

'PUNISHMENT COMEDY' | THE ARIDIFYING SOUTHWEST | REDEFINING RESTORATION

High Country News

For people who care about the West

August 6, 2018 | \$5 | Vol. 50 No. 13 | www.hcn.org

What Are We Doing Here?

Drought, dread and family
in the American Southwest

By Cally Carswell





Don Bustos adjusts the headgate to the *acequia* that runs through his and neighboring farms and orchards in Española, New Mexico, where his ancestors began farming more than 400 years ago. STEFAN WACHS

On the cover

Colin Dyck and author Cally Carswell stand with their dog, Google, in the dry Santa Fe riverbed near their home in Santa Fe, New Mexico. STEFAN WACHS



Complete access to subscriber-only content

HCN's website
hcn.org

Digital edition
hcne.ws/digi-5013

Follow us



FEATURE

12 What Are We Doing Here?

Drought, dread and family in the American Southwest By Cally Carswell

15 There's no place like home

Climate change hits close to the heart for many northern New Mexicans By Cally Carswell | Portraits by Stefan Wachs

CURRENTS

- 5 **Neighbors on call to help one another** Community health programs are thriving in Haiti, Montana and the Navajo Nation
- 5 **Snapshot:** Are we getting the health we pay for?
- 6 **Howie Echo-Hawk wants to see you squirm** The Pawnee comic draws on his experiences as an Indigenous man
- 6 **The Latest: Four Corners methane hotspot**
- 7 **In the Southwest, 'drought' ... or ...** Why 'aridification' is a better term for our new reality
- 8 **Restoration's crisis of confidence** To revive damaged landscapes, ecologists can't look to the past
- 9 **The Latest: Coal ash regulation rollback**

DEPARTMENTS

- 3 FROM OUR WEBSITE: HCN.ORG
- 4 LETTERS
- 10 THE HCN COMMUNITY Research Fund, Dear Friends
- 20 MARKETPLACE
- 22 BOOKS *Educated: A Memoir* by Tara Westover. Reviewed by Jenny Shank
- 23 ESSAY Except for the frogs By Joseph Belli
- 24 PERSPECTIVE
Sightseeing at the political circus: In Montana, Trump's spectacle draws a crowd — for now By Elliott Woods
- 28 HEARD AROUND THE WEST By Betsy Marston

Editor's note

When dreams dry up

We knew it was going to be a weird summer when it barely snowed all winter. By the end of May, the last patches of white had vanished from 11,401-foot Mount Lamborn, and the words, "Never seen anything like it," slipped out of the mouths of even our most ardent climate skeptics. A month later, irrigation ditches stopped flowing, and skies grew murky from wildfires. An oppressive atmosphere settled over our valley, like the aftermath of a presidential tweet storm.



That made it even weirder when, on July 8, a friend spotted what looked like a body floating down turgid Minnesota Creek, just outside of town. A microburst had dumped three-quarters of an inch of rain in less than an hour, swelling the dismal trickle to a full-fledged flood. The man was lucky to survive; he'd been swept into the creek a half-mile upstream while trying to jump across it. Somehow he dragged himself out, muddy and cold as a crawdad.

How quickly and violently the climate tables can turn in the West, and how unprepared for this we generally are. This is the reality contemplated in this issue by longtime HCN contributing editor, Cally Carswell, who wonders whether she and her husband, Colin, can survive in New Mexico. Does it make sense to stay in a place where drought and heat are making water ever more scarce, even as more people pour in?

We've never let a little desert get in the way of our dreams of empire. Los Angeles, Phoenix and Las Vegas all rely on distant and diminishing water sources. Yet, as Carswell notes, scarcity is forcing us to live more frugally. In Santa Fe, average per capita daily water use has dropped from 140 gallons to 90 over two decades.

That's good news. But some physical limits can't be out-plumbed or transcended with dams or low-flow toilets. I realized this on a trip down the Colorado River in late May, from Moab, Utah, through Cataract Canyon to Lake Powell. Though low flows made the rapids less treacherous, we ran more of them, ultimately through piles of silt, thanks to the receding reservoir. A few of them were new to our Colorado Riverkeeper guide, John Weisheit — they weren't there the year before.

Despite the likely decades of drought ahead, Weisheit said, it's premature to predict when the reservoir will fully return to river or its silt loads render Glen Canyon Dam utterly useless. He pointed to layers of sediment high up the canyon walls — evidence, he said, of past mega-floods, any of which would easily take out the dam.

With the sun beating down and temperatures in the 90s again today, it's hard to imagine that. But cars were floating down the street in Santa Fe this week after a deluge dropped more than a fourth of the city's annual average rainfall — 3.57 inches — in one night. And in the distance, I hear thunder.

—Paul Larmer, executive director/publisher



Colorado's North Fork Valley, where nearly 8,000 acres of BLM lands will be offered to drillers in a December lease sale. MORGAN LEVY FOR REVEAL

The Colorado valley at stake in Trump's oil boom

Once a coal town, Paonia, Colorado, (home of *High Country News*) has transformed itself over the past few decades to diversify its economy. Today, organic farms and wineries dot the landscape. But under the Trump administration, up to 95 percent of the valley surrounding the town could be available to drillers: In July, the Bureau of Land Management announced it would offer 7,903 acres in the valley to drillers in December.

President Donald Trump wants to open millions of acres across the West, all owned by taxpayers, to private oil and gas companies. Last year alone, his administration put 11.9 million acres on the auction block. These are symptoms of a growing bond between federal officials and the oil and gas industry, as shown by emails and correspondence obtained by *E&E News*, which reveal directives and orders by Trump officials to shelve environmental policies in order to speed energy development.

ZACK COLMAN/E&E NEWS
Read more online: hcne.ws/oil-threat

Trending
Hammond pardon continues Bundy standoff

In an opinion piece, Rocky Barker argues that President Donald Trump's pardon of the Oregon ranchers whose legal case helped spark the armed takeover of the Malheur National Wildlife Refuge perpetuates the polarization triggered by the entire Bundy family saga. Dwight Hammond and his son, Steven, were convicted of arson in 2012, and the Bundys took up their cause in 2016. For the Hammonds to go free means provocateurs like the Bundys can feel empowered to push their alternative brand of American history and the law. The standoff continues.

You say

ANDY GROZ: "The problem, as others have noted, is that the Bureau of Land Management are being entirely too tolerant of abusers. The vast majority of ranchers do not support what the Bundys did, and they do support the system as is."

FRED MARSICO: "Federal agencies have forced hundreds of ranchers out of business by changing the rules. The issue of federal lands won't be solved in a few comments or opinions."

WILL MOORE: "And (this) makes life more dangerous for those of us who work for the government on federal lands."

Read more online: hcne.ws/trump-pardon and [Facebook.com/highcountrynews](https://www.facebook.com/highcountrynews)

“What Trump did was take the name of a real Indian person (whose history has already been distorted beyond recognition in popular culture) and transformed it into a racially bigoted epithet.”

—Lawmakers of the Montana American Indian Caucus, writing in an opinion piece about President Donald Trump's July 5 speech in Great Falls, Montana, in which he repeatedly referred to Sen. Elizabeth Warren, D-Mass., as Pocahontas: "We are not Pocahontas."
Read more online as part of *The Montana Gap* series: hcne.ws/bigoted-epithet

2 Inches of precipitation recorded last year by farmer Byron Carter in Divide County, North Dakota

12 Average precipitation, in inches, there in a year.

In 2017, North Dakota ranchers were optimistic when they put their cattle out to graze in late spring. But by July, two-thirds of the pastureland in the Dakotas was in poor condition, and across the High Plains, from Kansas up to Canada, temperatures were above normal while precipitation was low — perfect conditions for what's known as a "flash drought," sudden and severe. North Dakota is experiencing climate change, and is "at the epicenter of temperature increases."

But while ranchers worry about their cattle and crops, the state's cattle industry has been fighting government action on climate change at every level. "Belief" in climate change falls mostly along party lines in Divide County. The county is clearly a red one, with 71 percent voting for Donald Trump in 2016. "I've seen the data that indicates, yes, we are warming, but there doesn't seem to be a lot of agreement," said Keith Brown, a retired agricultural extension agent in Divide County. "Some say that it's the result of man's activity and others say it's just a natural occurrence," he said. "Things change."

MEERA SUBRAMANIAN/INSIDE CLIMATE NEWS
Read more online: hcne.ws/pervasive-drought

Teens learn mental health skills in Montana

Retired Browning, Montana, educator Larry Woolf spent 11 years as a teacher and 15 as a guidance counselor in public schools on the Blackfeet Reservation. He has seen, again and again, the devastating pain of teenage suicide. Woolf is now a trainer and classroom presenter for the Youth Aware of Mental Health program, which focuses on prevention, not treatment,

and is a way to "help empower kids to become more involved in their own lives and to take more control in their lives to reduce the stigma of mental health and mental-health issues," Woolf said.

MELODY MARTINSEN/CHOTEAU ACANTHA
Read more online: hcne.ws/teen-health

Montana high school student suicide risk assessment

21 in 100 say they've seriously considered suicide in the last year, up by 6 from 2007



10 in 100 say they've attempted suicide in the last year, up by 2 from 2007



28 in 100 Native American high school students report having seriously considered suicide



18 in 100 Native American high school students report having attempted suicide



Growing numbers of Montana high school students report considering or attempting suicide — and Native American students are particularly at risk.

2017 MONTANA YOUTH RISK BEHAVIOR SURVEY

High Country News

EXECUTIVE DIRECTOR/PUBLISHER
Paul Larmer
EDITOR-IN-CHIEF
Brian Calvert
ART DIRECTOR
Cindy Wehling
DIGITAL EDITOR
Gretchen King
ASSOCIATE EDITORS
Tristan Ahtone
Maya L. Kapoor
Kate Schimel
Tay Wiles
ASSOCIATE PHOTO EDITOR
Luna Anna Archey
ASSISTANT EDITORS
Emily Benson
Paige Blankenbuehler
Anna V. Smith
WRITERS ON THE RANGE
EDITOR Betsy Marston
COPY EDITOR
Diane Sylvain
CONTRIBUTING EDITORS
Graham Brewer, Cally
Carswell, Sarah Gilman,
Ruxandra Guidi,
Michelle Nijhuis,
Jodi Peterson,
Jonathan Thompson
CORRESPONDENTS
Krista Langlois, Sarah
Tory, Joshua Zaffos
EDITORIAL FELLOWS
Carl Segerstrom
Jessica Kutz
EDITORIAL INTERN
Elena Saavedra Buckley
DEVELOPMENT DIRECTOR
Laurie Milford
PHILANTHROPY ADVISOR
Alyssa Pinkerton
DEVELOPMENT ASSISTANT
Christine List
DIGITAL MARKETER
Chris King
EVENTS & BUSINESS PARTNER
COORDINATOR Laura Dixon
WEB APPLICATION DEVELOPER
Eric Strebel
IT MANAGER
Alan Wells
IT SUPPORT TECHNICIAN
Josh McIntire
ACCOUNTANT
Erica Howard
ACCOUNTS ASSISTANT
Mary Zachman
CUSTOMER SERVICE MANAGER
Christie Cantrell
CUSTOMER SERVICE
Kathy Martinez (Circ.
Systems Administrator),
Rebecca Hemer, Debra
Muzikar, Pam Peters,
Doris Teel, Tammy York
GRANTWRITER Janet Reasoner
editor@hcn.org
circulation@hcn.org
development@hcn.org
advertising@hcn.org
syndication@hcn.org
FOUNDER Tom Bell
BOARD OF DIRECTORS
John Belkin, Colo.
Beth Conover, Colo.
Jay Dean, Calif.
Bob Fulkerson, Nev.
Anastasia Greene, Wash.
Wayne Hare, Colo.
Laura Helmuth, Md.
John Heyneman, Wyo.
Osvel Hinojosa, Mexico
Samaria Jaffe, Calif.
Nicole Lampe, Ore.
Marla Painter, N.M.
Bryan Pollard, Ark.
Raynelle Rino, Calif.
Estee Rivera Murdock, Colo.
Rick Tallman, Colo.
Luis Torres, N.M.
Andy Wiessner, Colo.
Florence Williams, D.C.

GORILLA IN THE ROOM

"Pay for Prey" (*HCN*, 7/23/18), written by Gloria Dickie, nicely detailed Oregon's efforts to manage both ranchers and wolves. Economic compensation programs exist in other Western states grappling with ongoing wolf colonization. Concerns raised in both camps with regard to data accuracy and program graft also persist. Still, cultural divides have always best clarified this issue, as well as the remaining questions. Often the loss of traditions and family values are cited, along with dire economic consequences, as concerns regarding limiting range grazing allotments or charging actual market rates. The cultural losses are quite real, but it is misleading to suggest that all economic consequences are shared equitably. Similar losses were also experienced by other homesteaders, primarily sheepherders, whose lifestyles and incomes were effectively eliminated in Oregon during earlier settlement.

The Stock Raising Homestead Act and the Taylor Grazing Act all resulted in substantial land ownership shifts from Indigenous people and earlier immigrants to U.S. citizens. A total of 10.5 million acres were homesteaded in Oregon, on what in many instances had been Mexican land grants. Families whose fortunes were lost still voice bitter remembrances, but today it's drought and fire anxieties that fuel most frustrations.

In the Pacific Northwest, the "snow-pack drought," combined with high temperatures, has led to extremely low flows in streams and rivers. Related drought and fire risks — and any economic mechanisms that might serve to mitigate these concerns — are not operating freely. Public-land management decisions in response to drought remain affected by the cultural perceptions of early homesteaders. During droughts prior to settlement, free-ranging grazers would have migrated out of the impacted area, but since that is no longer an option, the U.S. Forest Service has recently identified the need to reduce cattle numbers on drought-impacted public lands. Predictably, this alternative has not been widely embraced.

Losses experienced through wolf predation are quite real, and I accept that reality, but I would also ask that the



economic realities and shared costs of ranching also be accepted. Without that understanding we'll never find a balance.

*Erick Miller
Salida, Colorado*

THE LONG VIEW

Thank you, Anna V. Smith, for your article "Reclaiming the Klamath" (*HCN*, 6/11/18). And thank you, Amy Cordalis, for your hard work toward this end. A recreation outreach meeting was held in Copco, California, on June 12 by the Klamath River Renewal Corporation. Four community liaisons gave a presentation to an unfriendly, disruptive audience. Dam removal is controversial!

PacifiCorp, owner of the dams slated for removal, has decided to decommission them, citing the high cost of the upgrades required by the California State Water Resources Control Board. Actions short of dam removal will not eliminate the toxic algae that kill salmon and can sicken small children and pets. Property values next to the reservoirs may drop when the dams go, only to rise with river views. Restoring the health of the Klamath River by dam removal and restorative work will, in the long run, benefit all.

*John Bermel
Hornbrook, California*

A NEVER-ENDING FIGHT

Congratulations to Anna V. Smith on her great article ("Reclaiming the Klamath," *HCN*, 6/11/18). It's really well done. I was a biologist with the U.S. Fish and Wildlife Service managing the Klamath River Restoration Program from 1975 to 1980, and I worked closely with the Yurok Tribe, gathering salmon harvest and population data on the river. I then went on to manage the Indian Fish and Wildlife Program at the Department of Interior before retiring in 2005, working closely with tribes all across the country.

So sad to see what has happened on the Klamath and Trinity rivers, and glad to see folks like you are around to document the never-ending fight for the resource and tribal rights.

