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High Country News

For people who care about the West

THE GOLD KING RECKONING

Can Silverton ever be anything but a mining town in denial?

By Jonathan Thompson

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Children make their way along slushy Blair Street in Silverton, Colorado, in January. JEREMY WADE SHOCKLEY

On the cover

Wastewater continues to stream out of the Gold King Mine near Silverton, Colorado, Aug. 28, 2015, weeks after the initial breach caused by an Environmental Protection Agency cleanup crew.
GEOFF LIESIK, DESERET NEWS

Editor's note

Sometimes, the strangest ties bind tightest

In April, Colorado lawmakers approved a bill to fund emergency cleanups at legacy mine sites. The legislation was in response to the August 2015 wastewater spill from the Gold King Mine above Silverton, in the San Juan Mountains, which sent a 3-million-gallon slug of psychedelic-orange toxic fluid down the Animas and Colorado rivers and into neighboring states. Later that month, U.S. senators summoned the head of the Environmental Protection Agency, Gina McCarthy, to testify on the agency's role in the catastrophe. Today, the disaster still commands the public's attention.

When the Gold King blowout occurred, *High Country News* Senior Editor Jonathan Thompson was just downstream, in Durango. He tweeted news of the spill, took pictures of the contaminated water, and wrote a post on our website that went viral. By the end of the year, readers had spent some 19,000 hours on the story, making it one of our most popular ever. It even inspired one reader to pen a poem in the comments section that began:

"First betrayal in 1872
with a law that said mining is free.
Ulysses Grant urged: 'Do whatever you
want' to companies — who replied, 'Yippee!' "

Our interest in the story should come as no surprise; after all, *High Country News* was born as the first waves of environmentalism swept across the country in the 1970s. But recently a few readers have wondered about some of the topics we've covered lately — including the complicated network behind the latest Sagebrush Rebellion, and the cultural secrets of the national parks — asking us how far afield the magazine intends to wander. Not too far, I would say. We remain devoted to our core environmental values, such as clean water, clean air and healthy ecosystems, but we can't really cover those issues without documenting the region's changing economics and culture, which ultimately have a major impact on the environment.

The ties between environment, industry and culture tend to bind tightly, as reflected in this issue's cover story. In it, Thompson examines not only Silverton's long struggle to address the persistent pollution of acid mine drainage, but also the town's cultural, economic and even psychological connection to hardrock mining. Meanwhile, in Portland, Oregon, writer Julia Rosen introduces us to an unlikely ecological detective — tree moss — which can tell us a lot about a city's air pollution. And *HCN* editorial intern Lyndsey Gilpin writes about the political dimensions of land protection and pollution control in California. There, the removal of key leaders in two of the state's environmental protection agencies may signal the rise of more pro-development leadership. Taken together, these stories remind us that the West's environmental health will always be enmeshed with that of its people, cultures and economies. And that story is unlikely to change.

—Brian Calvert, managing editor

An outflight of Mexican freetail bats from the Orient Mine in Colorado's San Luis Valley. JENNIFER KLEFFNER/COLORADO DIVISION OF WILDLIFE

A little brown bat afflicted with white-nose syndrome (top). MARVIN MORIARTY/USFWS

White-nose comes West

Hikers in Washington state, 30 miles east of Seattle, found a sick little brown bat on March 11 and took it to a wildlife sanctuary, where it died a few days later – of white-nose syndrome. The disease has wiped out at least 7 million bats in the East and Midwest, but this marks the first instance of a documented case in the West. Because Western bats' behaviors and habitats are different, it's not clear yet how the disease might affect regional bat populations. Some species may remain relatively unaffected. Still, the Fish and Wildlife Service has released recommendations to try to lessen disturbance of hibernating bats and slow the disease's spread, and researchers are searching for a cure. **JODI PETERSON**
MORE: hcne.ws/bats-in-west

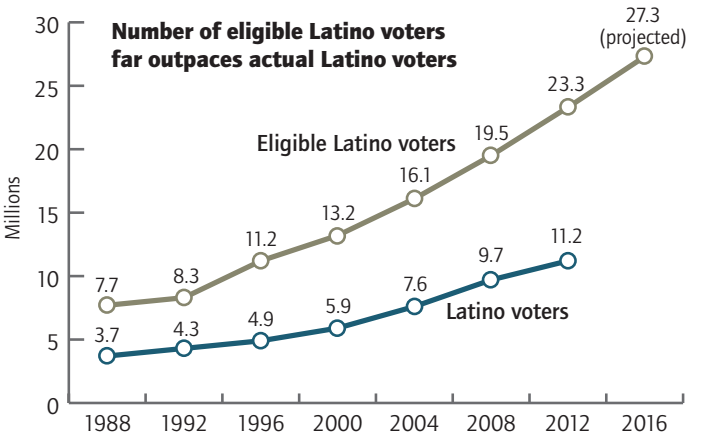
Election 2016

"A lot of the **Republicans have taken to the issue of public lands**, and more specifically, federal ownership of public lands and transferring that ownership to the states. And if we dig a little deeper, we know that what's behind that is the opportunity to do natural gas exploration on public lands. … It's kind of the throwback to the 'Drill, baby, drill,' that Sarah Palin would say in 2008."

–Laura Martin, the associate director of the Progressive Leadership Alliance of Nevada, speaking on *Soundtable: The West and the White House* hcne.ws/soundtable-whitehouse

Hispanic voter clout grows

Nationwide, about 12 percent of the country's eligible voting population is Hispanic, 40 percent of whom live in the West, and that number is growing. Turnout among Hispanics is also increasing: According to exit polls, 53 percent of Latino voters say they voted in 2012, compared with 44 percent in 1996. Turnout among young Latinos is historically relatively low, but experts say the group is more politically engaged this year, and that the rising tide could have profound effects on Western elections. **PAIGE BLANKENBUEHLER** MORE: hcne.ws/hispanic-voters



FIGURES ARE FOR PRESIDENTIAL ELECTION YEARS

NOTE: ELIGIBLE VOTERS ARE U.S. CITIZENS AGES 18 AND OLDER. VOTERS ARE PERSONS WHO SAY THEY VOTED.

SOURCE: PEW RESEARCH CENTER TABULATIONS OF THE CURRENT POPULATION SURVEY, NOVEMBER SUPPLEMENTS FOR 1988-2012.

17
percent coal production will decline in the West this year, as predicted by the U.S. Energy Information Administration

1,000
number of layoffs economists expect because of that decline

In early April, Arch Coal and Peabody Energy laid off 465 coal workers from their Powder River Basin mines in Wyoming. Experts warn that more cuts could be on the way. Western coal production is expected to decline significantly as natural gas, wind and solar produce increasing shares of the nation's electricity. Meanwhile, lawsuits filed by environmental groups last month challenging a handful of major Powder River Basin leases could accelerate the contraction of the coal industry. **ELIZABETH SHOGREN**
MORE: hcne.ws/coalmine-layoffs

40
percent of California biomass facilities that are idle, according to The California Biomass Energy Alliance

Biomass electricity facilities are closing in California and nationwide, pushed out by cheap natural gas and the more generous subsidies for wind and solar energy. One place that could buck the trend: Oregon, where the decision to phase out coal power and ramp up renewable energy consumption could open a door for the controversial energy source. Advocates say Oregon is well-suited to support biomass since it has existing but idle facilities, and because it can use biomass to recycle waste from the state's timber industry.
BRYCE GRAY MORE: hcne.ws/ORbiomass

Trending

Grand Canyon harassment

On March 16, Grand Canyon National Park Superintendent David Uberuaga announced the abolishment of the River District, which was responsible for resource protection and emergency services for 280 miles of the Colorado River. The abrupt decision was in response to a federal report released earlier this year that documented Grand Canyon's 15-year failure to address the sexual harassment of female federal employees. The park will take the opportunity to review the district's role and management, say officials. For now, the River District's six employees have been placed in other jobs within the park; it's not yet clear what steps will be taken next.
LYNDSEY GILPIN

You say

KRISTIN DOWNING:
"As a Grand Canyon river guide, I witnessed this horrible behavior from the park's river rangers. They got away with it for years."

JANE LYDER:
"Dave (Uberuaga) is a standup guy with daughters of his own. The park is a wonderful place and I met some of the best people I have ever worked with there. We are all sickened by this shadow on it."

KEN PARSONS:
"This whole situation is medieval. It stinks."

MORE: hcne.ws/GC-river-district and Facebook.com/highcountrynews

Send letters to editor@hcn.org or
Editor, HCN, P.O. Box 1090, Paonia, CO 81428.

TRIBAL LANDS, TRIBAL SELF-GOVERNANCE

Sierra Crane-Murdoch's beautifully illustrated feature exposes several inherent tensions in federal efforts to purchase and return lands that were stolen from tribes a century ago and given to individuals ("A Land Divided," *HCN*, 4/4/16). But the tone of the article is hostile toward a program that is successfully addressing a serious historical injustice and a modern calamity. President Obama's Interior Department started the Land Buy-Back Program, with the blessing of Elouise Cobell, to address a problem that was more than a century in the making — the problem of millions of tiny fractionated interests in land owned by hundreds of thousands of people. The program allows Indian people to sell their fractional interests in land for fair market value to the federal government so that these interests can be consolidated and returned to the tribes from whom the land was originally stolen.

The program gives each fractional Indian landowner a choice: They can either stay with the flawed system that the article documents well, or sell their fractional interests to help remedy a historical injustice and increase tribal self-governance. While the choice is not simple, it is the worst kind of 20th century paternalism to suggest that Indian people should be denied the opportunity to choose simply because they are poor. Moreover, a decision to sell will often benefit the sellers in more ways than just the sales price. The Obama administration has made a considered judgment that Indian people will be better served by empowering their own governments. Tribal leaders (who are elected by Indian people) are necessarily more accountable, and therefore more responsive, to Indian people than federal employees ever will be. The Land Buy-Back Program returns tribal lands to tribes and furthers tribal self-governance.

Kevin K. Washburn
Albuquerque, New Mexico

FIELD OF CHOICES

"And even environmentalists who oppose both projects agree that with annual park visitation expected to double to 10 million by mid-century, more beds and infrastructure are needed." This next-to-last sentence in the informative "State of the Grand" (*HCN*, 5/4/16) fades into a disturbing whimper without challenge. It implies and allows no imagined alternative to the presumption that there is no end in sight of the desire for consumption. A *Field of Dreams* inversion: Because they will come, we will build it. Is it so easy to accept the ideology of development — "more is better" — as an accommodating truism? Consider a "Field of Choices." There are many worthy models of how visitation and access is limited to preserve treasured places, enhance habitat for animals and plants, and reduce destructive impacts on land and water. Call it "Meander of the Grand."

Douglas Beauchamp
Eugene, Oregon

GRIZELDA/CARTOONSTOCK.COM

NO BIKES IN WILDERNESS, PERIOD

As a young staffer working for Arizona Rep. Mo Udall and Ohio Rep. John Seiberling around 1980, I vividly recall the chief of the U.S. Forest Service, Max Peterson, meeting with us to discuss a new threat to wilderness ("Biking in wilderness? Ain't gonna happen," *HCN*, 3/21/16).

