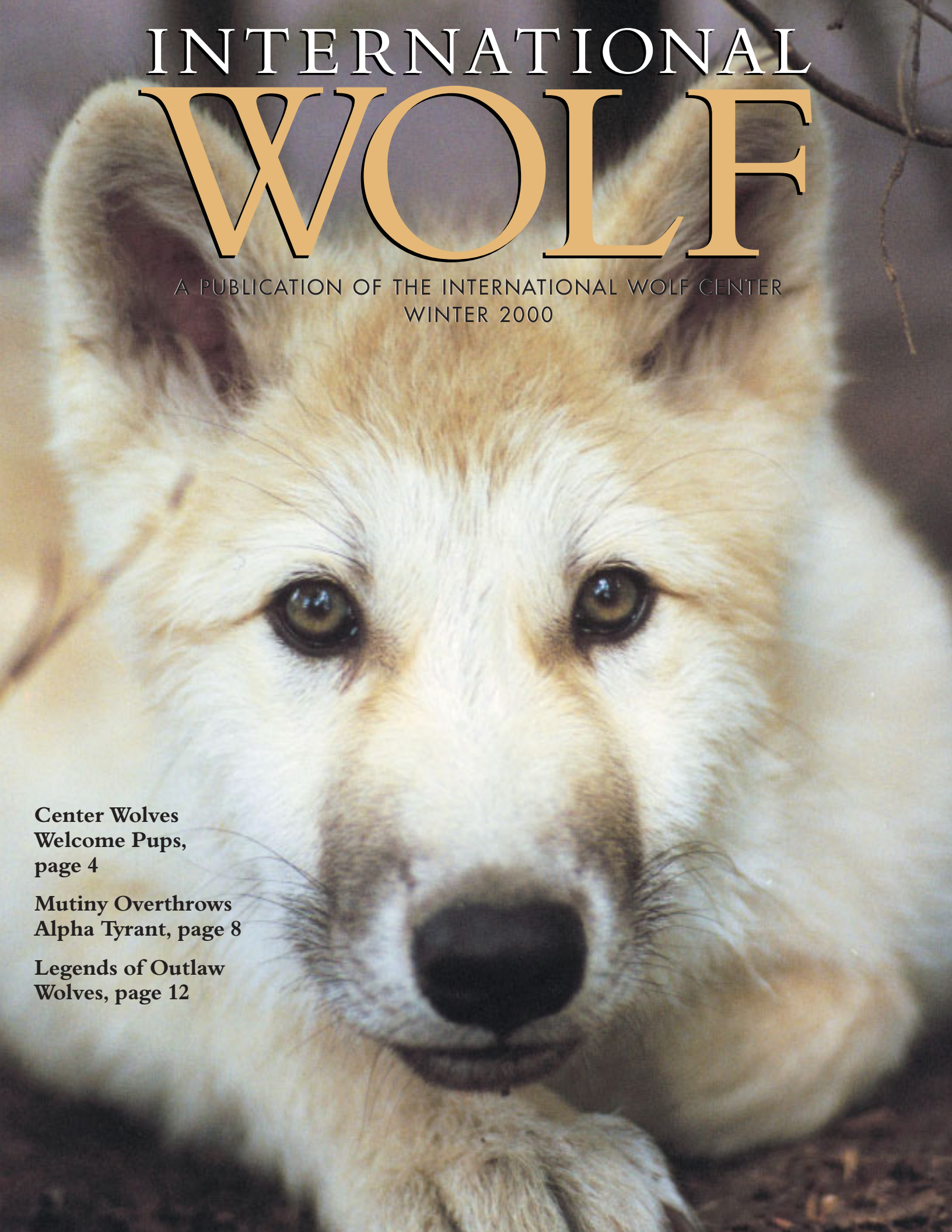

INTERNATIONAL WOLF

A PUBLICATION OF THE INTERNATIONAL WOLF CENTER
WINTER 2000

Center Wolves Welcome Pups, page 4

Mutiny Overthrows Alpha Tyrant, page 8

Legends of Outlaw Wolves, page 12

INTERNATIONAL
WOLF
THE QUARTERLY PUBLICATION OF THE INTERNATIONAL WOLF CENTER
VOLUME 10, NO. 4 WINTER 2000

Features


Diane Glenny

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Arctic Wolf Pups Make Smooth Transition Into Center's Pack

Arctic wolf pups Malik and Shadow (shown at left), were readily accepted by our resident wolves in Ely this summer and are now making the exciting transition as members of a wolf pack.

Andrea Lorek Strauss


Carter Niemeyer

Doug Smith puts a new radio collar on Wolf 40 after tranquilizing her so she could be tracked and monitored.

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The Death of a Queen

Wolf 40, the Druid Pack's Alpha female, is overthrown and killed in this dramatic depiction of social dynamics among wolves.

Douglas Smith and Rick McIntyre

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Legends of the "Outlaw" Wolves

Part I of a discussion of the legends behind "outlaw" wolves in the early 1900's.

Steve Grooms

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On The Cover

Malik, one of our new arctic wolf pups, looks tentatively on before joining the Center's resident pack in Ely on August 9 with his brother, Shadow. Sherry Jokinen, one of the Center's nannies, took this photo of Malik.

Daniel Cox/naturalexposures.com

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INTERNATIONAL
WOLF

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

As A Matter Of Fact

"Howling Wind", by Lee Kromschroeder. Courtesy of Lee Kromschroeder and Wild Wings Inc.

When do arctic wolf pups gain adult size?

Most wolves, including arctic wolves, reach adult size by about December of their first year if their nutrition is good. If food is scarce, their growth may be delayed, but their growth ends at about one year of age. ■

New Question

How far can a wolf see and can it see in the dark?

Correction *International Wolf* was notified by two of our members that an excerpt in our Wild Kids Department on page 29 of our Fall, 2000 issue was incorrectly attributed to Heather Williams. The excerpt, beginning with "We wild ones are now very few," should have been attributed to Jim Brandenburg, who wrote it for his book *Brother Wolf: A Forgotten Promise,* published by NorthWord Press, Inc. Heather illustrated a wolf to go along with the excerpt, which she must have taken from Brandenburg's book.

Wolves of the World

WOLVES IN THE FRENCH ALPS

Treading Between Pastoralism and Advocacy

by Neil Hutt

"Mort aux loups!", or in English: "Death to wolves!" As sheep farmers parade their flocks through the town of Aixen-Provence, they hold aloft signs protesting the presence of wolves in southeastern France.

Anti-wolf signs like this one reflect the viewpoint among many farmers in the French Alps that wolves are a threat to their pastoral way of life.

In this beautiful French Alpine region, sheep are herded to the surrounding hills each spring in a centuries-old tradition known as "la transhumance." The sheep, often in flocks of 2,000 and guarded by only one shepherd, will graze on the remote mountain pastures for about five months.

The 30 to 50 wolves now living in this region prey primarily on red and roe deer, chamois (a goat antelope), and feral mouflon (a type of sheep). The sheep farmers insist, however, that the wolves also prey heavily on their vulnerable domestic flocks. Well over 5,000 sheep have been killed by wolves in the past few years, the farmers claim. Increasingly vocal with their protests against legal protection of wolves in this mountain habitat, farmers and shepherds insist that the French government enact stringent laws to safeguard their way of life.

The government has taken several steps to appease the shepherds. For example, compensations are paid for confirmed wolf kills. Methods of mitigating attacks are also promoted.

Farmers are also encouraged to use guard dogs and nighttime "harborages" protected by donated electric fencing. Grants are available for the purchase of vaccinated pups. In addition, the government will allow farmers to shoot wolves straying outside the boundaries of Mercantour and Queyras, the two "parcs nationaux" where the wolves have returned after an absence of more than 50 years.

Shepherds argue that even these measures do not

B. Lequette, T. Houard, M.L. Poulle and T. Dohier

Mercantour National Park in France provides a rich, mountainous habitat for wolves with dense forest cover dominated by conifers.

Wolves of the World

"To put a wolf in an enclosed space makes the species meaningless. You wouldn't be keeping wolves, you'd be keeping just a memory of wolves."

—park official Michele Blanchet

adequately protect their herds against wolf attacks. Some farmers have called for wire fences around the national parks to enclose the wolves. Others have demanded the extermination of wolves in the French Alps. "Sheep breeding and wolves are incompatible," claimed shepherd Frederick Bues (as quoted in the November 1, 1999 issue of *The Christian Science Monitor*).

Several national and international organizations are determined to see that the re-established wolves in the French Alps remain protected. The suggestion that wolves be shut in and managed within the boundaries of Mercantour National Park and Queyras Park strikes many wolf advocates as unthinkable. "To put a wolf in an enclosed space makes the species meaningless," park official Michele Blanchet said. "You wouldn't be keeping wolves, you'd be keeping just a memory of wolves."