*Gary Rankel
Citrus Hills, Florida*

THE POPULATION PROBLEM

I was touched and saddened by Ben Long's eloquent lament on the extinction of the Selkirk caribou ("A quiet goodbye to the Selkirk caribou," *HCN*, 5/28/18). He rightly points out the necessity of ecosystem services provided by healthy forests to avoid the "emergency room" of the Endangered Species Act. He closes by wishing that America can do better for the sake of his grandchildren. What he misses is that grandchildren, in general, are the root cause of the plight of the caribou — that is, population growth. Smaller populations can support sustainable harvesting of forests; ever-growing populations cannot.

More generally, climate change and most other environmental issues are fundamentally driven by world population growth. This fact is not known or is ignored by most people. The National Academy of Sciences' Koshland Science Museum (before it closed) had a fantastic exhibit on the science behind climate change, but had not a word about its main driver: population growth. I am not criticizing Long's focus on local issues and causes. I just want to point out the larger context, and cause, of the plight of the caribou.

*Doug Duncan
North Potomac, Maryland*



High Country News is a nonprofit 501(c)(3) independent media organization that covers the issues that define the American West. Its mission is to inform and inspire people to act on behalf of the region's diverse natural and human communities. (ISSN/0191/5657) is published bi-weekly, 22 times a year, by High Country News, 119 Grand Ave., Paonia, CO

81428. Periodicals, postage paid at Paonia, CO, and other post offices. POSTMASTER: Send address changes to High Country News, Box 1090, Paonia, CO 81428. All rights to publication of articles in this issue are reserved. See hcn.org for submission guidelines. Subscriptions to *HCN* are \$37 a year, \$47 for institutions. **800-905-1155 | hcn.org**





Neighbors on call to help one another

Community health programs are thriving in Haiti, Montana and the Navajo Nation

BY ALEX SAKARIASSEN

In a house perched on the edge of a lush, forested ridge several miles outside Cange, a remote Haitian village near the Dominican border, Joseph Benissois asks a young man a series of questions. The questions come from a depression symptom inventory developed by Partners In Health, a global health nonprofit and Benissois' employer. He is one of many community health workers, non-specialists who provide patient check-ups and administer basic health care in small, isolated communities like this one. They are helping to fill the gaps in mental health

services in Haiti.

Though culturally and geographically distinct, Haiti and sparsely populated parts of Western states like Montana share many commonalities: remote populations, impoverished communities and — particularly in the wake of cuts last year to Montana's mental health budget — a pressing need for local solutions. According to the Montana Healthcare Workforce Advisory Committee, 15 of the state's 56 counties contained no licensed social workers in 2017; 40 lacked psychiatrists.

This year, Montana launched its own community health-worker training curriculum to support statewide implementation of the model. The Montana Office of Rural Health/Area Health Education Council says it's proven to increase health-care access, reduce costs and improve responsiveness to patient needs.

Based on six years of fieldwork and research in Haiti, Bonnie Kaiser, a professor of anthropology and global health at the University of California San Diego, says community health workers could benefit rural Montanans' mental health-care access and treatment. "Reaching people in the communities they live in is a much more successful model for actually linking to care," Kaiser says.

A similar program has been operating on the Navajo Nation since 1968, its vision essentially identical to Haiti's: Train and task trusted locals to staff health care's frontlines. Today, the Navajo program has a \$6.5 million annual budget and employs more than 70 community workers. Their training, however, has only recently started to tackle mental health issues head-on.

Studies on the Navajo Nation and elsewhere frequently cite familiarity with local values, beliefs and social dynamics — and the consequent ability to build patient trust — as among such workers' strongest assets. Back in Haiti, ask Benissois why he does this work and you'll get a shrug. His mustache will curl up at the corners. He will tell you it is his "pleasure" to help people. Then he will continue along the bustling roadside in silence, as if that's answer enough. □

Read more online: hcne.ws/community-health

◀ Joseph Benissois, right, queries Presandieu Charles on his mental state during a home visit in Haiti in June.

ALEX SAKARIASSEN / MISSOULA INDEPENDENT

These stories are part of The Montana Gap project, produced in partnership with the Solutions Journalism Network and local Montana newsrooms.

Snapshot

Are we getting the health we pay for?

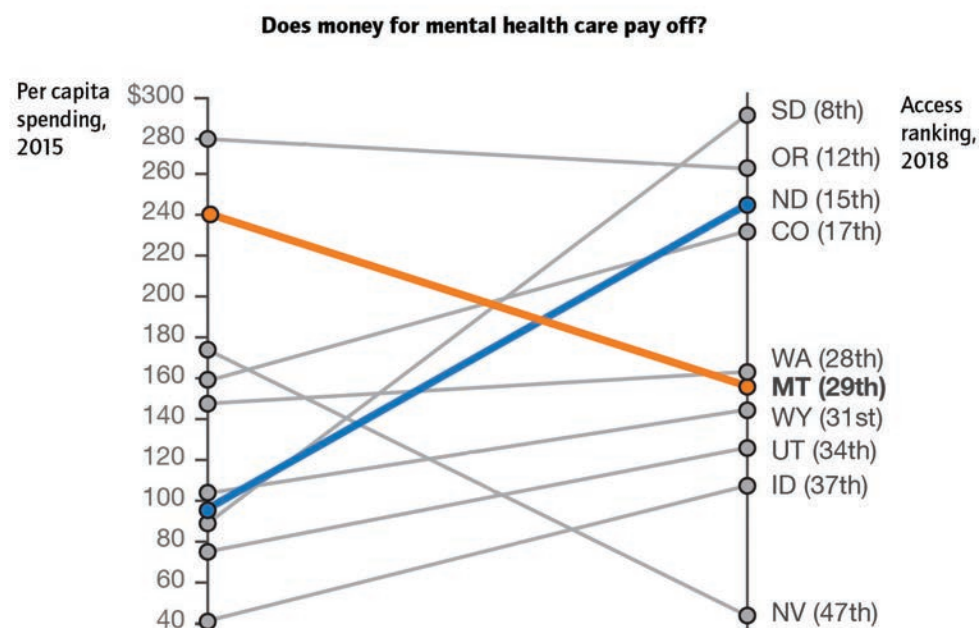
Historically, Montana has spent more per capita on mental health than most of its neighbors. But on measures like suicide rates and access to care, Montana generally ranks below many states it outspends.

Recently, a pair of sweeping changes rocked the economics of the Big Sky state's health-care system. In 2016, a state-level Medicaid expansion brought an influx of money; since 2017, however, state budget cuts have limited services and even shuttered some mental health centers.

As Montana weathers the fallout of those swings, "we need to be focused on prevention and early intervention wherever we can," says Zoe Barnard of the Montana Department of Public Health and Human Services.

KATHERYN HOUGHTON & ERIC DIETRICH

Read more online: hcne.ws/mental-health-funding



Montana spent \$241 per capita on state mental health programs in 2015 but, three years later, was ranked 29th in the U.S. for its mental health care access

In contrast, North Dakota spent \$94 per capita and was ranked 15th



ALAN STARK/CC FLICKR

THE LATEST

Backstory

Scientists have long been baffled by a methane "hot spot" in the Southwest's Four Corners region.

Energy companies maintained that the concentrated plume of potent greenhouse gas derived from naturally occurring methane seeps, as it couldn't be explained by the emissions industry reported from coal, oil and gas, and other operations. In 2015, NASA scientists began investigating those seeps and other sources, such as energy infrastructure ("Unlocking the mystery of the Four Corners methane hot spot," *HCN*, 8/31/15).

Followup

In June, a new study in the journal *Science* reported that **U.S. oil and gas operations emit at least 60 percent more methane than previously estimated** by the Environmental Protection Agency based on industry reports. Natural gas, which produces one-third of the nation's electricity, is usually considered much more climate-friendly than coal. But the new data — which, for the first time, account for abnormal releases such as from faulty equipment — may change that equation.

JODI PETERSON

Howie Echo-Hawk wants to see you squirm

The Pawnee comic draws on his experiences as an Indigenous man

BY SAVANNAH MAHER

Howie Echo-Hawk is halfway through his five-minute set at the Rendezvous bar in downtown Seattle. He has used the word "genocide" six times.

"This is a joke I keep telling because nobody laughs," he tells the crowd. The basement lounge he's performing in has been dubbed "The Grotto," and it feels like one. It's cramped. The air is stale. The audience members, mostly white, shift in their seats.

"Every morning when I wake up and go outside, I recognize that this might as well be the zombie apocalypse for Native people," Echo-Hawk says. "Y'all might as well be zombies."

One woman close to the stage lets out a laugh but quickly stifles it. Her friend turns her attention toward her phone, then her drink. Most comics would call this a bomb. On stage, Echo-Hawk is beaming.

A citizen of the Pawnee Nation of Oklahoma, Howie Echo-Hawk, 28, has been making people laugh all his life. But after the 2016 election, he was compelled to confront what he calls white liberal audiences with his "punishment comedy." Set after set, he seeks to agitate and even irritate with jokes, stories and dispatches from his life as an Indigenous man in America.

Reactions range from anxious laughter to full-blown crying, and that's exactly what Echo-Hawk wants. "It's fun for me to see them squirm," he says. "Because in mainstream colonizer-America, I'm pretty

much constantly squirming, so to put that back on them for a couple of minutes is just fine for me."

Echo-Hawk says he knows of maybe two Indigenous comics, including himself, who perform in Seattle — a scene dominated primarily by white comics. But he doesn't think audiences should be surprised to see Native people on an open-mic stage.

"It's not an illusion, folks, this is another Indigenous comedian," says Danny Littlejohn as he steps up to the mic.

After the show, Echo-Hawk and Littlejohn workshop the joke.

"You should have said that we're not brothers," says Echo-Hawk. "They probably assume that we're related."

"Man, we probably are related," Littlejohn says.

Indigenous communities boast vibrant storytelling traditions that use humor as a tool of teaching and resilience. Take, for example, the story of Maushop, the Wampanoag giant who created the islands currently known as Martha's Vineyard and Nantucket by dumping his sandy moccasins out into the ocean. Or the Kiowa anti-hero Saynday, who enlisted a cohort of Great Plains animals to help him steal the sun.

"It's a part of who we are," Echo-Hawk says. "We're very funny people."

Adrianne Chalepah is a Kiowa-Apache comic and part of a touring stand-up act called Ladies of Native Comedy. For her,

telling jokes on stage is an inherently Kiowa act.

"That's one of our favorite things to do," Chalepah says. "We sit around and we crack each other up."

She's inspired by the stories women in her family told around the kitchen table, weaving in and out of English and Kiowa, when she was a little girl. She says those women could turn something tragic or somber into a cartoon — something to be laughed at and learned from.

"It can feel sometimes like our communities are in a constant state of mourning, like there aren't enough tears to cry about every single tragedy," Chalepah says. "Native humor is part of why we survived genocide. It's allowing yourself to feel a little bit of joy in a moment that might otherwise break you."

Chalepah's material can be dark, like Echo-Hawk's, but never as confrontational or antagonistic. Still, she says, some non-Native audiences aren't quite sure how to react. That uneasiness, she says, is a form of erasure. That's why she likes Echo-Hawk's delivery style.

"He's using his talent to confront subjects like our genocide, what most Americans would otherwise be complicit to forget and deny," Chalepah says.

Echo-Hawk says his relationship with comedy is complicated. It's a release for him — a way to keep painful emotions and experiences from festering in his head. But it's also a source of frustration. He says the role can be tokenizing and taxing. He's only been at it for a year and a half, but he feels jaded already and says he thinks about leaving comedy.

Littlejohn can relate.

"Being an urban Indian comedian is rough," Littlejohn says. "So I'm with Howie on that."

Littlejohn says he's frustrated that audiences need a history lesson just to understand his jokes. Sometimes, he feels pitted against the handful of other Native comics trying to break into the industry.

Tonight, though, he and Echo-Hawk say they feel inspired by each other's sets. "I would have killed to see a Native comedian on TV as a kid. I would've loved that," Echo-Hawk says. "I don't know if I'm gonna get there, I don't even know if I wanna get there. But the idea that I could make that happen for somebody is great." □



Howie Echo-Hawk and Danny Littlejohn, both Indigenous comics in Seattle, chat between sets.

TRISTAN AHTONE/HIGH COUNTRY NEWS

Savannah Maher is a public radio reporter and producer and a citizen of the Mashpee Wampanoag Tribal Nation. [@savannah_maher](#)



In the Southwest, ‘drought’ ... or ...

Why ‘aridification’ is a better term for our new reality

BY EMILY BENSON

In early June, more than 1,000 people near Durango, Colorado, had to leave their homes as the 416 Fire swept across the landscape. Following a dismal snow-pack, the region experienced a spring so hot and dry that the U.S. Drought Monitor labeled the conditions “exceptional drought,” the worst category.

Colorado wasn’t alone. An irregular bull’s-eye of dryness radiated outward from the entire Four Corners region, where Colorado meets New Mexico, Arizona and Utah. These circumstances offer something of a preview of the coming decades: While experts say the Southwest will continue to experience swings in precipitation from year to year, overall, climate change is making the region and its river basins hotter and drier. That means humans must adapt to life with less water. “We have to fundamentally change the mindset of the public, and the way we manage this resource,” says Newsha Ajami, a hydrologist and the director of urban water policy at Stanford University’s Water in the West program. “And one of the ways you do it is, you have to change the terminologies that we use in dealing with water.”

This spring, the Colorado River Research Group, an independent team of scientists focused on the river, labeled the climate transition in the Colorado River Basin “aridification,” meaning a transformation to a drier environment. The call for a move away from the word “drought” highlights the importance of the specific language used to describe what’s going on in the Southwest: It could shift cultural norms around water use and help people internalize the need to rip out lawns, stop washing cars and refrain from building new diversions on already strapped rivers. As Brad Udall, a member of the research group and a water and climate researcher at Colorado State University, puts it: “Words matter.”

Linguists have long argued over the extent to which words and language influence one’s thoughts and worldview. One commonly cited example of evidence that

they do is an Indigenous Australian language that doesn’t use words for left and right. Its speakers orient themselves by the cardinal directions — north and south, east and west — rather than the relative terms typically used in English. Research suggests that in their thoughts and interactions with others, their conceptions of space are radically different from those who speak languages with relative spatial terms. Other studies have probed the ways linguistic differences may influence a wide range of attitudes and outcomes, including support for political policies, entrepreneurial gender gaps among countries, and the environmental attitudes of tourists.

But beliefs are not behaviors. Reframing our understanding of the Southwest’s climate — thinking of it as a place experiencing aridification, a dry place getting drier, rather than a place simply waiting for the next drought to end — will have major ramifications only if it changes how people actually use water.

There is some evidence of the inverse — that when people conceive of the problem as a temporary one, they use more water after they believe the emergency has passed. During California’s recent five-year drought, residents of the Golden State cut their water use by a quarter or more amid intense media coverage and water-use restrictions. This spring, a year after California Gov. Jerry Brown pronounced that drought over, Californians were using nearly as much water as they had before drought was declared.

How people perceive and value water is essential to shaping how much of it they use, says Patricia Gonzales, a doctoral student studying water resources at Stanford University. And those perceptions and values aren’t created in a vacuum. Officials, experts and the media frame and define the issues; social pressures also play a role. For example, when an entire community is aware that water is scarce, people might avoid washing their cars in order to duck the scorn of water-conserving

neighbors. “Everyone can do something,” Gonzales says, even as she and other experts acknowledge that irrigation gulps up most of the West’s water. “But even the small pieces kind of add up when you look at the whole picture of how much water we have available.”

