

# High Country News

For people who care about the West

## Grizzly Face-Off

The Yellowstone grizzly population is poised to lose federal protections — for better or worse

By Gloria Dickie



Yellowstone Valley photo guide, outfitter and hunter Jim Laybourn wears a bear costume to help send a message at the Yellowstone Ecosystem Subcommittee meeting in Teton Village last November. GLORIA DICKIE

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Wearing the wounds of mating season, a large male grizzly walks through the spring snow in Yellowstone National Park.

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## Editor's note

### Grizzly fascination

The professor's assignment was open-ended: Get together with another graduate student and write about a current natural resource dilemma, one with lots of competing players. Both topic and partner came readily to mind: The Yellowstone grizzly bear intrigued not only me, but also my vivacious, intelligent colleague, Ann Harvey.



That was back in 1985. The other day, I found our report buried deep inside an old file cabinet. It's not poetry, but it captures the flavor of the landscape, as well as the politics of a place that has been one of my journalistic foci for decades now. And I am still friends with Ann, who has lived in the greater Yellowstone ecosystem ever since, and who continues to be an ardent wildlife advocate.

Here's the thing about grizzly bears: They create a *human* ecosystem every bit as interesting as the natural one. And that system is also populated by fierce and persistent individuals. Ann is one of many who have remained in the grizzly-shaped system for decades.

Back in the 1960s and 1970s, for example, the legendary Craighead brothers — John and Frank — undertook the pioneering population studies that led to the bear's listing under the Endangered Species Act in 1975, and pushed the National Park Service to close the garbage dumps that had become dangerous, all-night buffets for too many bears.

In the 1980s and 1990s, biologists Richard Knight and Chris Servheen took center stage as successive directors of the Interagency Grizzly Bear Study Team, the federal and state scientists and managers assembled to monitor and manage the grizzlies. As former HCN intern Gloria Dickie reports in our cover story, optimism for full recovery grew once the dumps were closed and the population rose from a low of some 200 animals. And new advocates emerged from both within and without the bureaucracies.

One insider — former interagency team biologist Dave Mattson — and one outsider — bear activist Louisa Willcox — have spent the better part of two decades fighting Servheen's team's push to declare the Yellowstone grizzly, which now numbers around 700, fully recovered. Removing it from the endangered species list would mean handing management from the federal government to the states of Wyoming, Montana and Idaho, and possibly reinstating controversial grizzly hunting seasons.

There are good scientists and sincere grizzly lovers on both sides of the argument, as Dickie makes clear. One thing is certain, however: As the West's wild country continues to shrink, our struggle to live with bears will only get more complex. Should we be optimistic or pessimistic about the prospects for the Yellowstone grizzly? I say: Look to the humans the bear has surrounded itself with. As long as we remain diverse and engaged, our most celebrated fellow omnivore should be around for a long time to come.

—Paul Larmer, executive director/publisher



The “Stop Disenrollment” campaign urges tribal members and other people to share photos with slogans against disenrollment on their hands. [STOPDISENROLLMENT.COM](http://stopdisenrollment.com)

## The Nooksack fight for tribal membership

In February 2013, Michelle Roberts, along with approximately 300 other members of Washington's Nooksack Tribe, received a letter informing her that she was being ejected from her own tribe. Roberts and others fought back, kicking off three years of legal battles over tribal membership, still ongoing. In recent years, disenrollment, as the process of ejecting tribal members is known, has gained steam, typically for financial reasons. More than 30 California tribes have taken steps toward disenrolling members. In the case of the Nooksack 306, as they're known, the conflict has been particularly personal and tinged with uncomfortable questions about racial and tribal identity. People who lose tribal membership also can lose access to financial and medical benefits and may experience psychological harm from the deprivation of cultural identity. Notables such as author Sherman Alexie have spoken out, and a social media campaign has sprung up to stop disenrollments like those of the Nooksack 306. **BEN GOLDFARB**

MORE: [hcne.ws/nooksack306](http://hcne.ws/nooksack306)

## Trending

### 'Best idea?'

In an opinion piece that sparked heated discussion among readers, Alan Spears, director of cultural resources for the National Parks Conservation Association, argues that “parks are not America's ‘best idea,’ and describing them as such may be preventing us from creating and sustaining the diverse constituency our national parks need to survive and thrive in their second century.” Instead, he says, members of marginalized groups may rank other ideas higher, such as marriage equality or civil rights legislation. To create a more representative coalition of parks supporters, those groups' understanding of American history must be incorporated, too.

### You say

**STEVEN G. HERMAN:** This is an apple-and-oranges argument. Certainly we need to bring minorities into our parks; that is a very high priority. But the “best idea” concept applies in a conservation sense.

### SWIRLING WHEELNUTS:

This is an argument for people of color to be included in the discussion of nationalized public property. That white people so vociferously argue against the inclusion of these ideas of people of color speaks to the racism deep in their ideology.

**DOUG LUCCHETTI:** Literalists spoil everything, literally.

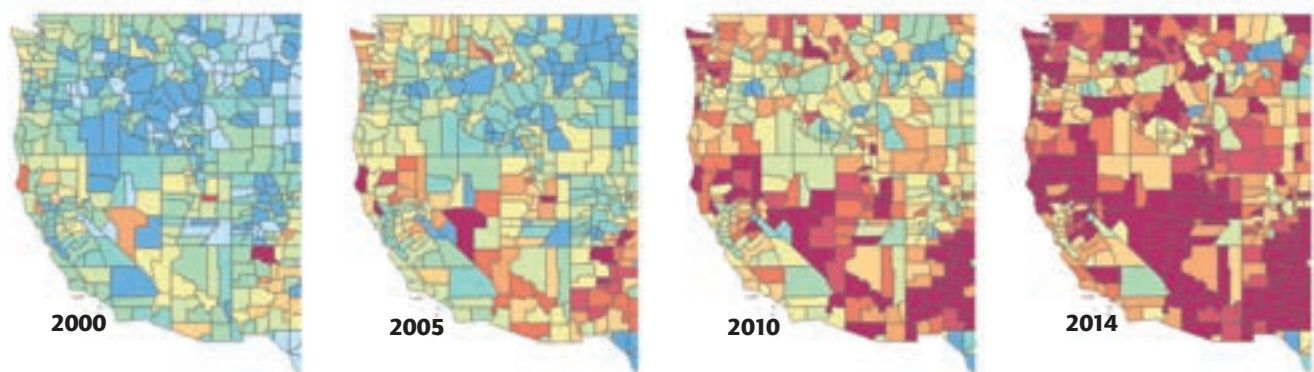
MORE: [hcne.ws/not-best-idea](http://hcne.ws/not-best-idea) and [Facebook.com/highcountrynews](https://www.facebook.com/highcountrynews)

## Railroad downturn

In April, the federal Surface Transportation Board cancelled a proposed railroad intended to ship coal from a since-abandoned Montana mine. For decades, coal has been a mainstay of the Western railroads. Rail companies therefore have made big cuts and other changes as the coal industry's decline continues, and now they're looking for new products to ship. For example, rail giant BNSF has furloughed 4,600 workers, about 10 percent of its staff, since last year. **ELIZABETH SHOGREN**

MORE: [hcne.ws/coal-railroads](http://hcne.ws/coal-railroads)

## The rising tide of overdose deaths



In the West, heroin and prescription opioid overdoses account for more than 60 percent of drug-related deaths.

SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION

**DEATHS PER 100,000 PEOPLE** In 2000, only one county in the West had an extreme overdose death rate. In 2014, more than 200 did.

0-2 2.1-4 4.1-6 6.1-8 8.1-10 10.1-12 12.1-14 14.1-16 16.1-18 18.1-20 >20

## Opiates on the rise

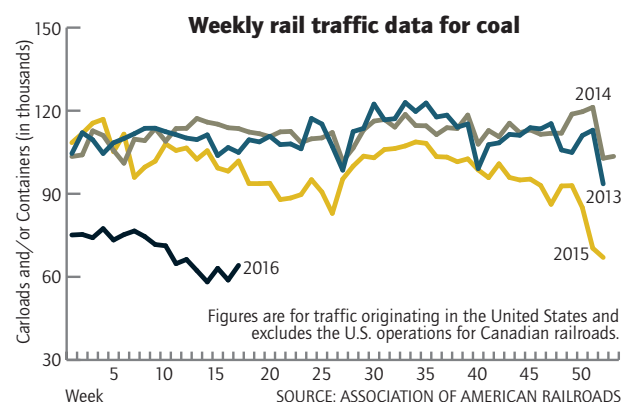
In March, a batch of illegally made fentanyl, a potent opiate used to treat pain, sold on the streets in Sacramento County, California, led to 11 deaths in the area and more than 50 overdoses. The overdoses were part of a broader opiate and heroin epidemic in the West and across the nation. In 2000, only one Western county — Rio Arriba in New Mexico — had a drug overdose rate of more than 20 deaths per 100,000 people. Today, nearly

200 Western counties do. The spread is due in part to the prevalence of prescription painkillers, as well as stricter regulations intended to restrict them that inadvertently created a demand for heroin when legal pills became more expensive and harder to find. Have you seen impacts or solutions in your community? Write us or fill out our anonymous tip form online. **PAIGE BLANKENBUEHLER** MORE: [hcne.ws/pill-addiction](http://hcne.ws/pill-addiction)

# 16

Number of “food hubs” — a new take on the old agricultural co-op idea — operating in Wyoming, Colorado and New Mexico. The U.S. Department of Agriculture put about \$1 billion into 40,000 local food infrastructure projects across the country between 2009 and 2015. But that's a small fraction of the amount the agency gave to industrial agriculture. **LYNDSEY GILPIN**

MORE: [hcne.ws/food-hubs](http://hcne.ws/food-hubs)



Figures are for traffic originating in the United States and excludes the U.S. operations for Canadian railroads.

SOURCE: ASSOCIATION OF AMERICAN RAILROADS

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## A ROMANTICIZED PAST

"The Gold King Reckoning" hit home for me and once again renewed my quandary over the nostalgic interest in all things mining-related in the American West (*HCN*, 5/2/16). I once participated in the Hardrock Hundred Mile Run, which offered me a unique tour of the vestigial remnants of Colorado's San Juan mining industry, and I now live on the Arkansas River in Salida, another unique front-row seat from which I can view the acid wastes originating upstream in Leadville.

Sure, the industry once represented a source of much-needed income, and by extension, was a means of securing both food and shelter for the nearby communities, but at what ultimate cost? The General Mining Law of 1872 and its subsequent amendments are so demonstrably outdated and ineffective that I shudder to think of what truly underlies their continued existence and use.

And of course, I remain keenly aware of our local "Smelter Town" Superfund site, which is just a stained stone's throw away from my current home. So, what do I think about the 365-foot-tall brick smokestack that still stands ominously at Smelter Town, now revered and listed in 1976 on the National Register of Historic Places? Just tear it down! It is simply evidence of a short-sighted, horrible past that we may never, ever, be able to adequately recover from or fix.

*Erick Miller  
Salida, Colorado*

## LOCAL CLEANUP CONTROL

Jonathan Thompson did a particularly comprehensive job of covering issues in Silverton ("The Gold King Reckoning," *HCN*, 5/2/16). There is probably an additional point relative to Superfund opposition. Mining communities throughout Colorado witnessed the conflicts between local governments and the Environmental Protection Agency at Leadville's Superfund site over several decades. As a consequence, many communities strongly prefer local control of cleanup efforts over Superfund designation. Groups such as the Animas River and Willow Creek (at Creede) associations were created, and are to be lauded



MATT WUERKER EDITORIAL CARTOON USED WITH PERMISSION OF MATT WUERKER AND THE CARTOONIST GROUP. ALL RIGHTS RESERVED.

for their hard work and collaborative efforts to improve water quality by applying scientific principles and research to the problems.

The Colorado Geological Survey, in addition to documenting acid-mine drainage in hundreds of locations, also documented large areas of natural, acid-rock drainage in a number of places in Colorado, including Silverton. Its publication, *Natural Acid Rock Drainage Associated with Hydrothermally Altered Terrane in Colorado*, is available at <http://coloradogeologicalsurvey.org/water/acid-water-natural/>. Competent cleanup of acid mine drainage cannot be accomplished without knowledge of the acid drainage problems that nature is also creating in the area. Thus far, the EPA's regulations do not take into account this natural phenomenon.