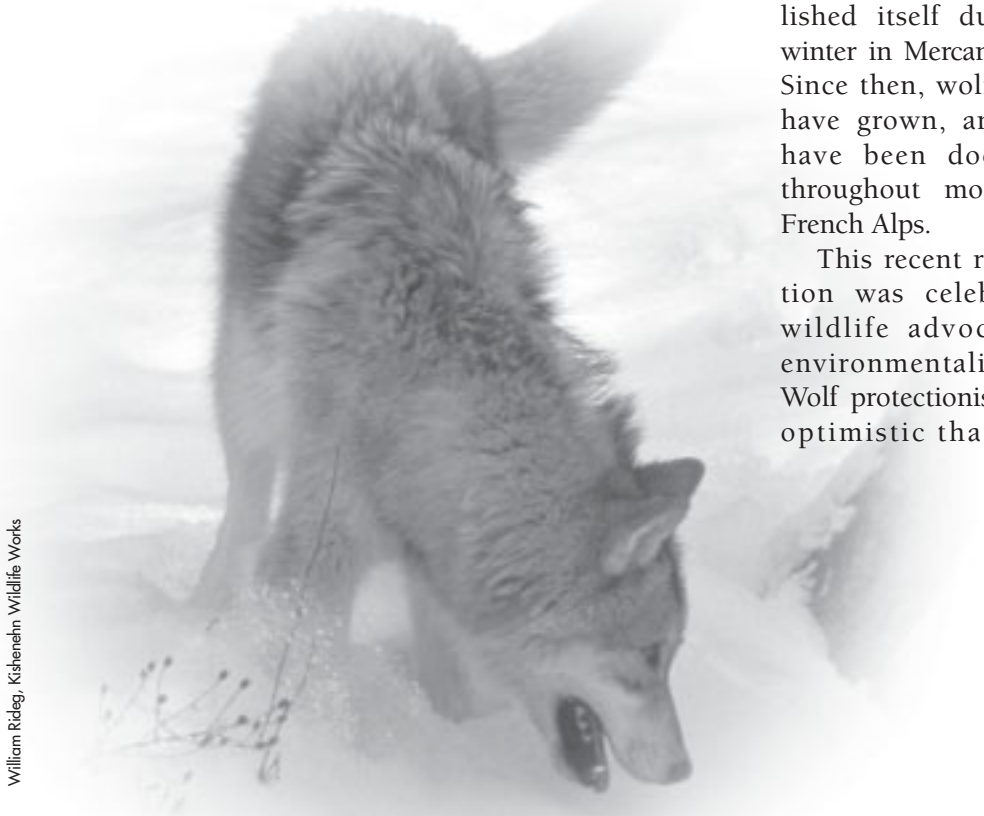
Wolves were, in fact, just a memory in France for more than 50 years; then in the early 1990's, dispersers from Italy came to the southeastern regions of the country. The first definite sightings were made in the fall of 1992, and the first pack of two wolves established itself during that winter in Mercantour Park. Since then, wolf numbers have grown, and wolves have been documented throughout most of the French Alps.

This recent recolonization was celebrated by wildlife advocates and environmentalists alike. Wolf protectionists became optimistic that a viable population of wolves could be established and sustained in the region.

Their positive view was based on several factors. The first is that human population in rural areas has declined, leading to an increase in prey species such as red and roe deer. In addition, stronger legal protection measures for wolves have gained public support, and education has led to a better understanding of predators.

Groupe Loup-France actively seeks support for wolves in France. Its web site (www.loup.org) provides news of recent developments in what has become a nationwide wolf war. After a recent declaration by the national assembly that "the return of the wolf in France is today incompatible with the maintaining of French pastoralism," a campaign was launched to prevent a wolf cull and the establishment of wolf exclusion zones.

There are signs that some compromises could



William Rideg, Kishenehn Wildlife Works

provide solutions. One of the most common protective measures against predators is the pastou, the Great Pyrenean Mountain dog, a huge white dog that is fiercely protective of sheep if raised among the flocks. Cabins in some of the remote pastures allow shepherds to be near their flocks, and two-way radios keep them in touch with their families. Salary increases may encourage young shepherds to protect the flocks against predators. Aversion techniques such as noisemakers are also being tried.

Some people are encouraged by these efforts, complicated as they are. Others are less convinced. "One day," said shepherd Roger Minard (as quoted in the November 1, 1999 issue *of The Christian Science Monitor)*, "the wolves will get used to my noisemaker. Then we will have to choose between an ecology of the wolf, which leaves no room for us, or an ecology of transhumance." Such attitudes seem to be on the rise and have brought the debate of wolf-livestock coexistence to the national level.

Some individuals argue that the ecosystem of southeastern France is impoverished by the absence of a top predator. Still others have pointed out the advantage of wolves as a tourist attraction. As is the case in much of the rest of the world, work on the human dimension in wildlife issues must become a priority, if "la piste du loup," the track of the wolf, is to remain in France.

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

WOLVES IN IDAHO

Riding the Fence Between Love and Hate

by Neil Hutt

"Idaho ranchers need wolves about as much as they need wildfires. These killing machines are killing cows, killing sheep and killing a way of life."

—anonymous rancher
near Challis, Idaho

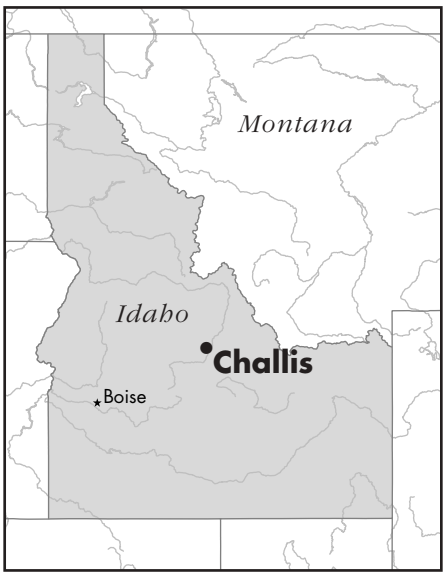
Taped on the display window of the Clayton Mercantile in Clayton, Idaho, is a "going out of business" sign. Beside it hangs a poster with the carefully hand-lettered words, "Kill all the goddamned wolves and the people who put them here!"

Not far away, near the town of Stanley, a rancher demands the removal of the wolf pack he claims has killed a prize calf and also his dog. At a meeting of the Idaho Outfitters Association, some members insist that elk numbers are declining. The wolf is blamed. An anti-wolf organization accuses the wolf of hurting the local tourism industry—whitewater rafting companies, outfitters, and businesses like the Clayton Mercantile.

Other people in Idaho, however, have greeted the return of the wolf with tolerance and even enthusiasm. For example, some residents near Challis were outraged by the discovery last year of two wolves killed by poison near the

Daniel Cox/naturalexposures.com

Wolves of the World



"Ranchers are right about one thing: wolves kill cattle and sheep. The answer is simple. Cows should go, wolves should stay."

—Susan Zakin
as quoted in
The Idaho Statesman
(July 21, 2000)

fringe of the vast Frank Church River of No Return Wilderness. Other citizens hold the view that wolves are a tourist attraction, not a drawback.

For people wanting a trek by horseback or river raft into wolf country, Idaho certainly offers rich possibilities. Typical of such adventurers are the eight vacationers dozing around the dying embers of a campfire in the Frank Church. This group, led by a local outfitter, has chosen central Idaho because of its beauty and solitude—and because the wolves are here. They know their chances of seeing the big predators in this steep and rugged country are slim, but they agree it would really be something to hear the wolves howl, even just once. The night is quiet—crisp and clear, and windless.

Suddenly from the darkness beyond the circle of trees where the mules and horses are corralled, a long low moan shivers on the night air, rises, then suspends itself on a last thread of sound before changing pitch and trailing into silence. An answering howl floats like a low-voltage current in the dark spaces beyond the adjacent meadow. A keening chorus joins the two solos, full-throated and chesty and joyful. The song swells and reverberates, then fades away. The stillness returns.

No one speaks until at last one of the men says softly, "Nothing on this trip can beat that." The others nod.

The outfitter leading the trip, a young man raised in Challis, is glad the group has heard the wolves. It's good for business, and besides, the sound thrills him, too. But like many people in Idaho, his feelings are ambivalent. In the fall, the outfitter will bring elk hunters here instead of wolf enthusiasts. The hunting trips are the main source of the outfitter's income, and he thinks there are fewer elk calves now that the wolves are back in the Frank Church.

The outfitter remembers when the wolves were reintroduced to central Idaho. There wasn't much fanfare, not like in Yellowstone. The outfitter's neighbor, a rancher near Challis, was philosophical. "I got nothin' against wolves," he said, "as long as they stay in the Frank Church and don't bother my stock."

The original wolves did stay. But the dispersers from succeeding generations are leaving the Frank Church, spreading out across Idaho and, according to some reports, traveling into Oregon. Curt Mack, recovery specialist with the Nez Perce tribe (a Native American tribe in Idaho managing wolf recovery for the federal government) estimates the Idaho popula-

tion has risen to between 140 and 150 wolves in 15 packs. "Where the wolf population will level out, we don't know yet," Mack says, although he projects the number will stabilize at 300 to 600.

The challenge to wolf recovery in Idaho is not biological but what Mack calls the social carrying capacity of wolves. "Wolves are going to be limited by human tolerance, not by habitat or food," agreed Roy Herberger, the retiring USFWS Idaho Wolf Recovery Coordinator.

The past year has proven both men right. Depredations on livestock have resulted in two highly publicized and controversial lethal control actions. Proposed non-lethal methods such as shock aversion and the use of rubber bullets have provoked heated debate as well. Some conservationists and wolf advocates demand that ranchers change their grazing practices to minimize depredation. Ranchers claim, however, that such measures are both ineffective and too costly.

