



COURTESY U.S. FISH AND WILDLIFE SERVICE

A hair sample is snagged on a hair corral during the U.S. Fish and Wildlife Service grizzly DNA study in southwest Montana this past summer.

# THE LANDS BETWEEN

## Connecting grizzly recovery zones may benefit populations

MICHAEL CAST | The Montana Standard and ROB CHANEY | Missoulian

Southwest Montana's Big Hole Valley is an intriguing piece of the grizzly bear puzzle.

Equidistant from the two largest populations of bears in the Lower 48 States, and surrounded by several potential mountain ranges that bears could travel through, the Big Hole Valley could be the place where grizzlies from populations in the Northern Continental Divide (NCDE) and Greater Yellowstone ecosystems (GYE) meet. Or it could be their next new home.

Whether a grizzly population is viable long-term depends on genetic diversity, experts say, and challenges to delisting have been successful in federal court in part because grizzlies from the populations have yet to connect or prove they can.

That's why a hairball from a young male grizzly bear in the Big Hole Valley was sent to Canada to be analyzed last year. The question was: Where did the grizzly that left the hair come from?

The results came back this fall. The bear was from the NCDE.

There have been many Big Hole grizzly sightings in recent years, but only the one sample has been analyzed closely. There were five confirmed sightings in 2020, and this year was mostly quiet in the valley until two grizzlies were confirmed by a range rider in the Miner Lakes area near Jackson in August.

This summer, the U.S. Fish and Wildlife Service, which oversees grizzly recovery, wrapped up a pilot DNA study – setting up hair snares and cameras across remote sites in southwest Montana, including in the Big Hole. The goal was to see if grizzlies from the two recovery areas have started to mingle, thus strengthening that gene pool and their chance for long-term survival.

Preliminary camera results released in mid-October confirmed two grizzly bears are using the headwaters of the East Fork Bitterroot River, just northwest of the Big Hole. Those are the first documented bears to use that area in recent history.

The study found light-colored

ored hair samples in the Big Hole Valley, but no grizzlies were captured on camera there, and the species of bears behind the hair remains unknown until DNA results come back.

Grizzlies are in the Big Hole, however, and Rory Trimbo, Montana Fish, Wildlife & Park's grizzly bear specialist out of Anaconda, and non-profit People and Carnivores' field leader Kim Johnston are targeting the area for conflict prevention work.

Johnston plucked that first sample from a barbed wire fence near Wisdom in April 2020 herself. She also got the young male grizzly on camera.

