

High Country News



THE RADIOACTIVE WASTE NEXT DOOR

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Decolonizing
roadside history

Hatch chiles
versus the drought

New lessons
from fire science

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Sunlight shines on the Yukon River in Alaska. Salmon returned to the Yukon in record low numbers this year, prompting the Alaska Department of Fish and Game to ban salmon fishing this season. **Keri Oberly**

Know the West.

High Country News is an independent, reader-supported nonprofit 501(c)(3) media organization that covers the important issues and stories that define the Western U.S. Our mission is to inform and inspire people to act on behalf of the West's diverse natural and human communities. High Country News (ISSN/0191/5657) publishes monthly, 12 issues per year, from 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. 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. For correspondence addressed to High Country News, HCN or to the editors, permission to publish will be considered implicit unless specifically stated otherwise.

EDITOR'S NOTE



Season of grace

WE ARE OFFICIALLY ENTERING what I call the season of food. Which is not to say that other seasons aren't times for thinking about food, or eating it. Eat, we must, day after day, no matter when or how. But now is the time of harvests, bounties, cornucopias, *pumpkin spice*. Planning holiday meals, putting up food for winter, baking cookies and pies. It's a time of celebration, as families come together to observe various holidays in different ways. And despite all the struggles of our time, we have many reasons to celebrate.

Start with the fact that what we drink, breathe and eat becomes what we are. The cells that our bodies make — and that we are made of — are themselves made from what we eat, drink and breathe. The plants that we eat — and that the animals that we eat also eat — are made from the soil in which they grow and the water that falls on fields and mountains and valleys and collects in streams and rivers and aquifers — and in that way, we are connected to the land in the most fundamental kind of web. Some call it the web of life. But unless you are living a hunter-gatherer lifestyle, there is also a social ecosystem associated with what you eat. Your food was grown, harvested and likely packed, transported, unpacked and sold by a person, or several people, or assemblages of people, known variously as co-ops, corporations or conglomerates. Most of us depend on these workers to do their jobs, and do them with care. We should not forget to celebrate them, too.

In fact, farm fields and ranchlands and the working conditions of farmworkers and the living conditions of farm animals are all components of the interconnectedness of life — and of justice, which is achieved when every being in the web has clean air and water and sustenance in the form of healthy food. Justice is what any thoughtful, caring person should want to work toward and wish for when they say grace in whatever form that takes. This issue contains a story about Alaska Native villages sharing the bounty of the salmon harvest with other villages whose rivers experienced a crash in salmon populations this year. This, too, is justice: a culture of reciprocity dedicated to making sure that everyone has enough.

As we gather with family, let's celebrate and be thankful for our good fortune to inhabit a planet that provides conditions conducive to life — water to drink, sunlight for plants, mountains to climb, salmon to eat. And let's also celebrate being part of a varied and variously ingenious human family, with special gratitude for those who have inhabited the West since time immemorial, caring for the land and modeling practices of justice and grace.

Jennifer Sahn, editor-in-chief

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FEATURES

Radioactive Neighbors 30

The only active uranium mill in the nation has plans to import waste from other countries, but its neighbor, the Ute Mountain Ute Tribe, strongly objects.
BY JESSICA DOUGLAS | PHOTOS BY RUSSEL ALBERT DANIELS

The Winnowing of Winter 26

As the climate crisis worsens, what will happen to snow?
BY HEATHER HANSMAN

ON THE COVER Toxic waste cells surround the White Mesa Mill near the Ute Mountain Ute community of White Mesa, Utah. **Russel Albert Daniels, with support from Eco Flight / HCN**

Old gas pumps and monsoon clouds in Monticello, Utah, once an active uranium-mining town north of Blanding and White Mesa, Utah (*above*).
Russel Albert Daniels / HCN

Za Xiong Moua, right, and his wife, Christine Moua, center, receive a blessing from his cousins, Lor Yank and Yer Yang, at a party at his home just outside Shasta Vista in Siskiyou County, California. Shasta Vista is home to about 3,000 residents, predominantly Hmong Americans (*right*).
Salgu Wissmath / HCN

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No choice left but to fight 10

Wary of local authorities, a Hmong American community defends itself against wildfire and a hostile county.
BY THEO WHITCOMB



Parks back? 7
Umatilla leader Chuck Sams is poised to be the first Native person to lead the National Park Service, which has a thorny history with tribes.
BY BRIAN OASTER

Hatch green chiles are feeling the heat 8
Growers of New Mexico’s iconic crop wrestle with drought, water rights and labor shortages.
PHOTOS AND TEXT BY WUFEI YU

Why fire experts are hopeful 13
Three new papers spell out the science of how to lessen wildfire devastation.
BY KYLIE MOHR

The beating heart of the Yukon River 14
Alaska Native villages band together to keep the Yukon’s wild salmon afloat.
PHOTOS BY KERI OBERLY |
TEXT BY MAIA WIKLER

What you can’t see can hurt 18
Why reducing methane emissions matters.
FACTS & FIGURES
BY JONATHAN THOMPSON |
ILLUSTRATIONS BY ABBEY ANDERSEN

Decolonizing Idaho’s road signs 20
A new effort will add Indigenous history to historical markers across the state.
BY TONY TEKARONIAKE EVANS

The White Sands discovery only confirms what Indigenous people have said all along 44
Once again, the media has excluded Indigenous peoples from our own story.
PERSPECTIVE BY NICK MARTIN

It’s time to end the Oppression Olympics 46
Two leading scholars take on the complex relationship between Black and Native communities, and the ways Afro-Indigenous people are asked to navigate it.
Q&A BY ALAINA E. ROBERTS

Prometheus’ children 49
On the fires that sustain us and those that threaten to unravel everything.
ESSAY BY JOE WILKINS

#iamthewest 52
Apollo Rodriquez, photographer and activist, Paonia, Colorado
BY LUNA ANNA ARCHEY

DEPARTMENTS

- 3 EDITOR’S NOTE
- 6 LETTERS
- 12 THE LATEST
- 23 DONORS / READER PROFILES
- 50 HEARD AROUND THE WEST

LETTERS

High Country News is dedicated to independent journalism, informed debate and discourse in the public interest. We welcome letters through digital media and the post. Send us a letter, find us on social media, or email us at editor@hcn.org.

THE PUBLIC HEALTH OFFICER EMERGENCY

Your impressively thorough article, “The Public Health Officer Emergency” (October 2021), was distressing. The defiant attitudes and mean-spirited tactics of the vociferous opponents of professional medical guidance concerning the COVID-19 epidemic are chilling. They apparently do not care about protection of their fellow citizens, their own personal vulnerability or the tragic impacts on overwhelmed medical facilities. It seems so simple. Mask up and get vaccinated as many millions of us have willingly done, and we can get out of this mess. Mandates would not be needed if it were looked upon as a civic duty ... like putting out campfires.

Clayton Parr
Draper, Utah

MAKING A HOME OF IT

“Making a Home of It” in the October *High Country News* was sad and frightening on several levels.

Our public lands are not a solution for “homeless” people or those

“I am really excited to see a hopeful tale of desperately needed action to give wildlife back their land.”

who don’t follow the rules. These are problems the U.S. Congress and the states must fix by requiring the wealthy to pay for decent affordable housing and natural resource funding that protects our public lands.

Brandt Mannchen
Humble, Texas

CORRECTIONS

In our story “Behind the wire with a fence ecologist” (October 2021), we misstated the specifications of the rebuilt fence on Horse Prairie, Montana; it was a barbed top wire 42 inches off the ground. In “A Hostile Country” (September 2021), it was under President Bill Clinton, not George W. Bush, that the gray wolf’s status was changed from endangered to threatened in 2000. In “Sucked Dry” (August 2021), we mistakenly spelled Lauralynn Cornelsen’s name as Laura Lynn. We regret the errors.

BEHIND THE WIRE WITH A FENCE ECOLOGIST

Big cheers for Michael Parks, *HCN* and the passionate Westerners who are working hard to remove the barriers to wildlife (“Behind the wire with a fence ecologist,” October 2021). I am really excited to see a hopeful tale of desperately needed action to give wildlife back their land. If this is the beginning of a greater trend in the West, they might just have a chance! Now we just need to extend this to half the world, and we’ll have the beginnings of the balance we need to save this planet.

