrown a radio-tracking antenna on the roof of the car to keep an ear out for my missing wolves before I crossed into Ontario. Little did I, or anyone else, know that had I made the trip a few months earlier, I would have picked up the telltale beep of a tracking collar. However, it would not have been in Manitoba, near where the wolves were first caught, but minutes outside of Thunder Bay, a distance of over 300 miles (483 kilometers). This wolf that wore the collar, a yearling male, vanished from the initial study area within a week of being collared, traveled from eastern Manitoba, south and east to Lake Superior, passing through the Quetico-Superior wilderness of Ontario and Minnesota.

My study began in 2007, as the basis for a master's program at the University of Manitoba, to look at wolf predation on an endangered woodland caribou range. The Owl-Flintstone caribou, the southernmost herd in Manitoba, had been subject to intensive research and monitoring. However, predation was a major problem that had not received attention. Wolves are the primary predator, and while they prey on moose more frequently, even a small percentage of losses to wolves could have a serious impact on a herd of caribou numbering fewer than 100. The role of the increasing number of trail and road networks adjacent to the range is also a factor that could upset the wolf-caribou-moose dynamic.

In the winter of 2007-08, the first study of wolves in eastern Manitoba commenced with the capture of eight wolves using helicopter-mounted net guns in an effort to look at the distribution of wolves in and around caribou range. We equipped six wolves with standard radio-tracking collars. These collars were to be located from the air over the next few years. We collared the remaining two wolves with GPS satellite tracking collars, allowing their location to be recorded every 80 minutes for more than a year and stored on the collar for later recovery. We measured wolves (length, chest girth and shoulder height) and took blood samples for genetic studies. The wolf discussed in this article was just over 74 inches (189 centimeters) from tail to nose, measured 33 inches (84 centimeters) at his chest circumference and was 29.5 inches (75 centimeters) tall at the shoulder.

The collars were activated, and two were lost quite early on. Of course, both of the missing collars happened to be the GPS tracking units, which we needed to get back to receive their location data. We searched from the air and the ground, contacted nearby wildlife departments that could keep an eye out and eventually gave the

Photo courtesy of Tim Davis

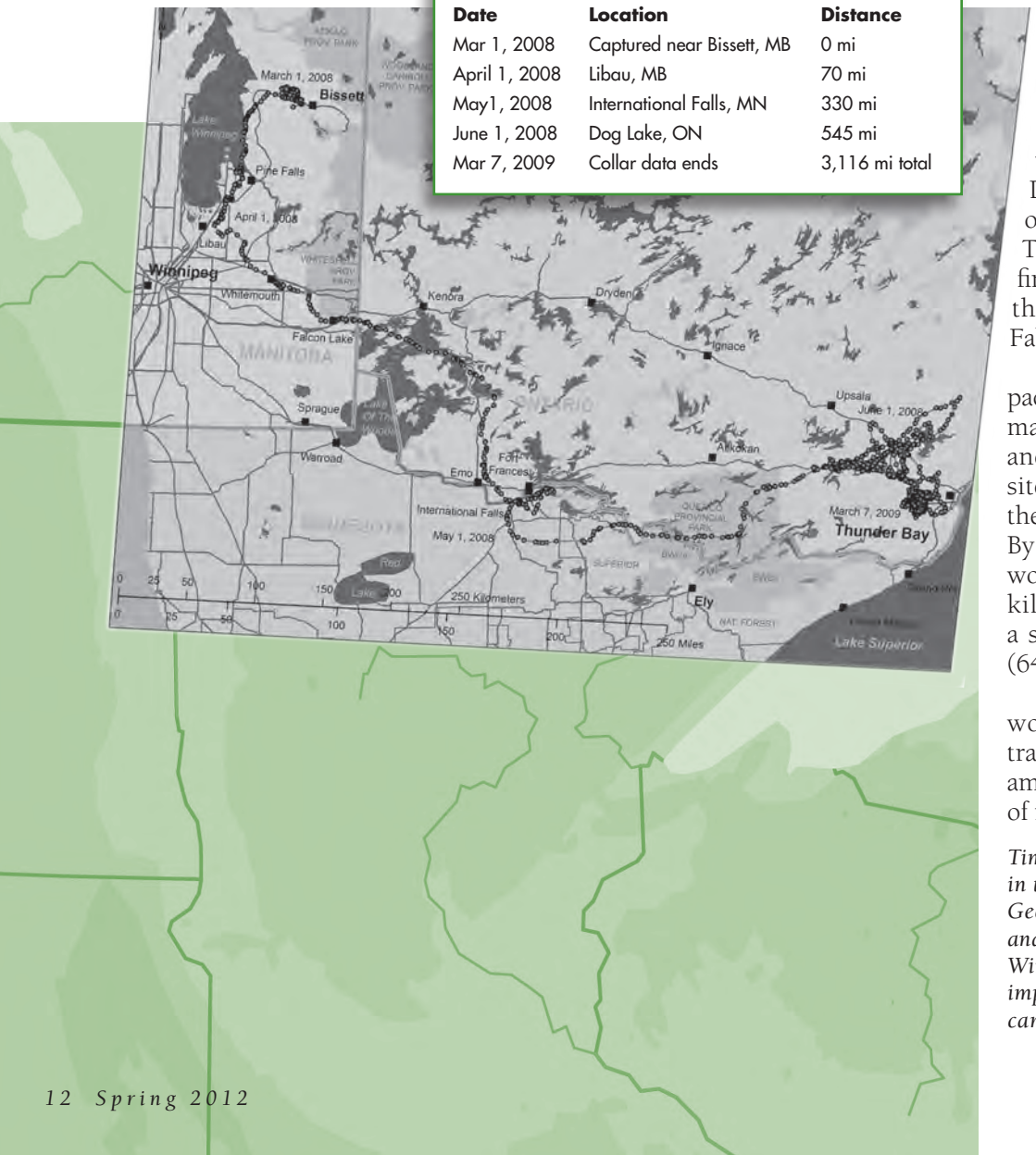
Tim Davis

collars up as lost or malfunctioning. Shortly after my visit to Thunder Bay, word came that a collar was recovered by a trapper near that city, who turned it in to the Ministry of Natural Resources, which then gave it to Rolf Peterson thinking it was from one of his Isle Royale wolves. Peterson didn't recognize it, so he gave it to Dave Mech whose project had been using this type of collar. When Mech and his team downloaded the data, however, they found the wolf had been collared in Manitoba and contacted me. A year's worth of the detailed wolf's travels were discovered.