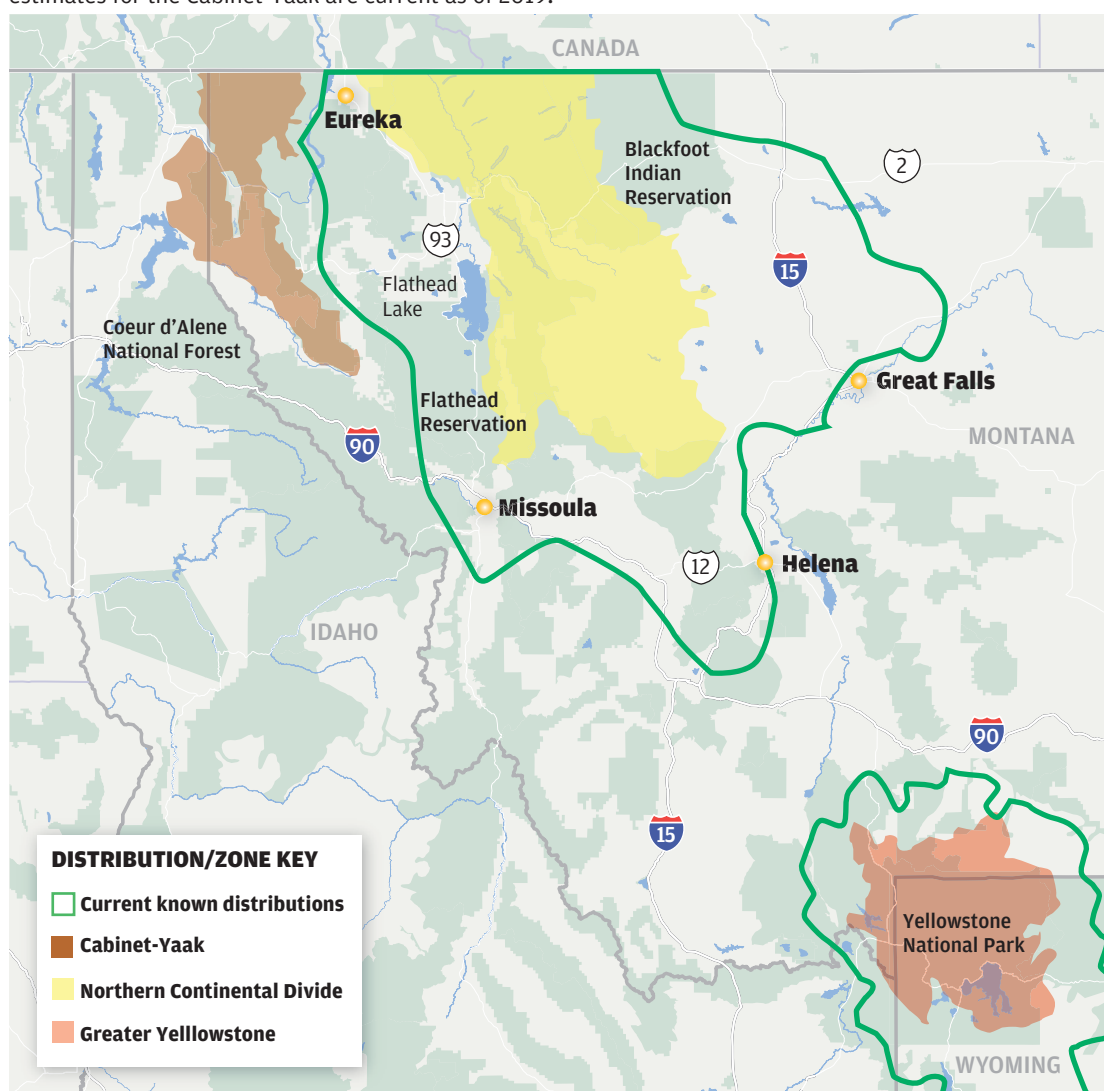
### The long road to connect

The fatal grizzly attack on camper Leah Davis Lokan in Ovando, 90 miles north of the Big Hole Valley, made national headlines.

The fatality also stirs echoes of the "Night of the Grizzlies" in 1967, when two grizzly bears killed two women in two separate Glacier National Park campgrounds on the same

### Grizzly bear recovery zones

Map shows three designated recovery zones – also known as ecosystems – where there are known resident grizzly bears in Montana, Wyoming and Idaho. Current known distributions show where grizzly populations have expanded outside of the three zones following successful recovery efforts. Distribution estimates for the Northern Continental Divide and Greater Yellowstone ecosystems are current as of 2020, while estimates for the Cabinet-Yaak are current as of 2019.



maps4news.com/CHERE, Lee Enterprises graphic

night. Then, as now, grizzly bears stood on the threshold of major change.

Fifty-four years ago, wildlife biologists and land managers dueling over the bear's dependence on garbage-dump feeding in Glacier and Yellowstone national parks. The debate ended with the abrupt closure of the dumps, which led to hundreds of grizzlies getting killed in conflicts with tourists

and others as they sought new sources of food. By 1975, there were so few grizzlies remaining in the Lower 48 states that they became the eighth animal given protection under the new Endangered Species Act of 1973.

A half-century later, the number of grizzlies in Montana, Wyoming, Idaho and Washington have grown four-fold. They have also roamed

beyond the recovery areas developed in the 1990s. The six designated areas, or ecosystems, were created as part of the grizzly recovery plan. While those grizzlies are exploring and occasionally denning in habitat they dominated for a millennia, they also share those places with people who haven't encountered an apex

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COURTESY PEOPLE AND CARNIVORES

A young male grizzly was captured on a game camera by non-profit People and Carnivores near Wisdom in the Big Hole Valley in spring 2020. People and Carnivores' Kim Johnston snagged a hair sample the bear left on a barbed wire fence, and results came back this fall. The bear was from the Northern Continental Divide Ecosystem.