Julie Smith
Golden, Colorado

THE TIME OF THE INDIGENOUS CRITIC HAS ARRIVED

I enjoyed reading Jason Asenap’s essay regarding the present state of Native filmmaking and production (“The time of the Indigenous critic has arrived,” October 2021). He landed on some critical points, especially concerning the Indigenous filmmakers and artists working in a predominantly and historically white-run business. Those lines are now being blurred. Just as Asenap has written, learning to live with and learn from diverse critics is a useful tool.

And now Indigenous film is at a whole new level. A whole new level of awareness is in the air, too, especially by their peers who have been boldly critiquing the shortcomings of Indigenous film. It is becoming a competition for viewers. Sponsors and ad buyers will follow. But who will get that money?

Dennis J. Dyer
Tecumseh, Oklahoma

A HOSTILE COUNTRY

Thank you to Paige Blankenbuehler for her recent article concerning wolf dispersal and Wyoming’s Green River corridor (“A Hostile Country,” October 2021). One passage I found particularly disturbing for its hypocrisy was the characterization of wolves as “vicious” and killing for fun. Although I am no expert in wolf

behavior, the idea that they kill for fun seems debatable. Perhaps hunting in packs, they make kills, eat their fill, and then leave before they themselves are killed or have a chance to return to eat more. But many of those spouting this idea are themselves big game hunters, hunting for fun and, I would guess, not eating all they kill. Wolf-burgers, anyone?

Rick Whitson
Salt Lake City, Utah

THE BEST READ

For my 85 years of avid reading, I don’t believe that I’ve ever read anything that I have enjoyed so much as “A Hostile Country.” The female wolf’s trek was fascinating — not really a happy ending, but so entertaining.

Thank you so much.

Joan Hamburger
Tucson, Arizona

DON’T MISS HALITO

HCN readers are missing out if they have not yet seen editorial intern Brian Oaster’s delightful video summaries of new articles each Friday (“Halito from *High Country News*”). But “summary” is a poor descriptor because what Oaster is really crafting are invitations that engage through clarity, wonder and wit. The Oct. 1 episode was a particularly shining example, and several articles have moved to the top of my reading queue as a result. I look forward to hearing more of Brian’s voice and what they have to tell us.

Will Petry
Raleigh, North Carolina

Editor’s note: Halito from *High Country News* is a short video clip where Brian Oaster rounds up some of our news stories from the past week. Oaster is one of our editorial interns and a member of the Choctaw Nation of Oklahoma. “Halito” is Choctaw greeting for “hello.” Readers interested in viewing the series can visit www.hcn.org/halito to watch a full playlist.

Parks back?

Umatilla leader Chuck Sams is poised to be the first Native person to lead the National Park Service, which has a thorny history with tribes.

BY BRIAN OASTER

IN AUGUST, THE BIDEN administration nominated Charles “Chuck” Sams III to lead the National Park Service. Sams, a U.S. Navy veteran who was, most recently, the executive director of the Confederated Tribes of the Umatilla Indian Reservation, also worked as an adjunct professor at both Georgetown University and Whitman College, where he taught about treaties between sovereign governments. He’s currently the sole tribal member on the Northwest Power and Conservation Council.

The nomination has so far received a positive response from tribal government leaders. In an email to *HCN*, Ken Ramirez, chairman of the San Manuel Band of Mission Indians, praised Sams’ experience in working with sovereign tribal governments as a “critical resource as tribes endeavor to work with the Park Service on cultural, environmental, conservation and other matters of mutual importance to the U.S. and Indian Country.” Echoing that sentiment, the Eastern Shoshone Tribe’s Business Council chairman, John St. Clair, wrote that tribal nations not only need to have representation in the Biden administration, they need “someone who understands treaty rights, sovereignty and tribal government.”

Sams’ nomination arrives at a crucial time for the National Park Service. If he’s confirmed, Sams will be the agency’s first full-time leader since Jon Jarvis retired in 2017; under President Donald Trump, it was led by a series of short-term acting and deputy directors. Sams would not

only be the first Native official in history to lead the Park Service, he would work under Deb Haaland, a Pueblo of Laguna citizen and the Interior Department’s first Native secretary. This places him in the unique position of being tasked with bringing stability back to the agency even as tribal leaders are relying on him to increase both Indigenous visibility and stewardship within the parks system.

White Mountain Apache Chairwoman Gwendena Lee-Gatewood sees Sams’ nomination as an opportunity to improve relations between tribal governments and the federal government. “I would like to see consultation with tribes on decisions impacting areas of Native significance,” said Lee-Gatewood. “We have a voice.” She added that the White Mountain Apache are seeking co-management policies and other ways of sharing decision-making power over park lands with the Park Service, and are also promoting the use of traditional stewardship methods.

St. Clair would like the agency to permit “tribes to have designated areas at national parks to display their connections.” He said that the Eastern Shoshone have already met with Yellowstone staff this year and asked for special areas to be established, where each tribe that has legacy connections to Yellowstone’s land can “display and demonstrate those historic and spiritual connections while the park is open each year.” A nationwide policy of educating visitors about the Native presence in the national parks through interactive media and displays, he

said, would improve relationships between the Park Service and Native people, and would help “bring better understanding and education of the profound history us Indigenous people have on America’s most beautiful lands.”

That would mean acknowledging the Park Service’s history of dispossession and forced removal of Native peoples. Since its founding in 1916, the agency has been charged with overseeing 423 sites altogether — monuments, battlefields, preserves and other sites as well as 63 official national parks. The cost of this expansion has routinely been paid by Indian Country. “The history pertaining to tribal histories is one that is not as pleasant,” Lee-Gatewood told *HCN*.

Before it could establish any national parks, the federal government first had to empty them of their human inhabitants. President Ulysses S. Grant ejected the Shoshone from their homes to designate Yellowstone as the world’s first national park in 1872. In Yosemite Valley, park officials invited some Miwuk residents to remain in their homeland as park employees, if they agreed to dress up as Plains Natives and perform for tourists. More broadly, national parks have been instrumental in reinforcing a continent-wide capitalist system

that separates people from the land and commodifies “wild” spaces as recreational territory primarily accessible to well-off white Americans.

From both a policy perspective and a historical one, the weight of potentially having a Native official leading the agency has not been lost on tribal leaders. “The Shoshone people first roamed the lands of many Wyoming national parks, including its biggest — Yellowstone National Park,” St. Clair said. “As the aboriginal people of the region, we know the significance of protecting and advocating for the sacred sites. We expect Mr. Sams will use his experience as a tribal leader to advocate for us and all tribes across Indian Country.”

Lee-Gatewood, who said she’s excited by Sams’ nomination, pointed out that he would be entrusted with the preservation of landscapes that Native Americans shaped for millennia. “Behind us is a history,” Lee-Gatewood said, citing the heroism, principles and faith of Indigenous ancestors. “Before us is a greater opportunity to forge ahead with faith, and those same principles our ancestors had.” Continuing to build upon positive relations, she said, takes effort and communication. “The work has never been easy, but it is worth it.” ☀





REPORTAGE

Hatch green chiles are feeling the heat

Growers of New Mexico's iconic crop wrestle with drought, water rights and labor shortages.

PHOTOS AND TEXT BY WUFEI YU

IN THE VILLAGE OF HATCH, New Mexico, at a chile shop cloaked in red ristras — the ornamental strings of chiles that often adorn doorways and windows in the state — Jessie Moreno, the young farmer who owns the store, tallies up sales, offers free samples and cranks an iron basket-topped chile roaster.

“This little festival is like a gold mine for us,” said Moreno, 21, gesturing toward three hissing chile roasters. A smoky, pungent aroma rose from the tumbling specimens of *Capsicum annuum* and permeated the air. The town's annual Hatch Chile Festival bolstered sales for two

days, attracting around 15,000 chile connoisseurs and hobbyists from as far as West Virginia, Louisiana and Florida, in a welcome boost after last year's pandemic-caused hiatus. Even so, Moreno and other local farmers couldn't help worrying about the crop's uncertain future and its profitability.

The continued drought and an unprecedented workforce shortage worsened by the COVID-19 pandemic have rattled the agribusiness that is central to the state's identity, said Stephanie Walker, a chile specialist at the Chile Pepper Institute at New Mexico State

University, one of a handful of research centers in the world dedicated to the plant. “We're definitely at a breaking point now.”

