

High Country News

For people who care about the West

FRACTURED

In one of the West's biggest arguments,
what is said matters less than who says it

By Patricia Limerick





University of Colorado historian Patty Limerick, right, with participants of a FrackingSENSE session on natural gas development's place in the history of Western American extractive industries.
COURTESY HONEY LINDBURG/CENTER OF THE AMERICAN WEST

On the cover

A drill rig lies in the greenspace between two neighborhoods, Raspberry Hill (foreground) and Eagle Valley, in Frederick, on Colorado's Front Range.

JIM HILL/KUNC



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FEATURE

- 14 **Fractured** In one of the West's biggest arguments, what is said matters less than who says it By Patricia Limerick
- 19 **Colorado activists set their sights on a ballot measure to limit drilling** By Joshua Zaffos

CURRENTS

- 5 **A 'grand bargain' for Utah public lands?** Rep. Rob Bishop's compromise for canyon country meets with mixed reactions
- 7 **Shepherders get a pay raise** Questions remain about whether a new minimum wage can justify harsh working conditions
- 7 **The Latest: Public-land access**
- 8 **Growing heavy** Central Valley farmers must choose to face the drought, or leave
- 11 **Unpacking the past** The lowly packrat provides valuable clues about climate change and plant migration
- 11 **The Latest: Klamath River dams**

DEPARTMENTS

- 3 HCN.ORG NEWS IN BRIEF
- 4 LETTERS
- 12 THE HCN COMMUNITY Research Fund, Dear Friends
- 20 MARKETPLACE
- 23 WRITERS ON THE RANGE
As snow piles up, so too does its danger By Allen Best
- 24 BOOKS
Where Roads Will Never Reach by Frederick H. Swanson.
Reviewed by Doug Scott
- 26 POETRY The time of painful impossibilities By Juan Felipe Herrera
- 28 HEARD AROUND THE WEST By Betsy Marston

Editor's note

Something to chew on

Perhaps the only coherent message to come out of the Malheur National Wildlife Refuge debacle in eastern Oregon has been this: Local people, rather than the federal government, should control the land around their own communities. Just "give back" the refuge and other public land in Harney County to those who believe they should rightfully control it and the place will thrive again, says sagebrush ringleader Ammon Bundy, who, incidentally, is not a local himself.



If this sounds familiar, it may be because you've heard it before from the West's mining, timber and energy industries. Wrapped in the cloak of "local control," they argue that, since the locals want the jobs and tax revenue their projects provide, environmentalists and government regulators should just get out of the way. In response, environmentalists, noting the money industry pours into local elections and groups that advocate for unfettered access to public lands, blast the local-control movement as a puppet of industry.

Which is why it is so interesting to watch this political dynamic turned on its head on Colorado's Front Range. There, the energy development along the suburban fringe is facing a local-control movement of a different kind. In the name of democracy and environmental protection, fractivists in several communities have passed ordinances empowering local governments to ban or restrict drilling in their jurisdictions. Predictably, the industry has furiously demanded state and federal regulation, rather than local. And just as predictably, national environmental groups have embraced local control like a long-lost relative.

Perhaps no one is in a better position to observe the ironies in the struggle between communities and the oil and gas industry than historian Patty Limerick, head of the Center of the American West and author of this issue's cover essay. Between 2013 and 2014, she attempted to hold civil discourse between various stakeholders in a series of events called FrackingSENSE. She discovered, to her delight, that it is possible — if you can get the people involved to honestly consider each other's viewpoints and the complex history that binds us together.

We're all hypocrites at some level, Limerick notes, from the CEOs who blithely ignore the messes their industry creates, to the car-driving suburbanites who wink at the fact that their comfortable lives literally float on a sea of hydrocarbons. So how do we find common ground? Limerick has a uniquely practical suggestion: Let's sit down and eat. Will that solve everything? No, but as she writes, getting together over good food always delivers one "bedrock benefit": Everyone has to stop talking long enough to chew — and thereby listen. That might not seem like much, but we have to start somewhere. Maybe over barbecue, both Sagebrush Rebels and fractivists can stop arguing long enough to re-discover their shared interests in controlling their own destinies and nourishing their passion for the West.

—Paul Larmer, executive director/publisher

Sexual harassment in the Big Ditch

A Department of Interior investigation of Grand Canyon National Park found a long history of sexual harassment and hostility among employees in its River District. Twelve women and one man, along with 22 other witnesses, provided evidence of discrimination, sexual harassment and retaliation by a handful of boatmen and supervisors during Park Service trips

over a 15-year period. The report, made public in January, has increased scrutiny of the agency's Grand Canyon office, leadership, employees and institutional culture, which does little to encourage accountability in positions of power. *High Country News* is seeking more information from other potential victims. LYNDSEY GILPIN MORE: hcne.ws/NPSharassment

An employee ... reported that Supervisor 1 made inappropriate comments to her during a 2014 river trip. She said that when she asked him what she could do to help with river trip duties, he responded that she could help him by being "naked in (the) motor well" of his boat. She did not report the incident to her employer or to NPS supervisors.

—Investigative Report of Misconduct at the Grand Canyon River District, Office of the Inspector General



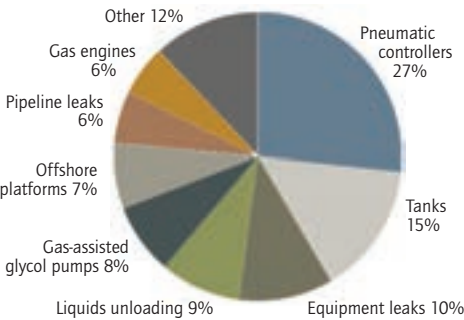
Rafts tied on Boat Beach on the Colorado River in Grand Canyon National Park. BILLY MCDONALD

100 billion
amount of gas, in cubic feet, producers vented and flared in 2013

1.3 million
number of households that gas would heat for a year.

On Jan. 22, the Bureau of Land Management announced proposed rules on emissions from oil and gas production on leases the agency administers. While similar rules proposed by the Environmental Protection Agency last fall applied only to new and modified facilities, the BLM rules would impact all facilities, including some 100,000 existing onshore oil and gas wells. The regulations target natural gas loss from venting, flaring, leaks, pneumatic devices, storage tanks, drilling and the unloading of liquids. The BLM estimates that the regulations will reduce emissions of methane, a potent greenhouse gas, by 166,000 tons per year, and of volatile organic compounds, precursors to harmful ozone, by 400,000 tons per year. JONATHAN THOMPSON MORE: hcne.ws/MethaneEmissions

Oil and gas production sector emissions 2013
(This sector accounts for 39 percent of total methane emissions from oil and gas.)

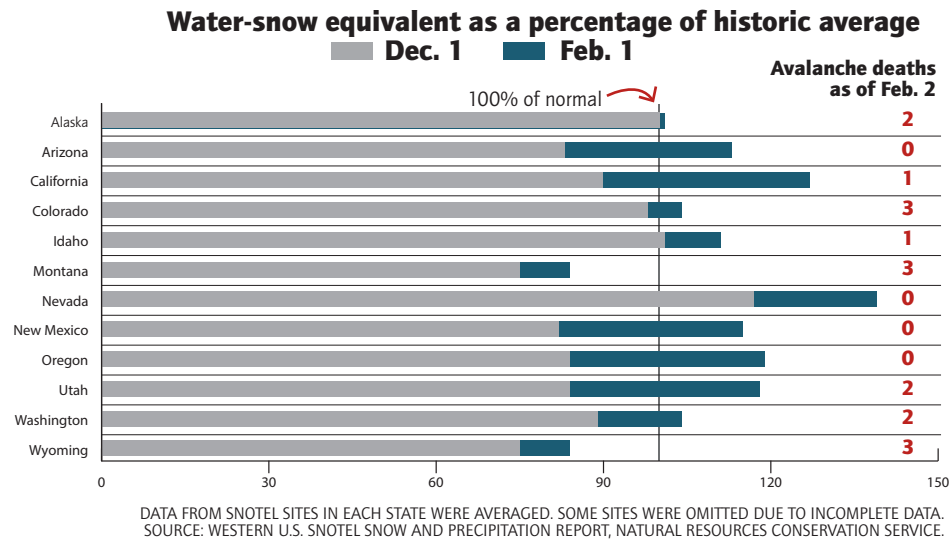


INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS, EPA

Snow comes in strong

According to February measurements, snowpack is largely above normal in the West. Utah claimed the biggest increase from early season snowpack, from 84 to 118 percent, but an unlikely state is leading the charge: California. Over the past month, the state's snowpack increased from 90 to 127 percent. But the strong snowpack is still

not enough to make up the water deficit from the persisting drought. Elsewhere, only Montana and Wyoming are below the historic benchmark for "normal" — and not by much. Both states are more than 80 percent of normal for this time of year. PAIGE BLANKENBUEHLER MORE: hcne.ws/snowpacks



Video hcne.ws/borrego-springs



ZOE MEYERS

"If it was a question of which would be worse for Borrego, get rid of the agriculture or the golf courses, I think the majority of the people would say better to get rid of the agriculture."

—Joan Kirchner, resident of Borrego Springs, California, where officials say water use must be reduced by 70 percent over the next 20 years. From "Worth of Water," by Zoë Meyers.

Trending

Land transfer shuffle

Montana state Sen. Jennifer Fielder has been named the new CEO of the American Lands Council, the organization leading the charge for state takeovers of federal lands. She replaces Utah state Rep. Ken Ivory. Fielder has links to militant organizations like the Oath Keepers and has publicly supported the message of the Malheur Refuge occupiers. JOSHUA ZAFFOS

You say:

GARETT REPPENHAGEN: "The fight between public lands for all Americans versus private land developed for individual profit is moving to a climax. Let's save the last wild, outdoor spaces we have left."

MARTY WILLIAMSON: "Take the Republican Party back from extremists. The Tea Party folks are killing us."

MORE: hcne.ws/jenniferfielder and facebook.com/highcountrynews

LETTERS

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TALK ABOUT OVERREACH

Your article on Wildlife Services (“The Forever War,” *HCN*, 1/25/16) was informative, but much too complimentary of that rogue federal agency, which simply needs to go away. Its use of public funds to kill public resources (native birds and mammals) on public lands at the behest of private industry (livestock producers with federal grazing permits) cannot be justified under any circumstances. For all of its body counts, the agency cannot demonstrate that its efforts and expenditures make a significant difference in livestock losses to predators.

Wildlife Services’ time has passed; the agency should absolutely be eliminated. For further insights into its agenda and history, visit predatordefense.org, and view the film *Exposed: USDA’s Secret War on Wildlife*. This is a classic example of government overreach!

Mike Todd
Twin Falls, Idaho

GANDHI, KING AND PHIL LYMAN

Has *HCN* stepped into the role of moderator of civil disobedience, declaring what qualifies and what does not? Despite the *HCN* spin, the Recapture Protest was exactly as it purported to be — a legal, peaceful protest against the collusion between the Bureau of Land Management and special interest groups (“The Sagebrush Sheriffs,” *HCN*, 2/2/16).

I said at my sentencing that Recapture Canyon is not closed; portions of it are closed to off-road recreational use. Driving on an open road is not trespass, and disquietude with the BLM is not conspiracy.

When asked if I would do it again, I always have to wonder what “it” is. Would I call the BLM the day after the town hall meeting to see if we could work out a path forward? Would I send dozens of emails and social media notices explaining the lay of the land in Recapture and where one could travel without fear of violating a law? Would I stay in constant communication with my sheriff to ensure that the event was safe and constructive? Would I invite the State BLM director and local BLM to attend the event and help to instruct and educate people? Yes, absolutely.

Did I expect a staged backlash from the BLM? Did I expect Monte Wells, a local reporter, to be charged out of pure spite? Did I expect a biased judge to pre-



DEB MILBRATH/AEC

side over my trial and then recuse, after the fact? Of course, I hoped otherwise, but having watched the same thing happen repeatedly in my own community and throughout the West, I knew it was a possibility. I don’t pretend to be ignorant to the corruption that I see or to the obligation I have to respond.

I will do my 10 days in jail. I will deal with the rancorous ire of The Wilderness Society, the Great Old Broads, SUWA and company; I will watch the Bears Ears Intertribal Coalition continue to spread their hatred and lies in an effort to persuade President Barack Obama to designate a national monument. But, I guess, like Tim DeChristopher, and Thoreau; Cliven, Ryan, Ammon, LaVoy, Rosa Parks, Chief Joseph, MLK, Gandhi, Tank Man, and all the others that I have been justly or unjustly associated with through this ordeal, I still expect dealings to be done honestly, in the light of day, and not in bureaucratic back offices.

Phil Lyman
Monticello, Utah

FED WORKERS ARE GOOD NEIGHBORS

Some were hoping that the Malheur occupation would fizzle out on its own, but the continuing rhetoric from the criminals made it seem they did not intend to leave peacefully (“Inside the Sagebrush Insurgency,” *HCN*, 2/2/16).