## Last week: How do we live with grizzly bears?

Day 1:  
Grizzlies  
and us

Day 2:  
Bears  
on the ranch

Day 3:  
Living  
with grizzlies

Day 4:  
Grizzly  
science

Day 5:  
Getting  
bear aware

Day 6:  
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Day 7:  
The recovery  
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Day 8:  
Where  
bears go

Day 9:  
Indigenous  
input

Day 10:  
The way  
forward

## This week: How do griz live with us?



COURTESY PEOPLE AND CARNIVORES

Kim Johnston, field project manager for non-profit People and Carnivores, installs an electric fence on a ranch in the Big Hole this past summer. Johnston has been working with Big Hole ranchers to prepare for the arrival of more grizzlies, and in 2020 snagged the first grizzly bear hair sample from a barbed wire fence near Wisdom.

## Grizzlies

From A8

predator at their grandfather's fishing hole before.

The NCDE lies entirely within Montana, and has about 1,000 grizzlies between Glacier National Park and Missoula. The GYE has an estimated 1,000 grizzlies in Montana, Wyoming and Idaho surrounding Yellowstone National Park. The Cabinet-Yaak and Selkirk Ecosystems each have about 50 bears, while the Bitterroot and North Cascades have no confirmed resident bears.

Why some bears are moving out of their isolated mountains inspires both scientific and political debate. Are recovery areas such as the NCDE and GYE too crowded or depleted, forcing bears to seek new territory? Or are the surrounding lands too attractive, drawing bears to literally greener pastures?

While wildlife managers concentrated their efforts to boost grizzly populations inside the recovery areas, that didn't mean the bears couldn't saunter outside the zones. And in fact, part of the criteria for getting grizzlies off Endangered Species Act protection is proof they can wander between those designated areas.

But although the two biggest populations lie a mere 70 miles apart, that gap contains a minefield of highways, towns, ranches, orchards, chicken coops, garbage dumps, bone-yards, and other obstacles that are either dangerous or enticing to grizzlies.

The Greater Yellowstone and Northern Continental Divide ecosystems are home to the vast majority of grizzlies south of Canada. Southwest Montana is the passage between them, and the Big Hole Valley is at the center of southwest Montana.

The area is also at the edge of the Bitterroot Ecosystem, a grizzly recovery area with no confirmed resident griz-

zlies that's getting increasing attention as bears from the other big populations explore new territory.

Bears attempting the passage face a serious barrier of Interstates 90 and 15. Younger males are often the first to venture into the unknown, and stand a higher chance of getting into conflicts as they seek new food sources on a landscape split 50-50 between public and private land.

More homes and people are arriving with the real estate boom, and even those who are well established may not have dealt with grizzlies in the past.

### The Big Hole bears

Before results came back from the 2020 Big Hole hair sample, bear experts weren't sure whether the bear came from the NCDE or GYE. Johnston leaned toward the NCDE.

NCDE bears have been trekking farther south. A young male grizzly Trimbo collared in fall 2020 is presumed to be an NCDE bear and made his way to within 25 miles of the Big Hole, after crossing I-90, no less, and was picked up on camera east of Sula during the FWS study this summer.

Grizzlies are also occasionally sighted just north of Butte in the Elk Park and Basin areas, also fairly close to the Big Hole, but on the opposite side of I-90.

On the other hand, a study conducted by FWP and the U.S. Geological Survey using 15 years of data from collared male bears from both the NCDE and GYE did find future travel direct from the GYE to the Big Hole probable.

Now the question is whether the other Big Hole bears are also from the NCDE.

The FWS led a major study with sites in the Big Hole and other reaches of southwest Montana between populations this summer to find out.

### The big study

FWS grizzly bear biologist Jennifer Fortin-Noreus led the charge way back up For-

est Service roads to find bear scat, huckleberries and rub trees in the Beaverhead, Pioneer, Anaconda-Pintler, Flint Creek, John Long, and Sapphire mountains, as well as to the lower Clark Fork and Ninemile Divide.

"It has been fun to get to know these very rugged areas," Fortin-Noreus said.

Collaborating with the U.S. Forest Service, teams from the FWS and conservation group Defenders of Wildlife built barbed wire hair corrals with scent lures and set up cameras at that sites.