On top of all this is the recent proposal by the US Fish and Wildlife Service to reclassify the gray wolf. A Wolf Oversight Committee established by the Idaho legislature has begun efforts that would enable the state to take over the management of wolves once they are removed from the endangered species list. Their plan is still in draft form, but already there is a firestorm of controversy over the proposals.

In the midst of contentious argument, there is some optimism. Some conservationists think the wolf's future in Idaho is bright, pointing out that great strides in public acceptance of wolves have been made in the last decade. Wolf recovery is, however, a major social challenge, and, said Roy Herberger, "Social change takes time. There's a long way to go yet."

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

WOLVES IN ALASKA

Wolf Attacks Analyzed

by Steve Grooms

Experts are trying to make sense of two recent non-fatal wolf attacks on humans. In April, a single wolf appeared to stalk two children who were playing near an isolated logging camp near Yakutat, Alaska. When the children fled, the wolf grabbed six-year-old John Stenglein and bit him repeatedly on the back, legs and buttocks. Several adults drove the wolf off.

Shortly afterward, the same wolf was lured into the open again and fatally shot. Tests proved the wolf did not have rabies. Stenglein was treated for puncture wounds at a local clinic.

Lynn and Donna Rogers

The wolf, a healthy and apparently normal animal wearing a radio collar, had been seen frequently around the logging camp. Authorities could not confirm rumors that the animal had been fed by humans. This wolf, however, was one that had behaved boldly around humans several times before the attack and had lived near the logging camp for two years.

The incident is complicated by the presence of a dog, a pet golden retriever. The wolf's aggression might have been triggered by competitiveness with the dog, although accounts of the attack suggest the wolf might have been stalking the boy before the dog intervened by attacking the wolf.

In a separate incident on July 5, a wolf attacked a man sleeping on a beach on Vargas Island, British Columbia. Scott Langevin, 23, was airlifted to a hospital, where he received 50 stitches to close a scalp wound. It was the first confirmed wolf attack in recent B.C. history.

Langevin, part of a kayaking expedition, was awakened when a small, dark wolf began tugging on his sleeping bag. He shouted and kicked at the wolf, which then attacked him, biting his head and hand. His cries attracted partners, who drove the wolf away. They used a marine radio to call for the airlift.

Authorities shortly afterward located two bold wolves and killed them.

The island, very popular with kayaking campers in summer, has a population of seven wolves. Area residents claim other groups of kayakers had been photographed feeding hot dogs by hand to wolves.

Weeks before the attack, two bold wolves approached wildlife photographer Jackie Windh near the same beach. When she failed to feed them, the wolves became aggressive and one ripped her pants. Windh left the area convinced it was "a matter of time" before there would be a serious incident.

According to Larry Dill, a college professor specializing in animal behavior, "If (wolves) begin to see people as a source of food, they will start approaching people. If they are frustrated when they…don't get fed, then aggression is the next natural step. It's a real dumb thing for anybody to be feeding them. Those wolves had to die because of some people's stupidity." ■

Steve Grooms is a writer living in Saint Paul, who recently revised his book, The Return of the Wolf.

News and Notes

Neil Hutt

(Left to right): Tristan Rebane, Dave Mech, Dean Cluff, and Jerry Sanders were part of an International Wolf Center expedition to Canada's Northwest Territories in August, where they observed 24 arctic wolves and other wildlife.

"WOLVES KILL GUARD DOGS" could be the title of a report from the Tom Miner basin in Montana. There, wolves have killed four livestock guard dogs this year and last. The dogs may be attracting the wolves to the area, so the rancher has been keeping the guard dogs inside when the wolves come around.

TWENTY-FOUR ARCTIC WOLVES entertained 13 members of an International Wolf Center expedition to Canada's Northwest Territories in August. The group watched a pack of nine adults and 15 pups at a rendezvous site some 200 miles northeast of Yellowknife daily for an entire week. Caribou, musk oxen, and arctic hares, the main prey of the wolves, were also seen.

WOLF RECLASSIFICATION in much of the 48 contiguous United States has been formally proposed by the U. S. Fish and Wildlife Service. Wolves in several states, including Wisconsin, Michigan, North Dakota, and South Dakota, would be reclassified from "endangered" to "threatened." Minnesota's wolves have been classified as threatened since 1978 (see http://midwest.fws.gov/wolf for the complete proposal; information can also be found on the Center's Web site, at www.wolf.org; go to the "News and Events" link).

WOLF MANAGEMENT in Minnesota is the subject of a lawsuit filed by several wolf advocacy organizations. The groups claim that the wolf management plan passed by the 2000 Minnesota Legislature was improperly attached to a funding bill in violation of the state constitution. Decisions on two previous suits based on the same claim resulted in decisions that differed from each other.

WOLF PACK LEADERSHIP was the subject of an article by L. David Mech in the April-June 2000 issue of *The Canadian Field Naturalist*. Mech reported that during summer when pups are present in a wolf pack, the breeding male tends to initiate activities associated with foraging and travel, and the breeding female with pup care and protection.

WOLF DELISTING in Minnesota may have received a boost in June when the Minnesota Conservation Federation Board unanimously petitioned the U. S. Fish and Wildlife Service to immediately begin the process of removing the wolf in Minnesota, Wisconsin, and Michigan from the Endangered Species List. The wolves there met the government's recovery goals in 1999 (at least 1,250 in Minnesota and 100 in Wisconsin and Michigan combined for five consecutive years) and now number more than double the goal.

THREE CURIOUS WOLVES from Montana's Spotted Bear pack watched fire trucks traveling up and down Bunker Creek Road in the midst of one of the West's worst forest fire seasons. Two other wolves were seen watching firefighters battling the 18,000-acre Monture Creek fire, according to the U. S. Fish and Wildlife Service.

TWO WOLF BOOKS are currently in the news. L. David Mech's *The Wolf: the Ecology and Behavior of An Endangered Species* (published by University of Minnesota Press), has now been in print for 30 years, with more than 100,000 in circulation. Mech's *The Arctic Wolf: Ten Years with the Pack* (Voyageur Press) was recently published in Hungarian. ■

Death of a queen

Continued from page 11

one by one, carried all of her pups to that site. Wolf 106 also moved her pups to 40's den.

As far as we can tell, the four adult females are caring for 40's pups, along with the pups born to 42 and 106. We have seen a total of 21 pups at that den!

Not long after 40's death, we observed 21 and 42 perform double scent marks, strong evidence that 42 had moved up to the alpha female position. None of the other females disputed her promotion.

In the three months since 40 died, we have not seen any aggression by 42 toward the other females. Unlike her sister, 42 seems to rule with a gentle touch. The fact that all of the females are working together to raise the three litters of pups indicates that they are getting along very well.

During her reign as alpha female, 40 acted like a tyrant and was quite violent with the other females in the pack. Her life and death could be summarized with the old phrase that often applies to human tyrants: If you live by the sword, you may die by the sword. ■

Rick McIntyre is a naturalist working as a field technician for the Yellowstone Gray Wolf Restoration Project, of which Dr. Douglas Smith is the leader. Dr. Smith's articles have been published in numerous journals, including 'Journal of Mammalogy.' McIntyre is the author of two books on wolves.

reaction to her sister. This seemed to placate 40 and she would end her attack. She never took the aggression to the same level that she had against 39 and 41.

In the spring of 1998, 40 denned at the same site used the previous year by her sisters and had two male pups. One pup was lost in July and the other one later died after dispersing.

In December of 1998, 40 and the other Druid females killed a two-year-old Rose Creek female in a border area used by both packs. This was the fourth wolf kill attributed to the Druid Pack.

Wolf 40 had a litter of six pups in spring of 1999 at the same den. Wolf 42 stayed away from 40's den and localized a few miles to the west, near Rose Creek, behaving as if she was denning there. One morning, several observers saw 40 lead the other pack members to 42's site. As soon as she sighted 42, she chased and then severely attacked her.

After the attack, 40 ran into a stand of conifers were 42 had localized. Wolf 40 then came out and led the pack back to her den. Wolf 42 later rejoined the pack and did not return to that forest. Did 42 have pups there? If so, did 40 kill them? We searched the area and found a den, but no remains of any pups. Wolf 42 may have been going through a false pregnancy that caused her to dig the den. In the end, we just did not know what took place there.

In early February of 2000, all five Druid females, 40, 42, 103, 105, and 106, came into estrus. We observed 21 breed 40, 42, and 106 and assumed he also mated with 103 and 105. When he mated with 42 and 106, 40 was nearby but did not intervene. However, in the days and weeks after 42 was bred, 40 repeatedly attacked her again for no apparent reason.

By late March, 42 was localized in a forested area south of Rose Creek, about four miles west of 40's den. Wolf 42's daughter (105) and niece (103) joined her there and all three stayed away from 40 and her den. The other female, 106, denned about three miles east of 40's den.

Wolf 21 primarily stayed with 40 at her den, but did make regular visits to 42's den and possibly to 106's den. Wolf 40 briefly visited 42's den site at least twice, without incident.

On May 1, we began to see pups at 42's den—at least five blacks and one gray. During that first week of May, behavior patterns indicated that 40 and 106 probably also had pups at their dens.

On the evening of May 7, 42 and 105 left their den and traveled east toward Chalcedony Creek on a hunt. Wolf 103 stayed behind at the den site, probably to watch over the pups.