I know a little about national wildlife refuges. I worked for the U. S. Fish

and Wildlife Service for almost 35 years. From 1984 to 1994, I was the regional supervisor for all the refuges in Oregon, Washington and Idaho, including Malheur. Many are located in rural areas, in that part of the West where it seems like there is a hate-the-government gene in the community DNA. The undercurrent of feelings that “things would be better if the feds weren’t here” can make both refuge managers and refuge neighbors uncomfortable, but in most cases it can’t even be called animosity. It’s just how things are.

The relationship between Harney County and the Malheur National Wildlife Refuge is typical of how things have worked out over the years. Despite philosophical differences, most refuge people have become good neighbors to their neighbors. Their kids have gone to local schools, the families have attended local churches, they have shopped locally and supported local charities. When there have been issues with refuge neighbors, they have looked for solutions. Good faith discussions on both sides have usually led to a semi-comfortable “agree to disagree” conclusion.

Throughout my life and career, I have been a peacemaker and negotiator, but there was nothing to “negotiate” here. Armed terrorism is armed terrorism, no matter where it occurs or who is involved.

Sanford Wilbur
Gresham, Oregon

High
Country
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A 'grand bargain' for Utah public lands?

Rep. Rob Bishop's long-awaited compromise for canyon country meets with mixed reactions

BY KRISTA LANGLOIS

Before it twists into Canyonlands National Park, Utah's Green River slices a serpentine, red-walled gash through Colorado Plateau sandstone. From the air, the landscape looks alive, a geologic taproot branching out into ever-smaller side canyons. Floating through it, John Wesley Powell christened the canyon "Labyrinth."

Today, Labyrinth Canyon is battle-scarred, like hundreds of other publicly owned lands in eastern Utah. River runners and environmental groups want it protected as wilderness. Ranchers want secure grazing rights. Oil and gas compa-

nies want to drill the benches overlooking the canyon, and off-roaders want clear access to it.

For decades, environmentalists' efforts to preserve Labyrinth and other contested landscapes were thwarted by pro-industry congressmen like Rep. Rob Bishop, R-Utah, who chairs the House Natural Resources Committee. And Bishop and others' efforts to bring more oil and gas jobs to rural counties were likewise derailed by litigious greens. Nobody was getting ahead.

So in 2013, Bishop proposed a truce. Instead of blocking wilderness bills, he offered to negotiate — to use wilderness as "currency" to bargain for development elsewhere. Bishop and fellow Republican

Rep. Jason Chaffetz reached out to local and national environmental groups, mountain bikers, outdoor leadership schools, ATVers, tribes, ranchers, oil and gas companies and county commissioners, hoping to find consensus.

But as stakeholders pored over maps, deadlines came and went. Two out of nine counties dropped out of the process. A coalition of five tribes advocating for a 1.9 million-acre national monument in southeastern Utah felt its voice wasn't being heard and walked away as well. Meanwhile, as Bishop made headlines for supporting efforts to transfer public lands to state control and gut the Land and Water Conservation Fund, environmentalists grew increasingly skeptical of his intentions. Still, none wanted to jeopardize what seemed poised to become the biggest public-lands compromise the West had seen in decades.

On Jan. 20, Bishop and Chaffetz finally unveiled a draft of their legislation. (*See graphic below.*) As promised, the Utah Public Lands Initiative Act proposes to address a number of longstanding issues. The draft expands Arches National Park and designates 4.3 million acres of new

None wanted to jeopardize what seemed poised to become the biggest public-lands compromise the West had seen in decades.

A SAMPLING OF THE COMPROMISES IN THE PUBLIC LANDS INITIATIVE ACT

IN ITS "CONSERVATION" SECTION, THE BILL WOULD:

Create **41 new wilderness areas**, ranging in size from 599 acres in Bull Canyon to 473,272 acres in Desolation Canyon, for a total of 2.2 million acres. They include lands in Canyonlands and Arches national parks, Dinosaur National Monument, Labyrinth Canyon, the Book Cliffs and on Cedar Mesa. Many would replace existing wilderness study areas, but 80,797 acres of wilderness study areas would be released to multiple use.

Create an **867-acre Jurassic National Monument** northwest of Green River to protect the world's highest concentration of Jurassic Era fossils.

Expand **Arches National Park by 19,255 acres** to protect the area around Delicate Arch from development.

Create **14 national conservation areas** on federal land around the Colorado River, San Rafael Swell and elsewhere, totaling 1.8 million acres. Perhaps the most controversial — Bears Ears, west of Blanding — would conserve 1.1 million acres, with management shared by tribes, a county commissioner and the state. A coalition of **five tribes argues that 1.9 million acres deserves protection**, that protections should be stronger, and that tribes need a greater management role. It opposes the bill and plans to seek national monument designation from the Obama administration.

Give **301 miles of the Dolores, Colorado and Green rivers varying levels of wild and scenic protection**. The longest contiguous stretch of protected river is 62 miles, in Desolation Canyon; the shortest a 3.7 mile section of the Colorado.

IN THE "OPPORTUNITY" SECTION, THE BILL WOULD:

Consolidate **336,441 acres of state land** within the Utah School and Institutional Trust Lands Administration, or SITLA, a state agency that generates revenue for Utah public schools, mostly through energy development and mining. Because SITLA lands are exempt from federal environmental review, development is usually expedited.

Add nearly **10,000 acres of BLM land to Goblin Valley State Park**, and consolidate another **13,321 acres of state land to help create Utah's first state forest**, in Carbon County's Price Canyon.

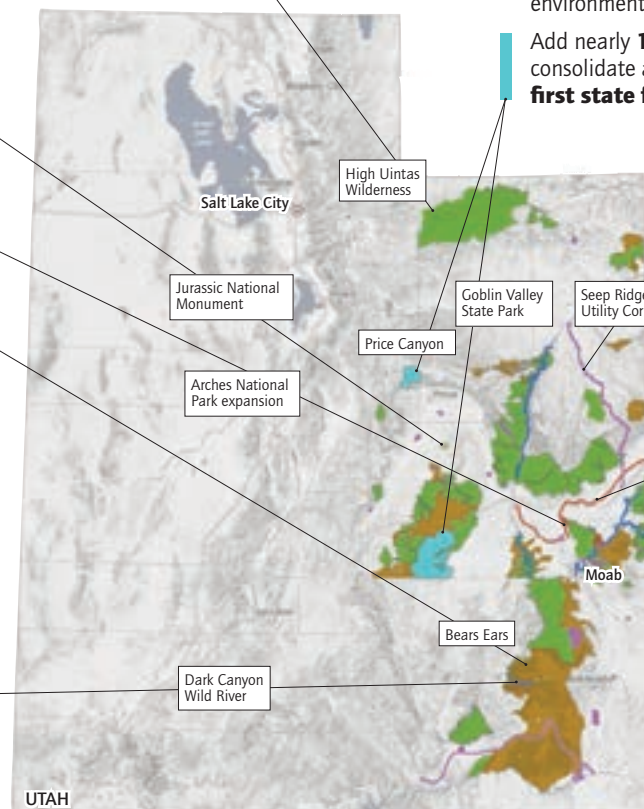
Convey an additional **40,449 acres of federal land to state and local entities** to expand a state park, several small airports and a water treatment facility, and to create "recreation areas," a still-vague designation.

Transfer **4,596 acres of federal land to the state** to build the Seep Ridge Utility Corridor, or Book Cliffs Highway, which could be used to transport fossil fuels from proposed tar sand mines to Interstate 70.

Create a **93-mile "Red Rock Country Off-Highway Vehicle Trail"** to connect small towns in western Colorado and eastern Utah.

Designate **"energy planning areas" on an estimated 2.6 million acres of BLM land**, where the "highest and best use" of the land is the development of oil, gas, solar, wind, coal, shale or other forms of energy. (This estimate is from the Southern Utah's Wilderness Alliance's analysis; the Utah congressional delegation did not calculate acreage for this designation.)

Grant Utah ownership over most trails and roads that fall under R.S. 2477, a Frontier Era law that allowed road-building across public land. **Many Western counties have tried to use it to open trails to motorized use, even in national parks and wilderness study areas.**



SOURCE: UTAH PUBLIC LANDS INITIATIVE, UTAH DEPARTMENT OF NATURAL RESOURCES
*COLOR BARS CORRESPOND WITH COLORED AREAS ON MAP.
COMPROMISES WITH GREY BARS ARE NOT REPRESENTED ON MAP.

The Bowknot Bend of the Green River in Labyrinth Canyon, Utah, where seven river miles make a U-turn. The Utah Public Lands Initiative designates wilderness around the canyon, but also allows for motorized use and energy development nearby.

BOB FERGESON/
NOSTALGIAWEST.COM

wilderness and national conservation areas, as well as 301 miles of wild and scenic rivers. It also transfers some federal lands to the state, creates designated “energy planning areas” on BLM land, where development will be the priority; preserves motorized use and grazing on many public lands; and paves the way for tar sands mining in northeastern Utah.

The Western Energy Alliance, which represents over 450 oil and gas companies, called the bill an “important milestone” that “could help achieve a meaningful resolution to contentious public lands confrontations.” The BlueRibbon Coalition, an off-roading advocacy group, says its members have mixed opinions of the bill. But many environmental groups feel betrayed. After three years of working in good faith with Bishop, they say the new bill is worse than the status quo. “I think it’s safe to say that hope is lost,” says Neal Clark, a field attorney with the Southern Utah Wilderness Alliance.

At the root of environmentalists’ misgivings is the way Bishop’s bill defines “wilderness.” They say the language is riddled with loopholes that permit activities usually prohibited in wilderness, like allowing chainsaws and using motorized equipment to build new water-storage fa-

cilities. It also denies land managers the authority to reduce livestock numbers in case of drought or other negative impacts, and lets ranchers drive ATVs to feed their cattle. And it gives the state free rein to conduct predator control — like shooting coyotes by helicopter.

Labyrinth Canyon would receive a one-mile wilderness buffer on either side of the Green River. Motorized use would continue just outside the boundary, and oil and gas leasing adjacent to side canyons could increase. Depending on how you look at it, either everybody wins, or nobody does. The way Clark sees it, “It’s wilderness in name only.”

Fred Ferguson, chief of staff for Rep. Chaffetz, counters that the language is modeled after existing wilderness bills, including 2014’s popular Hermosa Creek bill in southwest Colorado. But SUWA, along with the Grand Canyon Trust, Natural Resources Defense Council, The Wilderness Society and the Center for Western Priorities, claim the proposed loopholes are unprecedented. Other groups, including Pew Charitable Trusts and Trout Unlimited, have concerns but seem cautiously optimistic that they can be addressed.

Ferguson emphasizes that this is only a draft, and the door is still open for

changes. But after a press conference, Bishop didn’t seem particularly amenable; he reportedly dismissed environmentalists’ concerns as “crap.”

And while Bishop and Chaffetz claim the bill reflects the needs of local users, Grand County councilman Chris Baird says that’s not necessarily true. After debates that nearly tore communities apart, Grand County voted down a highway that would connect the Book Cliffs’ proposed tar sands mines to Interstate 70. That highway, though, is included in Bishop’s draft as a “public utility corridor.”

There’s one last sticking point that might doom Utah’s “grand bargain.” Should Bishop’s legislation pass Congress, it could die on the president’s desk. That’s because the Utah delegation insists on including a provision limiting the Antiquities Act, a century-old conservation tool that allows presidents to create national monuments by executive order. For the Obama administration, kneecapping the Antiquities Act is likely grounds for a veto.

Meanwhile, conservationists are already scrambling to prevent the legislation from reaching the president. Instead of putting out the fires of contention in eastern Utah, Bishop may have only fanned the flames. □





César Momouy Balca outside his trailer. He spends the winter close to his sheep, with his dogs and a horse for company. SARAH TORY

Shepherders get a pay raise

Questions remain about whether a new minimum wage can justify harsh working conditions

BY SARAH TORY

On a windy, treeless plain that spans the Colorado-Utah border, César Momouy Balca lives most of the year in a 12-foot trailer miles from the nearest town. A Peruvian shepherd, native of the high Andes near Lake Titicaca, he has spent most of the last decade in places like this, alone except for some dogs and a horse, caring for thousands of sheep.

"The work is good," says Momouy Balca, 50, who is nearing the end of his third three-year contract. But he misses his wife and three daughters, who live back in Peru. "It's sad," he says, "being alone so much."

Momouy Balca is here because of a program that allows sheep ranchers to bring in foreign herders, mostly from Latin America, to oversee their flocks under temporary "H-2A" work visas for three years at a time. More than 1,600 shepherders working in nine Western states participate in the program, living in primitive tents or trailers, watching over thousands of animals on vast areas of public land across the West. For decades, federal regulations have set their wages in most states at \$750 a month — only \$100 more than they were in 1965.

