

SPECIAL  
REPORT

# STATE OF THE GRIZZLY

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BY CHRISTINE PAIGE

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**WILDERNESS NEIN** Mountaineers, who have long admired the grizzly as a symbol of the state's wild heritage, began protecting the species from unregulated hunting in 1923. Due to abundant habitat on public and private land, grizzly populations are increasing in large parts of western Montana. Each year more grizzlies end up in culvert traps (right) to be radio-collared and released for observation.

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Published in

**Montana Outdoors** magazine

March–April 2008

[www.fwp.gov/mtoutdoors](http://www.fwp.gov/mtoutdoors)

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**WILDERNESS ICON** Montanans, who have long admired the grizzly as a symbol of the state's wild heritage, began protecting the species from unregulated hunting in 1923. Due to abundant habitat on public and private land, grizzly populations are increasing in large parts of western Montana. Each year more grizzlies end up in culvert traps (right), to be radio-collared and released for observation.



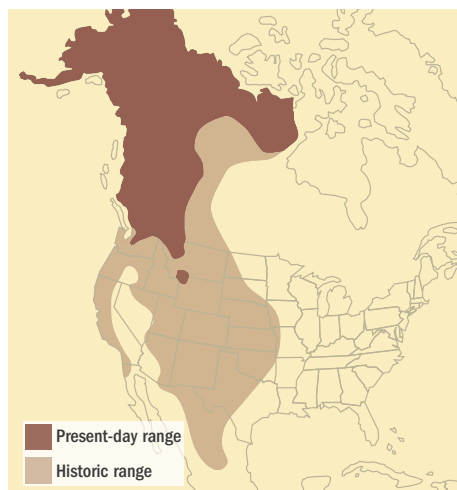
DEREK REICH

Biologists estimate that before European settlement 50,000 to 100,000 grizzly bears, also known as brown bears, ranged from Mexico to Alaska. Roughly half the population lived south of Canada, from the West Coast east to the central Great Plains. By the 1970s, only 2 percent of the grizzly's historic range remained intact in the lower 48 states—most of it in Montana. Agricultural land conversion coupled with predator control had reduced the grizzly population to an estimated 1,000 bears south of the Canada border. In 1975 the species was listed under the Endangered Species Act (ESA) as federally threatened. Montana, containing the largest grizzly population in the contiguous United States, continued a limited grizzly hunt until 1991. Environmental groups successfully petitioned to halt the season, arguing that the state lacked data to prove hunting harvest was not harming the population.

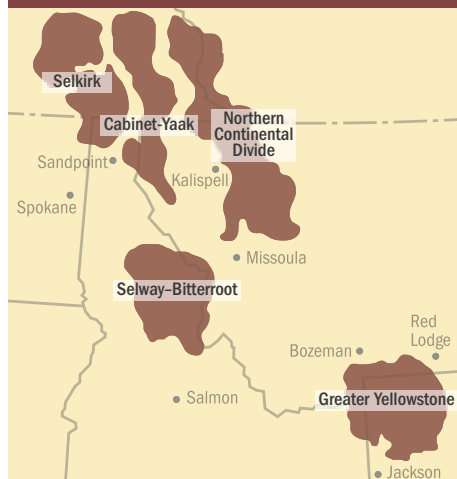
Today approximately 1,400 grizzly bears survive in five ecosystems in Washington, Idaho, Wyoming, and Montana, sustained by habitat on public and private lands. The Northern Continental Divide and Greater Yellowstone ecosystems support the largest populations, while small numbers hang on in the Cabinet-Yaak, Selkirk, and North Cascade (Washington) systems. The Selway-Bitterroot region is designated as a sixth recovery zone, though there has been no verified evidence of a resident grizzly population there for more than half a century.

### FIRST OFF THE LIST

When the species was listed, biologists estimated that fewer than 200 grizzlies remained in the Greater Yellowstone Ecosystem, which spans Yellowstone and Grand Teton national parks, parts of four national forests, and



**MONTANA STRONGHOLD** At one time grizzlies ranged as far south as Mexico City and east to the Dakotas. By 1975, when the species was federally listed, the range south of Canada had shrunk to just a few ecosystems in the northern Rocky Mountains—most of them in Montana. The state held a regulated hunting season until 1991, when a federal court ruled that Montana lacked data to prove hunting was not harming the grizzly population.



other public lands in Montana, Idaho, and Wyoming. At the time, no one guessed that in three decades the population would

rebound. But after years of cooperative recovery efforts, and despite being isolated from populations to the north, the Yellowstone population has rebounded, growing at 4 to 7 percent per year in the last decade. Today 550 to 600 bears inhabit a 14,000-square-mile expanse of the Greater Yellowstone Ecosystem. Having met all the criteria set under a federal recovery plan, the population was removed from the list of federally threatened species in March 2007.

