

THIS LAND IS THEIR LAND

Public lands belong to everyone. But private landowners can make it hard to get to them.

By Marshall Swearingen | Page 12



EDITOR'S NOTE

This land is whose land?



Every week, the editors of High Country News sit in a small, lime-sherbet-colored conference room and debate what stories we should cover. Should we tackle legalized marijuana, since the West is leading the charge, or has

that story become too "national?" How about North Dakota's response to the drop in oil prices - is it still too early to write about that? We bat around such questions while evaluating and often turning down freelance pitches. The proposed stories might sound good, but, sadly, they're just not HCN stories.

Over the years, we've broadened our understanding of what constitutes an HCN story. When we get a good pitch about a battle on public lands, though, there's no hesitation: All eyes in the room light up. "That's down the center of our plate," someone will intone as heads bob up and down. We all know that HCN exists largely because of the national forests, parks, wildlife refuges and BLM lands; they are the connective tissues that bind this region together and differentiate it from the rest of the country and, indeed, the world. Where else does the average citizen have the ability to explore unfettered more than half a billion acres of mountains, canyons, deserts and grasslands?

And yet the West's public lands have always seemed to belong to some folks more than others. A relatively small number of ranchers have the right to graze livestock on them; private companies drill for oil and gas, cut timber and dig for minerals on them; ski resorts charge folks a premium to slide down runs carved out from the public domain. And, as Montana writer Marshall Swearingen explores in our cover story, private landowners can secure almost exclusive access to adjacent public lands simply by locking a gate and putting up a "no trespassing" sign.

That's infuriating to those hunters, hikers and other recreationists who in recent years have seen roads long opened to the public get shuttered off by new landowners who want more privacy or, more insidiously, exclusive access to public lands for the patrons of their guest ranch or outfitting business. It can amount to a privatization of a public resource, vet, as Swearingen discovers. access advocates face an uphill battle to legally prove that historic access routes should remain open. In many cases the paperwork simply doesn't exist.

That's the bad news. The good news is that in some places, activists, land agencies, county governments and landowners have worked out ways to keep the gates open while respecting private property rights. We hope to see more of these success stories in coming years and write about them in the magazine.

In the meantime, keep your eye out for good stories about legalized pot and plummeting oil prices. And if you think we're missing a big story, send a tip to editor@hcn.org.

-Paul Larmer, executive director/publisher

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Montana-style humor marks a private property boundary. COURTESY PUBLIC LAND/WATER ACCESS



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Photo illustration: Crazy Mountains and a selection of Montana private property signs.

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After a ski patroller's death, a flurry of questions

Forest Service permitting issues complicate a southwestern Colorado tragedy, reports Jonathan Thompson. hcn.org/articles/ski-patrol-death

Population studies showed that after **IOIN THE CONVERSATION eradication of thousands of coyotes in California ... there were actually more coyotes than before. I postulate that the same will happen in Utah."

-Bill Wegesser commenting on "Death of Utah wolf is collateral damage" hcn.org/articles/mistaken-identity



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"Unfortunately, this isn't the first rodeo that we've been to."

--Montana Gov. Steve Bullock, after 50,000 gallons of oil spilled into the Yellowstone River. In 2011, 60,000 gallons spilled into the same river. National Public Radio



CLIMATE POLICY

The limits of legacy

Can Gov. Jerry Brown build big stuff and fix the climate too?

on Jan. 5, when Edmund "Jerry" Brown, 76, was sworn in for his fourth term as governor of California, he delivered a treatise on the environment for the ages. He quoted biologist E.O. Wilson. He geeked out on microgrids. He leveled warnings about the climate and announced a plan of action. Within 15 years, Brown said, 50 percent of California's energy should come from renewables; vehicles should use half as much gas. The energy efficiency of existing buildings should double.

The goals are California's, but Brown clearly expects the world to follow his state's lead. If we stand any chance of saving the planet, he said, California "must show the way."

No governor has ever pledged what Brown has, nor have many spoken so fiercely on climate. So why didn't Brown's speech make environmentalists swoon? Beyond a few kind words from Tom Steyer, the billionaire Keystone XL fighter, most guardians of public health and the planet came away no less pissed off than

BY JUDITH LEWIS MERNIT

they were before. Outside the Capitol building during Brown's speech, activists dressed as oil executives played mock tug-of-war with "the people of California," yanking a suited man in a papier-mâché Jerry Brown head around like a puppet. It wasn't clear who won.

Brown hasn't talked about oil much lately, but early in his third term he made clear what he thought of people who put environmental concerns ahead of California's then-sagging economy. In 2011, he fired two regulators for subjecting drillers to rigorous scrutiny; two years later, he announced that he wouldn't be "jumping on any ideological bandwagons" to ban advanced well-stimulation techniques like hydrofracturing and acidizing, which entails dissolving rock with hydrofluoric acid. High-tech extraction techniques are critical to exploiting the Monterey shale, the 1,750 square-mile jumble of oil-packed rock that Brown called California's "fabulous economic opportunity." But most environmentalists just want drilling on the shale to stop.



Gov. Jerry Brown displays a chart showing temperature increases due to climate change at an agricultural economics conference last year. RICH PEDRONCELLI/AP PHOTO

"He could sign an executive order at any moment placing a moratorium on fracking," says Kathryn Phillips, the director of the Sierra Club's lobbying arm in Sacramento. "And in light of the information that we have out now, logic would suggest he do so."

That information includes the 2-degree Celsius global temperature increase some scientists consider the climate's breaking

Please see Legacy, page 5

Immigrant families attend the **Immigration Relief Education forum** at the Los Angeles **Convention Center** to learn how to prove they have lived in the U.S. for five years or more. Deferred action programs could prevent the deportation of more than 4 million families in the U.S. DAMIAN DOVARGANES/

AP PHOTO



SNAPSHOT

Deportation relief

ver 4 million unauthorized immigrants live in the West. If the Obama administration and Congress succeed in passing immigration reform, many could be eligible for deportation relief. Nationwide, 46 percent of unauthorized immigrants qualify for deferred action programs under federal guidelines. But in many Western states, that number is higher: In Utah, it's 54 percent; in Idaho, 64. Across the 11 Western states, over 2 million people could qualify. A high proportion of immigrants in the region come from Mexico (in Colorado, 81 percent), says Randy Capps, an immigration expert at the Migration Policy Institute. These families are long established and settled, inreasing the odds that they'll be eligible. But as the chart below shows, the West's unauthorized immigrant populations are also widely diverse, in both countries of origin and in occupations. Increasingly, they have families, jobs and, now, roots in the region. SARAH TORY

UNAUTHORIZED IMMIGRANT POPULATION PROFILES IN THE WESTERN U.S.								
ARIZONA 274,000	CALIFORNIA 3,166,000	COLORADO 180,000	IDAHO* 34,000	NEVADA 145,000	NEW MEXICO* 69,000	OREGON 124,000	UTAH 88,000	WASHINGTON 214,000
TOP COUNTRIES OF BIRTH (BY PERCENT)								
Mexico 88 Guatemala 2 India 1	Mexico 71 Guatemala 6 El Salvador 3	Mexico 81 Guatemala 2 El Salvador 2	Mexico 82	Mexico 76 Guatemala 4 El Salvador 4	Mexico 89	Mexico 78 Guatemala 5 China 2	Mexico 73 Guatemala 4 Peru 3	Mexico 68 India 3 Korea 3
TOP EMPLOYMENT INDUSTRIES (BY PERCENT)								
Construction 20 Tourism 20 Professional and administrative 17	Tourism 16 Manufacturing 13 Professional and administrative 12	Construction 23 Tourism 23 Professional and administrative 15	Agriculture 32 Manufacturing 13 Tourism 12	Tourism 33 Construction 19 Professional and administrative 14	Construction 22 Tourism 20 Professional and administrative 9	Tourism 19 Agriculture 18 Manufacturing 14	Tourism 25 Construction 18 Manufacturing 14	Agriculture 22 Tourism 17 Professional and administrative 13

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THRILL OF THE DUST HUNT

Imagine my surprise at seeing the frontispiece of my doctoral dissertation on the cover of High Country News ("The Dust Detectives," 12/22/14). To those who study it, the atmospheric transport of dust and pollution is a truly exciting detective drama, full of twists and new discoveries. It is a field both driven by and motivating imaginative new instrument development and creative field experiments. At this intersection of human activity, geology, chemistry and atmospheric science, we are continually reminded of the many-layered interconnectedness of our environment, at scales from desert soil crusts to the whole planet. Douglas Fox's excellent piece captured both the thrill of the hunt and the deep implications of this area of environmental research.

Richard VanCuren Davis, California

TRICKY FLUENCY

I'm always pleased to find articles in HCN devoted to Native American issues, which is why I was glad to read a piece covering the Navajo Nation's plight concerning language fluency and the eligibility of presidential candidates ("A question of fluency," 12/22/14). And while the article was quite accurate in describing the now-obvious divisions among tribal voters in the debate, it failed to complete the picture of Chris Deschene's ordeal in his second-place finish in the primary. Yes, he objected to taking a fluency test given by his opponent's attorney. But he also, more importantly, objected to being the only one out of a field of 17 candidates to be required to take the test. Though each of these other candidates filled out the application form, checking the same box, no one but Deschene was required to submit to the test. How many others were as fluent as he but were not disqualified? Deschene's answers during the test were the equivalent of pleading the fifth in a court of law, whereby his answer to each question was, spoken in Navajo, "I refuse to answer, because you are trying to trick me."

Ron Pease Aztec, New Mexico

YELLOWSTONE'S CLIMATE THREAT

wolf reintroduction in Yellowstone was



a welcome change from the oversimplified accounts that have dominated media coverage ("Have returning wolves really saved Yellowstone?" HCN 12/8/14). One important factor was missing, even though it is likely to become the most critical one: climatic change.

Our University of New Mexico-based research on the long-term history of beaver damming and streams covers the specific drainages in the article, along with many other small streams in the dry lower elevations of Yellowstone and Grand Teton national parks. The data clearly show that during warm and dry intervals within the last few thousand years, beaver activity was markedly reduced — in particular during the Medieval Climatic Anomaly of 900 to 1300 A.D., when prolonged droughts shrank lakes and streams and spurred severe forest fires in much of the West, including

David Cooper pointed to Elk Creek's exposed sediments as evidence that the now deeply gullied valley was a pond environment for thousands of years. Indeed, our analysis and dating of sediments at that site show that wet, silty beaver meadows persisted over much of the last 4,000 years. But that environment was disrupted by forest fires and ensuing gravel-depositing floods during the Medieval Climatic Anomaly, when Elk Creek and most other small streams in Yellowstone and Grand Teton lack evidence of beaver ponds, and several down-cut through former pond deposits. Likewise, floods following the 1988 fires greatly increased gullying. Also, incision is not ubiquitous at present; the Elk Creek site represents one of the most severe impacts in a spectrum that also includes channels with no down-cutting, despite beaver dam abandonment. Only about 30 percent of

the length of small streams in Yellowstone's northern elk winter range show clear evidence of past beaver damming, a reflection of habitat limitations, and substantial reaches (including parts of Elk Creek and Blacktail Deer Creek) have dated terraces showing down-cutting that began many hundreds of years before the current episode of dam abandonment and channel incision.

Climate has also played a role in changes since Yellowstone's establishment in 1872. Following the elimination of wolves, a cooler and often wetter climate in the early 1900s combined with abundant willow and aspen and a lack of predators to assist beaver populations in rebounding from trapping. The Dust Bowl drought of the 1930s amplified the impact of browsing

by burgeoning elk populations on beaver habitat.

But of most concern are the rising temperatures and severe droughts of the last few decades. Some streams where Warren found abundant beaver in the 1920s now run dry in summer, and the lack of flow cannot be attributed to loss of water storage by beaver damming, as they are fed directly by springs that are no longer flowing. Other studies have documented the recent drying of once-perennial ponds in northern Yellowstone, and the massive 1988 burns and subsequent large fires in the Northern Rockies have been linked to warming temperatures, much more so than fire suppression.

We are disinclined to think that some streams will "never" recover, as the article suggests; in the last millennium, incised channels have refilled and beaver meadows have returned as environmental conditions changed. But warming by greenhouse gases with long residence times in the atmosphere has the potential to desiccate greater Yellowstone's small streams over many hundreds of years, with impacts that will resonate throughout water-limited ecosystems.

Grant Meyer and Lyman Persico Albuquerque, New Mexico



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greater Yellowstone.

Your piece on the differing responses to

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Legacy continued from page 3

point. Kassie Siegel, director of the Center for Biological Diversity's climate law center, notes that the governor mentioned that number in his speech, but didn't seem to understand its implications. "We cannot observe that limit if we develop the Monterey shale," Siegel says. "We just can't."

The good news for environmentalists is that Monterey won't be the nation's next Bakken: As the Energy Information Administration reported last May, there's far less recoverable oil there than the 15 billion barrels industry analysts once ballyhooed. Brown signed a law in September of 2013 requiring drillers to disclose their methods, and also calling for studies of their environmental impact. With New York Gov. Andrew Cuomo throwing down an implicit gauntlet with his own state's fracking ban, Brown might just consider some restraints on oil production when those impact reports come out this summer.

Then will the rift mend? Unfortunately, it will not. Environmentalist dissatisfaction with Brown extends beyond the Monterey, and some objections come from former allies. As the state's governor from 1975 to 1983, Brown signed into law protections for California's coastal waters, pioneered tax credits for rooftop solar and set energy-

efficiency standards so strict they obviated the need for a new nuclear power plant — a technology the governor and his then-girlfriend, Linda Ronstadt, rabidly opposed.

But that Jerry Brown is gone now, says Huey Johnson, who served as Brown's resource secretary from 1976 to 1982. He's been replaced by a distracted man with a worried eye on his legacy. "In his first two terms, (Brown would) give speeches on the importance of limits, on the limits of resources, the limits of consumption," says Johnson, now president of the Resource Renewal Institute in Mill Valley, California. "He used to talk about preserving land for wildlife or recreation."

These days, Johnson says, "He's gotten hung up on this twin tunnel stuff. And for that, he deserves to be tarred and feathered."

The tunnels Johnson refers to would divert water from the Sacramento River to thirsty farms and cities down south, ostensibly to reduce pumping from the ecologically hammered Sacramento-San Joaquin Delta. They've become so synonymous with the state's Bay Delta Conservation Plan, or BDCP, and so many environmentalists hate them, that in activist circles "BDCP," says Phillips, stands for "Big Dumb Concrete Pipes."

Phillips acknowledges that Brown is "weak on natural resource issues," but dis-

putes Johnson's view that the septuagenarian statesman differs so radically from the 36-year-old idealist who eschewed the governor's mansion for a downtown apartment because he wanted to walk to work. Like his father, Pat, who ran the state for two terms starting in 1959, "Brown has always been devoted to the idea that technology can solve all our problems," she says. "The Browns like to 'get shit done.'"

That's not all bad, Phillips argues; it's the very quality that "helped us transition so quickly to cleaner (electricity production) in this state." It's just that engineering marvels like dams, canals and high-speed rail often conflict with protecting habitat and open space.

Brown could, of course, leave an impressive legacy on climate alone, if he'd only hold consistently to that goal. On Feb. 7, 350.org will lead a climate march in Oakland, Brown's hometown, where he served as mayor for eight years, and participants apparently believe Brown is vulnerable to the pressure such a demonstration can bring.

"The standard slogan you see at these rallies," Phillips says, "is 'Climate Heroes Don't Frack.' I think the governor knows that. I think he understands that extreme extraction techniques to pull up oil will counteract all his other climate goals. I have hope that he'll make the right decision." □

Engineering marvels like dams, canals and high-speed rail often conflict with protecting habitat and open space.

FINDING

Balanced rocks can tell us about earthquake risk

Seismologists study precarious boulders to determine how hard the ground might shake

A slender monument stands in the slanted morning light: a column of granite boulders stacked like toasted marshmallows, throwing a crooked shadow down a hillside of sagebrush and scrubby juniper.

"You don't find anything like this near the San Andreas (fault)," says James Brune, climbing up to inspect this 10-foot tower in western Nevada. He wears a trim white beard, wool sweater and widebrimmed hat.

Brune, now 80, might have retired years ago from his post as a seismologist at the University of Nevada in Reno, but his interest in precariously balanced rocks keeps him busy. He is using them to estimate the hidden earthquake risks faced by a growing West. He hopes to learn something about the dreaded "Big One" — the kind of catastrophic shaking that occurs just once in 1,000, or even 10,000, years.

These are the rare, deadly events that engineers have to plan for when they build bridges, dams, hospitals and nuclear power plants, and yet, as Brune likes to say, "How do you predict once in 10,000 years when you only have a record of 100 or 150 years?" The information simply doesn't exist.

Historic records of earthquakes in the West go back only to the 1800s. To track older quakes, geologists trench across known faults in search of places where the silt layers are offset by several feet, marking major movements. Their studies show that Southern California's southern San Andreas Fault has experienced 10 magnitude-7-plus quakes over the last thousand years, most recently around 1720. But the magnitude of a quake provides only a rough estimate of how much the ground shook, on average, over a very large area. "Shaking from earthquakes is not a uniform pattern, like when you toss a rock into a pond and the ripples go," says Lisa Grant



A precariously perched granite boulder in the Mojave Desert of Southern California. Balanced rocks in these desert regions are thought to have begun standing between 12,000 and 18,000 years ago after eroding from underlying strata. DOUGLAS FOX



Blue grosbeak.

DAN PANCAMO/CC FLICKR

THE LATEST

Backstory If national parks are the beloved eldest son of the public-lands family, national wildlife refuges are the classic middle child: overlooked, ignored, underfunded and understaffed ("An agency in need of refuge?" HCN, 2/26/01). The 150-million-acre system has units focused on game animals, endangered species and migratory

birds. But the U.S. Fish

and Wildlife Service

has lacked a formal

policy regarding

refuge acquisition

and expansion, or

In mid-January, the

conservation goals of future expansions.

Followup

agency released its new "strategic growth policy," declaring that expansion should prioritize lands and waters to protect threatened and endangered species and migratory birds. Acquisition proposals must identify how refuges can contribute to landscape-scale conservation, with nearby landowners' cooperation, and whether they can still thrive as the climate changes. "It's a way for the Service to say, 'Given our limited resources, how are we going to do this in the future?" " says Desiree Sorenson-Groves of the National Wildlife Refuge Association.