Now, thanks to lawsuits filed by Colo-

rado and Utah activists, Momouy Balca and his fellow herders will finally get a pay raise. Late last year, the Department of Labor released a new rule increasing shepherd pay to \$1,200 per month, rising to \$1,500 by 2018. But some activists question whether the change goes far enough. The new rules do nothing to address worker abuses in the industry, including the many ways in which shepherders are treated differently from other ag workers, says Nina DiSalvo, the executive director of Towards Justice, a Denver-based legal aid nonprofit. DiSalvo calls the salary increase "woefully inadequate."

Until World War II, most of the West's shepherders were Americans, but by the early 1950s, the industry could no longer recruit enough citizens to do the tedious and difficult work. In 1952, Congress enacted the H-2A program to help all farmers and ranchers secure a reliable supply of foreign workers. But sheep and goat herders were exempted from many of the protections granted by law to most other foreign agricultural workers, such as an hourly wage and access to running water and a toilet.

The sheep industry argues that those exceptions are necessary because of the job's unique requirements. While herders may actually tend to the animals only once or twice a day, they are technically

on the job around the clock, and paying them hourly would put many small ranchers out of business, says Peter Orwick, executive director of the American Sheep Industry Association. "We can't afford to just triple wages," he says, noting that the sheep industry is one of the few agricultural sectors that does not receive government subsidies through the Farm Bill.

That's partly why, when the Department of Labor released its initial proposal for raising wages last spring, ranchers like Rex Tuttle, a fourth-generation Colorado rancher, balked. The new rules would have tripled pay to \$2,400 a month by 2020, along with other requirements. Ranchers claimed those changes would make it impossible for them to hire H-2A workers. For Tuttle, who runs 8,000 sheep in Moffatt County, the new salary increase will be tough to absorb financially. A lot depends on wool and lamb prices, he says. "But I'm not saying they (the shepherds) don't deserve it."

Still, activists argue that in releasing its final rule, the Department of Labor caved in to pressure from woolgrowers. The salary increase was partly based on the average number of hours shepherders work per week. Ranchers stated the average was 43 hours — far fewer than the 70 hours claimed by 81 percent of Colorado shepherders in a recent survey by Colorado Legal Services. Activists are pushing to strengthen protections for shepherders through two lawsuits, one against the ranchers, alleging the industry colluded to keep wages artificially low, and the other against the federal government, saying that even with the pay raise, wages are still so low that the industry can rely on H-2A workers instead of Americans — in violation of federal law.

With the new rules, shepherders like Momouy Balca will still be making roughly \$3 per hour less than all other H-2A agricultural workers without ever collecting overtime pay or benefits. It's still better money than what he would make in Peru, he says. But every so often, he would like to leave the sheep and go into town. He has 15 days of vacation per year written into his contract, but restaurants are expensive, and even the cheapest hotel is more than he can afford — let alone a ticket back to Peru for a short visit. So mostly he stays here.

On a snowy day in January, Momouy Balca looks across a sea of white from the small window inside his trailer, equipped with a small kitchen. He's nearing the end of his third H-2A contract. When it's over, he'll return to Peru to see his family for the first time in three years. After a few months with them, he plans on coming back to the U.S. for one more contract. Then, Momouy Balca says he'll return home for good: "I'll be finished with this life." □

THE LATEST

Backstory

Access to millions of acres of landlocked Bureau of Land Management and Forest Service territory depends on private landowners' willingness to share throughways, or sell land, and while federal agencies are working on the problem, millions of acres of public land are still effectively off-limits. **New Mexico's 16,000-acre Sabinoso Wilderness Area was designated in 2009, but this remote high-desert landscape, home to cliff-lined canyons and narrow mesas, remained impossible to visit** — it was completely surrounded by private property ("Private property blocks access to public lands," *HCN*, 2/2/15).

Followup

In January, the Wilderness Land Trust bought a 4,000-acre parcel of land called the Rimrock Rose Ranch, next to the Sabinoso, with a \$3 million donation from the Wyss Foundation. **The plan is to transfer the land to the BLM, which manages the wilderness, as part of a larger effort to develop access routes to marooned public land.**

LYNDEY GILPIN

A view from Rimrock Rose Ranch. COURTESY HAYDEN OUTDOORS



Correspondent Sarah Tory writes from Paonia, Colorado. She covers Utah, environmental justice and water issues. @tory_sarah



Growing heavy

Central Valley farmers must choose to face the drought, or leave

BY SENA CHRISTIAN

On a hot summer afternoon, California farmer Chris Hurd barrels down a country road through the Central Valley city of Firebaugh, his dog Frank riding in the truck bed. He lurches to a stop in front of Oro Loma Elementary School, which was built in the 1950s to accommodate an influx of farmers' and farmworkers' children. "All three of my sons went here," Hurd says, as we walk through overgrown weeds toward the shuttered building, closed in 2010. "I was on the school board, the grass was green, kids were running around. Now it's a pile of rubble."

Agricultural land stretches out in every direction. Most of the town's 8,300 residents are involved in growing or packing produce. The city is on the west side of the San Joaquin River, an area hit particularly hard by a historic drought, now in its fifth year. Wells have run dry and farm-related jobs are running out. Many other places in the eight counties comprising the San Joaquin Valley have suffered similar fates. These areas were disadvantaged to begin with, rural and isolated, lacking infrastructure, public transportation and safe housing. Persistent drought has compounded the struggles of some of the poorest communities in the nation. As of late January, 64 percent of the state was experiencing extreme drought — down from 78 percent that time last year. But even a stellar El Niño year won't undo all the damage.

Hurd, 65, who earned a degree in mechanized agriculture from California Polytechnic San Luis Obispo in 1972, has farmed for the past 33 years. These days, he tends 1,500 acres and serves on the board of a local water district. Right now, he's debating whether to rip out 80 acres of 20-year-old almond trees whose yields don't justify the cost of the water. Three years ago, his annual water bill was \$500,000. Now, he says, it's \$2.5 million; the price per acre-foot has increased sharply since the drought. Farmers like Hurd, who have junior water rights, are the first to see their allocations from the state's two major water projects curtailed during shortages, forcing them to invest in new wells to pump groundwater or buy water on the market. In 2014, farmers with junior water rights faced an unprecedented zero allocation from the U.S. Bureau of Reclamation's Central Valley Project. That happened again last year. In late February, the federal project will announce its water supply outlook for 2016. The State Water Project has also dramatically reduced its deliveries over the last two years.

In John Steinbeck's classic novel, *The Grapes of Wrath*, farmers escape Oklahoma's Dust Bowl by heading west to California in search of jobs and fertile land. Hurd says his friends have begun joking, grimly, about the reverse scenario — California isn't working out, so why not pick up and move back to Oklahoma? "Some are leaving, some are

staying to fight, a lot of them are in flux,” he says. Yet while grit has something to do with who stays and who goes, it ultimately comes down to two main factors: water and money. The survivors will likely need senior water rights and money to spend on planting high-value orchards or implementing expensive technology. Economically, California remains the largest agricultural producer in the United States. But El Niño’s precipitation notwithstanding, the prolonged drought is putting some farmers under heavy duress, and no one is sure how far California’s Eden will sink.

California, like much of the United States, was losing farmers long before the current drought began. The number of principal operators shrank 4 percent from about 81,000 in 2007 to 78,000 in 2012, according to the most recent U.S. Census of Agriculture. The average age of California farmers skews slightly older than the rest of the nation, at 60 years old, and the state has experienced a decline in the number of farms, reflecting a national trend.

Yet the market value of its output has grown to roughly \$54 billion annually. While a mere drop in the bucket of California’s \$2.2 trillion economy, this sector remains among the most productive in the world, thanks to the state’s Mediterranean climate and fertile soil. And the Central Valley — a 450-mile-long stretch of flat land through the middle of the state that encompasses parts of 19 counties and multiple watersheds — produces nearly half of the nation’s vegetables, fruit and nuts. California has accomplished this even though most of its precipitation happens in the north, while most of its agriculture occurs in the south.

But now, the state’s major reservoirs remain below normal for February, although their levels have dramatically improved since last December. Historically, a strong El Niño means most precipitation occurs in January, February and March. Too much rain at once won’t help farmers and could cause flooding, and it will do little to replenish the state’s drained aquifers. There is a positive note, however: The California Department of Water Resources’ semi-annual snow survey this winter, on Feb. 2, measured snowpack at 130 percent of normal in one location. Statewide, the snowpack is at 114 percent of average, which is the highest it’s been since 2011. That snow will eventually melt into streams and reservoirs, providing water for farms and cities. In normal years, the snowpack supplies about 30 percent of the state’s water needs.

In July 2014, a report by researchers at the University of California Davis made headlines with alarming news about the drought’s impacts. Researchers



Forty-foot sections of drip irrigation pipe ready to be buried in a tomato field at Bowles Farming Co. in Merced County, California. Solving irrigation inefficiencies helps farmers deal with water shortages. Facing page: An almond orchard after harvest in Madera County, California. Almonds are a high-value crop but also require a lot of water. SONYA DOCTORIAN

projected it would cause \$1.5 billion in economic losses to agriculture — factoring in crop revenue, dairy and livestock value, and the cost of additional groundwater pumping — and the loss of 7,500 jobs directly related to farm production by the year’s end. In their latest report, the Davis researchers estimate \$1.84 billion in economic losses to agriculture and 10,100 fewer agriculture jobs in 2015.

Yet for all that, California agriculture has demonstrated impressive resilience. Researchers at the Pacific Institute, in Oakland, analyzed drought’s impacts on the three major crop categories of field crops, vegetables and melons, and fruits and nuts, and found that California agriculture not only survived, it flourished overall, achieving both record-high crop revenue and record-high employment.

Crop revenue has increased steadily over the past 15 years, and 2013 was the highest ever at \$34 billion; 2014 was the second highest (although it dipped slightly). Revenue has increased even as land was fallowed at high rates. A follow-up report, incorporating livestock, dairy and nursery data, found the same patterns of high levels of productivity and profitability through this drought.

Meanwhile, agricultural employment has grown every year since 2010, employing a record-setting 417,000 people in 2014. But employment in the San Joaquin Valley waned. “It is important to note that statewide and even regional estimates can hide local variability,” the report’s authors wrote. “State agricultural revenue and employment remain high, but there are undoubtedly winners and losers.”

Excessive groundwater pumping is a major issue. “In my mind, there is an intergenerational equity issue here,” says Heather Cooley of the Pacific Institute. Future generations’ ability to meet their farming needs has been compro-

mised — groundwater will sink to greater depths, water quality will deteriorate and wells could run dry. Infrastructure such as conveyance canals, roads, bridges and buildings will suffer. “Our overdependence on groundwater is tenuous and not sustainable by any stretch of the imagination. (Farmers) recognize that,” says Scott Stoddard, a row-crop farm adviser in the Central Valley for the University of California Cooperative Extension. Underground aquifers took thousands of years to fill up and can’t be replenished at the current rates of withdrawal.

Another resiliency factor relates to improved water efficiency and crop shifting. “Together, these two are enabling farmers to get the most out of the water that they have,” Cooley says. Farmers aren’t flooding fields as much and are using scientific data and technology to better pinpoint when, where and how much to irrigate. They are shifting away from growing cotton and corn, concentrating water instead on higher-value crops, including almonds, pistachios, wine grapes, tomatoes and fruit. But permanent crops such as trees and orchards can’t be easily fallowed, and that reduces the flexibility to respond to future water shortages. Short-term water transfers between willing sellers and buyers provide a third major reason for resiliency. But regulators lack a complete understanding of how much water is actually changing hands, because informal farmer-to-farmer sales — the kind that happen over coffee at the local diner — aren’t tracked.

In considering how California agriculture has withstood the drought — increased groundwater pumping, water transfers, a shift from field crops to higher-value nuts and fruits, better irrigation techniques, fallowing land — many of the same strategies used in previous, albeit more modest, water shortages emerge. But, Stoddard wonders,

Survivors will likely need senior water rights and money to spend on planting high-value orchards or implementing expensive technology.

Reporting for this story was supported by an award from the Institute for Journalism and Natural Resources.

Sixth-generation California farmer Cannon Michael installed two solar arrays to generate electricity that will meet the needs of his family company's 10,500-acre farm in California's Central Valley.
SONYA DOCTORIAN

“What happens if what we’re seeing is not a drought, but the norm?”

Nonstop pressures threaten California agriculture: encroaching development, the high cost of farm and ranchland, which prices out new farmers and ranchers, onerous regulations, declining interest in the profession, water shortages and climate change. Greater climate variability may be the state’s new reality, but that doesn’t mean the end is near. “I think California will remain a great place to grow food and other agricultural products,” Cooley says. “One of the reasons we’ve seen high levels of agriculture development in the state is because we tend to have a dry summer (and) when water is available, it allows farmers to manipulate the water and use it with precision.”

Another reason is that for decades, the Central Valley’s Westlands Water District has managed to pull a lot of water for farmers near Fresno. But even the powerful water utility has struggled under the current drought and state water restrictions. It remains to be seen whether it can politically pull more water as the drought continues. In the meantime, farmers are handling the crisis the way they always have, through resiliency.