Delisting has not exactly left Yellowstone grizzlies out in the cold. If anything, a federally approved conservation strategy, state grizzly management plans, and ongoing population monitoring overseen by the Interagency Grizzly Bear Study Team focus even more resources on the recovered population than before recovery. State and federal biologists conduct annual surveys for females with cubs, monitor population trends, track reported mortalities, sample DNA to detect bear movement, measure the condition of captured bears, and monitor the status of natural bear foods. Charles Schwartz is the study team leader. He says tracking these indicators provides greater insight into the population's status and an early warning of problems.

Some view the Yellowstone delisting as premature. In 2007 several conservation groups sued to overturn the decision. They argue that the Yellowstone population remains significantly vulnerable to genetic isolation from other populations, habitat loss from rapid residential and energy development, and threats from climate change to grizzly habitat and food. Without the force of federal protection, they warn, the Yellowstone recovery will unravel.

There is little question that one key food

## TIMELINE: Grizzlies in Montana

 <p><b>1750</b></p> <p><b>1800</b></p> <p>Pre-1800: At least 50,000 grizzly bears live in North America, ranging from Alaska to Mexico. Roughly half are thought to live in the lower 48 states.</p>	<p><b>Early 1800s:</b> Western explorers encounter an animal far more ferocious than the black bear. Meriwether Lewis calls it a "bear of the large vicious species."</p>	 <p><b>1850</b></p> <p><b>1840-1900:</b> Grizzly numbers begin a rapid decline. Causes include habitat loss due to homesteading and railroad construction, predator control, and the unregulated overharvest of bison, elk, and other grizzly prey.</p>	<p><b>1921:</b> Montana bans bear-baiting and hunting bears with dogs.</p> <p><b>1923:</b> Montana becomes the first state to designate grizzlies as a protected game animal.</p>	<p><b>1975:</b> Grizzlies are listed as threatened under the Endangered Species Act.</p> <p><b>1983:</b> Governor Schwinden signs a law naming the grizzly bear as Montana's state animal.</p>	 <p><b>1991:</b> A lawsuit forces Montana to close its regulated hunting season.</p> <p><b>2007:</b> The USFWS removes Yellowstone grizzlies from the list of federally threatened species.</p>
	 <p><b>Montana Fish, Wildlife &amp; Parks</b></p>		<p><b>2003-05:</b> FWP drafts management plans for grizzlies in Yellowstone and northern Montana.</p>		

source—whitebark pine—is threatened by complex changes in the ecosystem. Global warming, white-pine blister rust, and mountain pine beetles seriously threaten the whitebark. Its oil-rich pine cone seeds are essential for fattening bears in years when other natural foods are scarce. If changes in food availability cause Yellowstone grizzly numbers to drop, the bear could be relisted as a threatened species. Excessive bear mortality, declining habitat quality, and other triggers could also prompt a reassessment.

Montana's other robust grizzly population lives in the Northern Continental Divide Ecosystem. This diverse, rugged, and largely roadless area covers roughly 9,600 square miles. It encompasses the Bob Marshall, Great Bear, Mission Mountain, and Scapegoat wilderness areas, as well as Glacier National Park and surrounding national forests, private forests, and tribal lands. The ecosystem is considered the greatest stronghold for grizzlies in the lower 48. It butts up against the grizzly bear populations of southeastern British Columbia and southwestern Alberta, a connection critical for the long-term viability of populations on both sides of the U.S.–Canada border.

Grizzlies in this deeply forested ecosystem are difficult to count. For years, biologists estimated the population at between 600 and 700 bears. Recently they have established a more accurate figure. Kate Kendall, a research biologist with the U.S. Geological Survey, supervised a 2004 population survey, the largest of its type ever undertaken. Researchers collected more than 34,000 samples of black and grizzly bear hair, snagged on baited barbed-wire enclosures, for DNA analysis. According to Kendall, it may still be a year before the final population estimate is established. “We’re doing everything we can to ensure that the data and analysis hold up under the most intense scientific and legal scrutiny,” she says.