*Vince Matthews, Ph.D.  
Leadville, Colorado*

## A NECESSARY DIMENSION

In your latest "Editor's Note," you indicated that some readers have "wondered" about recent editorial forays into long-standing social and cultural issues, such as the Sagebrush Rebellion, or the Wise Use Movement (*HCN*, 5/2/16). As a new subscriber (and educator who shares *HCN* with two college composition courses), I support such intentional turns as a vital adjunct to your strictly environmental coverage. This type of social/cultural coverage adds a necessary dimension to the limited vista of technical, engineering and scientific "problems" by highlighting the imminent participation of political-

ideological, economic and social-historical factors. My students, perhaps like some readers, would love to perceive climate change, for example, as a technical problem with technical solutions in the wings, but as I must remind them, our technology, engineering and scientific achievements reflect and emerge from powerful sources within our culture and history.

Take the story in the same issue that links environmental problems (air quality and coastal development) with politics — "California ousts environmental agency leaders." Not only does the article identify the

environmental issues at play, it clearly foregrounds these in California's complicated political and economic scene. This is good reporting, and I might add, not done well or frequently enough by our local, but sadly debilitated, *Los Angeles Times*. Kudos to intern Lyndsey Gilpin.

*Tom Edson  
Professor, Department of English,  
Literature, and Journalism  
Mt. San Antonio College  
Walnut, California*

## HOPES FOR LAND BUY-BACK

My name is Ed "Cowboy" After Buffalo Jr. As I read the story "A Land Divided" (*HCN*, 4/4/16), I am getting ready to attend the kick-off event for the Blackfeet tribal land buyback program on April 8, hoping to get good feedback on the program, which in turn will help me make an informed decision on selling vs. keeping what interests I have inherited from my father, Ed Sr. It would have surely been nice to individually acquire more interest in the allotment with 131 owners through the buyback program, but maybe, just maybe, the tribe will work with me, and I will be able to trade a smaller interest I own elsewhere on the reservation. That would make things a lot more simple for the ones next in line to inherit the property. We are one of the few families on the reservation still living on the original allotments given out between 1907-1911, and we want it to stay that way as long as possible.

*Edward After Buffalo  
Browning, Montana*

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## West Coast cities sue Monsanto to pay for chemical cleanup

*The agribusiness giant was sole U.S. manufacturer of PCBs*

BY SARAH GILMAN

Portland, Oregon's Willamette is no wilderness river. But on a spring day, downstream of downtown, wildness peeks through. Thick forest rises beyond a tank farm on the west bank. A sea lion thrashes to the surface, wrestling a salmon. And as Travis Williams, executive director of the nonprofit Willamette Riverkeeper, steers our canoe under a train bridge — dodging debris tossed by jackhammering workers — ospreys wing into view.

The 10-mile reach, known as Portland Harbor, became a Superfund Site in 2000. Over the last century, ships were built and decommissioned here, chemicals and pesticides manufactured, petroleum spilled, and sewage and slaughterhouse waste allowed to flow. Pollution has decreased, but toxic chemicals linger in sediments. Resident fish like bass and carp are so contaminated that riverside signs warn people against eating them, though some do. And osprey can't read warnings, so they accumulate chemicals, which can thin eggshells and harm chicks.

Among the worst are polychlorinated biphenyls, or PCBs. Used in electrical transformers, coolants, caulk, paints and other products, these probable carcinogens were banned in 1979 for their toxicity, persistence and the ease with which they escaped into the environment. Even so, they continued entering waterways through storm drains here and elsewhere.

The Environmental Protection Agency's remediation plan for Portland Harbor's PCBs and other pollutants, expected in May, will cost between \$790 million and \$2.5 billion. The city of Portland, one of 150 "potentially responsible parties" on the hook for a percentage, has already spent \$62 million on studies and reports. So on March 16, the city council decided to join six other West Coast cities in suing agribusiness giant Monsanto to recoup some past and future cleanup costs. San Diego filed in 2015, and San Jose, Oakland, Berkeley, Spokane and Seattle followed.

Monsanto is best known for GMO crops and Roundup, but before it split from its chemical and pharmaceutical branches (also named in the suits), it was the sole U.S. PCB manufacturer from the 1930s to the late 1970s. "Monsanto knew that if you used (these products) for their intended purpose, PCBs would leach into the environment," says Portland City At-

torney Tracy Reeve, but it sold the chemicals anyway. "We believe that polluters, not the public, should pay."

A victory would not only inspire more PCB lawsuits, it could suggest a pathway to help fill gaps in U.S. chemical regulation, says University of Richmond School of Law professor Noah Sachs, who specializes in toxics and hazardous waste. The 1976 Toxic Substances Control Act, inspired in part by PCBs, has a weak review process and generally doesn't require health and safety testing of chemicals before manufacturers can sell them. And the Comprehensive Environmental Response, Compensation, and Liability Act — CERCLA, the Superfund law — is concerned with who spilled or arranged to dispose of chemicals at a site, not who made them. "What we see here is testing a new legal theory," Sachs says. "I hope companies that know their hazardous products are escaping into the environment are held accountable for the damage they're doing."

The cases' novelty arises from their application of state public nuisance laws. Each seeks to prove that Monsanto compromised public use and enjoyment of waterways by marketing and selling this class of chemicals while well aware of its dangers. The Seattle complaint, for example, cites internal memos from the '60s in which company officials discuss PCBs as "an uncontrollable pollutant," noting their global spread and harm to people and wildlife. There is "no practical course of action that can so effectively police the uses of these products as to prevent environmental contamination," a Monsanto committee wrote in 1969. "There are, however a number of actions which must be undertaken to prolong the manufacture, sale and use of these particular Aroclors" — the company's trademarked name for certain PCB compounds.

The cases follow on a stunning 2014 vic-

tory in the Superior Court of California. There, a judge found three companies had created a public nuisance by marketing and selling lead-based paint while knowing its health hazards, and ruled they should pay \$1.15 billion into an abatement fund to remove it from homes. The Monsanto cases likely have a stronger public nuisance claim, says University of California Davis environmental law professor Albert Lin, because, unlike residences, "waterways are clearly public resources." Monsanto's role as sole manufacturer also simplifies efforts to connect the company to contaminated areas.

Nonetheless, "the plaintiffs face an uphill climb," says Peter Hsiao, an environmental attorney for international law firm Morrison & Foerster. The lead paint case is being appealed, he notes, and similar lead paint lawsuits failed in six other states. Attempts to use public nuisance law to address climate change, with California going after automakers, for example, have also foundered. Still, he worries a win could have an unintended chilling effect on innovation, "depriving society of the enormous benefit that comes from the safe and effective use of chemicals."

First, though, the lawsuits must reach trial. Monsanto has been filing motions to dismiss each case — arguing that it never had a manufacturing presence on the West Coast and never discharged anything there. The first motion, against San Diego, will be heard in court May 25. "The allegations ... are without merit," Monsanto spokeswoman Charla Lord wrote in an email. If "companies or other third parties improperly disposed of (PCB) products and created the need for the cleanup of any waterways, then they bear responsibility for the costs." □

**A canoe casts off from Cathedral Park under the St. Johns Bridge, part of a stretch of the Willamette River laced with PCBs and other pollutants.**

CATHY CHENEY/PORTLAND BUSINESS JOURNAL



Contributing editor Sarah Gilman writes from Portland, Oregon. @Sarah\_Gilman

# Santa Fe National Forest's pirated paths

*A lone investigator hunts for a rogue skier who cut more than 1,000 trees*

BY PAIGE BLANKENBUEHLER

**P**ine needles crunched under James Parker's feet as he walked in the Santa Fe National Forest on a warm September day. Parker, a longtime local, has hiked from the Winsor trailhead for the better part of two decades, and he rarely sees signs of other people once he leaves the path and bushwhacks into the woods. But this time, hiking off trail just inside the Pecos Wilderness, he stumbled upon a crime scene: Hundreds of chainsawed firs and ponderosa pines, their trunks littering the forest floor.

The fallen trees shaped a path 50 feet wide and several hundred yards long. Side trails branched out from it, forming a network of ski runs hacked from the heavily wooded forest. Shocked, Parker surveyed the damage, walking past stump after stump. "It goes beyond ego-

ism to egomania," Parker says. "It looks like someone cut their own personal run to show their friends this cool new glade they made." He reported the crime to the U.S. Forest Service and local media, and the Forest Service launched an investigation.

Most of the illegal cutting that Parker discovered occurred near Raven's Ridge, an unofficial trail near the Ski Santa Fe resort. And each time Parker returned, he found yet more slashed trunks. Plastic red ribbons flagged trees still standing in the route.

The U.S. Forest Service gave the case to the agency's crime unit, but as it grinds on, the incident vividly illustrates the paradoxes involved in managing public lands, which are open to anyone and lightly, if ever, patrolled. The federal process for developing new trails is slow and cumbersome, and that seems to be driving a few frustrated outdoor enthusiasts to forge

their own renegade paths, says Miles Standish, manager of wilderness, trails and recreation for the Española Ranger District.

Cutting trees and bringing a chainsaw into designated wilderness are both illegal activities. But the culprit here went beyond simply creating an unofficial trail by repeated use; this effort was "much more intentional," Standish says. "This damage, and the attitude that seems to be behind it, is worse than in the past."

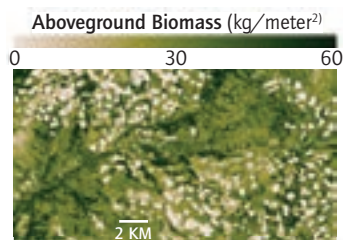
**O**n Sept. 24, 2015, soon after Parker's report, Michael Gardiner, an Albuquerque-based investigator of the crime unit of the Forest Service's Southwest Region, took the case. Gardiner, a middle-aged man with a Hardy Boys-like enthusiasm, has tracked misdeeds ranging from illegal marijuana crops on public lands to theft of government property. But the crimes unit is seriously un-

Paige Blankenbuehler is an HCN editorial fellow.  
@PaigeBlank

## Snapshot

### What the West's trees tell us

*How can biomass and carbon data help us mitigate the effects of human activity?*



Magnification shows logging on the scale of individual plots, in Washington.

The coastal Pacific Northwest has the densest biomass in the United States.

In the Southwest and Intermountain West, the thickest forests outline high plateaus and rocky mountain ranges.

Midwest trees outline rivers and edges between farms, and forests are recovering on once-cleared crop land.

Biomass in the Southeast includes many highly managed tree farms.

SOURCE: WOODS HOLE RESEARCH CENTER; ROBERT SIMMON

**E**very tree tells part of the story of Earth and its atmosphere, from the planet's available carbon and oxygen to its soil and water health. Tree height and forest undergrowth help scientists study biodiversity and predict wildfires, while the location and density of growth are linked to hydrology and erosion in mountainous regions. Scientists have long studied these patterns, but until five years ago, there was no comprehensive way to keep track of them. Instead, scientific understanding was piecemeal and regional. In 2011, Wayne Walker and Josef Kelldorfer from the Woods Hole Research Center mapped every forest in the United States, along with its biomass and the carbon it stores, using satellite and ground data collected by the U.S. Forest Service, NASA and the U.S. Geological Survey from 1999 to 2002, to create a forest biomass map in more precise detail than any other made. The darker the spot, the denser, taller and more robust the forests are. Predictable trends emerge: The rich forests of the Pacific Northwest and Northern California are obvious, for example. But there were also surprising insights, like the grid-like patterns created by human development in other Western forests. The map is already helping public-lands agencies and academics study and manage forest restoration, but researchers are working to update it: Western forests are changing rapidly due to logging, climate change and tree disease. "It's more valuable to understand how the forest is changing over time, in terms of ability to store carbon," Walker says. For now, land managers rely on these pixelated swaths of green as their baseline for understanding our country's forests and their future. **LYNDESEY GILPIN**

der-funded, and Gardiner's workload — he oversees several other investigators as well as his own district's crimes — keeps him from spending as much time as he'd like on each case.

Gardiner first turned to social media, scouring YouTube, Facebook, Twitter and Reddit for videos of cutting in the area, incriminating conversations, plans for skiing there. Nothing.

He called Parker, the sole witness, into his office to answer questions. On a topographic map, Parker sketched the damaged area. By then, he had tallied more than 600 cut trees.

In late September, Gardiner went to see for himself, driving his tan Chevy Tahoe up to the Winsor trailhead. He questioned the people he met, but learned nothing useful. Then he hiked towards Raven's Ridge, following Parker's map to the new clearing, piled with slashed debris and red ribbons waving from dozens of live trees.