Chief Peterson visited with Udall, chair of the House Interior Committee on Public lands, and Seiberling, chair of the House Public Lands Subcommittee, because a new type of bicycle — one that could be taken off-road — was beginning to be ridden through wilderness areas in California and elsewhere. Peterson sought the congressmen's confirmation that the words "no other form of mechanical transport" in the 1964 Wilderness Act meant no off-road bicycles in designated wilderness.

Both chairmen quickly and emphatically agreed that that was the intent of the law. Thus, the current ban on mountain bikes in wilderness is not some outmoded decision by a federal agency that "became frozen into place by lethargy and inertia," as Ken Stroll and the California-based Sustainable Trails Coalition insist in an op-ed. Rather, it is a carefully considered position based on the plain language of the Wilderness Act itself.

It is unfortunate that there's lobbying to change the Wilderness Act to accommodate mountain bikes — to beat this dead horse once again. Not everyone needs to be able to use every acre of our public lands as they see fit. The Wilderness System was specifically established by Congress to "assure that increasing population accompanied by expanding settlement and growing mechanization … does not occupy and modify, all areas within the United States … leaving no lands for preservation and protection in their natural condition."

While mountain bikes are appropriate in many places, they are able to penetrate into wildlands much faster than people on horse or foot can ever do, threatening the very "opportunities for solitude" and "primitive recreation" that the wilderness system was specifically designed to protect.

With more and more people moving to the West every year, putting increasing use pressure on our public lands, the last thing we need is to open the sanctuaries of our wilderness system to ever-greater human intrusion.

Andy Wiessner
Snowmass, Colorado

(Editor's note: Wiessner is an HCN *board member)*

High Country News

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National Park Service Director Jon Jarvis. EVAN VUCCI/AP

National Park Service centennial shares limelight with scandals

Ethical challenges plague Chief Jon Jarvis

BY ELIZABETH SHOGREN

Just weeks before the 2012 elections, National Park Service Director Jon Jarvis settled into a cabin on Grand Canyon's North Rim to write a speech for a conference for businesses that serve national parks. In contrast to politicians' divisive rhetoric, he highlighted dozens of parks and explained how each was preserved because it embodied a value Americans share — such as freedom, courage, honesty, the pioneer spirit and conservation. The speech was a hit, so he kept giving it over the years. The more than 400 units in the National Park System, he said in a recent version, are a "mosaic of the things we value most about ourselves, where our principles forged in the hottest fires are preserved so that future generations understand from where we came."

Jarvis decided to turn the speech into a book to sell during 2016, the national parks' centennial, believing his positive message could help the parks better resonate with increasingly diverse future generations. But that's where his trouble started. He assumed the book wouldn't be approved through official channels in time, so he quietly found his own publisher, a Park Service concessioner. His boss, Interior Secretary Sally Jewell, learned about the unauthorized book only when he sent her a copy of *Guidebook to American Values and our National Parks*.

That kicked off an investigation by Interior's Office of Inspector General, or OIG. In February, Jarvis was reprimanded for unacceptable behavior and ethics violations relating to the publication. The incident has resurrected earlier criticism of Jarvis' leadership of the agency he has headed for nearly seven years.

Another, unrelated OIG investigation, released in January, revealed a long-term pattern of sexual harassment and misconduct at the Grand Canyon, the very park where Jarvis wrote the original speech that inspired his book. The scandals have tarnished both the message that Jarvis wants to highlight for the parks' 100th birthday and the conclusion to his own 40-year career at the agency. (Jarvis plans to retire at the end of the Obama administration.)

"These incidents have cast the agency in a negative light at a time when we should be celebrating what Wallace Stegner told us was the best idea we ever had," says Mark Squillace, a professor at University of Colorado Law School, who twice worked in the Interior Department's solicitor's office.

During a recent interview in Washington, D.C., Jarvis said he was unaware of persistent sexual harassment by Colorado River boatmen until 2014, when 13 women employees sent a letter to Jewell detailing numerous incidents and supervisors' failure to respond. At the urging of Congress, Jarvis now plans to survey his entire staff about whether other parks have similar problems; he's also asked the agency's more than 20,000 employees to report any harassment. Rep. Nikki Tsongas, D-Mass., gives Jarvis credit for being open to Congress' suggestion: "These closed environments with their own internal cultures have great difficulties wrestling with these issues."

As chief, Jarvis has championed the parks and their natural resources. He emphasized the importance of climate change science in both park management and visitor education; instituted a winter-use plan in Yellowstone after 15 years of discord over snowmobiles; and significantly increased fundraising through the National Park Foundation, the parks' official charity arm.

But critics, including the watchdog group Public Employees for Environmental Responsibility, charge that both OIG reports reflect a broader ethics problem during Jarvis' tenure. For example, he promoted an agency official with past ethics violations to a top position. And in 2011, Jarvis stalled a ban on the sale of plastic water bottles at the Grand Canyon after Coca-Cola, a major parks donor, opposed it. "He's ethically challenged. ... That's why it's ironic that he writes a book about American values," says Frank Buono, a retired park manager and chairman of PEER's board.

Jarvis says he takes the attacks with a "grain of salt." "I've always held people accountable regardless of who they are. But I also treat people fairly," he says. He stresses that he won't profit from his book; all royalties go to the National Park Foundation. He says he didn't seek prior approval because he wanted editorial control. "This is a story I wanted to tell, and I'd been telling, but anytime you put pen to paper it goes though a lot of editorial review," Jarvis says. He told the OIG that he would probably make the same decision again: "I've gotten my ass in trouble many, many, many times in the Park Service by ... not necessarily getting permission," according to the report. In addition to the reprimand, Jarvis will no longer supervise the agency's ethics' program, and must attend monthly ethics training.

Jarvis' apparent disregard for the rules is particularly troubling given his position as an agency head, say government ethics experts. "It's these types of incidences that give people the feeling of distrust in government and senior leaders — when they act inappropriately, and act as if laws and rules that apply to other public servants don't apply to them," says Scott Amey, general counsel of the Project on Government Oversight, a watchdog group.

Jarvis admits that his book "caused some consternation," adding, "I regret the results of the investigation and apologized for it to the leadership of the department."

But he believes it was worth the risk because its message that the parks embody the values that Americans share "could be a very, very powerful tool to not only connect to the next generation but to resonate across political spectrums" and inspire people to preserve the parks for the future.

The people who manage the national parks may "mess up," as Jarvis says. But the parks themselves are no less invaluable for those human failings. □

Correspondent Elizabeth Shogren writes *HCN*'s DC Dispatches from Washington. @ShogrenE

THE LATEST

Backstory

In 2005, a Pavillion, Wyoming, landowner suspected that his drinking water well had been contaminated by nearby natural gas drilling. **An Environmental Protection Agency investigation found chemicals used in hydraulic fracturing in the aquifer but couldn't rule out other sources of the pollution,** such as waste pits from past drilling ("Hydrofracked: One man's quest for answers about natural gas drilling," *HCN*, 6/27/11). In 2013, the EPA dropped its study following criticism from industry, regulators and congressional Republicans.

Followup

A peer-reviewed paper released in late March by Stanford University scientists analyzed reams of data — gathered by the EPA and other sources in Pavillion — to provide the first-ever unequivocal link between fracking and groundwater contamination. The key evidence is a suite of organic chemicals detected in the aquifer that "are a virtual fingerprint of compounds used for hydraulic fracturing," says lead author Dominic DiGiulio. Industry downplays the findings. "I would call this speculation or theory," says Doug Hock, an Encana spokesman.

ELIZABETH SHOGREN

Water sampling in Pavillion. STANFORD

THE LATEST

Backstory

Fewer than 300 wolverines roam the Lower 48. They require deep snowpack to bear and raise young, but a third of their Northern Rockies habitat is predicted to be mostly snowless by mid-century. **The U.S. Fish and Wildlife Service proposed protecting wolverines as an endangered species in 2013, the first species in the Lower 48 that would have been listed due to climate change. In July 2014, one of the agency's regional directors, Noreen Walsh, reversed that recommendation,** citing uncertainty about climate change impacts. Environmental groups sued, claiming her decision reflected politics, not science ("Climate changes for wolverine listing," *HCN*, 8/4/14).

Followup

On April 4, U.S. District Judge Dana Christensen ruled that Fish and Wildlife's refusal to protect wolverines was "arbitrary and capricious," citing "immense political pressure" from Montana, Idaho and Wyoming. **He told the agency to reconsider, writing in his 85-page order that "if ever there was a species for which conservation depends on foregoing absolute certainty, it is the wolverine."**

JODI PETERSON

U.S. FISH AND WILDLIFE SERVICE

The San Gabriel Mountains are almost completely obscured by air pollution in Los Angeles, California. RINGO CHIU

California ousts environmental agency leaders

Will air and coastal waste rules bend for industries?

BY LYNDSEY GILPIN

For 62 years, Teresa Flores lived in a small house across from a railyard in San Bernardino, California. The smell of diesel fuel permeated the neighborhood, and dust coated cars and driveways. Her neighbors suffered from skin rashes, asthma, cancer and maladies no one could seem to identify.

Flores finally moved to the other side of town. Though she can breathe easier now, she knows there's no real escape: San Bernardino and Riverside counties have some of the state's worst air quality, blanketed as they are by the smog that blows eastward from Los Angeles and gets trapped by the San Bernardino Mountains.

The South Coast Air Quality Management District is responsible for regulating much of that pollution, from stationary sources like oil refineries and power plants. With the state Air Resources Board, it also helps inform policy decisions by assessing public health in communities around refineries, factories and railyards. In early March, the district's board fired its director of 19 years, Barry Wallerstein, because he opposed loosening state pollution regulations in order to accommodate business interests, according to some board members. "It's scary," Flores says. "I don't know if the person replacing him has the knowledge of what's going on in these communities."

Wallerstein was ousted less than two months after the California Coastal Commission fired its director of five years, Charles Lester. Several commissioners say this was due to his management skills, though others, including Lester, blame it on a power struggle with commissioners lobbied heavily by homebuilders and business developers.

The firings raise questions about the future of California's environmental regulations, generally considered the nation's most progressive. Last year, a Republican majority was elected to the Air Quality Management District, and the vote to oust Wallerstein was strictly along party lines. The commission's vote was less politicized, but Sean Hecht, a UCLA law professor, says, "Many commissioners and board members believe that there is an irreconcilable tension between environmental regulation and jobs."

Both agencies wield a lot of power: The Air Quality Management District's 725-person staff advises a board of 13 politicians and business leaders representing Los Angeles, Orange, San Bernardino and Riverside counties. The district helps ensure that Southern California abides by federal Environmental Protection Agency laws, such as the Clean Air Act. Wallerstein made great strides in reducing smog in his tenure: The number of days exceeding federal ozone standards dropped by a third, although some criticized him for not responding strongly enough to the notorious methane leak at Aliso Canyon.

The Coastal Commission's staff of 163 and its 12 commissioners work to uphold the Coastal Act of 1972, which protects public beaches and habitats along 1,100 miles of coastline. While Lester approved most proposed developments, he also implemented sea-level rise adaptation planning for local governments and fought to ensure public beach access for low-income communities.