At about the same time, 40 left her den, and with 21, also headed toward Chalcedony Creek. The two subgroups met and 40 immediately attacked 42, much more severely than usual. Wolf 42 rolled on her back and accepted the bites. When 40 was finished, she did the same to 105.

After that, all four wolves moved west toward 42's den. By that time, it was too dark for further observations.

We found 40 badly wounded the next morning. Prior to her death, we checked for signals from non-Druid wolves. There were no other radio-collared wolves in the area. That meant the other Druid females were the likely cause of her death.

We think that 40 followed 42 back to her den and probably attacked her again or her pups. In the past, 42 had always submitted to her sister. This time, apparently something different happened. Our best guess is that 42 fought back. That would have been totally unexpected and likely gave 42 a momentary advantage. Possibly 103 and 105 helped attack 40—her wounds were certainly consistent with attacks from multiple wolves. Wolf 40 managed to escape the scene, but her wounds were too great.

After her death, 21 continued to tend the pups at 40's den. A few days later, he traveled to 42's den. She followed him back to 40's den, then,

continued on page 26

Douglas Smith

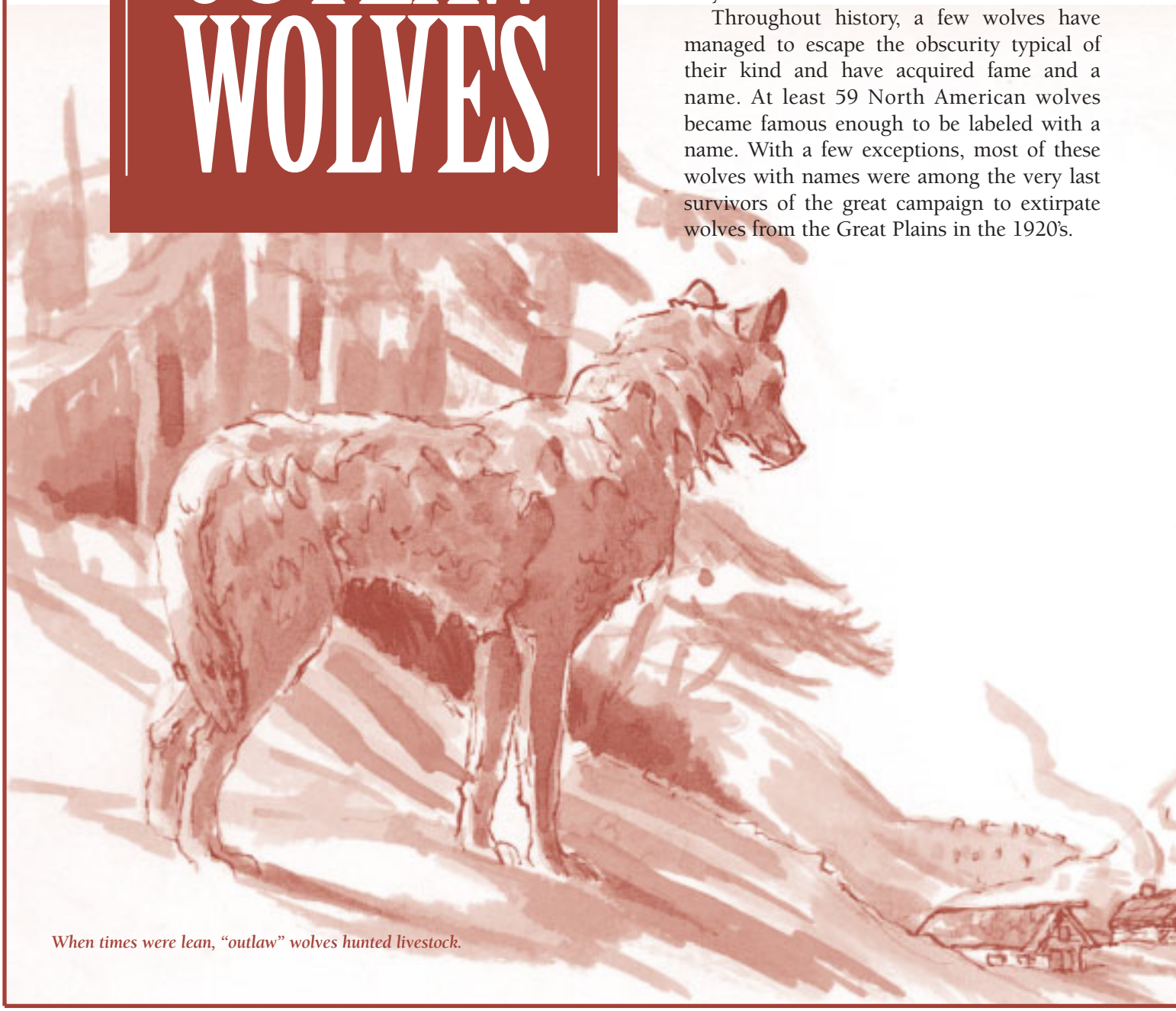
Kerry Murphy examines Wolf 40 after her death. Murphy is a wildlife biologist at Yellowstone National Park.

LEGENDS OF THE "OUTLAW" WOLVES

by STEVE GROOMS

What names they had! They were called such things as the Three-Legged Scoundrel, Lobo the Giant Killer Wolf of the North, the Phantom Wolf of Big Salt Wash, Badlands Billy, and the Werewolf of Nut Lake. Then there were all the "toe wolves": Old Three Toes, Old Two Toes and—you guessed it—Old One Toe. If these names sound a bit romantic, they were probably meant to.

Throughout history, a few wolves have managed to escape the obscurity typical of their kind and have acquired fame and a name. At least 59 North American wolves became famous enough to be labeled with a name. With a few exceptions, most of these wolves with names were among the very last survivors of the great campaign to extirpate wolves from the Great Plains in the 1920's.



When times were lean, "outlaw" wolves hunted livestock.

Illustrations by JOAN OULLETTE

This drawing depicts a "wolfer" around 1900 with his hunting dogs. Men who hunted wolves in this time period were lured by a bounty equivalent to two year's salary.

These were not ordinary wolves. These were the ghostlike wolves that no hunter or trapper could defeat, and some of the frustrated men pursuing them believed they had supernatural abilities. Because each of these "outlaw" wolves was responsible for destroying great numbers of livestock, they were regarded as a menace to society, much like the bank robbers and gunslingers of the Old West.

Like human outlaws, these wolves sometimes carried rewards on their heads and were hunted relentlessly until finally destroyed. The skillful and enterprising men who triumphed over a famous renegade wolf might acquire the sort of notoriety associated with someone like Pat Garrett when he killed Billy the Kid, or Frank Hamer when he ended the careers of Bonnie and Clyde.

When a notorious old cattle killer was finally destroyed, its demise would be celebrated in newspaper stories all over the region. The stories would note with approval that the death of this wolf made the world safer for livestock.

Yet the disappearance of the last and most famous wolves often seemed symbolically linked to the passing of all that had been wild and exciting in the region. Some stories about the deaths of old outlaw wolves carried a note of regret, as if the writer understood that a world without these wolves would be a less interesting place.

Some of the men who triumphed over famous wolves reflected the same ambivalence. Consider the reflections of Earl Neill, the man who shot the White Wolf of the Judith Basin:

And do you know, I almost didn't shoot. It was the hardest thing I think I ever did….I thought swiftly that these were the hills over which he had hunted. I knew that it was the cruel nature of the wilderness—the fight for survival of the fittest—that made him the ferocious hunter that he was. I thought of all the men that had hunted him, of how his fame had gone out all over the country, and I almost didn't shoot.

An even odder confrontation ended the career of Rags the Digger. Rags was named for his shaggy coat and amazing ability to discover traps and dig them up. He seemed to be flaunting his contempt for the trappers pursuing him. Trapper Bill Caywood finally derived a way of using that quirky habit to his advantage, luring Rags into a setup that clamped two big traps on him. Rags dragged the traps painfully through heavy brush, leaving a trail that impressed Caywood with the courage of the old wolf.

When Caywood got off his horse to confront Rags, the wolf astonished him by walking toward him. Caywood's rifle failed to fire twice. Caywood wondered if the wolf was going to attack him, then wondered if Rags might be seeking his help in getting the traps off. Rags kept limping closer. The rifle fired on the third try, and Rags died with his muzzle almost touching Caywood's boot. Stroking the pelt of the shaggy wolf he'd pursued for months, Caywood said, "You poor, lonely old murdering devil!"

The many legends passed down about different outlaw wolves are surprisingly similar. At least four qualities were commonly ascribed to these wolves with names. Above all, they seemed exceptionally wary, intelligent, and elusive. They seemed to have paranormal powers for evading their hunters. Lured by a bounty equivalent to two year's salary, countless cowboys and "wolfers" pursued the White Wolf of the Judith Basin without success. One man pursued the Custer Wolf four years before giving up. Another gave up after five years.

Many of these wolves were terribly destructive, engaging in what we now call "surplus killing." Livestock losses ascribed to the Judith Basin Wolf totaled a third of a million dollars (in today's dollars). A wolf named Blanca and a pack member reportedly killed 250 sheep in a single night. Some renegades maimed livestock they did not kill, for example, by biting off part of their tail (called "bobtailing"). Some ranchers claimed they were driven out of the livestock business by the depredations of famous wolves.