CALLY CARSWELL

Ludwig, a seismologist at the University of California in Irvine who spent 20 years studying prehistoric earthquakes on the San Andreas. "There's a lot of variability," because shock waves change as they travel through different types of rocks and soils. As a result, scientists have had no reliable way to figure out how hard the ground actually shook in any particular area during an earthquake — until now.

James Brune and his son, Richard, who designs electronic doors for aircraft hangars and fire stations, have spent 25 years mapping precariously balanced rocks in California and Nevada. They have created digital 3-D models of the rocks and calculated the shaking required to topple them. They want to know how many G's of acceleration a balanced rock can withstand before falling — not how far the ground underneath the rock must move, but rather how violent that motion has to be.

The Brunes have discovered some surprising things in the process. In some places, judging by the rocks still standing, the biggest earthquakes in the last 10,000 years weren't quite as large as we'd thought. And that, in turn, suggests that, at least in some places, the future Big One may not be as bad as expected. If bridges or dams need less strengthening than previously thought, more resources could be freed up for the hundreds of bridges and other structures in the West that are already at risk, not from earthquakes but from old age and inadequate maintenance. "I think the (balanced) rocks are very important tools," says Grant Ludwig. Information gained from studying them, she says, can communicate risk to the public in a concrete way that standard "2 percent risk in 50 years" seismic hazard maps don't.

Brune's interest in balanced rocks began by chance. In the early 1990s, he was assessing earthquake risk at Yucca Mountain, site of a proposed nuclear waste dump. He noticed volcanic rocks stacked awkwardly atop one another, painted in dark rinds of desert varnish that would have taken thousands of years to form. Using standard methods, engineers had predicted that the nuclear waste dump would experience maximum shaking up to about 0.8 G's over a period of 10,000 years. But Brune doubted these rocks could survive more than 0.3 or 0.4 G's - prompting him to suspect that scientists had overestimated the ground acceleration that could happen. His results suggested that the waste dump might not need to be quite so heavily fortified.

Yucca Mountain was eventually shelved, but the two Brunes began a broader search for balanced rocks, hoping they could improve shaking estimates in other places. Richard Brune outfitted a remote-control airplane with a live-feed video camera — a rudimentary drone that

they used to search in remote and rugged terrain. Later, Richard rode in a friend's Cessna with the door removed, leaning out to shoot photos as the plane flew tight crisscross grids over the Mojave Desert. The father and son pinpointed several thousand promising rocks, which they later hiked to and measured.

When you picture a balanced rock in the desert, you may envision a ruddy sandstone spire. But these balanced sandstone rocks often form and erode away too quickly to be of much use for studying earthquakes over thousands of years. So as the Brunes comb through California's San Bernardino, Los Angeles and Riverside counties and the western half of Nevada, they seek out balanced granite boulders instead. Geologic history has honed these columns into exquisite seismic record-keepers. Around 100 million years ago in Western North America, plumes of magma cooling miles beneath the surface formed granite monoliths. These buried blocks were alternately stretched and squished by shifting tectonic plates splintering them with cracks that acidic groundwater widened. A few thousand years ago, when water erosion finally exposed these rocks, they were rounded and fragmented, sitting upon one another but not attached. Wind and water whisked away the last grains of sand from their joints, leaving them balanced in the air — sometimes just a single granite boulder perched precariously on a stone pedestal, sometimes a column of three or four rocks.

The rocks have often fulfilled expectations: The farther away they were from major faults, the more precarious they were — some could be toppled with the nudge of a finger. But there were conspicuous exceptions, and these have led to important discoveries.

The Brunes found surprisingly tippy rocks near the San Jacinto Fault in Southern California. "Current hazard maps say those rocks shouldn't be there," says James Brune. The rocks clustered around a so-called "step-over," where the fault jags four miles west before continuing south. Brune concluded that such step-overs can effectively bracket an earthquake by preventing shock waves that begin in one segment of a fault from propagating strongly into other segments. It's a discovery he's proud of, he says, "because the precariously balanced rocks said something that nobody realized."

Glenn Biasi, a younger seismologist at UNR, is now converting the Brunes' copious field notes into a database — some 790 rocks, so far. Analysis of that big dataset is revealing some new and unexpected insights into the nature of seismic risk.

In some cases, patterns of risk are actually turning out to be simpler than previously assumed. For example, even within 10 miles of major faults like the San Andreas, Biasi sometimes sees rocks



that are surprisingly precarious, requiring only about 0.35 G's of ground acceleration to topple — about what you'd feel in a modern sports sedan going 0 to 60 in 8 seconds. Despite having experienced 50 magnitude-7 to -8 quakes in their lifetimes, a couple dozen of these rocks near the San Andreas Fault are still standing. The severity of shaking depends on many complex factors, including how deep in the earth the fault rupture occurred and the type of bedrock underlying the area. But these rocks have revealed something important: Having hard bedrock at ground level dampens the shaking, so that even in really big quakes, it still doesn't exceed about 0.35 G's. A magnitude-8 quake may unleash far more energy than a magnitude-7 one - but not because its maximum shaking is any harder. It simply occurs over a broader area. "Nobody's really seen that before," says Biasi.

The San Jacinto step-over results have already found their way into California's 2014 seismic hazard maps, which are used to decide how strongly houses, bridges and other structures should be designed, or when retrofitting is needed. The next hazard maps, due out in several years, will include more of their results.



Richard Brune prepares a rock for photogrammetry by taping the rock to aid in merging photographs to construct a 3-D digital model.

This boulder, east of the San Andreas Fault, may have withstood 50 or more major earthquakes over the past 10,000 years. DOUGLAS FOX

The balanced rocks are also relevant to broader areas of the West. Geologists now understand that some faults in Nevada and Utah can cause earthquakes as severe as those in California, but because they accumulate stress more slowly, their major quakes often have repeat times of 1,000 years — this is the case for a major fault that passes through Reno. This makes the 150-year historical record even less useful than it is in California, where many faults experience major quakes every 200 years or so. The information that balanced rocks provide in these inland zones could prove even more critical.

ne hundred and fifty yards from the offices of Biasi and Brune, engineers are studying the nuts-and-bolts implications of their findings. Inside a metal hangar sit three massive "shake tables," resembling metal dance floors. Controlled by an array of stout hydraulic jacks, these tables can be programmed to reproduce the shake patterns of any recorded earthquake. The Brunes have balanced rocks on the tables and shaken them down, testing their calculations of how precarious they are.

These tables are typically used on real structures — in one case, a concrete

bridge loaded with F-250 pickup trucks. Outside the hanger stands a macabre sculpture garden of wreckage from these experiments. Brune walks up to one such pillar. It is bent 90 degrees at the bottom, like a forlorn human figure knocked to his knees in battle. As the pillar bent, the rebar flexed inside it, causing its brittle concrete armor to pop off in chunks. "This," he says, "is one of the commonest ways that buildings fail" during earthquakes.

Brune's contribution to these experiments involves simply telling the engineers how hard they need to shake their structures to simulate once-in-1,000-years or once-in-10,000-years ground acceleration. But the most important consequence of his work may lie elsewhere — buried in obscure mathematics.

For decades, seismologists relied on complex statistical methods to estimate the potential ground motion at any given site. They collected the handful of available ground-shake measurements, then extrapolated that sample into a standard random distribution, similar to a bell curve. The average shake events clustered in the tall part of the curve, but the curve also included a thin tail stretching to the right, representing rare, extreme events—

events that had never happened, but were predicted to happen based on the standard shape of the statistical curve. "The width of that" tail, Biasi says, "is the most expensive thing in earthquake engineering."

Engineers use these shake severity curves to decide when and how to retrofit a bridge, building or dam. This is crucial for safety, but enormously expensive if the severity of future shaking is overestimated and the structures are over-engineered. Retrofitting a bridge to withstand 0.5 G's rather than 0.3 G's can sometimes cost as much as building an entirely new structure.

Biasi and Brune now believe that these standard statistical methods have caused scientists to overestimate the width of the shaking curves, leading them to overstate the amount of random variation in shaking, and the severity of the rarest and worst events. This finding, says Biasi, could end up being the most significant result of their work. It could alter seismologists' basic understanding of how all faults function and lead to further major revisions of seismic risk estimates. "We always study faults," Grant Ludwig says. "But the rocks let us study shaking — which is what actually does the damage."

THE LATEST

Backstory

After the Rio Grande silvery minnow made the endangered species list in 1994, battles over the river's water intensifiedcomplicated by the San Juan-Chama project, which diverts San Juan River water into the Chama, a Rio Grande tributary. **Environmentalists** won a lawsuit allowing the Bureau of Reclamation to use San Juan-Chama water to keep the river wet for the minnow, but in 2003, Congress barred the agency from using that water for endangered species ("Truce remains elusive in Rio Grande water fight," HCN, 8/4/03). Since then, the feds, cities, and farmers have tried to figure out ways to share the water, when conditions allow.

Followup

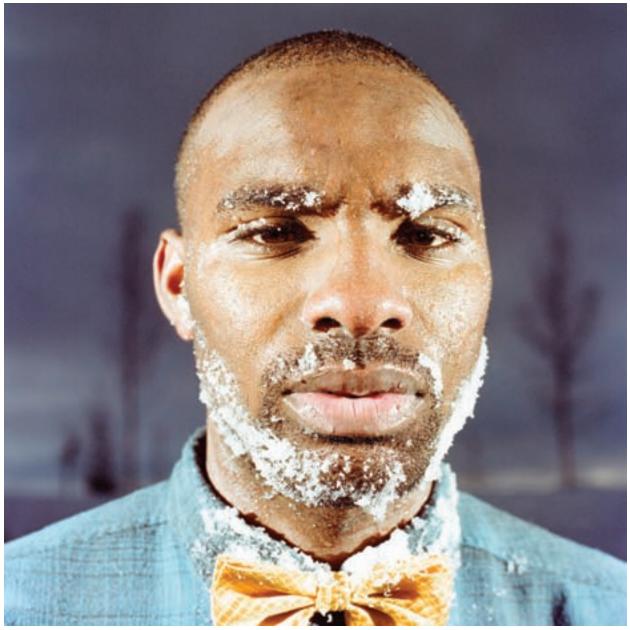
In January, the San Juan-Chama project fell short for the first time in its 40-year history.

The 10,000 acre-foot shortfall was due to a series of extremely dry years. Although local reservoirs can make up for this year's shortage, further drought may deplete them, leaving no water available for the tiny fish, or for farmers. It's a reminder that climate change may disrupt oncedependable supplies and exacerbate fights over the Rio Grande's

SARAH TORY

Low water levels at Heron Lake, the main reservoir of the San Juan-Chama Project. MICHAEL AUNE





Skateboarder, actor and model Preston Pollard. Anchorage, Alaska, 2013.



Singer/songwriter Marian Call. Anchorage, Alaska, 2012.



Brett Schmitz at the World Beard and Mustache Championships. Anchorage, Alaska, 2009.

People of Alaska

The surprising diversity of the 49th state, through Brian Adams' lens

Most people think of Alaska as either a white man with a beard that is pioneering a mountain, or a Native man with a fur ruff around his face," Alaskan portrait photographer Brian Adams says. "Those people are here, and they're definitely beautiful to look at, but I also wanted to showcase the diversity in Alaska."

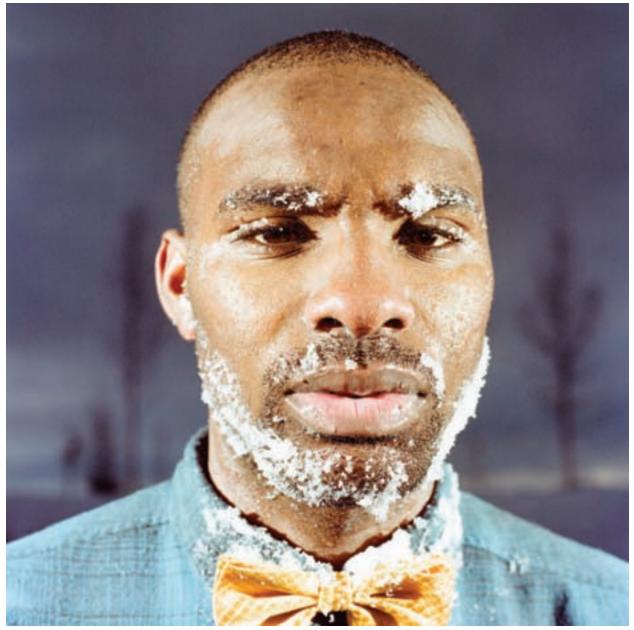
Adams focuses on photographing people, even when seeking to capture what he calls "the true essence of the place." His book, *I Am Alaskan*, is a celebration of the state's human landscape, as well as an exploration of his own identity — as an Alaskan, Iñupiat and artist.

His portraits place people in their own environments, from the snowy tundra in Barrow, Alaska, to the streets of Anchorage, to the interiors of their homes. His Hasselblad film camera produces only 12 shots per roll, so each shot is deliberate. Subjects often look directly into the lens, a composition that intimately connects the viewer to the image.

Adams has lived in Anchorage for most of his life, but he has also visited many rural villages on assignment for various clients, including ones that deal with tribal health issues. His own Iñupiat heritage gives him a close rapport with Native people, he says. "I could go to any village on the northwest area, and we're all connected somehow. The first thing they ask me is, 'Who are your grandparents?' and, depending on their age, they probably know or have some kind of story that goes along with who our families

Alaska is still a young state, just over 50 years old. Outsiders often romanticize it, but Adams gives a unique and raw view of life in the Far North. "What I want people to see in the book is that we are a very welcoming, fun, friendly, diverse state," he says. "It's a place I'm very proud to show people."

BROOKE WARREN



Skateboarder, actor and model Preston Pollard. Anchorage, Alaska, 2013.



Singer/songwriter Marian Call. Anchorage, Alaska, 2012.



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BROOKE WARREN



Ardith Weyiouanna. Shishmaref, Alaska, 2010.



Cannery workers. Whittier, Alaska, 2008.

"Alaska has been defined in the media by its politics and its oil. It has been defined in stories and science by its cold climate and wildlife. ... People define Alaska to me."

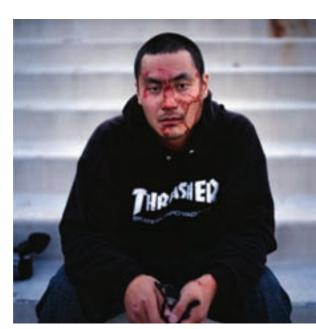
-Brian Adams



Sylvester Swan Jr. tom cod fishing. Kivalina, Alaska, 2007.



David Glenn Taylor. Barrow, Alaska, 2013.



Skateboarder Ted Kim. Anchorage, Alaska, 2009.

"The people in the village have a reverence for the land, water and sky of Alaska that I have always carried within me."

—Brian Adams



Heather Prunty and Tonia Burrow. Anchorage, Alaska, 2009.

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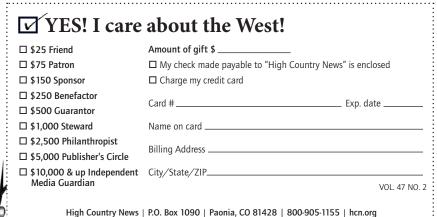
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William Matthews (American, b. 1949), *Bottle Tops*, 2005. Watercolor on paper; 39-1/2 x 43-3/4 in. COLLECTION OF WILLIAM MATTHEWS

Denver-based artist William Matthews is best known for his watercolor paintings of cowboys. But his interest gallops beyond traditional images of horses and guys in chaps; Matthews depicts objects like oil drums and even a lollipop as he breaks through clichéd imagery to reflect the contemporary American West. His paintings are featured in a new exhibit at the Denver Art Museum. William Matthews: Trespassing runs until May 17, 2015, and includes 27 works, ranging from the artist's early career to his recent works. The museum also features a documentary that follows Matthews as he prepares for the exhibit.

WILLIAM MATTHEWS: TRESPASSING is on view until May 17 in the Gates Family Gallery on Level 2 of the Frederic C. Hamilton Building; the exhibition is included in general admission.

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High Country News is seeking a Washington, D.C., correspondent to write about issues critical to the West and the way they play out on the national stage. A generous grant from the Society of Environmental Journalists and SEJ's Fund for Environmental Journalism makes it possible. We're looking for a savvy, experienced reporter based in the capital. For details, see hcne.ws/HCN-DCiob.

Last fall, we introduced the annual Bell Prize for young essayists. Named for our founder, Tom Bell, the contest is designed to inspire emerging writers. The winner receives \$1,000 in cash, and the runner-up gets \$500 worth of outdoor gear courtesy of Mountainsmith. We received more than 60 entries in this year's contest. Nathaniel **Kennon Perkins**' first-place essay was published in our Jan. 19 issue. You can also read it at hcn.org/issues/47.1/the-newnew-west; the runner-up essay, by Daniel Kinka, is at hcn.org/ issues/47.1/mesas-and-sky.

A huge thank-you to all of the folks who gave subscriptions to *High Country News* as gifts this holiday season. We beat our goal of 1,500 gift subscriptions by a whopping 615!

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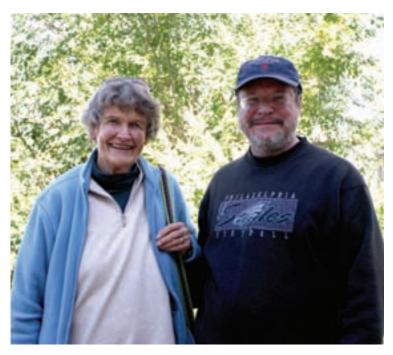
During the dark winter days, not many travelers venture to our western Colorado headquarters. But we always appreciate the few who brave the cold and snow — not that there's been too much of either so far — to come see us in Paonia!

In late November, **Christine Frank** dropped by. She'd just moved here from Minneapolis, Minnesota, and writes on the environment.

Bill Sayre from New Bloomfield, Pennsylvania, came to visit his aunt, Lee Overton of Paonia, and they stopped by for a tour. Bill noted how many of the topics we cover relate to issues out East, specifically fracking, pipelines and mining. Lee first came here from Colorado Springs in the mid-'80s and met then-HCN publisher Ed Marston when she was "checking the place out." Ed advised her to buy a house — a bust in coal production meant the local mines had laid off workers, and homes were cheap.

And back in October, **Nate** and **Liz Johnson** visited from Missoula, Montana. Nate is a retired wildlife biologist. They both volunteer a lot for the parks systems and like to travel.