Industry stakeholders often meet with members of both agencies, a fact that has always caused tension. Most recently, in December, the district's board ignored recommendations and EPA rules to adopt a weaker smog-reduction rule backed by the oil industry. According to Joe Lyou, a Los Angeles board member registered as an Independent, the Western States Petroleum Association "basically dictated" the decision from behind the scenes. Wallerstein was one of the most vocal objectors. Less than three months later, however, he was fired, and the board reaffirmed its smog decision.

Now, the question is who will run the agencies and in what direction they will steer them. The Coastal Commission is still seeking a director, but in early April, the Air Quality Management District hired Wayne Nastri, a former EPA administrator under George W. Bush. Nastri was president of a consulting firm, E4 Environmental Solutions, which represented energy companies involved in district decisions. The appointment isn't surprising, Hecht says: "The current board wouldn't be selecting someone if they didn't have a sense they would be more of a hands-off regulator than Wallerstein was."

Meanwhile, environmental organizations like the Natural Resources Defense Council and Earthjustice have sued the district over the smog rulings, and state lawmakers are pushing legislation that calls for greater agency transparency. Democratic Assemblyman Mark Stone of California's 29th District sponsored a bill requiring coastal commissioners to identify the names as well as the requests of the developers they meet with, and Sen. Kevin de León, D-Los Angeles, has proposed adding public health and environmental justice experts to the district.

Grassroots efforts to improve air quality and coastal access also continue. Flores works with the Center for Community Action and Environmental Justice to mobilize engagement in the low-income communities most affected by the district's decisions. "The laws are not followed through," Flores says. "They're always talking about things improving, but when you live in the middle of everything, you see it firsthand. We're watching (politicians) closely." □

Lyndsey Gilpin is an *HCN* editorial intern.
@lyndseygilpin

What moss taught Portland

Surveys of tree moss reveal an air pollution problem

BY JULIA ROSEN

On a drizzly March day, Sarah Jovan pauses to inspect a leafless maple growing through a hole in a downtown Portland sidewalk. She passes a slender hand over the miniature ecosystem colonizing its trunk — chartreuse savannahs that stretch between stands of thick, shaggy moss and lone shrubs of fruticose lichen. "These look stressed," she says of the latter, noting that the pale green epiphytes seem dull and stunted compared to their brethren in the wild.

That's where Jovan, a moss and lichen expert at the U.S. Forest Service's Pacific Northwest Research Station, usually works. But in 2013, she and her colleagues began studying the moss on Portland's countless urban trees. Their findings rattled the city: The moss revealed that Portland has an air pollution problem.

The news wasn't a complete shock. The Oregon Department of Environmental Quality (DEQ) has known for years that Portland's air contains unhealthy levels of heavy metals like cadmium and arsenic, both carcinogens. But a city-wide survey of moss allowed scientists to finally pinpoint a likely source: two art glass producers that use the metals in their manufacturing process.

The DEQ confirmed the moss results in October, using conventional air monitoring instruments that detected levels of cadmium and arsenic far above state benchmarks near one of the plants. The early February announcement angered many residents, who thought the department — which is charged with protecting Portland's air — should have taken action sooner. The director stepped down soon after, citing health issues.

After the revelations surfaced, the glass manufacturers — Bullseye and Uroboros — voluntarily stopped using heavy metals. The DEQ will now require both to install emissions control devices after the EPA determined that the plants do not, in fact, qualify for an exemption that allowed them to operate without such devices in the past. Meanwhile, officials have scrambled to cope with the consequences. So far, follow-up tests of soils and urine from residents near the plants suggest the long-term human health risks are low, although authorities identified a slight increase in bladder cancer rates around Uroboros between 1999 and 2003.

Without moss, though, the issue may never have come to light. Unlike vascular plants, moss and lichen lack roots, so they must extract all the nutrients they need from the air. And because they also lack waxy leaf coatings or other natural barriers to unwanted compounds, they soak up pollution "like a sponge," Jovan says.

Scientists, who first realized these plants could act as biomonitors in the 1970s, have since used them to study a range of pollutants, from heavy metals to polycyclic aromatic hydrocarbons, which threaten both human and environmental health. In fact, one of the great benefits of moss is that a single sample can yield information about many different contaminants, says Linda Geiser, director of the Forest Service's Air Resource Management Program. And studying moss is cheap. "It doesn't require power, and you can just send someone to hike back wherever you want, into the most remote place, to collect information," Geiser says.

That's one reason the Forest Service and other agencies have used moss to monitor air quality on public lands. A 2001 study in Alaska, for instance, revealed that dust from mining trucks was dousing fragile tundra plants in the Cape Krusenstern National Monument with heavy metals.

Still, moss has limitations when it comes to gauging threats to human health. The exposure pathways are different: Moss passively absorbs contaminants, while the effects on humans vary depending on whether they are inhaled or ingested. And concentrations in moss can't be directly translated into concentrations in the air. So it's not entirely clear what Jovan's results, on their own, mean for Portland's residents.

Geoffrey Donovan, Jovan's colleague, stresses that their moss study wasn't a replacement for traditional air monitoring, but a way to guide it. In the past, Portland only had one air monitoring station capable of detecting heavy metals, which could not provide regulators with detailed information about individual emitters. So Donovan used a model to turn their 346 moss samples — collected from every square kilometer of the city — into a detailed map of pollution hotspots that helped the DEQ focus its investigations. The cadmium results were recently published in the journal *Science of the Total Environment*.

The approach, which has been used in European cities, may now gain traction in the U.S. The Environmental Protection Agency plans to review the Portland study to evaluate whether it could use the method to screen for toxic air pollutants.

As cars roll past Jovan's tree, the tires sucking at the wet pavement, the moss already seems to have melted into the fuzzy green backdrop of Portland life. But the story isn't over. Despite the state's reassurances, some locals fear possible health impacts and question whether the DEQ will prevent similar situations in the future. To quell these concerns, Gov. Kate Brown recently established a new state program to strengthen air quality regulation.

Moss may very well play a role in that initiative — precisely because of its ability to detect sources of pollution. That, Jovan says lovingly, "is what we are solving with these delightful little primitive plants." □

WEB EXTRA See maps of some estimated heavy metals levels around Portland at **hcn.org**.

Julia Rosen is a freelance reporter based in Portland, Oregon. @ScienceJulia

Sarah Jovan, national lichen advisor to the Forest Inventory and Analysis Program, shows how moss is collected from urban trees to test air quality. Right, moss grows on a tree in the damp city of Portland. JULIA ROSEN

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FRANK MECHAU: ARTIST OF COLORADO
By Cile M. Bach
144 pages, hardcover: $39.95
University Press of Colorado, 2016

"If a man is, as scientists say, a product of his surroundings, then Frank Mechau is a part of the vast western slope of Colorado," wrote Carl Merey, head of the Denver Art Museum School, in 1942. Mechau died four years later at the young age of 42, leaving a rich legacy of romantic, colorful paintings of the West. After studying in Paris, he spent most of his life painting landscapes, rodeos, oilfields and wild horses from his home in the mountains near the Crystal River Valley, influenced by artists from Picasso to ancient Chinese painters. In 1981, Cile Bach, director of the Denver Museum of Art's publication department, compiled a book about Mechau's career, featuring excerpts from letters, journals, and notes, and photos of the artist and his paintings. This second edition, published in March to commemorate the original's 35th anniversary, is updated with a tribute from Mechau's family. **LYNDSEY GILPIN**

***Dorik and his Colt*, 1944.** FRANK MECHAU

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Keeping busy during publication break

April's publication break allowed us to hunker down for a bit and get the garden started, but the work never stops at *High Country News*. On the business side, we've been hard at work organizing an event with *Democracy Now!*'s **Amy Goodman**, who appeared here in Paonia, Colorado, on April 23. And over in the editorial department, we've been stoking the ever-burning flame of our website, bringing you new content each day at hcn.org.

In March, our online editor, **Tay Wiles**, joined a panel to discuss public-land controversies at the Rural West Conference in Missoula, Montana. Tay has taken the captain's chair for *HCN*'s ongoing coverage of public-lands history and disputes, including the Bundy-esque incidents that culminated at Malheur National Wildlife Refuge earlier this year. Go, Tay!

While we were on break, the weather was beyond unpredictable, with surprising snowfall and equally surprising splashes of bright sunshine. Still, we've had a steady stream of visitors. **Rich Messer** stopped by on a blustery day, battling falling rocks and slick, snow-covered roads on his way over from Fraser, Colorado, in the north-central part of the state. Rich, who came to Paonia to meet with folks from the local foundry, works with sculptors to create molds for bronze casting. "They're the artistic genius," he says. "I'm the labor." In keeping with *HCN*'s contrarian spirit, Messer says he reads all of our issues, even when he isn't always in accord. "It seems healthy," he says. That's family for you: loyalty, even when we disagree.

We also caught up with **Rob Mulford**, who recently stopped by during a visit from Fairbanks, Alaska. Rob was in the area to commemorate the 35th anniversary of a deadly explosion at Mid-Continent Resources' Dutch Creek No. 1 Mine, near Redstone, Colorado. The April 15, 1981, tragedy claimed the lives of 15 coal miners, all friends of Rob's. Though he's no longer involved with the industry, Rob, who worked at the site until shortly before the blast, was recruiting fellow coal miners and friends to place flowers at the mine in remembrance.

We'd like to offer a clarification, from last issue's cover story ("A Land Divided," *HCN*, 4/4/16). We stated that the Blackfeet Tribe would be among the last to take part in the Interior Department's land buy-back program. The Blackfeet Reservation will likely be among the last to participate among the 42 highly fractionated reservations identified as priority locations, not the last among qualifying tribes to participate. Some 150 tribes are theoretically eligible, and the Land Buy-Back Program does not officially end until 2022. Before then, whatever money is not spent on the most fractionated reservations will be made available for land consolidation in other locations, to be announced later this year.

—Paige Blankenbuehler for the staff

Rich Messer and Rob Mulford. BROOKE WARREN

The Gold King Reckoning

How a Colorado mine disaster forced Silverton to face its pollution problem, and its destiny

"Instead of a pure, sparkling stream of water, an opiate for tired mind and jaded nerves, what do you see? A murky, gray stream of filthy, slimy, polluted water, a cesspool for the waste of man."

–Durango-area farmer, 1937

On the morning of Aug. 5, 2015, a deep pool of acidic, metal-laden water was backed up behind debris in the Level 7 adit of the Gold King Mine on the slope of Bonita Peak, roughly 10 miles north of Silverton, Colorado. The pool had been rising for years, imprisoned in the dark of the mine, yearning, as all water does, to be free.

Outside, on the other side of the wall, a CAT excavator scooped jerkily at the debris and the slope. A few contractors and Environmental Protection Agency employees stood in the hard light of the high-altitude sun, watching.