The next day, on another "scoping mission," Gardiner found fresh damage, bringing the total flora fatalities to more than 1,000 trees. He thought he was hot on the heels of the perpetrators. The agency set a \$5,000 reward for information leading to an arrest and conviction.

The trail wasn't the area's first illegal path. In the 1960s, in the early days of Ski Santa Fe, a young employee there hacked away a few hundred trees on lunch breaks to create his own run, just beyond resort boundaries. A few years later, the ski area absorbed the illegal glade, and the cutter even got to name it — the Desafio. The ski area appears to have no connection to the current crime, though, and no plans to absorb this new trail, which is just past the resort's westernmost run. The motivation for the deed simply seems to be someone's desire for a secluded but easily accessible trail for downhill glade skiing, Gardiner says.

It's not just skiers who carve illegal trails on public land: Rogue ATVers, dirt bikers and hikers have created dozens of unauthorized tracks in Santa Fe National Forest. "There's a more aggressive attitude prevailing in the recreation community," Standish says. "People have differing opinions about how to manage these lands. The process of public-land management can be slow."

Many renegade trails that might have otherwise been sanctioned by the Forest Service are constructed clandestinely because legal development often takes years. The proliferation of pirated trails shortchanges citizens of the usual due process: public requests, environmental impact assessments and open comment periods. Establishing new trails legally starts with a request, Standish says, but that's just the first step. "Many requests sit in a holding pattern as a nice idea, but no certain way forward," he says,



Left, felled trees that James Parker suspects were illegally cut to create a "personal ski run." The Forest Service is still tracking down the culprit. Below, Parker investigates broken branches in a glade in the Pecos Wilderness, where trees have been cut down illegally. Parker and Forest Service investigator Michael Gardiner also observed ski tracks during their November patrol of the area.

COURTESY JAMES PARKER; PAIGE BLANKENBUEHLER



especially when they don't fit into the agency's master plans, which lay out a vision and management policy for the forest.

But the Forest Service would never have given someone the go-ahead to slice a trail or ski glade inside a wilderness area, says Standish. The agency lacks the funding or staff to patrol unsanctioned paths, or enforce closures. So it prioritizes protecting tribal lands and wilderness areas — and pursuing particularly egregious cases like the crime at Raven's Ridge.

In February, there was a break in the case. Someone mailed anonymous letters to the Santa Fe Forest Service office and a local newspaper. They included a LinkedIn profile picture of the alleged culprit, an employee of the U.S. Department of Agriculture, and a scathing argument that connected the suspect to the crime. Gardiner's head whirled: A federal

employee would have access to the equipment to do it — and could slip under the radar. In early March, Gardiner and the New Mexico Office of the Inspector General questioned the suspect. After more than two hours, though, they let him go. "We didn't have the evidence to prove anything," Gardiner says. "The trail ran cold right there."

Now, Gardiner fears the case is languishing. It will be hard to solve it, he says, without more time to patrol the area, another agent on the case, or the resources to install trail cams or increase rewards.

In March, James Parker went snowshoeing through the area. Once again, the tree slasher had left behind tantalizing clues. No more trees had been cut, but crimson ribbons glistened with melted snow, lightly swaying in the wind. Parker plucked off all of them. At the very least, he says, "I'm still watching." □

## THE LATEST

### Backstory

**In 2014, Wildlife Services killed 61,702 coyotes — one every eight and a half minutes.** The agency, part of the U.S. Department of Agriculture, kills invasive species, nuisance birds and livestock-eating predators like wolves and black bears. Though its researchers study nonlethal alternatives, such as alarms, these are seldom implemented. Ranchers, local governments and businesses fund half the agency's budget, and serving clients who want their wildlife problems eliminated remains its top priority ("The Forever War," HCN, 1/25/16).

### Followup

**In April, Mendocino County, California, severed ties with Wildlife Services, joining Sonoma and Marin counties in cancelling or suspending contracts with the agency.** Six environmental and wildlife groups had sued, claiming Mendocino County failed to consider nonlethal methods and needed to study the environmental impacts of killing predators. This is the first lawsuit to challenge the relationship between local governments and the agency; more counties are expected to cancel Wildlife Services contracts.

LYNDSY GILPIN



COURTESY WILDLIFE SERVICES/GUILLIA CHIVÉE

# Justice denied

*How Utah's public defense system is failing the poor*

BY SARAH TORY

**"They just want your money."**

*—What a public defender told Sue M. when asked if he could do anything to reduce her fine.*

**O**n Jan. 1, 2015, Sue M. was walking a friend's dog in Parowan, Utah, a small desert town near Zion National Park, when two unleashed Rottweilers attacked the dog. Sue (who asked that her full name not be used to protect her identity) filed a police report, but no investigation followed. Instead, a police officer came to her house, handcuffed her and took her to the Iron County Jail, where she spent three traumatic nights, locked inside a chaotic windowless room with 14 other women. Her crime? Her name was in the police database for an unpaid fine.

Earlier that year, Sue had shoplifted aspirin from a supermarket, was charged with retail theft and fined \$680. At 51, Sue struggles with depression and chronic pain, and blames the episode on the fact that her doctor had just changed her medication, increasing her emotional instability. Four months later, unemployed and recovering from breast cancer, she still hadn't paid the fine.

Sue was assigned a court-appointed public defender, but had to call him twice to get a response. He said that the only time he could meet with her was on the day of her court appearance. During their five-minute-long meeting, Sue asked whether there was any way to reduce the fine, which she could not afford to pay. But the lawyer was unwilling to pursue the matter. "They just want your money," he told her.

Sue is not alone in feeling shortchanged by her public defender. Utah and Pennsylvania are the only two states in the country that provide no funding for the right to legal counsel — guaranteed to all Americans by the Sixth Amendment, regardless of their ability to pay. That leaves local governments on the hook for public defense, but in Utah's budget-strapped rural counties the system is failing: public defenders are overworked and underpaid, many defendants never meet a lawyer until minutes before their trial, and each year hundreds of people are convicted without satisfactory legal representation.

Correspondent Sarah Tory writes from Paonia, Colorado. @tory\_sarah

**Tom Means, Utah's lead public defender, speaks with a client at a pretrial hearing.**  
MARK JOHNSTON/DAILY HERALD

**T**he right to a public defender stems from the 1963 *Gideon v. Wainwright* decision, in which the Supreme Court held that states are constitutionally required to provide legal counsel to defendants who cannot afford to hire their own. The roots of that decision, however, are actually much older. Nearly 100 years before, a man named Shepherd L. Wixom was charged with stagecoach robbery in Lander County, Nevada. Wixom, who was poor, fought for the right to have his own lawyer. In 1875, Nevada became the first state to authorize the appointment of, and payment for, defense attorneys in all criminal matters.

Montana, Idaho and California soon followed, and for much of the past 150 years, access to legal representation for all was the norm. But in the 1980s, the number of criminal cases exploded, thanks to the War on Drugs and new "tough on crime" policies. As the volume of cases increased nationwide, many counties could no longer afford to pay the full costs of public defense. And so they looked for shortcuts.

In Utah, the problem was amplified by a lack of government oversight and funding for the state's increasingly overburdened public defense system. Most counties in Utah offer contracts to public defenders for an annual flat fee, regardless of the number of cases. Often that leaves a defender tasked with well over the American Bar Association's maximum suggested caseload — 150 felonies or 300 misdemeanors a year. Sometimes, the low flat-fee rate, which in some counties is less than \$30,000, means that public defenders have to sign contracts with multiple counties or work in private practice on the side, leaving them without the time or economic incentive to fully represent their poor clients.

"My job is to give someone a voice in the system," says Michael Studebaker, a juvenile public defender in Box Elder County, Utah. "But the problem is that too many defenders won't do that because they don't have enough time."

The flaws in Utah's patchwork system were documented in a report released last year by the independent Sixth Amendment Center, hired by the state judicial council to assess Utah's situation. The report found that 65 percent of poor criminal defendants were never even provided legal counsel. The majority of cases end in plea-bargaining, a strategy Studebaker calls "meet and plea" — anxious clients have little more than a brief conversation in the courtroom with a harried public defender before they end up pleading guilty.

The report also documented how outsourcing public defense to counties increased the likelihood of conflicts of interest. The county often defers to the

*Please see Justice, page 22*





Mark Perkins, left, and Scott Pearce talk about recent layoffs from the nearby Black Thunder Coal Mine at Perkins' electrical shop in Wright, Wyoming. Perkins is closing his business after the mine laid off hundreds of workers, including Pearce, due to a dramatic decline in demand for coal. The town, with a population of less than 2,000, relies heavily on the energy industry to sustain itself.

NICK COTE



An injured red-tailed hawk at Altamont Pass Wind Resource Area. COURTESY EAST BAY REGIONAL PARK DISTRICT

# Life after coal

*Can the West's mining country learn from Europe's approach to laid-off energy workers?*

BY JOSHUA ZAFFOS

People linger at an outdoor café, children run around a park, and visitors tour a former coal mine, now a thriving museum. The one-time industrial site, which includes an events center, restaurants, and even a Ferris wheel, attracted 1.5 million visitors over the past five years. Zollverein, Germany, once home to one of Europe's largest coal mines, is now a retail and tourist destination.

The second act at Zollverein may provide inspiration — or aggravation — for down-and-out coal communities in Wyoming's Powder River Basin and elsewhere in the West. March 31 has become known as Black Thursday in Wyoming since Arch Coal and Peabody Energy announced 465 layoffs at two major mines, amid recent Chapter 11 bankruptcy filings by Arch, Alpha Natural Resources and Peabody. Given the combination of crashing prices, bankruptcies, and a global push to phase out fossil fuels, the layoffs are likely just beginning.

In northeastern Wyoming, where coal provides one out of every 10 jobs and has generated billions of dollars for schools, roads and other public services, plans for a popular museum or conference center seem far-fetched. Good jobs are scarce outside the energy industry, and retirement

benefits from faltering companies seem uncertain. Many locals wonder how their small towns will survive. Given all this, the official government response feels underwhelming.

While Zollverein is a long way from the Powder River Basin — the German mine is near a city of almost 600,000 people — U.S. economists and policy analysts are eyeing Europe, where governments, companies and unions are charting a different path toward life after coal. Overseas, coalfields are also facing job cuts, but unemployment benefits generally last longer, job training and economic-development programs are more extensive and retirement benefits better protected. "The safety net is much different in Europe," says Robert Godby, a University of Wyoming economist.

As concern over climate change has grown, Europe and the U.S. have taken different paths. In the U.S., coal-producing states and Congress have balked at steps to shift from coal to other industries, while Europe has more willingly embraced the transition.

Germany, which relied heavily on coal for power and jobs following World War II through reunification, has the most productive lignite mines in the world. But the government is now scaling back soft-coal mining as part of a na-

tional effort to address climate change by reducing fossil fuel use and investing in renewables. Mining subsidies are being phased out by 2018, according to agreements negotiated by the German government and industry.

The arrangement has created a "soft landing" for workers and companies without unexpected mass layoffs or abrupt bankruptcies. Many older workers will ease into retirement, while younger miners can take advantage of Germany's strong vocational training and apprenticeship programs to pursue work in engineering, technology and other industries.

The U.S., however, lacks a comprehensive climate action or energy policy. Miners and officials in Wyoming and elsewhere tend to blame President Obama and the Clean Power Plan, rather than global price drops, export declines and environmental pressures, for coal's downfall. "First, it's fiction," says Adele Morris, a senior fellow with the Brookings Institution, who authored a recent report on the future of coal communities and workforces, "and, second, it's unconscionable for leaders to not serve the people. It behooves us to do right by these folks who kept the lights on."

Instead, while global forces buffet industry and workers, U.S. lawmakers have done little to ease their pain or adjust to new realities. Wyoming Gov. Matt Mead, R, opened temporary community resource centers in the coal towns of Casper, Gillette and Douglas to provide information on unemployment insurance, job opportunities and training, and counseling services. Following Black Thursday, more than 900 people showed up at the centers and workforce offices, including some unemployed oil and gas workers. But the state's latest energy strategy is focused on fossil fuels with scarcely any mention of renewables, and Mead recently said Wyoming is "doubling down on coal," aggressively backing unproven "clean coal" and carbon capture and storage technology, in hopes of somehow bucking the global downturn.