—Jodi Peterson for the staff



Bill Sayre, right, visits the *High Country News* office with his aunt, Lee Overton, who moved to Paonia in the '80s. BROOKE WARREN

THIS LAND IS



Public lands belong to everyone. But private landowners can make it hard to get to them.

limpsed through the windshield of Kyle Newmiller's pickup, the peaks of the Crazy Mountains razor through the parting clouds. We're bumping along a dirt road in southwest Montana, cruising through miles of tan foothills, occasionally dropping down along Sweet Grass Creek amid stands of blazing yellow cottonwoods. Earlier today, it was raining, but now the clearing sky reveals a crisp snow line at 7,000 feet.

"Isn't that beautiful," says Newmiller, grinning. A construction contractor and avid hunter, he's driven an hour and a half from Billings, Montana, along with his 7-year-old daughter, Jordan, and his dad, Doug, a 40-year veteran at the local coal-fired power plant. In the coming weeks, they're hoping to pack some horses into these mountains, maybe bag an elk. If, that is, they can get access.

"There's a lot of elk at the top of Sweet Grass," Newmiller says. "But there's only one way in there" — this road, which threads through miles of private land (and multiple gates), before it enters the national forest. A half-mile shy of the forest boundary, there is a sign, installed by the owner of Sweet Grass Ranch, that reads: "This is not a trailhead. Private land, private road. ... Stop in at the main house to discuss access, parking, boundaries, any restrictions and to sign in." For access between mid-September and May, it adds: "Please call first."

Newmiller is edgy, thinking about last summer, when he came out to talk to ranch owner Tony Carroccia. He says Carroccia told him that he'd need written permission from the three other landowners along the road to get access during hunting season. Newmiller countered that he didn't need their permission because this road is a public access — a claim he backs up with old Forest Service maps showing a public trailhead here, as well as evidence that the road once served a school. That's when Carroccia "told me to get off his property," Newmiller recalls.

Carroccia denies that the incident took place.

As we rattle around a bend, we encounter the first gate, slung shut with a chain and padlocks. It reignites Newmiller's irritation: "I'm just trying to access public lands," he says. "You know — national forest. ... They've got their own mountain land — they don't need our public land on top of that."

The scuffle over Sweet Grass Creek is part of a much larger struggle in the West. In Montana alone, more than a dozen access conflicts have flared up in recent years, as landowners gate off traditional access routes and effectively put hundreds of square miles of public land out of reach for people like Newmiller. Some conflicts, including the one here at Sweet Grass Creek, have smoldered for years or even decades. In many cases, landowners profit in various ways from the exclusive access to adjacent public land.

In an ideal world, anyone would be

THEIR LAND



able to easily access the half-billion acres managed by the Forest Service, the Bureau of Land Management and other federal agencies in the West. But I'm struck by how tenuous, even fragile, our connection to that land is — including the land in this particular corner of Montana, near my home in Bozeman: just thin threads of roads, where access often hangs more on the will of a landowner than on whether a road is truly public or private. Who gets to enjoy the benefits of public land, and at what cost, is more complicated than the crisply mapped property lines. And opening public access is always more difficult than closing it off.

THE ROOTS OF THE PROBLEM reach back to the 1800s and early 1900s, when homesteaders carved out millions of acres from federal holdings in the West, forming rings of private land around islands of public land. And in what was probably the biggest giveaway of public resources in history, the federal government spurred

westward settlement — and set the stage for innumerable future disputes — by dispensing sections (640-acre squares) to railroad companies, creating checkerboards of private land within those public-land islands.

For decades afterward, the public generally accessed public land on roads scraped in to serve homesteaders, miners and loggers. In those less-populous times, landowners were more tolerant of people crossing their property under informal, usually undocumented, arrangements. Today's camo-garbed hunters and poletoting hikers still rely to a surprising extent on those roads. And the need for more legally binding rights to use them has grown, as a rising tide of public-land users collides with a new generation of landowners.

I'd read about access fights farther afield in Montana, but as I scanned maps of the lands closer to Bozeman, the nearby Crazy Mountains looked ripe for conflict. Shooting skyward from the sur-

rounding plains, the Crazies are ringed by private land. An additional 100 square miles of private land are checker-boarded throughout the range's 270 square miles of public land. Trailheads dot the western front, but along the entire 25-mile eastern front, there's only one established public trailhead, which the Forest Service secured in the 1950s after decades of landowner resistance. In at least four other drainages on that side of the Crazies, agency roads or trails dangle at the forest boundary, with no apparent public access. I home in on the biggest, Sweet Grass Creek, and soon learn from the Forest Service that more than 80 percent of the Crazies lacked "reasonable" public access as recently as the 1980s. Some in the agency even have their own nickname for the Crazies — "the final frontier."

Bob Dennee knows this ground well. He exudes a weathered ease from his 39 years as a Forest Service land specialist and in other roles. His tenure began around the time the National Forest The Crazy
Mountains near
Clyde Park,
Montana. The
mountains lie within
the Lewis and Clark
and Custer Gallatin
national forests, but
parts of the forests
are hard to get to
because they're
surrounded by
private land.
BEN PIERCE

Bob Dennee, below, negotiated many access deals during his 39 years with the U.S. Forest Service. At right, Bernard Lea, also retired from the U.S. Forest Service, now works with the Public Land/Water Access Association, training volunteers to search county records to document the historical ownership of roads. ADRIAN SANCHEZ-GONZALEZ/BOZEMAN CHRONICLE;

How governments and others can gain access

Establish historic public-access rights

Land agencies and others can prove an existing publicaccess easement by documenting that a road is a county road, for instance. Or they can ask a judge to issue a ruling in favor of "prescriptive" rights — access rights claimed through historic use — and thereby establish a new easement.

Acquire land

Land that links existing public land to public roads or trails can be purchased or donated, and agencies can also exchange public land for this purpose.

Purchase easements

Easements that give access along existing or new roads or trails can be purchased directly.

Establish reciprocal easements

Agencies can grant private easements — if a landowner wants to build a road across public land to reach an inholding, for example — in exchange for a public easement, of similar value, across private land.

Re-route or build roads or trails

Agencies can change access routes or build new routes in order to link to public land. This is costly and requires an environmental review under NEPA, the National Environmental Policy Act.

Acquire right of way using condemnation

Under federal eminent domain laws, agencies can seize ownership of private roads or trails and compensate the landowners. This is used only as a last resort, or to encourage other options.

-Marshall Swearingen



accessible. One Forest Service official in Washington, D.C., estimates that as much as 20 million acres of the agency's land still lack adequate access today. A 2013 report by the Center for Western Priorities, a Denver-based think tank, identified 4 million acres of Forest Service, BLM, state and other public lands, in six Western states, that were completely inaccessible. Montana had the largest share — nearly 2 million acres — of this "landlocked" public domain.

In Bozeman, Dennee spread a map across the table and described his biggest success — a massive land swap in the 1990s, when a cooperative Congress passed a bill consolidating tens of thousands of acres of old railroad checkerboard strewn across several mountain ranges in the Gallatin National Forest. "That resolved access across more than 150 miles of trail," he said. A similar land deal in the '90s, in which Dennee also played a major role, brought 39,000 acres of private checkerboard land in the northern Crazies under Forest Service ownership. He mentioned more success stories, including some that relied on productive partnerships with Montana Fish, Wildlife and Parks, the state's wildlife management agency, as well as with national nonprofits, including the Rocky Mountain Elk Foundation and The Trust for Public Land, and local access advocacy groups. "People do rally around access issues, and set aside their differences," Dennee observed.

But the bad news is that partner-

ships are becoming more necessary as the Forest Service is hit with tighter budgets and staff reductions. Dennee can remember a time, as recently as a decade ago, when each of Montana's eight national forests had a lands specialist dedicated to improving and safeguarding public access. Now only three staffers oversee access issues for the national forests and grasslands extending over the greater part of Montana and into North and South Dakota. Meanwhile, younger staffers coming up through the ranks lack the necessary expertise, he says.

"We have (many) willing landowners

"We have (many) willing landowners who want to work with us to resolve access needs," Dennee told me, "but we can't keep up with the demand."

IN MONTANA, THE AGENCIES have a tenacious ally that other Western states lack: the Public Land/Water Access Association (PLWA). Founded in 1986 by a retired Forest Service staffer, the all-volunteer group has a website that boasts of its "pit bull mentality" and lists dozens of battles it has waged against uncooperative landowners.

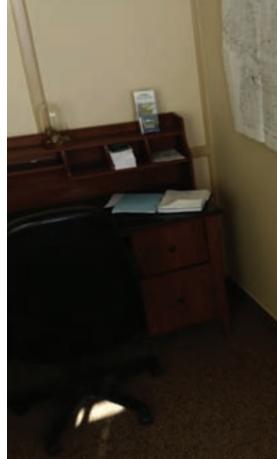
"The guys shutting off access to the public lands — it just didn't sit good with me," says Bernard Lea, who joined PLWA in the 1980s, while he was working as a Forest Service lands specialist. His home is surrounded by big cottonwoods, just off a commercial strip in Billings, and he jokes that his open-heart surgery the week before has "kind of backed up" a

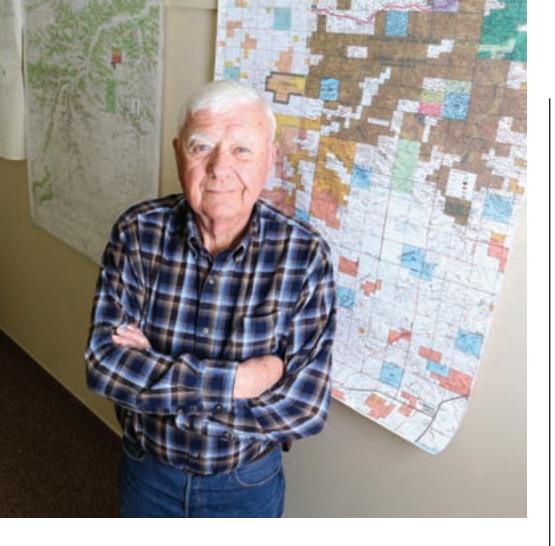
Management Act and other bedrock laws gave the Forest Service and BLM a broad directive to secure recreational public access. Though the agencies made some progress in the 1980s, Dennee points to a 1992 report by the General Accounting Office (now the Government Accountability Office) that concluded that more than 50 million acres of Forest Service and BLM lands — about 14 percent of their holdings in the contiguous U.S., mostly in the West — had "inadequate" access. The report noted a growing problem: "Private landowners' unwillingness to grant public access across their land" had increased over the previous decade, and sportsmen felt that landowners were "'privatizing' federal land for their own personal gain."

Dennee is an optimist, though. "We're making some gains," he told me at the federal building in downtown Bozeman last June, shortly before he retired. He pointed to the Gallatin Forest's 1987 Forest Plan, which identified 46 roads and trails, including Sweet Grass Creek, as the highest priority for securing access. Since then, Dennee and others have secured access at 23 of those. "But at the same time, land ownership changes," Dennee said. "New landowners come in and say: 'I don't recognize that historic trail, I'm closing it.' So we lose some ground."

Nationwide, it's hard to calculate how much progress has been made since 1992, because the agencies don't track the amount of land that is not adequately







couple of access cases. He hands me a binder full of survey records, handwritten letters exchanged by ranchers and county clerks, homestead patents and other obscure legal documents — all evidence he gathered for the first access case he pursued for the Forest Service. It proved that a road — which had long given the public national forest access — had originally been approved and paid for by a local county government at the request of homesteaders in 1910. Therefore, a landowner's attempt to close it was illegal.

Now, Lea trains other PLWA volunteers to do this work. In courthouse basements, they dust off thick tomes and read thousands of pages of county records, often having to decipher inscrutable cursive script. "You just about have to read it word for word," Lea says, because the key details that could decide a case "come out of the blue." Sometimes, the volunteers searching old archives come up emptyhanded and resort to other tactics, merely documenting that the public has previously used now-contested routes, a basis for securing "prescriptive" access rights under Montana law.

The work is tedious and sometimes takes decades to pay off, as it did in a struggle that began in 1997, when new landowners gated a road that historically provided public access to more than 25 square miles of national forest in the Absaroka Mountains, southeast of the Crazies. Backed by locals, PLWA and the Forest Service negotiated temporary

easements that reopened the road until 2009, a period during which they hoped to secure permanent access. But their efforts failed, and in 2009, Dennee and other Forest Service officials initiated the process of seizing ownership of the road's right-of-way under federal eminent domain laws — a long and costly procedure that must climb through every level of the agency to Washington, D.C., and then be approved by the secretary of Agriculture as well as by both houses of Congress. At the urging of Montana's Sen. Jon Tester, D, and agency higher-ups, the landowners and the Forest Service agreed to construct a new road through both public and private land — another lengthy process, requiring environmental review. Now, more than 17 years after the original road was closed, the new one is nearly ready. The landowners, who paid for the portion of it across their property, "should be commended for working with us," says Dennee.

Lea says the federal agencies often lack the resources or the will to pursue cases so aggressively. And he's skeptical about other approaches, like the unsuccessful attempts by Sen. Tester and then-Rep. Steve Daines, R, (now a senator) to tap the federal Land and Water Conservation Fund to purchase more access from landowners. (The 2014 Farm Bill did allocate \$20 million of similar funding.) Lea, who works as a real estate appraiser, says most landowners just aren't interested in selling access: Private land

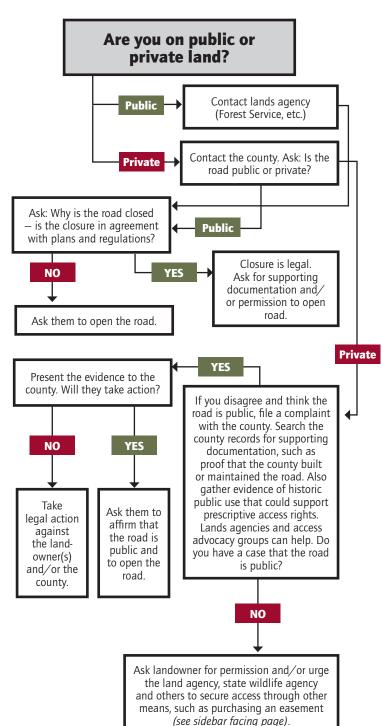


PLW

Locked out?

A few tips from PLWA's Bernard Lea on what to do when you hit a locked gate trying to get to public lands. This is based on PLWA's Montana experience; each case is unique and laws may vary from state to state.

—Marshall Swearingen



near public land "has become so damned valuable," he says. "You can buy 1,000 acres that borders national forest" where there's no public access, and basically you're getting that portion of the public land as part of the deal. "That's what a lot of out-of-state people are looking for, limited deeded acres that they're taxed on, and then they can (control) the access to the national forest."

Public Land/Water Access picks its battles carefully, with most of its \$40,000 annual budget going toward legal fees. "The agencies are doing what the politics will let them do," says Lea. "We do what we can."

That's not enough, according to some conservationists. "Even when (PLWA) wins, they lose, because huge swaths of public land are off-limits for years" while a case is jammed in court, says Nick Gevock, conservation director for the Montana Wildlife Federation, which is partnering with PLWA in an effort to change some key state laws. One proposal would require landowners to prove that roads are private before closing them; another would increase the fine for illegal road closure from \$10 to \$500 per day. Gevock is careful to emphasize that hunters and other public-land users must respect private property, but adds: "There need to be some repercussions for people who try and privatize public lands."

ON THE OTHER SIDE, private landowners often have good intentions, too. Until 2012, for instance, Paul Hansen allowed access through his Montana ranch to federal lands roughly 140 miles southwest of the Crazies. The ranch, which has been in

his family for four generations, stretches 25 miles along a county road in a narrow valley bracketed by sagebrush foothills and timbered mountains. Several of its roads branch from the county road and climb into BLM land, with Forest Service land not far above. It's prime elk-hunting territory, and during hunting season, Hansen allowed people to use his roads, which were never gated, and even hunt portions of his land; the rest of the year, he paid little attention to the issue. But the number of hunters grew each year until they became a problem.

Montana has a "block management" program that compensates landowners for providing public hunting access on their property. But when I meet Hansen on one of the few summer mornings when he's not having or moving cattle, he tells me how, in 2011, hundreds of hunters came through, maxing out the \$12,000 he gets from the program. Their ATVs became a nuisance, spreading invasive knapweed. And the increase in traffic along the narrow gravel county road, which his kids drive every day to town or to pick up their own kids from school, was especially troubling. "You'd think this was the interstate out here," he says. "It was like driving the gantlet."

One November afternoon in 2010, when the county road was slick with new snow, Hansen's daughter, Jody, was driving home in a bulky Chevy Suburban SUV. A jacked-up Dodge pickup, obviously speeding — one hunter driving and another in the passenger seat — fishtailed and collided head-on with the Suburban, plowing onto the hood within inches of the windshield. Pinned inside

with broken ankles and a broken arm, Jody drifted in and out of consciousness for two hours as emergency responders cut her from the vehicle. A similar problem occurred the following year, during hunting season: A speeding pickup, presumably driven by a hunter, crested a hill and skidded sideways past Jody as she veered into the ditch. The driver didn't stop. "It got to be too much," Hansen says. "We said: 'We're done with this.'"

So, in 2012, the Hansens dropped out of the state's block management program and closed their private roads, cutting off access to the adjacent public land. Angry hunters complained to the BLM and the Montana Fish, Wildlife and Parks agency. Some were especially riled to learn that Hansen had leased exclusive hunting rights on his land to a neighbor, James Lincoln, a wealthy newcomer who owns a network of nursing homes in Missouri.

The BLM asked Hansen to reopen his roads, but he refused, so the agency moved ahead with a plan to open public access by re-routing sections of the county road through BLM land. Hansen realized that the access route would be restored, even if it cost the agencies, so he agreed to sell public easements on his roads. Fish, Wildlife and Parks paid Hansen \$33,000 for the easements, securing much of the funding from the Rocky Mountain Elk Foundation and local sportsmen's groups. The BLM opened the new, year-round access in time for the 2014 hunting season.