For most of the summer, the crew had been working down the hill on the Red & Bonita Mine, putting in a concrete bulkhead to control the drainage of toxic water from its tunnels. In late July, workers moved on to the more challenging collapsed portal of the Gold King, which in recent years had become one of Colorado's most polluting mines. Uncertain how to proceed, the EPA's on-scene coordinator, Steve Way, postponed the job, pending a Bureau of Reclamation site inspection.

While Way was on vacation, however, his replacement, Hayes Griswold, a thick-necked, gray-haired man in his 60s, ordered work to proceed. He knew the risks. In May, the contractor on the job had noted, in the action plan, "Conditions may exist that could result in a blow-out of the blockages and cause a release of large volumes of contaminated mine waters and sediment." In situations such as this, the typical first step would be to drill in from above to assess the mine pool's depth and the pressure it exerted on the dirt and rock. Instead, apparently unsure about where the actual mine portal was, the crew burrowed into the debris.

Around 10:30 a.m., a thin stream of water spurted out, steadily growing into a fountain, then a roiling torrent of thick, Tang-colored water. As the workers looked on, stunned, the water roared over the edge of the mine waste-rock dump, carrying tons of the metal-laden material with it, crashing into the gently gurgling stream of the North Fork of Cement Creek, far below.

"Should we get out of here?" one worried worker asked.

"Oh, he's going to be pissed," another answered. "This isn't good."

"What do we do now?" someone else asked, shocked yet oddly calm, as though a household plumbing project had gone awry.

The workers avoided the deluge, but one of their vehicles, left below the jobsite, was submerged in orange slime. Farther downstream, along Cement Creek, the 3 million-gallon "slug" of water and sludge, laden with high concentrations of iron, zinc, cadmium and arsenic, roared past the old town site of Gladstone and another six miles to Silverton, where it cannoned into the waters of the Animas River.

It took about 24 hours for the prow of the slug to navigate the narrow, steep gorge below Silverton and reach the Animas River Valley, seven miles upstream from Durango, where I live.

I spent most of my childhood summers in, on or near the Animas, and often watched the river turn sickly colors: Yellowish-gray after the 1975 tailings pond failure; almost black when Lake Emma burst through the Sunnyside Mine three years later. Back during the 1950s, a uranium mill in Durango dumped 15 tons of radioactive goop into the river daily. Surely, I thought, as news of the catastrophe hit social media, this couldn't be any worse than that.

Curious, I raced out to examine the river, at a place where the valley, scoured flat by glaciers some 10,000 years ago, slows the Animas to a placid flow. Turbid, electric-orange water, utterly opaque, sprawled out between the sandy banks, as iron hydroxide particles thickened within the current, like psychedelic smoke. Downstream, the Animas was empty, not a sign of Durango's ubiquitous boaters, swimmers and partiers. For 100 miles along the

Kayakers on the Animas River north of Durango, Colorado, a day after work being done by the Environmental Protection Agency and contractors at the Gold King Mine unleashed a 3-million-gallon "slug" of water and sludge laden with high concentrations of iron, zinc, cadmium and arsenic. The kayakers told *Durango Herald* photographer Jerry McBride that they hadn't heard about the mine spill, and later told the paper that since it's not uncommon for the river to run brown during high run-off, they didn't think anything of it, despite the color looking a little more "in depth" than usual.

JERRY MCBRIDE/THE DURANGO HERALD/POLARIS

Silverton, Colorado, in 1911. Sultan Mountain, showing signs of the booming mining industry, rises behind town.
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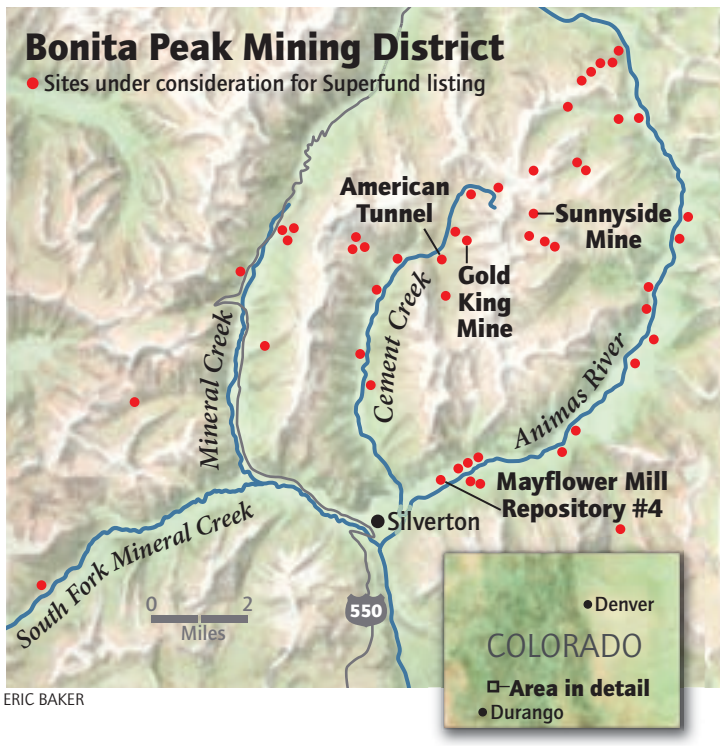

ERIC BAKER

On April 7, the Environmental Protection Agency proposed adding the "**Bonita Peak Mining District**" to the National Priorities List, making it eligible for Superfund.

Forty-eight mine portals and tailings piles are "under consideration" to be included. The Gold King Mine will almost certainly be on the final list, as will the nearby American Tunnel. The Mayflower Mill #4 tailings repository, just outside Silverton, is another likely candidate, given that it appears to be leaching large quantities of metals into the Animas River.

What Superfund will entail for the area beyond that, and when the actual cleanup will begin, remains unclear.

river, irrigation intakes were shut. After nightfall, the plume slipped through town like a prowler and continued toward the San Juan River and New Mexico and Utah.

In the weeks and months that followed, there was plenty of pain to go around. Durango rafting companies lost hundreds of thousands of dollars' worth of potential business. In the small fields of the Navajo Nation, along the San Juan River, corn shriveled without water. For many Navajo, the water is spiritually significant, and seeing it marred was heartbreaking, a bitter reminder of the many times they had borne the brunt of upstream pollution.

Most of the vitriol was directed at the EPA and its careless actions on Aug. 5. But others blamed a federal mining law that hasn't been updated in 150 years. In Durango, though, most of the ire was directed at its upstream neighbor, Silverton, which had long resisted federal efforts to use the Superfund to clean up the hundreds of now-abandoned mines that gave birth to the town and sustained it for decades.

Like a cathartic purge, the Gold King disaster swept most of that resistance away.

In February, the town of Silverton and the San Juan County commissioners voted unanimously to request Superfund designation, carefully calling the site the "Bonita Peak Mining District," to divert attention from Silverton and mitigate impacts to its tourist industry.

In Durango, and even, to my surprise, in Silverton, there was a palpable sense of relief, a feeling that the whole region might finally move beyond its messy past, clean up the river for good and embrace the future.

But I had my doubts. Having watched the decades-long collaborative effort to clean up the watershed, I knew that the problem was too complex, the wounds too deep and stubborn to easily heal. And I knew that "The Mining Town That Wouldn't Quit" was too deeply attached to its extractive past to easily refashion a shiny new identity from the rubble of the industry's demise.

So I went upstream to dig up the real story behind the Gold King Mine disaster, a tale of a community, of mining and of water, and the inextricable way they are entwined.

ACID MINE DRAINAGE may be the perfect pollutant. It kills fish, it kills bugs, and it lasts forever. And you don't need a factory, lab or fancy chemicals to create it. All you have to do is dig a hole in the ground.

The hole — assuming it's in a mineralized area — will expose iron sulfide, aka pyrite, to groundwater and oxygen. And when these collide, a series of atom-swapping reactions ensues. Oxygen "rusts" the iron in the pyrite, yielding orange iron oxides. And hydrogen, sulfur and oxygen atoms bond to create sulfuric acid, which dissolves zinc, cadmium, lead, copper, aluminum, arsenic and other metals. Naturally occurring, acid-loving

microbes then feast on the metals, vastly accelerating the whole process. The acids in this bisque can devour iron pipes, and the toxic metals render streams uninhabitable, sickening fish for miles downstream. Once the process is catalyzed, it's almost impossible to stop. A Copper Age mine in southern Spain, abandoned four millennia ago, pollutes the aptly named Rio Tinto to this day.

Mining not only indelibly alters a watershed's hydrology and chemistry, it also forever shapes the identity of the communities around it.

Miners first started drilling, blasting and digging holes into the mountainsides of the Silverton Caldera, a 27-million-year-old collapsed magma chamber, in 1872. The San Juan Mountains were still officially the domain of the Utes, who for centuries had followed the game into the high country every summer. Silverton was founded in 1874, and that same summer the Hayden Survey came through, marveling at the complicated mass of mountains, among the last piece of the Lower 48 to be invaded, or even visited, by European-Americans. What they found was a wilderness we can only imagine today. One of the surveyors, Franklin Rhoda, wrote about how, on Uncompahgre Peak, "at an elevation of over 13,000 feet, a she grizzly, with her two cubs, came rushing past us," and about huge herds of mountain sheep stampeding across rolling, wildflower-spattered highlands.

Less than a decade later, the railroad reached the caldera, opening the doors to humanity and its detritus. Giant mills crowded the valley floors, tramlines hung across meadows. The mountains' innards were honeycombed with hundreds of miles of mine workings, which served as vast, subterranean acid mine drainage cauldrons. Steep slopes were stripped of their trees, the waters ran gray with mill tailings. The wild lands that Rhoda had marveled at were now industrialized, the grizzly on the run, the Utes pushed onto a sliver of land to the south.

Despite Silverton's wind-bitten perch at 9,318 feet, its isolation, inhospitable climate and lack of coal for fuel or arable land, the town blossomed. Homes sprouted across the floor of Baker's Park, from Quality Hill to Poverty Flats. In the early 1880s, Greene Street, the main drag, was lined with businesses, from the Saddle Rock Restaurant and Stockman Barber Shop to the Wong Ling Laundry and Lewke Shoe Shop. Nearly every other hastily constructed facade was a saloon: Tivoli, Olympic, Occidental, Cohen and, surely the rowdiest, the Diamond, run by the notorious Bronco Lou, a "wily she-devil" and "enticing seductress," who, it was rumored, killed as many as five lovers and husbands.

Silverton's adolescent rowdiness ultimately mellowed (Bronco Lou was even run out of town), and the prosperity snowballed. At its 1907 peak, the mining industry employed more than 2,000 men — half the local population. The mélange of ethnicities fostered a rich culture, and the relatively stable flow of cash supported several newspapers, a healthy school, and strong government institutions, as well as a powerful miners' union.

Ugliness could arise from the amalgamation, too. In 1906, a union-led mob drove the entire Chinese-American population from town. And after a protracted, bitter strike, a company-led mob drove the labor organizers from the caldera, killing the union for good. Still, the residents enjoyed an economic equality that seems these days to have gone extinct.

"It was a blue-collar town, but an upper-class blue-collar town," remembers Bev Rich, a Silverton native, now in her mid-60s and chairman of the San Juan County Historical Society, easily the town's most influential nonprofit. "It was a great place to grow up, because everyone's dad worked in the mine and everyone was equal. The community was racially diverse, and it was safe."