Although wolves are one of the most social species known, most outlaws were loners. Many were alone simply because the rest of their kind had been wiped out, but others seemed to live alone by choice. One odd exception was the Custer Wolf. After his family was destroyed, the Custer Wolf never again associated with wolves, but for some time ran with a pair of coyotes, apparently using them as part of his defense system.

Some stories about the deaths of old outlaw wolves carried a note of regret...

The famous wolves often ranged over great distances. Several were thought to have roamed territories comprising several hundred square miles. This made them less predictable and harder to find.

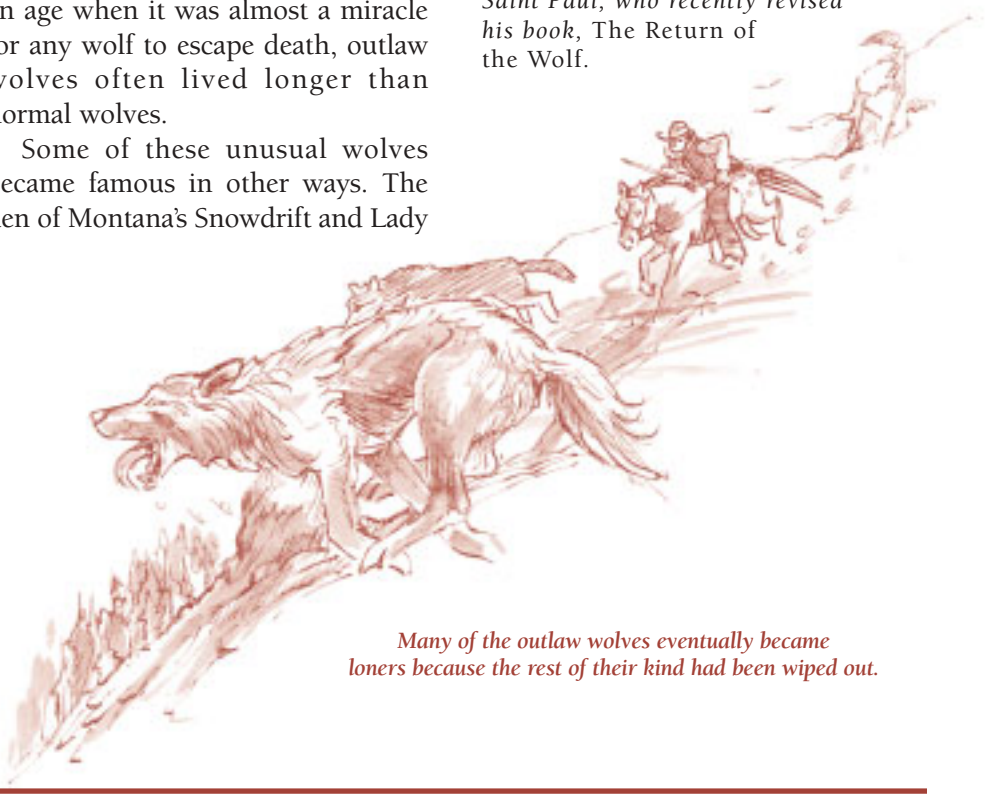
Most outlaw wolves were physically distinctive. Many had missing toes, having lost them to traps. Most were reputed to be exceptionally big, but when a notorious wolf was killed, it often turned out to be unglamorously average. A remarkable number of outlaw wolves were white, possibly because so many of them were so old. The infamous Judith Basin wolf, a gaunt and hoary old animal when killed, was estimated to be 18 years old. Ranchers claimed Old Whitey of Bear Springs, Mesa depredated a region of Colorado for 15 years. In an age when it was almost a miracle for any wolf to escape death, outlaw wolves often lived longer than normal wolves.

Some of these unusual wolves became famous in other ways. The den of Montana's Snowdrift and Lady Snowdrift was raided, and the pups were brought up in captivity. Two were trained to perform in Hollywood movies. Another became the camp mascot for Jack Dempsey as he prepared for a heavyweight championship fight.

A white wolf trapped as a pup on the ranch of William "Buffalo Bill" Cody was raised as a pet. It later escaped and became, according to a newspaper report, "a great white marauder" for ten years. When it was eventually killed, this wolf wore the collar the old buffalo hunter had placed on his neck.

Wolves are among the most interesting and exciting animals on earth, and these famous old "outlaws" were some of the most fascinating wolves ever to have lived. But what is the modern student of wolves to make of these old legends, many of which seem improbable or downright unbelievable? To find out, see part II of this story in the next issue of *International Wolf*. ■

Steve Grooms is a writer living in Saint Paul, who recently revised his book, The Return of the Wolf.



Many of the outlaw wolves eventually became loners because the rest of their kind had been wiped out.

Journal of a Wolf Pup Nanny

The International Wolf Center has been blessed with many wonderful volunteers, and Nancy Weiss is no exception. Weiss was the first of the volunteer nannies to help transition our new arctic wolf pups, Malik and Shadow, into their new lives at the Center in Ely, where they interacted with our resident wolves for the first time.

Weiss is a practitioner of TTouch™, a system of physical exercises and bodywork used to alleviate stress-related behavioral problems. Wolf Curator Lori Schmidt testified, "We saw dramatic examples of TTouch™ success, first when a small, flailing child in the audience acted like a wounded prey species, and then when a tornado warning brought the pups inside without the necessary crowd control." In both instances, one or both pups appeared anxious and overstimulated, and TTouch™ helped calm them.

"Success during this critical bonding period will have long-term benefits," added Schmidt. "Nancy can certainly be proud to know that she was an important component to that successful beginning." We extend our most sincere thanks to all the nannies who donated a week caring for Malik and Shadow.

Here is a glimpse of Weiss' week interacting with the pups and with Lori Schmidt, our wolf curator, excerpted from a journal filled with nearly 50 pages of observations:

June 30, 2000 – I arrive and meet Lori, who's handling deer haunches for the adults. Lori takes me into the pups' nighttime pen. We sit down and both pups greet Lori, then me. Pups very comfortable in my presence. They play, growls and grunts punctuating their actions. They watch adults in adjacent pen with great interest.

July 1 – Sleeping styles – Malik in deep sleep, Shadow more attentive. Shadow woke up a few times, food-begged from me, rolled over in submission.

July 2 – Malik is beginning to explore on his own, without the support of his brother. Malik seems to be more outgoing at this time.

July 3 – Headed to auditorium shortly after 11:00. Pups knew "the routine" and seemed eager to go in for the presentations.

July 4 – Malik awakens, notes deer hide we'd placed in pen earlier, and scent-rolls for the first time. Pups oblivious to the noise of fireworks [from some local celebration]!

July 5 – Shadow observed urinating several times. Could be a urinary tract infection. Got a sample and will take to vet.

July 6 – Dominance display by Malik, using head and paw over Shadow's shoulder as Shadow chewed a rawhide. Dominance display by Shadow – very high raised tail while playing with his water bowl and then with other items.

Additional Nanny Notes can be found on our web site, at www.wolf.org; visit our Pup Page. ■

Kyle Allen

Nancy Weiss holds Shadow. Weiss was one of the first nannies to transition Shadow and Malik into our resident pack in Ely.

Tracking the Pack

Where the Great Plains Meets the Arctic: A Comparison of Two Different Generations

by Lori J. Schmidt

If you didn't make a trip to the International Wolf Center this summer, you missed an exciting opportunity to meet the Center's newest members of the ambassador pack, Shadow and Malik, two arctic wolf pups born in April. In August, Shadow and Malik joined Lucas, Lakota, and MacKenzie, our resident wolves born in 1993, to form an ambassador pack of five wolves (Andrea Lorek Strauss' article on page 4, outlines the event in detail).

One of the most common questions asked by Center visitors related to the differences between the two subspecies of the gray wolf: the arctic subspecies represented by our newest pups, and the Great Plains subspecies represented by our 7-year-old adults. To answer that question, wolf care staff began investigating the physical and behavioral developments of both litters.

Diane Glenny

Arctic subspecies generally have a later breeding cycle and whelping pattern since warm spring weather in the Arctic arrives later than in the Great Plains. Both subspecies are dark when born, most likely an adaptation to blend in with the earth tones of the den. Both are also born blind, deaf, and helpless, and weigh approximately a pound at birth.

It was generally believed that arctic subspecies grow faster than the Great Plains subspecies due to the shorter summers, but individual growth rate varies with food availability in the wild and the health and condition of the adults during the breeding season. Even in a captive environment, there are far too many variables affecting growth rates to truly compare the data, including type of formulas and solid food, time of weaning, number of pups in a litter, method of feeding, etc.

Malik (to left) and Shadow demonstrate how arctic wolves turn quickly from their dark birth coat to their white adult coat. Here, Shadow (true to his name) has darker markings than Malik, including a darker face and back.

Lynn and Donna Rogers

MacKenzie, Lucas, and Lakota as pups demonstrate the many colors of wolves as they mature, including gray, tan, cream, and black. MacKenzie retained her black coloring.

It appears that both subspecies had a significant weight gain of 9.5 pounds between week 7 and week 9.