While climate change is already shrinking water resources in the Southwest, we shouldn’t throw out the word “drought” completely, says Connie Woodhouse, a paleoclimatologist at the University of Arizona. It’s important to recognize that even a drier future will contain variability. “We’re going to have periods that are wetter, and we’re going to have periods that are drier, within this baseline that almost certainly will be more arid.”

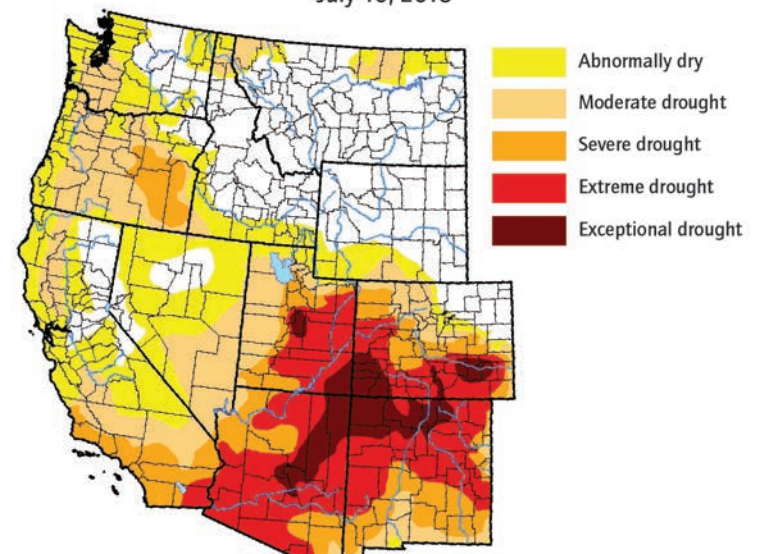
Still, people in the Southwest must adjust to a more parched landscape. “There’s a need to (fundamentally change) the way we talk about these things, to bring attention to the fact that drought is normal,” Gonzales says. In other words, even after the bull’s-eye dissipates from this summer’s Drought Monitor maps, Southwesterners need to keep acting as if that red swath were permanent — a lasting marker of a more arid reality. □

Emily Benson is an assistant editor at *High Country News*. [@erbenson1](#)

Lake Mead’s notorious “bathtub ring” is a stark reminder of current low water levels.

CHRIS RICHARDS/CC FLICKR

U.S. Drought Monitor of the West
July 10, 2018



BRIAN FUCHS/NATIONAL DROUGHT MITIGATION CENTER



Restoration's crisis of confidence

To revive damaged landscapes, ecologists can't look to the past

BY MAYA L. KAPOOR

The sun sets over a pond constructed by Sky Island Alliance volunteers at Camp Rucker, Arizona. The new pond ecosystem will support native Chiricahua leopard frogs, bats and pollinator species.

COURTESY OF SKY ISLAND ALLIANCE

Carianne Campbell remembers the exact moment she fell in love with the Sonoran Desert. As a botany major in college, she joined a class field trip to Organ Pipe Cactus National Monument on the southern border of Arizona, arriving and setting up camp in the dark. Emerging from her tent the next morning, Campbell, who grew up on the East Coast, caught her first glimpse of enormous saguaros, clustered organ pipes and bright desert wildflowers. She knew immediately that she wanted to work in this kind of landscape.

Today, Campbell is the restoration director for Sky Island Alliance, a non-profit conservation organization based in Tucson, Arizona. She leads efforts to re-establish native plant communities in “sky islands” — isolated, ecologically rich mountain ranges that dot southeastern Arizona and New Mexico and northern Sonora, Mexico, and serve as home to some 7,000 species of plants and animals. Under Campbell's guidance, Sky Island Alliance restores riparian habitat that's been overrun by invasive species, such as fountaingrass, which crowds out local species and transforms the desert into fire-prone grassland.

The point of Campbell's job used to be relatively straightforward: She attempted to conserve local biodiversity by re-establishing the wild spaces where native plant and animal species once lived. But given

the planet's rapid climate shifts, the connections between wild organisms and their ecosystems are fraying, forcing restoration biologists, including Campbell, to rethink the purpose of their work. It no longer helps to remember what a site looked like 20 years ago. “We need to be thinking about what it's going to be like 20 years into the future,” she said.

In the early 1980s, ecological restoration was much like cleaning up after a rowdy house party: trying to return a degraded habitat to its former pristine condition. Project managers focused on returning the right numbers and species of plants — and by extension, animals — to places that had been logged, mined, invaded by nonnative species or otherwise altered by people. “I've always been taught that restoration is about taking a degraded site and restoring it back to what it was before the disturbance,” Campbell said.

But increasingly, scientists who study ecosystems, as well as land managers who do restoration work, are questioning that model of ecological restoration, which relies on the idea of a stable “climax community,” even though many ecosystems are always changing.

The West's forests, for one, are much more dynamic than many people realize. Notwithstanding individual tree outliers, such as millennia-old redwoods and bristlecone pines, most North American forest ecosystems are, at most, 400 or 500 years old, according to Don Falk, a forest

ecologist at the University of Arizona. Reasons vary, from a severe drought in the late 1500s to 1800s tree harvesting by Euro-Americans. Today, forests continue to undergo constant change. “Many of the forests we look at are in post-fire recovery, we just don't see it,” Falk said. Outbreaks of insects such as bark beetles, which can decimate forests, add to the constant change. “We want to think of the primeval old-growth forest as having this stable characteristic, until we come along and introduce disturbance ... but the idea of forests in equilibrium is probably wrong.” Indeed, events ranging from volcanic eruptions to the Pleistocene ice age have left their mark on the West's forests.

But with climate change, landscape-level transformations are happening faster and becoming more extreme. As the West becomes warmer and drier, the idea of “recovery” becomes increasingly unrealistic. Instead, ecosystems transform, such as in northern New Mexico, where Gambel oaks may replace pine forest after a fire. “This is really a vexing problem for the field of restoration ecology, because our first instinct — and it's not wrong — is always to want to put it back to the way it was before we screwed things up,” Falk said.

Restoration ecologists, in other words, no longer know how to define success. “The dilemma for the field of restoration is, it's almost damned if you do, damned if you don't,” Falk said. “If you try to go back to 1850, it's just going to be a nonstarter,

Maya L. Kapoor is an associate editor at *High Country News*. [@kapoor_ml](#)

because the climate has moved on, and lots of other things have moved on. But if you're not restoring to a reference condition, then are you just sort of playing God and inventing new landscapes?"

This identity crisis is global: This year, at conferences from Iceland to Washington state, the Society for Ecological Restoration is grappling with the question of restoration during climate change.

Instead of trying to re-establish a checklist of plants and animals, as they might have in the past, some restoration practitioners are now focusing on ecosystem functions. For Campbell, that means worrying about pollinators, including birds, bats and insects, in the sky islands. Across the West, spring is thawing earlier and broiling into summer faster, and the region is getting hotter and drier overall, creating a mismatch between periods when pollinators need flowers and the times and places where those flowers are available. "How can I use various plant species in ways to ease that?" Campbell said.

Campbell keeps climate change and pollinators in mind when she's selecting native vegetation to plant. A low-elevation site might have red, tubular flowers in the spring, for example, and then again in September, but none during the hottest summer months. "I could plug in a species like desert honeysuckle, which would be blooming in that interim time, and providing a more constant source of nectar," she said.

Research on the timing of flowers and pollinator arrivals supports Campbell's concerns, although scientists don't yet know the consequences of these mismatches. Nicole Rafferty, a University of California, Riverside ecologist, studied the flowering schedule of manzanita, a mountain shrub with wine-red stems and glossy leaves, in the sky islands. The timing of the winter rains determines the appearance of manzanita blossoms, which are among the first mountain flowers each spring. But with winter rains arriving later, manzanitas are not flowering in time to feed the earliest native bees. Those later-flowering manzanitas also end up growing less fruit, which mule deer, black bears and other animals eat. Most plants have a wide enough variety of pollinators that they won't disappear entirely, Rafferty said, but the fate of those pollinators is harder to predict.

Overall, Campbell's goal is still to conserve as much biodiversity as possible in the sky islands, where each mountain range has its own unique combination of plants and animals. But she knows she can't simply reassemble historic plant communities. "Certainly now, we (take) a forward view," Campbell said. "How is this (species) going to be durable into an uncertain future, where there's going to be larger, more intense wildfires, and more erosion, flooding, drought, all of those things?"

She's had to adapt how she uses native species, because of the changing rainfall patterns. For many years, Sky

Island Alliance planted native vegetation in the spring, following the winter rains. But two years ago, Campbell noticed that most of the plants died. With spring arriving earlier and becoming hotter, "there's not enough time for those new plants to become established, and then be able to go dormant to make it through to monsoon season and become good members of their vegetation society," Campbell said. She has stopped spring planting altogether at restoration sites, waiting instead until after the summer monsoon rains.

The new focus of ecological restoration is "less about identifying the particular species, and more about the traits," Elise Gornish, a cooperative extension specialist at the University of Arizona, said. Gornish surveyed almost 200 California managers, including master gardeners, ranchers, nonprofits, federal employees and others, about nonnative species. Close to half of her respondents, including most of the federal employees she interviewed, already used nonnative plants in restoration projects, often for erosion control. One reason was that they were less expensive. But almost 40 percent of the managers also contemplated using nonnatives because of climate change.

"It's clear that folks are really, really concerned about climate change and restoration," she said. "A lot of folks wouldn't use the term 'climate change' to describe their challenges; they would say things like 'drought,' 'changing environmental conditions.'" But the bottom line is the same: "Practices people have been using historically, and probably pretty successfully, and things that are now policies among the federal agencies ... are not successful anymore," she said.

Some plant populations, for example, are responding to climate change by

moving up in elevation and in latitude. "What this suggests is that if you're in your site that needs restoration, the plants from that area are probably no longer well-adapted to the new conditions of that area," Gornish said. This raises prickly questions about whether or not to start using plants from farther south and lower elevations, or even from entirely different regions. "People get extremely nervous, and with good reason, when you start talking about moving plants around," Gornish said. The U.S. has not had a good track record with introduced species. "Some of our most noxious invasives, like tamarisk or buffelgrass, are things we planted 80 years ago," she said.

Not that long ago, the inclusion of nonnative plants species in restoration projects "was heretical," Falk agreed. Now, however, those species may be the best-adapted flora for a region's changing climate. But for Falk, managing for functions more than for species is still ecological restoration. It's always been true that, ultimately, "you're trying to maintain the ability of a system to adapt," he said.

For her part, Campbell is learning to reconsider the role of exotic species on the landscape. For example, she sometimes spares bird-of-paradise, an evergreen shrub in the pea family that is native to Uruguay and Argentina, in her restoration planning. A fast-growing ornamental with feathery leaves and bright red and orange flowers, bird-of-paradise thrives in the Southwest's disturbed landscapes, where it can crowd out native species. But removing the plant now may actually rob hummingbirds and other pollinators of meals. "It flowers opportunistically with rain," Campbell said, "so in summer months, it can be the only flowers available." □



Sky Island Alliance volunteers assess the diversity of species in a spring in Graham, Arizona. Evaluating current conditions allows them to determine how best to support the ecosystem. COURTESY OF SKY ISLAND ALLIANCE



WATERKEEPER ALLIANCE
INC./CC FLICKR

THE LATEST

Backstory

Millions of tons of coal ash, a toxic byproduct of burning coal for energy, have long been stored in 1,400 pits around the country, potentially leaching arsenic, lead and sulfates into groundwater. States had patchy regulations, but none existed at the federal level until the Environmental Protection Agency began writing them in 2009 ("The EPA rides again," *HCN*, 1/3/10). Finished in 2015, they included inspection and monitoring requirements, contamination limits, and drinking water protections.

Followup

In July, under brand-new EPA head and former coal industry lobbyist Andrew Wheeler, the agency rolled back many coal ash regulations, despite a March analysis by Earthjustice indicating that most storage pits were contaminating groundwater. **Now, states can end monitoring in some instances, and state officials, rather than professional engineers, can approve storage sites. Some contamination limits have been removed, and ash ponds at risk of leaking can be used longer.** The changes will save industry up to \$31 million per year, according to the EPA.

JODI PETERSON

RESEARCH FUND

Thank you, Research Fund donors,
for helping us reach new summits

Since 1971, reader contributions have made it possible for *HCN* to report on the American West. Your tax-deductible gift directly funds nonprofit, independent journalism.

Thank you for supporting our hardworking journalists.

STEWARD

Virginia Darvill | Mount Vernon, WA
Tracy & Michael Ehlers | Boulder, CO

GUARANTOR

Anonymous (2) | Seattle, WA
Gretchen Augustyn | Claremont, CA
Barbara Deweese | Arizona City, AZ
Steven Lamy | San Gabriel, CA
William Scott | Battle Ground, WA

BENEFACTOR

In memory of Douglas Baker | Denver, CO
John & Suzanne Barr | Bend, OR
Charles & Marjorie Bolles | Boise, ID
Stephen Buckhout | San Jose, CA
Michael Halpert | Vail, CO
John Herrman | Placerville, CA
Osvel Hinojosa | Ensenada, Baja California
Robert Krieger | Riverside, CA
Russell & Janice Martenson |
Ranchos de Taos, NM
Wayne Roth & Kathleen Alcalá |
Bainbridge Island, WA
Thomas & Lucy Shipp | Durango, CO
Greg Tieman | South Charleston, WV

SPONSOR

Anonymous (12) | Idaho Falls, ID
In honor of Tangerine Restaurants | Boulder, CO
In memory of Randy Morrison | Tifton, GA
In memory of John Pung | Honolulu, HI
In memory of Billie Stoker | Milford, UT
Donald R. Ackerman | Ignacio, CO
Steve & Ellen Adelson | Tulsa, OK
Robert G. Amundson | Portland, OR

Janet Anderson | St. Paul, MN
Jeanne Barlow | Delta, CO
Donald & Ellen Bauder | Salida, CO
Paul M. Boden | Albuquerque, NM
John & Anita Briscoe | Taos, NM
Bruce & Barbara Carman |
Corte Madera, CA
Allen J. Christie | San Francisco, CA
Richard & Cathe Finlon | Denver, CO
Robert & Nancy Follett | Highlands Ranch, CO
Candace M. France | Yakima, WA
Sidney Mackenzie Fulop | New York, NY
Waldo Griffin | Los Altos, CA
Carol A. Haller | Corrales, NM
Chris Hoffmann | Salem, OR
Neil Hourihan | Burlington Flats, NY
Donald Jordan | Prescott, AZ
Lawrence & Judy Kolz | Colorado Springs, CO
Caroline Lowsma | Denver, CO
Carol Lubell | Colorado Springs, CO
Kenneth Luttrell | Sacramento, CA
Dorothy McBride | Tacoma, WA
Robert McGimsey | Eagle River, AK
Arnold Miller | Lynnwood, WA
Don & Joan Neptune | Anderson, CA
Urs Ochsner | Boulder, CO
Jim Ridley | Santee, CA
Rich Rozzelle | Aliso Viejo, CA
Tom & Anna Rudd | Seattle, WA
William Schmidt | Tucson, AZ
Sarah Sisk | Lamy, NM
Alan L. Stewart | Carbondale, CO
George Warrington | Cincinnati, OH
Polly Wiessner | Salt Lake City, UT
Burton D. Williams | Fishtail, MT
Park Willis | Salt Lake City, UT
Heidi B. Youmans | Helena, MT

PATRON

Anonymous (17) | Glenn, CA
In memory of Hal Boyne
In memory of Rusty Cheney | Driggs, ID
In memory of J.H. Corbin | Tucson, AZ
In memory of Scott Onweiler | Stockton, CA