Data from the collar provide a virtual journal of the wolf's daily activity, beginning with the March 1, 2008, capture. After spending two weeks in the capture area, the wolf departed. Dispersing of younger wolves is common, and whether the collaring had anything to do with his departure is uncertain but unlikely. After two weeks of heading south along the Lake Winnipeg shoreline, the wolf passed by the small village of Libau on the Red River Delta, approximately 70 miles (113 kilometers) from Bissett. By April 4, he reached the beach town of Falcon Lake and entered Ontario. In early spring, Lake of the Woods is still passable, but even in April, the ice is starting to shift and melt. After 10 days of negotiating across the lake, the wolf headed south to the Rainy River. By the end of April, he had crossed into Minnesota, making a short detour up to Rainy Lake, for a total distance of more than 300 miles (483 kilometers) over two months. Continuing eastward, the next month saw the wolf pass through Superior National Forest, the western portion of the Boundary Waters Canoe Area Wilderness and Ontario's Quetico Provincial Park, reaching the eastern extent of his travels at Dog Lake, Ontario. For the remainder of the year, the wolf explored the Thunder Bay region extensively, finally settling into a territory around the dramatic cascades of Kakabeka Falls, due west of Thunder Bay.

WOLF TRAVEL JOURNAL

Date	Location	Distance
Mar 1, 2008	Captured near Bissett, MB	0 mi
April 1, 2008	Libau, MB	70 mi
May1, 2008	International Falls, MN	330 mi
June 1, 2008	Dog Lake, ON	545 mi
Mar 7, 2009	Collar data ends	3,116 mi total



The wolf may have joined a local pack at this time, or remained solitary, making regular use of forestry roads and trails and approaching the town site and local dump to scavenge off the bustling tourist traffic in the area. By the time the collar shut down, the wolf had traveled 3,116 miles (4,986 kilometers) from where he started, a straight-line distance of 400 miles (644 kilometers).

While dispersal of many young wolves has been documented, GPS tracking has shown the details of the amazing routes wolves travel in search of new homes. ■

Tim Davis is a master's degree student in the Department of Environment and Geography at the University of Manitoba, and works as a GIS/wildlife technician in Winnipeg, Manitoba. He has studied the impact of human development on boreal caribou and wolves since 2005.

Mike Possis

Montana Wolf Hunt Report

by JESS EDBERG,
information services director

The wolf harvest season in Montana, which started September 3, 2011, will run through February 15, 2012, and has claimed 137 wolves[1]. State officials extended the season from December 31 to February 15 in some areas to achieve the statewide quota of 220 wolves.

Montana has been managing its wolves since May 5, 2011, when the U.S. Secretary of the Interior reissued the April 2009 delisting rule per congressional action. Unlike delisting rules issued in the past, this action also excludes the rule from judicial review. Montana's wolf hunt is part of the state's approved wolf management plan, which includes updates based on the Montana Wolf Management Advisory Council's recommendations.

The plan allows for an annual harvest that coincides with the state's archery and firearms ungulate (hoofed mammal) hunting seasons. The plan identifies 14 distinct Wolf Management Units (WMUs) each with its own quota based on wolf densities and land area.

According to Montana Fish, Wildlife and Parks (FWP), the goal is to manage wolves similarly to black bears and mountain lions. Basing management decisions on wolf numbers, distribution and public acceptance while maintaining a minimum of 15 breeding pairs, the plan engages a variety of conflict-resolution techniques, ranging from simple harassment to chase wolves away to lethal control such as providing kill permits to landowners and regulated hunting or trapping.

The FWP Web site states, "The aim is to sustain the wolf population, Montana's deer and elk populations, and to help resolve wolf-human and wolf-livestock conflicts."

The 2010 population of wolves in Montana was at least 566 (fwp.mt.gov). Although the quota represents a significant portion of the state's wolf population, whelping of pups in the spring almost doubles the wolf population. The FWP anticipates the hunt will reduce the state's overall wolf population between 7 and 25 percent in 2012.

The 2011 quota is up from Montana's 2009 wolf hunt, which was its first since federal listing under the Endangered Species Act. In 2009, the quota was 72 wolves statewide in three WMUs, and the season ended in mid-November.

The increased quota has raised eyebrows of those concerned with resiliency of the population as a whole. Wolf hunting opponents not only question the reasoning behind holding a wolf hunt but also voice concerns over how the hunt affects individual packs. Packs that experience the death of a dominant member such as the breeding male or female sometimes

The goal of the Montana Fish, Wildlife and Parks is to manage wolves similarly to black bears, **Ursus americanus** *(left), and mountain lions,* **Puma concolor** *(right).*

react by dissolving and dispersing. However, the behavioral effects are more difficult to research and analyze.

In October, protesters rallied outside of the state's capitol in Helena asking Governor Brian Schweitzer to immediately end the wolf hunt and called for an economic and travel boycott of Montana, Idaho and Wyoming.