Silverton lorded over its neighbors, sitting not only at the headwaters of the area's rivers, but also the regional economy. When Durango threatened to sue Silverton-area mills for dumping tailings directly into the river, tainting drinking and irrigation water, Silverton shrugged it off, the editor of the local newspaper suggesting that Durango think twice before "killing the goose that laid the golden egg." Durango capitulated, shifting its primary water source in 1902 from the river that runs right through town to a safer source, the Florida River, several miles away. The system is still in place.

Yet it all hinged on one industry, mining, prone even then to the ups and downs of the national and global market. In 1924, the once wildly profitable Gold King, beleaguered by a string of disasters and bad management, went dark. The county's biggest mine, the Sunnyside, shut down in the late 1930s, partly because of the cost of hauling ore and pumping water uphill to get it out of the mine. And in 1953, the only major operator remaining, the Shenandoah-Dives, also went quiet.

With the industry virtually dormant, Silverton struggled through what became known as the "Black Decade."

The town clung to life, however, thanks in part to the silver screen's mythical Wild West and a steam locomotive that had long hauled ore from Silverton to Durango's smelter. The train itself became a movie star, along with Clark Gable and Barbara Stanwyck, and it began to haul tourists into Silverton, where they were greeted by a surrealistic spectacle — part Western movie-set, part Third World medina — that included elaborate fake gunfights. Loudspeakers blared advertisements and merchants swarmed passengers, begging them to buy hamburgers or tchotchkes.

Tourism kept the town afloat, but it was no replacement for mining. The pay was lousy, the season short, and it banked on what Bev Rich calls a false "rinky-dink, rubber tomahawk" version of history. "You develop a foul taste in your mouth when one of the gunfight participants says, as she walks away from the pile of bodies, 'Everyone come to the Bent Elbow, the best food in town,' " noted a *Silverton Standard* editorial in 1963, summing up the sentiment of many locals.

So when Standard Metals announced in 1959 that it would re-open the Sunnyside Mine, the people of Silverton rejoiced. The plan was to extend the existing American Tunnel — started in the early 1900s but never finished — from the old town site of Gladstone two miles underground to the Sunnyside, where ore still lingered in the rock. It worked, leading a revival of mining that lasted for three decades.

Miners stand in the power plant of an aerial tramway, top, at the Sunnyside Mill near Eureka in San Juan County, Colorado, c. 1880. Above, a 1940s-era Labor Day parade — with several men wearing miners' hard hats — makes its way past The Best Cafe in downtown Silverton.

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Tourism continued to grow, though the locals accepted it grudgingly. "Prosperity stemming from mining is welcome," Ian Thompson, my father, wrote in 1964 in the *Standard*. "Prosperity stemming from tourists is inevitable." Miners, working underground, looked out for one another. Tourism, on the other hand, was a crassly commercial, dog-eat-dog world. Silverton was torn apart by these conflicting identities in a long-running, Dr. Jekyll-Mr. Hyde struggle.

"The Train is the instrument of death," George Sibley, a longtime western Colorado writer, wrote in the *Mountain*

Bill Simon was co-coordinator of the Animas River Stakeholders Group when he was photographed in 2013 collecting soil samples at the San Antonio Mine near Red Mountain Pass. The Congress Mine can be seen in the distance. JERRY MCBRIDE/DURANGO HERALD

Gazette in 1975, referring not to the railroad itself but to the new economy it ushered in. "Among the miners, still the core of what remains of the Silverton community, there is an attitude ranging from bare tolerance to outright disgust toward The Train."

Inevitably, though, global economics would triumph over local sentiment. Gold prices slumped, and massive open-pit mines in Chile and Nevada brought competition. By the mid-1980s, mining company bankruptcies were weekly headline fodder. Finally, in 1991, the Sunnyside shut down for good. One hundred and fifty miners lost their jobs, and Silverton lost its center. All that remained was a rich historic legacy — and the toxic water still draining from the mines.

NOT LONG AFTER THE GOLD KING BLOWOUT, I sat down with Bill Simon at his earthen home north of Durango. Simon is an ecologist who has long worked to improve the environmental health of the Silverton Caldera. I first met him in 1996, when I was a cub reporter for the *Silverton Standard & the Miner*. Back then, Simon was leading the local effort to understand and tackle mine pollution, traipsing around the caldera, sampling streams and piloting a backhoe on remediation projects. Now, his old mop of brown hair is a roughly shorn gray, and he moves slowly and awkwardly. Simon has Parkinson's, but its physical ravages have not affected his intellect. We talked for more than three hours, and it struck me that he carries a multidimensional map of the upper Animas watershed in his head, its geology, hydrology and history — even its politics. He's as intent as ever on solving the caldera's mysteries.

Simon was quick to remind me that Silverton's pollution problem is relatively small on a global scale, paling in comparison to, say, the Bingham Canyon Mine outside Salt Lake City, which has created a 70-square-mile underground plume of contaminated groundwater, or California's Iron Mountain Mine, the waters of which are some of the most acidic ever sampled outside the lab. More rock is scooped from a large-scale modern mine in a day than the Sunnyside Mine produced in a lifetime.

"So the problem of acid mine drainage is huge. It's worldwide," says Simon. "That's why I got involved. The problem is being ignored."

Simon's involvement began incrementally back in 1970, when he first came to Silverton. Originally from Colorado's Front Range, he attended the University of California, Berkeley, in the 1960s, where he helped found the Environmental Studies College and worked toward a doctorate in evolutionary ecology. After the military began taking "too much interest" in his work, though, he fled, landing in southwestern Colorado's high country.

He worked for various mining companies, doing excavation or surface work and then big welding jobs, sometimes cleaning up a site or planting trees afterward. By then, the Colorado Department of Public Health and Environment and the state Division of Wildlife (now Colorado Parks and Wildlife) had pronounced most of the Silverton Caldera's waters "dead," thanks to natural mineralization, acid mine drainage and tailings spills. That's why the wildlife agency had stopped stocking them with trout, a common practice in the state for decades. But Simon had noticed areas that he thought seemed fish-worthy.

So, when he became a San Juan County commissioner in 1984, Simon decided to test his theory, using fish as his guinea pigs and the watershed's streams, beaver ponds and lakes as his laboratory. With a group of miners, who were also anglers, he hiked to backcountry waters carrying packs that held thousands of fingerling trout, donated by the state Division of Wildlife.

Even Simon was surprised by how many of those trout survived, including fish in seemingly sullied stretches of water. That meant that other stream segments might be able to support fish, too, if they were cleaned up. This realization ushered in Silverton's next challenge — one that was less about the town's economy or its historic past and more about ecology and the future.

Charged with enforcing the 1972 Clean Water Act, "the state health department took note," Simon says, and began the process of setting water-quality standards for local streams. That made locals, Simon included, nervous. The state appeared to be working with incomplete data that did not account for natural sources of metal loading. That could result in unrealistic water standards, or even lead to the Silverton Caldera being designated under the Comprehensive Environmental Response, Compensation and Liability Act, better known as Superfund.

The last thing most people wanted was to be declared the nation's next Love Canal. Locals dreaded an invasion of federal bureaucrats who would end any possibility of hardrock mining's return, because once a mine has been listed, no company will touch it. As an alternative, the state agreed to help the community form a consensus-driven organization called the Animas River Stakeholders Group, hiring Simon as its coordinator. "We figured we could empower the people to do the job without top-down management," Simon explained, "and develop stewardship for the resource, which is particularly useful in this day and age."

Members spanned the spectrum from environmentalists to miners. Some of them — such as Steve Fearn and Todd Hennis, past and present owners of the Gold King Mine — hoped to mine here in the future.

Fearn, in particular, believed that active mining could actually result in cleaner water in a place like Silverton,

which was already pocked with abandoned, draining portals. Any new mining is likely to occur in existing mines (more destructive open-pit mining is not considered feasible here) where drainage is already a problem. Re-opening such a mine would require a discharge permit, as mandated by the Clean Water Act, and a plan for treating the drainage, bringing in a responsible party — a company — where none currently existed.

Working with a team of U.S. Geological Survey scientists and intent on identifying all the ingredients of the watershed's acid-drainage chowder, Simon and other stakeholders took thousands of water samples, studied draining mine portals and natural springs, counted bugs and subjected fish to doses of metal and acid.

They found that the concoction was considerably more complicated than just a couple of spewing mines. Nature, it turns out, is the biggest polluter in the watershed. Some springs, untouched by mining, were as acidic as lemon juice or Coca-Cola, inhabited only by extremophilic microbes. About 90 percent of the aluminum and 80 percent of the copper in the middle fork of Mineral Creek was natural, a finding that jibed with Franklin Rhoda's 1874 observation of a stream "so strongly impregnated with mineral ingredients as to be quite unfit for drinking."

That didn't let mining off the hook, however. Almost 400 of the nearly 5,400 mineshafts, adits, tunnels, waste dumps and prospects in the upper Animas watershed had some impact on water quality. About 60 were particularly nasty, together depositing more than 516,000 pounds of aluminum, cadmium, copper, iron and zinc into the watershed each year.

Notably, neither the Gold King nor the Red & Bonita were on the list yet. At the time, the Gold King was technically dry. No one knew that the mines would soon become two of the state's biggest polluters — ironically, because of the very effort to clean up a neighboring mine.

Steve Fearn, left, former owner of the Gold King Mine, believes mining still has a place in Silverton. Bev Rich, below, chairman of the San Juan County Historical Society, says historic preservation and scientific research is a more realistic future for the town.

JEREMY WADE SHOCKLEY, LEFT. BENJAMIN RASMUSSEN, BELOW

WHEN I FIRST MOVED TO SILVERTON, in March 1996, the town seemed like a jilted lover, abandoned by mining but yearning for its return. There were no tourists; people simply didn't visit during the springtime. What was there to do but watch the thawing snow and ice retreat, revealing an interminable winter's worth of dog turds and other junk? Most of the windows on the century-old buildings were boarded up, awaiting train season — the only economic season remaining.

Five years after the mine shut down, the impacts still rippled through the community. The year-round population was half what it had been a decade before, and the school was left with just 60 kids in grades kindergarten through 12. About a quarter of the county's revenue, from production taxes, had vanished. That spring, the Sunnyside Mine's owners cut a pollution deal with the state to release them from their water discharge permit and allow them to stop treating the water still leaking from the American Tunnel, paving the way for their eventual exit.

If I'd had any money, I could have picked up a run-down mining shack for less than $30,000. I was broke, though, so I rented a tiny room in the Benson Hotel, no cooking allowed. Because almost all year-round eating establishments had fallen victim to the mine closure and the seasonal tourist season, I regularly dined at the one remaining culinary option, the Miner's Tavern's microwave burritos notwithstanding: The Drive-In.

Most evenings that spring, after I'd sat down with my burger and fries, a tall man in his 70s came over and sat down across from me. Russ was a fixture at the Drive-In, though his role there was unclear. Between not-so-furtive swigs of Old Crow, he occasionally pushed a dust mop across the tiled floor, or wiped down a counter, or washed a plate. Mostly, though, he waxed nostalgic about the old days, when the streets were "full of men with boots," and any able man could make a decent wage underground.