In Europe, stabilizing forces also include the unions. Germany's mining, energy and chemical industry trade union is one of the nation's strongest, and has helped maintain welfare and retirement benefits and pensions and supported the

Please see **Euro coal**, page 23

## THE LATEST

### Backstory

As coal fades, industrial solar and wind energy are filling the gap. **But massive solar thermal collectors and wind turbines kill a lot of birds, including federally protected eagles and migratory birds.** A researcher estimated that one solar facility alone, Ivanpah near the Southern California-Nevada border, killed up to 30,000 birds in 2014. The industries, however, have been slow to admit the problem ("Green Energy's Dirty Secret," *HCN*, 10/26/15).

### Followup

Now, the largest planned onshore wind facility in the country has plans to reduce eagle deaths. A U.S. Fish and Wildlife Service study projected Wyoming's Chokecherry and Sierra Madre wind farm would kill 10 to 14 golden eagles each year, down from the 46 to 64 estimated in 2012. Power Company of Wyoming says it will relocate and adjust turbines based on eagle flight-path data. Meanwhile, **the Obama Administration again proposed giving wind and other energy industries a 30-year pass on killing or injuring more than 4,000 eagles annually** — nearly four times the current limit. Public comment is open through July 5.

PAIGE BLANKENBUEHLER

Correspondent Joshua Zaffos writes from Fort Collins, Colorado. @jzaffos

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TO SEE THEM RUN: GREAT PLAINS COYOTE COURSING  
By Eric A. Eliason, Photos by Scott Squire  
112 pages, hardcover: \$40. University Press of Mississippi, 2015

The photographs by Scott Squire in the book, *To See Them Run*, offer a glimpse of an unusual Great Plains tradition called “coyote coursing,” a sport that involves training athletic hounds to run down coyotes. The book also includes vignettes written by Eric Eliason about some of the characters involved. The sport is “an uncommercialized and never-before-studied vernacular tradition,” writes Eliason. Coyote hunting is widespread across the country, but coursing remains relatively uncommon, though still contentious. *To See Them Run* sidesteps the controversy entirely; no photos show the end of the hunt, when the greyhounds actually catch and kill their prey. In the end, that’s what is most unsettling about Eliason’s book: It keeps the gore of an otherwise bloody hunt aesthetically out of view. PAIGE BLANKENBUEHLER

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Guy Martz fires his .22 revolver across a gully as his dogs scan the prairie for coyotes, above. Todd Fritz's kennel with "Pinhead," a dog who doesn't hunt coyotes, left. SCOTT SQUIRE

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## Blossoming fruit trees and a bounty of awards

As local orchards and vineyards gear up for business, the *High Country News* staff has been busier than ever. Something about this glorious time of year is bringing visitors aplenty to our headquarters here in Paonia, Colorado. **Erik Cadaret** of Mission Viejo, California, recently toured the office before jetting off to Utah's national parks on a 25-day solo adventure. We also caught up with loyal readers **Chris Caskey** and **Holly Williamson**, who live on the Front Range. They stopped by *HCN* and Solar Energy International, then grabbed lunch from Taco Bliss, our local taco truck. Thanks for dropping in!

It's been an exciting time for us: The Society of Professional Journalists recognized some of our staff in its Top of the Rockies Awards.

Washington, D.C., correspondent **Elizabeth Shogren** scored first place in enterprise reporting for her feature story, "The Campaign Against Coal," published last November. **Cindy Wehling**, our head of design, and longtime contributor **Marshall Swearingen** received second place in the infographic category for an interactive timeline of public-lands protection through the Antiquities Act. And associate designer **Brooke Warren**, together with contributing photographer **Garrett Grove**, won second place in feature story page design for last July's "The Human Factor." Elizabeth and **Jonathan Thompson**, Durango-based senior editor, also won

second and third place, respectively, in general reporting for coverage of the failures of the Federal Emergency Management Agency and the mysteries of methane gas. Cindy and **Kate Schimel**, our associate editor, took second place in public service journalism for their project "Why Westerners die at the hands of cops."

And that's not all: Online editor **Tay Wiles** and her team snagged a first-place award for general website excellence, while Jonathan received second place in breaking news for his coverage of the Animas River spill. Way to go, team!

Finally, contributing writer **Hal Herring** — who chronicled his experience at the Bundy-led wildlife refuge occupation in the recent cover story, "Making Sense of Malheur" — received the Backcountry Hunters and Anglers 2016 Ted Trueblood Award, which recognizes journalism on public lands, water and wildlife. Hats off to you, sir.

When our contributors aren't busy winning awards, they're writing books. *HCN* contributing writer **Eric Wagner** just published *The Once and Future River*, which chronicles Seattle's Duwamish River Superfund site and its possible restoration. Congratulations, Eric!

Now that we've tooted our own horn sufficiently, we want to reserve the last and highest praise for you, our readers. Thank you all for making *HCN* possible.

—Paige Blankenbuehler  
for the staff



Pages from some of our award-winning content, clockwise from upper left, in issues 47.12, 47.15, 47.22 and 47.19.

# Grizzly Face-Off

*The Yellowstone grizzly  
population is poised  
to lose federal protections  
— for better or worse*

FEATURE BY GLORIA DICKIE





**E**very morning, David Mattson hikes up the steep hillside behind his house in Livingston, Montana. From there, he surveys the swath of Paradise Valley that unfurls before him, flanked by the northern terminus of the Absaroka Range. He can see the subdued trickle of Suce Creek, which threatened to flood last spring; a multi-million-dollar mansion — abandoned by a Florida lawyer who found the area too windy — and the pale gray barn that a mountain lion raided late one night, making off with a couple of goats. But Mattson usually focuses less on the valley below him, and more on the tree line above.

He seeks out a smooth, distant ridge covered in what appear to be spiky gray toothpicks. Not long ago, that ridge was host to a thicket of green and healthy whitebark pines. Today, more than 90 percent of the region's trees are gone. "Back in 2007, you could come up and watch the trees decline," he says, tracing the loss with a gloved finger. "Everywhere you looked during that period, whitebark pine was dying."

Mattson is one of the country's most eminent grizzly bear biologists, so he found the rapid decline especially worrying. In the summer of 1988, 28 percent of the whitebark pines in Yellowstone National Park burned in devastating fires. Later, in the 1990s, Mattson watched the region's whitebarks die from blister rust, a non-native fungus. So when the beetle-kill epidemic hit in the early-2000s, it devastated already struggling forests. And it also threatened everything that depends on those forests, particularly the Yellowstone grizzly bear, which relies on whitebark pine nuts as a key source of nutrition. Fresh off the endangered species list and without federal protections, the Yellowstone grizzly was suddenly facing an uncertain future. Citing Mattson's research on the relationship between the bear and the nuts, conservation groups fought hard in court to regain the bear's protected status. The strategy worked: In 2011, the 9th Circuit Court deemed the Yellowstone grizzly to be still in danger and relisted it as threatened.

But now Mattson feels like he's suffering from a serious case of déjà vu. In March, the U.S. Fish and Wildlife Service announced its plans to move forward with a proposal to delist the Yellowstone grizzly bear, citing the 700-some bears who currently live in the Greater Yellowstone Ecosystem as a victory for the recovery effort — the successful culmination of 41 years of struggle, and an indicator of the health of the grizzly population. With fewer federal restrictions, states would be able to restore trophy hunts and gain revenue, as well as more easily resolve livestock conflicts. But scientists and conservationists fear that the move to delist relies too heavily on uncertain science and is largely a response to state pressure. If the federal government had the bear's best interest in mind, they say, why wouldn't it wait to be sure the grizzly was truly recovered?

For Mattson, 62, who has dedicated much of his life to protecting these bears, another delisting would be a heartbreaking defeat. "It's been an incredibly fascinating career, observing these bears," he says. "And it's been a cause for grief."

*"It's been an incredibly fascinating career, observing these bears. And it's been a cause for grief."*

—David Mattson,  
Montana bear biologist  
and opponent of  
delisting the grizzly

A collared grizzly bear stands to get a better view of a nearby grizzly sow and cub in Grand Teton National Park. MARK GÖCKE



Chris Servheen, grizzly bear recovery coordinator for the U.S. Fish and Wildlife Service, center, talks with Frank van Manen, center right, of the U.S. Geological Survey and leader of the Interagency Grizzly Bear Study Team, during a break at a Bozeman, Montana, public hearing in April over the proposed delisting of the Greater Yellowstone grizzly bear population. (Servheen retired later that month.) MIKE GREENER

“It’s not like the Wilderness Act, where places must forever remain listed after they’ve been designated. The ESA needs success stories to strengthen the law, and the Yellowstone grizzly bear recovery is the greatest success story of all.”

—Chris Servheen, U.S. Fish and Wildlife grizzly bear recovery coordinator

**CHRIS SERVHEEN HAS SERVED** as the U.S. Fish and Wildlife Service grizzly bear recovery coordinator since 1981 — long enough for his thick mustache to turn from brown to gray — working from his office at the University of Montana, where he earned his Ph.D. in wildlife biology and forestry. For more than three decades, his job has been to keep the Lower 48’s 1,800 grizzly bears alive and healthy; a delisting ruling would be the crowning achievement of his career.

“The objective of the Endangered Species Act is to get a species to the point where protection is no longer required,” says Servheen, who announced his retirement at the end of April. “It’s not like the Wilderness Act, where places must forever remain listed after they’ve been designated. The ESA needs success stories to strengthen the law, and the Yellowstone grizzly bear recovery is the greatest success story of all.”

In 1975, with the grizzly bear extirpated from 98 percent of its former range south of the Canadian border, the federal government opted to protect the five remaining populations in the Lower 48 as threatened under the 1973 Endangered Species Act. The ruling triggered an array of protective measures for bears in Yellowstone, Bitterroot, Selkirk/Cabinet-Yaak, the North Cascades and Northern Continental Divide, including halting the grizzly hunting season. In the Greater Yellowstone Ecosystem, which includes

34,375 square miles in and around the national park, rangers worked to close open garbage dumps, a long-standing source of bear-human conflict, in hopes of “rewilding” the fewer than 312 bears that remained.

In 1979, nearing the completion of his master’s degree in plant ecology, Mattson joined the Interagency Grizzly Bear Study Team, working as a field technician and collecting habitat data. Then, in 1983, federal, state and tribal entities formed the Interagency Grizzly Bear Committee to help boost the grizzly population, which had continued to decline despite the new protections. The committee, which would guide the bear’s recovery across all states, relied on the study team’s research to establish policies and alter land-management practices. Members worked with area managers to close grazing allotments that brought bears into conflict with livestock; changed garbage management in Yellowstone National Park; and limited road access. For 14 years, Mattson, who took over field investigations in 1984, contributed to the committee’s bear ecology research, counting bears and looking into the causes of bear mortality.

Much of this research came to fruition in 2013, 20 years after Mattson’s departure, when the study team released a report examining the impact of whitebark pine loss on bears — the reason the courts had earlier restored federal protection. The report noted that poor

whitebark pine production had caused bears to forage at lower elevations, creating a spike in conflicts with humans. And it found that lower cub and yearling survival slowed population growth in 2002. However, the study team also praised the bears’ diet diversity and ecological adaptability. Though omnivorous, Yellowstone grizzlies rely more on meat than other populations, the study team wrote, and many bears occupy areas with little or no whitebark pine habitat, and thus eat other foods. The reason more cubs and yearlings were dying, they figured, was not because of the whitebark pine declines, but because too many grizzlies were crowded into too small an area. Given that evidence, in 2013 the Yellowstone Ecosystem Subcommittee and Interagency Grizzly Bear Committee recommended that the Fish and Wildlife Service remove the bear from the endangered species list.

“We have three times as many bears occupying more than twice the range we did when we started,” says Servheen. That’s in spite of the fact that grizzly bears, or *Ursus arctos horribilis*, are the second slowest-reproducing land animal in North America, just behind the musk ox, taking two or three years to rear a single litter of cubs. And, unlike most other listed species, they sometimes kill human beings. Since 1872, grizzlies have killed eight people in Yellowstone National Park. “And yet we’ve done it,” Servheen says. “That’s a good story.”

Yet it’s a story with some hiccups. At the Yellowstone Ecosystem Subcommittee’s annual meeting in Teton Village, Wyoming, this past November, Frank van Manen, the bald, bespectacled Dutch ecologist who now leads the study team, walked up to the podium in Hotel Terra’s airy conference center and announced to dozens of grim-looking outfitters, photo safari guides and tribal representatives that the grizzly bear that Fish and Wildlife was so ready to delist had, in fact, declined over the previous year, from 757 to 714 animals. Van Manen quickly added that the number was within the range of variability, and that the long-term trends showed no evidence of decline, but that did little to dampen the palpable sense of frustration in the room.

