

COVER STORY



Photo by Mark Miller/Images on the Wildside



After collecting grizzly bear hair plucked from barbed-wire fences, studying each fuzzy follicle and dedicating five years to the largest-ever study of the grizzly bear population in northwest Montana, biologist Kate Kendall is closing in on an answer.

Just how many of the legendary bruins roam the Northern Continental Divide Ecosystem? That ecosystem includes some of the wildest backcountry around. Spread across 7.3 million acres of steep mountain ridges, thick timber and sheer-walled canyons, it stretches north to south from Highway 200 to the Canadian border and east to west from Highway 93 to Highway 89. The study area includes Glacier National Park and the Bob Marshall Wilderness complex.

U.S. Geological Survey crews spent 14 weeks in 2004 collecting hair samples for Kendall's DNA study, the largest hair snag study done in the world. A single bear hair follicle provides enough DNA to identify species, individual and gender.

"We think that this method is the best way to estimate population size for these forested habitats," says Kendall, a researcher with the U.S. Geological Survey, and the leader of the DNA project. "We will have a very good population estimate."

Kendall's study is the first-ever ecosystem-wide population work done in the Northern Continental Divide. The Yellowstone ecosystem, ▶

BEAR AWARE

After years of being endangered, grizzly bears finally are on the upswing in Yellowstone. But the results of a DNA study could play a big role in how the big bears are managed in Montana.

BY SONJA LEE

another haven for grizzlies, has benefited from more than 35 years of solid study.

For the DNA study, crews erected snag stations, lines of barbed wire stretched around trees to form a square corral about shoulder-high for a bear, throughout the ecosystem. Dead wood was piled in the middle of the station to absorb liquid lure, a combination of “marinated” cow blood and rotten fish that was aged for a year. Bears, which couldn’t resist the smell, rubbed against the wire as they investigated the scene, leaving behind hair that crews later collected. Crews also gathered hair from rub trees favored by grizzlies.

Some 34,000 hair samples were collected, and the DNA showed that Kendall and her crew had snared hair from 545 different grizzlies. That minimum count of 545 is the first solid number bear managers have had in the Northern Continental Divide. Kendall can use the findings to estimate an overall population size. That number will be released late this year or in early 2008.

From Glacier to Yellowstone to the Idaho border, the number of bears in Montana is being religiously tracked. But counting bruins is just one piece of a complicated puzzle that is yet to come together and spell success in the West.

“Recovery is much more complex than numbers of animals,” says Chris Servheen, U.S. Fish and Wildlife Services grizzly bear coordinator based in Missoula.

The western half of the U.S. was once home to as many as 50,000 grizzlies. The bear was hunted and poisoned until the population dwindled, leaving grizzlies to occupy just 2 percent of their historic range. In 1975, the U.S. Fish and Wildlife Service determined that the grizzly population in the lower 48 had dropped to levels that warranted placing the bear on the Endangered Species Act list. Today an estimated 1,200 bears remain in the Lower 48.

Grizzly bears are growing and even thriving in many areas, Servheen says. However, it is critical to look at the numbers in conjunction with population trends, mortality rates, habitat, long-term management and even money.

Yellowstone takes the lead

Nowhere is this better illustrated than in the Yellowstone ecosystem. The grizzly bears in Yellowstone are among the most studied population in the world. Their numbers have grown from about 200 bears in the 1970s to nearly 600 today in parts of Montana, Wyoming and Idaho. The bear population has been growing at an annual rate of 4 to 7 percent for the last 10 years. In April the FWS cut the Yellowstone grizzlies loose from federal protection.

Reaching the target numbers took decades. Grizzlies are one of the world’s slowest reproducing animals, having cubs only every two or three years.

To remove federal protections there must be a set number of females with cubs on a six-year average and mortality must be limited. Habitat criteria and limits on new roads and new development on public lands have



to be established. Regulatory rules and management plans must be hammered out. Finally, there has to be enough money to pull all the planning, research and future management together.

The federal government has reviewed all these pieces and determined the Yellowstone grizzly is ready to go without federal protection. Safeguards are in place in the nearly 9-million-acre ecosystem, Servheen says. But once the bear is delisted, everything doesn't go back to the way it was before the bear was protected.

"There is a grand misconception that delisting means an abandonment of bear management and monitoring and that we just open the gates and everyone can do whatever they want, Servheen says. "Delisting is simply a transition from management under the Endangered Species Act to management under a conservation strategy and a state plan. From a grizzly's point of view, there is little difference between listed and delisted."

About 10 percent of the Yellowstone grizzly population still wears radio collars. Post-delisting management will cost about \$3.7 million a year.