At the time, Russ struck me as an anachronism, a bourbon-soaked leftover from days long gone. I couldn't comprehend how or why anyone would even entertain the notion that mining might return. It was time to move on. After all, Aspen, Telluride, Park City and even Moab had all abandoned their extractive past, welcomed the feds in to clean up the mess, and cashed in on the New West's amenity-based economy. Give it five more years, I wanted to tell Russ, and you won't even recognize this place. I may not have been entirely wrong, but I didn't yet understand what might be lost in pursuing such a path.

"It seems that mining was better than what we have now, in terms of culture. Now, a lot of people just want to ruin Silverton by making it into a tourist trap."

–Dolores LaChapelle, in a 2000 interview

Some time later, after dandelions had replaced the springtime slush in the yards of the old mining shacks, I sat outside Silverton's first, and (at the time) only real coffee shop, the Avalanche, eating key lime pie with Dolores LaChapelle. She had come to Silverton in the 1970s with her then-husband Ed, one of a group of snow scientists who had descended on the caldera to study the potential impacts of cloud seeding on avalanches. Ed left, but Dolores stuck around, building a reputation as an author, scholar and pioneer of Deep Ecology.

I asked her what it was like to be someone like her, writing books about sacred sex, the earth and the rapture of deep-powder skiing in a hard-core mining town. "I just told people I was writing children's books," she replied, a nod to the mean streak often hidden in working-class towns. She was in her early 70s then, her face deeply lined, her trademark silver braid hanging over her shoulder, her brown eyes bright as ever.

Then she spoke about the particular strain of culture that mountains foster, and about how, in Silverton, that culture was, and still is, directly tied to mining. Tearing ore out of the earth mars the landscape and might poison the water irreparably, but, like farming, it also creates an unbreakable, visceral link between people and place. The entire community depended upon this relationship — abusive though it often was — with the earth. "It seems that mining was better than what we have now, in terms of culture," Dolores said. "Now, a lot of people just want to ruin Silverton by making it into a tourist trap."

I think Russ, in his own way, tried to tell me the same thing. He mourned the loss not just of jobs and money, but also of authenticity and, in a way, of identity. Mining is real, genuine, palpable; tourism is entertainment. The people of Silverton had little control over whether the Sunnyside's absentee owner mined here or not. But they did have some say over how mining's mess is handled. And by opposing Superfund, they believed, they were not fighting against clean water. Rather, they were exerting what little power they had over their own identity and culture and future.

A FEW YEARS AFTER I ARRIVED, it looked as if the Animas River Stakeholders Group might actually get a handle on the caldera's dirtier legacy, and all without the feds invading.

Fearn ramped up his mining plans, inspiring hopes for economic and cultural revitalization. He wanted to re-open the long-abandoned Silver Wing Mine, testing experimental water treatment methods, as well as the Gold King, which had last been mined in the late 1980s. He also planned to overhaul the Pride of the West Mill, which he would use not only to mill the ore, but also to process mine waste, both recovering metals and removing a source of pollution.

Meanwhile, Sunnyside Gold, after spending millions of dollars remediating its own mess and that of past miners, was finally ready to shut down for good. With state and federal funding, the Stakeholders had tackled a number of projects on their own, and, in cooperation with Sunnyside Gold, plugged some draining mines that were off-limits to the Stakeholders because of liability concerns. Those combined efforts were paying off, resulting in lasting improvements to water quality. No one knew then that within Bonita Peak's byzantine plumbing system a yet more perplexing and vile mess was brewing.

In July 1996, some 6,500 feet into the dank, dark American Tunnel, one of the last remaining Sunnyside employees screwed shut the valve on bulkhead #1 — a concrete plug about the size of a boxcar — cutting off a stream of acidic water for good. Behind the plug, the labyrinthine shafts and tunnels of the Sunnyside Mine became a 1,200-foot-deep aqueous grave. Two more bulkheads were installed closer to the surface in 2001 and 2003, to stanch water pouring into the lower section of the tunnel through cracks and faults. Together, the three plugs stopped as much as 1,600 gallons per minute of acidic water, keeping 300 pounds per day of fish-killing zinc from Cement Creek and, ultimately, the Animas River. At least, that was the plan.

But in the early 2000s, tainted water started pouring out of the Gold King, which had gone almost dry when the first section of American Tunnel was built back in the early 1900s. By 2005, the Gold King had "started to belch out seriously," says Simon. Suddenly, it was one of the worst polluters in the state. To make matters worse, the Sunnyside water treatment plant — transferred to Fearn in 2003 — closed at about the same time, when Fearn's mining venture went broke, killing the best hope for cleaning up the new drainages. Water quality deteriorated. In the Animas Gorge below Silverton, the number of fish per mile dropped by as much as 75 percent, and where mottled sculpins and brown, rainbow and brook trout once flourished, only a few brooks remained.

It was a baffling plot twist in a long saga that was supposed to be nearing a tidy resolution. Clearly, the American Tunnel bulkheads were responsible. But no one knew for sure where the water was coming from — whether it was the Sunnyside Mine pool, or near-surface water returning to its historic path, or perhaps a bit of both. Until the mystery is solved, no one will know who's really responsible and how best to handle the new drainage.

The Stakeholders knew that the most logical solution was another water treatment plant, like the one that operated for years at the Sunnyside. But finding the $10 million or so to construct it, and another $1 million per year to operate it, wasn't easy. "We'd spent all of our money,

A bicyclist rides through the sleepy streets of Silverton this winter, left, where the old storefronts have been spruced up to serve the tourist economy. Below, rust-colored snow lines the banks of the mineral-rich Cement Creek.
JEREMY WADE SHOCKLEY

plus we knew that we had limited abilities," says Simon. "We didn't feel comfortable checking these out on our own, so we invited the EPA to help." That launched a process that revived old efforts to get a Superfund designation, and it also, ultimately, inadvertently led to the Gold King blowout, some 10 years later.

SILVERTON IS NO LONGER THE TOWN

I stumbled into two decades ago. Both Russ and Dolores are gone. The Silverton Mountain ski area, a stone's throw from the site of all the acid mine drainage action, has kick-started a fledgling winter tourist economy. Many of the town's historic buildings have gotten makeovers, and you can now grab a decent bite to eat, even in the dead of winter. Those mining shacks that were $30,000 in the mid-1990s? They sell for 10 times that now. Like many mining-turned-resort towns, Silverton's chock-full of vacant homes for most of the winter, but long-term rentals are either unavailable or too expensive for the locals — the average wage remains the lowest in the state, even worse than in the chronically depressed counties out on the eastern plains. The absence of a "basic industry" is deeply felt.

For a while, it seemed that this might change. In 2007, Todd Hennis, the current owner of the Gold King, brought an upstart company called Colorado Goldfields to town, buying the Pride of the West Mill and intending to pick up where Fearn had left off. The company put out slick brochures and optimistic videos and press releases, issued shares of stock like it was Monopoly money and pulled in investors, even a handful of locals, on news of rising gold prices. Hennis soon cut ties with the company, however, and ultimately sued, taking the Gold King off the table. And without ever extracting any ore, Colorado Goldfields faded away in 2014, taking with it shareholders' cash along with another shred of hope that mining could return. When Superfund became inevitable, the rest of the hope fluttered out the window — almost.

This February, Fearn, who has been involved in mining ventures here for 40 years, told me that Superfund will surely kill the possibility of mining the Gold King ever again. But infected with the sort of chronic optimism endemic to mining country, he thought other mines, like his Silver Wing, still had a chance.

Yet Bev Rich, who for a time sat on Colorado Goldfields' board of directors, remains doubtful. "Mining probably won't return," she told me. "We are two generations removed from that economy. We're proud of our mining history. We wouldn't be here without it. But global economics makes it almost impossible." Besides, even if the industry did return, its effect on the community would surely be far different than before. It would bring money, yes, but culture, equality and diversity? Maybe not.

Instead, Rich thinks, Silverton should push a more viable industry: historic preservation, perhaps, or acid mine drainage research and remediation. She has long opposed Superfund designation, but now accepts it as inevitable. Like other local leaders, she worries about how the town will handle an influx of outside EPA contractors, given the rental shortage, and the added impacts to public services and infrastructure. Mostly, though, she's concerned that cleaning up pollution might also wipe away the artifacts of mining's history. After all, in many cases they are one and the same.

LAST YEAR, ON A WINTER'S EVE, a friend and I, visiting for Thanksgiving, headed out for a drink at one of Silverton's local bars. Just a few weeks earlier, local elected officials had tentatively thrown their support behind a Superfund designation. A blanket of snow covered the ground, and another storm had settled in, along with the giddiness that comes when you know the snow might close the passes, trapping you for hours, maybe days, transforming the town into the solitary domain of extremophiles. Just before darkness, the world went cerulean blue in a way that is only possible in the mountains in winter.

"The Miner's Tavern has got to be open," I said. It had been years, but I knew what it would be like: The dim light shining down through a haze of cigarette smoke; Judy, with her raven hair and stiletto heels, running the pool table to her rival's chagrin; Terry, who worked in the mines like his father, bellied up to the bar with his son, who never got the chance; Ernie holding court at the round table up front, with another elected official or three, tipsily deciding the fate of the town.

It was eerily quiet, and as we made our way down the empty main drag, all the shop windows were either boarded up or dark. Maybe everyone went home early, I thought. The last few years were tough, after all: Most of the cottage industries that sprouted before the national recession were gone, the community had been ripped apart by an ugly political battle and its heart was broken by a recent domestic homicide. To top it all off, the Gold King Mine blew out, and now the community was diving into the uncertain waters of Superfund.

We pulled up in front of the Miner's Tavern and started to get out of the car before we noticed something amiss. The neon beer signs were dark. Through the window, we saw pool tables piled with junk, and the door was padlocked from the outside. Turns out Silverton Mountain Ski Area bought the entire Miner's Union Hall, including the tavern and theatre upstairs, and made them into its office and, apparently, storage locker.

We continued on our futile search for an open bar, an open anything, and as snowflakes swarmed the streetlights like a million falling moths, I felt an ineffable sadness, and a nagging notion that Superfund, in this instance, somehow translated to surrender. □

WEB EXTRA

For an interactive timeline of the Gold King Mine's history, see **hcn.org**

Senior Editor Jonathan Thompson writes from Durango, Colorado. @jonnypeace

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President Barack Obama accompanies César Chávez's widow, Helen F. Chávez, to place a red rose on the labor leader's gravesite at the César E. Chávez National Monument Memorial Garden in 2012.
CAROLYN KASTER/AP PHOTO

A monument that tells a story of struggle and worker's rights

OPINION BY
PAUL F. CHAVEZ

Four years ago this October, President Barack Obama traveled to the very small town of Keene, California, in the foothills of the Tehachapi Mountains. This is the place where my father lived and labored during the last 25 years of his life. President Obama had come to dedicate the César E. Chávez National Monument, the 398th unit of the National Park Service, and the first to honor a contemporary Latino figure. Just a few weeks before the anniversary of that event later this year, Americans will celebrate a monumental 100th birthday, the centennial of the National Park Service.