CHILE PEPPERS, which are originally native to South America, were introduced to the harsh, iron-rich red earth of what's now New Mexico by Spanish colonizers over four centuries ago. But it wasn't until 1921 that Fabián García, a Mexican American horticulturist, developed the long green chile pepper after years of researching and cross-breeding plants from Hispanic family gardens. It quickly became a customer favorite: Green chile is now smothered on burritos and used as a seasoning for popular snacks like popcorn and crackers — even mixed with lemonade. When the leafy, pod-bearing plant ripens at the end of summer, it becomes a red chile pepper, which has a sweeter and mellower taste and is also used in a variety of New Mexican dishes. Though long green chiles are also commercially grown in Mexico, Arizona, California and Colorado, locals and chile enthusiasts believe that the combination of the high desert climate, sandy loam

soil and water from the Rio Grande gives the chiles grown in the Hatch Valley a distinctive flat and earthy flavor. New Mexico, which proudly calls itself “the chile capital of the world,” boasts an official state question: “Red or green?”

But now, the state is asking a different question: Can its iconic crop weather the changing climate?

New Mexico's hottest commodity is delicate. It doesn't thrive below 60 degrees Fahrenheit and can be killed by even a light frost, but it can also be harmed by high temperatures; it doesn't fruit above 95 degrees. (Botanically speaking, chiles, like tomatoes, are fruits, not vegetables, because they have internal and edible seeds.) This doesn't bode well in a climate that's growing hotter and more unpredictable every year. In just two decades, the Southwest is projected to heat up by more than the global average of 2.7 degrees Fahrenheit. It will also be increasingly battered by extreme weather events like spring freezes and heat waves, according to an August report from the Intergovernmental Panel on Climate Change.

This year, spring heat waves

accelerated snowmelt evaporation in the Rio Grande, leaving both the river and Elephant Butte Reservoir, which it feeds, with a dwindling supply of water for agriculture in the southern part of the state. With the reservoir hovering around 5% of capacity over spring and summer, the Elephant Butte Irrigation District provided surface water to farmers in southern New Mexico for just 27 days this growing season. It was one of the worst curtailments in the irrigation district's history in over a century, according to J. Phillip King, a water resource consultant for the district. "This is an unfortunate, disturbing pattern that is setting in — a multi-decadal drought now superimposed on an increasingly arid climate."

Back at his farm, Moreno stood looking out at the 9.5-acre field he leases. "It's crazy that all our water is gone," he said. "My dad used to tell me that before these two decades, he could get water from the river from February till fall." But that's no longer true: To supply his plants this summer, Moreno had to pump groundwater from his 30-foot-deep well. It cost him thousands of dollars to irrigate his chile fields using the pump.

And even that last resort might not last for long. Increased pumping is lowering the water table, and the saline concentration in some wells has tripled or quadrupled, damaging the plant's roots and causing wilt and other diseases. The legality of pumping groundwater is also up in the air. A U.S. Supreme Court lawsuit between New Mexico and Texas over groundwater pumping along the Rio Grande could further cut the amount of groundwater available for chile farmers and reduce the crop's acreage, according to King, a witness testifying in the case. The case has lasted eight years now, and a ruling is still pending.

The uncertainty about climate, water and water rights is a constant worry for Moreno. The son of two migrant workers who labored in chile fields and processing plants, he is proud to run his own family-owned chile business, which

he hopes to eventually pass on to his 1-year-old son. But he wonders if there will be any water available for chiles by then. "I really hate to see the chile in this valley go down," Moreno said forlornly.

Beyond the climate woes, chile farmers are also facing a labor shortage. "Nobody wants to work," said Rigo Gutierrez. He and his wife, Maribel, a bubbly farmer and chile laborer in her late 30s, run a seasonal shack two miles from Moreno's shop. In past harvesting seasons, the couple hired four family friends to pick and roast. This year, they've had to do everything themselves.

Laborers harvest the fruit almost entirely by hand before the chiles turn red in late October. Starting in July, pickers head into the rows of crops with plastic buckets, grabbing the pods with the right "squeeze" and dashing back to waiting pickup trucks as soon as their buckets are full. The state needs about 3,000 seasonal workers for the \$50 million industry, but this year it's been short about 1,350, said Joram Robbs, executive director of the New Mexico Chile Association. "This year is even worse than last year, when everything was shut down," Robbs said. He blamed federal pandemic unemployment benefits, which expired at the start of September.

As an incentive, in mid-August, industry leaders negotiated with New Mexico Gov. Michelle Lujan Grisham to use \$5 million of the federal pandemic relief fund to boost wages among chile pickers and process plant workers up to \$19.50 per hour, almost twice the state's minimum wage of \$10.50 per hour. By early October, according to Robbs, the incentive had eased the hiring shortage for farms and processing plants, though the problem was far from resolved.

Some smaller farmers, scientists and labor rights activists are ambivalent about the one-time cash infusion, saying the worker shortage is less about the unemployment benefits than it is about historical labor and immigration injustices. According to the Border

Agricultural Workers Project, a nonprofit that has organized farmworkers in the Borderlands for over 30 years, the average annual chile-picking wage of immigrant laborers has risen by only about \$1,000, from \$6,000 to \$7,000. However, the cost of living in the U.S. has almost doubled from what it was in 1993, according to the Bureau of Labor Statistics.

During the pandemic, the job's backbreaking nature was compounded by the lack of personal protective equipment, sanitation and hand-washing facilities. "(It's) not that there's no workers available for the chile harvest," Carlos Marentes, the director of the Border Agricultural Workers Project, said. "It's an issue with their safety, wages and working conditions."

In recent decades, chile fields have given way to less labor-intensive, more profitable

crops like pecans and alfalfa, which, ironically, consume a lot more water than chile. As a result, the chile-harvesting acreage in New Mexico has shrunk from an all-time-high of 34,000 acres in 1992 to around 8,000.

Still, here in the Hatch Valley, farmers like Moreno uphold the tradition of growing a beloved and iconic plant. As chiles tossed in the roasters behind him, Moreno told me that the money he makes at the chile festival will bring him one step closer to his dream of owning a 30-acre farm. "My parents came from nothing and built it up," he said, referring to the shop he runs and the acres he currently leases. "And I am not about to lose it just yet." ❁

Workers harvest green chile around Hatch, New Mexico (opposite).

A mural on a storefront in Hatch, New Mexico (below). Jessie Moreno with roasted green chiles.





Shasta Vista, California, residents Neng Thong, left, and Zeng Lee, right, chose to protect their community during the Lava Fire by defying evacuation orders and fighting the flames using their own water trucks.

entire area would've burned."

On the day of the fire, flames hurtled downhill as the group assembled water trucks along the edge of the subdivision, forming an ad hoc defense. Ill-equipped and putting their lives on the line, they planned to communicate via cellphone and dispatch their own water trucks to vulnerable areas. "We did not believe they were going to come and rescue us or put out the fire," said Zeng Lee, who ran a water truck as he fought the fire alongside Thong. "That's why I decided to stay."

Sheriff LaRue, aware of the residents' distrust, worried that they wouldn't evacuate. He sent officers to spread a mandatory evacuation order. Sgt. Cory Persing confronted Thong that Monday, stepping out of his patrol car as dust and smoke whipped by, according to video footage obtained by *High Country News*. "This is a mandatory evacuation," Persing said. "Is there anything in there worth dying for?"

"We know," Thong said as Persing approached. There were flames on the horizon, and others had already left with their water trucks, fearing arrest. "When the wind shifts on us and it comes through here," Persing said, "you're not going to be able to survive it." Thong held his phone to his chest, filming.

For four long days, Thong and Lee fought the fire with roughly a dozen others. They couldn't protect everything; according to the Siskiyou Community Development Department, nearly 10% of the subdivision burned. According to eyewitnesses interviewed by *HCN* as well as affidavits filed in court, firefighters from the California Department of Forestry and Fire Protection, or Cal Fire, were slow

REPORTAGE

No choice left but to fight

Wary of local authorities, a Hmong American community defends itself against wildfire and a hostile county.

BY THEO WHITCOMB | PHOTOS BY SALGU WISSMATH

IN LATE JUNE, lightning struck the western slope of Mount Shasta, a volcano in Northern California, igniting the Lava Fire. Four days later, gusting winds sent flames billowing towards the unincorporated community of Shasta Vista, where over 3,000 residents, predominantly Hmong Americans, live.