Back in the Crazies, Carroccia also talks about the darker side of public access. He sees his family's control of the trailhead, going back to when they





Paul Hansen, left, allowed access to public lands through his Montana ranch until the costs became too high; he eventually sold public easements to his ranch roads to Montana Fish, Wildlife and Parks. Above, the Forest Service tried for decades to secure public access across the Sun Ranch, which borders 14 miles of national forest in southwest Montana. A road that crosses the ranch's southern corner is the only public access to this part of the Madison Range today. MARSHALL SWEARINGEN



bought the ranch in 1965, as a steward-ship role, needed "to preserve the place." He spends much of his days patrolling and spraying for weeds, something he says the Forest Service doesn't have the manpower for. "I don't know what anybody gains with a (public) trailhead," he says. "All we get is more vehicle traffic, more weeds, less beauty — less enjoyment for everybody."

But like many landowners controlling public access, Carroccia also has a financial interest: He runs a guest ranch in addition to his family's cattle business. The Sweet Grass Ranch website advertises several guest cabins and rooms, available for upwards of \$1,750 per person per week, offering opportunities for horseback riding, hiking and fishing—flashing the scenic beauty of the Crazy Mountains and inviting guests to "trek into our backcountry to enjoy unspoiled high alpine lakes and jagged peaks," some of which lie on his land, and some of which are in the national forest.

Although Carroccia says he allows access during hunting season if hunters have permission from the other landowners along the road, it's not easy to get that permission. One of the landowners, Chuck Rein, who boasts about his ranch's fourth-generation roots on his outfitting business website, charges up to \$6,000 for multi-day hunts pursuing elk, deer and mountain goats, mostly on his land

but also on the national forest, including up Sweet Grass Creek. When I phone Rein in August, he complains about being inundated with calls from hunters; over lunchtime, he'd already turned down three requests. He grants access to some hunters during the final days of the biggame hunting season, to hunt cow elk, and even sometimes hauls out their kills for them, he says. But Kyle Newmiller says Rein never returned his calls, and the locked gate we hit in October is on Rein's land.

Tony Carroccia says, "We're working hard to allow access, but keep a little bit of control." The Forest Service maintains that it still has rights of public access here, because of previous public use and the history of the road, but the lack of a recorded public easement means that the landowners hold the cards for now. Carroccia's policy, which requires hikers and horsepackers to sign in at his ranch house, makes it more difficult for the agency or Public Lands/Water Access to assert prescriptive access rights, because the signatures indicate that visitors are asking permission rather than freely using the route. It's the kind of case that might be resolved only with a lawsuit triggered by cash-strapped PLWA or the Forest Service, or by an irate hunter cutting the locks.

The district ranger here, Alex Sienkiewicz, who earned a law degree before going to work for the Forest Service, is clearly doing the best he can. "The reality is we have to triage," he says. For now, the agency is focused on more promising cases, like a potential land swap that would resolve an access dispute on the Crazies' west side. As for Sweet Grass Creek, where the lines between public and private blur, "some of these cases sit in limbo for a long time," he says.

IT'S A HOT JULY DAY and I'm dodging cowpies on a faint trail that skirts the sharp front of Montana's Madison Range, a string of 11,000-foot-plus peaks and alpine lakes towering above a river valley, southwest of the Crazies. I'm hiking toward Wolf Creek, a major drainage where a Forest Service trail climbs into the heart of this range. But already, as the sun starts to dip, I know I won't make the 20 miles to Wolf Creek and back.

Getting to the trail at Wolf Creek would actually have been easy, if I'd been willing to trespass: A road from the highway leads directly to the trail, crossing the sprawling Sun Ranch, which borders 14 miles of the Beaverhead-Deerlodge National Forest. As I piece together the Forest Service's decades-long fight for access here, I uncover some incremental victories. But I also see more clearly how, once the public loses ground, it may be gone forever.

A 1964 map shows Forest Service

For decades Bill Orsello's family used a road passing through private land to access national forest near Helena, Montana. **Because the Forest** Service didn't have a public easement on the road, it was legal for the landowner to lock a gate and block public access. DYLAN BROWN/HELENA INDEPENDENT RECORD

A sampling of locked-up public land and access battles

North Fork Wilderness Study Area

The Wyoming Wilderness Association calls this 15-square-mile BLM area "a wilderness fisherman's dream," with a stunning mix of old-growth forests, red hills and deep canyons. A county road creeps within a fraction of a mile of its boundary, but for decades, a handful of landowners have effectively cut off all access, though they offer guided hunting for a fee.

Mabee Road

The public used this road, which passes through a checkerboard of BLM and private land, to reach nearly 40 square miles of public land until 2007, when a landowner gated it and began selling outfitted hunts, both on private and adjacent BLM land. PLWA is fighting in court, saying that the road is a public road, and that historic use supports prescriptive rights.

Bureau of Land Management

National Park Service

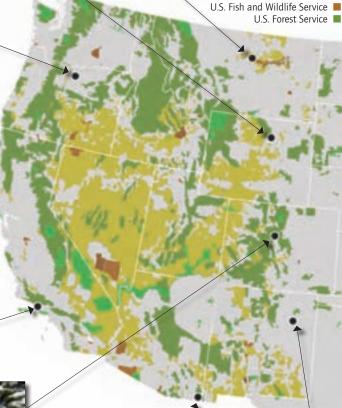
John Day River

About 70 square miles of BLM land are only accessible by boat — when the water is high enough — because private landowners along the canyon rim restrict road access. Oregon's Department of Fish and Wildlife has been trying, unsuccessfully, to purchase or lease public easements.



Matilija Creek

For decades, people used a Forest Service trail to reach swimming holes and waterfalls here. The trail crosses a piece of private property, and in recent years the landowner has begun actively discouraging visitors. Los Padres ForestWatch, a local watchdog group, is suing, claiming prescriptive access rights based on historic public use.



Skeleton Canyon Road

Around 2005, a landowner locked a gate on this road, complaining about drug running and other traffic. This has blocked access to more than 20 square miles of Coronado National Forest, including the historic Geronimo surrender site. Roughly 200 of the 320 routes into the forest lack a recorded public easement, so similar closures are possible.

ALLI LANGLEY/SUMMIT DAILY

Quandary Peak access road

Prior to the 1980s, when the Forest Service constructed a formal trail to 14,265-foot Quandary Peak, the main access was an old mining road. Locals continue to use it, but in 2011, a new landowner began discouraging public access. "It's a really hostile environment now," one local told the *Post Independent*. The Forest Service and Summit County are considering legal action to assert a right of way.

Sabinoso Wilderness

This 25-square-mile patch of BLM land, a high mesa cut with a deep canyon, was designated as wilderness in 2009, but there's currently no legal public access on roads through surrounding private land. The BLM has unsuccessfully tried to secure access, mainly by offering to buy land.



roads crossing the Sun Ranch, leading not just to Wolf Creek but to two other drainages to the south. Jack Atcheson Jr., who grew up hunting this area with his dad, remembers the access at Wolf Creek as being "as good as a trailhead" into the 1960s. "I'd leave my camper trailer there for three weeks," he says.

But by the 1970s, the Sun Ranch owners were tightening access — perhaps at first by more strictly requiring permission, as happened at Sweet Grass Creek. Like Sweet Grass Creek, these roads had apparently never been formalized as public-access routes. By the late '70s, there was no secured access along this 20-mile section of the Madison front. Atcheson, who was by that time guiding clients into Wolf Creek as an outfitter, using a less direct access road on a neighboring ranch with the landowner's permission, urged then-District Ranger Vergil Lindsey to help turn the tide. "I could see (the access) drying up for everyone," he says.

Lindsey took a collaborative approach, rather than asserting prescriptive rights based on prior access. But progress was slow, and complicated by the transfer of the Sun Ranch into new hands. In 1978, it sold to Southern California banker and real estate developer Ted Gildred and his partner, Bill Poole, the first in a string of wealthy owners who would come to include a major mining company CEO, a Silicon Valley entrepreneur and action-movie star Steven Seagal. Lindsey increased his efforts and by the early '80s made a breakthrough: Gildred and Poole agreed to a trailhead access at Papoose Creek — about 10 miles from Wolf Creek, across the ranch's southern corner. That significantly improved access along the Madison front, but Lindsey was disappointed that he couldn't do more. What killed a more ambitious deal? Lindsey says that the forest supervisor, shying from confrontation, "just ran backwards."

The Papoose Creek agreement included a Forest Service promise to back off its pursuit of Wolf Creek for 10 years. But when the 10 years had passed, then-District Ranger Mark Petroni resumed Lindsey's fight, despite the landowner's opposition. The agency worked with PLWA to dig deeper into the legal history of the road, but "there was nothing," says Petroni. "There really wasn't any option other than condemnation, and the political stars wouldn't align."

Determined hunters still trekked to Wolf Creek on a faint and unofficial trail, which scrambled over difficult terrain to avoid trespassing on the Sun Ranch. After 2008, when Sun Ranch owner Roger Lang donated an easement, the Forest Service constructed a more moderate trail between Papoose Creek and Moose Creek, the middle of the three drainages. As I hike that trail today, it still fights the foothills topography, diving and climbing over several other drainages. In some places, it's nearly illegible from disuse.

Ironically, even agency staffers have



Kyle Newmiller at home near Billings, Montana. He has been locked out of some of his favorite hunting spots by landowners who have blocked access to public land beyond their property. PAUL RUHTER

"Someone should come up here and say: 'If we catch you locking this gate, we're going to write you a ticket.' ... What is the hold-up?"

–Montana hunter Kyle Newmiller

welcomed this outcome. Jonathan Klein, who served as the district's wilderness manager until he retired in 2012, believes, as do some local hunters, that this area is better off now because the wildlife get a break and those humans who do visit have a chance for solitude. "You're not going to go there unless you're really into it," he says. "You don't have to have a trailhead at the mouth of every drainage."

It's a good point. And it's the main justification that the Forest Service now gives for apparently abandoning the fight for access to Wolf Creek. But it grates against another chapter in the Sun Ranch's history, one that underscores how, in the end, the struggle isn't just about whether there's access — it's about who has access, and whether that access is in the spirit of public ownership.

In 1978, as Gildred was preparing to buy the Sun Ranch, Florida attorney Hamilton Kenner swooped in to buy the ranch himself. Kenner then flipped the ranch to Gildred, but not before piecing off sections on its north end, adjacent to the national forest near Wolf Creek. He subdivided that land, branded the development as Rising Sun Mountain Estates, and marketed it with bylaws and covenants specifying that anyone who bought in would have access to the national forest. All the lots sold.

Several of those properties are again for sale today, even as the fight for access at Wolf Creek fades from public memory. The listings advertise "exclusive hunting rights in the area with common access to the forest land," and go even further: "A locked gate at the entrance protects that exclusivity. ... No public access into this part of the Wilderness for miles in either direction."

KYLE NEWMILLER sits in his idling truck, staring at the locked gate on the road up Sweet Grass Creek. "Someone should come up here and say: 'If we catch you locking this gate, we're going to write you a ticket.' ... What is the hold-up?" he says. He's already talked to District Ranger Sienkiewicz and Public Lands/Water Access. Now he considers his more immediate options: Return to Rein's house and hassle him for permission; go back into town and report to the county, where Tony Carroccia's brother-in-law is the county attorney; or maybe get out of the truck and cut the locks himself.

The hold-up is this: No matter how frustrated Newmiller is, this road — like all others — is private until proven or made public. And the hold-up can last for decades: For 30 years, a road 120 miles west of here was gated, blocking access to nearly 20 square miles of Beaverhead-

Deerlodge National Forest that are otherwise hard to reach. Only in recent years did the county uncover clear evidence that the road was public, prompting county commissioners to personally cut the locks on that gate in 2012. The landowners took the case to court, and the judge upheld the public right of way.

Newmiller turns the pickup around, and we drive back through the cottonwoods along the creek. In the nearest town, Big Timber, we pull into a gravel lot where state wildlife officials are checking hunters' kills. A game warden, bundled up against the cold wind, comes up to talk to Newmiller. It's a continuation of the talk they had earlier this morning, when Newmiller asked about access at Sweet Grass Creek; now, he tells the warden about the gate. The warden clearly also believes the public should have access there, but his words are carefully vague. If anything, I think, he's egging on Newmiller. He says, "Somebody's gotta do it. ... Somebody's gotta go in there and say '(is this a public access), yes or no?'

Newmiller knows he could be that "somebody," blazing his own path and personally shouldering the costs, which are unknown but daunting. "That's what's so frustrating," he tells me. "Everyone sits back like it's no big deal. When does somebody do something about it?" □



Former HCN intern Marshall Swearingen freelances from Bozeman, Montana.

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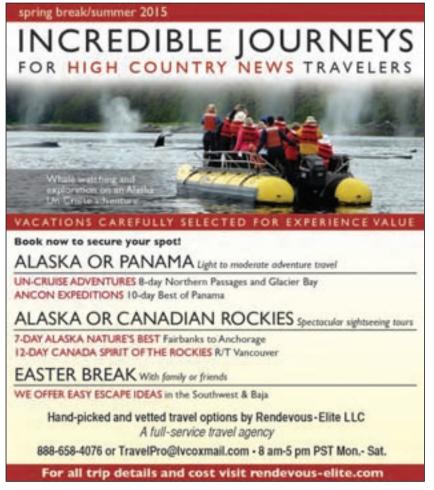
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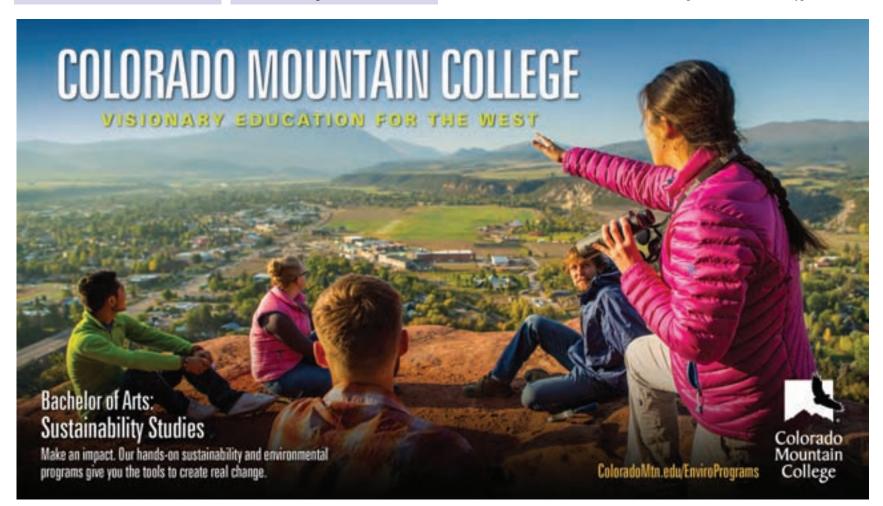
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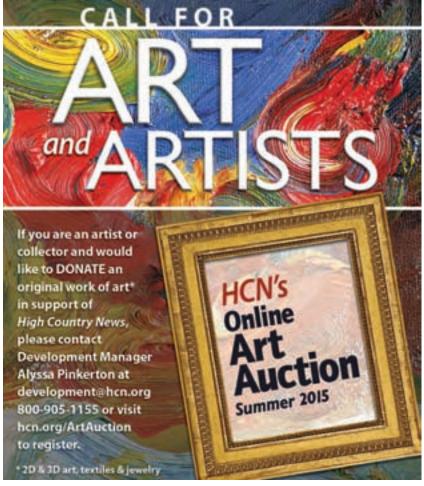


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Set the fossil fuel industry free



OPINION BY PEPPER TRAIL

WEB EXTRA

To see all the current Writers on the Range columns, and archives, visit HCN's Web site, www.hcn.org

n 1729, Jonathan Swift published the most famous satirical essay in the English language: A Modest Proposal For Preventing the Children of Poor People in Ireland from Being a Burden to Their Parents or Country, and for Making Them Beneficial to the Public. And what was Swift's proposal? Merely that the 1-year-old children of indigents be eaten, thus solving the problems of poverty and overpopulation at a stroke.

Poverty and overpopulation are still with us, of course, but sadly, such bold ideas to solve these problems are in short supply today. Meanwhile, the world's current level of 7 billion is straining resources to the limit. Certainly the earth cannot support in health and comfort the 9 billion expected to swarm upon its surface by mid-century. Action must be taken — immediate, forceful action — to reduce the human population and re-balance the planet before it is too late. No person of good conscience can view televised scenes of squalor in the teeming cities of Africa and Asia — and even, if reports are to be believed, in parts of our own country — without feeling called upon to make a difference.

Fortunately, thanks to the genera-

tive genius of capitalism, the fossil fuel industry is positioned to solve this problem, while simultaneously generating good-paying jobs and unimaginable amounts of money. The release of greenhouse gases by this industry has already set the world on a trajectory toward irreversible climate change, which will ultimately bring about the population readjustment that all thinking people wish for. And companies from ExxonMobil to BP to Koch Industries to Syncrude stand ready to do so much more.

However, through no fault of their own, these corporations have not been as effective as they might be. Last year, barely over a million acres of new oil and gas leases were sold on America's public lands, and the industry was forced to make due with only \$18.5 billion in government subsidies. Meanwhile, endless red tape has imposed restrictive regulations on emissions, delayed the construction of essential pipelines like the Keystone XL, and waged a pitiless War on Coal. President Obama even signed an emissions-reducing deal with China. It is obvious to all sensible people that this is going in exactly the wrong direction.

My modest proposal is simply this:

Set the fossil fuel industry free. Open the valves fully on greenhouse gas emissions. The near-term profits will be immense. In the slightly longer term (after most of our generation are safely off the stage), this plan will produce a bracing readjustment of earth's ecological systems, resulting in much-needed population reduction through droughts, crop failures, and coastal inundation. And don't worry about your children or grandchildren. Surely the wealth they inherit will insulate them from whatever unpleasantness may come in the overpopulated parts of the world.