These two milestones are worth applauding. Our national parks, as the title of Ken Burns' PBS documentary says, may well be *America's Best Idea*, and celebrating them offers us the chance to reflect on this country's leadership throughout the world in conservation. The Chávez National Monument also provides a glimpse into what the second century of American conservation could look like.

For generations to come, the Chávez National Monument recognizes my father's legacy in building the United Farmworkers Union, which still works to remedy the many abuses that agricultural workers confront. The monument shows visitors how he built a movement that confronted the exploitation and prejudice that farmworkers and other poor people faced. It celebrates the boycotts, fasts, marches and protests that inspired millions of Latinos and other Americans from all walks of life to become involved in social and political activism. Many of the people who responded to the organizing struggle of César Chávez had never worked on a farm and had no idea what it was like to work in production agriculture. The monument also tells how my father tried to create a community of people to practice the values he cherished, values such as nonviolence, self-sacrifice and service to others.

Until recently, when it came to memorializing this country's historical figures or protecting locally relevant outdoor treasures, Latinos were largely overlooked. Of all of our national monuments, only a tiny fraction pay tribute to the Latino men and women who helped build this country. If the Park Service's mission is preserving and telling an inclusive story of America, then the Chávez National Monument — which was championed by former Interior Secretary Ken Salazar — is only a beginning in recognizing the important role of Latinos in our nation.

President Obama has demonstrated much-needed leadership in celebrating how Latinos and other minorities helped shape American history. But the president has also protected huge landscapes that are relevant to Latino and black history. The list includes the Organ Mountains-Desert Peaks National Monument and Rio Grande Del Norte National Monument in New Mexico. The president also championed much-needed protection for the San Gabriel Mountains in Southern California, which are home to 70 percent of Los Angeles County's open space. Monuments to preserve civil rights history, such as Pullman National Monument in Chicago and the Harriet Tubman Underground Railroad National Monument in Maryland, are other examples of the president acting to preserve and tell the tale of our diverse and complex past.

When we mark this year's National Park Service centennial, we should not only revel in past successes that protected unique lands, but also consider the next 100 years of American conservation. The César Chávez National Monument, together with the other monuments designated by the president under the Antiquities Act, helps show us ways to expand that new path forward.

President Obama has inaugurated a model that emphasizes conserving places that protect significant but little celebrated American stories, not just significant and magnificent American lands. When conservation is used this way, as a tool to expand our understanding of our history and of each other — especially the minority populations, who still remain underrepresented on the public lands — then our national parks, monuments and other protected lands will truly reflect America.

Paul F. Chavez is president of the César Chávez Foundation, which partners with the National Park Service in managing the César E. Chávez National Monument in California.

Writers on the Range is a syndicated service of High Country News, providing three opinion columns each week to more than 200 media outlets around the West. For more information, contact Betsy Marston, betsym@hcn.org, 970-527-4898.

WEB EXTRA
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An absurdist Western

The Western Lonesome Society
Robert Garner McBrearty
124 pages, softcover: $14.95.
Conundrum Press, 2015.

Don't be fooled by the length of Robert Garner McBrearty's debut novella — at a mere 124 pages, *The Western Lonesome Society* includes enough intrigue to fill books twice its size. Characters battle mental illness, kidnappings and Comanches to find their way home after wandering across the wild and lonely American Southwest.

Full of lost souls, this absurdist Western thriller (perhaps the only one of its kind) is a trip through the human subconscious, alternating between three increasingly peculiar storylines. Anchoring it all is Jim O'Brien, a professor obsessed with committing his family history to paper. Two of his ancestors were abducted by Native Americans during a raid on their Texas cabin in 1870; Jim finds connection in the fact that he was also kidnapped as a child. All the characters, especially Jim, grope for purpose. But the professor's vapid journal entries: "Spent night at Mesa Verde … Saw big wild turkey. Had fun playing football with boys," suggest that he realizes the futility of his quest for greater meaning. And somehow, that is freeing — absurdism in miniature.

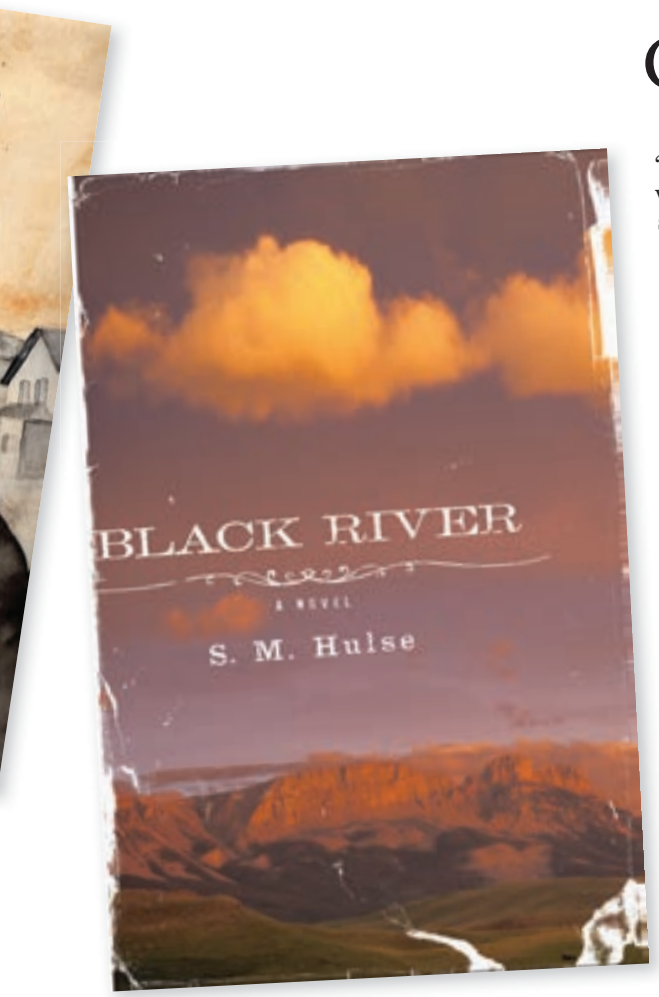
Chapters alternate between the kidnapped brothers' adventures in the 19th century, "Old West" part of the plotline, Jim's own tale, and a third short story involving an escaped mental patient who moonlights as a stripper. In less capable hands, the literary device known as *mise en abyme* — images within images, or stories within stories — can quickly become incomprehensible, but McBrearty cut his teeth on crafting short stories for the *North American Review* and *StoryQuarterly*, among other publications. His taut narratives are composed with precision and spare imagery. (Don't expect any grand descriptions of the Texas frontier; the closest contender is a riff on the seedy strip-club-lined underbelly of Austin.) That said, this is the kind of book that will attract fierce loyalists but leave others scratching their heads. So, *caveat lector*: Though entertaining, the narrative requires intense concentration.

As the book accelerates to its conclusion, the stories — vignettes, really — become more bizarre, forcing the reader to decide what is real and what are the ramblings of a delusional professor.

"We've all been taken — taken from our true home and it's only a matter of getting back there!" Jim exclaims to his imaginary therapist. As long as the reader willingly suspends any expectation of realism, *The Western Lonesome Society* is a fascinating, hallucinatory trip down memory lane.

BY BARBARA BASBANES RICHTER

Grieved man walking



"Wesley is one of those Montana men whose mouths hardly move when they speak, for whom words are precious things they are loath to give up," writes first-time novelist S.E. Hulse in *Black River*, a story haunted by loss and violence in a dead-end prison town.

Although the narrative begins from the perspective of Claire, Wes' wife, at a hospital in Spokane, it quickly shifts: Claire is dying of leukemia. Her last wish is to return to her chosen home in Black River, Montana, where her son still lives. It's a landscape Hulse describes in gorgeous detail: "The foothills rose abruptly here, as though the earth had suddenly run aground of something much stronger and sturdier and been left with nowhere to go but skyward. Old logging roads crossed the bare slopes like neat surgical scars."

But Wes, a retired corrections officer, returns without his wife, hoping to reconcile with his stepson, Dennis, the product of a rape that happened shortly before Wes and Claire met. Propelling the plot is a looming parole hearing for the prisoner who tortured Wes during a prison riot 18 years earlier, breaking nine of his fingers, leaving him without the ability to play his beloved fiddle.

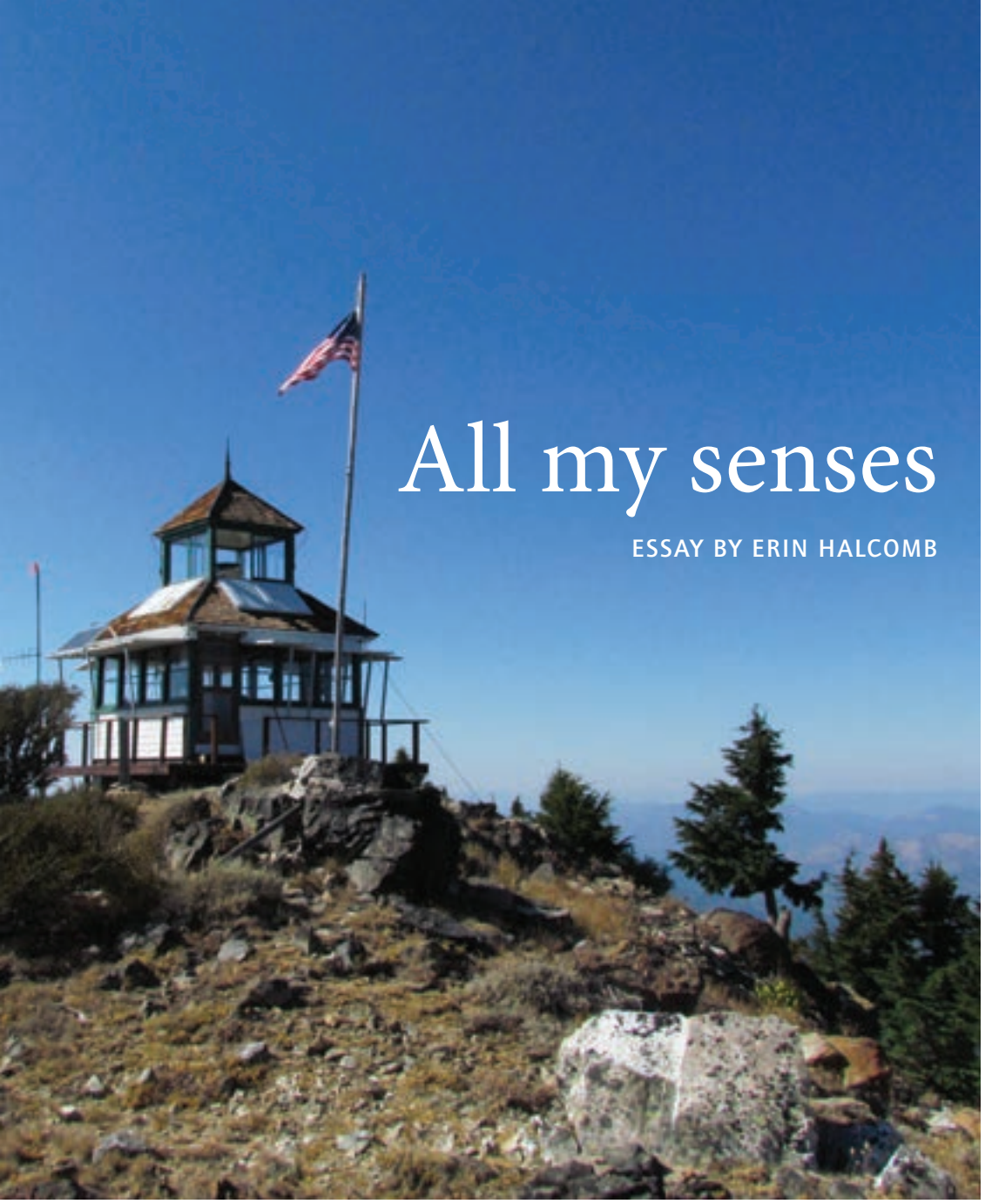
The question of forgiveness hovers over Wes, even in his relationship with Dennis. Years earlier, the boy pulled a gun on him during an argument, an incident that prompted the couple's departure to Spokane, leaving the teenager on his own.