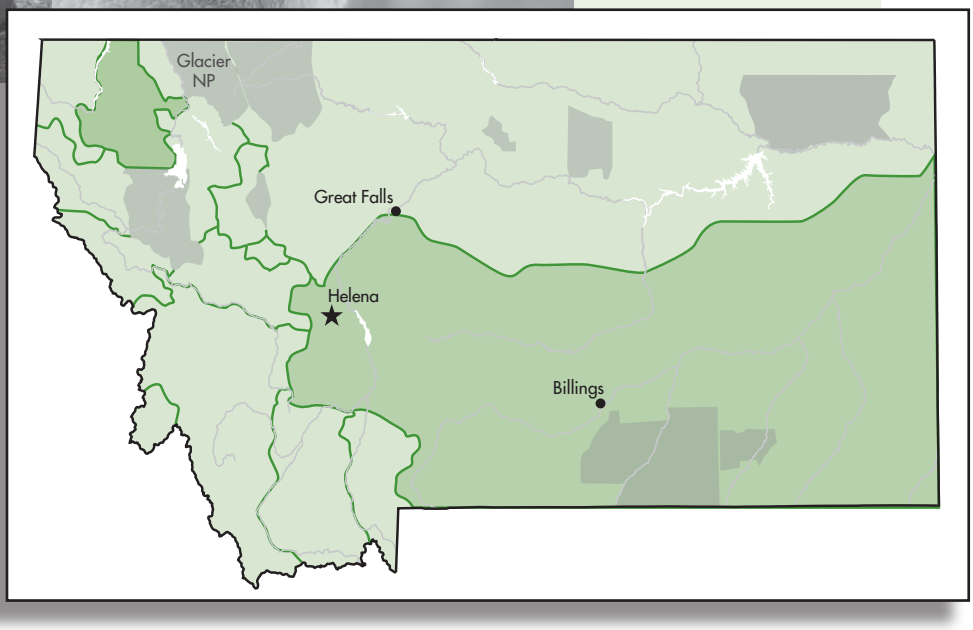
Proponents of the hunt view it as an opportunity to potentially prevent future depredations of livestock by targeting specific packs that have been involved in depredation incidents or wolves that live on or near grazing lands. This proactive approach to depredation control, albeit controversial, is seen as a way to implement a cost-saving, revenue-generating method of lethal control.

Most hunters who kill wolves take them incidentally to elk and/or deer hunting during the general season from October 22 to November 27. The general backcountry season began September 15. Wolf hunters are required to report their kill within 12 hours and present the head and pelt within 10 days if they wish to keep the parts. Hunters who kill wolves generally do not process the animal for its meat but rather take the pelt for a rug or for sale.

During the five-week elk and deer season, FWP estimates 150,000 hunters were in the field. Even though nearly 20,000 wolf-hunting licenses were sold at a cost of $19 each for residents of Montana and $350 for nonresidents, the state did not achieve half its wolf quota.

Wolf activity in the fall generally involves greater travel, making locating wolves more unpredictable for hunters. An extension of the hunt to Feburary 15 remains controversial. The outcome of the wolf hunt in Montana will not be immediately evident and may take months to be measurable for the long-term. ■

1. Number of wolves harvested at time of printing. For updated numbers, visit fwp.mt.gov/hunting/planahunt/huntingGuides/wolf/



This map depicts the 14 wolf management units implemented by Montana Fish, Wildlife and Parks (FWP) to monitor the number of wolves killed during the state's wolf harvest. The FWP Commission extended the wolf season through February 15, 2012, or until the quota is met, whichever comes first.

Tracking the Pack

It's That Time Again: Pups in 2012!

by Lori Schmidt, wolf curator, International Wolf Center

The International Wolf Center will be raising pups in summer 2012 per our management policy to introduce new members to the Exhibit Pack every four years. The four-year rotation prevents overpopulating the Exhibit Pack and allows the older wolves to have several years of retirement before the next generation retires. Many people are interested in the timing of our 2012 pups' arrival—including the wolf care staff, which has a significant amount of preparation to do prior to the arrival of the pups. We can only speak generally because it is up to the female wolf as to when she whelps a litter. Below is a recap of the whelping dates of wolves acquired by the Center.

April 24, 1989
April 28, 1993
May 8, 2000
May 5, 2004
April 27, 2008

Shadow and Malik, arctic subspecies, had the latest birthing pattern (May 8, 2000). Since we are tentatively acquiring subspecies similar to the 1993 and 2004 litters, we expect the whelping period to occur between April 28 and May 5. Many factors can affect the wolf breeding season such as weather, nutrition and even the age of the female, but generally speaking, wolves breed in late January through March and whelp pups 60–65 days later.

Females typically display some pre-denning behavior including den digging, becoming more reclusive, or they tend to localize in one general area. In captivity, this can mean they spend more time in a den box. Captive facilities observe this type of behavior and try to determine the approximate whelping date. Once the Center's wolf management team receives a call about the litter's birth, the countdown begins.

It has been our policy to socialize wolf pups between 12 and 14 days of age during the "transition stage," when their sensory abilities such as sight and hearing begin to develop. This is the time to introduce the pups to the sights and sounds of our captive facility and for the pups to meet their future packmates, Aidan and Denali, through the fence.

Based on the estimated whelping date, we expect to meet our pups sometime between May 10 and May 17, although we need to be prepared for anything. The current plan is to have the pups make a quick appearance in the Twin Cities before traveling to Ely, Minnesota. On May 24, we plan to begin the first of many public programs on the pups at the Center's educational facility in Ely. To keep tabs on news regarding our newest pups, become our friend on Facebook, watch our YouTube channel, and check out Wolf Logs at www.wolf.org. ■

Shadow and Malik, arctic subspecies, had the latest birthing pattern of the Center's ambassador wolves. They are pictured here in the summer of 2000.

Shadow greets 2008 litter of Aidan and Denali

Denali, 2008, at 14 days of age.