In memory of Tom Preston | Marion, Iowa
In memory of Christine Webster Steeples |
Redlands, CA
In memory of Tim Tuthill | Laramie, WY
In memory of Donald & Ida Webster |
Red Bluff, CA
In memory of Jo & Lee Wiegand | Boise, ID
In memory of Virginia Wright | Reno, NV
Charles Aschwanden | Lakewood, CO
Stanley P. Bader | Abiquiu, NM
Susan F. Baker | Waitsburg, WA
Tom Barrett | Chico, CA
Robert E. Benson | Missoula, MT
Richard & Anne Bingham | South Hero, VT
Benjamin Blom
David Bordow | Milwaukee, WI
Steve & Anne Boyd | Rancho Cordova, CA
Gene Edwin Bray | Meridian, ID
Rob & Mary Bricker | Prescott, AZ
Rodger & Diane Brown | Norman, OK
Rogene Buchholz | Denver, CO
John & Jan Ellen Burton | Salt Lake City, UT
Marilyn Burwell | Ferndale, WA
Rob Carrick | Ouray, CO
Wendy Chase | Bellevue, ID
Norma Clark | Coupeville, WA
Kenneth & Jane Cole | Albuquerque, NM
Kathleen B. Connell | Buffalo, WY
Charles & Louise Conrad | Tucson, AZ
Robert Coon | El Cerrito, CA
Ernie & Margo Cotton | Durango, CO
George Crichton | Walnut Creek, CA
Mike & Sue Daugherty | La Grande, OR
Wilma Deen | Yellow Springs, OH
Hobey & Ruth Dixon | Alamosa, CO
Mary Lea Dodd | Bellvue, CO
James Dorrough | Denver, CO
Margaret C. Dreyfous | Salt Lake City, UT
Kathleen Dugan | Eugene, OR
Nancy Dwyer | Littleton, CO
David Elwonger & Diane Luck |
Woodland Park, CO
Josephine Fallenius | Telluride, CO
H.K. Faulkner | Peterborough, NH
John Fields | West Hills, CA
Thomas Filkins | Tenino, WA
Brian Fitzgerald | South Duxbury, VT
Ruth Marie Flucke | Bellingham, WA
Gerald Folland | Seattle, WA
Elaine & John French | Ketchum, ID
Ralph & Judy Friedemann | Jerome, ID
Loren & Jill Fruhwirth | Lakewood, CO
Eric L. & Diane Gay | Ann Arbor, MI
Roy Glauthier | Costa Mesa, CA
Katherine Gonyea | Alexandria, VA
Sue Hall | Centennial, CO
Kimberly Hannula | Durango, CO
Robert Harper | Rock Springs, WY
Evan Haynes | Gaithersburg, MD
Norma Heinz | Denver, CO
Kathryn Hiestand | East Glacier Park, MT



Thomas Holyoke | Fresno, CA
Marcia Hudson | Monmouth, OR
Ed & Mary Husted | Fairbanks, AK
Martin A. Jackson | Lakeside, AZ
Bill Jenkins | Leavenworth, WA
Jan Johnson | Carbondale, CO
Steve Kellar | St. Helens, OR
Robert Kelly | Salinas, CA
Hardin King | Mount Angel, OR
Robert Knight | Missoula, MT
Sue Knight & Glenn Lamb | Portland, OR
Bob Landis | Gardiner, MT
Jamie Lansford | San Antonio, TX
Heather Larronde | McCall, ID
June Layton | Union Springs, NY
Peggy Livingston | Boulder, CO
Stephen Livingston | Anchorage, AK
Jane Lopez | Fort Collins, CO
Donna Lusby | Fort Collins, CO
Suzanne Marshall | Coeur d'Alene, ID
Riley & Pat McClelland | West Glacier, MT
Doyle McClure | Boulder, CO
Louann McCune | Riggins, ID
John & Maryann McGee | Cody, WY
Heather McGregor & Steve Smith |
Glenwood Springs, CO
Joanne McInnis | Winthrop, WA
Barbara Meckel | Denver, CO
Tim L. Medley | Washington, DC
Cecil & Lisa Moreno | Anchorage, AK
William Morris | Santa Rosa, CA
John & Barbara Morrison | Castle Pines, CO
Betty Morrow | Albuquerque, NM
Kim Munson | Fort Collins, CO
Anne Nelson | Watkins, MN
Katie Neuhoﬀ
Deedee & Dick O'Brien | Holladay, UT
Marjorie Perry | Carbondale, CO
Stephen & Rodene Phillips | Albuquerque, NM
Allan Pietrasanta | Bishop, CA

☒ YES! I care about the West!

☐ \$35 Friend	Amount of gift \$ _____	☐ Make this amount recurring
☐ \$75 Patron	☐ Here's my check (or voided check)/1st month's gift for recurring gifts)	
☐ \$150 Sponsor	☐ Charge my credit card	\$15/month minimum
☐ \$250 Benefactor	Card # _____	Exp. date _____
☐ \$500 Guarantor	Name on card _____	
☐ \$1,000 Steward	Billing Address _____	
☐ \$2,500 Philanthropist	City/State/ZIP _____	
☐ \$5,000 Publisher's Circle		
☐ \$10,000 & up Independent Media Guardian		

High Country News | P.O. Box 1090 | Paonia, CO 81428 | 800-905-1155 | hcn.org D016A010

Gwen Moffat was the first female mountain guide in Great Britain. She is also known for her crime novels and barefoot climbing, and for deserting the British Army during World War II.

JIM HERRINGTON

THE CLIMBERS, Jim Herrington
192 pages, large-format hardcover: \$75.
Mountaineers Books, 2017.

If you flipped through Jim Herrington's *The Climbers* without reading the title, you might not realize that the subjects defined rock climbing and mountaineering. In black-and-white photographs, aging climbers pose, wearing oxygen masks or sitting underwear-clad in their kitchens. By capturing its figures modestly, *The Climbers* humanizes the "golden age" of climbing, when skill made up for feeble gear and mountains weren't dressed with bolts and chalk dust. The book opens with a simple portrait of Glen Dawson, who ascended Mount Whitney in 1931. Subjects vary in age and fame: Some, like Reinhold Messner, are clothed in celebrity, while others, like French mountaineer Sonia Livanos, climbed more quietly. According to Greg Child's introductory essay — climber Alex Honnold also contributes a foreword — the golden age was simply "decades of innocence, exploration, and experimentation ... uncertain, like the outcome of a good climbing adventure." Herrington's resolute images ask for a long stare — much like a mountain in the distance.

ELENA SAAVEDRA BUCKLEY

Rolanda A. Port | Albuquerque, NM
Stella Portillo | Sandy, UT
Susan Putnam | Aurora, CO
George Raino | Boise, ID
John Ratts & Elizabeth Stanek | Mosier, OR
Don Rea | Albany, OR
John Reber & Sarah Wynn | Longmont, CO
Kenneth R. Reed | Bishop, CA
William Reffalt | Albuquerque, NM
Louis Regnerus | Bozeman, MT
Edwin & Sylvia Reis | Bethesda, MD
Hap Ridgway | Cody, WY
Jerry Roath
Daniel Robinett & Linda Kennedy | Elgin, AZ
Milly Roeder | Lakewood, CO
David M. Rose | Silver City, NM
Ellen M. Rosenau | Berkeley, CA
John Santangini | Denver, CO
Osman Sanyer | Salt Lake City, UT
William E. Sawrey | Long Beach, CA
William Scheible | Cedar Rapids, IA
Charlynn Schweingruber | Evanston, IL
Randy Selig | Corvallis, OR
Herb Simmons | Visalia, CA
Raymond Smead | Boulder, CO
Cameron D. Smith | San Francisco, CA
Greg A. Smith | Durango, CO
Jerry Smith | San Jose, CA
Morgan Smith | Santa Fe, NM
Richard Smythe | Sister Bay, WI
Tyrone & Deidra Steen | Colorado Springs, CO
Frank P. Stewart | Denver, CO
Kiki Tidwell | Redwood City, CA
Pamela Timmerman | Chimayo, NM
Eric Twitty | Lafayette, CO
Stan Usinowicz | Lake Havasu City, AZ
William Van Moorhem | Klamath Falls, OR
David Viskochil | Salt Lake City, UT
Warren Weaver | Genoa, NV

Neal & Cheryl Wilkinson | Greeley, CO
Norman Williams | Rye, CO
Leslie Wood & Edward Spauling | La Grande, OR
R. Zimmerman | Eagle, CO
Susan Zwinger | Langley, WA
Marjorie True | Paonia, CO

FRIEND

Anonymous (9)
In memory of Ester Johnson | Paonia, CO
T.J. Brown
Dr. & Mrs. Robert E. Carlton | Colorado Springs, CO
Noreen Clifford | Milford, NH
David W. Dirks | Fruita, CO
Linda Grey & Terry Root | Golden, CO
Cindy Guthals | Denver, CO
Gerald Ireland | Highlands Ranch, CO
Christopher M. Ives | Flagstaff, AZ
Frank Landis | Erie, CO
Dan Lincoln | Evergreen, CO
Brian Loughman | Grand Junction, CO
Carole Morain
Dorothy Musil | Denver, CO
Bill Schoenecker | New Castle, CO
Lorin Stearns
Maruyi Wendt | Tucson, AZ
Larry & Chris White | Evergreen, CO
Victor Whitmore | Boise, ID
G.H. Wiegand | Inkom, ID
Jim Wilkinson | Boulder, CO
Phil Williams | Orelan, PA
Susan L. Williams | Las Cruces, NM
George R. Wilson | Coeur d'Alene, ID
Jeff Woodard | Idaho Falls, ID
Kenilynn Zanetti | Rock Springs, WY
Joe Zebrowski | Las Vegas, NM
Linda C. Zeigenfuss | Carson, WA
Dave & Kathy Zezulak | Davis, CA

A welcome to our new intern

July has been a busy month here at *High Country News*. While some staff members have begun to pack their belongings for the move to Gunnison, Colorado, where we are setting up an experimental satellite office, others have spent the month attending conferences and speaking engagements around the country. In the midst of all that hustle and bustle, we've had the pleasure of welcoming a new intern to the team.

A graduate of Yale University, **Elena Saavedra Buckley** comes to *HCN* with a degree in humanities and a penchant for long-form journalism. The Albuquerque native first tapped into her creative muse for a classical music blog she started in high school, which eventually led to an internship at NPR. At Yale, her passion for journalism led her to serve as the editor-in-chief for *The New Journal*, the school's creative nonfiction magazine, where, she says, many weekends were spent laying out the pages in her college apartment.

At *HCN*, **Elena** says she hopes to craft stories about the West's changing dynamics and "how people are experiencing climate change in more localized ways." In college, for example, she focused her thesis on a small town in New Mexico that was transformed into an anti-terrorism facility, an experience that has her itching to write about how militarization has impacted communities across the West.

Meanwhile, *HCN* editors **Tristan Ahtone, Graham Brewer, Ruxandra Guidi, Kate Schimel, Anna Smith** and editorial fellow **Jessica Kutz** attended the 2018 joint conference of the National Association of Hispanic Journalists and the Native American Journalists Association in Miami. There, **Tristan** was re-elected to the NAJA board of directors, and will be serving alongside **Graham** and **Bryan Pollard**, who was re-elected as president of the association and serves as a member of *HCN's* board of directors, as well.

Back at our headquarters, in Paonia, Colorado, we have greeted a number of visitors. **Stephanie Thliveris** from Doylestown, Pennsylvania, and her niece, **Lyndsey Kirchner**, from New Orleans, took a break from picking cherries at their family's annual Berg harvest and get-together. The various Berg relatives gather in Paonia each summer to help out on the orchard, which has been in the family since the 1940s. Stephanie's Buckingham Friends School is part of the HCNU program, which delivers free magazines to classrooms, and she's hoping to connect with other educators to learn how they use *HCN* in their classrooms.

Finally, we have one correction to make. Our cover story "Little Weed, Big Problem," (*HCN*, 6/25/18), incorrectly stated that GMO creeping bentgrass escaped from test fields during an August 2013 windstorm. It was actually a 2003 windstorm. We regret the error.

—Jessica Kutz, for the staff



Intern Elena Saavedra Buckley, the newest addition to our editorial staff.
LUNA ANNA ARCHER/HIGH COUNTRY NEWS

What Are We Doing Here?

Drought, dread and family in the American Southwest



Four years ago, my fiancé, Colin, and I decided to move to New Mexico. We had been living in a secluded river valley in western Colorado, but both of us were venturing into self-employment and thought it'd be easier in a bigger town. So we rigged our pickup with a load the Beverly Hillbillies would have admired — furniture, lamps, buckets full of pottery glaze — and drove south. We crossed the Chama River, turned left into the Española Valley, and stopped at a Lotaburger for the cheap thrill of green chile on a fast-food cheeseburger. The burger was bad but the chile was hot, and I was happy. I'd waited my whole life to make this move.

Every summer of my childhood, my family had made a similar migration, leaving our duplex in Illinois and driving West. The drive was awful and awfully long. When you're stuck in them, the monotonous plains of Oklahoma feel like an inescapable vortex. But they were worth it for what came after. We'd spend a couple of months in the scrappy adobe house on a hill in Santa Fe, New Mexico, where my dad grew up. Though we had a great life in Chicago, this house cast a spell on all of us. The hill's edges looked soft and green from afar. Up close, the land was spiny and jagged, a pile of pinkish granite with squat trees and tough succulents. The house was a fawn-brown color, with curved white interior walls and my dead grandmother's purple velvet drapes still hanging from the curtain rods. It seemed even then that though I didn't live here, it was where I came from, the place I always wanted to get back to.

Colin and I are married now. Colin is generous and goofy, a self-taught professional potter with impossibly pale blue

eyes. He is also logical: When I try to eyeball our oatmeal rations before backpacking trips, he suggests I calculate how much we'll need per meal and multiply it by our days on the trail. Colin grew up in Ohio and loves mountains and the space of the Western horizon, but he doesn't pine for the high desert. He notices with annoying frequency how little water Santa Fe has. He likes big trees and he likes to grow food, and he wonders if big trees and homegrown food will exist here in 50 years. Or in 20. Or in 10. These are reasonable concerns, I know. I'm a journalist who covers climate change, and I've written thousands of words about the Southwest's hot, dry future. Yet whenever Colin fretted, I found myself punting, offering half-baked reassurances that we'd be fine.

And then this year, winter never came. I watered the trees in our yard in early February. On April Fool's Day, I hiked to 11,000 feet without snowshoes. A friend and her husband, who were planning a spring trip to Montana, said they wanted to scope it out as a place to live. "We can't have all our money tied up in property in a place that's going to run out of water!" she told me.

I began to worry, too, that after a long and frequently distant romance, I'd married us to a town without reckoning with the particulars of its future. How likely is this place to become barren? How soon? Will we have the tools to endure it? We'd eloped.

Now, in this rapaciously dry year, a quiet question grew louder: What are we doing here? I felt a sudden need to understand what Colin and I stood to lose as the heat intensified and the world dried out. And I wondered if we should leave.

FEATURE
BY CALLY
CARSWELL

PHOTOGRAPHS
BY STEFAN
WACHS



My husband
notices with
annoying
frequency
how little
water
Santa Fe has.
He likes big
trees and he
likes to grow
food, and he
wonders if
big trees and
homegrown
food will
exist here
in 50 years.
Or in 20.
Or in 10.

By the end of the century, some say, the amount of water in the Southwest's rivers could well plummet by 50 percent.