And the most recent count doesn’t factor in all of Greater Yellowstone’s recent grizzly deaths — 61 in 2015, the most since records began. Instead, most of those deaths will be reflected in the 2016 count, when grizzlies first emerge from their winter dens. Last year, 37 bears were killed by humans, including the euthanization of the notorious mother grizzly who killed a hiker last summer. An additional 17 ursine fatalities are under investigation, the majority of which occurred during hunting season. Though they are much larger than their cousins and have distinctive features such as a dish-shaped face and shoulder hump, grizzlies can still be mistaken for black bears.

Fewer bears are living out their

roughly 25-year natural lifespan in the wild. Instead, bear and human conflicts are increasing “because bears are getting into areas where they haven’t been for decades,” van Manen said in a phone conversation a few weeks before the Teton Village meeting. “They’re moving into areas where people are not used to seeing grizzly bears.”

Some wildlife managers actually worry that continued protection of the bears could increase conflicts with humans and livestock, resulting in yet more bear deaths. Brian Nesvik, chief warden of Wyoming’s Game and Fish Department, believes that the states could do a better job of managing delisted bears, reducing conflicts and removing problem animals earlier. “The bottom line is the core of the grizzly bear population has reached carrying capacity, and there’s not a lot of room left in the sardine can to put more bears.”

**DRIVING THROUGH WYOMING’S RAIN-SOAKED BRIDGER-TETON** National Forest, it’s hard to miss the yellow, diamond-shaped signs that warn of “game” on the roads, a not-so-subtle reminder of how the state sees most wildlife: as something to be hunted. That may soon include grizzlies, too.

If and when the Yellowstone grizzly is delisted, regulated hunting will be allowed inside the 19,300-square-mile management zone that surrounds the park. The bear population would not be permitted to drop below 600, meaning that, according to the latest count, about 100 potentially could be killed. The quota would be divided between Wyoming, Idaho and Montana, with Wyoming hunters getting the largest share.

Further riling bruin-lovers, one Jackson Hole outfitter announced that as soon as grizzlies are delisted, he intends to target Bear 399, the Yellowstone ecosystem’s most famous and beloved grizzly. First collared in 2001, Bear 399 and her several litters of cubs have frequented Grand Teton’s roadsides for more than a decade, delighting sightseers. The outfitter told the *Jackson Hole News&Guide* that he was motivated by a hatred for “the federal government, bear-loving environmentalists and the Endangered Species Act.”

Such vitriolic reactions, Mattson says, “go back to fundamental world-views, where the idea that there would be a species out there that’s not hunted is a literal moral offense,” a philosophy Mattson refers to as “domestic utilitarian.” The philosophy is “fully embodied in state wildlife management,” he says, with disgust. “Wildlife are there to be used and dominated — and the ultimate act of domination is to kill them.”

The delisting proposal “is very much responding to state pressure,” says Noah Greenwald, the Center for Biological Diversity’s endangered species director. “It’s just unfortunate, because some of these state game agencies are terribly regressive.”



Nesvik, the Wyoming wildlife official, notes that his state is a strong believer in the state-run “North American model of wildlife management.” Management decisions, he says, are best made by the folks on the ground who live near bears. After all, he says, other species, like black bears, are successfully managed by the state. “What folks need to remember is the states are fully committed to ensuring we have a healthy recovered population of grizzly bears that won’t ever be threatened again.”

Some say that, unlikely as it may seem, the domestic utilitarian approach could help the bear. Once wildlife becomes game, hunters — a powerful, moneyed constituency — gain a stake in the

species’ survival. The healthier the bear population, the better the hunt. In effect, the same people who want to shoot the bears could become their best stewards.

**IT’S BEEN MORE THAN 20 YEARS** since David Mattson arrived for work one morning at the Yellowstone Interagency Grizzly Bear Study Team to find that his office had been invaded: His computer files deleted, research folders emptied and data confiscated. The jarring event, which would mark a turning point in Mattson’s career as a grizzly bear biologist, was chronicled in Todd Wilkinson’s 1998 *High Country News* feature “Grizzly War.” Later, Mattson learned that the apparent burglary had actually been a

Wyoming Game and Fish Department employees Terry Kreeger, Dan Thompson and Matt Huizenga admire the 23-year-old female grizzly 179 they had just re-collared, before releasing her back to the Bridger-Teton National Forest near Moran Junction. Data collected is used both by the state agency and the interagency team.

MARK GOCKE, WYOMING GAME AND FISH DEPT.

Bear biologist David Mattson and his wife, and fellow bear-activist Louisa Willcox, hike with their Australian shepherd, Tashi, along the hillside above their Paradise Valley home outside Livingston, Montana. The couple contends the grizzly population remains in peril and is fighting the delisting effort.

MIKE GREENER



“raid,” by the then-leader of the study team, Richard Knight, who stated in a memo that the incursion was “simply my retrieval of data that I am responsible for before it was used to further criticize the government.” Mattson had openly challenged the scientific basis for removing endangered species protections from the Yellowstone grizzly, something the federal wildlife service was eager to push along.

The experience shook Mattson to the core. “I thought science drove the world,” Mattson recalls, chuckling at his naiveté. “I thought science was the fountain of everything that mattered to decision-makers.” The middle-aged scientist fled, seeking refuge first at the University of Idaho, where he finished his doctoral degree, then in the Canadian Yukon’s Kluane National Park and Reserve, where he continued to study grizzlies, and later, when the ursine reminders proved too much, in the dusty American Southwest, where he surveyed the predatory behavior of mountain lions.

Eventually, Yellowstone’s grizzlies pulled him back home to Montana — that, and a certain grizzly bear activist. “I came back to Louisa, and therefore I came back to grizzly bears,” he says with a shy smile early one morning at the home he and his wife now share.

“Louisa” is Louisa Willcox, long a force to be reckoned with. Where Mattson appears soft-spoken and reflective, Willcox is outspoken and determined, quick to denounce what she sees as social and political injustices. She’s on the “pointy end” of advocacy, her husband says. Having spent most of her professional life at the center of grizzly bear conservation in

the Northern Rockies, the 62-year-old, gray-haired activist is accustomed to controversy. She served as program director of the Greater Yellowstone Coalition, then as the Natural Resources Defense Council’s senior wildlife advocate for nearly a decade, where she fought to relist the grizzly in 2007. Now semi-retired, she authors an incendiary email news bulletin, *Grizzly Times*.

Today, after what Willcox calls “a long, weird, wild ride” and six years of marriage, the couple constitutes what they term “the rebel bear force” in this corner of Montana.

**ON A COLD NOVEMBER NIGHT**, shortly after the first snow of the season, Mattson and Willcox pore over a draft of their latest *Grizzly Times* entry. It’s the day after the Teton Village meeting, and news of the population decline has traveled fast. Willcox and Mattson are in a bit of a tizzy. “Seven hundred and fourteen!” Willcox exclaims. The bookshelves in the couple’s home office, illuminated by the computer monitor’s harsh glow, overflow with skulls and specimens, books on bear biology and tomes of forest ecology. Their dog, Tashi, a black-and-white shepherd, sits patiently at their feet as they run through final edits before blasting news of the meeting’s revelations out to conservationists around the country. As the most persistent, and celebrated, auditor of the grizzly bear study team’s data, Mattson spends much of his time conducting external reviews and delivering presentations on his findings around the region to the public. The couple’s

work has drawn the ire of many delisting advocates. When Willcox started receiving death threats, the couple installed an elaborate external lighting system around their property.

Mattson’s audits go far beyond the whitebark pine nut research that made him famous. He examines population density and counting methods with a critical lens — because management decisions, and ultimately listing decisions, hinge on population figures — and he focuses on the bear’s diet of army cutworm moths, cutthroat trout and ungulate meat.

According to the best available science, 717 grizzly bears roam the Yellowstone ecosystem (a slight revision to November’s estimate of 714), the second-largest population in the Lower 48. But even van Manen, who has studied the world’s ursines, from sloth bears in Sri Lanka to China’s giant pandas, admits that the margin of error is large: Bears are notoriously hard to count. Still, he says, the agency has erred on the side of caution, and there may be as many as 1,000 bruins roaming the Yellowstone region’s woods.

Mattson, however, is not so sure. The traditional counting method, the Chao2 estimator, which extrapolates population estimates and growth trends from ground and aerial observations of females and their young cubs, is prone to overestimation, he says. And a newer technique, mark-resight, which uses a combination of radio-collar tracking and aerial observation, is also faulty, according to critics, in that it can generate population trends that would be biologically impossible.

Meanwhile, University of Colorado ecologist Daniel Doak found that the aerial “search effort” had increased substantially over the past 27 years, giving the false impression that the Yellowstone population was increasing. This leads folks like Mattson to believe the general population trend has remained stagnant, or even declined, despite the official counts.

The population impact of changing feeding behaviors can’t be ignored, either. In Yellowstone, gender once determined diet: Female grizzlies ate a lot of white-bark pine nuts, while males consumed nearly twice as much meat. Now, more and more females with cubs are feasting on ungulate carcasses and livestock to make up for the loss of whitebark pine and cutthroat trout, which were a staple until the mid-1990s, when whirling disease and invasive lake trout devastated the Yellowstone Lake cutthroat population. The meatier meals lead to conflict not only with humans, but also aggressive male bears and wolves.

Though the study team found no significant effects from whitebark pine loss, changes in grizzly populations can take over a decade to manifest. “Van Manen’s estimates are averaged essentially over the past 10-plus years, which completely masks the fairly dramatic changes that have gone on,” Mattson says. “Looking in the rearview mirror doesn’t have any sensitivity to what’s unfolding in real time.”

Other scientists are cautious too. For her master’s thesis, Ohio State University student Harmony Szarek surveyed the world’s foremost grizzly bear experts to determine how many were in favor of delisting. Of the 234 respondents, more than 60 percent believed the Yellowstone grizzly should remain listed as threatened or be upgraded to endangered.

“This was shocking to us,” says Jeremy Bruskotter, Szarek’s advisor and a professor in OSU’s Terrestrial Wildlife Ecology Lab. “We had anticipated that if the Fish and Wildlife Service was moving this proposal forward, then other scientists were probably going to be on the same page.”

Tom France, senior director of the National Wildlife Federation’s Northern Rockies Regional Center, is one of the few environmentalists willing to defend delisting.

“We have many, many species under the ESA and a limited set of federal resources. As we achieve success, like the Yellowstone grizzly, we need to redirect those federal resources to other more imperiled fish and wildlife.”

France says he’s looked closely at scientific audits done by Mattson and others, and believes “it doesn’t overcome the tremendous body of research that has been developed around the Yellowstone population. It’s indisputably one of the most studied populations in the world, and the body of evidence speaks loudly to recovery targets being met.”

Still, he adds, much of his support ultimately comes down to what happens

afterward. He’s OK with the Yellowstone grizzly being delisted, provided Montana and the Fish and Wildlife Service make strong, clear plans to link grizzly populations across the state.

**OUTSIDE THE ENTRANCE OF HOTEL TERRA,** Jim Laybourn clasps a white plastic sign between wooden claws. A gaping grizzly mouth covers his mustachioed face; fangs protrude over his eyebrows. A bodysuit of brown fur protects him from the November wind.

Laybourn, a photo guide, outfitter, and hunter in the Yellowstone valley, is here in bear costume to send a message to the Yellowstone Ecosystem Subcommittee: We grizzlies are worth more alive than dead, and there’s a very real economic reason to keep protecting us under the Endangered Species Act.

“Our tourism economy here is so based on bears,” says Laybourn, who ends up acting as doorman to the members of the study team as they search for the correct entrance. In 10 years working as a guide, Laybourn has taken hundreds of people into the dense coniferous forests of Yellowstone in search of grizzlies, not geysers. “Every single person I have ever taken out asks, ‘Are we going to see a bear today?’ For some people, it’s a life-changing experience.”

A 2014 study published in *The Journal of Environmental Management* entitled “The Economics of Roadside Bear Viewing” found that Yellowstone visitors would be willing to pay an additional \$41 if it ensured spotting roadside grizzlies. But if bears were barred from roadside habitat, the study noted, 155 jobs and more than \$10 million to the local economy could be lost.