1989 *Ballazar, Jedadiah, Raissa, Bausha*

1993 *Makenzie, Lukas, Lakota, Kiana*

2000 *Shadow, Malik*

2004 *Grizzer, Maya, Nyssa*

2008 *Aidan, Denali*

2012

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Memorials

In memory of my dog Bear:
Craig Caston

In memory of Gizmo:
Tina Velazquez

In memory of Jack Ersfeld and Lee Hartung:
Ronald Baran

In memory of Dr. and Mrs. Franklyn:
Robyn Franklyn

In memory of Delores Guthrie:
Mary Price

In memory of Jack Heck:
Elisabeth Bockoski

In memory of Harold Houghton:
Jean Green and Family
Beverly James

In memory of Peter J. Insel:
Valerie and Newton Powell

In memory of Leonard Kmak:
Ruth Ann Kmak

In memory of Maya:
Kathleen Hess
Shy Hicks
Lianne Muhl
Sharene Smith

In memory of Nadia:
Gerald Fox

In loving memory of our pack leader, Kayla:
Ken and Margaret Flavia

In memory of my loving companion Kiana:
Jean V. Ruth

In memory of my brother, Jeff Peterson, who loved the wild:
Wendy Dehkes

In memory of Lloyd W. Towner:
Nancy Towner

In memory of all the wolf families torn apart and slaughtered because of barbaric laws and men:
Vitra and Ernesto Garcia

Honorary

In honor of all the members of the International Wolf Center:
Teri Williams

In honor of the wonderful staff, teachers and dedicated workers of the International Wolf Center:
Meredith Bradshaw

To the students who helped me move my rock:
Lori Schmidt

In honor of my precious wolves Josie and Maghigan-Dakota "Cody"
Irma Hines

In honor of the Country Veterinary Clinic:
Julie Veneklasen

In honor of Dakota:
Bernadette Cook

In honor of Nancy Gibson:
Vincent J. Ryan

In honor of Alec Hendrickson:
Steven Hendrickson

In honor of Luke Jandreski, who will become the next great wildlife vet:
Denise Jandreski

In honor of Kat:
Wolfe Molitor

In honor of Patricia Kmak:
Ruth Ann Kmak

In honor of Wayne Lampi:
Suzanne Hembly

In honor of Maya:
Donna Mack Iwanski
Karen Peterson

In honor of Ayla Miller:
Marije Miller

In honor of my mom—keep up the good fight:
Code Sternal

In honor of Nathan and Linda:
Nancy Harman and Terry Bryant

In honor of Nyssa and Maya:
Arthur and Vicki Bomberger
Dawn Ewing

In honor of Catherine, Evan and Lynn Reynolds:
Anonymous

In honor of Pam Churn:
Lorianne Churn

In honor of my daughter Lilly Crook:
Rebecca Kohler

In honor of Judy Hunter:
Sharon Froehle

In honor of my daughter, Matilda, and all the others who love wolves so very much:
Cynthia Lee

For Odin:
Erik Bjelke

In honor of wonderful Oscar, the newest member of the wolf care team:
Joyce Wells

In honor of Siobhan Pasternack:
JoAnn Pasternack

In honor of Sandra Rea:
Caroline Rea

In honor of the marriage of Toni Robino, my wolf sister, to her adored Doug:
Ann Gross

In honor of Shasta, Bear, Spirit and Kona:
Barbara Legler

In honor of Sprint and Racer:
Karen Blaha

In honor of Kristine Stack's birthday:
Latonya Jackson

In honor of our beloved companions Rocco, Ajax and Isabelle:
John and Mayumi Hughes

To the Wolfman, SGK. I miss you:
Rebecca Stanek

In honor of Susan Wolfstar for helping us complete our first year of shamanic healer training:
Paige Madison, Beverly, Cindy, Dottie, Flame, Franciska, Kiara, Lindy, Loring and Sandy

To all eight of my grandchildren with love and care:
Catherine Harlander

To all the German shepherd dogs I have had, which are relatives to the wolf. I love them all:
Marnell Wilber

To preserve this ancient and compelling bond—human, wolf and the wild:
Priscilla Hughs

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Thank You!

Wolves of the World

Japan Seeks to Bring Back its Once-Sacred Wolves

by Tracy O'Connell

Editor's note: The last issue of International Wolf *announced the pending meeting of the Japan Wolf Association, held in Tokyo, to promote the importation of wolves to control crop damage caused by deer and wild boar. At that time, 83,000 people had signed a petition in support of the move. The island nation saw the loss of its last native wolves more than a century ago. This article examines that history in greater detail.*

The gates to the temple are guarded by two stone figures, both canine. The animal on the right was depicted with its mouth open; the one on the left, with its mouth closed. Together, they created a mystical symbol—the Japanese words for "open mouth sound" and for "closed mouth sound" in combination created the word "aun," known in Sanskrit as "om," the sound of the universe.

Wolves have been worshipped in Japan for at least 1,000 years, as both messengers of the divine and as divine themselves, by two of the three ethnic groups that populated the island in its early days—the third group lived in an area uninhabited by wolves. Ethnic Japanese called the wolf the "Large Mouth Pure God." The Ainu people, an ethnic minority who lived on the northern island, Hokkaido, saw it as a god itself and their ancestor.

Yet the taxonomy of the canine is cloaked in confusion in this nation, due in part to the role this animal has played in myth, religion and culture. The Japanese wolf is believed to have come from Siberia 20,000 years ago where wolves were large and to have been dwarfed in response to changes in climate and prey over the millennia. (Currently only the Arab wolf is smaller than the Japanese wolf at the time of its extinction.) Over time two wild canids were reported in Japan, the wolf and the mountain dog, a canid of obscure identity.

In addition to distinctions made as to their size, head shape and the sound of their howl, it was noted (without explanation) that wolves were edible while mountain dogs were not. However, terms for dog, wolf and mountain dog appear to be used in many mentions interchangeably, and references to the mountain dog have been discussed by scientists as possible terms for occasional, feral dogs rather than for a separate subspecies of wolf.

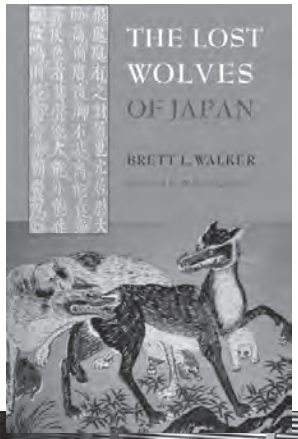
Some say this latter creature resulted from hybridization with dogs to increase the hunting skill of the domestic animals such as those owned by the Ainu, many of which, like the kishu and shiba breeds, were wolfish in appearance. The matter is further confused when distinctions are made in the literature between the Japanese wolf and the Chinese, Mongolian and Korean wolf, since the nomenclature seems to refer as much to national identity and relations among the relevant nations as to a distinct difference in the animal in question.