I acknowledge that there are a few misguided individuals who will urge a different course. They fancifully suggest that carbon emissions be immediately and drastically reduced, with the goal of keeping atmospheric CO₂ below 450 parts per million. This is the threshold that international climate negotiators have identified as providing a 50 percent chance of avoiding the impacts of catastrophic climate change. The level is almost 400 ppm today. To keep it below 450 ppm would cost the fossil fuel industry the equivalent of \$28 trillion in revenues over the next two decades, ac-

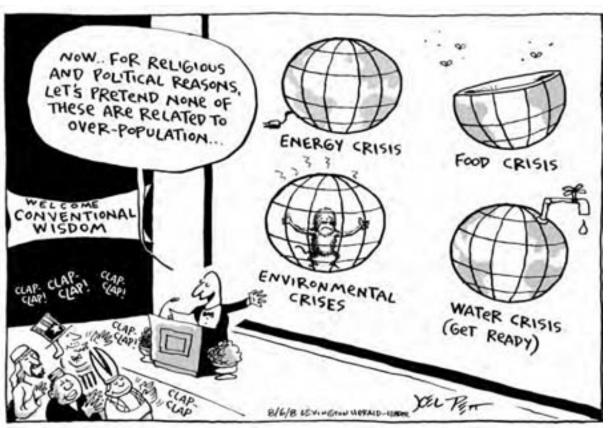


cording to published estimates. The only possible response to such an idea is a hearty laugh. When in the history of the world have corporations or governments passed up such wealth?

Nothing makes me angrier than those self-righteous "greens," who profess to love the earth, but who do nothing but fiddle about with this little regulation here, that little lawsuit there, and never talk about population at all. To use a well-worn phrase, they are merely rearranging deck chairs on the Titanic. I say, aim the Titanic straight at that rapidly melting iceberg! Throw more coal into the boilers! Full steam ahead! The earth will thank us. Eventually.

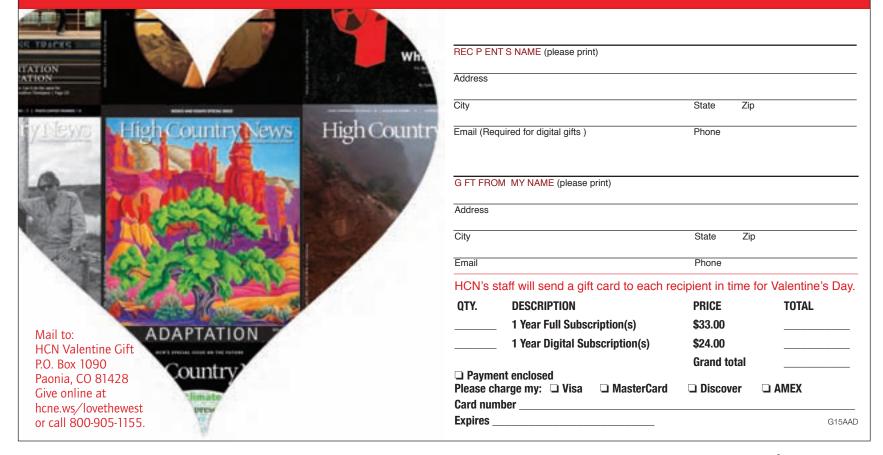
Pepper Trail is a writer, naturalist, and co-author of Shifting Patterns: Meditations on Climate Change in Southern Oregon's Rogue Valley (www.shiftingpatterns.org). He lives in Ashland, Oregon.

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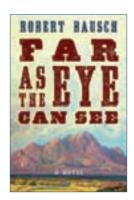


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On the edge of Custer's Last Stand



Far As The Eye Can See Robert Bausch 320 pages, hardcover: \$26. Bloomsbury USA, 2014.

Far As The Eye Can See, the seventh novel from Georgia-born author Robert Bausch, opens in the 1870s, with Bobby Evans. a serial "deserter" from the Union Army, wandering aimlessly through the Montana, Wyoming and Dakota territories. He's an unsettling character: a man without a purpose, the kind of hustler who took the cash bounty for enlisting several times, only to slip away and reenlist elsewhere under a different name.

Committed only to saving his own skin, answering threats with his finger on the trigger, Evans ends up traveling with and learning Native skills from a chance companion, Big Tree, "a Crow brave ... a statue of what God wanted when he dreamed up the creature

he would call man." Later on, though, Evans helps the military round up Sioux and Cheyenne who refuse to move to reservations or abide by treaties. Stumbling through a landscape "as big as any whole earth I ever dreamed of," he observes both the white man's misguided response to the Indians and the bloody retaliatory tactics of the tribes in the Yellowstone



The Battle of Little Bighorn. C.M. RUSSELL, 1903. PRINTS AND PHOTOGRAPHS DIVISION, LIBRARY OF CONGRESS, LC-USZC4-7160

River region

Bausch takes the reader deep into his protagonist's psyche. Haunted by the echo of screams from the Civil War and the sound of "a bullet thwack(ing) into the breast of a fellow only inches away from me," Evans trusts nothing and no one. He impulsively attacks both red and white men, leaving human wreckage in his wake. But a moment of truth arrives

when he must decide whether to keep moving, or to stay and care for a person he has hurt. In the rising hills surrounding the Little Bighorn River, against the violent chaos of Custer's Last Stand, this amoral man is finally caught in a web of moral choices, where he must choose his own thread and take the consequences.

BY PHYLLIS BARBER

Love in a post-apocalyptic world



California
Edan Lepucki
400 pages,
hardcover: \$26.
Little, Brown and
Company: 2014.

When Cormac McCarthy sent an unnamed father and son out to wander a post-apocalyptic landscape in his 2006 Pulitzer Prize-winning novel *The Road*, he inadvertently created the template for one of contemporary fiction's dominant themes. Among the spate of post-apocalyptic narratives that appeared in 2014 is *California*, the debut of Los Angelesbased writer Edan Lepucki.

Lepucki, along with other recent postapocalyptic tour guides, echoes McCarthy on a few points: In the future, there will be no Internet, finding enough food will require constant effort, people will sift through relics of fallen civilizations for useful materials, and the roads will be beset by highwaymen. (In *California*, they're called pirates.)

But while McCarthy keeps his

characters in constant motion, Lepucki's protagonists, Cal and Frida, a young married couple, are determined to find a safe place to settle down.

Through flashbacks, we learn that they fled the nightmarish Los Angeles of a few decades from now and drove into the wilderness until their car ran out of gas. Frida has a city dweller's limited outdoor survival skills, but Cal has learned a few useful crafts like farming and carpentry. When winter closes in, they're lucky enough to find an empty shack for shelter.

They've heard there are other people left in the world, some of them holed up in private enclaves rumored to enjoy electricity and other amenities, but Cal and Frida don't encounter anyone until they meet the family who once occupied their

shack, and August, a roving junk dealer who trades Frida some Vicodin for a bra, "made of fabric and wire, both valuable," he says.

In plain, straightforward prose, Lepucki deftly notches up the tension when Frida discovers she's pregnant and she and Cal set off into the woods hoping to find a settlement. Sometimes the characters' motivations are murky and their beliefs confusingly mercurial, and the ending is a puzzler, but *California* is both diverting and thoughtful. It leaves you with the notion that maybe the postapocalypse genre isn't new-fangled after all, but rather a fresh reimagining of a classic Western theme: Every man for himself against nature.

BY JENNY SHANK

Half-Blind Valley

The suburb we grew up in had a series of greenbelts: preserved land flowing like inlets between the thousands of tract homes that stretched ever south from Denver. Highlands Ranch had been a cattle ranch in the not-so-distant past, and cattle still grazed on some of the land in 1991 — a comfortingly pastoral sight for the 17,000 inhabitants of the 10-year-old suburban outpost.

When I was 9, I spent hours exploring our greenbelt with a tall redheaded kid from the neighborhood. We spent most of our time down by the creek, protected from the hot summer sun by towering cottonwood trees. We would pack provisions and wander the great expanse just as Stephen Harriman Long had in July of 1820. His namesake peak (14,259 feet tall) looms over the Front Range, and under its watchful gaze we delighted in finding quicksand and frogs and the occasional owl. We dreamed of finding swimming holes and stringing up rope swings that would propel us through the air and into the cool water below.

On summer afternoons in Colorado, storm clouds formed near Longs Peak and neighboring mountains, where we could see them building, their strength growing. Then, as if given permission, they advanced across the plains, a torrent of rain and thunder and lightning. In the cities and suburbs, water gathered in the streets, the contours of the concrete forcing it through gutters to storm drains, where it disappeared into the underworld.

Once, just down from the greenbelt entrance, we found a storm drain outlet hidden behind the cottonwoods, around a bend in the creek. It was a large concrete block with a stream of water flowing from an opening at its base. We scaled the exterior wall above the opening and looked down into a room. After scoping out the obstacles inside, we decided to iump down. We waded five feet through ankle-deep water and climbed over a giant interior concrete wall to reach the farthest chamber, where a large drainpipe emerged. It was like nothing we had seen before. Deep inside, the drainpipe was utterly dark, an emptiness from which a cool breeze blew.

"Because it's there," George Mallory said, when he was asked why he climbed Everest. Our answer, at 9, to the question, "Why do you want to enter the drainpipe?" would have been the same. Mallory was last seen a couple hundred meters from the summit of Everest in 1924. He was 37. His well-preserved body was found in 1999 on the North Face, at 26,760 feet. His partner's body was never found. We hadn't heard of either of them.

We went home to plan. We did not know what the pipe was exactly or why it was there. We did not know how long it was or if in fact it ever ended. We did know that we needed more provisions for this expedition, our most daring to date. We loaded up on flashlights, candles, matches and Hostess CupCakes. Our load seemed heavy; never before had we carried so much. So we tied a rope to a skateboard and pulled our gear behind us.

When we got to the drainpipe, past the entrance and the water and the concrete wall, the otherworldly breeze met us once more. We stared into the depth of the darkness. And then, taking a deep breath, we stepped inside.

We could walk inside the drainpipe as long as we kept our heads down and knees bent. After about 10 feet, the light of day faded behind us. We turned on our flashlights and crept forward, spelunkers encountering a corrugated-steel cave. We were followed by the sound of the skateboard's wheels drumming out a steady rhythm against the corrugation.

After what felt like an hour, we stopped and talked briefly, reassuring each other. Outside, the thunderclouds were building in the distance, the winds were picking up. Inside, with the storm out of sight, we felt only the cool breeze flowing through the tunnel. We continued.

Then, on our left, in the glow of a flashlight, we saw another pipe, much smaller and jutting out like a tributary. It opened about halfway up the wall of the main pipe. We would be able to fit as long as we crawled on our hands and knees. There would not be enough room to turn around. We would need to make it to the end, or, if retreat became necessary, we would need to methodically inch backward all the way to the main pipe.

We had not checked the weather report. We had no idea if there might be a thunderstorm that afternoon. The weather was not on our minds. It was darkness, not rain, that scared us.

We deliberated. We ate our cupcakes. Then we followed the tributary to see where it would lead.

Kyle Boelte is the author of The Beautiful Unseen (Soft Skull/Counterpoint, February 2015), from which this essay is adapted.

PHOTO: DARKDAY/CC FLICKR



We did not know what the pipe was exactly or why it was there. We did not know how long it was or if in fact it ever ended.



HEARD AROUND THE WEST | BY JONATHAN THOMPSON

GOATLAND

Goats are enjoying the spotlight. Yes, goats. On YouTube, for example, you can join 28 million others in watching a video of "goats yelling like humans." Thirteen million have watched "Buttermilk," an excruciatingly cute kid — the four-legged kind, not your adorable nephew — abuse his yard mates by jumping over them or on them. It's even spawned a video game, one of several involving goats. The "evil goat from hell terrorizes town" category is slightly less popular, but has plenty of followers.

NPR has a blog called Goats and Soda, though it doesn't appear to be about either goats or soda, and the Washington Post's Wonkblog recently came up with a map that purports to show the location of every single goat in the United States. And you thought they were keeping an eye on you, silly kid. It was the blog's most-read story for a day or two, picked up by dozens of other media outlets.

According to the map, which was put together using data from the agricultural census, Sutton County, Texas, which boasts 55,000 billies, nannies and kids, is the goat capital of the U.S. Not far behind, though, are counties in northwestern Arizona that overlap the Navajo Nation. Apache County, for example, has 26,000 goats, more than one for every three humans. Churchill County, Nevada — home to a giant goat dairy — has almost 14,000 goats, and California's Stanislaus County has 21,000.

Some of the nation's 2.6 million goats are milked. Others, like the "Goat Grazers" in Nevada, are hired out to eat invasive weeds and even discarded Christmas trees — actual conifers, we hope, not plastic imitations. Still others are so famous that they are the honored guests of increasingly popular "Goats and Grenache" dinners. We've never been to one, but like to picture the billies and nannies dressed in formal attire, sipping fine wine and sharing the latest goat gossip. Though no doubt everyone is too polite to mention the main reason folks raise goats in the U.S.: For their meat. Not the kind of thing you bleat about at the table.



GRASSLAND

Surely you've heard about the glut of natural gas in the U.S., which has kept heating bills low and the gas patch economically depressed. And then there's the oil glut, which has pushed

And then there's the oil glut, which has pushed gasoline prices so low that people are buying cars the size of houses again. But in Washington state, a similar glut has struck another natural resource: Weed.

When outlets began selling newly legalized marijuana this past summer, they couldn't keep the stuff in stock, and prices skyrocketed. The growers responded. Now, there's so much out there — 31,000 pounds, according to the Associated Press — that wholesale prices have crashed, putting farmers in a bind. (The price drop has yet to hit retail outlets, which still charge \$25 or more for a gram.) Some farmers say that the low prices, combined with the high taxes, have forced them to sell their latest crop at a loss. In other words, they're now in the same boat, or tractor, as all the other farmers.

Colorado, which also legalized recreational marijuana sales, has avoided the glut issue by regulating production. Demand remains greater than supply. But the state's run into its own problems, namely: exploding homes. Seems that amateur chemists and would-be entrepreneurs are trying to create hash oil, or concentrated marijuana, by forcing butane through raw marijuana. The butane vapors concentrate, and, if someone lights a match, *Boom*. And no, not the economic kind.

THE URBAN WILD

A couple hit an unknown animal that bounded into the road in front of them in Scottsdale, Arizona on a Friday night. When they reached their destination, they realized that a still-living 7-pound bobcat was trapped in their Mazda's plastic grille. State game and fish officials rescued the cat, which spent a week in rehab before being released back into the wild, no doubt still dizzy. Not far away, a 44-pound beaver wandered into Tempe Town Lake and was captured by wildlife officials. It, too, will be released into a wilder area. It is not known whether officials will use the same method used to relocate beavers in Idaho in the 1940s: Officials boxed them up, flew them over the wilderness, and parachuted them safely to the ground. We love to picture them wearing cute little WWII aviator outfits. In San Diego, a five-and-a-half foot, 5-pound snake slithered out of a toilet in an office building; it (the snake, not the toilet) apparently belonged to a resident, and may have turned to plumbing in search of water. And a Seattle dog named Eclipse has learned to take the public bus from its owner's home to the dog park, without a human companion. Man walks dog. Dog walks man. Dog rides bus. We have clearly outlived our usefulness.

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

Tips and photos of Western oddities are appreciated and often shared in this column. Write betsym@hcn.org.



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I do not believe in killing, or in dying, for a cause or an idea. I leave that to adolescents. I do believe in living for a cause.

Rob Pudim, in his essay, "Charlie Hebdo has the last laugh," from Writers on the Range, www.hcn.org/wotr



Ardith Weyiouanna. Shishmaref, Alaska, 2010.



Cannery workers. Whittier, Alaska, 2008.

"Alaska has been defined in the media by its politics and its oil. It has been defined in stories and science by its cold climate and wildlife. ... People define Alaska to me."

-Brian Adams



Sylvester Swan Jr. tom cod fishing. Kivalina, Alaska, 2007.



David Glenn Taylor. Barrow, Alaska, 2013.



Skateboarder Ted Kim. Anchorage, Alaska, 2009.

"The people in the village have a reverence for the land, water and sky of Alaska that I have always carried within me." —Brian Adams



Heather Prunty and Tonia Burrow. Anchorage, Alaska, 2009.

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Harold & Susan Case | Nipomo, CA

Jim Case | Cedar City, UT Mr. & Mrs. Ronald H. Chilcote |

Laguna Beach, CA Mary Clark | Boise, ID

Mark Clevenger | Wichita, KS

Laura A. Cotts | Cedar City, UT

Gale Dayton | Sandy, UT George Dies | Aptos, CA

Terrell Dixon & Linda Walsh | Estes Park, CO

Willa H. Drummond | Gainesville, FL

Jeannine Erhart | Salida, CO

Robert Eschrich | Tucson, AZ

Gary Falxa | Eureka, CA

Stuart Feen & Carol Sonnenschein, Prairie Crossing | Grayslake, IL

Melinda & Dave Foster | Crowley Lake, CA William R. Fraser, Polar Oceans Research Group | Sheridan, MT

Dennis Ghiglieri & Rose Strickland | Reno, NV Jon Gibans | Aspen, CO

Ethan R. Glawe | Austin, TX

Warren Gold & Roberta Newman | Mill Valley, CA

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Karen Harris | Cheyenne, WY

Charles & Bonnie Hash | Bozeman, MT

Donald Haworth | Napa, CA Virginia Hawthorn | Lemitar, NM

Mark Hein & Elizabeth K. Lee | Portland, OR

Joanne Hilton | Sandia Park, NM

Virginia K. Howle | Lyman, WY Richard Hunt, View Point West | Keyser, WV

Nathan Johnson | Missoula, MT

Dale & Paula Keyes | Tucson, AZ

Pat & Rod Killian | Arvada, CO

Bette Korber | Santa Fe, NM

Mark Langner & Lynn Inouye | Coleville, CA Walter Lehman & Jennifer Thorne Lehman | Albuquerque, NM

 $\textbf{Kim Lohse \& Phil Archibald} \ | \ \texttt{Entiat}, \ \texttt{WA}$





William Matthews (American, b. 1949), *Bottle Tops*, 2005. Watercolor on paper; 39-1/2 x 43-3/4 in. COLLECTION OF WILLIAM MATTHEWS

Denver-based artist William Matthews is best known for his watercolor paintings of cowboys. But his interest gallops beyond traditional images of horses and guys in chaps; Matthews depicts objects like oil drums and even a lollipop as he breaks through clichéd imagery to reflect the contemporary American West. His paintings are featured in a new exhibit at the Denver Art Museum. William Matthews: Trespassing runs until May 17, 2015, and includes 27 works, ranging from the artist's early career to his recent works. The museum also features a documentary that follows Matthews as he prepares for the exhibit.

WILLIAM MATTHEWS: TRESPASSING is on view until May 17 in the Gates Family Gallery on Level 2 of the Frederic C. Hamilton Building; the exhibition is included in general admission.