At the end of January, Grand Teton National Park officials publicly spoke out against the potential delisting decision. “We are concerned about the potential harvest of grizzly bears adjacent to Grand Teton,” park spokesman Andrew White said. “This is a very important issue that may negatively affect grizzlies using the park as well as bear-viewing opportunities for visitors.”

Down the road, the bears’ charisma is on full display at the Grizzly and Wolf Discovery Center, nestled between an IMAX and a McDonald’s in West Yellowstone, Montana, the park’s tourist hub. As many as 100,000 people visit the center each year when the wild disappoints. On a chilly November day, Kimberly Shields, a young naturalist with dark brown hair and maple-leaf-red winter coat, talks to the few off-season visitors. Behind her, resident brother and sister grizzlies Kobuk and Nakina tussle in their enclosure. Their mother and another sibling were caught raiding a chicken house 17 years ago in Alaska and shot by a farmer, who left the two remaining cubs for dead.

Now lumbering, full-grown bruins, they awe, even as they fight over pumpkin snacks. When asked what it was about grizzlies that inspired him,

Mattson made no mention of their brute force or 400-plus pound presence. Rather, he gave a scientific answer: “They’re more intelligent, adaptable, omnivorous. The ways they plug into the environment are unending. Frankly, they just do that many more interesting things.”

When it comes to delisting, Shields says, “we try to provide a neutral stance and let people decide for themselves. Unfortunately, she adds, few of the people who come through understand delisting, or are even aware of the pending decision.

She’s less worried about hunting than about the potential loss of habitat under delisting. “Right now, the grizzly population seems like it’s at a really healthy level,” she says, “but it’s ultimately an island population.”

Under the draft Grizzly Bear Conservation Strategy most development is restricted in the 5.5 million-acre conservation area. But more than half of the habitat outside the recovery zone is open to oil and gas development and timber cutting, with even more land available to road building.

“We like to tell people, you don’t need to save hundreds of thousands of acres to save these bears. You just need to save the right spots,” says Shields.

The Northern Continental Divide Ecosystem, which spans 9,600 square miles in northwestern Montana and includes Glacier National Park, is home to an estimated 960 grizzly bears. A century ago, Yellowstone’s grizzlies mingled and procreated with these northern neighbors, and one goal of the 1993 Recovery Plan was to re-unite the two groups. But today more than 150 treacherous miles of farmland and roadways still separate the populations.

Servheen, however, is confident the two populations will soon connect, aided

“We had anticipated that if the Fish and Wildlife Service was moving this proposal forward, then other scientists were probably going to be on the same page.”

—Jeremy Bruskotter, speaking about a study that was part of an Ohio State University master’s thesis that found more than 60 percent of grizzly experts were against delisting

## Grizzly bears in the West



ERIC BAKER. SOURCE: CENTER FOR BIOLOGICAL DIVERSITY.



**Grizzly 399 and her triplets navigate a bear jam in Grand Teton National Park. One Jackson Hole outfitter has threatened to target 399, if grizzlies are delisted.**

THOMAS D. MANGELSEN/  
WWW.MANGELSEN.COM

by projects to help the animals bridge highways, like I-90, which cuts the two populations in half. Even without connectivity, the Yellowstone population is genetically healthy, says Servheen. "It's not a small isolated population; it's a large isolated population."

Mattson confirms that the divide is shrinking. "They've covered about half the distance going down — the gap, at this point, is not huge." But he worries that once the Yellowstone grizzly is delisted, the progress will cease. Suddenly, bears will be hunted on the fringes, or euthanized for moving into agricultural land. "There's a predictable geography to where death rates are going to escalate first," he explains, "and it's going to be on the periphery."

**IN 2007, DAVID MATTSON** knew the "rebel bear force" had a good chance at getting grizzlies back on the endangered species list; the possible impacts of whitebark pine loss were clear. But this time, he says, will be tougher.

On a crisp, winter morning, while Mattson sips coffee out of a Grizzly Bear X-ing mug, a knock, followed by Tashi's barking, echoes from the front door.

"Oh, that's Kelly," says Willcox, rushing to greet a young woman with bright red curly hair, whom I immediately recognize from the meeting at Hotel Terra. Kelly Nokes was the only one who managed to make the Fish and Wildlife Service squirm, when she asked Richard Hannan, deputy director of the agency's Pacific Region office, if he was familiar with the case of gray wolves in the Great Lakes region.

Hannan, who seemed to have been brought in as a quasi public relations handler, cleared his throat and gruffly replied, "The U.S. Fish and Wildlife Service does

not agree with the decision of the Department of Justice when it comes to the gray wolf and is appealing their decision."

In 2013, the Humane Society sued to overturn U.S. Fish and Wildlife Service's final rule to delist the Great Lakes gray wolf. The U.S. District Court ruled in the Humane Society's favor, calling the agency's decision "arbitrary and capricious." Judge Beryl Howell ordered the immediate restoration of endangered species protections in Minnesota, Wisconsin and Michigan, halting the controversial hunts.

Nokes, who has a J.D. and master's in environmental law and policy from the Vermont Law School and is now the WildEarth Guardians' Carnivore Campaign Lead, plans to use a similar angle of attack against the Yellowstone grizzly delisting: The law does not allow for the piecemeal delisting of species by distinct population segments.

"The plain language of the Endangered Species Act is that a listed species may be delisted in its entirety only," she says. "The Service, in effect, is really thwarting the very purpose of the ESA and undermining efforts to recover the grizzly as a whole."

In other words, since the grizzly bear was listed in 1975 in all of the Lower 48 states, the U.S. Fish and Wildlife Service cannot slice the population into different subgroups, like Yellowstone or Bitterroot or North Cascades, simply for the purpose of delisting them one by one.

Not long after the Great Lakes gray wolf verdict, Michigan and Wisconsin filed an appeal, which is pending. The outcome of the case could very well determine the grizzly bear's future.

**B BAR RANCH**, marketing itself as an "organic working guest ranch" that focuses

on environmental stewardship, lies about 40 miles from Willcox and Mattson's home. On my last day in Montana, Louisa suggests we stop in for a visit. Rumor has it that grizzlies have been seen foraging in nearby fields.

Indeed, says Trina Smith, the ranch's guest services supervisor, cars clogged the ranch's private roads all summer long. Some visitors even held tailgating parties while they waited for the grizzlies. By mid-September, Smith had counted 18 bears at once feeding on what the ranch presumed to be wild caraway root (an exciting new dietary discovery, if true), not far from the ranch's cattle. What might horrify some ranchers is more than tolerated at the B Bar — it's celebrated.

"The West is changing," Willcox concludes at dinner later that night, pulling apart a piece of chicken as we discuss the day's events. "Whether it's Bozeman or Yellowstone, or Colorado. There's a new kind of people living here, and they are not reliant on agriculture, logging and mining."

Instead, newcomers tend to be more interested in recreation, tourism and simple mountain living, far away from the highways and high-rises that plague cities. They have different value systems, says Willcox. But that doesn't mean the grizzly is out of the woods.

"The bears are still adjusting to a world without whitebark, trout and fewer elk. They can't withstand too much killing," says Willcox. Moreover, the new people moving to the mountains aren't as vocal or as engaged in the political process, leaving the microphone open for hunters, loggers and miners.

The Yellowstone grizzly remains in a perilous position, despite the hints of change. Perhaps only when the old value systems give way, and the rebel bear force is rendered obsolete, will Willcox and Mattson support delisting.

"The Old West knows it. They know they're going down. And they're just putting up the last, biggest fight they can over the thing they can fight over — grizzly bears."

As I head to bed that night, snow beginning to fall again in Paradise Valley, I have to wonder: Just how many grizzly bears is enough? How many bears will the people of Montana, Wyoming and Idaho truly tolerate? Once described by *The Milwaukee Journal* as the "king of the wild beasts of the Rocky Mountains" after the mauling of legendary frontiersman Hugh Glass, grizzlies were and are one of the few animals in North America considered "really dangerous." As much as Mattson and Willcox would love to see thousands of grizzlies in their home state and beyond, is this a feasible goal? Can grizzlies roam from Yellowstone to Yukon? Or is 717 bears the best we can hope for? Ultimately, it's an answer that will only emerge once the bear is delisted, and the states and the people are left to decide just how far the monarch of the wilderness will be allowed to reign. □



Gloria Dickie is a freelance environmental journalist and former HCN intern who writes from Boulder, Colorado.

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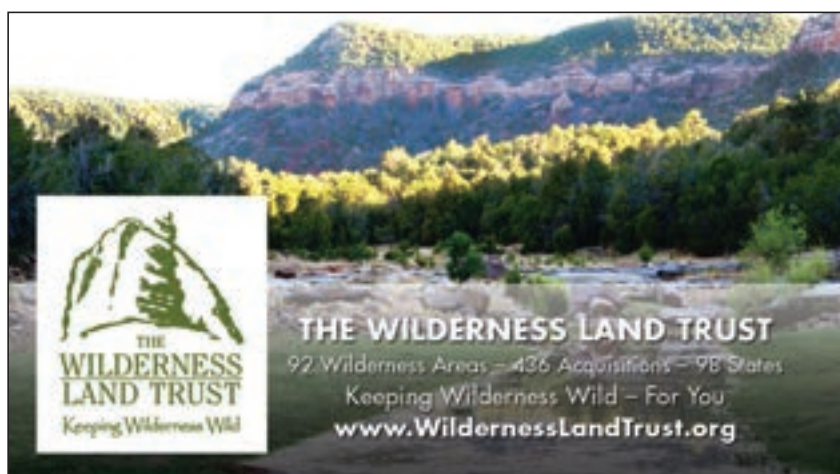
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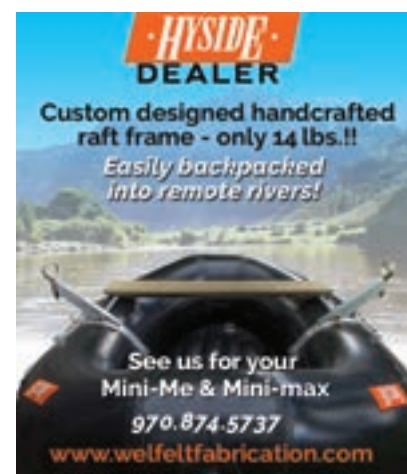
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prosecutor regarding which public defenders to hire, an arrangement comparable to letting one team pick its opponent, says Anna Brower of the American Civil Liberties Association (ACLU). The public defender may hesitate to ask for a special investigator or expert witnesses, because doing so not only reveals the defense's strategy, it also costs the county extra money. According to the multiple current or former public defenders interviewed for this story, many lawyers have lost their contracts after billing the county for too many such "extras," like choosing to go to trial instead of arranging a plea deal. The result is a justice culture that rewards deference over a robust defense, says Brower.

Ending up with a criminal record due to inadequate legal representation has consequences that go beyond the courtroom. A poor person with a record can be barred from certain educational grants, professional licenses and public housing. Inadequate public defense also contributes to Utah's growing number of people behind bars for minor offenses or for simply violating the terms of their probation or parole, by missing an appointment or failing to pay a fine.

Ironically, short-changing public defense ends up costing the state more at the other end, says David Carroll, the executive director of the Sixth Amendment Center. "When you don't have proper representation, people sit in jail longer pre-trial and get longer sentences," he says. In the U.S., prison systems now account for

\$1 out of every \$15 of state general fund discretionary dollars.

Utah's public defense may be among the country's worst, but the state is by no means the only one where the system is failing the poor. Studebaker says it's a "monstrous problem" throughout the rural West, where counties with low tax bases suffer the most from a lack of state funding. In January, Studebaker sued Washington County, Utah, alleging unconstitutional public defense on behalf of several defendants facing serious criminal charges.

The lawsuit recalls Sue's experience in neighboring Iron County. Under Washington County's current system, the suit notes, public defenders regularly fail to meet and confer with their clients in a meaningful manner before trial. Often, the lawyer's contact with a defendant is limited to a few minutes in the courthouse immediately prior to a court appearance. Overall, the complaint states, Utah's public defense system is designed "to minimize potential financial liability rather than to ensure adequate defense representation."

Studebaker hopes his suit will help spur the changes necessary to fix the system, such as establishing a statewide public defender office that employs full-time lawyers.

Already, a number of Western states have taken steps toward reform. In recent years, Nevada, Idaho, Montana and Washington have abolished flat-fee contracting, and both Montana and Colorado formed statewide commissions to

enforce higher standards for rural public defenders.