The lures were stinky, but didn't provide a food reward, and sites were chosen in part based on past verified or possible sightings and recommendations from area biologists.

From cameras, the scientists can determine whether grizzly bears were on site, and whether there were any sows and cubs. From the hair, the species, sex, actual individual bears, and the origin of population can be determined.

Fieldwork went from mid-May through the end of August, and Fortin-Noreus presented the preliminary results at the Interagency Grizzly Bear Committee's Bitterroot Subcommittee meeting in late October.

A total of 140 barbed wire hair corrals with cameras were set up across the region for 3-4 weeks each, and 805 hair samples were collected.

However, only 181 hair samples were sent to the lab, because cameras verified that the other samples were from black bears. The study had camera problems at 52 sites, often from black bear cubs moving the cameras as they climbed trees. The grizzlies captured on camera east of Sula also tore down the camera eventually, Fortin-Noreus said.

The agencies working on the study ran into challenges in the Big Hole. Due to livestock grazing allotments on National Forest lands, the Big Hole sites were only set up a few weeks early in the study

season before grazing would pose an issue.

"Although the hair corrals would not hurt livestock, livestock tend to investigate our hair snare corrals, and often-times just trample them and destroy the barbed wire. So we try to avoid them," Fortin-Noreus explained.

She added that she would ideally like to maintain the Big Hole sites the entire season, and is working with Forest Service officials to plan around grazing practices in the future.

The Trail Creek Fire west of Wisdom also destroyed one of the sites too, along with its camera. Light-colored hair samples were taken at Big Hole sites however, so it's possible the origins of more Big Hole grizzlies will be identified.

Fortin-Noreus is hoping the DNA results will be back in time for the spring meeting of the Interagency Grizzly Bear Committee.

### In-between lands

Fortin-Noreus said establishing where bears are, and which populations they belong to, helps predict connectivity corridors. Understanding these corridors is also important for bear management.

"If you're looking at the landscape, you can see how much of that area they have to travel through is private versus federal lands. We do see as bears are expanding their range an increase in the number of conflicts on private lands. It also tells us, from a management standpoint, where to target information and outreach efforts to people that live and recreate in those areas — how to do it safely in expecting grizzly bears there," she said.

The targeted opportunistic study to establish bears' origins was not a grid sample to determine everywhere bears are present in southwest Montana, however, so Fortin-Noreus said the public shouldn't assume a location is grizzly-free just because the study didn't find one there.

As Montana Fish, Wildlife

and Parks officials have said, residents should now expect grizzlies anywhere in the western half of the state.

Connectivity is a chief focus of the Interagency Grizzly Bear Committee, the collaborative formed in 1983 to ensure the bears' recovery.

Former Montana Gov. Steve Bullock formed the Grizzly Bear Conservation and Management Advisory Council in 2019, appointing 18 Montana citizens from various walks of life — ranchers, farmers, trail runners, hunters and conservationists, among others.

Cole Mannix, a member of the council and part of a 5-generation ranching family in western Montana's Blackfoot valley, told IGBC members at the winter 2020 meeting that establishing its vision statement was one of the most important things the council accomplished.

The statement depicts the challenge faced by people and bears across Montana. It reads:

*"We envision fully recovered grizzly bear populations in the four identified recovery areas in Montana and the landscapes in-between that accommodate grizzly bear presence and connectivity while maintaining the safety and quality of life of those that live, work and play in Montana."*

Debate was fierce over the wording of that sentence during the meetings. While recovery ecosystems are largely uninhabited public lands, the places in between are packed with private ranches, homes, roads, railroads, farms and orchards.

The grizzlies moving through the areas don't change Endangered Species Act status when they step outside a recovery area, but they do become a novel and unpredictable threat to the people unaccustomed to their appearance.

Even as the experts wait for DNA results to illuminate where more Big Hole bears are coming from, they are preparing folks in the area for the next batch of new arrivals.

**"We envision fully recovered grizzly bear populations in the four identified recovery areas in Montana and the landscapes in-between that accommodate grizzly bear presence and connectivity while maintaining the safety and quality of life of those that live, work and play in Montana."**