Doubts linger

Others remain skeptical of the decision in Yellowstone. Seven conservation groups filed a lawsuit attempting to reverse the April delisting decision. The groups believe the bear's continued existence is threatened because the population is isolated and because the bear's main food source is threatened. "The question is whether the goal has been set in the right place or not," says Tim Preso, staff attorney for Earthjustice, which is representing the groups.

One primary concern is that the Yellowstone grizzly is isolated from bears in other ecosystems. "To have a viable population that is not connected to a larger population you need 2,000 to 3,000 reproductive

animals to have genetic diversity," he says.

There also is concern about what will be left to protect the bear when the federal safety net is pulled away. Preso is concerned that large portions, he estimates up to 40 percent, of the habitat used by grizzlies in Yellowstone will not be managed in a way that sustains bears.

Another issue is the grizzly bears' food source. White bark pine and its high-calorie nuts are declining in high-elevation habitats. A blister rust is attacking the pine and slowly eliminating it, he said. Warmer winters have allowed pine beetles to thrive and attack the trees at epidemic levels. "We believe that food source is jeopardized," Preso says. "That's one of the chief things raised in this lawsuit is the failure to assess the grim future outlook for white bark pine."

Bitter debate

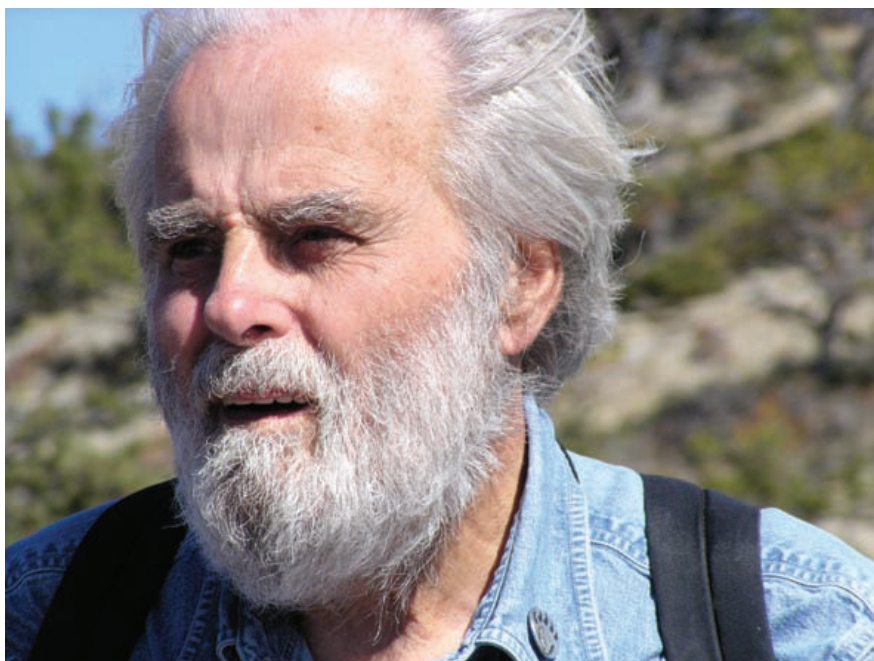
While the Yellowstone and Northern Continental Divide ecosystems get the biggest share of the attention these days, there is another lingering issue when it comes to grizzlies in Montana—the Selway-Bitterroot wilderness, which straddles the Montana-Idaho border.

A plan to bring the grizzly back to the Selway-Bitterroot died in 2001 when the Bush administration put the proposal on the back burner. Ranchers contended the grizzlies would decimate herds, and sportsmen pleaded with the government to protect big game populations.

"We're not done discussing the Selway-Bitterroot," Servheen says. "Our long-term goal is to reconnect all the large blocks of public land in the northern Rockies for all the wildlife species. Such reconnections will create healthier, stronger wildlife populations that will be here into the future."

Chuck Jonkel, a biologist who has dedicated his life to studying grizzlies and educating people about them, has urged people not to focus on the numbers but instead to think about habitat. "I don't want any part of the numbers," says Jonkel, who also is co-founder of the Great Bear Foundation in Missoula. "It's about habitat and corridors." And as he discusses habitat, there is one key area—"the Selway-Bitterroot. It's our only chance to add habitat."

Grizzly bears won't be able to survive if cut off from other



Facing page: Kate Kendall, top, sets up a hair-trap station. Photo by Derek Reich, courtesy of USGS. A grizzly bear roams free in Montana. Photo by Donald M. Jones. Chris Servheen, front, checks a bear trap. Photo by Chuck Bartlebaugh, courtesy of the USFWS. This page: Chuck Jonkel has dedicated his life to studying grizzly bears. Photo courtesy of the Great Bear Foundation.

populations, Jonkel said. Genetic intermingling and a lack of food will spell disaster. That disaster can be mitigated by allowing bears in the Selway-Bitterroot, which stretches from near Missoula to central Idaho.