AFTER OUR WEDDING, Colin and I planted an elderberry bush, his favorite plant, in our yard in Santa Fe. We had found a variety native to New Mexico, and our parents had added soil from their homes to the plant's pot during the ceremony. Putting it in the ground was our first act as homeowners.

We had started to look at real estate soon after moving, though Colin was reluctant to make the financial and physical commitment. I had promised that our move to New Mexico didn't have to be final. We'll give it five years, we said. We looked at loads of houses before we found one that met Colin's unlikely conditions: a passive-solar design for less than \$100,000. It was a bank-owned wreck with a leaky roof, a root-choked sewer line, a bathtub that drained into the yard through a haphazard hole in the wall, and a mess of once-wet dog food still caked to the kitchen floor. Yet it had "good bones," as they say, and we knew right away that it fit. More than money, we had time and the innocent enthusiasm of first-time renovators.

We thought we'd move in within months. Instead, it took more than a year. I learned how to tile and chiseled fossilized gunk from the floors. And Colin got to entertain his fantasy of raising his own house, rebuilding walls, replacing windows, building a shower, plumbing sinks. Realizing our dreams, we learned, was sometimes a giant pain in the ass. We laughed about how unreasonable it was to move, become self-employed, get married, and buy a fixer-upper, all within six months. But really, we were proud of ourselves.

Still, neither of us slept as well as we used to. We were stressed by our irregular paychecks. We'd begun a splintered conversation about having children. Our house was on a well. At first, we thought this was a liability, but people told us it was an asset: In Santa Fe, city water is expensive and well water is free. We looked into hooking up to the city system anyway, but it would have been pricey, and the guy who replaced our sewer line advised us to just wait until our well ran dry.

Conversations like this felt like little warnings. One truism about the future is that climate change will spare no place. Still, I suspect the threat of warming feels more existential in New Mexico than it does in Minnesota, the land of 10,000 lakes. Drought has gripped the Southwest for 19 years, more than half my life. It's been dry in two ways: First, less water has fallen from the sky. And second, it's been unusually hot. In an arid climate, heat is like a steroid, amplifying the atmosphere's power to suck moisture from plants, soil, rivers and human skin.

By the time we arrived in Santa Fe, the Jemez Mountains west of town had become an archetype of the murderous impact climate change will have on

forests. Drought, heat and insect outbreaks had killed 95 percent of the old piñon pines over large portions of the southeast Jemez, and where unusually hot fires torched hundreds of thousands of acres, ecologists worried that the forest might never grow back. This year, the moisture in living trees in the Santa Fe National Forest has hit levels lower than those you'd find in lumber at Home Depot. The fire risk was so high by June 1 that the U.S. Forest Service closed all 1.6 million acres of the forest to the public.

The forecasts for our water supplies are equally grim. The Colorado River's flows are down about 20 percent since the start of the drought, and scientists believe the remarkable heat is responsible for up to half of the decline. By the end of the century, some say, the amount of water in the Southwest's rivers could well plummet by 50 percent.

We could see the power of the parched air and scorching sun in our own yard. Our elderberry seemed to melt in the midday sun. It sacrificed limbs, their leaves shriveling brown and crisp. *Is it a bad sign if our wedding plant dies?* We joked about it, but it felt like an omen. We gave the plant extra drinks, and Colin built it a shade structure. Last year, he divided its roots, and he transplanted part of it into the shade this spring, a kind of insurance against death.

ARIDITY, IN ONE WAY OR ANOTHER, has pushed or drawn people to New Mexico for centuries. Pueblo peoples came in part because a punishing drought strained their societies in the Four Corners and it was time to start anew. In the late 1800s, white Easterners came because the aridity healed. These so-called "lungers" suffered from tuberculosis, and doctors believed that dry air and sunshine could sap the damaging moisture from patients' lungs. Albuquerque advertised itself as the "heart of the well country."

My mom's family moved from clammy Illinois to Albuquerque in the 1960s to give her mother, Ann, relief from arthritis, while my dad's family came for art and adventure. In the 1940s, his parents, Polly and Thornton Carswell, were living in Carmel, California, a countercultural refuge from their buttoned-up hometown of Springfield, Illinois. Polly was a free spirit, a weaver, who kept a few demure beige dresses to wear back to Springfield. Out West, she wore flowing skirts, colorful aprons, heavy turquoise jewelry and orange lipstick, carrying a basket instead of a purse.

In the story I knew, Polly and Thornton took my dad, Rodney, and his brother, Courtney, on a camping trip to Santa Fe. Polly loved New Mexico instantly, with its mix of Native American, Spanish and Anglo cultures, its beaderns, painters and miscellaneous misfits. They pitched their tent in a state park outside of Santa Fe and chatted

up the caretaker, who told them he was retiring. Why not take his job and his lodge? They drove back to Carmel, and packed up their life.

They took over the caretaking responsibilities and ran a sandwich shop for skiers. They eventually moved to town and started a restaurant, which is still in the family. They screen-printed the menus and hosted jazz concerts there, and when business was slow, they pulled the boys out of school and took road trips through Mexico. They bought the house on the hill and were laid to rest beside its back door.

Their story taught me about where I came from, both the place and the people: brave, adventurous, entrepreneurial folk who took risks and led lives that were, above all, interesting. Yet when I asked my family about this story recently, hoping to understand it better, another version emerged. Thornton told my Aunt Linnea that the family had moved to New Mexico in part for protection from Polly's troubled mind. Once, when my dad was an infant, Thornton found Polly carrying him toward the ocean, intending to give him to it, to let the waves swallow his tiny body whole. In this version of the story, Thornton came here to escape the ocean, drawn by the sense of security that came not from what New Mexico had, but from what it lacked: too much water.

I LIKED THE ARIDITY for more superficial reasons. Midwesterners describe the summer air as "sticky." It sucks clothing to your skin like a leech, and it's relentless. When the sun sets, the sticky stays. In Santa Fe, sweat evaporates in an instant, and the sun's glare is escapable. You go up in elevation, find shade, or wait for dusk, when you are likely to need a sweater. "The weather in Santa Fe is awesome, except that it doesn't rain," Colin remarked one cool April morning over breakfast. "Except it's awesome that it doesn't rain."

As this spring wore on, though, the thirsty days piling up, this force that had lured my family here with its power to heal, and apparently, to protect, began to feel like a real threat. Halfway across the world, amid another deep, multi-year drought, the residents of Cape Town, South Africa, were anticipating "Day Zero," when the city's taps would run totally dry and residents would have to line up for water rations. Could that happen here? And if it did, what would become of this home we were building? The house was our shelter, our first big project together, but it was also a foundation. We'd both chosen fulfilling careers that paid poorly, and if we wanted to travel, go out to eat, support a future child, make self-employment viable long-term and generally not live in perpetual fear of our bank balance, we figured we should grow the modest money we made. The house would help us build a life. Unless it handcuffed us to a place running short on



There's no place like home

Climate change hits close to the heart for many northern New Mexicans

Don Bustos

Don Bustos farms the same Española Valley land his ancestors did 400 years ago. Water is delivered via *acequia*, a traditional ditch system managed by a collective of irrigators. **"The whole community lives or dies by the decisions made along the acequia,"** Bustos says. "They're the first form of democracy in the U.S."

Bustos' farm is doing OK this year, but he's concerned about the future. "I don't think all agriculture is going to survive climate change in the Southwest," he says. "We're going to have to really articulate the reasons water has to stay in agriculture." Bustos believes growing your own food is "an act of freedom," and essential to long-term resilience. Plus, northern New Mexico would be a fundamentally different place without farming and *acequias*. "We can make more money building houses," he says, but what if the cost is culture? "If we lose that, we just become another Dubai in the middle of the desert."

PHOTOGRAPHS
BY STEFAN
WACHS

Claudia Borchert

Claudia Borchert grew up in hilly, green eastern Kansas. She's lived in Santa Fe for 30 years, and has worked on water issues for the city and county for over a decade. Santa Fe is not in imminent danger of running out of water, she says. Nevertheless, "I'm likely to become a climate migrant. Four months of no rain just doesn't suit me."

Borchert served on a recent working group to advise the mayor on sustainability issues. Thanks to recent changes in its water supply and management, the city doesn't have to impose water restrictions on users this year. But the group has proposed implementing additional conservation measures and water restrictions during drought anyway, to satisfy the strong local desire for action. "There was a feeling of, **we want to worry about it, we want to do something**," she says. "People want to take some personal responsibility."



"On a personal level, yeah, this is frightening. I've never seen it so damn dry. But I'm feeling more bullish about our ability to be sustainable with diminishing resources."

—Kim Shanahan, the head of the Santa Fe Area Home Builders Association

one of life's most basic necessities.

I got in touch with Kim Shanahan, the head of the Santa Fe Area Home Builders Association, to gauge how reality-based my fear was. It wasn't that long ago that the developers and contractors he represents had faced their own demise. In 2002, a nail-bitingly dry year that followed several pitiful winters, Santa Fe's aboveground reservoirs dipped precipitously low, and the city was draining groundwater through its wells at frightening rates. The city implemented water restrictions, and the citizenry aimed pitchforks at developers. If there wasn't enough water for the people already here, they felt, there wasn't a drop to spare for new homes. The city council debated whether to stop issuing building permits.

This year, though, for whatever reason, the city didn't seem to be facing imminent crisis. Were water cuts or construction moratoriums on the horizon? Shanahan didn't think so, and he told me something had changed: toilets. To deal with the water shortage and to avoid a building moratorium, the city purchased 10,000 low-flow toilets and offered them free to anyone who would replace an aging one. Old toilets use as much as 5 gallons per flush, while toilets manufactured since the mid-1990s use 1.6 or less. The city also required builders to replace toilets in existing homes and businesses before they could pull permits, so that the savings offset the water use of new construction. Then the city added a water conservation fee to utility bills that funds rebates for things like efficient clothes washers, fixtures and rain barrels. The water saved through the program goes into a "bank," and today builders have to buy offset credits from it so that water use doesn't rise with new construction. All this has allowed the city's population to grow even as water consumption has declined. Combined with rules that limit outdoor watering and pricing that incentivizes conservation, Santa Fe has reduced its per capita consumption from 168 gallons per day in 1995 to 90 today. Crucially, it has also diversified its supply, piping water from the Colorado River Basin to the Rio Grande, allowing the city to rest wells and turn groundwater into drought insurance. So far, it's worked.

"On a personal level, yeah, this is frightening," Shanahan admitted. "I've never seen it so damn dry. But I'm feeling more bullish about our ability to be sustainable with diminishing resources."

The city doesn't have much choice but to try. An in-depth 2015 study of the risk climate change poses to Santa Fe's water found that as the population continues to grow, the city and county's supply could fall short of demand by as much as 3 billion gallons by 2055. That's a lot — about equal to the city's current annual consumption. Another sobering reality: Among Southwestern cities, Santa Fe's

water supply is considered relatively secure because its sources are diverse. Recently, a couple of rural New Mexico towns with poor infrastructure and little money have temporarily run out of water, or come close.

Strangely enough, though, learning all this made me less fearful. It helped to define the problem, and reminded me that we were agents in this mess, not blind victims. In that sense, in Santa Fe the drought had a strange upside: It forced the conversation. And the result so far seems to prove journalist John Fleck's principle of water: When people have less, they use less. Even my husband was more adaptable than I'd expected, worrying as I had that the high desert would never satiate his desire for leafy canopies and grapefruit-sized garden tomatoes. He told me recently that, when we started looking at houses, he decided: Screw the consequences. "Look, if we all run out of water and lose everything," he told a friend, "that's just going to be part of our story."

Colin had confronted the uncertainty by making peace with it. I was searching instead for objective information to confirm my fears that our move was misguided, our own act of climate change denial. But the question of whether we should stay or go was turning out to be complicated; even the angles that seemed straightforward weren't. Shanahan pointed out that if water limited the city's growth, the value of our home might go up. That's how supply and demand should work, Grady Gammage, a lawyer, water expert and sometimes developer in Phoenix, told me. But the idea that there's not enough water to build houses? "That's going to scare people, so it might constrain demand." Claudia Borchert, Santa Fe County's sustainability manager, remarked over coffee that she'd just fielded a call from an anxious homeowner asking if his property value was safe. "Boy, in the short term, yes," she told him. "In the long term, all bets are off. It won't necessarily be that there's no water, but will people want to live here?"

It occurred to me that the drought is a little like the Trump presidency. You know it's bad, and that it could herald much worse. But in the present moment, life feels strangely normal. Sure, draconian water shortages and the demise of our democracy are real possibilities — not even distant ones — but you're not *really* suffering. Not yet. It's hard to tell how much you will. If this is your reality, as it is mine, you're probably not an immigrant, or a farmer, or a tribal member, or poor, or sick, or brown-skinned. You're lucky. The crisis is real, and it's not.

IN THIS LIMBO, I felt a melancholy that was both hard to identify and hard to shake. A hot day no longer felt like just a hot day, something that would pass. On a cloudless Saturday in May, shoppers



Tom Swetnam

University of Arizona fire ecologist Tom Swetnam and his wife, Suzanne, recently retired to forestland outside Jemez Springs. This is Tom's home turf, and it's near the site of one of the Southwest's most serious recent blazes — the 2011 Las Conchas Fire, which he and his colleagues believe foretells the bigger, hotter burns to come. "When I first bought this place, several of my friends in the fire science community said, 'You bought *where*?' " he recalls. "The reality is we could lose this place tomorrow."

But Swetnam doesn't buy the argument that people shouldn't live in the forest. "These landscapes have been livable in the past, and we can get there again," he says, by allowing certain fires to burn and thinning overgrown stands. For him, **it's a landscape of hope** more than fear, with one caveat: If warming spikes by 4 or 8 degrees Celsius — around 7 to 14 degrees Fahrenheit — "I don't know where is safe."



Santa Clara Pueblo Gov. J. Michael Chavarria

The Santa Clara Pueblo Reservation runs from the Rio Grande to the Jemez Mountains. Recent wildfires have burned 80 percent of the forest there, putting the tribe's watershed at risk and transforming its ancestral landscape.

In adversity, the tribe has looked to its past and the power of prayer for guidance. "We've lived here and been resilient to change over time," says the pueblo's governor, J. Michael Chavarria. Take first contact with the Spanish in the 1500s. "They hurt our women, they killed our children, they killed our traditional leaders. They told us, 'If you don't convert to Christianity, you're ... basically nothing.' So our religion, the culture, went underground. But **we kept strong, and we're here today.**"

Now, the people are investing in forest restoration. "We can't just pack up our bags and leave," Chavarria says. "The whole reservation is considered a place of worship, a spiritual sanctuary. So it goes back to remembering who we are, and where we come from — and not to give up."



Marilyn & Ed Winter-Tamkin

For years, Marilyn and Ed Winter-Tamkin talked with friends about leaving Santa Fe. They worried about water scarcity, fire and toxic waste from Los Alamos National Lab's nuclear research. Then came severe fires around Los Alamos and the widespread death of the state's piñon trees. In 2013, the Winter-Tamkins sold their house and moved to Bellingham, Washington.

But they were homesick for their

friends and community, and a year ago, the couple moved back. "I've heard it said that when you leave here, they tie a rubber band to your leg, and at some point, they snap it back," Ed says. **"This is our place."**

"Every place has their problem," adds Marilyn. "In Bellingham, we were at the base of a volcano. We know what the pimples are here — it's the poisons from Los Alamos and the drought. We'd rather go down with those issues with our friends, our community and near our family."