Daniel Sumner, an agricultural economist at UC Davis and coauthor of the economic-projection reports, says this isn’t the first time farmers have switched up crops, nor will it be the last. California used to be among the biggest wheat-producing states in the United States, and that’s no longer the case. “California ag-

riculture adapts continuously to markets and other shifts,” Sumner says. “The gradual move from field crops to more tree and vine crops and vegetables has been ongoing for decades. This drought has caused some temporary shifts, such as leaving rice land idle, and perhaps accelerated the long-term trends.”

Adaptation is nothing new to agriculture, but that offers little consolation to the individual farmers tasked with growing much of the nation’s food. Sure, the sector may be doing all right, but that doesn’t mean some farmers, farmworkers and their families aren’t suffering. This is especially true of farmers with junior water rights, who have had to shell out lots of money to access water, and in areas of extensive fallowing, which means fewer jobs for farmworkers. Sixty-five percent of California’s farms earn less than \$50,000 annually. These farms are small, and likely more vulnerable to threats such as drought. Only 8 percent of farms fall into the highest economic class, making more than \$1 million.

Increasingly, adult children find the prospect of an air-conditioned office job in a city more appealing than taking over such a harsh family business. Drought’s indirect impacts will compound agriculture’s other pressures but won’t be realized for several years, if not decades. “It’s a very strong possibility in the future that we’re looking at an exodus of more and more people, if this lack-of-water situation continues,” Stoddard says. “We are using more water than the system allows, and something has to give.”

What will “give,” as Stoddard says, are farmers with exorbitant water bills, or those who just can’t make their operations work anymore.

If California’s agriculture is going to thrive, policymakers need to ensure better management of groundwater resources and stop underpricing water. A comprehensive statewide agriculture plan could help. So will continued improvements in agricultural practices: conservation; transitioning to drip irrigation; using cover crops and no-tillage for better soil health and reduced water usage; employing GPS and possibly drones to pinpoint inefficiencies in irrigation; and funding plant science where genetic engineering could help crops withstand drought.

Farmers with the most resources will have the best chance of surviving. Like Cannon Michael, a sixth-generation farmer whose ancestor Henry Miller, of Miller and Lux Co., once owned the area that’s now the town of Firebaugh. Michael inherited senior water rights, which gives him a safety net in this current drought. His business, Bowles Farming Co., brings in an average of \$25 million in annual gross revenue, but he still worries about the future. “Our good years are never going to be as good, and our bad years have the potential to be catastrophic,” he says.

His response has been to adapt. Historically, Bowles has grown almonds, pistachios, wheat, corn, alfalfa, cotton, tomatoes, onions and melons on 10,500 irrigated acres — but the drought pushed Michael to fallow one-fourth of his ground and stop irrigating alfalfa. He reduced labor needs, installed drip irrigation and transitioned to reduced-tillage to save money on gasoline. This summer, he made a multimillion dollar investment in the installation of two solar arrays that will generate 1 megawatt of power, enough to supply electricity for nearly the whole operation, including the office, shop, houses (his and the workers) and all drip-irrigation systems. Michael is also diversifying with a new 5,000-acre farm in Uruguay, where he will grow wheat, sorghum, soybeans and corn and raise 1,000 cattle.

South America may beckon as a new agrarian frontier, but Michael, like many of his peers, refuses to give up on California yet. A few years ago, he bought a struggling young almond orchard, excited by its status as a high-value crop. He says there’s not much to be excited about with farming nowadays, but raising the almonds was something that brought him hope. On a summer afternoon in 2015, before the orchard’s inaugural harvest, Michael plucks an almond off the branch, picks out the seed and takes a bite. Fresh from a tree, almonds taste different: wetter with a hint of vanilla. “Can you be proud of trees?” he asks, closely admiring one of the leaves. “I’m proud of these trees.” □





In 1979, Julio Betancourt holds a midden he collected from a cliff in New Mexico's Chaco Canyon. COURTESY JULIO BETANCOURT

Unpacking the past

The lowly packrat leaves valuable clues about climate change and plant migration

BY MARSHALL SWEARINGEN

On a bright, late-summer day in southwest Montana, Julio Betancourt gazes through binoculars across a dry slope rimmed by limestone cliffs. A cave-like divot in the rock catches his attention.

"I see middens," he says, meaning packrat middens — the nests that the long-tailed nocturnal rodents construct with material from trees and other vegetation. Excited, he uses a technical term: "I can actually see the amberat."

For Betancourt, a U.S. Geological Survey senior scientist who studies climate variability and ecological change, middens provide a window into the past. Packrats drink no water, but produce a viscous plant-derived urine, which they excrete on their nests. When this dries, it forms amberat — an asphalt-like crust that can preserve plant material for tens of thousands of years. A well-preserved midden is a snapshot of plant communities from as far back as the last ice age.

Over the past decades, Betancourt has chiseled samples from hundreds of middens, some more than 50,000 years old. Back then, glaciers were scouring Western mountain ranges, global temperatures were several degrees cooler, and familiar trees like ponderosa pine hadn't yet spread across the West. By noting

middens' age and location, scientists can map how plant species migrated as the ice age transitioned, starting around 12,000 years ago, to the warmer, arid climate of the modern West.

Now, middens may help us understand how plant communities will respond to human-caused climate change. "Most places in the world lack the detailed historical knowledge that middens provide here," says Betancourt. "We're damn lucky" to have them.

In 1961, two scientists studying the biological effects of nuclear detonations at the Nevada Test Site climbed a nearby mountain. They were surprised to find no juniper trees on top, but spotted what turned out to be a midden — full of juniper twigs. Radiocarbon dating pegged the twigs at about 10,000 years old.

The duo later found other middens as old as 40,000 years in the area. When they published their conclusion that juniper had climbed the area's mountains and then vanished as the climate became warmer and drier, they mentioned the middens' "peculiar varnish-like coating" and noted that they may hold "unique value" in the study of ancient climate.

Scientists began poking around rock crannies in the Sonoran and Mohave deserts, the Great Basin and the Grand Canyon, using the middens they found to

plot the spread of plant species across the landscape in the wake of the most recent ice age. Betancourt and others charted the northward march of ponderosa and the spread of piñon-juniper forests to the Colorado Plateau.

Although a modern-day forest may look ancient, "there's a lot of instability," says Betancourt. Generally, the midden record shows some plant species invading while others retreat, not only in rhythm with broad climatic trends but also with acute droughts and wet periods.

For example, Utah juniper jumped suddenly from southern Wyoming into Montana during a two-millennia dry period beginning around 7,500 years ago, stalled during a wet spell, then backfilled as the climate again began drying 2,800 years ago. Similarly, piñon pine leaped 25 miles to Dutch John Mountain on the Utah-Wyoming border around the year 1200, hung on during a decades-long drought that killed most of the long-dominant juniper, and finally took over during the wetter 1300s.

Such ecological elasticity is reason for "cautious optimism" as climate change likely brings a new scale of drought and other disturbance, says Stephen Jackson, who heads the U.S. Geological Survey's Southwest Climate Science Center. "We know that with enough time, species can migrate" to areas with suitable climate, rather than perish, and that even small populations like the Dutch John Mountain piñons can weather severe drought and spring back.

But, Jackson adds, the accelerating pace of climate change may mean that plant species "aren't necessarily going to have those decades or centuries to make the adjustment." He and Betancourt, teaming up on a study published last November, estimate that a widespread Western subspecies of ponderosa could lose half its current habitat by 2060 due to warming. They suggest one possible solution: deliberately translocating it to places — such as farther north in Canada — where it is more likely to endure future climate, with past climate-driven jumps helping to identify those areas.

Back in Montana, Betancourt continues his midden hunt. By midday, we've found a few gamey middens, none with the promising crust of old age. As if for a consolation prize, Betancourt pulls out several baggies of duff-like plant material from his luggage — ice-age midden matter, washed of the amberat. As a passerby eyes us suspiciously, Betancourt opens one and assures me that ice-age samples such as this one smell of Pinesol. I inhale deeply, imagine future juniper flowing across these foothills. Packrats will surely glean those trees' twigs, caching a story yet to be told. □

THE LATEST

Backstory

A water war in the early 2000s in Oregon's Klamath River Basin brought bitter feelings, fallowed fields and devastating fish die-offs. After decade-long negotiations, **more than 40 stakeholders signed three agreements in 2010 that would have provided minimum flows for irrigators and wildlife refuges, assured tribal water rights — and removed four geriatric dams, restoring salmon runs and improving water quality.** In late 2015, though, Congress let the agreements' cornerstone expire, leaving the Klamath's future uncertain ("Hope fades for Klamath River accords," *HCN*, 2/2/16).

Followup

On Feb. 2, the Interior Department announced that despite the congressional inaction that sank the Klamath Agreements, **the four Lower Klamath River dams will be removed through the Federal Energy Regulatory Commission process,** which found that the cost of retrofitting far exceeded decommissioning. The removal (set for 2021) will occur independently of the other deals, so stakeholders still have to figure out how to revive them.

PAIGE BLANKENBUEHLER

Copco I Dam and powerhouse. USFWS



Marshall Swearingen is a freelance reporter based in Livingston, Montana.

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Safety first on icy sidewalks

It's been an icy month so far, but not so frigid as to stop the presses or freeze the computers. We've been forging ahead, hard at work on our annual Travel Issue as well as on other timely Western stories. The chill just makes our masochistic staff work harder, so everyone is pitching in to plan features and campaigns for later in the year, too.

For a while there, Paonia, Colorado's icy sidewalks refused to thaw, forcing our editorial interns to strap on crampons for their daily pedestrian commute. It's working quite well, apparently: No reports of broken bones or frostbite, and inside the warm office, everyone is still happily typing away with all 10 digits. No one has been reduced to eating their boots yet, though we are stockpiling recipes, just in case.

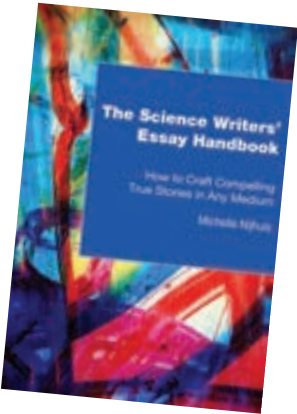
The *High Country News* internship program, which began in the 1980s, has brought us lot of talent, no matter the season. And we try to stay in touch with alumni, or, better yet, keep exploiting their talents. Our own longtime contributing editor **Michelle Nijhuis**, who began here as an intern in 1998, has published a new e-book, available online.

The Science Writers' Essay Handbook is designed to help writers develop ideas, report and write compelling first-person essays. Congratulations, Michelle. We've already ordered copies for the office. *HCN* has also published our own first-ever e-book: *Sagebrush Rebellion: Evolution of a Movement*, available on Amazon.

Longtime reader and Oregon native **Dave Dalglish** stopped by recently. Dave, who was keenly interested in our photography department and magazine layout, has traveled the West hunting and taking nature photographs. He worked as a moose-hunting guide in Alaska before he came to Paonia in August to camp and hunt. He hasn't yet found a good enough reason to leave. Thanks for sticking around, Dave.

Lastly, a correction: In our story about a plan for a copper mine in Arizona ("How a huge Arizona mining deal was passed — and could be revoked," 2/2/16), we incorrectly identified the name of the Vermont Law School. We regret the error.

—Paige Blankenbuehler
for the staff



The Mount Con Mine waste pile and the remains of Corktown, Butte, Montana, 1985-1987. DAVID T. HANSON

WILDERNESS TO WASTELAND

By David T. Hanson
191 pages, hardcover, \$55
Taverner Press, 2016

In December 1951, a nuclear power plant outside Atomic City, Idaho, sent electricity through four 200-watt bulbs, in the first use of a nuclear plant for that purpose. The flickering lights were a promising sign for the high-desert community, situated next to the world's largest concentration of reactors. Less than 15 years and a couple of nuclear accidents later, the plant was decommissioned, leaving the town to wither into a historical footnote.

Photographer David T. Hanson uses Atomic City as one of many settings in his book, *Wilderness to Wasteland*. In images made during the early and mid-'80s, Hanson captures large-scale energy and mining production sites and the "poisoned landscape" they left behind. Those scars, Hanson writes, will be industrialized society's legacy. "Indeed, it seems likely that the most enduring monuments that Western civilization will leave for future generations will not be Stonehenge, the Pyramids of Giza, or the cathedral of Chartres," he says, "but rather the hazardous remains of our industry and technology." **BRYCE GRAY**

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FRACTU



TURED



In one of the West's biggest arguments,
what is said matters less than who says it

FEATURE ESSAY BY PATRICIA LIMERICK

*A new cartography for us to master,
In whose legend we read where we are bound:
Terra infirma, a stranger land, and vaster.
Or have we always stood on shaky ground?*

—A.E. Stallings, “Aftershocks”

*Time spent on digging in
May prove expensive.*

—Aristophanes, *The Frogs*

The public discussion of hydraulic fracturing continues to founder in an atmosphere thick with resentment, defensiveness and cynicism. For several years, that fog has been my ambience. Working at an interdisciplinary, university-based center where we apply historical perspective to contemporary dilemmas, I have tried many experiments to clear the air. I have participated in more panels, forums and conversations on the subject than I can count, and I have hosted a lengthy series of public programs called FrackingSENSE. Sometimes distrusted by people who have mobilized to fight hydraulic fracturing projects in proximity to their homes, and sometimes distrusted by people in the oil and gas industry, I have become a resident, in the words of poet A.E. Stallings, of “shaky ground.”