One resident, Neng Thong, who bought property there a year earlier, joined with 30 others to form a firefighting force. The

community felt like it had no choice; people no longer trusted the county or state to protect them. A seven-year crackdown on cannabis farming had eroded what little trust existed between the Hmong American community and county leaders. Thong believed the county would simply use the fire as an opportunity to clear the area. Others thought the county would implicitly approve the destruction of their property. Recently, vigilantes who'd fulminated against

the subdivision on the sheriff's Facebook page openly mentioned arson, with one user wondering whether it would be legal to start a fire. Sheriff Jeremiah LaRue, in a recent interview, brushed off the exchange, saying that the vitriol is "just kind of the way Facebook is."

"They announced that they're going to burn our town down," Thong told me a month later, showing me a screenshot of the comment. "We wanted to save our property. If we hadn't stayed, the

to respond. LaRue maintains that engines tried to enter the subdivision but were delayed because Shasta Vista residents blocked the roads with their cars. Later, Thong and the others learned that one resident, Soobleej Kaub Hawj, was shot and killed by four law enforcement officers as he tried to evacuate. According to the Siskiyou County Sheriff's Office, Hawj brandished a gun while trying to bypass a roadblock.

Thong and the others didn't believe that Persing was there to help them; they thought he was there to prevent them from protecting their property. "We did not block the road," Thong told me, retracing his steps that day. "We have never done anything to them. Nothing at all." At press time, despite numerous interview requests and a public records request, *HCN* had yet to receive any comment from Cal Fire.

The current tension speaks to a dynamic that goes back years. With

few friends in public office and a sense that county officials and community members regard them as organized criminals, the Hmong Americans harbor a deep suspicion of the sheriff's office and the Siskiyou County Board of Supervisors.

AROUND 2015, Hmong Americans started moving to Siskiyou County, the vanguard of many Mien, Cambodian, Laotian, Chinese and other ethnic Americans and migrants, according to a 2019 study by researchers Margiana Petersen-Rockney and Michael Polson for the Cannabis Research Center at the University of California, Berkeley. In the 1960s, the Hmong were recruited to fight during the CIA's "Secret War" in Laos; many of the early Shasta Vista arrivals were older refugees who originally immigrated to the U.S. in the late 1970s, following the Vietnam War. As they aged, some retired from cities to the countryside. The Shasta Vista subdivision seemed ideal: cheap, contiguous plots available for close-knit friends and family, where they could plant subsistence gardens, raise animals and grow cannabis.

Some started farming at a commercial scale and became the immediate focus of local

politics: To the majority-white county, cannabis, and its cultivators, signified a visible, rapid economic and demographic shift, Petersen-Rockney said. U.S. Department of Agriculture estimates from 2017 and the Siskiyou County Sheriff's Office show twice as many cannabis farmers as non-cannabis farmers. Now, thousands of greenhouses dot the valley.

Early on, the sheriff's office tied the cannabis "problem" — according to former Sheriff Jon Lopey — to the subdivision, denouncing it as a threat to "our quality of life and the health and safety of our children and grand-children." Others voiced their concern at town halls, and this spring a county supervisor called the industry a "virus." LaRue, over the phone, condemned the crime and profit-seeking, noting he'd heard the farms described using terms like invasion, virus or cancer. "For me," he said, "this issue is mainly about greed."

The Siskiyou County Board of Supervisors, which is responsible for local cannabis regulation, began criminalizing commercial activity in 2015. In 2017, it declared a state of emergency and passed a moratorium on commercial cannabis activities, both medical and recreational. Nearly all the Shasta Vista

farmers found themselves in immediate non-compliance.

Since farming cannabis commercially remains a criminal act, unregulated infrastructure proliferates. Generators have caused carbon monoxide poisoning, and unlined septic systems threaten public health. "It's very detrimental environmentally," Rick Dean, director of Siskiyou County's Community Development Department, told me over the phone in July.

Nearby ranchers supplied water to the growers until the county banned such transactions in May — a policy that was contested in a civil rights lawsuit and recently blocked. According to the sheriff's office, delivering goods and services to the area, including water, was considered "aiding and abetting" illegal activity.

Shasta Vista residents feel like they're being forced out. Thong, for example, sees himself as pursuing an American ideal. "In the old days, everybody bought lands for a couple dollars," he told me. Many landowners invested in livestock, Thong said, so why would the county think his family was only there to grow cannabis? "We are poor, so we have to start somewhere," he said. "It's land, you know."

Neng Thong shows a photo of himself working to put out fires during the Lava Fire (below left).

A water truck drives through the Shasta Vista subdivision (below right).





Za Xiong Moua poses for a portrait in front of his garden just outside Shasta Vista in Siskiyou County, California. Moua is an elder in the local Hmong American community.

Compliance with the ordinance has been an issue; in an interview this summer, Dean said that just 5% of the Shasta Vista lots were obeying it. “When we have such a large scale of people ignoring basic laws, we need to figure out how to enforce it somehow.”

That’s how the sheriff’s office became involved, resulting in what Petersen-Rockney, the cannabis researcher, calls a blurring of civic violations and criminal law. “The county created these conditions. From the beginning, no one could comply,” she said. In 2016, the sher-

iff’s office formed an interagency task force specifically for cannabis, and within a month of its creation, it issued 25 abatement notices and filed 20 criminal charges. Later, the emergency declaration enabled the county to enlist state agencies and expanded the sheriff’s capacity to police the area.

The Hmong American families shouldered the impact of the heavy police presence. Many say they were pulled over in traffic stops — the result, they felt, of racial profiling. The conflict continues to create political polarization.

Recently, LaRue recruited “volunteers” from a so-called “Patriots’ group” to bulldoze cannabis farms. Congressman Doug LaMalfa, R-Calif., before driving a tractor into a greenhouse, proclaimed, “I love the smell of diesel power in the afternoon. It smells like victory,” a direct reference to the 1979 Vietnam War movie *Apocalypse Now*. State of Jefferson Outdoors, a hunting outfitting company, later sold T-shirts emblazoned with a tractor and the slogan: “Bulldozers and Badges ... Support our Sheriff.”

Today, the conflict remains

in a damaging feedback loop: The more the ordinance is enforced, the bigger the problem appears, even though little is being done to address noncompliance, environmental concerns and public health. Hekia Bodwitch, a postdoctoral researcher in environmental policy and community development at UC Berkeley, said the situation was counterproductive. “Actually, bringing people into compliance and making compliance easier for people will probably have better outcomes.”

Za Xiao Moua, an elder who has advocated for Hmong American veterans in the United States for years, bought property in Shasta Vista in 2017. His family runs a small farm with goats, ducks and a single cow outside the subdivision. Moua echoes the frustration with the current impasse. “We are not here to do anything to damage the community,” he said. “We wish we can get engaged in the community and better understand each other — make this a better place to live. We need the entire community to understand who we are. We are good people. We can enjoy our freedom here.” ☀

THE LATEST

A new home in Idaho

Backstory

Under President Donald Trump, the Twin Falls Refugee Center in Twin Falls, Idaho, saw a sizeable decrease in refugee admissions, down from an average of around 300 people to just about 60 a year, according to Zeze Rwasama, director of the center. This resulted in large budget cuts, leading to the closure or suspension of programs in more than 100 resettlement offices, not just in Idaho but across the country (“Refugees in Idaho look for belonging,” November 2019)

Followup

Now, under the Biden administration, more refugees are being accepted, said Rwasama. This year, the center will settle about 250 people. It’s already received one family from Afghanistan and is planning for about 50 more Afghans, as well as arrivals from the Democratic Republic of Congo, Eritrea, Sudan and Iran. “The past three months, we’ve been focusing on building our capacity,” said Rwasama. “Which means hiring more staff and making sure our partners and our stakeholders are aware of the increase.” —Jessica Kutz

Why fire experts are hopeful

Three new papers spell out the science of how to lessen wildfire devastation.

BY KYLIE MOHR

THIS YEAR'S FIRE SEASON

broke records: In July, the National Interagency Fire Center raised its preparedness level to Level 5, the most critical status possible, indicating that 80% of all wildfire fighting resources nationwide were already allocated. It remained there for 69 days, the longest stretch ever. Firefighting resources were stretched thin and communities engulfed by flames, while people thousands of miles away inhaled smoke. In early August, U.S. Forest Service Chief Randy Moore called this wildfire season a “national crisis” and temporarily suspended some resource-heavy management practices, including prescribed fires. He also stopped the practice of letting some blazes burn — a calculated risk, since such fires could balloon into bigger, more dangerous ones that require much larger crews to put out.