The ostensible reason for Wes' reappearance in Dennis' life is the need to dispose of Claire's remains. Once they have flung her ashes over the valley, old antipathies return, and Dennis wants Wes gone. The stepson and the prisoner, as well as the prison itself, force Wes to confront his true vulnerability.

"What he felt in those days after her death so filled him, so commanded every moment, he knew it was just a hairsbreadth from love itself. Like the same note played an octave apart, at the same time, ringing and resonating together."

BY ANNIE DAWID

Black River: A Novel
S.M. Hulse
240 pages, softcover: $14.95.
Mariner Books, 2016.



All my senses

ESSAY BY ERIN HALCOMB

Dutchman Peak Lookout in southern Oregon.
WIKIMEDIA COMMONS

Lillian's knuckle swells with an arthritic burl. Still, she slides her finger down the front of her blouse and into the pack of Pall Malls she keeps in her bosom. She hooks a cigarette without even looking, lights up, and turns to me. Her eyes flame like butane, but there's an amused lilt to her voice. "Can you believe I used to be the Avon lady — nylons, dress, the whole bit?"

We're in her garden, watching dozens of pinwheels spin; they protect her strawberries from the robins. We sit in the sun. Our dogs pant in the shade beneath our chairs, and Lillian is reflecting on her life prior to 1972, before she began her career as a fire lookout and, consequently, became my local heroine.

Her transition was sudden. Her husband came home from the Forest Service saying that the lookout had quit. Lillian responded, "I'll do it." She told her four teenagers to behave, climbed an 80-foot steel tower, and started scanning Northern California for smoke.

She hopscotched to different mountaintops, but her last post, which was the longest of her reigns, was in southern Oregon. There, for 17 years, she staffed a cedar-shingled pagoda on the summit of Dutchman Peak.

I also staffed Dutchman. That's why I'm here. I've driven several hundred miles to visit Lillian because it's fire season. But now I'm not keeping watch. I want to vanquish my sense of loss — the feeling that my seven seasons weren't enough — and reclaim the far-reaching view of all that the mountain gave me.

If anyone can help, it's Lillian.

***

By the time I reached Dutchman, Lillian had long since retired. But everyone still talked about her. They told me she spotted fires with speed and precision, and that she shooed visitors away like flies. To her, the lookout was a workstation; entertaining sightseers was not in her job description.

I aspired to uphold her standard of detection. I studied maps and requested mirror flashes. To avoid distractions during lightning events, I asked visitors to remain in their vehicles, with their windows rolled up.

One afternoon, I told a woman to stay in her vehicle. She ignored me. She plodded up the footpath, her face shaded by a visor. I stood on the catwalk and repeated myself. She paused at the weather station. She lifted her hot blue eyes and yelled at me: "Damn you, girl, I was up here before you were born!"

And I knew instantly. "You must be Lillian," I said. I invited her in.

During that storm, I didn't track downstrikes. It was wet; it would take time for water dogs to dissipate. I studied Lillian. She, too, seemed shaped by the wind. Weather on Dutchman had made the mahogany and hemlock alike: short and stout and strong. That afternoon, I learned Lillian didn't only guard the forest from wildfire. She'd shoveled bear shit off the roads to fool hunters. She harassed butterfly collectors.

***

Lillian hunches over her garlic and snarls at the mold that discolors it. I ask if she remembers the first time we met, and recount the story. But she denies it. "Oh, I did not say that," she replies. She mounts a hand on her hip, and, with an inch of ash hanging off the end of her cigarette, corrects me: "What I said to you was, 'The hell with you, girl, I'm coming up anyway.' "

She moves near, sits down slowly, and hunts her own memory. "You know about the ladybugs, right?" she asks. I nod.

"They'd arrive in September," she says, "and swarm the rocks by the flag pole."

Ladybeetles congregated on the peak to overwinter in its granite crevasses. Before their dormancy, they'd exude from cracks and purl over boulders, little upwellings, the color of magma. Visitors would stand on the summit and extol their numbers.

"I'd warn them," Lillian continues. " 'Be careful. They'll bite ya,' but everyone would look at me like I was damn crazy, until"— *whack*, Lillian slaps her arm, mimicking a visitor — "one of them'd get hit. And the surprise on their face. They couldn't believe it. They'd been bit by a ladybug."

I know the scene; it happened every season.

"If you had to pick your favorite thing about Dutchman, what would it be?" I ask. I've found it impossible to decide. The view? The solitude? Lillian takes a drag and then squashes the cigarette in an ashtray.

"I lived with all my senses," she says. "I was down on the ground watching a grasshopper lay eggs. You done that?" she asks, as if posing a dare.

I watch her smoke ringlets rise and answer, "Yes, I have." □

Erin Halcomb is working on other essays about her time on Dutchman. She thanks the American West Center for helping her travel to visit Lillian.

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PHOTO BY MARK GOCKE

PHOTO BY MARK HARVEY

"*High Country News* continues my work and my vision of providing the best information possible about this place we all care so much about. I would like to see it carry on that vision long after I am gone."

—Tom Bell, founder
High Country News

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HEARD AROUND THE WEST | BY BETSY MARSTON

COLORADO

It was a story made in heaven, at least for headline writers: "Bible giveaway riles nonbelievers, and there may be hell to pay," said the *Grand Junction Daily Sentinel*. The kerfuffle began when western Colorado's Delta County School District allowed Gideon Bibles to be given away for free at a Delta middle school library. The nonprofit Freedom from Religion Foundation demanded equal access, citing separation of church and state, and the school district, hoping to avoid a lawsuit it had little chance of winning, agreed. So, as the *Sentinel* put it, the schools now had to "give the devil his due." Which is why both middle school and Delta High School students soon found provocatively titled publications on a hall table, all of them free for the taking, including *The Satanic Children's Big Book of Activities* and pamphlets entitled "Why Jesus?" and "The Top 10 Public School-State Church Violations." All were swiftly snapped up, perhaps to be savored as future collector's items. The Gideon Bible giveaway was initially reported by the parents of middle-schooler Aileen Harmon, who complained that she was harassed by fellow students for not taking one. Meanwhile, 18-year-old Delta High School senior Cidney Fisk reported that last fall, the abstinence-only sex education program offered a special presentation that stressed that "sex before marriage moved you further from God," and that wives had to be subservient to their husbands. Boys and girls were segregated for separate talks, but Fisk, who was covering the story for the school magazine, sat through both. "On every slide," she added, "there was a crucifix." A school district official said he never noticed any crosses, but added, "I'm not saying it wasn't there, I'm saying I didn't notice it." The school district is now reconsidering its "open-door" policy on the distribution of religious materials.

ARIZONA

How would you like to shoot virtual gnomes in taxis and garbage cans in a virtual New York City? That may soon be an option in Peoria, a town of 154,000 on the outskirts of Phoenix. Under a Peoria program that encourages the re-use of empty buildings, a corporation called Modern Round Entertainment will get $655,166 to open a "virtual shooting lounge" in a former restaurant and bar. Patrons will sit on couches in darkened rooms and participate in virtual shooting games that play out on large screens, using realistic machine guns and other weapons. The idea is "Ready, aim, fun," reports KJZZ radio. If the project goes through, there will be no gnomes on the range in Peoria.

WASHINGTON **He'll know you're speeding before you do.** AMY GULICK

WYOMING

Wyoming Supreme Court Justice Michael Davis has a keen awareness of how gas companies try to dodge their reclamation obligations. Recently, he ruled in favor of Brett Sorenson, an Arvada-area rancher stuck with 10 coalbed methane wells. Judge Davis said Pennaco Energy's sale of the wells to an operator who went bankrupt didn't end the company's original obligation to remove its equipment and restore the private land to its original state. "Pennaco says its obligations passed like a quarterback passes the football to a receiver — once the ball is passed, the receiver has it and the quarterback has not. We view Pennaco's attempts to relieve itself of the obligations it bargained to perform more as a game of hot potato." Pennaco is now liable for a total of $1.1 million: $70,032 in unpaid annual surface-use payments, $888,732 for reclaiming the land torn up by the wells, and $96,217 to replace an artesian spring damaged during drilling. Judge Davis said Pennaco could have written the contract so that reclamation costs passed to any future buyer, but it failed to do so. "There is no such clause, and we are not at liberty to rewrite the agreement," the court said. The decision guarantees an increase in legal action from some of the thousands of landowners with abandoned wells in northeastern Wyoming, says oilprice.com. Wyoming regulators have committed to plugging more than 3,800 wells, while another 4,000 idle coal-bed methane wells are on public land. So far, says the *Casper Star-Tribune*, the Bureau of Land Management has made no formal plans for reclamation.

THE WEST

Sometimes a corporation's behavior is so self-serving you'd think its top brass would be ashamed to get out of bed. Arch Coal Inc., for example, reported a loss of more than $2.9 billion for 2015. In fact, it has "lost more money than it has taken in every year since 2012," reported *Environment & Energy Publishing*. Yet a few days before the company declared bankruptcy — threatening coal mining jobs around the West — Arch made payments of $8.12 million in bonuses to seven of its corporate officers, including its chief executive officer, chief financial officer and president. Gary Hufbauer, a senior fellow at the Peterson Institute for International Economics, called the bonus payments "bizarre," and added that they were vulnerable to being "voided by a bankruptcy court."

WEB EXTRA For more from Heard around the West, see **hcn.org**.

Tips and photos of Western oddities are appreciated and often shared in this column. Write betsym@hcn.org or tag photos #heardaroundthewest on Instagram.

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> "**It's not the first time bigoted attitudes have surfaced in the United States.** Rock Springs, Wyoming, was ground zero in 1885, when hate talk spurred the murder of Chinese immigrants."
>
> Paul Krza, in his essay, "How bigotry helped shape the West," from Writers on the Range, hcn.org/wotr