In very recent times, the combination of two forms of technology has brought a vast energy resource into reach: Hydraulic fracturing has mobilized a process to release gas and oil from impermeable underground formations, while horizontal drilling has made it possible to drill a well vertically and then branch off horizontally to reach a much greater area of the subsurface for fracturing. This technological convergence has called into question the once-confident prophecies of the looming scarcity of U.S.-produced oil and natural gas.

The boom of activity in the planet's underworld has brought to the surface not only an abundance of hydrocarbons, but a deep reservoir of buried political and social tension. So closely entwined are the rearrangements of the geological and psychological subsurfaces that there are, indeed, good reasons to see the controversy over hydraulic fracturing as a “proxy debate.”

An honest account of everything we are fighting about when we fight about fracking would require a text of great length, featuring, for instance, an enormous chapter on capitalism, property and profit. But just as worthy of our attention is a surprisingly neglected question: *Which* people are fighting

Homes in the town of Erie push up against oil and gas development on Colorado's Front Range. EVAN ANDERMAN

Stakeholders in support of fracking include Caroline Maxwell, shown with her baby, Cayden, at a pro-oil and gas rally in Greeley, Colorado, last summer, top, and Rick Roles, bottom, whose family leases land to the industry in Garfield County.

with intensity when we fight about fracking, and what lines of division structure their fight? Conventional commentary rests on the notion that the American people are divided into two clearly defined and rigidly opposed cohorts, one in support of hydraulic fracturing (“pro-industry”) and another in opposition to it (“anti-industry”). Just beneath the surface of that notion lie layers of complexity.

Often pushed to the side is the very sizable portion of the citizenry that has not yet made up its mind. This nearly inaudible population likely finds more cheer than gloom in the news that the American nation turns out to have enormous holdings in oil and gas, even as it understands that this unexpected good fortune comes with a crucial challenge in responsible stewardship. These folks do not organize themselves into associations, convene rallies, gather signatures for ballot initiatives, buy advertisements, put out position papers, or hire attorneys to file lawsuits in support of their interests.

Factors of class, race and ethnicity converge in a second concealed layer. Most of the people openly opposed to or in favor of hydraulic fracturing are white and middle- or upper-class. Figuring out the positions of working-class and/or poor people is

an exercise amounting to guesswork. Native American people, weighing the benefits and costs of development on reservations, are also under-noticed and at times undercut by a residual paternalism that would not only “protect” them from oil and gas development’s environmental disruption, but also from its potential for economic, social and other opportunities.

Similarly, the discussion of the impacts of development on industrialized urban communities is often drowned out by the much more publicized debates in Colorado’s Front Range suburbs; in a place like Commerce City, for example, oil and gas development is just one more dimension of an already troubled relationship with industrial sites.

Finally, the individuals and groups who have taken firm positions are aligned in a lot more ways than simply lining up as “two sides.” Both the “pro” and “con” positions are honeycombed with their own internal divisions and fractures, and they share the limitations of a selective historical memory. A closer look at this terrain charts a route to greater realism and — *perhaps* — a more viable middle ground.

INDUSTRY

While coal, oil and natural gas are all fossil fuels, the people who work in the development of those resources are far from unified and homogenous. Representatives from the natural gas industry are eager and willing to point out the unfortunate emissions produced by the combustion of coal. Coal industry representatives are equally eager to point out that coal remains abundant and matched to the operation of many existing electrical generation plants.

Hydraulic fracturing, meanwhile, is used to produce *both* the natural gas and the oil embedded in shale rock. Inevitably teamed up in the phrase “oil and gas” (it is almost as difficult to say “oil” without “gas,” as it is to say “Lewis” without “Clark”), oil does not deliver the significant climate advantage of cleaner-burning natural gas. Public discourse would benefit immediately if the discussion of using-hydraulic-fracturing-to-produce-oil was distinguished from the discussion of using-hydraulic-fracturing-to-produce-natural-gas.

Companies come in all sizes, from vast multinationals to small family businesses. While there is a lot of room for variation in the choices made by individual company leaders, it is undeniable that large companies have more financial resources to invest in precautions and protections against pollution, as well as in compensations to affected communities.

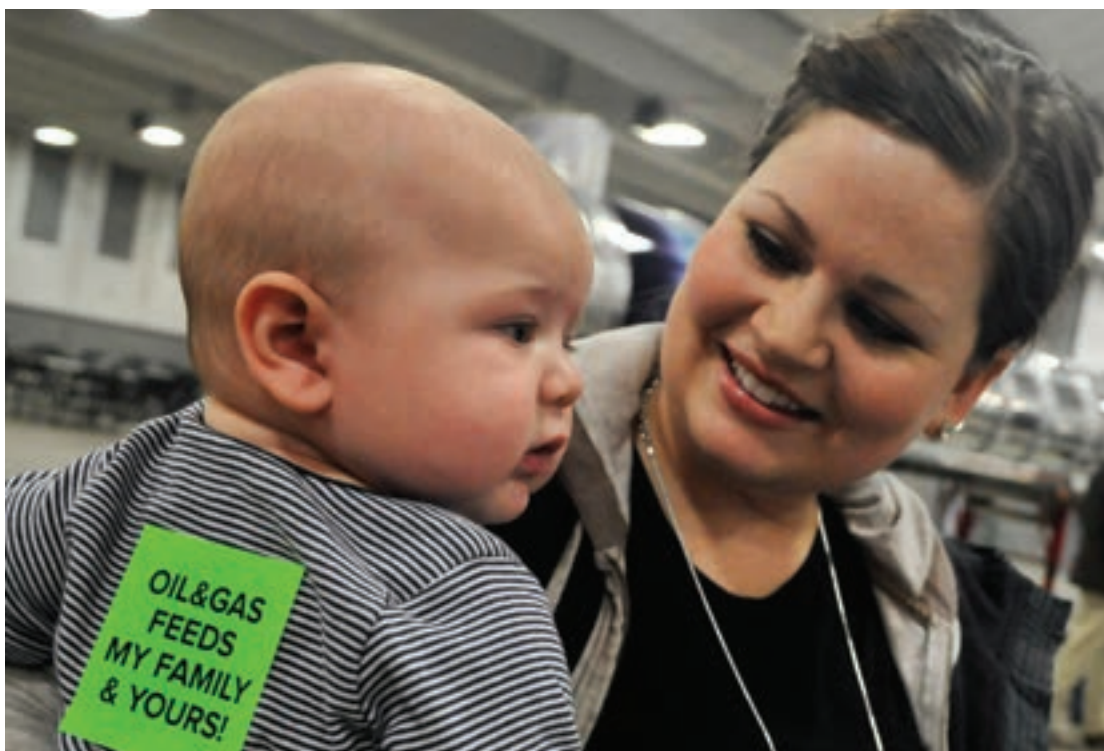
Also worth attention is the difference between the operator (the company that is the principal player in a particular development) and a range of subcontractors. While the operator holds primary responsibility for the site, service companies perform the actual work of hydraulic fracturing and production. This helps explain why subcontracting companies like Halliburton and Schlumberger, which see the components of fracturing fluid as their key intellectual property or trade secret, have resisted the public disclosure of these components much more vigorously than exploration and development companies.

Subcontractors also supply the trucking services that bring water to the site for fracturing, and then take it away for disposal or treatment. (Pipelines, of course, provide an alternative to trucks, but that, in turn, brings another subcontractor into the story.) As in any such chain of commissioned services, a clear line of responsibility and accountability becomes increasingly hard to track as more moving parts come into play.

Of all these distinctions, the toughest to address is the difference between good operators and not-so-good operators. As in every profession, variations in human character and judgment can make a big difference in performance. A good player has no obvious mechanism or procedure for asking that his rivals meet his standards of good performance, even though the reputations of all companies will suffer from the careless behavior of one.

NOT-INDUSTRY (i.e., groups expressing concern about or direct opposition to hydraulic fracturing and oil and gas development)

Here we are stuck with a wordy, clumsy sub-section title, because the terms “opposition” or “opponents” fail to capture the spectrum of distinct groups that includes:



JOSHUA POLSON/THE GREELEY TRIBUNE



JULIE DERMANSKY

- Residents who have learned that their neighborhoods are under consideration for development, and whose concerns center on impacts to their quality of life. These folks never had the slightest desire to live in proximity to the noise, bright lights, bustle and smells of an industrial production site, nor to consider the possibility of health threats from pollution. Many of them never saw themselves as activists, but have become mobilized by the intrusion.

- Residents who share the concerns of the people in the previous category, but who were primed and ready, for reasons that preceded the arrival of hydraulic fracturing in their neighborhoods, to denounce the concentration of power in corporations and to lament the failure of government to protect citizens.

- People (whether residents or not) who have had a long involvement in environmental causes, acting as advocates for clean air, pure water and wildlife habitat. These folks place natural gas development in a category of troubles (mines, dams, fossil-fuel-dependent transportation, suburban sprawl, etc.) they have been trying to correct or constrain for years. Often, their concerns focus on oil and gas development on the public lands.

- People who move to an area undergoing natural gas development in order to mobilize and channel local discontent, often on behalf of a national campaign to challenge the power of the fossil fuel industry and to accelerate the shift to renewable energy.

While these groups may unite from time to time, industry groups often overlook their differences. A drilling opponent, for instance, may be accused of pushing a hidden agenda of halting society's dependence on fossil fuel use, whether or not that goal ever figured into his or her motivations.

Those living in proximity to drilling also defy homogeneity. "Royalty owners," people who own both the land on the surface and the mineral resources beneath the surface, view the terrain differently than those who just own the surface. It is not uncommon to find one group of landowners, insisting on their right to the revenue from their subsurface mineral rights, in direct conflict with another group who resents the disruption and disturbance wrought by development from which they will not see a dime.

Both the surface landowners and the owners of the subsurface minerals celebrate the rights of private property, and sometimes their collision can be negotiated in ways that both find acceptable. But more often, split estate leads to clashes under tangled terms that are hard to manage or sometimes even to understand.

The "two sides" model becomes a particular burden when we return to the uncomfortable issue of social class. Consider low-income households, where individuals and families struggle to pay their heating bills, facing difficult choices between buying food or medications and keeping a house warm in winter. For people struggling with household finances, the recent drop in energy prices (produced in part from the expansion of hydraulic fracturing) has reduced life's burdens, a point often lost in public discussions.

And then there are the workers. Jobs in natural gas development pay well. This is especially true for people without college degrees who, otherwise, face a dismal set of opportunities in "post-industrial" America. And yet they also face the highest risk of injury or exposure to toxic substances. Because the workers are often transitory newcomers, interactions between them and long-term residents can be tense, even hostile. The established residents may express an interest in the workers because the close monitoring and study of their health could reveal risks that they themselves might face. But their social distance from the workers is itself an unsettling aspect of the industry's presence.

During a very cold spell near Mead, Colorado, in November of 2014, workers tried to thaw a high-pressure water pipe at a well site. When the pipe broke, it killed one and injured two others. Newspaper articles simply said that the person who lost his life had been identified as "Matthew Smith, 36." Had the person killed in this explosion been a nearby resident, or an executive of an oil and gas company, we certainly would have learned a lot more about him. Instead, the dimensions and dynamics of his



JULIE DERMANSKY



STEVE HARBULA

life remain beneath the surface of our attention. Returning to the "two sides" model, where do we place "Matthew Smith, 36?"

The broadest paradox in the fracking debate lies in the allocation of costs and benefits. The local communities in proximity to development experience the disturbance with immediacy and intensity. The principal benefits — national security, a cleaner-burning fossil fuel, heated homes, generated electricity, and profits to company owners and stockholders — are received in distant locales. This is an arrangement set up to maximize distrust and misunderstanding.

PEOPLE OF PARADOX

If digging into the physical and social complexity of the fracking debate is one way to overcome polarization, understanding historical context is another. All the contestants engaged in disputes over hydraulic fracturing rest their weight on the thin veneer of the present, paying only selective and sporadic atten-

Stakeholders against fracking include Julie Boyle, top, whose Weld County home became neighbor to a fracking operation, top. Bottom, Shane Davis, a well-known fracking activist in Colorado, speaks during the Frack-Free Colorado rally in 2012.

tion to the history concealed beneath it. History, however, is not choosing sides.

The extraction of natural resources — gold, silver, coal, oil, timber, grass, water, soil nutrients — drove American expansion into the West. It also left behind many messes: abandoned mines leaking acid drainage into streams and open-pit mines evolving into toxic lakes; clear-cut forest lands; eroded soil; ghost towns stranded when busts followed booms. Today, when an energy company puts forward a plan to drill for oil and gas, it is susceptible to characterization as the latest villain in this long history of companies racing to capture resources, make money and depart without cleaning up. Even though oil and gas leaders can accurately point to a revolution in federal, state, and local regulation of their industry, for better or worse they carry an association with the history of extraction in the West, and they may have to embrace even higher standards to overcome its weight.