Taxonomy aside, wolves were seen as protectors in early Japan, starting around the seventh century, and over centuries and across regions, they were associated with saving the crops of farmers by hunting the deer and wild boar that otherwise destroyed them. People would pray to the wolf to save the crops and carry a talisman with a wolf image, which was variously said to also protect against fire, theft and ill health and ensure crop and human fertility.

Japanese historian Brett Walker of Montana traces this early view, which was embedded in a respect for nature and influenced by Buddhist, Shinto and Confucian thought. Nature was seen as a place of uncertainty, and wolves were important guides and

Wally Gobetz

A canid guardian to the temple



Dr. Brett Walker, professor of history, studied living wolves as well as historical ones to enrich his understanding.

Kato

guardians. The "sending wolf" was a being that could provide either safety or harm. Stories were told of people feeding starving wolves and later being rewarded—rescued from danger themselves. Daily offerings of bean and rice cakes were therefore made to wolves, in reality or symbolically, to gain this support.

While there were occasional stories of a wolf attack, it was seen as part of the unavoidable uncertainty of nature, distant and apart from the civility and order of city life. A profound respect for all living things, embedded in the culture and enforced in some cases by legislation, protected wolves as well as other animals from harm. While some wolves were allowed to be killed because they were considered a danger, this task was reserved for only the most severe cases of predation, and relocation of troublesome wolves was a preferred course of action.

Ancient breeds such as the shiba inu and kishu (left) were kept by the Ainu people of ancient Japan.

International Wolf Center

Over time, the view of wolves became clouded. Common at this time was the practice of disposing of human corpses in rivers, where they would often be consumed by wolves. Especially in time of famine, such as in the 12th century near Kyoto, when there were many bodies being disposed of in this way, the sight of wolves devouring human carrion reduced them in the eyes of viewers from their lofty status as protectors.

Views started to change more drastically in the 17th century, driven first by increased travel, which saw more people on roads where they encountered wolves more frequently, and then by an outbreak of rabies that affected the canine population, resulting in numerous reports of wolf attacks on travelers. Hundreds of townspeople would rally at the sound of blasts on a conch shell, joining hunts for reportedly mad wolves.

The dawn of the Meiji era, starting in 1868, saw the end of feudalism and the uniting of the nation under an emperor. During the 50-year period bearing this name, the nation modernized rapidly and looked to the West for new and better ways to increase productivity. This included a move in agriculture from mostly grain production, in which the wolves helped protect crops from ravishment by wild ungulates, to the raising of livestock.

To provide adequate pastures for their stock, the Ainu were assimilated into the rapidly modernizing Japanese culture in a manner similar to that experienced by Native Americans in the United States. Their land was redistributed, and they were made to learn the Japanese language and discontinue their cultural traditions.

As more land was cleared for livestock, increasing numbers of deer were harvested, which would otherwise compete for scarce resources in the harsh, mountainous terrain. As ranches cut into the territory of wolves and their ungulate food source vanished,

the wolves began to hunt livestock, killing horses, cattle and sheep.

Faced with losses that made their nascent ranching venture unprofitable, the Japanese fought back, and among their tools were the methods their U.S. advisors, such as Ohio-born rancher Edward Dun, brought to the table. Traps, bounties, strychnine and denning (the removal of pups from dens) were used to exterminate the once-revered canids, now seen as a barrier to the advancement of culture and commerce in a modern world.

Historian Walker studied wolves in Yellowstone to enrich his understanding of the animals, volunteering to accompany scientists making observations of several packs and radio-collared individuals. His work compares the fortune of wolves at the hands of various developing nations. He traces how in both the United States and Japan, land was taken from the native peoples (though the status of the Ainu as indigenous is not established) and wild herbivores (bison in the United States and deer and wild boars in Japan) were slaughtered to make way for livestock production. In both cases, this was followed by the killing of wolves when they began to prey on domestic animals.

The desire to reintroduce wolves to Japan has been discussed for more than a decade. One measure covered by Russian and Japanese media in early 2011 was the planned research into the introduction of wolves to a region called Oita on the Japanese island of Kyushu.

The area is known as one of the major producers of shiitake mushrooms in Japan, with nearly one in four households involved in farming. In fiscal 2008, wild boars and deer damaged crops worth a reported 32.2 million yen (more than $300,000 U.S.). The city set up nets and traps and eliminated 2,500 animals on average each year. With an aging human population unable to hunt, the region is examining the importation of canid predators.

The municipal government's plans include research into the status of wild animals used in a pest control program and obtaining understanding of the project from local citizens as well as surrounding municipalities and the national government. The city plans to set up a research center to allow citizens to get used to wolves before they are released into the wild.

While this modern nation has moved on from its roots in the mystery of nature and the mythos of the wolf, it is believed, in at least some places, the wolf's protective power still lingers. Walker, visiting sites where wolf imagery exists, was told a story by the keeper of a shrine where the wolf talisman was believed to protect crops from damage. Although the wolves have been gone for a century, it is said that around the area of the shrine, no crop damage was taking place. ■

Sources:

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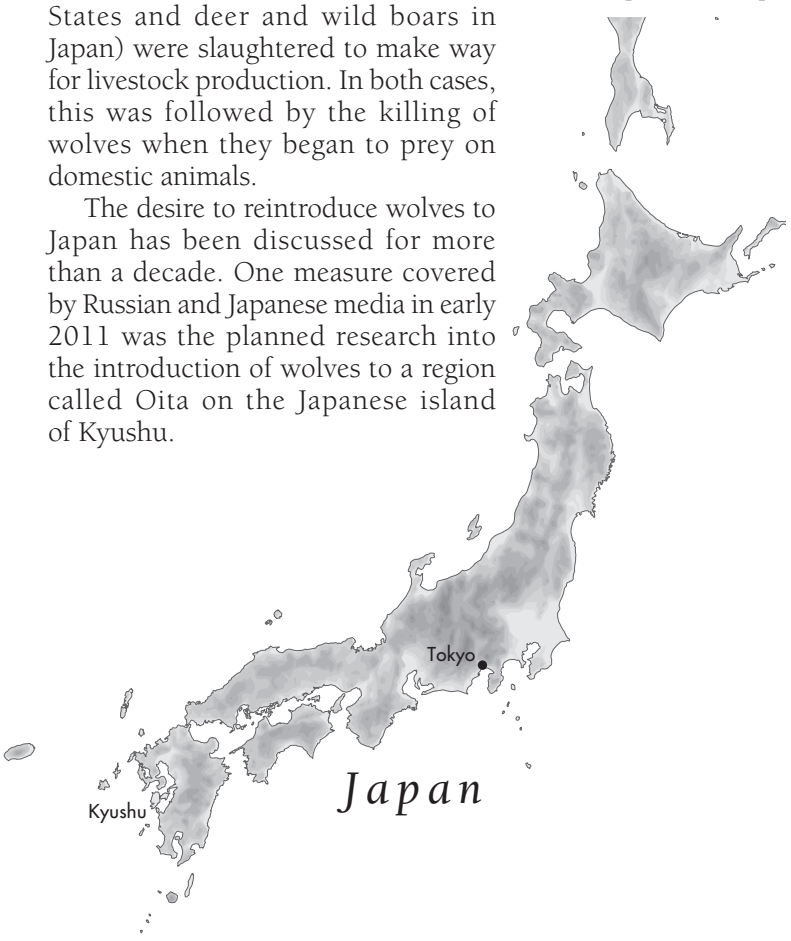
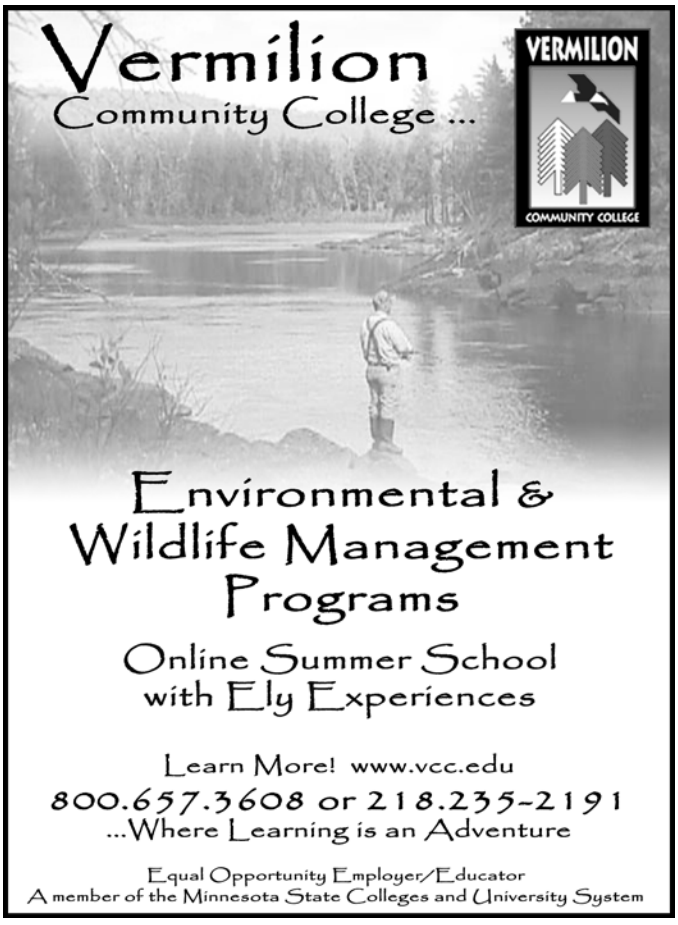
Tracy O'Connell is associate professor of marketing communications at the University of Wisconsin-River Falls and serves on the International Wolf Center's communications and magazine committees.





Personal Encounter

A New Wolf Pack in Kananaskis Country

Text and photos by Jeff MacIntyre

The sunrise was lovely as I headed into Kananaskis Country in western Alberta, Canada. That in itself made my day a success, but little did I realize how great a success it would eventually be. About an hour into my drive, I spotted a gorgeous silver grizzly sow with two fat, silver yearling cubs grazing beside the road and stopped, staying in my car to watch them. The sow did not seem to pay me any attention. The cubs glanced my way, and all three bears continued to graze as I observed them. Berries or rosehips appeared to be their forage. As they seemed undisturbed by my presence, I continued to observe them from my car, and they grazed a bit closer. When they got roughly 50 feet (15.24 meters) from me, between road and tree line, the sow alerted, and all three bears started toward the tree line east of the road.

I thought they'd alerted to my presence, and I started to pull away to leave them to feed when right beside my car on the same side of the road a gray, adult wolf appeared—to my great surprise. There hadn't been a breeding wolf pack in the area since the 1990s. The wolf followed the bears toward the tree line, stopping to sniff around where the bears had been feeding. The gray wolf was soon followed and joined by a large black wolf. They sniffed around quite thoroughly where the bears had been and then started to head up into the trees (gray wolf leading) where the bears had retreated. The wolves progressed a few feet up into the trees on the scent trail of the bears when the sow made a short charge toward them, chasing them back into the open where they continued to sniff around. The black wolf did a raised-leg urination and scrape. After a good, thorough sniff around, the wolves stood together looking south and sniffed the air. They then continued north and crossed the road to the west with the gray wolf still in the lead. They travelled out of sight into the trees, heading downhill to the west.

Above: Gray wolves catching the scent of nearby bears.

Right: The black wolf does a raised leg urination.

Soon after the wolves left, the three bears reappeared and continued to graze in the same area. I continued to watch the bears, and within a few minutes, I heard wolves howling from the area where the gray and black had disappeared. The howls were immediately answered by what sounded like three or more individuals very close by to the east side of the road, south of my location. Some of the responding voices were very high pitched.