Wildfire scientists say there's a better way. A team of more than three dozen people from universities, conservation groups and government labs published an unusual trio of scientific papers in August in the journal *Ecological Applications*. Together, the studies are meant to provide a roadmap for how land managers and policymakers can move from passive to proactive wildfire and forest management.

Climate change is clearly setting the stage for hotter, drier summers, more flammable forests

and, consequently, more frequent and damaging fires. “We’re living in and literally breathing climate change through wildfires,” said Susan Prichard, a forest ecologist at the University of Washington, who was a co-lead author on the papers. But, she said, there are ways to reduce some of the harmful impacts. “I’d love to translate that into practical tools for managers, and also let the public know that it’s not all doom and gloom when it comes to adapting forests to climate change.”

Still, no one thing is guaranteed to work in every forest. For example, the thin-barked, higher-elevation lodgepole pines in the Greater Yellowstone ecosystem respond differently to fire than the Douglas fir and ponderosa pines in the Eastern Cascades. But after reviewing more than 1,000 papers representing over a century of research and observations, the researchers concluded there are several strategies that can make wildfires less destructive under certain circumstances. These include thinning dense forests that haven’t recently burned, removing some flammable shrubs and bushes, allowing wildfires to burn when conditions are appropriate, and ramping up Indigenous fire stewardship practices, including prescribed burns. If forests are managed well, they’ll still burn — but the fires won’t be so devastating.

One paper takes a non-

traditional approach: It’s formatted in a “frequently asked questions” style that clearly states the benefits and limitations of management practices like thinning and prescribed burns. Can thinning alone mitigate wildfire hazards? Usually not; the technique is most effective when coupled with prescribed burns. Which is the primary problem driving destructive wildfires — climate change, or extra fuel, meaning burnable vegetation like trees, tree needles, grasses and shrubs? Neither; the answer is both. Can wildfires do the work of fuel treatments on their own? Not always; that’s too simplistic, Prichard said. The fires that do end up burning in the height of fire season are too big, too hot and too severe to help keep an ecosystem healthy.

So, if we know what works, why isn’t it happening? “That’s the million-dollar question,” said Lenya Quinn-Davidson, a fire advisor with the University of California Cooperative Extension in Humboldt County and the director of the Northern California Prescribed Fire Council. “The holdup is so multifaceted.” Hurdles include getting vast numbers of private landowners to work together and understand what they need to do, dealing with federal and state regulatory barriers, permitting red tape, an insufficient federal workforce, a lack of funding, the risks stemming from liability and insurance policies, and a deeply ingrained fire suppression mentality.

Considering that laundry list of barriers, there’s a fear that adapting Western forests to climate change will prove almost impossible. Yet experts are hopeful. “We can wrap our mind around having prescribed fire on a given ranch, but it’s pretty overwhelming when thinking about the entire West,” Quinn-Davidson said. “(But) if we break it down, thinking about forests and communities and what we want to persist, I think it’s doable.” While no solution will be fast, cheap or smoke-free, Prichard said, “the biggest risk we’re taking right now is to continue kicking the can down the road.” ☀

6.5 million

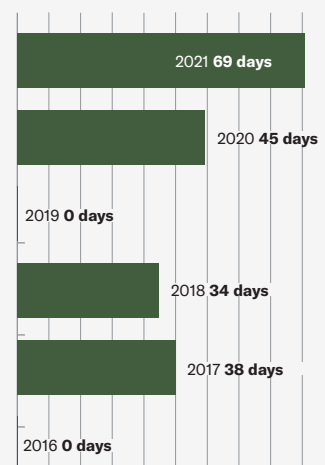
Acres burned this year by wildfires nationwide as of Oct. 15.

8,006

Personnel currently deployed on 39 large active fires across the U.S. as of Oct. 15.

A record-breaking summer

Number of days preparedness level was at 5, the most critical, meaning over 80% of resources had been allocated.



Source: National Interagency Fire Center

The Bootleg Fire burned Fremont-Winema National Forest in August, but areas where the U.S. Forest Service and the Klamath Tribes had conducted thinning and prescribed burns (background) were less damaged than adjacent sites (foreground). **Leah Nash**





Brooke Woods (Yookkan Hoont'aanh) and her son, Ed, harvest a whitefish from a 4-inch mesh net. Even though her family isn't allowed to harvest salmon this year, Woods takes her family to Rampart Village, Alaska, on weekends to keep her culture alive. "Our tribes and families are suffering," she said.



The beating heart of the Yukon River

Alaska Native villages band together to keep the Yukon's wild salmon afloat.

PHOTOS BY KERI OBERLY | TEXT BY MAIA WIKLER

IT'S NEARLY 2 IN THE MORNING and the sun is just beginning to set as Ben Stevens navigates the braided channels of the Yukon River toward his fish camp. Stevens is a traditional fisherman — Dinyee Hutanne, the people of the canyon. He was raised by his grandmother on the river in Stevens Village, a Koyukon Athabascan community nestled within the Yukon Flats. Typically, the camp is bustling with families processing salmon. This year, however, it was quiet as he set a 4-inch mesh net for whitefish; there were no salmon to catch. It was unsettling, especially for someone like Stevens, for whom the river represents sovereignty. “Back in the day, I never bought a fishing license,” he said. “Nobody ever bothered us. We were able to give fish to whomever we’d like, we fed people. Families came to our fish camp to enjoy the fish camp life. When they left, they were loaded with fish.”

Since those childhood days, the combination of climate change and federal and state mismanagement have caused a rapid decline in the Yukon's wild salmon, threatening the sovereignty, culture and economic life of the villages along the river's banks. This year was particularly alarming: All three primary Yukon River salmon species — chinook, chum and coho — returned in record low numbers, prompting the Alaska Department of Fish and Game to ban fishing along the entire river. “Our main food source is now a delicacy,” said Brooke Woods, a traditional fisher (Yookkan Hoont’aanh from Rampart Village) and a University of Alaska Fairbanks Fisheries student.

Despite the widespread distress along the Yukon and the nearby Kuskokwim and Copper rivers, the culture of reciprocity and sense of community of the fish camps persist. In 2014, the Tanana Chiefs Conference — the traditional tribal consortium of 42 Interior Alaska villages — launched a Hunting and Fishing Task Force, along with the Yukon River Inter-Tribal Fish Commission. “As a unified voice, we are unstoppable — and we can manage the river

better,” Natasha Singh, general counsel for the conference, said.

At the same time that the communities along the Yukon struggled with declining salmon, 500 miles to the south, fishers in Bristol Bay enjoyed record harvests for both sockeye and pink salmon — an estimated 170 million fish. Scientists are still trying to understand why. The Tanana Chiefs Conference worked to coordinate salmon donations, and the Bristol Bay fishers shared 22,000 pounds of chinook and chum salmon with the Yukon River villages. “We still give, and that’s how I know we are still Indigenous,” Singh explained.

Still, the donation model is a temporary fix; 94% of the households in the Yukon Flats region depend on traditional hunting and fishing, not only for food security, but also for their cultural survival. Now the villages are planning ahead, determined to restore the salmon. Any lasting solution, however, requires understanding how the salmon ended up in such a precarious position.

Researchers believe climate change is a key factor: The warming seas mean less oxygen and disrupted food chains, and that impacts the life cycle of the fish. Salmon are maturing earlier in the ocean, returning to freshwater at half the age and size they normally would, according to the National Oceanic and Atmospheric Administration and the Alaska Department of Fish and Game. Meanwhile, the U.S. Fish and Wildlife Service and Alaska Fish and Game continue to manage the river in ways that impact the Indigenous community. A report published by the *Alaska Journal of Commerce* in 2013 showed that the state agency failed to act quickly enough to protect the Yukon king run, and that its decisions favored commercial industry, according to the *Journal's* review of 16 years of public testimony. In 2017, the agency briefly allowed commercial sales of king salmon, only to close the commercial fishery within just a few hours after Indigenous fishers complained, citing irresponsible management.



This summer, the Tanana Chiefs Conference task force hosted emergency meetings throughout the upriver villages, where community members and state officials gathered to address the salmon crisis. Brooke Woods and Ben Stevens, both members of the task force, attended a meeting in the village of Rampart in early July. Elders described the salmon fishing ban as a form of genocide. “I miss the smell of the smoke coming out of the smokehouse,” elder Janet Woods said. “All aspects of our lives are just turned upside down when we are restricted

from our traditional food.... If we don’t have the salmon, then we will just be people. We won’t be Native anymore; we will just be people.”