In March, Utah's Legislature passed a bill aimed at reforming the state's system. The proposal, which will likely go into effect this May, would create a statewide public defense commission to establish standards and provide training and money to the counties. Those standards would presumably address the flat-rate contracts and other shortcomings. But Brower says the funding falls far short of the estimated \$30 million-\$40 million that's needed: There's only \$1.5 million to start with, and then \$500,000 annually thereafter.

Meanwhile, Sue's fine has now risen to over \$900, thanks to late fees and the additional fee the county imposed for sending it to a collections agency. Before she was released from jail, a judge ordered her to start paying the fine in \$25 monthly installments, which Sue still cannot afford to pay. She is \$50,000 in debt from her master's degree and gets by with the help of food stamps.

Last year, Sue applied to live in a housing shelter, but was denied when a previous conviction for forging a prescription for painkillers appeared on a background check. She is trying to support herself through a variety of odd jobs: Writing about hiking trails around Parowan for a local tourism website, teaching karate, walking dogs, handing out samples at Costco. But a full-time position with a salary that would allow her to pay off her debts still eludes her — likely because of her two criminal convictions. Sometimes she thinks about that vial of aspirin. The price, she remembers ruefully, was just \$1.45.

For the ACLU's Brower, Sue's experience highlights the substandard treatment of Utah's poor at the hands of its criminal justice system. "You put public defenders in a situation where they can't be a vigorous defender of their client's rights," she says, noting that an adequate defense would almost certainly have argued down the fee, had it written off altogether, or pushed for community service instead, given Sue's financial circumstances and mental health problems.

Sue says that she is resigned to poverty. A few weeks ago, she applied for disability benefits, hoping that, if she's successful, it will enable her to finally pay off the fine. Eventually, Sue would like to become a writer, or perhaps an addiction therapist. "I've heard they're less strict on background checks," she says. □



Sue, who has incurred a lot of debt, partly because she has not had adequate legal representation, and a friend's dog in Utah.

COURTESY PHOTO

For Utah's poor, the consequences of having a criminal record due to poor legal representation can include being barred from certain educational grants, professional licenses and public housing.

**Euro coal** *continued from page 9*

negotiated phase-outs of coal. In contrast, the once-mighty U.S. mining-labor movement is in steep decline. The United Mine Workers had 800,000 members in the 1930s, but now represents just 35,000 active and 40,000 retired miners. A mere 5 percent of mining, quarrying, and oil and gas workers were members in 2014.

"In the Powder River Basin, union mining is almost nonexistent," says Godby, partly since strip mines there have small workforces compared to West Virginia and Kentucky's underground mines. The union has fought hard to prevent companies from trying to duck out of retirement benefits in Appalachia, but it has little stake or influence in the Powder River Basin. Arch Coal, at least, has said it will continue to make retiree benefit payments after filing for bankruptcy. But the company's executives also paid themselves exorbitant bonuses despite the bankruptcy announcements. For laid-off workers, Arch is offering between four and 26 weeks of severance pay.

Behind decisions over unions, retirement and support services, notes Godby, is a larger debate over what citizens expect from governments. In Europe, gov-

ernments and citizens have mostly supported broader public resources and a greater safety net than the U.S., where limited government remains a mantra among conservatives and even some progressives. On top of that, Europe's politics are generally more left-leaning, with social-democratic influences that walk the line between capitalism and socialism.

A stronger safety net, however, requires higher taxes, a trade-off most Americans resist. So while Wyoming miners average \$83,000 a year, a laid-off worker collects perhaps \$470 a week, and benefits can run out after half a year. In Germany, a lignite miner's salary was roughly \$57,000, in 2011, and tax rates are about double U.S. rates, but unemployment benefits pay job seekers two-thirds of their former earnings for up to two years, and healthcare continues despite job loss.

In remote Svalbard, Norway, small coal-mining communities are surviving thanks to government help. Payments of about \$66 million helped the state-owned mining company, Store Norske, concentrate operations in one expanded mine-shaft while closing down others, giving the community time to develop alternative industries. The company and gov-

ernment also formed a local tourism enterprise and helped develop a university Arctic research program.

In the U.S., President Obama launched the POWER Initiative last year to provide about the same amount, \$65.8 million, for job training, job creation and economic diversification for slumping coal communities. But it's mostly focused on Appalachia, and isn't big enough, considering the size of the country's energy industry. According to the recent Brookings report, protecting retiree benefits, reclaiming abandoned mines and providing substantive job training would require tens of *billions* of dollars.

To generate that sort of money, Morris suggests that a carbon tax — anathema to energy-dependent states and many politicians — could actually help by providing predictable coal-price changes for companies and collecting funds that could be set aside to help communities and workers.

"Regardless of regulation, the market and outlook for coal is grim, and it's unfair and unwise to rely on a rebound," Morris says. "It's going to take a lot of money, and our (national and state) budgets are wholly unsuited to the kind of ambition we need to help revitalize these areas. But it's much easier said than done." □

Overseas, coalfields are also facing job cuts, but unemployment benefits generally last longer, job training and economic-development programs are more extensive and retirement benefits better protected.



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"You ready to make the world a better place?" Judy Hopps asks an unimpressed group of megafauna and predator police officers in *Zootopia*.

DISNEY

## Real predators don't eat popsicles



OPINION BY  
KIM TODD

The movie starts with a roar. Then we hear the words "fear," "treachery" and "bloodlust." Disney's latest offering highlights the relationship between predators and prey. Curious to see how they'd spin this for kids, I bring my daughter to a spring break showing. At first, in *Zootopia*, they don't pretty things up. Someone is about to get eaten.

Then the camera pulls back to reveal a school play about the distant past. "Over time we evolved and moved beyond our primitive savage ways," a narrator intones. "Wait, who did?" I think. "The tiger? The kid two rows over eating a hot dog? Don't carnivores still deal with blood and sharp teeth?"

Ecological inaccuracies in kids' movies push my buttons, I admit. *The New Yorker's* suggestion that SpongeBob SquarePants is an actual sea sponge triggered a rant about how he must be polyurethane *because his pants are square*. And don't get me started on *Dr. Dolittle 2*, where a bear that looks like a grizzly roams a forest outside San Francisco.

Clearly, I need to calm down. These are just fantasies. No one confuses the creatures cracking jokes on screen with real animals, do they?

*Zootopia* tells the story of Judy Hopps, the first rabbit on the police department of the city of Zootopia, where predation no longer exists and ecosystems (Rainforest District, Sahara Square) are connected by rail, in a layout that looks suspiciously like Disneyland. Despite the lion mayor's "mammal inclusion initiative," the police department is full of hulking, male carnivores: leopards, tigers, polar bears. Judy meets with sneers and gets assigned to ticket parked cars. But when several meat-eaters revert to their savage ways, Officer Hopps is on the case.

At her first press conference, she issues a warning about predators. "We may be evolved, but deep down we are still animals," Hopps says. She implies the attacks might have something to do with "biology." Yet the movie exists to prove her wrong. It is, as reviewers pointed out, a metaphor for civil rights — the opposition faced by women and people of color as they joined police and fire departments. And, as such, it's topical and convincing. But isn't biology the key? Isn't Hopps right?

### Predators matter. And what matters is their biology, their teeth and the blood that gets shed.

The early 20th century was marked by efforts to sanitize nature, to make our national parks into "zootopias." Though many predators were killed off, Yellowstone and Glacier allowed a few to linger. According to Yellowstone's superintendent in 1925, "In great wilderness areas such as these parks are, we can afford the luxury of a few of even these cruel and destructive beasts."

And the lesson from these efforts to create a real-life Zootopia? Predators matter. And what matters is their biology, their teeth and the blood that gets shed. It's a lesson many in the West have learned as carnivores struggle to make a comeback: We ignore wildlife ecology at our peril. The issue of how to respond still roils many communities, but everyone can agree that waiting for meat-eaters to evolve to prefer kale isn't the solution.

In the East, forests lacking predators are so overrun by white-tailed deer

that some native plants are browsed too heavily to grow back. When the deer problem first became apparent in the 1940s, and conservationist Aldo Leopold wanted to change hunting rules, his opponents used a powerful symbol against him, a movie that had just been released: *Bambi*.

Over the years, my family has absorbed my concerns. The credits roll and my daughter wonders, "Where did the reptiles live?" My husband, when I describe the characters later, asks, "What did they eat?" For a movie all about diet, not much. The rabbits ate carrots. The predators drank soda and ate popsicles, donuts and a few blueberries. The question of protein was politely ducked. Predation is still seen, as it was in the 1920s, as "savage," "cruel" and "destructive."

Using animals as a metaphor without reference to reality in the wild is a challenge because the animals' beastly nature is difficult to disguise. Adults get the racial profiling references, but, according to an article in the *Los Angeles Times*, kids are already clamoring for pet fennec foxes, like the cute sidekick in *Zootopia*.

Movies, particularly the most artistic, feed our sense of the wild. That vision shouldn't be that of a zoo or a utopia. Our biologically rich, morally complex world is fantastic enough, and it is humans, not predators, who will have to adapt and evolve in order for it to flourish. □

*Kim Todd writes in Minneapolis.*

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Some environmentalists and scientists have begun calling our current epoch the “Anthropocene” to acknowledge the gross changes humans have induced in global ecosystems. But the biologist and author Edward O. Wilson has proposed an alternative name: “Eremocene,” or the Age of Loneliness, a name that alludes to the fact that we are in the midst of a sixth mass extinction, one for which humans are primarily responsible. The impending loss of so many of our fellow creatures means that humanity faces what can best be described as a kind of “species loneliness.” Regardless of what we call this new epoch, there are witnesses emerging — writers attuned to their environment — who are keenly aware of the implications of species loss, and who vow to bear witness to the songs of past beings and savor the life that remains.

In *Giant Sloths and Sabertooth Cats: Extinct Mammals and the Archaeology of the Ice Age Great Basin*, zooarchaeologist Donald Grayson surveys North America’s last mass extinction, which occurred at the end of the Rancholabrean North American Land Mammal Age in the Late Pleistocene. In all, the last ice age wiped out 37 genera, and Grayson pays particular attention to the 20 genera — mostly megafauna — that once populated what’s known today as the Great Basin, which covers most of Nevada and parts of five adjoining states. He compiles incisive obituaries for each bygone species, including mammoths, mastodons, sabertooth cats and the largest flying bird ever recorded, the giant teratorn, which “weighed about 150 pounds, and had a wingspan of about 23 feet,” analogous to “a Cessna 152 light aircraft.” In this chapter, these “hugest and fiercest and strangest” of forms seem to manifest only to perish. Echoing the 19th century naturalist Alfred Russel Wallace, Grayson says that “compared to the world of the late Pleistocene, our world really is zoologically impoverished.”

Grayson compresses and addresses the centuries of ignorance surrounding extinction by offering a series of hard-boiled clarifications. His is a temperate voice, wary of global theories of extinction. He is more interested in advocating for a compendium of individual species’ histories. Because it is “difficult to extract definitive answers from the fossil record,” an extinction narrative must instead be singular and idiosyncratic to each unique species.

While the fossil record preserves the story of extinct species, one can turn to a field guide to apprehend extant species.

For over a century, North American naturalists have been compiling field guides to aid citizen scientists in identifying the native flora and fauna of particular regions. In the case of *The Sonoran Desert: A Literary Field Guide*, editors Eric Magrane and Christopher Cokinos are both guides and anthologists; this is a Sonoran Desert tour led by a park ranger with an

MFA. Cokinos makes the case that “the empiricism of science, the imaginative and cognitive leaps of poetry, the close observation of both ... we need it all.” *The Sonoran Desert* is not just a field guide, but also an anthology of prose and poetry about the Arizona Upland. As in earlier “literary field guides” such as *Califauna* and *Califlora* (Heyday 2007, 2012), each species’ passage is accompanied by an essay or poem, an illustration, and a spirited description of its morphology, habitat and life history.