The most obvious differences relate to the pelage or hair coloration of the pups as they grow into adulthood. While both subspecies are born dark, the Great Plains subspecies has several color phases, including gray, tan, cream colored, and black. The arctic subspecies is almost exclusively dominated by the white color phase, most likely an adaptation for its life in an environment covered by snow ten months of the year. ■

Lori Schmidt is the wolf curator at the Center in Ely, MN.

This chart compares weights between the two litters:

AGE IN WEEKS	**Arctic** (2000 Litter) Weight in Pounds	**Great Plains** (1993 Litter) Weight in Pounds
3–4 weeks	4.13 – 6.35	3.25 – 7.0
5–7 weeks	8.6 – 14.0	7.5 – 14.5
7–9 weeks	14.0 – 23.5	12.0 – 21.5
9–11 weeks	23.5 – 27.0	18.0 – 28.0

(Weights listed as a range of smallest pup to largest pup for the week)

**At 12.5 weeks of age, Malik weighed 32 pounds and Shadow weighed 32.5.*

INTERNATIONAL WOLF CENTER

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From the Executive Director

Part of me keeps thinking that the wolf world is due for a long, restful lull when our existence and that of the wolves becomes routine and any news is old news. But as this issue will demonstrate, such a lull is nowhere in sight. Established and re-established wolf populations continue to challenge our thinking as to what is convention in the wolf world.

When it comes to wolves and humans, the landscape is in a constant state of flux. As the state of Minnesota settles into the mindset that the wolf will be delisted in the near future, and that its management bill will be the basis for a management plan, several local and national organizations have announced a lawsuit on the basis of the unconstitutionality of the state's legislative process. And there are indications that the Fish and Wildlife Service's intent to reclassify the wolf nationwide will run into strong opposition based in part on the uncertainties of Minnesota's status.

Walter Medwid

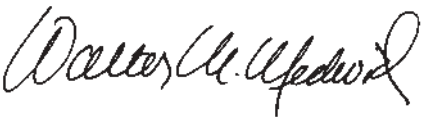
Established and re-established wolf populations continue to challenge our thinking...

Despite statistical insignificance, wolf attacks on humans always get strong newspaper play and become fodder for those who are against wolves. Regrettably, headlines associated with the story reinforce so many of the stereotypes we try to fight each and every day. Two recent incidents are covered in detail in this issue, minus the provocative headlines.

Our fascination and admiration of the wolf becomes quite clear when you read the incredible story by Rick McIntyre and Doug Smith. The harsh, complex realities of wolf society are portrayed in this first-hand account by these notable wolf researchers.

We recently experienced some wolf dramas of our own with the introduction of two arctic wolf pups to our resident pack of three seven-year old gray wolves in early August. The first encounter between the pups and our resident pack gave us all some anxious moments as we watched for any signs of aggression. We were rewarded by the most wonderful sight: adults and pups mingling in exuberant greetings, licking, smelling, whining, romping, rolling, and an assortment of other canine behaviors.

As we head toward a New Year, we can't help but express our excitement over the new teaching opportunities that are available to us with our newly expanded pack in Ely. Several other exciting developments are in the formative stages and we look forward to sharing them with you as they unfold. ■



Arctic Wolf Pups Make Smooth

Heather Wieczorek

Malik greets Lucas. Lucas' tender response to Malik demonstrates how well the introduction went in Ely this summer.

Transition Into Center's Pack

First encounter marked by playful interaction.

Nancy Gibson

Lucas, Lakota, and Malik explore the enclosure in single file.

The morning of August 9, 2000 was a historic one for the International Wolf Center, when our two arctic wolf pups were introduced to our existing pack of adult wolves at the Center in Ely. Although the pups and adults had seen, smelled, and licked each other through the fence for six weeks, this was their first full-contact meeting!

This summer, the International Wolf Center undertook the socialization of arctic wolf pups for the purpose of expanding our educational effectiveness about wolves around the world. The two male pups were born at a private breeder's facility on May 8, raised by Board Member Nancy Gibson for the first seven-and-a-half weeks of their life, and then brought to the Center in Ely. A series of pup nannies helped Lori Schmidt, our wolf curator, continue their socialization process until the bond between the pups and humans was cemented.

The pup introduction to the adults was carefully planned to avoid shifting the hierarchy dynamics of the existing pack. While the pups were in their overnight holding pen, Lakota and Lucas were each directed into separate holding areas. The pups' holding pen was then opened to the main enclosure, where they ventured out to explore and greet our alpha female wolf, seven-year-old MacKenzie.

by ANDREA LOREK STRAUSS

Thank You, Nancy Gibson!!

The International Wolf Center extends its sincerest thanks to Board Member Nancy Gibson, who nurtured and cared for Malik and Shadow, our two new arctic wolves, during the first weeks of their lives. Nancy's commitment, patience, and hard work has translated into two healthy, thriving wolves who have a new family and can help us extend our educational outreach even further. Thanks, Nancy!

The pups ran around, alternately exploring and greeting MacKenzie by licking her muzzle and smelling her. MacKenzie responded well to the pups, smelling them and following them as they explored. After about 15 minutes, Lucas, our alpha male, was let out of his enclosure, and he joined the smelling/licking/chasing romp. The pups continued to explore the new sights and smells of the main enclosure. When Lakota was released from her pen, she investigated the pup enclosure at length before greeting the pups, apparently searching for food scraps.

As the next few hours unfolded, the interactions among the animals ranged from complete submission of the pups to the adults, to defensive snaps from the pups to the adults. The pups are learning their new subordinate role in the pack structure. At times, the pups were observed climbing over MacKenzie while she rested, muzzle mouthing

Sherry Jokinen

Alpha male Lucas displays an unusual behavior for a male wolf, putting his mouth around Shadow's torso as if he wants to pick him up!

Nancy Gibson

Sherry Jokinen

Alpha female Mackenzie shelters Malik and Shadow during their first hours in the enclosure. Above left: Mackenzie (right) displays the motherly attitude she's taken toward the pups since they were introduced to the pack.

each of the adults, racing through the grass in the enclosure, and getting mouthed around the torso by the adults. Board Member Dave Mech commented that it seemed like Lucas was using his mouth to attempt to pick Shadow up by the torso, a behavior he had not observed in adult males before. Lucas' mouth fit nearly all the way around Shadow's torso!

Other behavior observed included active submission/roll over behavior by Malik to all of the adults; occasional submission by Shadow to the adults; Malik dominating Shadow; Shadow snapping at Lucas with Lucas jumping away; and general romping and exploring. Shadow's snapping could have been attributed to his insecurity with the adults, but it could also be related to the defense of a bone he had found in the enclosure. Wolf care staff anticipated this sort of pup behavior while the young ones establish their place in the pack structure.

The social dynamics of the new fivesome were watched around-the-clock for the following ten days to ensure complete acceptance and tolerance of each other.

Important to the success of the pups' acclimation phase were the Behavioral Observation Teams, who donated their time to observe the pups and document their interactions. This surveillance was a preventive measure allowing for instant intervention should any problems arise.

During this time, Malik adapted easily to the new setting. He and Lucas developed a strong bond and they are often seen together. Shadow was more reserved and easily intimidated by growling and other dominant behavior from the adults, and would stand apart from the other wolves and seek out human contact whenever available. We expected the pups to take at least a few days to develop relationships with the adult wolves, having been raised by humans. By day eight, the entire pack was observed playing and howling together, a good sign of their comfort level with each other.

Wolf care staff including Lori Schmidt, Nancy Gibson, Dave Mech, and former Wolf Curator Janice Templeton, were all pleased with the ease of the introduction and optimistic that things will continue to go well. The pups' development is featured on the Center's Web site (www.wolf.org), including Behavioral Observation Notes that detail specific interactions between the pups and adults. ■