Luis Torres

Luis Torres grew up on a subsistence ranch in northern New Mexico, a place his seven brothers hoped to escape. But Torres loved his home mountains, and with only a high school degree, leaving never seemed an option. When he was young, working for a time on Forest Service wildfire crews, all he needed was a horse and a chainsaw to earn money. Now, he's a community organizer for environmental groups, who hire him for his knowledge of place.

Torres lived through a deep drought in the 1950s, but this one feels different. "I look at hillsides where whole piñon ecosystems die. When we get rain again, something'll come back, but not those trees." And he worries about his grandson, who wants to follow in his wildfire-fighting footsteps. "I say, 'Stay away from that,'" Torres explains. "From what I see, **it ain't your grandfather's old fire.** It's more dangerous. These are explosive, bomb-type fires." (Luis Torres is a *High Country News* board member.)



Lesli Allison

Lesli Allison's mother lives alone in Allison's childhood home near Pecos, New Mexico, in a canyon with a high risk of fire. Growing up, "we never worried about fire," Allison says, "but now I fear for her safety." Allison's own home is vulnerable, too, and she worries about her son when he's home alone because a fire could block the exits to their rural subdivision.

Allison is a former rancher who now works

on private-land conservation. "I sometimes dream of buying a small farm in some other part of the country with good topsoil and moisture," she says, "just to have the feeling that I could grow food and not worry about water or forest fires." But New Mexico is home. It would take a lot for her family to leave, she says. "Sometimes I imagine that if water shortages end up driving other people away, there would be enough water for those of us stubborn enough to stay." **CALLY CARSWELL**

at a plant nursery gripped about how Santa Fe was becoming like Albuquerque, the sweatier city to our south. The heat seemed imbued with finality, a change that could not be undone.

My grandmother Polly died the year before I was born. After my dad's birth, she suffered bouts of what the family calls "sickness." Her illness was mental — schizophrenia, manic-depression, or some other condition doctors didn't understand. With her glasses on, she could see St. Peter. She wailed in bed. One night at the hospital, she continued to wail after doctors had pumped her full of enough sedatives to, as they told my parents, "kill a horse." Yet she was also a magnetic personality. At the restaurant, Thornton was the workhorse and she the muse. Sometimes, she spent the entire lunch service sitting and talking with a single customer.

My parents used to rent the house on the hill during the school year. Once, a renter abruptly moved out mid-lease, saying that Polly's ghost had appeared over her bed in the middle of the night, growling at her to "*get out.*" As a kid, the haunting didn't scare me. I thought it was awesome, and hoped it was real. I secretly hated the renters: Nice as they were, I didn't want them in our house or on our land.

My attachment to the place was always instinctual. My parents occasionally talked about selling it, daydreaming about what they'd do with the money. I reacted to these conversations defensively, like a coiled snake. I'm an only child, and I told them that when they died, it was what I would have left of my family. The house and the land would be my memory.

"*Querencia*," the late New Mexico poet and historian Estevan Arellano has written, "is a place from which one's strength of character is drawn. Folklore tells us that '*no hay mejor querencia que tu corral*,' there is no better place than your corral — a typical saying that alludes to where someone is raised, the place of one's memories, of one's affections, of things one loves and, above all, where one feels safe."

Staying put may not mean that Colin and I lose what we've put into our home, and it may not mean running out of water. But it may mean bearing witness to the slow death of the Rio Grande. It may mean biting our nails with the rest of the city every June, hoping this won't be the year that a mushroom cloud of smoke rises from the Santa Fe Mountains, which are primed for a destructive fire. If the mountains do burn big and hot, and the tourists that are Colin's customers stay away, it may mean recalibrating his business plan. It may mean longer drives to reach green mountains. It may mean more summer months when we can't escape to the cool of the forest because the forest is closed. And it already means grappling with the

more unsettling feelings that accumulate from these smaller worries.

In 2005, the Australian philosopher Glenn Albrecht coined the term “solastalgia” to characterize the peculiar modern condition caused by circumstances like these — “a form of homesickness one gets when one is still at ‘home.’” *Solastalgia* describes a loss that is less tangible than psychic. “It is the pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault,” Albrecht writes. “It is manifest in an attack on one’s sense of place, in the erosion of the sense of belonging to a particular place and a feeling of distress about its transformation.”

When the drought began in the late 1990s, my parents and I had stopped spending summers in Santa Fe. They’d opened a restaurant in Chicago, a business it’s hard to leave for even a day. A couple of years into the drought, my uncle called to report that the piñon trees surrounding the house on the hill were dying. My parents and I had been pissed off when rich people changed the landscape by building prominent houses across the arroyo. But the news of the tree die-off inspired different feelings — apprehension and a kind of fear. My dad said he was afraid to go back.

THE TOTAL TRANSFORMATION OF LANDSCAPES — and of a community’s sense of place — isn’t an abstract possibility in New Mexico. It’s already happened to communities in the Jemez Mountains, where a series of big, hot wildfires have torched the forests. And so on a Sunday afternoon, I visited a woman named Terry Foxx at the home she’s evacuated twice during recent burns, interrupting her afternoon sewing to ask about the aftermath.

Foxx has studied the fire ecology of the Jemez since the 1970s, and after the 2000 Cerro Grande Fire, which burned more than 400 homes in Los Alamos, she also became something of a community therapist. She collected fire stories and published them in a spiral-bound book. She gave community lectures on how life returns to the forest, and about the spiritual toll of landscape loss.

“There was grief, just intense grief,” Foxx told me. “Some people would say, ‘I have no right to be grieving because so-and-so lost their home.’ I thought, wait a second, we have all lost something. It was that mountain that used to have trees on it.”

North of Los Alamos, Santa Clara Pueblo has endured even more devastating fires, with three blazes scorching 80 percent of its forest in the last 20 years. The most destructive, the 2011 Las Conchas Fire, incinerated an entire watershed, the tribe’s spiritual and ancestral home. “People freaked out right after it happened,” Porfirio Chavarria, who is from Santa Clara and works

on wildland fire for the Santa Fe Fire Department, told me. “It felt like this was never going to repair itself.”

But with time, the feeling shifted in Santa Clara, a close-knit, deeply rooted community, where the cliff faces preserved 1,000-year-old dwellings. People found solace in one another and in their history, Chavarria said. “Those communities that feel like they have a sense of place, or culture, or something that binds them all together,” he explained, “they are more resilient to say, ‘This has happened, we feel bad, we need to think about how we go forward.’” Nobody thought about leaving.

Some people in Los Alamos did flee, though. Foxx told me about one couple who left because they loved trees and couldn’t stand to look at a mountain of blackened sticks. They moved to Colorado, right back into the pines. Others rebuilt, the fire strengthening their resolve to stay. When we experience loss, Foxx said, “It’s like, ‘What can I do?’ You either feel a deep sense of depression, or if you can, you find some way to help.” Two men formed a group called the Volunteer Task Force that rebuilt trails, planted trees and pelted the burn scars with golf ball-sized mash-ups of clay and wildflower seeds made by schoolchildren, nursing home residents and others. It gave people a sense of ownership, Foxx told me, and of hope.

“Don’t get me wrong,” Foxx said. “I believe we need to be doing everything we can to prevent polluting and changing our area. But regardless of what we do, nature is here. I say nature adjusts to change easier than we as humans do.”

The answers I sought, I began to understand, could not be found in climate studies, water plans or market analyses, because my questions, my doubts, weren’t ultimately about logic or pragmatism. They were about love.

AFTER LEAVING TERRY FOXX’S HOUSE, I drove to the forest and hiked to the edge of a burn scar. I sat below a gnarled old ponderosa that had survived the fire, facing a hillside that looked like a moon-cape, and wrote Colin a letter.

Ecologists call wildfires “disturbance events.” In nature, disturbance often gives rise to new life. The large aspen stands in the Sangre de Cristos facing Santa Fe, the trees whose colors help us measure the seasons, are there because a fire raced over the mountain, killing conifer stands whole. My marriage had been through its own disturbance event. For months, our conversation about children had not gone well. I wanted a child, but the idea made Colin anxious. He wasn’t ready yet, and unsure that he ever would be. I was hurt by his reluctance. One night, I blurted out a tearful and angry ultimatum, without knowing whether I meant it. It bruised him in a way that one apology, then another, couldn’t quite heal.

He wanted me to fantasize out loud about how I imagined him as a father, but it was hard for me because the conversation clammed him up; he didn’t give back.

Eventually, though, the difficult conversations grew more honest and empathetic. We turned toward each other, closing the raw space between us, and as we did, we felt more in love. Still, the issue was unresolved. Some days, I was fine with that. Others, I’d be struck by a sudden and profound sadness. The night before had been one of those nights, so I decided to write what was hard for me to say. I told him that if we didn’t have a kid, I still wanted to buy the weedy dirt patch next door together and build a studio and make it beautiful. And if we did have a kid, I wanted Colin to teach them to make buttermilk biscuits, to hear them squeal as he chased them around the yard like a deranged zombie. I wanted that child to feel the same full acceptance Colin gave me. I told him I wanted him to change all the diapers. He cried when he read the letter, and then he baked me a perfect apple pie. He told me he would not change all the diapers.

I began to think that our relationships with places aren’t so different from our relationships with people. They are emotional and particular. Over time, there is tumult. That has been true for as long as people have lived on the side of volcanoes or in deserts or on top of tectonic faults. What’s both hard and hopeful about this new tumult is that, unlike an eruption, a natural drought cycle or an earthquake, it’s not inevitable. The change is the result of the choice we are making to continue our carbon binge.

The disturbance in my marriage had ultimately deepened our commitment to our joined lives. And maybe the same should be true of our relationships with our places. A better response than running might be to spend more time walking the forests and canyons of the landscapes we love, even as they change, to engage more deeply, to fight for them. After all, leaving might not be a form of protection, but just another form of loss.

MY PARENTS RETIRED a few years ago, and their desire to come home overrode any fear of what they’d find there. They’re living in the Santa Fe house again — back in their “corral” — and the tree die-off wasn’t as bad as they’d feared. The junipers are toughing it out, and some piñons survived. A decent number of piñons are even resprouting in the shelter of old junipers.

There was something else, too: A weed that popped up near the front door. My dad didn’t recognize it, but he didn’t pull it up. Then, one day, it erupted in purple flowers. It was a native wildflower called desert four o’clock, and he thought it might be Polly, signaling her approval that they were back. Every year since, it has returned. And every year, it has bloomed. □

“Regardless of what we do, nature is here. I say nature adjusts to change easier than we as humans do.”

—Terry Foxx, fire ecologist and collector of fire stories



Contributing editor Cally Carswell writes from Santa Fe, New Mexico. @callycarswell

This story was funded with reader donations to the High Country News Research Fund.

SHARE YOUR SOLACE

HCN's 2018 Photo Contest

We're dedicating this year's photo contest to the people, places and animals of the West that help you find solace.

Submit photos: Aug. 1-31
Vote on photos: Sept. 1-15

WINNERS will be published and receive gear from our sponsor, Mindshift.

Visit hcn.org/photos18 to find out more, submit photos and vote for your favorite images!



Notice to our advertisers: You can place classified ads with our online classified system. Visit hcn.org/classifieds. Aug. 3 is the deadline to place your print ad in the Aug. 20 issue. Call 800-311-5852, or email laurad@hcn.org for help or information.

BUSINESS OPPORTUNITIES

Internet-based business for sale – Dream of owning your own business, being your own boss, working from home ... this is the one. 928-380-6570, www.testshop.com. More info at <https://bit.ly/2Kgi340>.

Forge and fab shop – with home on one beautiful acre in Pocatello, Idaho. Blackrock Forge – retiring after 43 years! Fully equipped 5,500-square-foot shop, including office, gallery and studios. Details at blackrockforgeproperty.com.

Conservationist? Irrigable land? Stellar seed-saving NGO is available to serious partner. Package must include financial support. Details: <http://seeds.ojaidigital.net>

EMPLOYMENT

Director of Visitor Services and Bookstore Operations – The San Juan Mountains Association in Durango, Colo., is seeking a Director of Visitor Services and Bookstore Operations to lead our visitor information program and manage bookstore operations across southwest Colorado. For a detailed job description, visit www.sjma.org.

Land Conservation Director – Manage, develop and implement all stewardship and land management plans and activities on both private and public lands. Guide and direct comprehensive planning efforts, provide support in identifying conservation goals, and prioritize those efforts. Salary begins at \$68,000 with an excellent employee benefits package. <http://www.walkerbasin.org/>.

Executive Director – Seeking passionate full-time Executive to lead the oldest nonprofit organization in Idaho. Must have knowledge of environmental issues, excellent organizational, verbal presentation and written skills, grant writing and fundraising experience, impressive interpersonal skills, event planning experience and the ability to work independently. College degree and business/management experience preferred. Salary is commensurate with skills and experience. See www.kealliance.org for full job description. Send résumé and cover letter to kea@kealliance.org 208-667-9093.

Conservation Director – Carbondale-based public-lands advocate, Wilderness Workshop, seeks a Conservation Director to help direct and shape the future of public land conservation on the West Slope of Colorado. Details at: <http://wildernessworkshop.org/careers/>.

Bring the West to the classroom

Your donation will help send a subscription to *High Country News* to educators and classrooms like these



"The HCNU program has provided high-quality articles to our field instructor team to help them keep abreast of current issues in conservation, alternative perspectives, and ultimately connect them to a larger community that shares the same value base. HCNU is essential in these

functions, as instructors continually relay to me how grateful they are to be receiving materials that support and strengthen the delivery of their educational programs here in Yellowstone National Park."

— Joshua Theurer, Citizen Science Program Manager,
Yellowstone Forever



"I have been using HCN materials in my environmental, natural resources and related classes for the past 20 years. My students and I are particularly grateful for the HCN classroom subscription program, which keeps them up to date and also provides live-action

materials for both their research and class discussions. And I must say, even for exams. The quality of the articles is very high, the information reliable, and covers an enormous range. They are an important adjunct to what we do."

— Oliver A Houck, Professor and David Boies Chair in
Public Interest Law, Tulane University

Here at *High Country News*, we've made a commitment to provide 10,000 students with FREE subscriptions to HCN both in print and online.

Please join us and help win a \$10,000 matching grant challenge! Visit hcn.org/support/HCNU



Truck driver – Class A & B drivers, pass all DOT requirements and clean driving record. 970-390-2414. dirttaxi@earthlink.net.

Experiential Education Intern/Assistant – Actively introduce students to experiential education, outdoor recreation, and sustainability while engaging and challenging them to learn and participate in these diverse opportunities. Room, board, salary, starts August 2018. Contact: joel.barnes@wasatchacademy.org.

Executive Director – If you are deeply committed to public service and would like to become part of our high-performing, passionate and diverse team, NCAT is looking for an Executive Director in Butte, Mont. Information at www.ncat.org/executive-director/.

Land Acquisitions Specialist, Renewable Energy – Energiakontor US seeks experienced local candidate, must reside in western South Dakota. Send résumé and cover letter to: brenda.moore@energiakontor.com.

Trout Unlimited, Bighorn River Basin Project Manager – The Bighorn River Basin Project Manager identifies and implements projects to improve streamflows, restore stream and riparian habitat, improve fish passage and rehabilitate or replace aging irrigation infrastructure to accommodate fish movement in the Bighorn River Basin in Wyoming. The position also participates in youth education programs, primarily through Trout Unlimited's Adopt a Trout Program, with local school districts. The position is based in Cody, Wyo. katie.becker@tu.org. See www.tu.org for complete job description.