The residents of Colorado's Front Range towns and suburbs, meanwhile, move through the present with an awkward historical legacy of their own. A number of these communities originated as coal-mining towns or came into being with an extractive economy. Even Boulder had an active oil field in the early 20th century. More to the point, these towns owe their post-World War II burst of residential expansion to a festival of fossil fuel combustion, which continues apace today. Commuting to and from the city of Denver became more and more viable with highways, abundant gasoline and widespread automobile ownership. And the suburbs have left their own heavy social and ecological footprint: Just a few decades ago, environmentalists were deeply concerned about sprawl, which was driven in part by white flight from urban desegregation. The resulting suburban development created a legacy of traffic congestion, disrupted wildlife habitat and celebratory consumerism.

To view Front Range suburbs before the arrival of rigs and wells as places of pastoral calm, healthful living and environmental responsibility is historically naive. Their residents would do well to remember that just beneath the innocence of their neighborhoods lies an infrastructure that steadily provides them with energy produced in other people's neighborhoods.

History, in other words, requires us to face up to the cultural and psychological disconnection between energy production and energy consumption. But history does *not* require us to use the term "hypocrites" to characterize residents who resist fossil fuel production in proximity to their homes. By a long shot, it would be wiser to borrow the wonderful title of a book by historian Michael Kammen, and refer to suburban residents making difficult choices as "people of paradox."

THE SEEDS OF A NEW CONVERSATION

Hosting FrackingSENSE events in Boulder and in Greeley, I arrived at each session with hopes that seemed both very promising and appropriately modest. I felt certain that we could reduce the confusion produced by the imprecise and misleading categories of "pro-industry" and "anti-industry," and that we could sharpen our thinking by paying close attention to presentations by experts and by thoughtful advocates. And as an ardent practitioner of applied history, I wanted to explore the possibility that thinking in larger units of time could clear our minds.

In many ways, my hopes did not betray me. Audience members were attentive, even when they disagreed with a speaker. Asked to limit their expressions of dissent to a new social form, the exciting innovation called "fully licensed respiratory protest," citizens did not shout to interrupt or silence speakers; instead, they accepted my invitation to sigh in exasperation, gasp with disbelief, and snort with contempt, effectively conveying their feelings without interfering with their neighbors' right

to hear the speakers.

The scene at the end of a FrackingSENSE talk was particularly encouraging: clusters of people pursuing intense and forthright conversations. Assigned to attend the talks and to ask the community members seated near them about their reactions, CU students, as well as the citizens who responded to their questions, were high achievers in the sport called civil discourse.

But my hopes got their greatest reinforcement when I left the lecture hall and went to dinner with the speaker and several purposefully courted guests with a wide variety of viewpoints. By and large, the conversations were congenial, even if they were (as they should have been) tense. But the deeper value of my dining experiment was this: The participants alternated speaking and listening, the best conditions for making at least brief visits to the inner worlds inhabited by opponents, and to separating issues of substance and consequence from the noise of fevered dispute.

And now I can imagine hundreds of readers putting aside their differences to unite in a great swell of skepticism: "Could Patty Limerick *actually think* that this enormous conflict could be resolved by taking antagonists out to dinner?" In truth, I would be an ardent supporter of a campaign to mobilize Colorado's thriving restaurant scene in this cause. Assembling antagonists around a table with an array of good food in front of them delivers this bedrock benefit: Everyone must, episodically, fall silent in order to chew.

There's no shortage of evidence that we are still trapped in a hopeless stalemate on the future of hydraulic fracturing. Even as I write this, industry and non-industry groups are gearing up for fights at the ballot box and in the courts. And yet the downturn in oil and gas prices gives us a chance to *think beneath the surface* of our locked and frozen antagonism.

I have listened as a veteran of the oil and gas business declared that his industry should pay close attention to the lessons from the history of extractive industries, especially on the wisdom of exercising foresight and precaution in anticipation of environmental legacies. And I have confronted the fatigue and frustration of people deeply concerned about the well-being of their home communities, who must shoehorn their activism into schedules already packed with the obligations of work and family. I believe that empathy for their circumstances, especially with their concerns for the safety of their children, is within the emotional reach of any leader in the oil and gas industry, and meaningful actions could result from that willingness to venture outside the circles of the likeminded and to reckon with the experiences of people who have been unsettled — in the many meanings of that word — by oil and gas development.

The women and men who served on the recent Colorado Governor's Oil and Gas Task Force, tasked with finding a politically viable middle ground, had a tough job that no one can envy. And yet, true to my profession, I cannot surrender the thought that their labors would have proven more fruitful if they could have opened their meetings with this secular invocation: *We cannot plan for our future until we face up to our history and directly acknowledge the complexity of our own moment in time.* And if that observation seems too prosaic and pedestrian, then here are two more eloquently phrased statements to get conversations off to a promising start:

*There is no distinction, for all have sinned
and fall short of the glory of God.*

—Romans 3:23

*Slowly you restore
The fractured world and start
To re-create the afternoon before
It fell apart.*

—A.E. Stallings, "Jigsaw Puzzle"



HONEY LINDBURG/CENTER OF THE AMERICAN WEST

Patricia Limerick, shown above at a FrackingSENSE session in 2013, is the director of the Center of the American West at the University of Colorado Boulder, and was recently named Colorado State Historian. This essay is based on work supported by the National Science Foundation, though its findings and conclusions are those of the author alone. A version of this essay appears in a new book, *Fracture: Essays, Poems and Stories on Fracking in America*, published in 2016 by the Center of the American West.

Colorado activists set their sights on a ballot measure to limit drilling

Over the past two years, plummeting natural gas and oil prices have caused energy companies in Colorado to lay off thousands of employees, and put state and local governments in a pinch from declining tax revenue.

But if you thought this might cool the anti-fracking fever on the populated Front Range, you were wrong.

As 2016 began, two organizations filed petitions for statewide ballot measures that would allow communities to ban drilling and fracking within their boundaries, or effectively prohibit new drilling by greatly expanding setbacks between development and homes or other buildings. Activists are unhappy with state-level efforts to regulate the industry, and there's enough new drilling along the populated and oil-rich area north of Denver to portend a new boom, should prices recover.

"There's no foot coming off the gas," says Merrilly Mazza, a councilwoman in Lafayette, near Boulder, and president of the Colorado Community Rights Network.

In 2014, Mazza and others pushed two proposed anti-fracking measures, supported by Congressman Jared Polis, D, that nearly made it onto the Colorado ballot. But a last-minute deal, involving Polis, Gov. John Hickenlooper, D, and industry representatives, stopped both those proposals and two industry-backed countermeasures. Instead, the deal established a 21-member task force to gather community input and consider further development rules, a compromise deftly designed to help Democrats, including Hickenlooper and then-Sen. Mark Udall, support industry while appeasing concerned citizens.

But it angered fractivists, who felt abandoned, and though Hickenlooper won re-election, Udall still lost his seat to Republican Cory Gardner. The task force was a disappointment, too: New state rules were issued this January that require energy companies to consult with local governments on drilling plans in limited "urban mitigation areas," but environmentalists say that doesn't go far enough. And folks like Mazza remain frustrated by their inability to set local rules on energy development.

"Nothing coming out of (the task force) is for the local communities," says Mazza, whose town, Lafayette, is among the Front Range cities and counties



CYRUS MCCRIMMON/THE DENVER POST VIA GETTY IMAGES

that have tried to control or halt drilling through local ordinances. All such efforts have been overturned in state courts, with some still working through appeals.

Bitterness was aggravated by a *Boulder Weekly* and Greenpeace investigation published last fall, which suggested that industry funded and unduly influenced University of Colorado Leeds School of Business research reports, which warned — right before the 2014 election — that fracking limits would harm the state economy.

Mazza's group is circulating a petition for a "community-rights" amendment to the state Constitution. It wouldn't specifically prohibit fracking but would broadly recognize local rights to set rules or bans on energy development and other activities. "The communities that are impacted by this are told, 'You have no rights and it's up to industry,'" Mazza says. "This is a democracy issue, and it should be the people deciding."

Similar strategies have succeeded in New York and Pennsylvania, although a community-rights bill that passed in Mora County, New Mexico, was later rejected in state court.

Another group, Coloradans Resisting Extreme Energy Development (CREED), has submitted 11 different versions of a ballot measure that would limit fracking and extend setbacks between wells and homes, schools, and other buildings or occupied spaces, such as parks. Some suggest a 4,000-foot setback, eight times greater than current limits and double the distance recommended in one of the aborted 2014 ballot measures. Both groups have until August to gather enough signatures for the ballot.

Industry proponents say the expanded setbacks would virtually prohibit drilling, decimating an industry that brings a reported \$31.7 billion annually to Colorado. "We already have some of the toughest rules in the country. The question I

have is, when is enough enough," says Karen Crummy, spokeswoman for Protect Colorado, an organization that opposes any statewide fracking limits and backed the industry's own 2014 ballot measures. "It seems these groups aren't going to be happy until there's no oil and gas at all within the state."

Adds Dan Haley, president of the Colorado Oil and Gas Association, "We're looking for solutions. The other side is looking to make things political."

The political path holds dangers, says Charles Davis, a political science professor at Colorado State University who studies fracking rules. Framing a ballot measure as a "local-control" issue instead of an anti-drilling one is a good strategy, Davis says, but with industry slumping and also publicly supporting the task force, "the degree of urgency seems to have dissipated." He anticipates that oil and gas groups will spend readily to oppose any drastic measures, and perhaps back their own countermeasures again.

Crummy says industry is "considering all our options." Judging by 2014, measures could include withholding energy tax dollars from counties or cities that limit or ban fracking. But if fracking and energy development become an important election platform in Colorado, it could again challenge Democrats working both sides of the issue. Republicans are already targeting incumbent Sen. Michael Bennet, considered his party's most vulnerable incumbent and one of just 10 Democrats up for election in the U.S. Senate this year.

"It's a tough issue" for Democrats, and could be "a tougher sell" with voters, Davis says. "I think (an anti-fracking measure) would have a real poor chance of passing when you consider industry is still a major economic engine."

That may be, but the activists aren't backing off. After 2014, Mazza says, "People are utterly cynical." JOSHUA ZAFFOS

Protesters gather outside the Colorado Supreme Court building in December to protest fracking before hearings on local communities' right to ban fracking. The oil and gas industry sued to overturn measures passed by the Front Range communities of Longmont and Fort Collins, contending that the local governments have no power to regulate the industry, or control the location and practices of any oil and gas activities in their borders. Meanwhile, activists are pursuing ballot measures.



Joshua Zaffos is an HCN correspondent in Fort Collins, Colorado. Follow him on Twitter @jzaffos.

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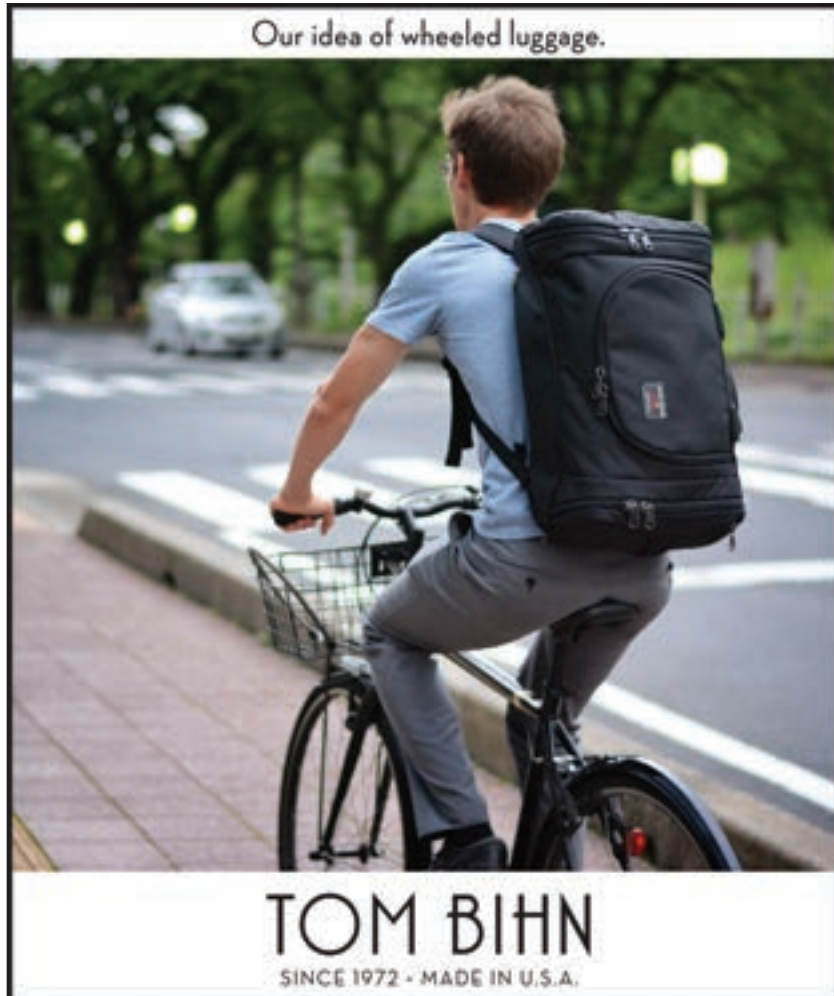
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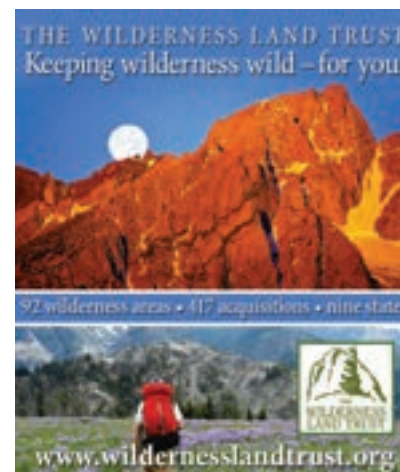
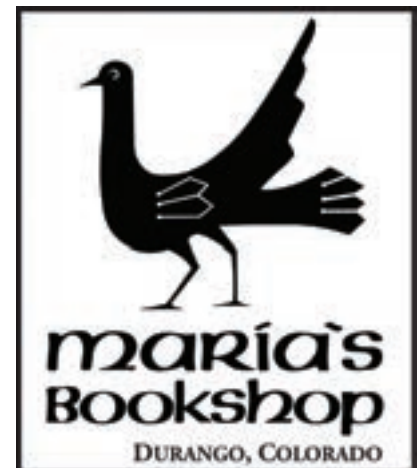
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A ski pole marks the crown of a snowmobile-triggered avalanche in January near Crested Butte, Colorado, where one man died.