Tonga R. Stimpson | Englewood, CO

Ingrid A. Louiselle | Cornelius, OR Marcia Patton Mallory | Fort Collins, CO James Manley & Julie Kley | Flagstaff, AZ Susan Marcus | Golden, CO Valerie Marquis | Snoqualmie, WA Jack McGrew | Fort Collins, CO Wendy Meyer | Dallas, TX Eric Mills, Action for Animals | Oakland, CA Linda Morgan | Sagle, ID Robert Moston | Grand Junction, CO Stewart L. Murray | Capay, CA Donald & Jeannette Nelson | Littleton, CO Margie Oldham, UCCS | Chipita Park, CO Bob Osborne | Wilson, WY Donald C. Peach | Rangely, CO Meq & Bruce Peterson | Taos, NM Sandra Phillips | Brecksville, OH Richard & Megan Prelinger, Prelinger Associates Inc. | San Francisco, CA Nicholas Psarakis | Colorado Springs, CO Gloria Purcell | Belmont, CA George Rampp | Port Angeles, WA Matthew Redwine | Jackson, WY Mark Rochester | Sutherlin, OR Genevie Rosin | Newport, OR Margaret Rostkowski | Ogden, UT Jeff Ruch | Bethesda, MD Anne Ruggles | Fairbanks, AK Jessica Satre | Reno, NV Schaffner Press Inc. | Tucson, AZ Daryl A. Scherkenbach | Cazadero, CA Robert & Nada Scofield | Lander, WY Christina Rabe Seger | Tucson, AZ Ed Shadrick | Overland Park, KS Don Sharaf | Victor, ID Maureen Sheldon | Etna, NH Luther Shetler | Bluffton, OH Bruce Sillers | Issaquah, WA Helen Simmons | Pauma Valley, CA Douglas & Joan Simons | Pleasant View, UT Jeanette Smith | Durham. CA

William J. Starker | Denver, CO

Ted & Marilyn Stevens | Eugene, OR

Bill Steinkuhler | Arvada, CO

Harold H. Stowell | Tuscaloosa, AL John Stutzman | Albuquerque, NM David Suehsdorf | Eden. UT Tom & Della Sullivan | Nathrop, CO Steve Swanson | Glenwood Springs, CO Harry Taylor | Wheat Ridge, CO William Taylor | Sacramento, CA Mikki Teresin | Billings, MT Jeff Terrill | Lakewood, CO Jon Thomas | Portland, OR Sandra Thorne-Brown | Pocatello, ID Robin Tierney | Half Moon Bay, CA Pamela Timmerman | Chimayo, NM Jon Tripp | Paonia, CO Deborah Trotter | Moraga, CA Tom Viola | Berkeley, CA Sally Vogel | Lacey, WA Linda & Carl Wagner | Beloit, WI Christina L. Wall | Abiquiu, NM Wallace Ward | Houston, TX Linda & Richard Warner | Springfield, OR Maryann Wasiolek, Hydroscience Associates Inc. | Corrales, NM Warren Weaver | Genoa, NV Grant R. Weber | Naples, FL Jana Weber | Pinedale, WY Donald Webster | Red Bluff, CA Rebecca Weed | Belgrade, MT Andrew Weiner | Albany, CA Bob Weirick & Susan Slade | Salt Lake City, UT Michael Weiss | Longmont, CO William Welch Jr. | Reno, NV Pamela Wells | Salt Lake City, UT Carole Wendler | Death Valley, CA Paul & Jory Westberry | Naples, FL Tim Westby | Tucson, AZ Margaret Whitfield | Briones, CA Claudia Whitnah | Martinez, CA Arnold Whitridge | Douglas City, CA Nicole Whittington-Evans | Palmer, AK William L. Bach | Santee, CA Bob Zimmerman | Eagle, CO

We're hiring – in D.C.!

High Country News is seeking a Washington, D.C., correspondent to write about issues critical to the West and the way they play out on the national stage. A generous grant from the Society of Environmental Journalists and SEJ's Fund for Environmental Journalism makes it possible. We're looking for a savvy, experienced reporter based in the capital. For details, see hcne.ws/HCN-DCjob.

Last fall, we introduced the annual Bell Prize for young essayists. Named for our founder, Tom Bell, the contest is designed to inspire emerging writers. The winner receives \$1,000 in cash, and the runner-up gets \$500 worth of outdoor gear courtesy of Mountainsmith. We received more than 60 entries in this year's contest. Nathaniel **Kennon Perkins**' first-place essay was published in our Jan. 19 issue. You can also read it at hcn.org/issues/47.1/the-newnew-west; the runner-up essay, by Daniel Kinka, is at hcn.org/ issues/47.1/mesas-and-sky.

A huge thank-you to all of the folks who gave subscriptions to *High Country News* as gifts this holiday season. We beat our goal of 1,500 gift subscriptions by a whopping 615!

VISITORS

During the dark winter days, not many travelers venture to our western Colorado headquarters. But we always appreciate the few who brave the cold and snow — not that there's been too much of either so far — to come see us in Paonia!

In late November, **Christine Frank** dropped by. She'd just moved here from Minneapolis, Minnesota, and writes on the environment.

Bill Sayre from New Bloomfield, Pennsylvania, came to visit his aunt, Lee Overton of Paonia, and they stopped by for a tour. Bill noted how many of the topics we cover relate to issues out East, specifically fracking, pipelines and mining. Lee first came here from Colorado Springs in the mid-'80s and met then-HCN publisher Ed Marston when she was "checking the place out." Ed advised her to buy a house — a bust in coal production meant the local mines had laid off workers, and homes were cheap.

And back in October, **Nate** and **Liz Johnson** visited from Missoula, Montana. Nate is a retired wildlife biologist. They both volunteer a lot for the parks systems and like to travel.

—Jodi Peterson for the staff



Bill Sayre, right, visits the *High Country News* office with his aunt, Lee Overton, who moved to Paonia in the '80s. BROOKE WARREN

THIS LAND IS



Public lands belong to everyone. But private landowners can make it hard to get to them.

limpsed through the windshield of Kyle Newmiller's pickup, the peaks of the Crazy Mountains razor through the parting clouds. We're bumping along a dirt road in southwest Montana, cruising through miles of tan foothills, occasionally dropping down along Sweet Grass Creek amid stands of blazing yellow cottonwoods. Earlier today, it was raining, but now the clearing sky reveals a crisp snow line at 7,000 feet.

"Isn't that beautiful," says Newmiller, grinning. A construction contractor and avid hunter, he's driven an hour and a half from Billings, Montana, along with his 7-year-old daughter, Jordan, and his dad, Doug, a 40-year veteran at the local coal-fired power plant. In the coming weeks, they're hoping to pack some horses into these mountains, maybe bag an elk. If, that is, they can get access.

"There's a lot of elk at the top of Sweet Grass," Newmiller says. "But there's only one way in there" — this road, which threads through miles of private land (and multiple gates), before it enters the national forest. A half-mile shy of the forest boundary, there is a sign, installed by the owner of Sweet Grass Ranch, that reads: "This is not a trailhead. Private land, private road. ... Stop in at the main house to discuss access, parking, boundaries, any restrictions and to sign in." For access between mid-September and May, it adds: "Please call first."

Newmiller is edgy, thinking about last summer, when he came out to talk to ranch owner Tony Carroccia. He says Carroccia told him that he'd need written permission from the three other landowners along the road to get access during hunting season. Newmiller countered that he didn't need their permission because this road is a public access — a claim he backs up with old Forest Service maps showing a public trailhead here, as well as evidence that the road once served a school. That's when Carroccia "told me to get off his property," Newmiller recalls.

Carroccia denies that the incident took place.

As we rattle around a bend, we encounter the first gate, slung shut with a chain and padlocks. It reignites Newmiller's irritation: "I'm just trying to access public lands," he says. "You know — national forest. ... They've got their own mountain land — they don't need our public land on top of that."

The scuffle over Sweet Grass Creek is part of a much larger struggle in the West. In Montana alone, more than a dozen access conflicts have flared up in recent years, as landowners gate off traditional access routes and effectively put hundreds of square miles of public land out of reach for people like Newmiller. Some conflicts, including the one here at Sweet Grass Creek, have smoldered for years or even decades. In many cases, landowners profit in various ways from the exclusive access to adjacent public land.

In an ideal world, anyone would be

THEIR LAND



able to easily access the half-billion acres managed by the Forest Service, the Bureau of Land Management and other federal agencies in the West. But I'm struck by how tenuous, even fragile, our connection to that land is — including the land in this particular corner of Montana, near my home in Bozeman: just thin threads of roads, where access often hangs more on the will of a landowner than on whether a road is truly public or private. Who gets to enjoy the benefits of public land, and at what cost, is more complicated than the crisply mapped property lines. And opening public access is always more difficult than closing it off.

THE ROOTS OF THE PROBLEM reach back to the 1800s and early 1900s, when homesteaders carved out millions of acres from federal holdings in the West, forming rings of private land around islands of public land. And in what was probably the biggest giveaway of public resources in history, the federal government spurred

westward settlement — and set the stage for innumerable future disputes — by dispensing sections (640-acre squares) to railroad companies, creating checkerboards of private land within those public-land islands.

For decades afterward, the public generally accessed public land on roads scraped in to serve homesteaders, miners and loggers. In those less-populous times, landowners were more tolerant of people crossing their property under informal, usually undocumented, arrangements. Today's camo-garbed hunters and poletoting hikers still rely to a surprising extent on those roads. And the need for more legally binding rights to use them has grown, as a rising tide of public-land users collides with a new generation of landowners.

I'd read about access fights farther afield in Montana, but as I scanned maps of the lands closer to Bozeman, the nearby Crazy Mountains looked ripe for conflict. Shooting skyward from the sur-

rounding plains, the Crazies are ringed by private land. An additional 100 square miles of private land are checker-boarded throughout the range's 270 square miles of public land. Trailheads dot the western front, but along the entire 25-mile eastern front, there's only one established public trailhead, which the Forest Service secured in the 1950s after decades of landowner resistance. In at least four other drainages on that side of the Crazies, agency roads or trails dangle at the forest boundary, with no apparent public access. I home in on the biggest, Sweet Grass Creek, and soon learn from the Forest Service that more than 80 percent of the Crazies lacked "reasonable" public access as recently as the 1980s. Some in the agency even have their own nickname for the Crazies — "the final frontier."

Bob Dennee knows this ground well. He exudes a weathered ease from his 39 years as a Forest Service land specialist and in other roles. His tenure began around the time the National Forest The Crazy
Mountains near
Clyde Park,
Montana. The
mountains lie within
the Lewis and Clark
and Custer Gallatin
national forests, but
parts of the forests
are hard to get to
because they're
surrounded by
private land.
BEN PIERCE

Bob Dennee, below, negotiated many access deals during his 39 years with the U.S. Forest Service. At right, Bernard Lea, also retired from the U.S. Forest Service, now works with the Public Land/Water Access Association, training volunteers to search county records to document the historical ownership of roads. ADRIAN SANCHEZ-GONZALEZ/BOZEMAN CHRONICLE;

How governments and others can gain access

Establish historic public-access rights

Land agencies and others can prove an existing publicaccess easement by documenting that a road is a county road, for instance. Or they can ask a judge to issue a ruling in favor of "prescriptive" rights access rights claimed through historic use and thereby establish a new easement

Acquire land

Land that links existing public land to public roads or trails can be purchased or donated, and agencies can also exchange public land for this purpose.

Purchase easements

Easements that give access along existing or new roads or trails can be purchased directly.

Establish reciprocal easements

Agencies can grant private easements - if a landowner wants to build a road across public land to reach an inholding, for example - in exchange for a public easement, of similar value, across private land.

Re-route or build roads or trails

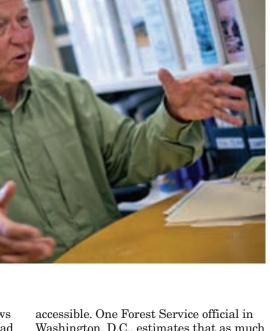
Agencies can change access routes or build new routes in order to link to public land. This is costly and requires an environmental review under NEPA, the National Environmental Policy Act.

Acquire right of way using condemnation

Under federal eminent domain laws, agencies can seize ownership of private roads or trails and compensate the landowners. This is used only as a last resort, or to encourage other options.

> –Marshall Swearingen





Management Act and other bedrock laws gave the Forest Service and BLM a broad directive to secure recreational public access. Though the agencies made some progress in the 1980s, Dennee points to a 1992 report by the General Accounting Office (now the Government Accountability Office) that concluded that more than 50 million acres of Forest Service and BLM lands — about 14 percent of their holdings in the contiguous U.S., mostly in the West — had "inadequate" access. The report noted a growing problem: "Private landowners' unwillingness to grant public access across their land" had increased over the previous decade, and sportsmen felt that landowners were "'privatizing' federal land for their own personal gain."

Dennee is an optimist, though. "We're making some gains," he told me at the federal building in downtown Bozeman last June, shortly before he retired. He pointed to the Gallatin Forest's 1987 Forest Plan, which identified 46 roads and trails, including Sweet Grass Creek, as the highest priority for securing access. Since then, Dennee and others have secured access at 23 of those. "But at the same time, land ownership changes," Dennee said. "New landowners come in and say: 'I don't recognize that historic trail, I'm closing it.' So we lose some ground."

Nationwide, it's hard to calculate how much progress has been made since 1992, because the agencies don't track the amount of land that is not adequately Washington, D.C., estimates that as much as 20 million acres of the agency's land still lack adequate access today. A 2013 report by the Center for Western Priorities, a Denver-based think tank, identified 4 million acres of Forest Service, BLM, state and other public lands, in six Western states, that were completely inaccessible. Montana had the largest share — nearly 2 million acres — of this "landlocked" public domain.

In Bozeman, Dennee spread a map across the table and described his biggest success — a massive land swap in the 1990s, when a cooperative Congress passed a bill consolidating tens of thousands of acres of old railroad checkerboard strewn across several mountain ranges in the Gallatin National Forest. "That resolved access across more than 150 miles of trail," he said. A similar land deal in the '90s, in which Dennee also played a major role, brought 39,000 acres of private checkerboard land in the northern Crazies under Forest Service ownership. He mentioned more success stories, including some that relied on productive partnerships with Montana Fish, Wildlife and Parks, the state's wildlife management agency, as well as with national nonprofits, including the Rocky Mountain Elk Foundation and The Trust for Public Land, and local access advocacy groups. "People do rally around access issues, and set aside their differences," Dennee observed.

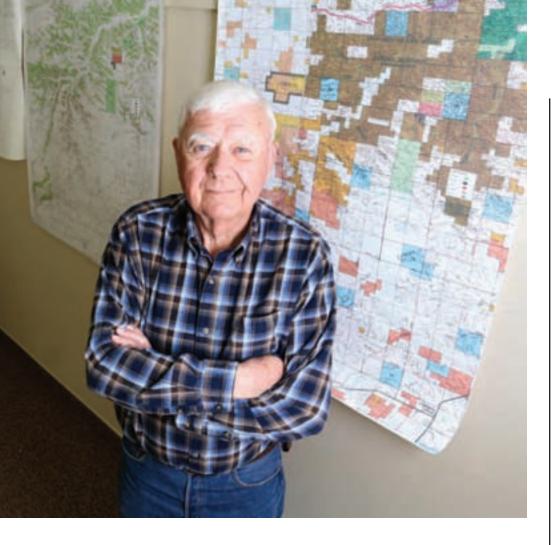
But the bad news is that partner-

ships are becoming more necessary as the Forest Service is hit with tighter budgets and staff reductions. Dennee can remember a time, as recently as a decade ago, when each of Montana's eight national forests had a lands specialist dedicated to improving and safeguarding public access. Now only three staffers oversee access issues for the national forests and grasslands extending over the greater part of Montana and into North and South Dakota. Meanwhile, younger staffers coming up through the ranks lack the necessary expertise, he says.

"We have (many) willing landowners who want to work with us to resolve access needs," Dennee told me, "but we can't keep up with the demand."

IN MONTANA, THE AGENCIES have a tenacious ally that other Western states lack: the Public Land/Water Access Association (PLWA). Founded in 1986 by a retired Forest Service staffer, the all-volunteer group has a website that boasts of its "pit bull mentality" and lists dozens of battles it has waged against uncooperative land-

The guys shutting off access to the public lands - it just didn't sit good with me," says Bernard Lea, who joined PLWA in the 1980s, while he was working as a Forest Service lands specialist. His home is surrounded by big cottonwoods, just off a commercial strip in Billings, and he jokes that his open-heart surgery the week before has "kind of backed up" a



couple of access cases. He hands me a binder full of survey records, handwritten letters exchanged by ranchers and county clerks, homestead patents and other obscure legal documents — all evidence he gathered for the first access case he pursued for the Forest Service. It proved that a road — which had long given the public national forest access — had originally been approved and paid for by a local county government at the request of homesteaders in 1910. Therefore, a landowner's attempt to close it was illegal.

Now, Lea trains other PLWA volunteers to do this work. In courthouse basements, they dust off thick tomes and read thousands of pages of county records, often having to decipher inscrutable cursive script. "You just about have to read it word for word," Lea says, because the key details that could decide a case "come out of the blue." Sometimes, the volunteers searching old archives come up emptyhanded and resort to other tactics, merely documenting that the public has previously used now-contested routes, a basis for securing "prescriptive" access rights under Montana law.

The work is tedious and sometimes takes decades to pay off, as it did in a struggle that began in 1997, when new landowners gated a road that historically provided public access to more than 25 square miles of national forest in the Absaroka Mountains, southeast of the Crazies. Backed by locals, PLWA and the Forest Service negotiated temporary

easements that reopened the road until 2009, a period during which they hoped to secure permanent access. But their efforts failed, and in 2009, Dennee and other Forest Service officials initiated the process of seizing ownership of the road's right-of-way under federal eminent domain laws — a long and costly procedure that must climb through every level of the agency to Washington, D.C., and then be approved by the secretary of Agriculture as well as by both houses of Congress. At the urging of Montana's Sen. Jon Tester, D, and agency higher-ups, the landowners and the Forest Service agreed to construct a new road through both public and private land — another lengthy process, requiring environmental review. Now, more than 17 years after the original road was closed, the new one is nearly ready. The landowners, who paid for the portion of it across their property, "should be commended for working with us," says Dennee.