Just prior to the howling, a man in a black Jeep heading north had stopped to photograph the bears. As I looked in my side mirror past his vehicle, I saw a black wolf pup cross the road behind his vehicle (east to west), traveling over or around the guardrail on the west side of the road out of sight. The first black wolf pup was soon followed by a second. My first impression seeing the wolf pups was that they were this year's pups, not yearlings. Later, after having seen a photo that the man behind me had taken through a long lens, this impression was confirmed because I could see the wolf pup in relation to the nearby guardrail. I believe the gray adult wolf was a female and that the black was a male. The confident lead role of the gray wolf and the raised-leg urination

of the black, adult made me believe I saw a breeding pair.

I watched in both directions for a few minutes as I observed the bears feeding but saw no more wolves cross. By this time, the photographer behind me had exited his car to walk to the west side of the road to look down slope where the pups had disappeared into the trees. The bears then started to the north, crossing the road to the west roughly in the same place that the adult wolves had crossed. The bears headed into the trees, travelling north just inside the tree line as if they were waiting for an opportunity to come back to the roadside to graze. At this point, the man in the Jeep had left, and I left as well, thinking that the bears might wish to return to grazing on the roadside bushes. The entire observation probably lasted 15 minutes.

Three weeks later on October 16, 2011, Melanie Percy, senior park ecologist, Kananaskis Region, Alberta Parks and Protected Areas, Canmore, reported that the adult, black wolf I had seen was, indeed, the breeding male. He was originally collared (with a GPS collar) in Banff last year and went on a walkabout, ending up in Peter Lougheed Provincial Park, where he and his mate denned this year.

On November 28, I received an email from Alberta Parks and Protected Areas thanking me for my reported wolf observations and photos taken near Peter Lougheed Provincial Park on September 25. Since my sighting, Carrie Hunt of Wind River Bear Institute, Florence, Montana, has seen a similar black wolf in the area. Hunt and her crew have actively worked with Kananaskis Country bears and are currently providing wildlife monitoring for the Pocaterra Penstock Project.

Hunt's crew sighted a black, adult wolf in canyon campground in Peter Lougheed Provincial Park in late November. A construction crew later saw a group of four wolves that matched my descriptions and photos on the Smith-Dorrien/Spray Trail.

Various conservation officers and ecologists working in the area have shown substantial interest in my observations and photos. Distribution to people in the field is apparently happening as it should. These field researchers are leaning toward the belief that the black adult I saw is a wolf named Skoki.

What makes these sightings so exciting is that there had not been a wolf pack in Peter Lougheed Provincial Park for more than 10 years. The pack of the 1990s dispersed shortly after Nakoda, the breeding female, was shot, according to Alberta Parks and Protected Areas. Small groups or individuals have been sighted occasionally since the previous pack dispersed, but there haven't been any resident wolves. ■

For more on Sokoki, go to

blog.wildernessprints.com/2011/02/skoki-and-kananaskis-wolves.html.

Jeff MacIntyre lives in Okotoks, Alberta, Canada and spends 7-10 weeks each year watching wolves in Yellowstone National Park.

Gray wolves following the bears as they retreat to the tree line.

Wild Kids

Welcome to Wild Kids!

Dear Reader,

The International Wolf Center is proud to bring back International Wolf's youth page, beginning with this issue. As adults, we know the importance of wolves and wildlands to the overall health of our environment. We also know that many of you share our wish to connect more young people with the importance of the natural world.

Wild Kids will be dedicated to connecting young people with wolves, wildlands and the natural world. Please pass this issue's Wild Kids along to the young people in your life, or consider giving them a membership to the International Wolf Center, so they can connect with this content on their own.

This space will be exciting, dynamic and engaging for young readers of all ages. Each month we'll feature "Notes from the Field" and "Meet the Pack" as well as stories and pictures from and about our young supporters. Please feel free to contact us with feedback about these pages and ideas for the space. We are excited to make sure Wild Kids is the best it can be.

Sincerely,

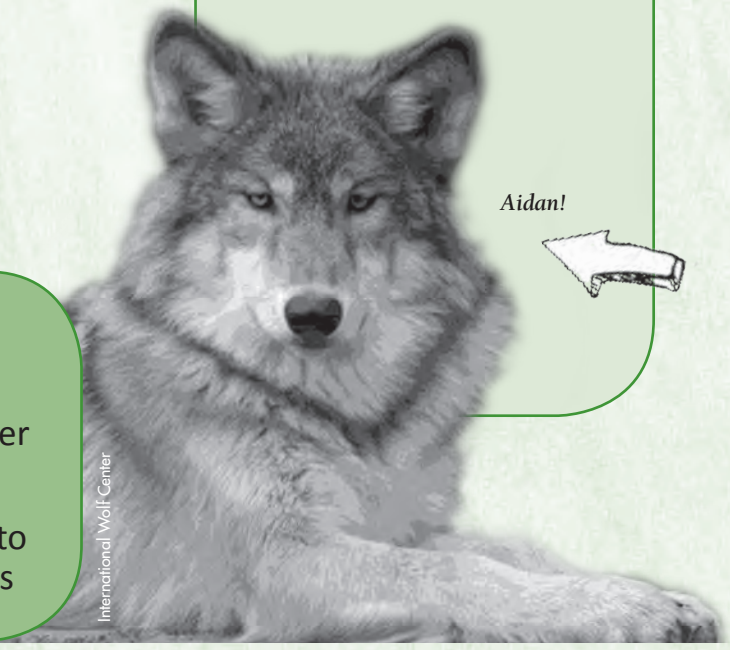
Jerritt Johnston, director of education

Meet the Pack

Aidan

The Fiery One

Aidan was born on April 27, 2008, and since then has been part of the International Wolf Center's Exhibit Pack with his littermate Denali. Aidan is an Irish Gaelic name that usually means "little fiery one" when translated into English. It is a very appropriate name for Aidan. As a pup, Aidan showed his hunting skills earlier than Denali did, and Aidan was always very focused on any movement in the enclosure. As an adult, Aidan is quick to guard things and will chase Denali throughout the exhibit.