COLORADO AVALANCHE INFORMATION CENTER

sugary layers of marble-like depth hoar, a recipe for slab avalanches. The January avalanche near Crested Butte had a fracture line that was three feet deep.

New technological wrinkles — air bags and Avalungs — have helped, but not that much. The best thing is to avoid avalanches altogether. Colorado has led the United States in avalanche deaths since 1950, with 270 occurring from then and through last year, followed by Alaska (145), Washington (116), Utah (114) and Montana (108). California comes in behind them with 66 fatalities, despite having just about as many high mountains and far more people.

Colorado avalanche forecasters report that the 10 U.S. avalanche deaths in January within a nine-day span were typical in a somewhat surprising way: About 70 percent of fatal avalanche accidents occur within four days of a prior accident, according to a 2012 study. In other words, you can go weeks without an avalanche death — and then, *wham-bam*.

In British Columbia, where 80 percent of Canada's avalanche fatalities occur, last weekend was a wham-bam. Seventeen snowmobilers were caught in a hellacious avalanche on Mount Renshaw, part of a snowmobiling paradise around the small town of McBride. Altogether, five men — all from Alberta, ranging in age from 42 to 55 — died. As at Crested Butte, other snowmobilers were quick on the scene with probes, beacons and shovels. As detailed by Canada's *Globe and Mail*, they got to one of the victims within five minutes. It was still too late.

"Heartbreaking" was the reaction of Mary Clayton, communications director for the Canadian Avalanche Centre. "Clearly, we have a lot of work to do."

Canadian avalanche professionals typically instruct about 8,000 people annually in safety. Just 10 to 15 percent are snowmobilers. The statistics argue that they need to pay closer attention. For the decade ending in 2014, avalanches killed 54 snowmobilers in Canada as compared to 49 skiers.

Meanwhile, the Canadian Avalanche Centre has shifted its instruction, says Clayton, with instructors now emphasizing terrain rather than the more complicated snow physics. Making safe route choices is a simpler story: Stay off slopes of more than 30 degrees — especially if there's a steeper slope above. □

Allen Best lives in the Denver area and writes about Western environmental issues. @mountaintownnew.

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



As snow piles up, so too does its danger



OPINION BY
ALLEN BEST

This has been a deadly winter for fun in the heavily snow-laden backcountry. Through early February, avalanches had killed 24 people in North America, including hikers, climbers, skiers and snowboarders.

Snowmobilers — including the five killed in late January in British Columbia — account for 12 of the 24 deaths. Every case is different, but a fatality in late January in Colorado is revealing. It was on a day of blue skies at Crested Butte in western Colorado, when six local men decided to hop on their snowmobiles.

Mindful of high avalanche danger, they opted for what seemed like safer fun on the lower slopes of Ruby Bowl, about seven miles west of Crested Butte. After building a jump, they used the snowmobiles in yoyo fashion to ferry skiers and snowboarders up the slope for sliding and jumping.

Located just below tree line, at about 11,000 feet above sea level, the slope seemed tame. Every avalanche book on the planet warns of 30- to 45-degree slopes, and this one was just 20 degrees. Above their chosen playground, however, the slopes steepened to 32 to 42 degrees. That made all the difference.

In early afternoon, after eight laps, two of the men were riding uphill on a single snowmobile. Just as they turned the snowmobile, the avalanche from the

steep slope above broke. It wasn't a large avalanche, but it buried the snowmobile driver up to his shins. His unfortunate passenger, however, was washed downhill 340 feet into a small stand of trees, and directly into a tree well.

Others were quickly on the scene. They were equipped with transceivers, metal shovels and probes, the essential avalanche safety equipment. They picked up the signal of their companion and began digging. First one six-foot hole, then another. Nothing, but still the signal. Digging just a foot deeper, they found their companion.

All of this had taken a mere 15 minutes. It was still too long. The man died later in a hospital.

Avalanche transceivers, also called beacons, can save lives. But consider this: About 25 percent of all victims die of trauma, not suffocation. In that case, the beacon just helps searchers find the body more easily.

As demonstrated at Crested Butte, time is precious. "Your odds go down immediately with every ticking second, but you see a dramatic rate (of fatalities) after about 15 minutes," says Brian Lazar of the Colorado Avalanche Information Center.

Colorado has an inland climate, usually featuring a few heavy storms followed by periods of cold. This creates weak,

WEB EXTRA

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How the wild Northern Rockies were saved — and who led the way



Where Roads Will Never Reach: Wilderness and Its Visionaries in the Northern Rockies

Frederick H. Swanson
376 pages, softcover:
\$24.95.
University of Utah Press,
2015.

The Northern Rockies are America's epic mountains, bastion of grizzlies and other wildlife, the awe-inspiring terrain that Lewis and Clark explored and chronicled two centuries ago. In *Travels with Charley in Search of America*, John Steinbeck called Montana "a great splash of grandeur. The scale is huge but not overpowering. The land is rich with grass and color, and the mountains are the kind I would create if mountains were ever put on my agenda."

It's a landscape whose wild spirit draws backpackers, hunters and anglers. And that spirit appears on every page of *Where Roads Will Never Reach: Wilderness and Its Visionaries in the Northern Rockies*, Frederick Swanson's history of wilderness preservation in the region. The book is scrupulously footnoted, yet accessible to the general reader, with maps to show where the writer is taking us.

When you love a place, you want to save it, not just for yourself but for others. You cherish memories of a backpacking trip into the Absaroka-Beartooth Wilderness Area or a horse-packing trip into the great complex of the Bob Marshall, Great Bear and Scapegoat wilderness areas. We're talking big landscapes

here — over 7.4 million acres preserved in 17 wilderness areas.

Such preservation does not come unbidden, like a wind across the plains. It reflects hard work by people who passionately love a favorite wild landscape. This is the story Swanson sets out to tell, by getting into the hearts of those people, interviewing many who were there at the creation.

Swanson begins with a full disclosure: "My heart is, and always has been with the preservationists." I plead guilty here, too, for I had a role in some of the successes recorded in this book. But my role was minor; the preservation of wilderness areas requires — *requires* — that the local congressional delegation be behind any proposals for them to succeed. And that can only happen when there is broad grassroots support.

And that, in turn, means support not so much from environmental groups, but from the butcher, the baker, the candlestick-maker — and the hardware dealer. Cecil Garland, for example, a thickly accented North Carolina native who owned a store in Lincoln, Montana. Hearing that the Forest Service planned to log his favorite hunting area, Garland just said,

"Nope." As the ink dried on the 1972 law establishing the 256,647-acre Scapegoat Wilderness, the regional forester groused: "Why should a sporting goods and hardware dealer in Lincoln, Montana, designate the boundaries? If lines are to be drawn, we should be drawing them."

Wrong. The 1964 Wilderness Act, which chartered our national program of preserving the wildest, most natural portions of our national forest and other federal lands, gave that boundary-drawing authority to Congress. But it took devoted, hard-working volunteers to motivate their elected officials to push wilderness-protection bills through Congress, with the help of legislative giants like Sens. Frank Church, D-Idaho, and Lee Metcalf, D-Mont.

This is the heart of Swanson's story, and here he makes a unique contribution, by introducing us to unlikely heroes like Doris Milner, a housewife from Hamilton, Montana, who noticed trees marked for logging in the wild country where she and her family loved to camp. When asked why she got involved, she seemed puzzled by the question: "I just got mad!" And she got her senators involved. In 1980, President Jimmy Carter signed the



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High Country News 

law, adding Milner's magical place to the Selway-Bitterroot Wilderness Area.

Among those who worked with Sen. Church on the huge River of No Return Wilderness Area were his longtime Idaho camping cronies, led by Ted Trueblood, an editor of *Field and Stream*. Environment groups joined in and national lobbyists provided advice, but the real power lay with the Cecils, Dorises, and their like across the country.

Well into the 1970s, the leadership of the U.S. Forest Service was on the wrong side of the wilderness. In part, this reflects the agency's deference to its corporate logging clientele, and in part a strong dislike to giving up its discretion over the lands under its care — in this case, the decision regarding which should be protected as wilderness and what boundaries might be folded back to accommodate roads into wild country.

But a balance has been struck in the Northern Rockies. Wilderness has done well, without destroying the region's economy. After long struggles, a sustainable timber industry is emerging. "A century hence," Swanson writes, "the Northern Rockies could be a place where generations of loggers still work in the woods, passing along their knowledge of good practices; where families can drive to and camp by peaceful lakes and clear, undammed streams; where agricultural lands fill verdant valleys."

BY DOUG SCOTT



A mule deer in the Bob Marshall Wilderness in Montana. STEVEN GNAM



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The time of painful impossibilities

Editor's note: Juan Felipe Herrera is a California writer and performer and U.S. poet laureate. The following essay, which is taken from a recent reading he gave at the Aspen Institute in Colorado, was edited for clarity and length. Find the full reading and others at aspenwords.org.

That one room was an entertainment center, that one room was a bedroom, that one room was a kitchen, that one room was a guest room, it was a playground, it was a storytelling center, it was a performance artist auditorium.

It's been a tough year, this last year, as you know: So many of our brothers and sisters, facing incredible horrors across the world and also here in the U.S. So let us send them our love and let us send them our healing thoughts and feelings. So many things have happened, and we're going so fast sometimes that we forget to take a moment to wish the best to everybody, to treat each other with love. When we write poetry, let us write for them, and as a matter of fact, let us live for them. That's even better.

I've been thinking of my father. You know, he was born in 1882. When I was born, he was 66. And he would tell the story of coming to the United States, from Chihuahua, the land of Pancho Villa, in the late 1800s. To El Norte, the north country, at the age of 14, when he hopped a train — you know he got his degree at 14, from milking goats — coming north, to Colorado. You know the life, right, the life of the big sky and the bigger earth. You work hard, and if you're a child and right out there in those lands, in north-

ern Mexico, in those years, it's kind of impossible for us to imagine.

The train from Chihuahua is one straight shot to Denver. He got off that train, and it was pretty cold. He used to say, "It was so cold, when I spit down on the ground, it was little tiny cubes of ice, Juanito," and that's how he began. He learned English by buying a word for a penny. And of course he only earned — how many pennies a day? That was his school, out in the fields of Colorado, buying words for a penny. *Como se dice eso*: How do you say that in Ingles? *¿Como se dice leche en Ingles?* Melk. Melk. *Milk*. It sounds hilarious, but that's our life: Word by word, penny by penny.

My father found a car buried on a hill, and he told my mother, Lucia: "Look at that car." "What about it? It's buried, what do you want to look at that for? It's rusty. You can't even see the steering wheel." "I'm gonna raise it up, raise it all the way up, and I'm gonna squash it down, and I'm gonna build a house on top of it, Lucia, so we can travel, so I can pull it with my Army truck, and we're gonna have a Winnebago. A *Mexicano* Winnebago." And that's the house I lived in.