Lea says the federal agencies often lack the resources or the will to pursue cases so aggressively. And he's skeptical about other approaches, like the unsuccessful attempts by Sen. Tester and then-Rep. Steve Daines, R, (now a senator) to tap the federal Land and Water Conservation Fund to purchase more access from landowners. (The 2014 Farm Bill did allocate \$20 million of similar funding.) Lea, who works as a real estate appraiser, says most landowners just aren't interested in selling access: Private land

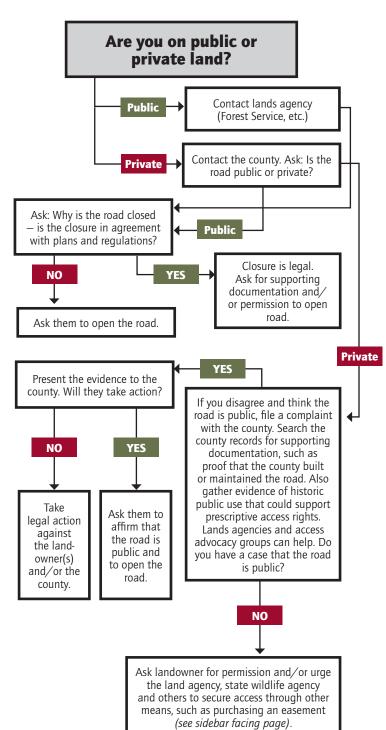


PIW

Locked out?

A few tips from PLWA's Bernard Lea on what to do when you hit a locked gate trying to get to public lands. This is based on PLWA's Montana experience; each case is unique and laws may vary from state to state.

—Marshall Swearingen



near public land "has become so damned valuable," he says. "You can buy 1,000 acres that borders national forest" where there's no public access, and basically you're getting that portion of the public land as part of the deal. "That's what a lot of out-of-state people are looking for, limited deeded acres that they're taxed on, and then they can (control) the access to the national forest."

Public Land/Water Access picks its battles carefully, with most of its \$40,000 annual budget going toward legal fees. "The agencies are doing what the politics will let them do," says Lea. "We do what we can."

That's not enough, according to some conservationists. "Even when (PLWA) wins, they lose, because huge swaths of public land are off-limits for years" while a case is jammed in court, says Nick Gevock, conservation director for the Montana Wildlife Federation, which is partnering with PLWA in an effort to change some key state laws. One proposal would require landowners to prove that roads are private before closing them; another would increase the fine for illegal road closure from \$10 to \$500 per day. Gevock is careful to emphasize that hunters and other public-land users must respect private property, but adds: "There need to be some repercussions for people who try and privatize public lands."

ON THE OTHER SIDE, private landowners often have good intentions, too. Until 2012, for instance, Paul Hansen allowed access through his Montana ranch to federal lands roughly 140 miles southwest of the Crazies. The ranch, which has been in

his family for four generations, stretches 25 miles along a county road in a narrow valley bracketed by sagebrush foothills and timbered mountains. Several of its roads branch from the county road and climb into BLM land, with Forest Service land not far above. It's prime elk-hunting territory, and during hunting season, Hansen allowed people to use his roads, which were never gated, and even hunt portions of his land; the rest of the year, he paid little attention to the issue. But the number of hunters grew each year until they became a problem.

Montana has a "block management" program that compensates landowners for providing public hunting access on their property. But when I meet Hansen on one of the few summer mornings when he's not having or moving cattle, he tells me how, in 2011, hundreds of hunters came through, maxing out the \$12,000 he gets from the program. Their ATVs became a nuisance, spreading invasive knapweed. And the increase in traffic along the narrow gravel county road, which his kids drive every day to town or to pick up their own kids from school, was especially troubling. "You'd think this was the interstate out here," he says. "It was like driving the gantlet."

One November afternoon in 2010, when the county road was slick with new snow, Hansen's daughter, Jody, was driving home in a bulky Chevy Suburban SUV. A jacked-up Dodge pickup, obviously speeding — one hunter driving and another in the passenger seat — fishtailed and collided head-on with the Suburban, plowing onto the hood within inches of the windshield. Pinned inside

with broken ankles and a broken arm, Jody drifted in and out of consciousness for two hours as emergency responders cut her from the vehicle. A similar problem occurred the following year, during hunting season: A speeding pickup, presumably driven by a hunter, crested a hill and skidded sideways past Jody as she veered into the ditch. The driver didn't stop. "It got to be too much," Hansen says. "We said: 'We're done with this.'"

So, in 2012, the Hansens dropped out of the state's block management program and closed their private roads, cutting off access to the adjacent public land. Angry hunters complained to the BLM and the Montana Fish, Wildlife and Parks agency. Some were especially riled to learn that Hansen had leased exclusive hunting rights on his land to a neighbor, James Lincoln, a wealthy newcomer who owns a network of nursing homes in Missouri.

The BLM asked Hansen to reopen his roads, but he refused, so the agency moved ahead with a plan to open public access by re-routing sections of the county road through BLM land. Hansen realized that the access route would be restored, even if it cost the agencies, so he agreed to sell public easements on his roads. Fish, Wildlife and Parks paid Hansen \$33,000 for the easements, securing much of the funding from the Rocky Mountain Elk Foundation and local sportsmen's groups. The BLM opened the new, year-round access in time for the 2014 hunting season.

Back in the Crazies, Carroccia also talks about the darker side of public access. He sees his family's control of the trailhead, going back to when they





Paul Hansen, left, allowed access to public lands through his Montana ranch until the costs became too high; he eventually sold public easements to his ranch roads to Montana Fish, Wildlife and Parks. Above, the Forest Service tried for decades to secure public access across the Sun Ranch, which borders 14 miles of national forest in southwest Montana. A road that crosses the ranch's southern corner is the only public access to this part of the Madison Range today. MARSHALL SWEARINGEN



bought the ranch in 1965, as a steward-ship role, needed "to preserve the place." He spends much of his days patrolling and spraying for weeds, something he says the Forest Service doesn't have the manpower for. "I don't know what anybody gains with a (public) trailhead," he says. "All we get is more vehicle traffic, more weeds, less beauty — less enjoyment for everybody."

But like many landowners controlling public access, Carroccia also has a financial interest: He runs a guest ranch in addition to his family's cattle business. The Sweet Grass Ranch website advertises several guest cabins and rooms, available for upwards of \$1,750 per person per week, offering opportunities for horseback riding, hiking and fishing—flashing the scenic beauty of the Crazy Mountains and inviting guests to "trek into our backcountry to enjoy unspoiled high alpine lakes and jagged peaks," some of which lie on his land, and some of which are in the national forest.

Although Carroccia says he allows access during hunting season if hunters have permission from the other landowners along the road, it's not easy to get that permission. One of the landowners, Chuck Rein, who boasts about his ranch's fourth-generation roots on his outfitting business website, charges up to \$6,000 for multi-day hunts pursuing elk, deer and mountain goats, mostly on his land

but also on the national forest, including up Sweet Grass Creek. When I phone Rein in August, he complains about being inundated with calls from hunters; over lunchtime, he'd already turned down three requests. He grants access to some hunters during the final days of the biggame hunting season, to hunt cow elk, and even sometimes hauls out their kills for them, he says. But Kyle Newmiller says Rein never returned his calls, and the locked gate we hit in October is on Rein's land.

Tony Carroccia says, "We're working hard to allow access, but keep a little bit of control." The Forest Service maintains that it still has rights of public access here, because of previous public use and the history of the road, but the lack of a recorded public easement means that the landowners hold the cards for now. Carroccia's policy, which requires hikers and horsepackers to sign in at his ranch house, makes it more difficult for the agency or Public Lands/Water Access to assert prescriptive access rights, because the signatures indicate that visitors are asking permission rather than freely using the route. It's the kind of case that might be resolved only with a lawsuit triggered by cash-strapped PLWA or the Forest Service, or by an irate hunter cutting the locks.

The district ranger here, Alex Sienkiewicz, who earned a law degree before going to work for the Forest Service, is clearly doing the best he can. "The reality is we have to triage," he says. For now, the agency is focused on more promising cases, like a potential land swap that would resolve an access dispute on the Crazies' west side. As for Sweet Grass Creek, where the lines between public and private blur, "some of these cases sit in limbo for a long time," he says.

IT'S A HOT JULY DAY and I'm dodging cowpies on a faint trail that skirts the sharp front of Montana's Madison Range, a string of 11,000-foot-plus peaks and alpine lakes towering above a river valley, southwest of the Crazies. I'm hiking toward Wolf Creek, a major drainage where a Forest Service trail climbs into the heart of this range. But already, as the sun starts to dip, I know I won't make the 20 miles to Wolf Creek and back.

Getting to the trail at Wolf Creek would actually have been easy, if I'd been willing to trespass: A road from the highway leads directly to the trail, crossing the sprawling Sun Ranch, which borders 14 miles of the Beaverhead-Deerlodge National Forest. As I piece together the Forest Service's decades-long fight for access here, I uncover some incremental victories. But I also see more clearly how, once the public loses ground, it may be gone forever.

A 1964 map shows Forest Service

For decades Bill Orsello's family used a road passing through private land to access national forest near Helena, Montana. **Because the Forest** Service didn't have a public easement on the road, it was legal for the landowner to lock a gate and block public access. DYLAN BROWN/HELENA INDEPENDENT RECORD

A sampling of locked-up public land and access battles

North Fork Wilderness Study Area

The Wyoming Wilderness Association calls this 15-square-mile BLM area "a wilderness fisherman's dream," with a stunning mix of old-growth forests, red hills and deep canyons. A county road creeps within a fraction of a mile of its boundary, but for decades, a handful of landowners have effectively cut off all access, though they offer guided hunting for a fee.

Mabee Road

The public used this road, which passes through a checkerboard of BLM and private land, to reach nearly 40 square miles of public land until 2007, when a landowner gated it and began selling outfitted hunts, both on private and adjacent BLM land. PLWA is fighting in court, saying that the road is a public road, and that historic use supports prescriptive rights.

Bureau of Land Management

U.S. Fish and Wildlife Service

National Park Service

U.S. Forest Service

John Day River

About 70 square miles of BLM land are only accessible by boat - when the water is high enough — because private landowners along the canyon rim restrict road access. Oregon's Department of Fish and Wildlife has been trying, unsuccessfully, to purchase or lease public easements.



Matilija Creek

For decades, people used a Forest Service trail to reach swimming holes and waterfalls here. The trail crosses a piece of private property, and in recent years the landowner has begun actively discouraging visitors. Los Padres ForestWatch, a local watchdog group, is suing, claiming prescriptive access rights based on historic public use.



Skeleton Canyon Road

Around 2005, a landowner locked a gate on this road, complaining about drug running and other traffic. This has blocked access to more than 20 square miles of Coronado National Forest, including the historic Geronimo surrender site. Roughly 200 of the 320 routes into the forest lack a recorded public easement, so similar closures are possible.



ALLI LANGLEY/SUMMIT DAILY

Quandary Peak access road

Prior to the 1980s, when the Forest Service constructed a formal trail to 14,265-foot Quandary Peak, the main access was an old mining road. Locals continue to use it, but in 2011, a new landowner began discouraging public access. "It's a really hostile environment now," one local told the Post Independent. The Forest Service and Summit County are considering legal action to assert a right of way.

Sabinoso Wilderness

This 25-square-mile patch of BLM land, a high mesa cut with a deep canyon, was designated as wilderness in 2009, but there's currently no legal public access on roads through surrounding private land. The BLM has unsuccessfully tried to secure access, mainly by offering to buy land.



roads crossing the Sun Ranch, leading not just to Wolf Creek but to two other drainages to the south. Jack Atcheson Jr., who grew up hunting this area with his dad, remembers the access at Wolf Creek as being "as good as a trailhead" into the 1960s. "I'd leave my camper trailer there for three weeks," he says.

But by the 1970s, the Sun Ranch owners were tightening access — perhaps at first by more strictly requiring permission, as happened at Sweet Grass Creek. Like Sweet Grass Creek, these roads had apparently never been formalized as public-access routes. By the late '70s, there was no secured access along this 20-mile section of the Madison front. Atcheson, who was by that time guiding clients into Wolf Creek as an outfitter, using a less direct access road on a neighboring ranch with the landowner's permission, urged then-District Ranger Vergil Lindsey to help turn the tide. "I could see (the access) drying up for everyone," he says.

Lindsey took a collaborative approach, rather than asserting prescriptive rights based on prior access. But progress was slow, and complicated by the transfer of the Sun Ranch into new hands. In 1978, it sold to Southern California banker and real estate developer Ted Gildred and his partner, Bill Poole, the first in a string of wealthy owners who would come to include a major mining company CEO, a Silicon Valley entrepreneur and action-movie star Steven Seagal. Lindsey increased his efforts and by the early '80s made a breakthrough: Gildred and Poole agreed to a trailhead access at Papoose Creek — about 10 miles from Wolf Creek, across the ranch's southern corner. That significantly improved access along the Madison front, but Lindsey was disappointed that he couldn't do more. What killed a more ambitious deal? Lindsey says that the forest supervisor, shying from confrontation, "just ran backwards."

The Papoose Creek agreement included a Forest Service promise to back off its pursuit of Wolf Creek for 10 years. But when the 10 years had passed, then-District Ranger Mark Petroni resumed Lindsey's fight, despite the landowner's opposition. The agency worked with PLWA to dig deeper into the legal history of the road, but "there was nothing," says Petroni. "There really wasn't any option other than condemnation, and the political stars wouldn't align."

Determined hunters still trekked to Wolf Creek on a faint and unofficial trail. which scrambled over difficult terrain to avoid trespassing on the Sun Ranch. After 2008, when Sun Ranch owner Roger Lang donated an easement, the Forest Service constructed a more moderate trail between Papoose Creek and Moose Creek, the middle of the three drainages. As I hike that trail today, it still fights the foothills topography, diving and climbing over several other drainages. In some places, it's nearly illegible from disuse.

Ironically, even agency staffers have



Kyle Newmiller at home near Billings, Montana. He has been locked out of some of his favorite hunting spots by landowners who have blocked access to public land beyond their property. PAUL RUHTER

"Someone should come up here and say: 'If we catch you locking this gate, we're going to write you a ticket.' ... What is the hold-up?"

–Montana hunter Kyle Newmiller

welcomed this outcome. Jonathan Klein, who served as the district's wilderness manager until he retired in 2012, believes, as do some local hunters, that this area is better off now because the wildlife get a break and those humans who do visit have a chance for solitude. "You're not going to go there unless you're really into it," he says. "You don't have to have a trailhead at the mouth of every drainage."

It's a good point. And it's the main justification that the Forest Service now gives for apparently abandoning the fight for access to Wolf Creek. But it grates against another chapter in the Sun Ranch's history, one that underscores how, in the end, the struggle isn't just about whether there's access — it's about who has access, and whether that access is in the spirit of public ownership.

In 1978, as Gildred was preparing to buy the Sun Ranch, Florida attorney Hamilton Kenner swooped in to buy the ranch himself. Kenner then flipped the ranch to Gildred, but not before piecing off sections on its north end, adjacent to the national forest near Wolf Creek. He subdivided that land, branded the development as Rising Sun Mountain Estates, and marketed it with bylaws and covenants specifying that anyone who bought in would have access to the national forest. All the lots sold.

Several of those properties are again for sale today, even as the fight for access at Wolf Creek fades from public memory. The listings advertise "exclusive hunting rights in the area with common access to the forest land," and go even further: "A locked gate at the entrance protects that exclusivity. ... No public access into this part of the Wilderness for miles in either direction."

KYLE NEWMILLER sits in his idling truck, staring at the locked gate on the road up Sweet Grass Creek. "Someone should come up here and say: 'If we catch you locking this gate, we're going to write you a ticket.' ... What is the hold-up?" he says. He's already talked to District Ranger Sienkiewicz and Public Lands/Water Access. Now he considers his more immediate options: Return to Rein's house and hassle him for permission; go back into town and report to the county, where Tony Carroccia's brother-in-law is the county attorney; or maybe get out of the truck and cut the locks himself.

The hold-up is this: No matter how frustrated Newmiller is, this road — like all others — is private until proven or made public. And the hold-up can last for decades: For 30 years, a road 120 miles west of here was gated, blocking access to nearly 20 square miles of Beaverhead-

Deerlodge National Forest that are otherwise hard to reach. Only in recent years did the county uncover clear evidence that the road was public, prompting county commissioners to personally cut the locks on that gate in 2012. The landowners took the case to court, and the judge upheld the public right of way.

Newmiller turns the pickup around, and we drive back through the cottonwoods along the creek. In the nearest town, Big Timber, we pull into a gravel lot where state wildlife officials are checking hunters' kills. A game warden, bundled up against the cold wind, comes up to talk to Newmiller. It's a continuation of the talk they had earlier this morning, when Newmiller asked about access at Sweet Grass Creek; now, he tells the warden about the gate. The warden clearly also believes the public should have access there, but his words are carefully vague. If anything, I think, he's egging on Newmiller. He says, "Somebody's gotta do it. ... Somebody's gotta go in there and say '(is this a public access), yes or no?'

Newmiller knows he could be that "somebody," blazing his own path and personally shouldering the costs, which are unknown but daunting. "That's what's so frustrating," he tells me. "Everyone sits back like it's no big deal. When does somebody do something about it?" □



Former HCN intern Marshall Swearingen freelances from Bozeman, Montana.

This coverage is supported by contributors to the High Country News Enterprise Journalism Fund.