Vocabulary

Adapt:	To adjust or change to a specific location or situation
Predator:	An animal that lives by eating other animals
Camouflage:	Something that allows an animal to blend into its natural surroundings

High School Seniors Raise Awareness and Money

Inspired by meeting Dr. Jane Goodall and learning about her international environmental and humanitarian program for youth, St. Louis Park High School seniors Jesse Abelson and Shane West started a club called Roots and Shoots to learn more about problems and issues in their community and to identify ways to make the world a better place. They chose to adopt the gray wolf as a species to help and then held a fundraiser to support gray wolves in Minnesota. The 10 club members, all students at the St. Louis Park, Minnesota, school learned about the wolf, raised awareness of issues pertaining to the species and placed donation jars in more than 30 classrooms with announcements promoting the fundraiser. They organized classroom competitions to help boost donations and encouraged teachers and families to donate as well.

Photo provided by Jesse Abelson

Jesse Abelson (left) and Shane West (right).

Jesse and Shane donated the more than $600 they raised to the International Wolf Center. All of us at the Center are grateful to these young men and their classmates for their initiative, leadership and generosity. ■

Word Find

Find the words in the word bank (bottom) hidden in the puzzle. Words can go forward, backward, up, down or diagonally.

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

Word Bank

beaver
paw
carnivore
predator
deer
pup
elk
track
habitat
wildlands
herbivore
wolf

What's in your backyard? At the International Wolf Center in Ely, Minnesota, we have so many things in our backyard that we can explore and learn from. Not only do we have the Ambassador Wolves, but we also see wild wolves in the woods behind the Center from time to time. Very cool!

In Ely, it is still winter, and for us that means the chance to see tracks. Recently there were tracks outside that were very interesting: two large, oval holes right next to each other with two small circular holes just behind them. What animal do you think made the tracks? Why do the tracks look the way they do? What animal could live in this deep snow and get around so well? If you haven't figured it out yet, it is the snowshoe hare.

Robert Whitney

This cool animal is adapted for life in cold, snowy climates. Its large, back feet help it move through deep snow, just like snowshoes help us. It also changes from white in the winter to brown in the summer. An all-white hare in the summer might be too easy to spot for local predators, but in the winter in the far north white is perfect camouflage.

Do you have snowshoe hares where you live? Check the map to find out. If so, have you seen their tracks in the snow this year? If there are no hares where you live, what animal can you think of that is adapted to thrive near you? ■

A Look Beyond

Wolves Must be Managed to Minimize Conflicts with People

by Mike Jimenez

In 1995 and 1996, the U.S. Fish and Wildlife Service (USFWS) reintroduced 35 wolves into central Idaho and 31 wolves into Yellowstone National Park (YNP) with the goal of re-establishing a viable wolf population throughout the Northern Rocky Mountains (NRM). Recovery goals were set at 30 or more breeding pairs comprised of 300 or more wolves that were well distributed among the recovery areas of central Idaho, Yellowstone and northwestern Montana. Shortly after reintroduction, wolves began dispersing and recolonizing parts of Idaho, Montana and Wyoming. Wolf recovery became a remarkable conservation success story when recovery goals were met in 2002.

Unfortunately, wolves don't fit everywhere in Wyoming, especially where increasing wolf-human conflicts erode local tolerance and cause a public backlash against wolves. Much of northwest Wyoming is remote and mountainous with abundant prey to support a viable wolf population. Wolves initially recolonized these remote areas where interactions with humans were minimal; however, as wolf recovery continued and those areas became saturated with resident wolf packs, wolves expanded into areas near rural communities, living closer to people with pets, livestock and other domestic animals. Public opinions about wolves have become extreme, ranging from intensely negative to very positive. Many residents in rural agricultural communities detest wolves for killing their livestock and pets, while guides, outfitters and hunters believe wolf numbers have grown out of control and are an increasing threat to ungulate populations in Wyoming. On the flip side, tourists travel to Wyoming in the hope that they have an opportunity to see a wolf in a national park.

Despite all the controversial media coverage and heated public debates, wolves can be effectively managed, and conflicts can be kept to acceptable levels. For the last 16 years, the USFWS has both managed wolf population growth and distribution in Wyoming to minimize chronic loss of livestock from wolves and promoted wolf conservation by maintaining the wolf population well above recovery objectives. For example, in 2010, the wolf population (outside YNP) consisted of at least 230 wolves living in at least 34 packs of which 19 or more breeding pairs produced 77 or more pups that survived through December 31, 2010. Livestock depredations have been kept relatively low for years even though the wolf population has continued to increase.

Increased human tolerance of wolves has allowed wolves to expand their range throughout the NRM. The biggest future challenge will be effectively managing wolves to minimize wolf-human conflicts in such a way that public tolerance is maintained and viable wolf populations can persist. Scientific research has provided insights into complicated natural predator-prey systems, but the real answer to where wolves will be allowed to exist and how many wolves will be tolerated will be driven by human values. Ironically, neither science nor technology can answer this question adequately.

Wolf recovery in the NRM has been a true success story. Wolves are thriving in Wyoming, and the population continues to increase annually. Recovery goals have been exceeded for 10 consecutive years. It's time to delist wolves in Wyoming and make the transition to state management. The Wyoming Game and Fish Department is a well-funded agency comprised of experienced, professional biologists who are committed to conserving and managing wolves above federal recovery levels. It is well acquainted with the challenge of balancing the various public interests concerning high-profile animals as demonstrated by their successful management of other large carnivore species in the state.

Additional information about wolves in Wyoming and the NRM can be found at westerngraywolf.fws.gov. ■

Mike Jimenez, the science and management coordinator for the USFWS NRM wolf program, has worked as a wolf biologist for the last 25 years in Montana, Idaho, British Columbia and Wyoming. He was the project leader for the release of reintroduced wolves in Idaho in 1995 and 1996. Since 1999 he has been the project leader for wolf recovery in Wyoming.