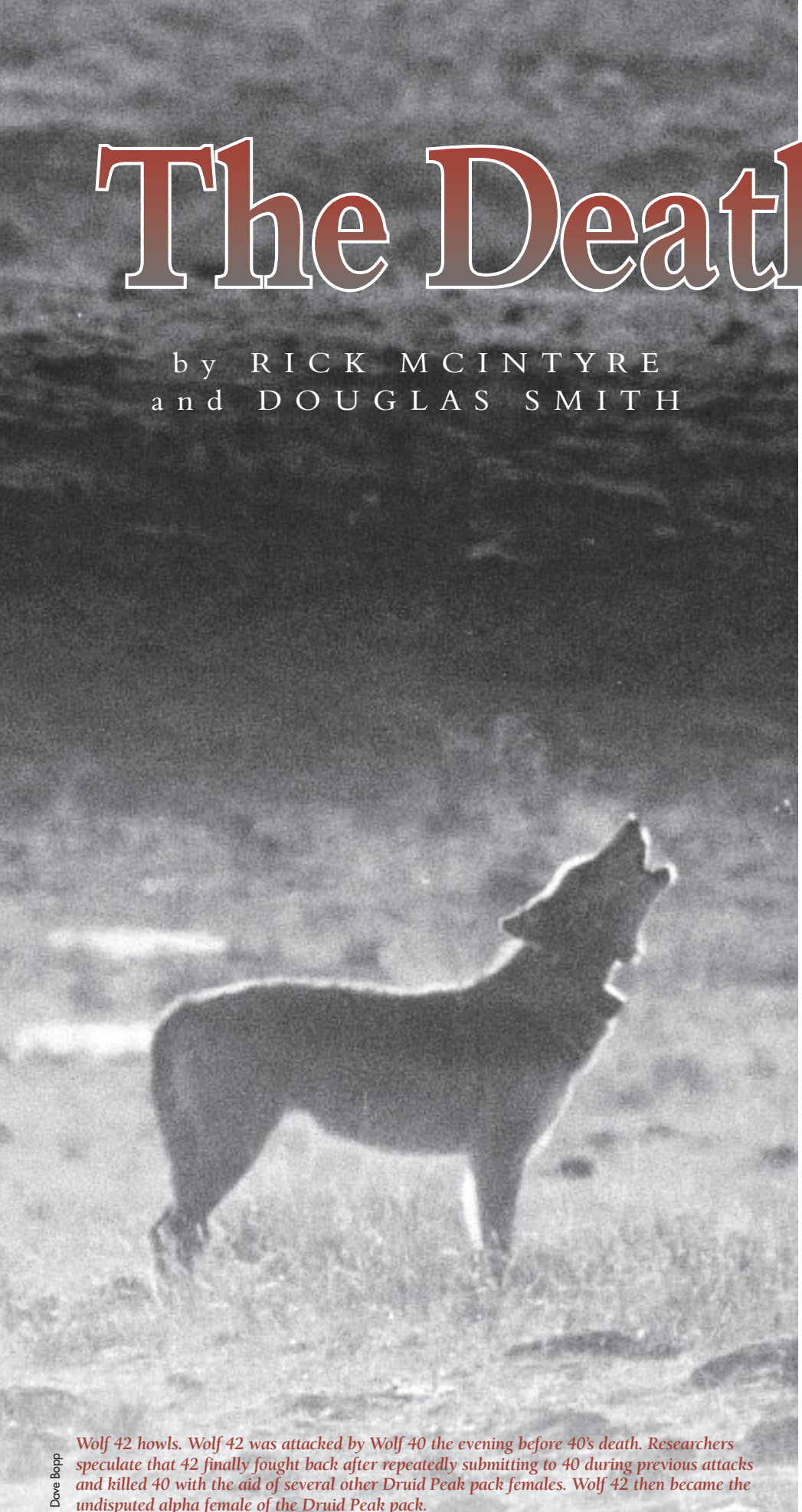
Andrea Lorek Strauss is the Education Coordinator at the International Wolf Center in Ely, MN.

Nancy Gibson

Malik settles in.

The Death of a

by RICK MCINTYRE
and DOUGLAS SMITH



Dave Bopp

Wolf 42 howls. Wolf 42 was attacked by Wolf 40 the evening before 40's death. Researchers speculate that 42 finally fought back after repeatedly submitting to 40 during previous attacks and killed 40 with the aid of several other Druid Peak pack females. Wolf 42 then became the undisputed alpha female of the Druid Peak pack.

We found her near the park road, disoriented and bleeding, on the morning of May 8, 2000. She was known as wolf 40 and had been the undisputed alpha female of the Druid Peak Pack for the last four years. Blood seeped from numerous bites on her hide. One wound on the back of her neck was especially deep. The injuries, blood loss, and shock were too much for 40, and her life slipped away.

The necropsy report confirmed what we suspected: the bite marks had been made by other wolves. In life, 40 seemed indestructible. She was a fierce defender of her pack, her territory, and especially of her alpha status. During the years she dominated her pack, the Druid wolves had attacked and killed a number of neighboring wolves. Which wolves could have killed her?

To answer that question, we looked back at the history of 40 and her pack.

The founding members of the Druid Peak pack were caught in British Columbia in January of 1996 by the US Fish & Wildlife Service and sent south to Yellowstone National Park following the lengthy political process of wolf reintroduction. The previous year, wolves had been captured in Alberta. The Druid wolves were part of a second batch of reintroduced wolves to Yellowstone.

The original Druid wolves included 39, an adult female, and her three female pups: 40, 41, and 42. A big, unrelated male, 38, was added to the group. All five wolves were placed in the Rose Creek acclimation

Queen: Yellowstone mutiny ends tyrannical rule over Druid Pack

pen in the Lamar Valley. The pack left the pen in April of 1996 and explored the surrounding country. The Lamar Valley is the winter range for thousands of elk and the Druid wolves quickly recognized the area as quality habitat.

In addition to the elk, the Druid wolves found something else in the valley. In early May of 1996, they ran into the denning Crystal Creek Pack—one of the three packs released in 1995. No one witnessed the encounter, but we do know the outcome: the Druid wolves killed the Crystal Creek alpha male and injured the alpha female. No pups survived. The remaining two Crystal wolves abandoned the northern part of their territory to the Druid Pack, shifted south, and used Pelican Valley as the core of their home range.

In mid-June, the Druid wolves traveled west and encountered the Rose Creek Pack, another one of the 1995 reintroduced packs. Wolf 38 led the charge at the rival wolves. But the other pack was larger, and wolf 8, the Rose Creek alpha male (the son of the deceased Crystal Creek alpha male) decisively defeated 38.

The Druid wolves fled the area after the fight. The next day, we received a mortality signal from a male Rose Creek yearling. He had made the mistake of chasing after the Druid Pack by himself. Once he was far enough away from his own pack, the Druid wolves must have turned around and killed him.

In early summer of 1996, 39 dispersed and wandered far and wide throughout the region. That left the alpha male 38 and three female yearlings. Soon it became obvious which wolf had taken over the alpha female vacancy. Wolf 40 was making double scent marks with 38. Her two sisters (41 and 42) seemed to accept 40's promotion without incident.

In February of 1997, all three female yearlings came into estrus and were bred by 38. Wolf 41 and 42 gave birth to a combined total of five pups at a den surprisingly close to the road. Wolf 40 had no surviving pups that year.

Wolf 39 returned to the pack that spring and served as the primary babysitter for the pups. She was much larger than 40, but deferred to her as the unchallenged alpha female. As the months went by, 39 became the omega female, the lowest ranking of the four females.

The Rose Creek Pack had three litters in separate locations that year. One of those dens was located on the border of the Druid territory. It had been dug by 19, a low ranking female in the pack. The other pack members did not seem to visit her or assist her with her four-pup litter.

Then we got a mortality signal from 19. When we found her, it was clear that 19 had been killed by other wolves. The Druid wolves were in that area around that time and were considered the prime suspects.

The Players: Druid Peak Pack Members and Status

F = Female; M = Male

21 M From neighboring Rose Creek pack; joined Druid pack in December 1997 after 38 M was shot.

38 M From Canada in 1996; alpha male, introduced to females 39, 40, 41 and 42 in holding pen; shot illegally outside Yellowstone in fall 1997.

39 F From Canada in 1996; original alpha female and mother of 40, 41, and 42; dispersed in summer 1996, rejoined pack in spring 1997, and dispersed again in fall 1997.

40 F 1995 pup from Canada caught in 1996; daughter of 39 and sister to 41 and 42.

41 F 1995 pup from Canada caught in 1996; daughter of 39 and sister to 40 and 42; eventually dispersed.

42 F 1995 pup from Canada caught in 1996; daughter of 39 and sister to 40 and 41.

103 F Pup born in 1997 to 41 or 42.

105 F Pup born in 1997 to 41 or 42.

106 F Pup born in 1997 to 41 or 42.

Note: Other members were present in the Druid Peak pack at various times but have not been included here to help clarify the main story.

Douglas Smith

An aerial shot of the Druid Peak pack shows them resting in the snow covered Lamar Valley.

All four pups were found dead in the den from lack of food and water.

That fall, the Druid Pack spent most of their time at the Chalcedony Creek Rendezvous Site, an open meadow near the road offering a clear view of the wolves.