Later that night, after the meeting, Woods and her children piled into a boat to check their family’s 4-inch mesh net. They cut through the glassy water, floating by quiet fish camps and empty smokehouses. Brooke slowed the boat to a stop in the eddy. In a flurry of hands and entangled mesh, 6-year old Braelynn gleefully shrieked “*Baasee!*” (“Thank you!”) to the whitefish who gave their lives in the glistening net. ☀

Ben Stevens borrowed a 4-inch mesh net to fish for whitefish. Despite the salmon fishing ban, Stevens continues to bring his son, family and friends to camp. “They need a connection with their ancestors, and the ground they walked on,” he said (*top, above left*).

With the lowest salmon runs on record, communities along the Yukon River face dire food insecurity and have to rely upon other species, including moose, to get through the long winter (*above*).



(Clockwise, from above)
Brooke Woods, a traditional fisher and UAF Fisheries student, stands for a portrait at the Yukon River outside her family home in Rampart Village, Alaska.

Natasha Singh, general counsel for the Tanana Chiefs Conference, dances to the Stevens Village drummers with her youngest son, Issac, during an intertribal meeting.

A charter flight unloads Bristol Bay salmon in Venetie, one of the 42 interior villages that received fish donations.

Pastor Gary Simple prepares one of the four Bristol Bay salmon his family received.

Salmon, which were inadvertently caught, hang in a smokehouse along the Yukon River. Typically, the smokehouse would be filled.



What you can't see can hurt

Why reducing methane emissions matters.

BY JONATHAN THOMPSON |
ILLUSTRATIONS BY ABBEY ANDERSEN

ON A BLAZING HOT SUNDAY, just before the summer solstice, a deputy with the Cibola County, New Mexico, Sheriff's Department noticed something awry at a natural gas pipeline compressor station just outside the Pueblo of Laguna. He called Transwestern Pipeline, the station's operator, and urged the company to send someone. When technicians arrived, they found a broken sensing line, which caused a

relief valve to fully open and start oozing natural gas, the fossil fuel that generates about 40% of the nation's electricity.

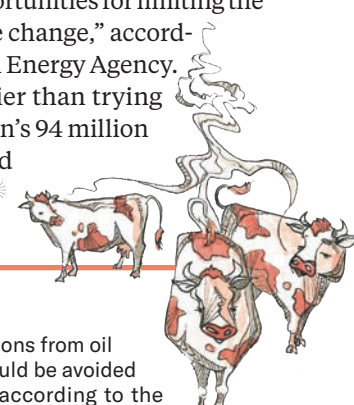
Transwestern Pipeline shut down the line and repaired it, and within a couple of days, gas was flowing again. Power plants kept the air conditioners humming as extreme heat cooked the Southwest. The leaking gas never ignited, no one was injured or killed, and the only visible damage was to the sensing line, which was easily fixed.

But what you can't see can still hurt you. Before the line was shut off, the valve leaked nearly 38 million cubic feet of methane into the air — enough to power more than 300 homes for a full year. Methane is not toxic, but it can build up and explode, and it reacts with oxygen to form harmful ozone pollution. It is also a potent greenhouse gas. That means that not only was the incident wasteful and costly, it's still not over yet: Because the methane molecules trap heat in the atmosphere, they will continue to cause the climate to warm, with increasingly disastrous effects.

The Cibola incident was just one of over 1,000 ruptures, punctures and leaks reported over the last decade by the operators of interstate natural gas transmission lines, which

together disgorged massive volumes of methane into the atmosphere. Far more methane is still routinely spewing from the vast web of oil and gas extraction, transportation and processing infrastructure. That amount, in turn, is dwarfed by the mind-boggling quantity of methane intentionally released via flaring or venting at oil wells. Taken together, all of these emissions and leaks and seeps have caused atmospheric methane concentrations to surge since 2007, jeopardizing the status that natural gas holds as being more climate-friendly than coal.

Oil and gas operations are not the only sources of methane emissions — cows, landfills, coal mines, wetlands and rice cultivation also play their part — but they are definitely one of the biggest contributors. Reducing methane emissions from fossil fuel operations by repairing leaks and upgrading equipment is “one of the best near-term opportunities for limiting the worst effects of climate change,” according to the International Energy Agency. And it is certainly easier than trying to discourage the nation's 94 million cows from farting and burping all day long. ☀



Myriad avenues of emission

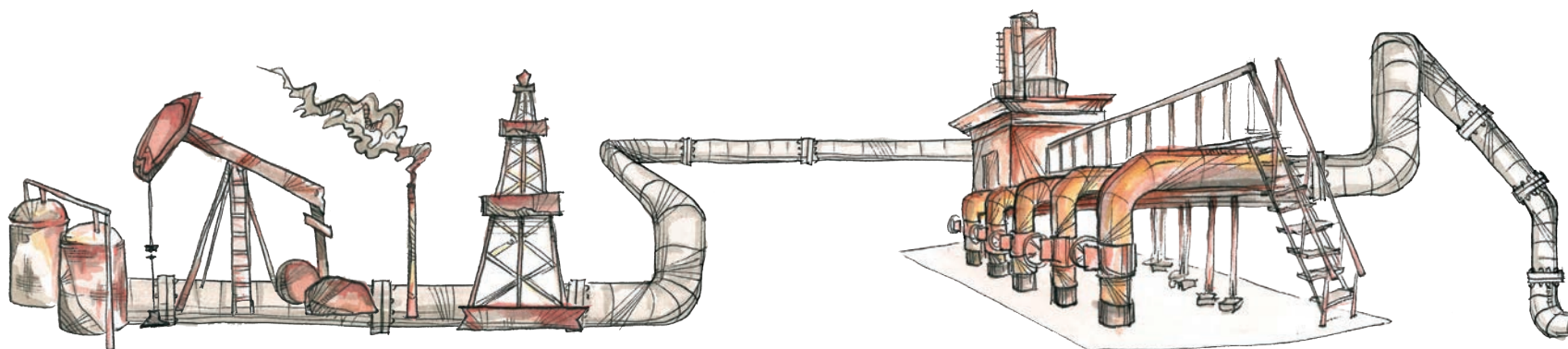
When it's burned to produce electricity or heat, natural gas is far more climate-friendly than coal. But methane emissions during extraction, processing and transportation can cancel out those benefits.

1.89 million

Metric tons of methane emitted by the oil and gas industry per year, not including orphaned/abandoned or plugged wells.

70%

Amount of methane emissions from oil and gas operations that could be avoided with current technology, according to the International Energy Agency. Much of that could be done at no net cost to the producers.