About a year ago, Montana Fish, Wildlife and Parks finalized a management plan for grizzly bears in 17 counties in western Montana. The plan notes “new and or innovative approaches would be helpful to speed recovery in the Cabinet-Yaak and Bitterroot as well as securing successes in the Northern Continental Divide.”

The plan analyzes management alternatives in each ecosystem and strives to integrate grizzly bear conservation with broader issues, like social acceptance and faith in management, says Arnie Dood, FWP endangered species coordinator.

The management plan would continue efforts to move grizzlies from regions, like the Northern Continental Divide, and augment other populations. An estimated 30 to 40 bears now inhabit the Cabinet-Yaak area near Libby, but the plan notes that the area could support a population three times that size. The nearly 200-page plan focuses on the complex balance that must be struck between biological requirements and a broad social, political and economic framework to fully recover the grizzly bear population.

Montana also is leading a trend study in cooperation with tribal agencies, the National Park Service, U.S. Fish and Wildlife Services and the Forest Service in an attempt to determine if the grizzly population in the Northern Continental Divide is increasing, decreasing or stable coming off Kendall’s 2004 DNA findings. To monitor trends, state bear biologists are trapping and collaring female grizzlies. By monitoring female grizzlies, researchers can learn about survival rates and reproductive rates. “One reason bears were delisted in Yellowstone was that there was a positive trend,” says Rick Mace, Kalispell-based research biologist with Montana Fish Wildlife and Parks.

It will be seven or eight more years before the trend study yields results in the Northern Continental Divide. One of the critical hurdles in completing the trend study is funding. It costs about \$350,000 a year. The state has said it can’t afford the long-term study, unless the federal government antes up. If the trend study isn’t completed, there is zero chance of delisting in the Northern Continental Divide.

Lack of funding in the NCDE has been a perpetual problem. Yellowstone, historically, received far more funding and scientific attention. “Right now we are just waiting to see if that money comes through,” Mace says. “We are hoping like heck that now that Yellowstone is under control that it is our time now.”

Montana is in the third year of the interagency

monitoring program. Mace also is clear that while numbers are critical, they have to be viewed in concert with many other issues. The population has to be examined in terms of land base. More bears mean a bigger cushion for other activities in bear country.

Management programs also have to be designed to work with the public and to limit conflicts. “A lot of it is social tolerance and how much you want to spend to keep a lot of bears around,” Mace says.

That social tolerance plays out along the Rocky Mountain Front, a critical piece of the Northern Continental Divide Ecosystem. It’s also an area where the prairie meets the mountains, and where grizzlies share space with cattle.

Karl Rappold’s lower ranch spills out about nine miles from the peaks of the Front. The mountains blanketed in evergreen on his upper ranch have always been a haven for grizzlies. But 30 years ago, it was rare for Rappold to spot a grizzly on the lower ranch. But now, on the lower ranch, “the bear population has definitely increased,” he says.

The Rappold family has ranched west of Dupuyer since 1882, when Karl’s grandfather homesteaded the ranch. “I think that things are working out good for the ranchers and the grizzly bears, and I hope they continue to work that way so it can be a success story,” Rappold says. “I’ve always said the bears were here long before I was.”

Rappold realizes the complexity of the delisting discussion. “I know there are a lot more studies to do, but I think we are getting to the point where we really should be looking at it,” he says.

Mark Hitchcock, who leases a ranch west of Dupuyer where he runs cattle, has a rockier relationship with the bruins. “I don’t coexist with them; I tolerate them,” he says.

Grizzlies have taken pigs, and he lost a calf about a year ago. However, it’s not just a livestock issue for Hitchcock. There also is the fear factor.

“You send your son out to irrigate, and you have to think about him walking among the bears,” Hitchcock said. The family has a Karelian bear dog to keep grizzlies out of the family’s yard.

Hitchcock recognizes that the delisting discussion is complicated. But he is optimistic that state management, and removal of federal protection, is a step in the right direction. Hitchcock said he isn’t anti-bear but simply wants to have more options in dealing with the creatures.

“Right now, with the Endangered Species Act, the bear has more rights than I do,” he says.

‘Our long-term goal is to reconnect all the large blocks of public land in the ... Rockies for all the wildlife species. Such reconnections will create healthier, stronger wildlife populations that will be here into the future.’

Chuck Jonkel



Sonja Lee, a Roundup, Mont. native, has worked as a reporter at the *Casper Star-Tribune* in Wyoming, the *Longmont Daily-Times Call* in Colorado and the *Great Falls Tribune*. She currently is employed as a nonpartisan research analyst for the state of Montana.