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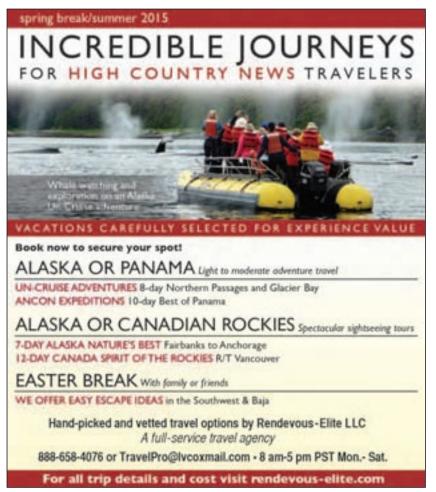
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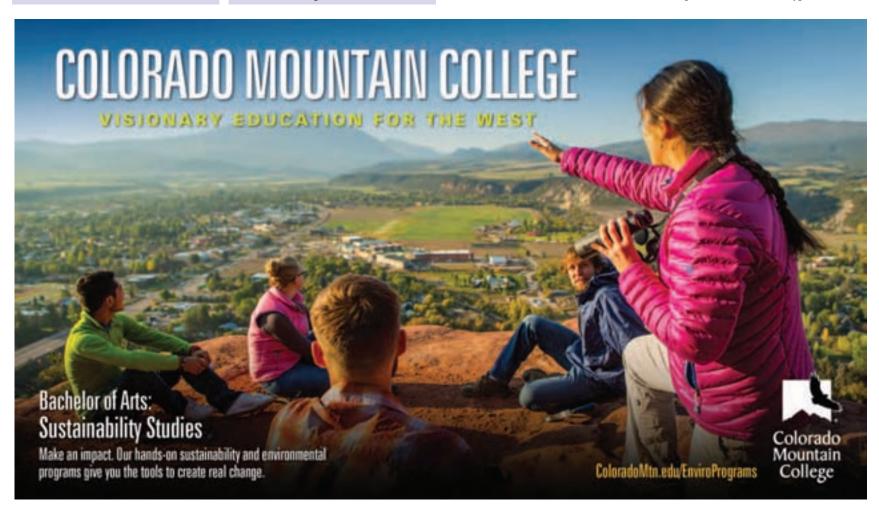
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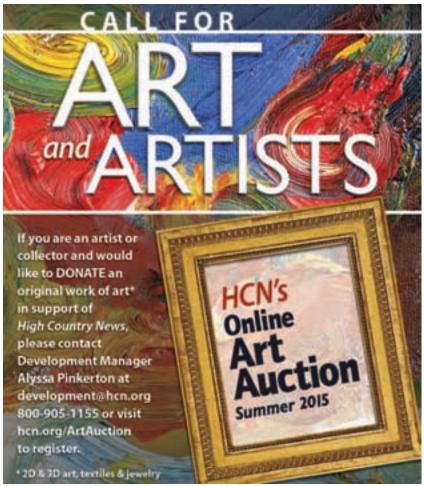


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Set the fossil fuel industry free



OPINION BY PEPPER TRAIL

WEB EXTRA

To see all the current Writers on the Range columns, and archives, visit HCN's Web site, www.hcn.org

n 1729, Jonathan Swift published the most famous satirical essay in the English language: A Modest Proposal For Preventing the Children of Poor People in Ireland from Being a Burden to Their Parents or Country, and for Making Them Beneficial to the Public. And what was Swift's proposal? Merely that the 1-year-old children of indigents be eaten, thus solving the problems of poverty and overpopulation at a stroke.

Poverty and overpopulation are still with us, of course, but sadly, such bold ideas to solve these problems are in short supply today. Meanwhile, the world's current level of 7 billion is straining resources to the limit. Certainly the earth cannot support in health and comfort the 9 billion expected to swarm upon its surface by mid-century. Action must be taken — immediate, forceful action — to reduce the human population and re-balance the planet before it is too late. No person of good conscience can view televised scenes of squalor in the teeming cities of Africa and Asia — and even, if reports are to be believed, in parts of our own country — without feeling called upon to make a difference.

Fortunately, thanks to the genera-

tive genius of capitalism, the fossil fuel industry is positioned to solve this problem, while simultaneously generating good-paying jobs and unimaginable amounts of money. The release of greenhouse gases by this industry has already set the world on a trajectory toward irreversible climate change, which will ultimately bring about the population readjustment that all thinking people wish for. And companies from ExxonMobil to BP to Koch Industries to Syncrude stand ready to do so much more.

However, through no fault of their own, these corporations have not been as effective as they might be. Last year, barely over a million acres of new oil and gas leases were sold on America's public lands, and the industry was forced to make due with only \$18.5 billion in government subsidies. Meanwhile, endless red tape has imposed restrictive regulations on emissions, delayed the construction of essential pipelines like the Keystone XL, and waged a pitiless War on Coal. President Obama even signed an emissions-reducing deal with China. It is obvious to all sensible people that this is going in exactly the wrong direction.

My modest proposal is simply this:

Set the fossil fuel industry free. Open the valves fully on greenhouse gas emissions. The near-term profits will be immense. In the slightly longer term (after most of our generation are safely off the stage), this plan will produce a bracing readjustment of earth's ecological systems, resulting in much-needed population reduction through droughts, crop failures, and coastal inundation. And don't worry about your children or grandchildren. Surely the wealth they inherit will insulate them from whatever unpleasantness may come in the overpopulated parts of the world.

I acknowledge that there are a few misguided individuals who will urge a different course. They fancifully suggest that carbon emissions be immediately and drastically reduced, with the goal of keeping atmospheric CO₂ below 450 parts per million. This is the threshold that international climate negotiators have identified as providing a 50 percent chance of avoiding the impacts of catastrophic climate change. The level is almost 400 ppm today. To keep it below 450 ppm would cost the fossil fuel industry the equivalent of \$28 trillion in revenues over the next two decades, ac-

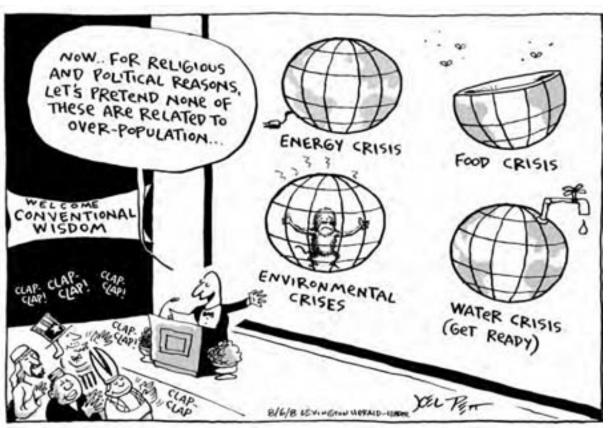


cording to published estimates. The only possible response to such an idea is a hearty laugh. When in the history of the world have corporations or governments passed up such wealth?

Nothing makes me angrier than those self-righteous "greens," who profess to love the earth, but who do nothing but fiddle about with this little regulation here, that little lawsuit there, and never talk about population at all. To use a well-worn phrase, they are merely rearranging deck chairs on the Titanic. I say, aim the Titanic straight at that rapidly melting iceberg! Throw more coal into the boilers! Full steam ahead! The earth will thank us. Eventually.

Pepper Trail is a writer, naturalist, and co-author of Shifting Patterns: Meditations on Climate Change in Southern Oregon's Rogue Valley (www.shiftingpatterns.org). He lives in Ashland, Oregon.

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

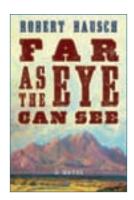


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Far As The Eye Can See Robert Bausch 320 pages, hardcover: \$26. Bloomsbury USA, 2014.

Far As The Eye Can See, the seventh novel from Georgia-born author Robert Bausch, opens in the 1870s, with Bobby Evans. a serial "deserter" from the Union Army, wandering aimlessly through the Montana, Wyoming and Dakota territories. He's an unsettling character: a man without a purpose, the kind of hustler who took the cash bounty for enlisting several times, only to slip away and reenlist elsewhere under a different name.

Committed only to saving his own skin, answering threats with his finger on the trigger, Evans ends up traveling with and learning Native skills from a chance companion, Big Tree, "a Crow brave ... a statue of what God wanted when he dreamed up the creature

he would call man." Later on, though, Evans helps the military round up Sioux and Cheyenne who refuse to move to reservations or abide by treaties. Stumbling through a landscape "as big as any whole earth I ever dreamed of," he observes both the white man's misguided response to the Indians and the bloody retaliatory tactics of the tribes in the Yellowstone



The Battle of Little Bighorn. C.M. RUSSELL, 1903. PRINTS AND PHOTOGRAPHS DIVISION, LIBRARY OF CONGRESS, LC-USZC4-7160

River region

Bausch takes the reader deep into his protagonist's psyche. Haunted by the echo of screams from the Civil War and the sound of "a bullet thwack(ing) into the breast of a fellow only inches away from me," Evans trusts nothing and no one. He impulsively attacks both red and white men, leaving human wreckage in his wake. But a moment of truth arrives

when he must decide whether to keep moving, or to stay and care for a person he has hurt. In the rising hills surrounding the Little Bighorn River, against the violent chaos of Custer's Last Stand, this amoral man is finally caught in a web of moral choices, where he must choose his own thread and take the consequences.

BY PHYLLIS BARBER

Love in a post-apocalyptic world



California
Edan Lepucki
400 pages,
hardcover: \$26.
Little, Brown and
Company: 2014.

When Cormac McCarthy sent an unnamed father and son out to wander a post-apocalyptic landscape in his 2006 Pulitzer Prize-winning novel *The Road*, he inadvertently created the template for one of contemporary fiction's dominant themes. Among the spate of post-apocalyptic narratives that appeared in 2014 is *California*, the debut of Los Angelesbased writer Edan Lepucki.

Lepucki, along with other recent postapocalyptic tour guides, echoes McCarthy on a few points: In the future, there will be no Internet, finding enough food will require constant effort, people will sift through relics of fallen civilizations for useful materials, and the roads will be beset by highwaymen. (In *California*, they're called pirates.)

But while McCarthy keeps his

characters in constant motion, Lepucki's protagonists, Cal and Frida, a young married couple, are determined to find a safe place to settle down.

Through flashbacks, we learn that they fled the nightmarish Los Angeles of a few decades from now and drove into the wilderness until their car ran out of gas. Frida has a city dweller's limited outdoor survival skills, but Cal has learned a few useful crafts like farming and carpentry. When winter closes in, they're lucky enough to find an empty shack for shelter.

They've heard there are other people left in the world, some of them holed up in private enclaves rumored to enjoy electricity and other amenities, but Cal and Frida don't encounter anyone until they meet the family who once occupied their

shack, and August, a roving junk dealer who trades Frida some Vicodin for a bra, "made of fabric and wire, both valuable," he says.

In plain, straightforward prose, Lepucki deftly notches up the tension when Frida discovers she's pregnant and she and Cal set off into the woods hoping to find a settlement. Sometimes the characters' motivations are murky and their beliefs confusingly mercurial, and the ending is a puzzler, but *California* is both diverting and thoughtful. It leaves you with the notion that maybe the postapocalypse genre isn't new-fangled after all, but rather a fresh reimagining of a classic Western theme: Every man for himself against nature.

BY JENNY SHANK

Half-Blind Valley

The suburb we grew up in had a series of greenbelts: preserved land flowing like inlets between the thousands of tract homes that stretched ever south from Denver. Highlands Ranch had been a cattle ranch in the not-so-distant past, and cattle still grazed on some of the land in 1991 — a comfortingly pastoral sight for the 17,000 inhabitants of the 10-year-old suburban outpost.

When I was 9, I spent hours exploring our greenbelt with a tall redheaded kid from the neighborhood. We spent most of our time down by the creek, protected from the hot summer sun by towering cottonwood trees. We would pack provisions and wander the great expanse just as Stephen Harriman Long had in July of 1820. His namesake peak (14,259 feet tall) looms over the Front Range, and under its watchful gaze we delighted in finding quicksand and frogs and the occasional owl. We dreamed of finding swimming holes and stringing up rope swings that would propel us through the air and into the cool water below.

On summer afternoons in Colorado, storm clouds formed near Longs Peak and neighboring mountains, where we could see them building, their strength growing. Then, as if given permission, they advanced across the plains, a torrent of rain and thunder and lightning. In the cities and suburbs, water gathered in the streets, the contours of the concrete forcing it through gutters to storm drains, where it disappeared into the underworld.

Once, just down from the greenbelt entrance, we found a storm drain outlet hidden behind the cottonwoods, around a bend in the creek. It was a large concrete block with a stream of water flowing from an opening at its base. We scaled the exterior wall above the opening and looked down into a room. After scoping out the obstacles inside, we decided to iump down. We waded five feet through ankle-deep water and climbed over a giant interior concrete wall to reach the farthest chamber, where a large drainpipe emerged. It was like nothing we had seen before. Deep inside, the drainpipe was utterly dark, an emptiness from which a cool breeze blew.

"Because it's there," George Mallory said, when he was asked why he climbed Everest. Our answer, at 9, to the question, "Why do you want to enter the drainpipe?" would have been the same. Mallory was last seen a couple hundred meters from the summit of Everest in 1924. He was 37. His well-preserved body was found in 1999 on the North Face, at 26,760 feet. His partner's body was never found. We hadn't heard of either of them.

We went home to plan. We did not know what the pipe was exactly or why it was there. We did not know how long it was or if in fact it ever ended. We did know that we needed more provisions for this expedition, our most daring to date. We loaded up on flashlights, candles, matches and Hostess CupCakes. Our load seemed heavy; never before had we carried so much. So we tied a rope to a skateboard and pulled our gear behind us.

When we got to the drainpipe, past the entrance and the water and the concrete wall, the otherworldly breeze met us once more. We stared into the depth of the darkness. And then, taking a deep breath, we stepped inside.

We could walk inside the drainpipe as long as we kept our heads down and knees bent. After about 10 feet, the light of day faded behind us. We turned on our flashlights and crept forward, spelunkers encountering a corrugated-steel cave. We were followed by the sound of the skateboard's wheels drumming out a steady rhythm against the corrugation.

After what felt like an hour, we stopped and talked briefly, reassuring each other. Outside, the thunderclouds were building in the distance, the winds were picking up. Inside, with the storm out of sight, we felt only the cool breeze flowing through the tunnel. We continued.

Then, on our left, in the glow of a flashlight, we saw another pipe, much smaller and jutting out like a tributary. It opened about halfway up the wall of the main pipe. We would be able to fit as long as we crawled on our hands and knees. There would not be enough room to turn around. We would need to make it to the end, or, if retreat became necessary, we would need to methodically inch backward all the way to the main pipe.

We had not checked the weather report. We had no idea if there might be a thunderstorm that afternoon. The weather was not on our minds. It was darkness, not rain, that scared us.

We deliberated. We ate our cupcakes. Then we followed the tributary to see where it would lead.

Kyle Boelte is the author of The Beautiful Unseen (Soft Skull/Counterpoint, February 2015), from which this essay is adapted.

PHOTO: DARKDAY/CC FLICKR



We did not know what the pipe was exactly or why it was there. We did not know how long it was or if in fact it ever ended.



HEARD AROUND THE WEST | BY JONATHAN THOMPSON

GOATLAND

Goats are enjoying the spotlight. Yes, goats. On YouTube, for example, you can join 28 million others in watching a video of "goats yelling like humans." Thirteen million have watched "Buttermilk," an excruciatingly cute kid — the four-legged kind, not your adorable nephew — abuse his yard mates by jumping over them or on them. It's even spawned a video game, one of several involving goats. The "evil goat from hell terrorizes town" category is slightly less popular, but has plenty of followers.

NPR has a blog called Goats and Soda, though it doesn't appear to be about either goats or soda, and the Washington Post's Wonkblog recently came up with a map that purports to show the location of every single goat in the United States. And you thought they were keeping an eye on you, silly kid. It was the blog's most-read story for a day or two, picked up by dozens of other media outlets.

According to the map, which was put together using data from the agricultural census, Sutton County, Texas, which boasts 55,000 billies, nannies and kids, is the goat capital of the U.S. Not far behind, though, are counties in northwestern Arizona that overlap the Navajo Nation. Apache County, for example, has 26,000 goats, more than one for every three humans. Churchill County, Nevada — home to a giant goat dairy — has almost 14,000 goats, and California's Stanislaus County has 21,000.

Some of the nation's 2.6 million goats are milked. Others, like the "Goat Grazers" in Nevada, are hired out to eat invasive weeds and even discarded Christmas trees — actual conifers, we hope, not plastic imitations. Still others are so famous that they are the honored guests of increasingly popular "Goats and Grenache" dinners. We've never been to one, but like to picture the billies and nannies dressed in formal attire, sipping fine wine and sharing the latest goat gossip. Though no doubt everyone is too polite to mention the main reason folks raise goats in the U.S.: For their meat. Not the kind of thing you bleat about at the table.



GRASSLAND

Surely you've heard about the glut of natural gas in the U.S., which has kept heating bills

low and the gas patch economically depressed. And then there's the oil glut, which has pushed gasoline prices so low that people are buying cars the size of houses again. But in Washington state, a similar glut has struck another natural resource: Weed.

When outlets began selling newly legalized marijuana this past summer, they couldn't keep the stuff in stock, and prices skyrocketed. The growers responded. Now, there's so much out there — 31,000 pounds, according to the Associated Press — that wholesale prices have crashed, putting farmers in a bind. (The price drop has yet to hit retail outlets, which still charge \$25 or more for a gram.) Some farmers say that the low prices, combined with the high taxes, have forced them to sell their latest crop at a loss. In other words, they're now in the same boat, or tractor, as all the other farmers.

Colorado, which also legalized recreational marijuana sales, has avoided the glut issue by regulating production. Demand remains greater than supply. But the state's run into its own problems, namely: exploding homes. Seems that amateur chemists and would-be entrepreneurs are trying to create hash oil, or concentrated marijuana, by forcing butane through raw marijuana. The butane vapors concentrate, and, if someone lights a match, *Boom*. And no, not the economic kind.

THE URBAN WILD

A couple hit an unknown animal that bounded into the road in front of them in Scottsdale, Arizona on a Friday night. When they reached their destination, they realized that a still-living 7-pound bobcat was trapped in their Mazda's plastic grille. State game and fish officials rescued the cat, which spent a week in rehab before being released back into the wild, no doubt still dizzy. Not far away, a 44-pound beaver wandered into Tempe Town Lake and was captured by wildlife officials. It, too, will be released into a wilder area. It is not known whether officials will use the same method used to relocate beavers in Idaho in the 1940s: Officials boxed them up, flew them over the wilderness, and parachuted them safely to the ground. We love to picture them wearing cute little WWII aviator outfits. In San Diego, a five-and-a-half foot, 5-pound snake slithered out of a toilet in an office building; it (the snake, not the toilet) apparently belonged to a resident, and may have turned to plumbing in search of water. And a Seattle dog named Eclipse has learned to take the public bus from its owner's home to the dog park, without a human companion. Man walks dog. Dog walks man. Dog rides bus. We have clearly outlived our usefulness.

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

Tips and photos of Western oddities are appreciated and often shared in this column. Write betsym@hcn.org.



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I do not believe in killing, or in dying, for a cause or an idea. I leave that to adolescents. I do believe in living for a cause.

Rob Pudim, in his essay, "Charlie Hebdo has the last laugh," from Writers on the Range, www.hcn.org/wotr