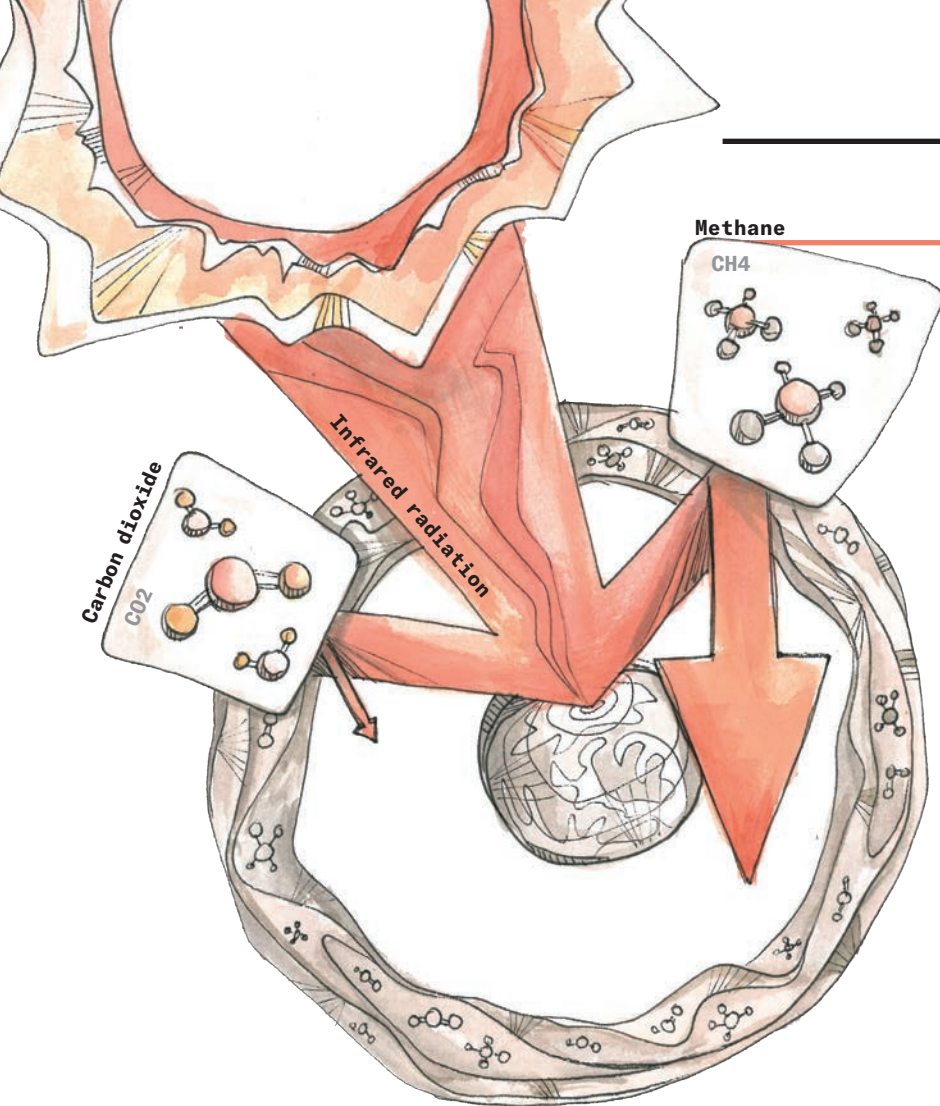


1. During the drilling process, natural gas — aka methane — oozes from the well during and immediately after drilling and hydraulic fracturing at a rate of more than 1 billion cubic feet per year from public lands-drilling alone. For wells targeting natural gas, it's in the driller's best interest to capture — and sell — as much of that methane as possible. But producers going after more lucrative crude consider methane to be a mere waste product.

2. Once a well is producing oil and gas, the equipment becomes a major emissions source. Fittings and valves and storage tanks leak methane and harmful pollutants, such as benzene, volatile organic compounds and hydrogen sulfide; these gases escape when wastewater is pumped from the well into trucks for disposal; and pneumatic devices — automated instruments that control liquid level and pressure — bleed methane. If an oil well is not equipped to capture natural gas, then the methane continues to be vented or flared off, to the tune of **210 billion cubic feet per year**, from Bureau of Land Management-administered leases alone.

3. Compressor stations pressurize the natural gas in pipelines to move it from the well to the processing plant and on to consumers. Methane is emitted via pneumatic controllers, gas-powered engines and leaks.

54% Portion of total methane emissions from the oil and gas industry attributable to pneumatic controllers, amounting to about 1.02 million metric tons per year.

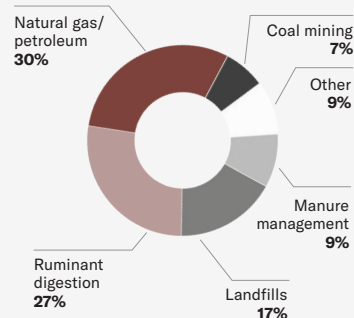


A potent greenhouse gas

Throughout the first decade after it enters the atmosphere, methane, due to its molecular structure, traps infrared radiation about **86 times more effectively than carbon dioxide** does, which means avoiding one ton of methane emissions is as effective in the near term as cutting 86 tons of carbon dioxide emissions.

U.S. CH₄ emissions, 2019

Methane oozes from cows and coal mines, wetlands and landfills, rice paddies and oil and gas facilities.



\$139.6 million: Amount the oil and gas industry and its advocacy groups donated to political campaigns in 2020 alone.

\$21.73 million: Amount by which oil and gas donations to Republicans running for Congress exceeded those to Democrats.

3: Number of Senate Republicans who voted in favor of reinstating the Obama-era methane rules this spring.

\$1.95 million: Amount Hilcorp Energy donated to candidates during the 2020 election cycle.

1: Rank of Hilcorp on the list of top oil and gas-related methane emitters in the United States.

280,000: Tons of methane emitted from abandoned oil and gas wells in 2018, according to EPA estimates. A 2021 peer-reviewed study found that the actual amount was likely 20%, or 56,000 tons, higher.

39,211: The number of direct jobs that could be created by cleaning up oil and gas wells on state and private lands in New Mexico alone.

\$2.9 billion: Value of methane lost via oil and gas field emissions on public lands since 2013.

\$1.8 billion: Amount SoCalGas will pay to settle litigation relating to the 2016 Aliso Canyon natural gas storage facility blowout, which emitted about 100,000 metric tons of methane and forced 8,000 families to evacuate, making it the largest such leak in U.S. history.

1,400: Number of ignited flares observed in the New Mexico portion of the Permian Basin by a New Mexico Environment Department aerial survey in late 2020.

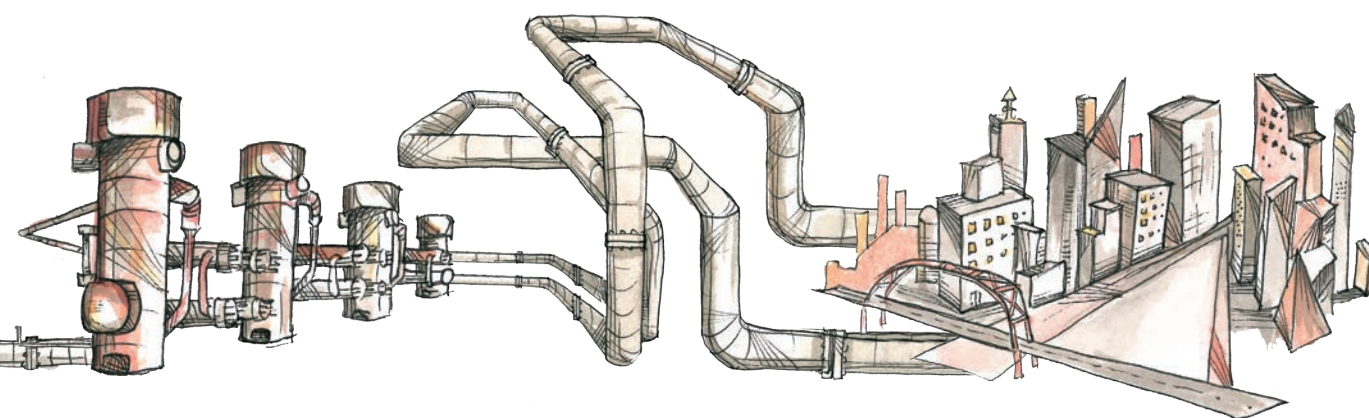
39: Tons of methane a satellite detected emanating each hour from a single cluster of oil and gas infrastructure in New Mexico's San Juan Basin this September.

100 million cubic feet: Amount of methane released by a single incident in the Harvest Rio Arriba Pipeline in November 2018, blamed on a faulty valve.

4,000: Number of houses that amount of gas could power for a year.

Infographic design: Luna Anna Archey

Sources: EPA Greenhouse Gas Inventory, M.J. Bradley and Associates, Center for Responsive Politics, WEST, Environmental Defense Fund, U.S. Department of Energy, Federal Register, [ourenergypolicy.org](https://www.ourenergypolicy.org), Permian Methane Analysis Project, American Chemical Society, Pipeline and Hazardous Materials Safety Administration, International Energy Agency.



4. The raw gas from the well must be **processed** before it can be used to heat homes or generate power — and massive processing plants contain multiple avenues by which methane is emitted.

5. Long-distance, interstate **transmission lines** carry natural gas from production areas to distribution hubs. Corrosion, lightning, floods, shifting soils and other factors can rupture the lines, sometimes resulting in deadly explosions or fires and huge methane releases.

6. The system that **distributes gas** to residents, power plants and industrial facilities is often plagued with leaks. If methane builds up in an enclosed space, it can explode to disastrous effect. During the last decade, 1.6 billion cubic feet of methane has been emitted owing to reported incidents in the nation's distribution systems that resulted in 85 fatalities and 485 injuries.