The DNA project will provide a baseline population number, but managers also need to know, as a prerequisite for delisting, if the population is increasing or at least stable. Rick Mace, FWP grizzly research biologist, spearheads a long-term population-trend monitoring project for the Northern Continental Divide Ecosystem. Starting in



DEREK REICH

**WEIGHED, PROBES, COLLARED** Grizzlies are the most-studied predator in North America. After attaching radio collars to trapped bears, researchers track the animals to learn their habitat needs, survival rates, and reproduction rates. In 2004, scientists conducted one of the largest bear population studies ever in the 8-million-acre Northern Continental Divide Ecosystem. Researchers collected more than 34,000 samples of bear hair, snagged on baited barbed-wire enclosures. Due to the need for rigorous DNA analysis, the final population number is still being processed.



DEA VOGEL

2004, Mace and FWP grizzly management specialists began trapping, radio-collaring, and tracking female grizzlies to monitor the bears' survival and cub production. “Right now, the population is above the minimum size needed to be viable,” says Mace. “But there needs to be both a viable population size and a positive or stable population trend. If the trend is declining, we’ve got a problem.” Aside from Mace’s study, the number of bears showing up on the fringes of the ecosystem suggests an expanding population. Grizzlies are now commonly seen along the Rocky Mountain Front from Canada to Montana Highway 200, sometimes ranging into historical prairie habitats to the east.

### THE SMALLER ECOSYSTEMS

Montana's smallest grizzly population finds refuge in the 2,600-square-mile Cabinet-Yaak Ecosystem. Only 35 to 45 bears survive in the ecosystem, and even this tiny population is divided. Roughly 25 to 30 bears live in the

northern part of the zone, contiguous with grizzly habitat in Canada and Idaho's Selkirk Mountains. Roughly 10 to 15 bears seem to be isolated south of the Kootenai River. So far, DNA and telemetry studies have revealed no bear movement between the two areas.

In small populations, every bear death greatly increases the risk of the entire population dying out. The U.S. Forest Service has closed many old logging roads in national forests to provide secure bear habitat, but the closures are fought by off-highway vehicle riders who recreate on the routes. Other threats to the Cabinet-Yaak population include encroaching residential development in the scenic mountain valleys, growing traffic on U.S. Highway 2, and a railway line with 40 or more trains each day. FWP recently hired a new bear specialist based in Libby to work with landowners on conserving private land habitat and reducing bear conflicts. The agency is trying to give the Cabinet grizzlies a big boost by transplanting bears from other ecosystems



ROBERT J. WESELMANN



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**GRIZ ON THE GO** For decades, grizzlies thrived in Yellowstone and Glacier national parks and surrounding forests. Under federal protection, populations have expanded beyond the biological carrying capacity of those wildlands, spilling out into areas that have not seen grizzlies in decades. Biologists are learning that grizzlies roam much farther than previously believed, sometimes crossing highways and traveling hundreds of miles. These wanderings often lead to interbreeding among populations, important for maintaining genetic health. Biologists say conserving linkage areas between ecosystems is essential for the species' long-term survival.

into the most remote reaches of the range. In the early 1990s, biologists relocated four female grizzlies to the Cabinets from British Columbia, hoping the sows would mate with resident males. Recent DNA testing from hair snares revealed that at least one of the females produced two female cubs, which later reproduced, resulting in six or seven grizzlies that are direct descendants of the early transplants. With funding from the FWP Foundation, biologists have recently augmented the population with two female grizzlies from the Northern Continental Divide Ecosystem. “We can recover bears in these smaller systems,” says Chris Servheen, coordinator of the USFWS Grizzly Bear Recovery Program, “but it takes a different type of effort and it takes time.”

*Christine Paige is an independent wildlife biologist and science writer who lives in the Bitterroot Valley.*

Spanning 5,600 square miles of central Idaho and western Montana, the Selway-Bitterroot Ecosystem contains the largest area of designated wilderness in the Rocky Mountains. Historically, grizzlies were widespread and abundant there, yet for 60 years no verified evidence of the species existed. That changed in September 2007, when a black bear hunter mistakenly shot a young male grizzly on upper Kelly Creek in the northern Bitterroot Mountains, 3 miles west of the Montana-Idaho border. The Kelly Creek bear was the first confirmed grizzly in the Selway-Bitterroots since 1946. Genetic analysis revealed that the animal had come from the Selkirk Mountains, 140 miles and across two major highways to the north.