Wildland fire instructor needed Instructor with five years' documented instruction experience, current qualifications, M-410 or equivalent, and able to work as needed for New Mexico nonprofit working with at-risk youth. 505-629-0757. info@wildfirenetwork.org. wildfirenetwork.org.

HOME AND GARDEN

Western Native Seed – Specializing in native seeds and seed mixes for Western states. 719-942-3935.

MERCHANDISE

Lightweight fly rod cases for standard or custom lengths. Rugged protection for backpacking. Affordable pricing. www.fly-lite.us.

PROFESSIONAL SERVICES

Expert land steward – Available now for site conservator, property manager. View résumé at: <http://skills.ojaidigital.net>.

REAL ESTATE FOR SALE

Salmon River, Idaho – 1,800 square-foot, off-grid home on a quarter acre, with 750 square-foot deck, private well, fruit trees, large organic garden. gymnogyps@gmail.com. <https://jzrebski.wixsite.com/salmonriverhome>.

Former retreat center/conservation property for sale – 57 acres in Skull Valley, Ariz., 17 miles from Prescott, year-round creek, swimming holes, secluded canyon, hiking/meditation trails, oaks, pines, garden, greenhouse. House, office building, garage, shop, pumphouse, farm/maintenance equipment. 760-777-0370. atlaspine@gmail.com. <https://ciphercanyonranch.com/for-sale-to-qualified-buyers/>.

Rammed-earth solar cottage in five-home conservation community and botanical sanctuary on 20 acres. beantreefarm.com.

Rustic horse property in New Mexico. 23 acres, off the grid, rustic cabin, organic gardens, fruit trees, fenced. Call 505-204-8432 evenings.

Hand-crafted log home in Teton Valley on 10 acres. Full view of the Grand Teton. 35 miles to Yellowstone and 20 minutes to Grand Targhee Ski Area. 208-709-4470 kwagener@sagerg.com.

Gila National Forest – Nine-plus-acre inholding. Passive solar strawbale off the grid at 7,400 feet. Three bedrooms, 1,200 square feet, \$189,000. 575-313-2599.

Solar-powered home near Capitol Reef National Park – 1,800-square-foot home on 4.12 acres surrounded by national forest and recreational opportunities in a beautiful area (Happy Valley) between Torrey and Boulder. cathy@bouldermountainreality.com, www.bouldermountainreality.com/properties/grover/off-the-grid-in-happy-valley, 435-425-3593.

Triplex, .8 acre, Kanab, Utah – Create a base in the center of southern Utah's Grand Circle of National Parks. Multiple residential property with three established rental units and zoning latitude for much further development. 435-689-0254. cddewitz@gmail.com.

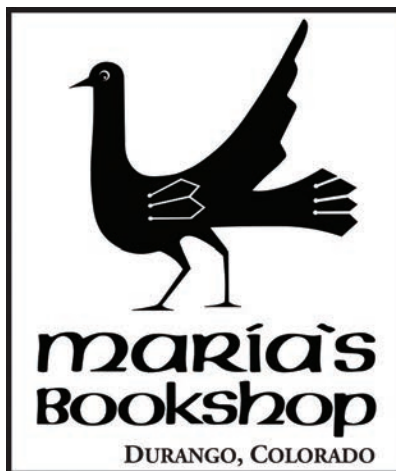
Home on 3.5 acres – Beautiful red-rock country location boasting a remodeled modular home plus three and one-half acres setup for horses. 435-672-2450. rkantrell@frontier.com.

Forty-acre organic farm – Potential fruit/hay with house, Hotchkiss, Colo., Scott Ellis, 970-420-0472, oeais@gmail.com.

Small farm at the base of Mount Shasta, Calif. – Certified organic fruit/berry/veggie/flower farm. Home, barns, garage, separate apartment, more. Just under two acres, edge of town. Famously pure air and water. Skiing, mountaineering, bike, hike, fish, more. \$450K. jardinway@yahoo.com.

TOURS AND TRAVEL

Learning adventures on the Colorado Plateau – Small group, active, adult field seminars with guest experts, plus private custom trip options for your family or group. Canyonlands Field Institute, Moab, Utah. 800-860-5262. www.cfimoab.org.



Camino de Crestone
"Life-Affirming and Life Transforming"
Sign up now for this week-long Inter-Faith Journey of Exploration
Registration Deadline August 18
Be PRESENT – Be AWAKE – Be SILENT
September 16 – September 21
caminodecrestone.com • 970-945-8586

Pickin' Productions & the Kampe Foundation Present

Local Beer Local Cider	11th Annual PICKIN' IN THE PARK	Local Food Local Wine
Aug 2nd Cicada Rhythm Wood & Wire Jordan Evans	Aug 9th John Fullbright Rob Ickes & Trey Hensley Justin Evan Thompson	
Aug 16th Charlie Hunter Trio The Sea The Sea Taylor Hawk	Aug 23rd C.J. Chenier & the Red Hot Lousiana Band INTUIT Pure Word	
KID'S ZONE		Free - 6pm
PAONIA TOWN PARK • PAONIA, CO.		

Did you know we publish stories online that aren't in your magazine?

It's true! We write stories for our website each work day to keep you up to date on the latest news affecting the West.

Visit hcn.org and read all our work.

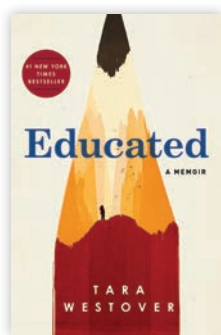
Get our free newsletter and see all our latest stories.

Sign up at
hcn.org/enewsletter



High Country News

Learning the hard way



Educated: A Memoir

Tara Westover

332 pages, hardcover:

\$28

Random House, 2018.

Tara Westover's astonishing debut memoir, *Educated*, chronicles how she grew up on a southern Idaho mountain in a survivalist Mormon family, never setting foot in school, but eventually earned her Ph.D. in history from the University of Cambridge. "There's a sense of sovereignty that comes from life on a mountain, a perception of privacy and isolation, even of dominion," Westover writes. Her father, a charismatic and self-reliant but often unhinged man — imagine Pa Ingalls with a few screws loose — exercises that dominion in myriad ways.

Westover's father, whom she calls by the pseudonym Gene, limits his interactions with the government and the medical establishment to an extreme: He doesn't want his kids born in a hospital, issued birth certificates, vaccinated, or educated in schools where they could be "seduced by the Illuminati." He makes a living as a junk dealer, and trains each of his seven kids to perform dangerous work, using metal-cutting machinery with no safety equipment, and hauling sharp and heavy scraps.

In 1992, when Tara is 5, news of the FBI standoff at Ruby Ridge in northern Idaho spikes Gene's paranoia. He stockpiles weaponry and food and builds a hidden bomb shelter. His preparations intensify as Y2K approaches, an event after which he believes "all would sink into chaos, and this would usher in the Second Coming of Christ." We feel Westover's sense of perplexity and loss when Jan. 1, 2000, dawns and she looks at her father. "The disappointment in his features was so childlike, for a moment I wondered how God could deny him this." A less subtle writer might have caricatured or demonized some of these people,

but Westover writes with understanding, love and forgiveness.

Gene encourages Westover's mother to train as a midwife, assisting a woman who "had no license, no certificates," Westover writes. "She was a midwife entirely by the power of her own say-so." Westover's mother eventually becomes a revered midwife and "wise woman," crafting herbal treatments and essential oils for healing — ultimately launching a business that has become a major community employer by the time Westover heads to college.

Because Gene believes that his wife can heal anything, the Westovers never receive treatment, even for serious accidents and ailments, including hard falls, severe burns, gashes and car crashes. One of Tara's brothers, whom she calls by the pseudonym Shawn, suffers so many head injuries that it's tempting to arm-chair diagnose him with brain trauma; he becomes sadistic and controlling, brutalizing everyone in his orbit, especially women.

Tara's desire to escape Shawn's abuse eventually motivates her to pursue college — aided and encouraged by her brother Tyler, who earned a Ph.D. in mechanical engineering. Brigham Young University accepts homeschooled kids, and Tyler suggests she study for the ACT. Despite learning little beyond how to read and write (the Bible has been her primary textbook), Tara grinds through an ACT prep book and scores high enough to be admitted with a scholarship.

Tara's initial experiences at Brigham Young are a huge culture shock; it's as if she had been raised by wolves and then brought into human society. Tara's roommates are Mormon, but they scandalize

her by wearing sweatpants emblazoned with the word "Juicy" on the derriere. She appalls them, in turn, by refusing to wash her hands after using the bathroom, following her father's instructions.

Westover writes about her studies with extreme humility. She's never heard of the Holocaust and is flabbergasted to learn that black people didn't begin to obtain equal rights until a hundred years after the Civil War ended. She's frequently lost in classes and fears failing, yet performs well enough to keep the full scholarship she needs to remain in school. Her professors, struck by the extraordinary quality of her mind, mentor her, eventually boosting her to a scholarship at Cambridge, a fellowship at Harvard University, and a Ph.D.

Westover chooses history as her focus. She writes: "What a person knows about the past is limited, and will always be limited, to what they are told by others." Westover still loves her family and many aspects of their way of life — including the mountain she grew up on, and her singular mother, "that docile woman" who "had a power in her the rest of us couldn't contemplate." As Westover becomes increasingly dedicated to seeking the truth, though, a confrontation with her family about Shawn threatens to prompt her expulsion from it.

Whatever Westover's father may think, his daughter's life has in fact embodied the ideal of individual sovereignty that he modeled. It's just that her pursuit of self-dominion led her on a quest for knowledge, resulting in a broader perspective than the one offered on the beloved Idaho mountain where she was born. This gorgeous, heartbreaking memoir, the product of the thoughtful reflections of a seeking mind, has the ring of a classic.

BY JENNY SHANK

Supporters of Randy Weaver demonstrate at Ruby Ridge in 1992. FBI sharpshooter Lon Horiuchi was ordered to stand trial on manslaughter charges in the shooting death of Vicki Weaver.

JEFF T. GREEN/AP PHOTO



Except for the frogs

Back then, they were known as mountain yellow-legged frogs, though when I first saw them in an alpine meadow, taxonomy wasn't exactly on my mind. It was the 1970s, and I was just a boy out exploring while my grandparents set up a picnic table at their favorite Forest Service campground near Mount Rose, just north of Lake Tahoe. At least once every summer, they'd drive up for the afternoon. I remember the tablecloth, the pines and firs ringing the campsite, the aroma of the barbecue. But mostly I remember the frogs.

They weren't the tree frogs I routinely saw back home in the Bay Area. They were slightly larger, and an unremarkable earth-tone in color. What made them so memorable was their abundance. Walking along the stream in the meadow, I flushed several with every step. There were hundreds, possibly thousands; I had never seen so many frogs. As a curious boy fascinated by wild things, this place was better than anything I'd ever known. I don't think I've ever been happier.

But the years of picnics and frogs were brief. When I became a teenager, I spent less and less time at family outings. By the time I got my driver's license I was off on my own, exploring elsewhere. And I never saw those frogs again.

Time was not kind to mountain yellow-legged frogs. Their numbers plummeted. The California Department of Fish and Wildlife had introduced trout in numerous high-country lakes and streams, and those fish gobbled up tadpoles with gusto. Worse, chytrid fungus, an introduced pathogen, arrived like the amphibian equivalent of the Black Death. In one watershed after another, frogs disappeared. The population on the flanks of Mount Rose was the only one known in Nevada, but sometime before 2000 it, too, had vanished. Those frogs surely played a role in my decision to return to school for a degree in conservation biology. I read about their demise through the distance of field guides and journals.

In the early 2000s both my grandparents passed away, and that got me reminiscing about our picnics and those frogs, which are now known as Sierra Nevada yellow-legged frogs (*Rana sierrae*). Genetic analysis concluded that those inhabiting the Northern and Central Sierra were distinct from populations in the Southern Sierra and the mountains of Southern California. The species was split in two. Both were eventually listed under the Endangered Species Act, but not before the Sierra Nevada yellow-legged frog had vanished from over 90 percent of its range.

In September 2016, I found myself drawn back to that childhood campsite. I'd done some summer reading, thoughtful pieces on place and time. Maybe it was only nostalgia, but I felt the urge to acknowledge those long-ago outings, which, like so many good things in life, had ended almost unnoticed.

Escaping the pall of the Soberanes Fire and the heat of the lowlands, I headed to the mountains. Finding the place again, however, proved tricky. I didn't know the campground's name and had only a general sense of where it was. Nothing looked familiar on the drive toward Mount Rose, until, near the summit, I recognized a spur road and campground sign. The campground had recently closed for the year, its gate locked. I parked by the road and walked in. Several roads branched out just beyond the entrance. A golden-mantled ground squirrel scolded me, and looking past it, I saw the old campsite. It had been rejuvenated — new picnic table and grill, a bear-proof trash receptacle instead of the old metal garbage cans — but the trees looked just as I remembered.

Beyond, the meadow beckoned. In my boyhood memory it went on forever, but this clearing was hardly longer than a football field. I walked out into it, eyes groping for something familiar. Yet it was my feet that remembered first: I stepped onto some moss and sank, just as I'd done here as a boy who had wondered if he'd hit quicksand. Just ahead lay the stream's headwaters, a rivulet barely a foot wide. Flecks of granite and pyrite sparkled in its clear, shallow water, and just beyond, at the confluence of another tiny stream, was a boulder I recognized like a long-lost friend. Suddenly, everything fell into place, except for the frogs. And without them, how could this place ever again mean anything to a 10-year-old?

My head and heart battled over what to do next. The heart won. For the next hour, I scoured that stream, my heart searching for frogs my head knew were long gone. I returned to the boulder. Something monumental happened to me here all those years ago, and I was torn between jubilation and despair. There's no adjective to describe it; it was akin to bittersweet, but amplified. The time for picnics had passed; both the frogs and my grandparents were gone. But the trees, campsite, and meadow were still here, and so was I. □

Joseph Belli is a wildlife biologist who writes from Pacheco Pass in central California. He is the author of The Diablo Diary, a collection of essays from California's Diablo Range.



REBEKA RYVOLA



President Donald Trump welcomes attendees at his rally for Republican Senate candidate Matt Rosendale in Great Falls, Montana. TONY BYNUM

Sightseeing at the political circus

In Montana, Trump's spectacle draws a crowd — for now



NEWS
COMMENTARY
BY ELLIOTT
WOODS

When Judy Barbelt staggered into the Four Seasons Arena in Great Falls on Thursday, July 5, her husband, Lee, was visibly relieved. They'd both waited several hours under the harsh Montana sun to see President Donald Trump speak, and Judy, in her late 60s, was flushed, sweating and limping. Lee reached out and caressed his wife's shoulder. They wore matching black "America" T-shirts and "Make America Great Again" hats embellished with gold oak leaves on the bills. "Long line?" I asked. Judy muttered an expletive under her breath, then smiled. "I said, 'Frick!'" she joked. "We're hardcore Trump supporters," she said proudly. "You can't buy him, he loves America as much as we do, and he's not a quitter. He would fit in here in Montana."

Judy said she was lukewarm about Matt Rosendale, Montana's Republican candidate for U.S. Senate, on whose behalf the rally was ostensibly being held. But she didn't have any doubts about Rosendale's competition, incumbent Democrat Jon Tester, a farmer from a

small town upstream from Great Falls on the Missouri River. "I think he's tied up with Soros," she said. I asked her where she got that information — Facebook? "I don't trust Facebook," she scoffed, before explaining that she got her news primarily from members-only Facebook groups. "But I'm not going to tell you what they are."