It sounds funny, but I lived in a one-room house that my father built on top of a beat-up old car that he found buried on a hill. That one room was an

entertainment center, that one room was a bedroom, that one room was a kitchen, that one room was a guest room, it was a playground, it was a storytelling center, it was a performance artist auditorium. That's how I saw it as a child. I didn't see it in any other way. My father came here in 1904, and he bought words for a penny, and he learned English, and he became a pioneer. He taught me in so many ways that he was that, a pioneer, and I had to battle to find that. I had to battle through all the negative portrayals of Mexicanos, and I had to battle them inside my own being.

Now, in California people are getting thrown in buses and hauled into detention centers. In this one case, the bus couldn't even make it to the detention center, because people didn't want that bus to be in their city. This poem is called "Borderbus," and I wanted to see if I could bring up the voices of the two women in that bus. I knew there were women in that bus, because during that time, there were a lot of children coming to the United States from Central America, by themselves. Unimaginable journeys, as you know. Another incredible, impossible thing, and these are the times we're living in now. The times of the impossible, which are possible. These are painful impossibilities. JUAN FELIPE HERRERA



Two young girls in a holding area, where hundreds of mostly Central American immigrant children are processed and held at the U.S. Customs and Border Protection Nogales Placement Center in Arizona.

ROSS D. FRANKLIN/AP

Borderbus

A dónde vamos where are we going
 Speak in English or the guard is going to come
 A dónde vamos where are we going
 Speak in English or the guard is gonna get us hermana
 Pero qué hicimos but what did we do
 Speak in English come on
 Nomás sé unas pocas palabras I just know a few words

You better figure it out hermana the guard is right there
 See the bus driver

Tantos días y ni sabíamos para donde íbamos
 So many days and we didn't even know where we were headed

I know where we're going
 Where we always go
 To some detention center to some fingerprinting hall or cube
 Some warehouse warehouse after warehouse

Pero ya nos investigaron ya cruzamos ya nos cacharon
 Los federales del bordo qué más quieren
 But they already questioned us we already crossed over they
 already grabbed us the Border Patrol what more do they want

We are on the bus now
 that is all

A dónde vamos te digo salí desde Honduras
 No hemos comido nada y dónde vamos a dormir
 Where are we going I am telling you I came from Honduras
 We haven't eaten anything and where are we going to sleep

I don't want to talk about it just tell them
 That you came from nowhere
 I came from nowhere
 And we crossed the border from nowhere
 And now you and me and everybody else here is
 On a bus to nowhere you got it?

Pero por eso nos venimos para salir de la nada
 But that's why we came to leave all that nothing behind

When the bus stops there will be more nothing
 We're here hermana

Y esas gentes quiénes son
 no quieren que siga el camión
 No quieren que sigamos
 Están bloqueando el bus
 A dónde vamos ahora
 Those people there who are they
 they don't want the bus to keep going
 they don't want us to keep going
 now they are blocking the bus
 so where do we go

What?

He tardado 47 días para llegar acá no fue fácil hermana
 45 días desde Honduras con los coyotes los que se — bueno
 ya sabes lo que les hicieron a las chicas allí mero en frente
 de nosotros pero qué íbamos a hacer y los trenes los trenes
 cómo diré hermana cientos de
 nosotros como gallinas como topos en jaulas y verduras
 pudriéndose en los trenes de miles me oyes de miles y se resbalaban
 de los techos y los desiertos de Arizona de Tejas sed y hambre
 sed y hambre dos cosas sed y hambre día tras día hermana
 y ahora aquí en este camión y quién sabe a dónde
 vamos hermana fijate vengo desde Brownsville dónde nos amarraron
 y ahora en California pero todavía no entramos y todavía el bordo
 está por delante
 It took me 47 days to get here it wasn't easy hermana
 45 days from Honduras with the coyotes the ones that — well
 you know what they did to las chicas

right there in front of us so what were we supposed
 to do and the trains the trains how can I tell you hermana hundreds
 of us like chickens like gophers in cages and vegetables
 rotting on trains of thousands you hear me of thousands and they slid
 from the rooftops and the deserts of Arizona and Texas thirst and hunger
 thirst and hunger two things thirst and hunger day after day hermana
 and now here on this bus of who-knows-where we are going
 hermana listen I come from Brownsville where they tied us up
 and now in California but still we're not inside and still the border
 lies ahead of us

I told you to speak in English even un poquito
 the guard is going to think we are doing something
 people are screaming outside
 they want to push the bus back

Pero para dónde le damos hermana
 por eso me vine
 le quebraron las piernas a mi padre
 las pandillas mataron a mi hijo
 solo quiero que estemos juntos
 tantos años hermana
 separados
 But where do we go hermana
 that's why I came here
 they broke my father's legs
 gangs killed my son
 I just want us to be together
 so many years hermana
 pulled apart

What?

Mi madre me dijo que lo más importante
 es la libertad la bondad y la buenas acciones
 con el prójimo
 My mother told me that the most important thing
 is freedom kindness and doing good
 for others

What are you talking about?
 I told you to be quiet

La libertad viene desde muy adentro
 allí reside todo el dolor de todo el mundo
 el momento en que purguemos ese dolor de nuestras entrañas
 seremos libres y en ese momento tenemos que
 llenarnos de todo el dolor de todos los seres
 para liberarlos a ellos mismos
 Freedom comes from deep inside
 all the pain of the world lives there
 the second we cleanse that pain from our guts
 we shall be free and in that moment we have to
 fill ourselves up with all the pain of all beings
 to free them — all of them

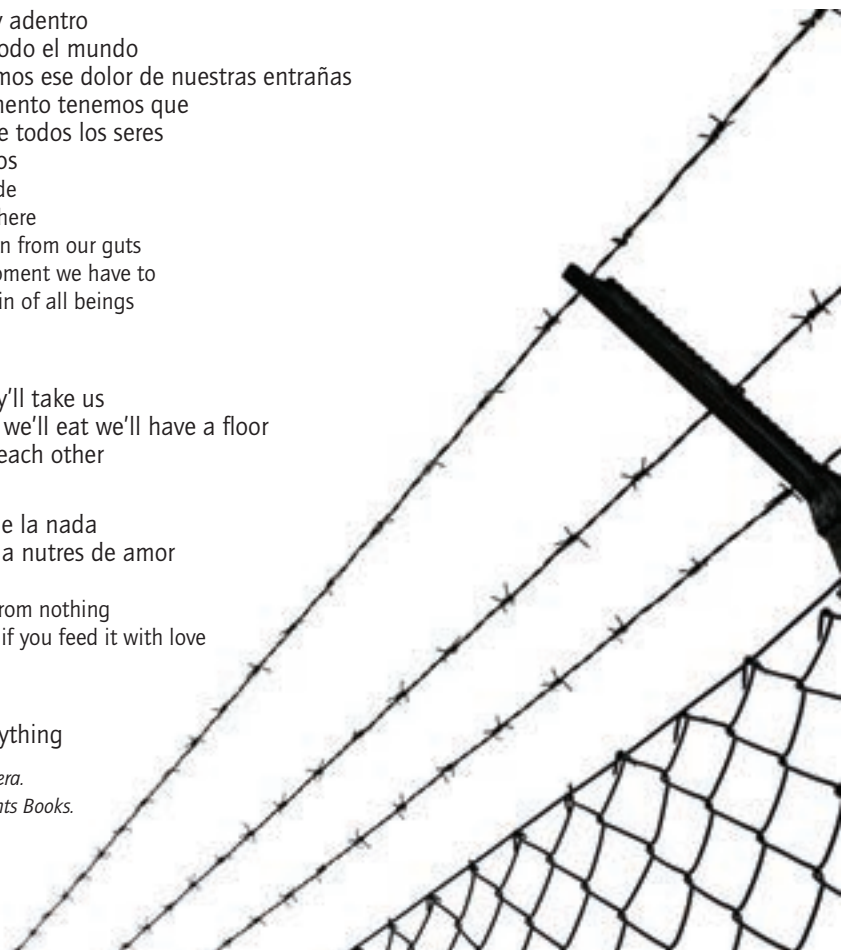
The guard is coming well
 now what maybe they'll take us
 to another detention center we'll eat we'll have a floor
 a blanket toilets water and each other
 for a while

No somos nada y venimos de la nada
 pero esa nada lo es todo si la nutres de amor
 por eso venceremos
 We are nothing and we come from nothing
 but that nothing is everything, if you feed it with love
 that is why we will triumph

We are everything hermana
 Because we come from everything

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*Freedom
 comes from
 deep inside
 all the pain of
 the world lives
 there*





HEARD AROUND THE WEST | BY BETSY MARSTON

WASHINGTON, D.C.

"Something is genuinely different and something is genuinely fabulous!" crowed Alaska Republican Sen. Lisa Murkowski, as she looked around the U.S. Senate on a morning in late January. She'd noticed that only women were in the chamber. From pages and parliamentarians to floor managers and the presiding officer, Sen. Susan Collins, R-Maine, each had struggled to get to work on that snowy and traffic-snarled morning. Murkowski's explanation of the phenomenon will seem perfectly understandable to women everywhere. "It speaks to the hardness of women," she told the *Washington Post*. "(You) put on your boots and put on your hat and get out and slog through the mess that's out there." That might go for the inside mess, as well.

OREGON

It's happened before, said Steve Robinson of Walterville, Oregon, in the *Statesman Journal*: Trucks just crash into his yard. The most recent accident, however, was a doozy. A truck hauling hatchery salmon smashed into a power pole and spilled 11,000 spring chinook smolt all over a state highway, close to Robinson's yard. "The fish were obviously flopping all over the place — trees breaking, power poles breaking, dirt flying everywhere," he said. Truck driver Ray Lewis, who works for a state fish hatchery, offered a novel defense, claiming he suffered from a rare medical condition called "auto-brewery syndrome," which caused his blood-alcohol concentration to register three times the legal limit. Lewis also guessed that he might just be fired. According to the *Oregon Register-Guard*, Lewis was diagnosed with the rare syndrome, but that did not prevent him from being charged with a misdemeanor. Lewis is appealing his conviction; as of press time there is no word about his employment status.

UTAH

It may be a losing battle, but state Sen. Jim Dabakis, D-Salt Lake City, is outraged. So this February, he began waging a campaign to find out what Utah got for spending \$640,000 on a legal long shot. The public money went



OREGON Higher powers in the city of roses.

JOLIE KAYTES

to high-paid lawyers, lobbyists, a polling firm and a research group, all of whom were paid to analyze the chances of Utah successfully suing the federal government for ownership of public lands. Not surprisingly, they concluded that, yes, a suit should be pursued, and it got the go-ahead in December. But Dabakis, one of two Democrats on the seven-member Commission for the Stewardship of Public lands, says he has never seen a full report. He'd like to know, he told the *Salt Lake Tribune*, what the arguments were for *not* spending an estimated \$14 million on what seems a hopeless effort. "I'm on the damn committee. I'm a senator," said Dabakis. "Everyone who's involved in this process is a Republican, and they all want this lawsuit. ... To deny us the information the chairs have got doesn't allow us to do our public responsibility." But until Dabakis and fellow Democratic Sen. Joel Briscoe receive "authorization" from the two chairmen of the stewardship commission, they will remain in the dark. George Wentz, an attorney for the New Orleans firm hired to do the legal analysis, said attorney-client privilege allows for non-disclosure to committee members. If the two Democrats ever do get to read the full document, one question they'll most certainly ask is why attorneys on the team were paid as much as \$500 an hour.

IDAHO

Is it possible to mistake a wolf for an elk? Apparently so, if you work for Idaho's Department of Fish and Game. State wildlife managers recently dropped into the Frank Church-River of No Return wilderness by helicopter — resulting in several legal challenges for using helicopters in a designated wilderness — in order to trap and then collar elk. Once there, they successfully collared 30 elk and 30 calves, but also did the job on four wolves as well — "by mistake," reports the *Missoulian*. "The error was due to a breakdown in internal communications," explained Fish and Game spokesman Mike Demmick. George Nickas, director of the Missoula-based Wilderness Watch, found this explanation difficult to swallow: "The fact they were collaring elk alone is bad enough. It's not a secret that this is really all about wolves." State officials say their only purpose was to learn more about declining elk populations in the Frank Church, where gray wolves were reintroduced in 1995.

CALIFORNIA

Coyotes brash enough to stare down the drivers of passing cars — unnerving them enough to make them slam on the brakes — then sniffing and snapping at the car's tires before running off, are alarming residents of Stinson and Bolinas Beach, coastal towns near San Francisco, reports the *International Business Times*. The coyotes are not thought to be rabid, as the attacks have been happening for weeks, and some think their behavior might be spurred by drivers who previously fed the animals. A more bizarre explanation comes from the *Pacific Sun* weekly: Perhaps the aggressive coyotes are "tripping their tails off." Maybe so. Poisonous red-capped, white-speckled mushrooms — think "magic mushrooms" — grow in the area, and *Amanita muscaria* has known hallucinogenic properties.

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

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



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“Politicians making shocking statements are nothing new in the West. Some candidates have even been elected anyway.”

Forrest Whitman, in his essay, "Potty-mouths and Western politics," from *Writers on the Range*, hcn.org/wotr