Remote and still rich in grizzly habitat, the Selway-Bitterroot presents the best prospect for expanding the bear's recovery in the lower 48 and connecting Yellowstone grizzlies with populations to the north. After years of study,

planning, and public comment, the USFWS decided to restore grizzlies to the Selway-Bitterroots by establishing a “nonessential experimental” population of 25 bears over five years. The plan was set aside by the Department of Interior in 2001, putting reintroduction on hold. But no one told the bears, which could move to the area on their own. “How grizzlies get to the Selway-Bitterroots has huge management implications,” says Chris Smith, FWP chief of staff and chair of the Interagency Grizzly Bear Committee. “If grizzlies recolonize the Bitterroots on their own—and there’s no reason to expect they won’t—they bring the full weight of the ESA with them as a protected threatened species. That would mean very limited management options. On the other hand, if grizzlies are reintroduced as a ‘nonessential experimental population,’ the states would have much more management flexibility, as has been the case with wolves in Yellowstone.”

A single bear does not constitute a population, but where one has traveled others may follow. The USFWS, with help from the U.S. Forest Service, FWP, and Idaho Fish and Game, plans to carry out a new field survey of the northern Bitterroots in 2008, using lure stations with hair snares for DNA analysis.

### MAINTAINING CONNECTIONS

Montana’s interest in seeing grizzlies return to the Bitterroots reflects the state’s long-standing commitment to conserving and managing a secure and recovered population throughout the state’s western region. “FWP envisions management programs that preserve biological connections between all its grizzly populations and maintain links with populations in Canada and eventually the Bitterroots,” says Arnie Dood, who coordinates the FWP Threatened and Endangered Species Program. Over the past several years, the agency has produced a comprehensive grizzly management plan that will guide management over the next decade. “We’re trying to fit grizzly bears into western Montana as a valued wildlife species, just like the mountain lion and the black bear,” says Dood.

That may be a tight fit in some areas. As the great bears expand their range in western Montana—either on their own or with help from conservation agencies—they increas-

ingly run into a two-legged species expanding its range into the same scenic mountainous landscapes. People are the primary cause of grizzly deaths in Montana. Grizzlies are killed by highway traffic, trains, poachers, and hunters who mistake them for legal black bears. Housing developments and accompanying roads diminish habitat and restrict grizzly movement between ecosystems. People and development bring more pet food, bird feeders, garbage cans, and picnic coolers into grizzly territory. When natural foods are scarce, these attractants draw grizzlies near people and livestock, forcing state and federal agents to kill problem bears.

Far fewer grizzlies receive that death sentence thanks to Manley and FWP's four other bear specialists stationed across western Montana. The specialists work with communities in each ecosystem to educate homeowners and recreationists on how to properly secure food and garbage. In addition, the National Wildlife Federation (NWF) and Defenders of Wildlife run a program that helps communities and individuals install bear-resistant dumpsters and garbage cans. "During the six months bears are outside their dens, they become vacuum cleaners searching for the highest-calorie foods they can find,"

“ We’re seeing an evolution away from arguing about status and litigation toward finding solutions on the ground to make living with grizzlies safe for both people and bears.”

says Sterling Miller, NWF grizzly specialist.

Grizzly predation on livestock is another problem, particularly on the Rocky Mountain Front and around Yellowstone National Park. Wildlife biologists and bear specialists remove grizzly repeat offenders and work with ranchers to fence livestock and eliminate garbage dumps. Defenders of Wildlife compensates

# The Road To Further Grizzly Delisting



TED CHASE

Now that the Yellowstone population has been delisted, all eyes are turning to Montana's other grizzly ecosystems, especially the Northern Continental Divide (NCDE). There is some speculation that soon-to-be released results of a population survey will indicate that NCDE grizzlies may be close to delisting.

Not so fast, say FWP and USFWS officials. Much additional work needs to be done to determine the status of grizzlies in that ecosystem and elsewhere in Montana. For example, the soon-to-be-released Northern Continental Divide population estimate will only be a snapshot of grizzly numbers in 2004, when the survey was conducted. To learn if bear numbers are stable or increasing, biologists will have to wait several more years for the results of a long-term grizzly mortality study being conducted by FWP research biologist Rick Mace. Other delisting criteria include a minimum number of females with cubs, the distribution of these family groups across an ecosystem, and mortality limits at or below a level the population can sustain.

Another factor on the road to further delisting is whether the NCDE population should be considered on its own or as part of a larger "distinct population segment" that includes the other northern ecosystems. In the early 1980s, when the original recovery plan was drafted, the USFWS identified recovery zones in those ecosystems based on what were once considered distinct populations. Scientists believed that bears rarely, if ever, moved from one population to another. Since then, grizzly researchers and managers have collected vast amounts of DNA and radiotelemetry evidence showing that bears travel widely among ecosystems.