Judy's belief that Trump would fit in here — that he's just an average Joe trapped in a billionaire's fake tan and ill-fitting suit — is pervasive in Montana, as it is in much of rural America, and I have often struggled to understand why my neighbors find it so easy to relate to him. I think of Montanans as generally polite people who are often reluctant to express their opinions or boast. Meanwhile, Trump is loud and bombastic. He is notoriously germ-averse, and one wonders how he'd handle mucking stalls or gutting an elk. However, while I've met plenty of unassuming rancher types in Montana, I've also met my share of loudmouths. Just walk into a bar along

the Rocky Mountain Front and mention how much you love wolves, and you'll see what I mean.

And Montana's image as the last refuge of stolid, respectful rural people belies a history and enduring culture of bigotry that makes Trump's popularity less baffling. The same year that Wilmot Collins, a Liberian refugee, won the mayoral race in our capital, Helena, the state Legislature proposed an anti-transgender "bathroom bill" and passed an anti-Sharia bill, later vetoed by the Democratic governor. I've seen "White Pride" and swastika tattoos and heard racist comments thrown around even in Montana's most liberal towns.

Looking around at the crowd flowing into the arena, however, it was hard to ignore the feeling that Trump's unrepentant rudeness is central to his appeal here. The rally was heavy on T-shirts and buttons with aggressive messages clearly designed to anger "liberal snowflakes," even though such people are exceedingly hard to find at Trump rallies, or any-

WEB EXTRA
Read more from Elliott Woods and all our commentators at www.hcn.org



where else in Montana. A typical example bore crossed AR-15s and read, “I am politically incorrect, I say Merry Christmas, God Bless America, I own guns, eat bacon, and salute our flag & thank our troops. If this offends you, I don’t care. In God we trust.”

When Trump finally took the stage at around 4 in the afternoon, he quickly trotted out Montana Republican Sen. Steve Daines. “Every morning I wake up and thank God that Hillary Clinton is not president of the United States,” Daines said, “and that Donald Trump is.” The crowd roared. Greg Gianforte, Montana’s Republican congressman, also spoke briefly, followed by Matt Rosendale, who said the president is fighting for “those miners down in Colstrip who produce that beautiful clean coal.” There is no such thing as clean coal, and Colstrip is actually in the process of reducing its capacity because of demand for renewables from its biggest customers — Oregon and Washington — but the crowd did not seem to mind Rosendale’s magical thinking. Not surprisingly, Trump didn’t mention that EPA Administrator Scott Pruitt — a climate change denier who sued the EPA on behalf of energy companies as Oklahoma attorney general — had resigned that very morning following months of ethics scandals.

Of the three Montana politicians, Rosendale follows Trump’s model most closely. During a 2014 campaign for the

Republican congressional nomination, he put out an ad that attracted national attention, in which he shot down a drone with a hunting rifle to express his opposition to domestic spying. Daines and Gianforte are typical of the Republican Party that preceded Trump, eager to echo populist sentiments about respecting the flag and the war on Christianity, but also buttoned-up and allergic to controversy (although Gianforte famously body-slammed a reporter on the campaign trail). Daines did not endorse Trump until late in the 2016 primary, and when he finally did, he said, “Donald Trump was not my first choice, he was not my second choice, but I’m going to do all I can to make sure that Hillary Clinton is not elected.” Both Daines and Gianforte refuse to hold town halls in Montana, fearing the kind of confrontation that ensnared former Utah Republican Rep. Jason Chaffetz in Salt Lake last year.

None of the Montana politicians who spoke that Thursday said much of anything about Montana. There was no mention of the farm bill, for example, which is up for renewal this year. The House version would cut millions of Americans from the rolls of the Supplemental Nutrition Assistance Program, or SNAP, also known as food stamps. In Montana, 120,000 people could lose their benefits — roughly 10 percent of the population. (In Cascade County, where the rally took place, roughly 20 percent of children live below the poverty line.) The Senate bill, by contrast, protects SNAP, crop insurance programs and the Conservation Reserve Program, and it has the support of both Daines and Tester. It’s a bipartisan effort that seemed at odds with the rally’s raging rhetoric.

As for Trump’s remarks, they were

similarly devoid of substantive references to Montana, focusing instead on the size of the crowd at his inauguration, the enduring evil of the Clinton family, the sleaziness of the lying media, Elizabeth Warren’s heritage, and the success of Elton John, which Trump said he has managed to surpass without even owning a musical instrument. “I don’t have a guitar or an organ. No organ,” Trump said. “This is the only musical: the mouth. And hopefully the brain attached to the mouth, right?” In a later analysis, the *Washington Post* concluded that 76 percent of Trump’s claims were only loosely, if at all, tethered to fact.

The president spoke for an hour and a half; people started leaving in ones and twos after about 45 minutes. By the one-hour mark there was a steady stream of people flowing toward the door. I wondered what the turnout would be if Trump came to Montana again. Short on substance and heavy on spectacle, Trump plays better in tweets and cable news sound bites, which can be consumed comfortably from home. In Great Falls, I waited for Trump to say something about how the government might help Montana escape the clutches of a substance abuse epidemic that now accounts for over 65 percent of Child and Family Services cases and has cost Montana hospitals nearly a billion dollars since 2010, but all he had to offer were vague commitments to support ICE and crack down on MS-13. In a state with one of the highest suicide rates in the country, where over 13 percent of the population lives in poverty, and where public schools could face over \$20 million in budget cuts next year, Trump joked that Montanans were “tired of winning,” and that constituents had sent Daines to ask him to slow down the

Short on substance and heavy on spectacle, Trump plays better in tweets and cable news sound bites, and you can get your fill of those from home.



Rather than bringing up issues like the substance abuse epidemic in Montana, Trump focused on the crowds at his inauguration, the media and cracking down on MS-13. TONY BYNUM

pace of victories. “I said, ‘Steve, go back to the people. ... Tell them Trump can’t honor that request,’” Trump said.

At one point, Trump said of the crowds at his rallies, “Why do they come?” I feared the answer was a dark one: They come for the same reason mobs have assembled throughout history — to watch the guillotine fall, to watch men fling ropes over tree limbs, to watch things burn. I looked at all the children in the audience, their faces beaming up at their parents as they joined in chants of “build that wall” and “lock her up,” and I felt a profound sadness. This man was a hero to them, a role model. In this simple way, the danger of the Trump presidency goes far beyond his reckless policies: His influence will be generational.

As for what the rally portends about November’s elections, the answer is probably not much. No one I spoke to felt very strongly about Rosendale one way or the other, beyond a vague loyalty to the Republican ticket, and several said they liked Tester and might vote for him. Tickets to the event were free, and I suspected a large number of people turned up just for the show. “I’ve never met a president or been to an event like this,” said Kelly Silverstein, 42, a home nurse’s aide. She came with her elderly parents and wore a pink “Keep America Great” hat, the new slogan of the Trump 2020 campaign. Silverstein said she didn’t follow politics closely, but that she was deeply concerned about school shootings and gun violence, and that she favored stricter gun control. She hoped her son, a student at Montana State University in Bozeman, would stay away from Great Falls forever. “There aren’t good jobs and there’s too much drugs and alcohol,” she

said. When I asked her what she thought about Stormy Daniels and the way Trump talks about women, she said, “I think it’s sick.”

“I thought it would be a once-in-a-lifetime opportunity,” said Vicki Roath, 68, a retired church secretary from Great Falls who came with her husband, Lee, 65, a Vietnam veteran who did two tours on medevac helicopters with the Marine Corps and now works as a statistician for a local hospital. Vicki, who considers herself a conservative, said she “really struggled” with the last election and chose Trump as the “lesser of two evils.” But she has been disappointed with the constant scandals and, more recently, with the family separation policy. “As a mother, that would just kill me,” she said. Lee, who wore khakis and a sport coat, said he voted for Trump “to be against Obama,” but like his wife, he’s uncomfortable with Trump’s vulgarity. Lee said he appreciated Tester’s work on behalf of veterans, and respected the senator for his opposition to the nomination of Admiral Ronny Jackson to head the Department of Veterans Affairs. “It’s not a political thing — do the right thing for the people,” Lee said. Moments later, when Trump attacked Tester over his opposition to Jackson, Lee shot me a knowing glance.

If there was a significant takeaway from Trump’s rambling monologue, it’s that his shtick hasn’t evolved much: He’s still campaigning against Hillary. On the edge of the Montana prairie, that still draws a crowd, for now. Outside the arena, about two hundred protesters were gathered, holding signs that read “Love Trumps Hate” and “Love Builds Bridges Not Walls.” A scuffle

broke out while I was inside, but things had reached a détente by the time I exited. The Trump supporters passing by shouted “commie scum” at the protesters, along with insults laden with four-letter words and rude gestures. A man wearing an American flag do-rag and riding a Harley throttled his engine and glared at the protesters while an armored vehicle surrounded by heavily armed policemen looked on.

A few steps away from the policemen, among the protesters, I found Gloria Zell, 66, from Shelby, Montana. She was talking to a Trump supporter in a skirt and a MAGA hat who was trying to convince Zell and her friends — over the roaring Harley engine — that human trafficking rings exploiting the porous U.S.-Mexico border were engaged in organ harvesting. Zell was trying hard not to lose her patience as the woman said, repeatedly, “You have to open your heart.” Zell, a U.S. citizen, came from Michoacán 40 years ago. I asked her if anyone had specifically singled her out because of her brown skin, and she told me one man walked up and said, “I only know one word in Spanish, and it’s *puta*.” The word means “bitch,” or more accurately, “prostitute.”

“It’s really disturbing,” Gloria’s husband, Zane, 69, told me. “I knew we were in dire straits, but all of this confirms my worst fears.” Zane, who carried a large American flag, noted that the protesters had sung the national anthem. When people gave them the finger, they responded with the peace sign. □

Elliott Woods is a freelance writer in Livingston, Montana. He is a correspondent at Outside Magazine and a contributing editor at the Virginia Quarterly Review.

At one point, Trump said of the crowds at his rallies, “Why do they come?” I feared the answer was a dark one: They come for the same reason mobs have assembled throughout history — to watch a guillotine fall, to watch men fling ropes over tree limbs, to watch things burn.



Outside the arena, about 200 protesters gather. Passing Trump supporters threw insults and lewd hand gestures at them, which were met with peace signs and a singing of the national anthem.

TONY BYNUM



CAN HEAVY DUTY BE LIGHTER WEIGHT?

Introducing All Seasons Hemp Canvas Workwear

Drawing its strength from industrial hemp, our newly developed work cloth is a lightweight but remarkably durable material that requires no break-in and offers the resilience and freedom of motion needed to carry the day as temperatures rise.

Michael O'Casey of the Oregon Natural Desert Association removes old barbed wire fencing in the Steens Mountain Cooperative Management and Protection Area, allowing native wildlife to move freely through the landscape once more. **SAGE BROWN** © 2018 Patagonia, Inc.

patagonia®

*Women's
All Seasons
Hemp Canvas
Bib Overalls*

*Men's
All Seasons
Hemp Canvas
Double Knee
Pants*



HEARD AROUND THE WEST | BY BETSY MARSTON

CALIFORNIA

Angela Hernandez, 23, will always have an amazing story to tell if anybody ever asks her about her most interesting road trip. The adventure began when she set out on a journey from her home in Portland, Oregon, to Lancaster, California. On the way through Big Sur along the Northern California coast, she swerved to avoid a small animal in the road and lost control of her Jeep, which hurtled over the cliff to the beach below. “They say I fell somewhere around 250 feet. The only thing I really remember after that was waking up. I was still in my car and I could feel water rising over my knees.” Though her head hurt and she was bleeding, reports the *Willamette Week*, Hernandez found a tool to smash the driver’s side window so that she could crawl out of the car and onto dry land. But her accident was completely invisible to drivers on the road above, and she remained invisible, too, though she yelled for help. Hernandez survived alone for a week, despite sustaining a brain hemorrhage, four fractured ribs, two broken collarbones, a collapsed lung, and ruptured blood vessels in both eyes. Despite her injuries, she was calm and resourceful, rigging a hose from her car after three days to collect fresh water dripping from cliff moss. “It would be a lie to say that things got easier as the days passed. They never did,” Hernandez wrote on her Facebook page. “But they sure got predictable.” On July 13, a couple hiking on the beach found Hernandez, and her ordeal was over at last. Hernandez wrote: “I’m sitting here in the hospital, laughing with my sister until she makes broken bones hurt. ... I don’t know, you guys, life is incredible.” People like Hernandez are pretty incredible, too.

WASHINGTON

Not far from the tiny towns of Winthrop and Twisp, in west-central Washington, a Forest Service staffer was doing some surveying work in the Okanogan-Wenatchee National Forest when a wolf “approached her,” reports The Associated Press. This is unusual wolf behavior, but then something even more unusual happened: Bear spray failed to deter the animal and other wolves suddenly appeared, forcing the staffer



MONTANA Anything to cool off in this heat.
MARC LUTSKO

“to climb 30 feet up into a tree.” Perched on a branch, she used a satellite phone to call the Okanogan County sheriff, who then called the state Department of Natural Resources, which sent a helicopter to the rescue. The noise from the rotors scared away the gathered wolves and enabled the staffer to climb down from the tree. It is somewhat reassuring to note that wolf attacks in this country remain “exceedingly rare,” with only eight aggressive incidents recorded between 1962 and 2001.

THE WEST

Sometimes, private companies get a well-deserved comeuppance, though it can be costly. After spending nearly \$1 million in legal fees, Campbell County, Wyoming, has recouped much of the \$20 million in unpaid taxes owed by Alpha

Natural Resources, which declared bankruptcy in 2015. The missing tax money was a blow to the county, as it’s used mostly to finance public schools. So the county played hardball, hiring both local and out-of-state lawyers to build its case against Wyoming’s largest coal company. Campbell County didn’t get everything it was owed, but the settlement will bring in close to \$15 million. Now, county commissioners are urging the state to attach liens to a company’s property “at the time of production in favor of the county” — thereby avoiding future problems of this sort, reports the *Casper Star-Tribune*.

And in California, the Nestlé Corp., after bottling billions of gallons of water from the San Bernardino National Forest for 30 years without a current permit, will face limits on how much water it can withdraw, reports *EcoWatch*. On June 27, the Forest Service offered Nestlé a three-year permit that ups its annual fees from \$624 to \$2,050 and requires the corporation to maintain “minimum flows” of surface water. The Forest Service said the watershed’s health is now rated as “impaired,” and that water extraction will be allowed only “when there is water available consistent with the forest’s Land Management Plan.” Nestlé, which bottles the spring water it captures under the brand Arrowhead, has operated with remarkable freedom in the national forest: In 2016, for example, the company depleted Strawberry Creek by piping 32 million gallons from San Bernardino Mountain. The proposed permit is a victory for *The Desert Sun*, the newspaper that wrote an exposé of Nestlé’s decades-long water grab, as well as for the three environmental groups that went to court to try to halt the water withdrawals: the Center for Biological Diversity, the Courage Campaign Institute and the Story of Stuff Project. Nestlé has 60 days to decide whether to accept the permit’s terms.

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.



High
Country
News

For people who care about the West.

High Country News covers the important issues and stories that are unique to the American West with a magazine, a weekly column service, books and a website, hcn.org. For editorial comments or questions, write *High Country News*, P.O. Box 1090, Paonia, CO 81428 or editor@hcn.org, or call 970-527-4898.

“When I reeled in my first bluegill, a lead split-shot hung between my hook and bobber. When I killed my first deer, 120 grains of lead brought it down.”

Jesse Alston, in his essay, “Hunters and anglers need to get the lead out,” from *Writers on the Range*, hcn.org/wotr