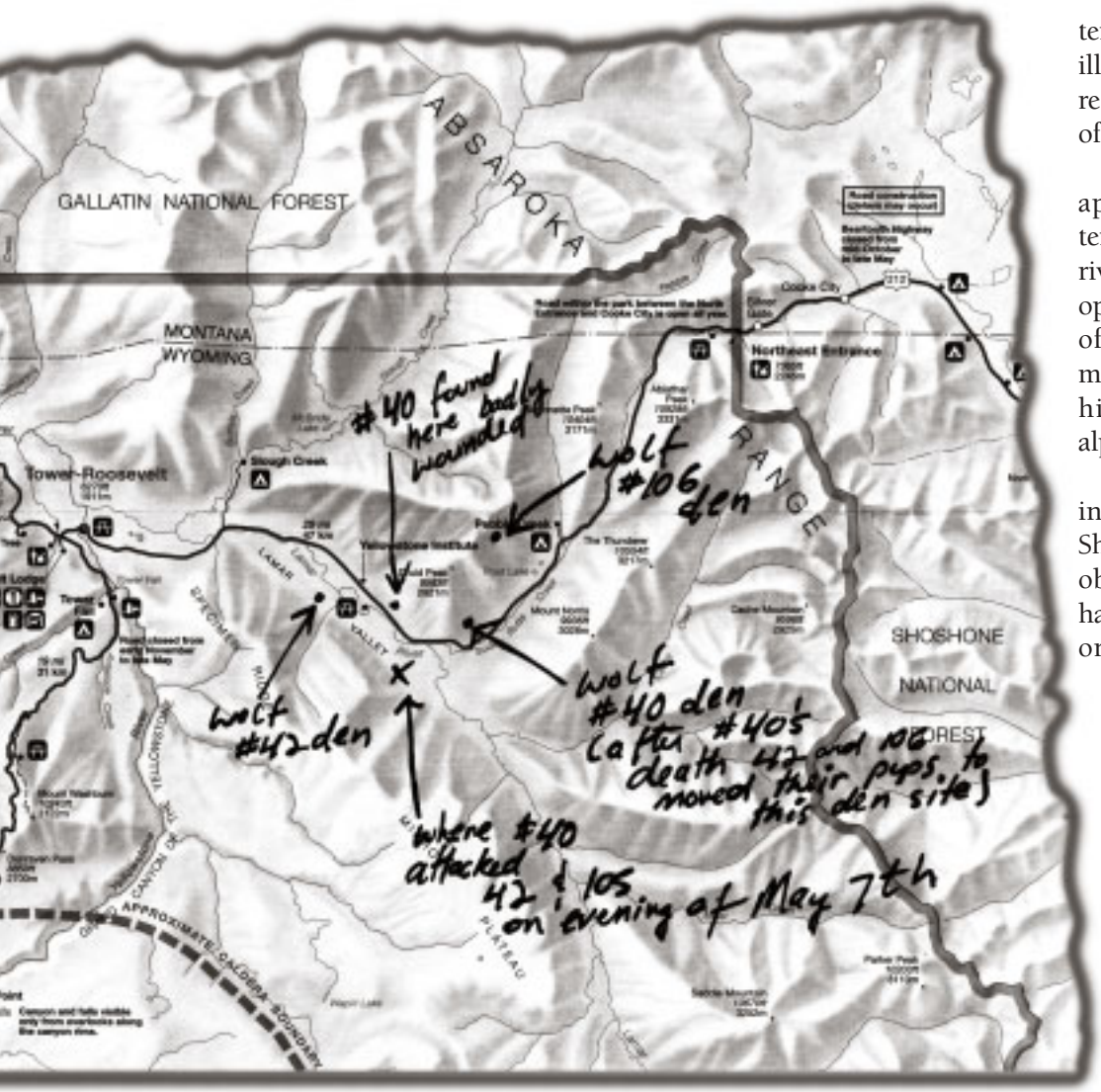
We began to see a high level of aggressiveness directed at 39 and 41 by 40. She would chase and attack both females whenever they approached the pack. Wolf 42 usually assisted 40 when she attacked those females. Eventually 39 and 41 left the pack. Wolf 41 later paired off with a young Rose Creek male and 39 was illegally shot outside the park.

In November of 1997, there were five females in the Druid Pack: two adults (40 and 42) and three pups: 103, 105, and 106.

Later in the fall, the pack temporarily left the park and 38 was illegally shot. The surviving wolves returned to the Lamar Valley, the core of their territory, and regrouped.

A few days later, a stranger appeared in the middle of Druid territory—it was 21, a male from the rival Rose Creek Pack. He sensed an opportunity and took full advantage of it. After 21 displayed a friendly manner, the Druid wolves accepted him into their pack as the new alpha male.

As the months went by, 40 became increasingly aggressive toward 42. She would attack her without any obvious provocation. Each time that happened, 42 would lie on her side or back and display a submissive



Arrows point to areas of the Lamar Valley in Yellowstone where the drama surrounding Wolf 40's death took place. Arrows and notes by Douglas Smith.

Packing for the Arctic

by Nancy jo Tubbs

Have you ever wanted to travel to the land of icebergs and arctic wolves? Imagine your breath frosting the air and snow crunching under foot. In the High Arctic, temperatures reach -70 degrees Fahrenheit during five months of around-the-clock winter darkness. What would you wear to stay warm?

Let the arctic wolf be your guide. This fur-covered hunter has adapted to thrive in winter in the North. Arctic wolves live the farthest north of all gray wolves. Compared to their cousins to the south, these white wolves have slightly rounded ears and shorter legs and muzzle. They grow to 100 pounds and larger. This concentrated body mass helps them to keep warm.

The wolf's coat has two layers. Underneath is a soft, dense fine-haired fur that holds heat close to the body in winter. Longer, coarser guard hairs offer outer protection that sheds water and holds in heat.

Imagine going barefoot in the snow. Brrrr! Thank goodness the wolf has thick, padded toes with fur between them. A unique blood circulation system in its legs and feet also helps keep the wolf warm. Deep inside the wolf's legs, arteries and veins run close together so that the cool blood returning from the feet is warmed by blood coming from the heart. Arteries also carry warm blood into the foot pad to keep the foot from freezing.

Using the wolf as your guide, how would you dress for freezing weather? Think about how your body works.

The first thing sacrificed when our body temperature starts to drop is our skin. Blood stops flowing to the skin and goes to the internal organs and brain — better protect your fingers and toes, the tips of your ears and your nose, too! Otherwise, you could lose them to frostbite.

How many layers will you wear to cover your chest and back? Animals, including humans, need to keep the body core toasty. The chest and abdomen contain vital organs—the heart, liver, kidneys and lungs.

The body pumps warm blood to the head. But heat rises. You could lose a lot of body heat if you don't hold it in. What sort of head gear will you wear?

Since humans don't have built-in fur coats and hats, we have to rely on our smarts and be prepared. Make a list of all the clothing you would pack to survive in the Arctic. ■

Paul Schurke

Doug Hall of Cincinnati wears lots of layers during a 1999 Wintergreen expedition to the North Pole. Wolves' coats have their own layers, keeping them warm inside and shedding moisture on the outside.

Lynn and Donna Rogers

When they sleep, wolves curl up tight, leaving little body surface exposed to the icy air and ground.

A Look Beyond

Wolves and Tourism

by Scott McMillion

The following article originally appeared in the January 16, 2000 edition of 'The Bozeman Daily Chronicle.'

Are wolves in Yellowstone a financial benefit or detriment? That depends on who you talk to.

Wolves are chewing holes in the pockets of outfitters in the Jardine area by reducing the numbers of resident elk there, some people in the area just north of Yellowstone National Park maintain. Others say wolves are making wildlife less visible, making even non-hunting trips harder to sell.

"Right now, I'm scared," Cooke City outfitter Vic Jackson said. Jackson guides hunters and summer travelers and said wildlife is a big part of each trip. "In the area where I'm operating, the game is not there," he said. Ranchers, too, complain that wolves are killing and harassing livestock while causing expensive headaches for which they can't be compensated.

But while some wallets may be thinned by the presence of big predators, others' are being fattened. People all over the world are fascinated by wolves, and there's a big market for people who can take the tourists to them, let them snap pictures, and maybe teach them something along the way.

Steve Braun, of Bozeman, runs Yellowstone/Glacier Adventures, which specializes in bringing people from Japan to the area. He said the reintroduction of wolves has drastically increased his business and spread a lot of money around the local economy. Braun said his clients spend an average of about $300 a day, including motels, food, transportation, and equipment, bringing total local spending to around $300,000.

Seventeen companies have permits to conduct wildlife and photography tours in Yellowstone. Many of them specialize in wolves and all of them talk about wolves.

"One-third to one-half of our clients say it's [seeing wolves] the highlight of their trip," said Tom Murphy of Livingston, who conducts outdoor photography classes.

Jim Halfpenny runs A Naturalist's World, an educational organization in Gardiner, MT. His classes focus on wolf biology, ecology, and the complicated human sociology surrounding wolf issues. Halpenny's clients pay $200 to $250 a day, including room, board, and transportation. "We try to educate about both sides of the social question," he said.

While wolves are increasingly raising the hackles of ranchers and hunters in the area, their appeal to people around the world is undeniable. Halfpenny said, "People write to me to say, 'I've dreamed about wolves all my life. What are the chances that I'd get to see them?'" ■

This group of International Wolf Center tourists on a trip to Yellowstone in 1999 are among those who are bolstering the area's local economy through their interest in wolves.

Nancy Gibson

The Alpha Legacy Program

recognizes the generosity and foresight of individuals who have included the International Wolf Center in their wills or other estate plans.

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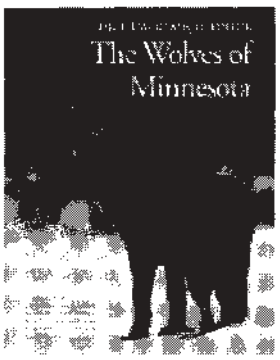
Photo by Lynn and Donna Rogers



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Howl in the Heartland
L. David Mech, Editor
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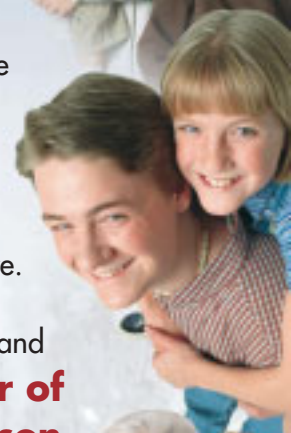

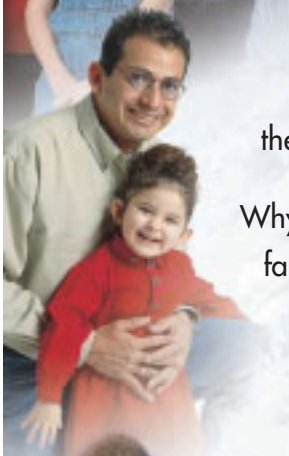

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