The Interagency Grizzly Bear Committee (IGBC) oversees all aspects of grizzly management and recovery. It is currently evaluating existing data to determine if the recovery zones defined in the original plan still reflect distinct populations, or whether the NCDE, Cabinet-Yaak, and Selkirk populations should be considered a single population. The ramifications of linking what appears to be a strong NCDE population with the smaller ones to the west are considerable. "If a new consolidated population were delisted, that would remove protection from bears in the Cabinet-Yaaks," says Chris Smith, FWP chief of staff and IGBC chair. "Or the U.S. Fish and Wildlife Service could decide not to delist the consolidated population until numbers of Cabinet-Yaak bears increased, which would delay delisting the NCDE population."

There are plenty of "what-ifs" regarding further grizzly delisting, says Smith. But he and other committee members want people to begin discussing various possibilities and ramifications. "Our goal is to inform and involve the public throughout the process, and not surprise them with a bureaucratic outcome they never heard of," he says. ■



TOMMY EVANSON



ranchers for livestock lost to grizzlies as a way to reduce the economic burden on those who live with growing predator populations. To reduce conflicts, the National Wildlife Federation buys, from willing sellers, grazing leases where grizzlies habitually harass livestock. The organization provides ranchers fair compensation, allowing them to secure alternate grazing allotments elsewhere, while the problem allotments are retired from grazing.

FWP, other public agencies, and nonprofit land trusts also work with private landowners to protect habitat and linkage areas using easements and other conservation tools. Wildlife crossings built at highway trouble spots reduce animal mortalities and increase public safety. For example, where U.S. Highway 93 runs through the Flathead Indian Reservation, roughly 50 wildlife crossings—mainly bridges and rectangular culverts—will be constructed over the next several years. As if endorsing the project, a female grizzly was seen in fall 2007 using a newly constructed underpass near Ravalli, just south of the National Bison Range. “We’re seeing an evolution away from arguing about status and litigation toward finding solutions on the



NPS ARCHIVES

**FED BEARS** Though grizzlies are effective predators, they scavenge rotting carcasses (opposite) as well as human garbage (above). FWP bear specialists work with homeowners and communities to secure garbage and food to keep grizzlies out of trouble. The Living with Wildlife Foundation, in cooperation with FWP and other agencies, tests residential trash bins (right), dumpsters, and other garbage containers. On its website—[lwwf.org](http://lwwf.org)—the foundation publishes a list of products that pass stringent requirements.



LIVING WITH WILDLIFE FOUNDATION

ground to make living with grizzlies safe for both people and bears,” says Smith.

As bear numbers grow and grizzlies return to habitats they have not occupied for decades, the challenge to both people and bears to find ways to live together increases.

“Grizzly bears will always be a complex and controversial species to manage,” says Smith. “But I’m encouraged by the attitude I see, the pride Montanans take in having healthy grizzly populations, and their desire to accommodate these great animals.” 🐻

## LEAVING THE LIGHT ON FOR BEARS

In areas like the Cabinet-Yaak, where the grizzly population is small, a single bear death is a major loss. When that bear is a sow with one or more cubs, the young bears will likely die without their mother. The FWP wildlife rehabilitation center in Helena temporarily houses orphaned animals, primarily bears, until they can be returned to the wild or placed in zoos. “We can hold cubs here, keep them safe and well fed, until they are ready for release,” says Patty Sowka, the center’s director.

Most of the bruins coming through the center are black bears. The bears are never handled and are kept separate from humans. Volunteers feed the animals road kill as well as produce donated by Wal-Mart and Costco, hiding the food so the bears learn to forage as they would in the wild. Visitors can watch the bears on a live video camera, but the animals never see humans. “We do everything possible to minimize contact,” says Sowka. “We don’t want the bears to

ever associate food with people.”

Most of the young bears are held until fall, when they are hauled half-asleep to forested areas and then placed into natural or constructed dens.

So far only a few young grizzlies have come to the center. Twins whose mother was killed after raiding livestock stayed there for several months. Bear specialists believed the cubs may have learned livestock depredation from their mother, so the pair was eventually placed in the San Francisco Zoo. A few adult grizzlies have also been placed in zoos. Thomas Baumeister, chief of FWP’s Education Bureau, says that eventually some orphaned grizzly cubs could make their way through the center and back to the wild. “But we would only do that after careful review by bear specialists, and only if we were certain they would not return to areas of human habitation,” he says.

Meanwhile, the rehabilitation center will continue looking for zoos to take any grizzlies it receives. “The wildlife rehab center



KENTON ROWE

**MELON TIME** Patty Sowka, the wildlife rehab center’s director, slices donated fruit to feed cubs temporarily housed at the Helena facility.

saves grizzlies, and that’s important, even if the bears don’t go back into the wild,” Baumeister says. ■