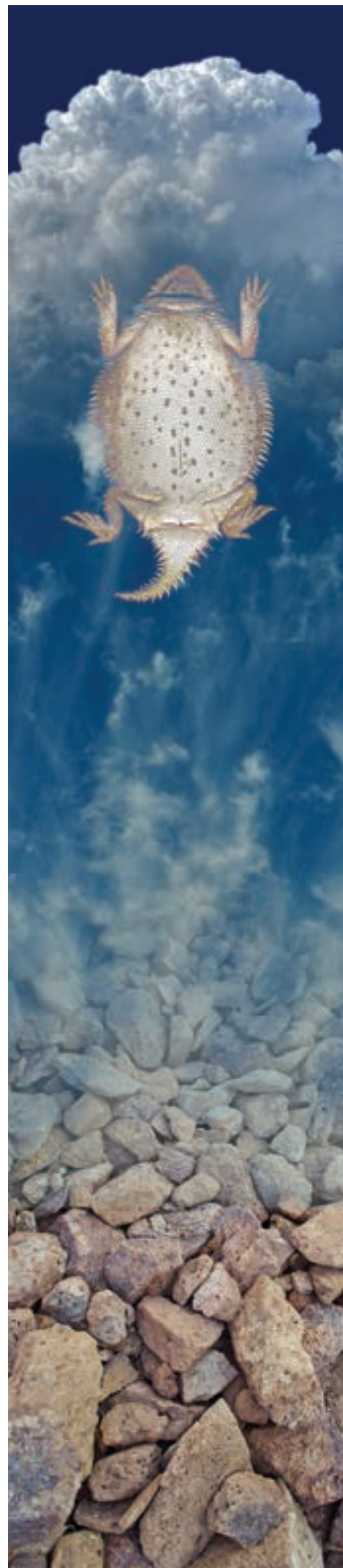
The 63 literary stewards of the Sonoran Desert were mostly recruited during the *National Geographic* BioBlitz in Saguaro National Park in 2011, an event where citizen scientists teamed up with professionals to develop a 24-hour species inventory. The resulting anthology is varied — a blend of witness and imagination, intention and happy accident, anthropomorphism and zoomorphism. In a single-sentence piece about the broad-billed hummingbird, Arizona’s first poet laureate, Alberto Alvaro Ríos, writes: “Hummingbirds are quarter notes which have left the nest of the flute.” Elsewhere, Alison Hawthorne Deming observes, “The saguaros all hum together like Tibetan or Gregorian monks / one green chord that people hear when they drive.” Such synchronicities abound in *The Sonoran Desert*. As Cokinos writes, it becomes a “form of literary biomimicry,” tandem imitations of nature’s patterns.

Many of these species’ life histories are implicitly authored by the Tohono O’odham Nation, a tribe that has dwelt in the Sonoran Desert for thousands of years. “This is what the Tohono O’odham tell us,” one passage says, “that humans can be turned into Saguaro.” In fact, the passage on *Canis latrans*, the coyote, is written by Angelo Joaquin Jr., a Tohono O’odham Coyote Clan Member. Neither poetry nor essay, this piece functions as a kind of outlying mythology.

In *The Sonoran Desert*, creosote and Coulter’s lupine garner equal attention, as do roadrunner and verdin, javelina and red-spotted toad. Likewise, celebrated Sonoran authors Joy Williams, Ofelia Zepeda and Jane Miller are joined by a chorus of newcomers, including Jeevan Narney, Aisha Sabatini Sloan and Maya L. Kapoor, who writes in her passage on ocotillo: “to live in the desert sometimes means nothing more than anchoring into soil, eating hot air, waiting for seasons of lushness.”

*Giant Sloths and Sabertooth Cats* and *The Sonoran Desert* are both significant literary offerings that illuminate the bioecology of the Great Basin’s past as well as the Sonoran Desert’s present. For those who dread the prospect of an Age of Loneliness, these books provide excellent company, bringing to life the precious biota of the American West, both the species that have long since vanished and those that still survive, at least for now.

BY LAWRENCE LENHART



Dreaming down the Rain. PHOTO COLLAGE BY PAUL MIROCHA



Birds, including sparrows, frequently find their way inside airport terminals, flitting among travelers.

RON DOWDELL

Fiddle feet. Wanderlust. It's something that most of us have, if we were lucky enough to grow up in the era of American Prosperity.

We leave the nest.

We travel far from home to go to school or take a job. Or just to travel for the sake of travel, on a lark, if we have a few pennies to rub together. Just because the great wide world is *there*.

I grew up road-tripping in the back-seat of a VW bug, and puddle-jumping from Louisiana to Texas to Alabama visiting relatives during school breaks.

As my family's center of gravity moved West, our bayou nest frayed, and I developed a new migration pattern that spins out like a spiral from Phoenix, Arizona. I'd lift off to the Great Plains, or take wing and chase work and adventure in Western locales like Boulder, Sea-Tac, Portland, Reno and Jenner-by-the-Sea. Occasionally, I traipse off to distant glaciers — the Alps, Iceland — but more often than not, my window seat looks out upon the sharp-relief vistas of the arid West.

Along the way, I've come to love Phoenix's Sky Harbor, my home airport, even though I deplore its crowds and noise and cramped quarters. For me, air travel is one long opportunity to practice mindfulness.

But in Phoenix, there's one sweet note of relief: Birds roost in some concourses of the airport. They fly in through the jetways, which open just long enough for them to zoom in. I think they're sparrows, but there are few people worse at identifying birds than I am. Let's just agree to call them "birds." They fly between the ledges of the enormous picture windows, and have interloped at Sky Harbor for so many years now that the concourse staff have installed birdhouses.

They don't seem to mind our frenzy, our leave-takings and homecomings, our worries or our anticipation.

Occasionally, they startle travelers by zipping between their ersatz nests to the floor, where they've spotted a feast. They glean. They hop. They clean up after us, separating our edible droppings from the bags and cups strewn on the floor. When the job is done, they jet off again.

They keep up a running commentary on life, hunger, and the banishment of hunger. People don't always notice their chatter, though, perhaps thinking it part of a soundtrack — or maybe they are just too preoccupied with phone calls or computer games to pay attention. Perhaps it's a good thing that most people also don't see the grayish-white guano covering the ceiling beams or the metal sculptures over a water fountain. (The maintenance staff always pay special attention to that water fountain. Good job.)

I once asked a pilot on his way to catch a flight — well, I guess he would have been on his way to "fly" a flight — if he thought the birds were jealous of the planes. He laughed and said he thought they were just trying to get out.

But he was wrong about that, said Liz, a friendly gate agent in Concourse D. She told me that the birds get shooed out of Sky Harbor every now and then by the maintenance staff, but that they always sneak back in. She feels sorry for them, and so she puts out water dishes. Liz also says they love popcorn.

I got the feeling that Liz really likes having them around. Whatever the correct attitude is about feeding this population (which probably depends on whether you see them as pests, pets, accidents of ecology or mere novelties), I found Liz's

They don't seem to mind our frenzy, our leave-takings and homecomings, our worries or our anticipation.

attention and concern endearing. In the short time I spent in Liz's orbit, she fielded hundreds of questions and placated dozens of angry travelers. Maybe a few moments of watching or listening to the birds is, for her, a relief.

For a while, during my unsettled 30s, I experienced a physical terror of flying that couldn't be explained by my own experience. I'd never been in an accident on a plane; there had been no recent news reports of planes dropping out of the sky. During that jittery time in my life, the only thing that calmed me while flying was to imagine that my plane was overtaken by a real bird, one with sleek feathers and keen, kohl-black eyes. Cheesy, yes. But it worked, perhaps because I trust feathers and blood and birdsong — wherever they may be. □

*Renée Guillory hails from the Sonoran Desert. Forthcoming works include essays on the restoration of Fossil Creek, near Strawberry, Arizona. Follow her at [www.therenaissancewriter.com](http://www.therenaissancewriter.com) or on Twitter @noirista.*



## HEARD AROUND THE WEST | BY BETSY MARSTON

## ALASKA

**If the Burning Man festival in the dusty**

Nevada desert conceived a love child with a monster-truck rally in the snowy mountains of Alaska, that would surely be the “Arctic Man” gathering, says the *Guardian*. Think 12,000 Alaskans — all heartily sick of winter — converging on a snow-covered field in the Hoodoo Mountains near Summit Lake, a place that’s usually in the middle of nowhere. But this April 4-15, Arctic Man became one of the biggest cities in the state. Bundled-up participants enjoyed giant bonfires that burned through the night, costume parties that featured “a guy with a bear hat made from an actual bear’s head,” souped-up snowmobile races, where drivers climbed hills at 92.3 mph, and food trucks that sold reindeer on a stick. It’s always a “booze and fossil-fueled Sledneck Revival,” and this year, the slednecks did their best to smash the Guinness World Record for the largest parade of snowmobiles.

## WASHINGTON

**Whatcom Watch, in Bellingham, Washington,**

recently interviewed Lorena Havens, a longtime environmentalist and co-author of the popular classic, *The People’s Guide to Mexico*. The reporter was curious about what inspired Havens to become an activist in the early 1970s. Apparently, it was a combination of indignation and common sense: Havens said that Judy Chicago, the artist and activist, urged her to tackle local problems first, saying, “Go home and see what needs doing — and do it!” A few weeks earlier, as it turned out, Havens had seen something that needed *un*-doing. From her “river shack on Ebey Island,” Havens saw trucks from lumber mills lining up to dump bark and sawdust into a wetlands. That night, Havens wrote a petition asking the county to halt the pollution, got all her neighbors to sign it, and presented it a few weeks later to the planning commission. Her petition initially didn’t get much traction, she recalled; a company lawyer dismissed it, saying that if dumping caused a problem, “there should be a stack of documents and scientific

NEVADA *Cirrus angelicus*. HAROLD ROY MILLER

evidence” proving it. “I found myself walking up to the front of the room,” Havens recalled, where she told elected officials that that kind of twisted logic had allowed rivers to become so fouled you couldn’t drink the water or swim in them. To her surprise, the planning commission then denied the dumping permit; afterward, she was told that her statement tipped the balance. These days, Havens advocates for more complete recycling: “We must not only stop putting more trash in the ocean, we need to be cleaning the plastics out of the ocean and reusing that material.”

## OREGON

**Seventy-five goats hired to eat invasive species** at a public park in Salem, Oregon, had to be fired for failing to do their job. Eenews.net reports that the animals preferred to munch on tree bark and some native plants, and instead of clearing entire patches of blackberry bramble, they fastidiously nibbled just the leaves. What’s worse, renting the goats cost the town five times more than mowing or weed-whacking. Cleaning up the goat poop also wasn’t cheap. They left behind “a heavily fertilized area — if you know what I mean,” said Mark Bechtel, Salem’s public works manager.

## NEW MEXICO

**While its owners were away** for two weeks, a parked Toyota Tundra truck in Aztec, New Mexico, became a bed and breakfast for a rat. Vicky Ramakka says she and her husband didn’t know about the rat’s sojourn on top of the truck’s engine until a routine truck servicing revealed the carnage that had occurred during their absence. A mechanic cleaned out an entire rat’s nest filled with cactus and tree parts, as well as the remains of a rabbit, but “the wiring was intact, so thank God for that,” Ramakka says, “We were dumbfounded at this detailed maintenance report — especially the rabbit corpse!”

## MONTANA

**“A cat with a bloody human hand in its mouth”**

must have been a chilling sight as it strolled down a street in Bozeman, Montana. That’s what a caller reported to police, reports the *Bozeman Daily Chronicle*, though the eyewitness wasn’t sure if the hand was real. Fortunately, it wasn’t; another caller told dispatch that one of her missing pink gardening gloves was most likely the “hand” the cat was holding.

## CALIFORNIA

**Back in the 1960s, the “man in black,”** Johnny Cash, played a series of concerts for the men in Folsom State Prison, on the edge of the Sierra Nevada mountains of California. Chris Hamilton, a young biologist from Auburn University in Alabama, knew about those concerts and loved Cash’s song, *Folsom Prison Blues*. So it made perfect sense for him to name the all-black tarantula he recently discovered near Folsom *Aphonopelma johnnycashi*. Hamilton told the BBC that he also proudly sports a Johnny Cash tattoo; no word on how many legs it has.

**WEB EXTRA** For more from Heard around the West, see [hcn.org](http://hcn.org).

Tips and photos of Western oddities are appreciated and often shared in this column. Write [betsym@hcn.org](mailto:betsym@hcn.org) or tag photos [#heardaroundthewest](https://www.instagram.com/heardaroundthewest) on Instagram.



High  
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“Too often, the **human costs of doing what’s right for our Earth** are not considered as part of the equation.”

Wendy Beye, in her essay, “The end of coal is bringing a wrenching transition,” from *Writers on the Range*, [hcn.org/wotr](http://hcn.org/wotr)