Decolonizing Idaho's road signs

A new effort will add Indigenous history to historical markers across the state.

BY TONY TEKARONIAKE EVANS



IN SEPTEMBER OF 1824, a Scottish schoolteacher turned fur trapper made his way to a mountain summit overlooking the awe-inspiring Sawtooth Valley near present-day Sun Valley, Idaho. Historical Marker 302 on Highway 75 at Galena Summit now commemorates the moment when Alexander Ross and his entourage first stood at the spot above the headwaters of the Salmon River. The sign proclaims that Ross “discovered” the summit before

spending another month traveling “mostly through unexplored land.”

The notion that Ross “discovered” any place that had not already been well traveled by Native Americans strikes Idaho State Historic Preservation Office Deputy Tricia Canaday as absurd. “Of course, Indigenous groups had been traversing that route for millennia,” she said. Canaday has taken on the monumental task of working with Idaho’s five tribes to revise many of the 290 signs in the

states’ historical marker system, and possibly add new signs.

The initiative’s stated goal, Canaday said, is to rebalance Idaho’s roadside history with an Indigenous perspective and thereby create a more culturally sensitive and historically accurate picture of the past. Each state in the U.S. appears to have its own standards and protocols for reviewing highway marker language, she said, and her office is in charge of Idaho’s. As a result, Ross may soon

be known for having “mapped” or “encountered” Galena Summit, rather than discovering it, Canaday said. That might seem like a small success, but it’s just one piece in a wider mosaic that could transform Idaho’s roadside history for generations to come.

Leading this effort alongside Canaday are tribal officials like Nolan Brown, an original territories researcher at the Shoshone-Bannock Tribes’ Language and Cultural



In mid-October, an empty frame is all that's visible of Historical Marker 302 at the Galena Summit near Sun Valley, Idaho. **Roland Lane / HCN**

Preservation Department at the Fort Hall Reservation. The revision of highway markers is now part of his job, which since 2017 has included the creation of new interpretive signs and exhibits around the state related to his community. "Our major purpose is to educate tribal members and the public and build awareness about the Shoshone-Bannock Tribes' history and continued presence in all of our original territories," Brown said.

That original territory is vast

and includes the land traversed by Ross when he first came through what is now known as Blaine County. Brown's strategic approach is part of the Language and Culture Department's ongoing effort to identify relationships with the Northwestern Band of Shoshone, Shoshone-Paiutes and others, such as the tribes of the Boise Valley. New sign information could include hunting and gathering rights guaranteed by treaties, as well as details about historic sites like Map Rock, a large boulder in the Snake River Canyon near Boise that features elaborate petroglyphs created by the ancestors of the local Shoshone or Paiute nations, as well as the Lemhi Reservation near Salmon, Idaho, which was abandoned during a forced march known as the "Lemhi Trail of Tears" in 1907. The markers could also include information about traditional campsites, homesites, original fisheries, original trails and battle sites.

Brown's staff at the Language and Culture Department addressed the first group of 27 highway markers that the Idaho Transportation Department had proposed for replacement due to their declining condition. The tribes plan to update five of these with completely new narratives. Others simply need revising. "A few signs like those at Lava Hot Springs, the Salmon River and others we are eager to help rewrite," Brown said, adding that he and his staff are enthusiastic about the work and the opportunity to "provide the tribal perspective and history that was previously lacking." The Salmon River sign, Number 292, states that Lewis and Clark "discovered" the river. It makes no mention of the Native people who took salmon for thousands of years on the river, nor of how the Shoshone-Bannock have worked for decades to save endangered Sawtooth sockeye salmon from extinction.

All 290 of Idaho's signs were installed in the 1950s without Native input, often reflecting the *terra nullius*, or "vacant land"

concept held by those who settled in the wake of the Doctrine of Discovery, which had been used for centuries to entitle European Christian immigrants to lands in North America under international law. But even Ross was under no illusion that he was the first person to see the Sawtooth Valley, although for a spell he seems to have hoped he was looking out upon a new Garden of Eden.

"It appeared to us probably that no human being had ever trodden in that path before," he wrote in his memoirs in 1856. "But we were soon undeceived, for we had not been many hours there before my people, going about their horses, found a pheasant (grouse) with a fresh arrow in it and not yet dead. So, at the moment we were indulging in such an idea, the Indians might have been within fifty yards of us!"

The histories of the state's Indigenous nations, long ignored by both state education policies and highway signs, may soon find a place where the rubber hits the road in Idaho, thanks to tribal representatives and historians. The process is only just beginning and could take years, Canaday said. What pieces of history could get displaced in favor of others on the signs will depend on space constraints, Canaday said. "There are strict word counts allowed on each sign," she said. Canaday said the project to revise highway markers, which has received \$700,000 in funding, would follow input from the state archaeologist and state historian, as well as the tribes. "We are trying to look critically at the stories we are putting out there," she said. The Shoshone-Paiute, Kootenai and Coeur d'Alene nations have yet to respond to her request for consultation.

Among those Canaday has met with is Nakia Williamson-Cloud, the cultural resources program director for the Nez Perce Tribe. Situated to the north of Shoshone-Bannock territory, the Nez Perce are now based between the Snake and Clearwater rivers, but, as with most if not all tribal nations,

they once had far more expansive territories that now compete with modern place names and historical narratives. In early July, Canaday and Williamson-Cloud had a three-hour meeting in Lapwai, on the Nez Perce Reservation, where they sifted through highway marker language and reviewed Williamson-Cloud's initial advice on revisions and historical errors and omissions. As a result, one big change could be the inclusion of Nez Perce or *Nimiipuu* language on some signs. "Nakia knew the Nez Perce names for all the places up there," Canaday said. Williamson-Cloud reportedly took interest in the Buffalo Pit highway marker, Number 370, near Elk City, which commemorates a hydraulic gold mine operation that tore away a hillside to get at the riches underneath. "Nakia said that stretch of the river has been called 'muddy water' in the Nez Perce language ever since," Canaday said. "We are considering adding that language to the sign because, from our perspective, it is an interesting historical notation to make."

This long-overdue enterprise began with a suggestion from Marsha VanDeGrift, a Boise resident who was picnicking in 2019 with her husband near Historical Marker Number 75, which details the "Ward Massacre." The sign commemorates an 1854 attack on the Alexander Ward party that brought military retaliation and the closure of the Hudson's Bay Company posts at Fort Boise and Fort Hall. It was part of a wider conflict in the region that became known as the Snake War.

The Ward Massacre sign states that only two young boys survived the attack and that "eight years of Indian terror followed." VanDeGrift contacted the state offices and found them willing to consider changes. "I didn't want my kids or grandkids to ever read such a one-sided description of an event," VanDeGrift said. Soon, thanks to the work of Canaday, Williamson-Cloud, Brown and others, they may not have to — at least not in Idaho. ☀

A scenic landscape photograph showing a large body of water (Eleven Mile Reservoir) in the middle ground, with rugged mountains in the background under a blue sky with scattered clouds. In the foreground, two cyclists are riding on a grassy hillside, looking towards the lake. The overall tone is peaceful and majestic.

Jalen Bazile and Rachel Olzer at Eleven
Mile Reservoir near Deckers, Colorado.
Adam Andres Pawlikiewicz Mesa

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Raising fun — and funds — across the West

FUNDRAISING IS A FACT OF LIFE for most nonprofits. Those of you who get hit up for donations for a multitude of causes every time you turn around might see it as a rather grim and wearisome one. Indeed, asking folks to repeatedly open their wallets is the kind of chore most of us would rather avoid. But that's not how *High Country News'* FUNraising team rolls. Led by the ever-buoyant Alyssa Pinkerton, our director of philanthropy, its five members know how to have a good time while still bringing home the (free-range or vegan-style) bacon that nourishes our organization. In late August, Alyssa led team members on a camping retreat to Utah's Capitol Reef National Park and Grand Staircase-Escalante National Monument to refresh their batteries and map out plans for the year ahead. Two days and nights of stargazing, hiking, rockhounding and general merriment (Of course we also made time for productive work!) reminded everyone why we enjoy raising money for *HCN*. "We get to really see the West in our travels and build friendships with fascinating and generous people," says Alyssa. "What's not fun about that?"

High Country News has been a nonprofit operation almost since our founding in 1970, relying on a mix of reader subscriptions and donations to sustain our work. Year-end giving provides almost a quarter of our annual revenue. Look for our mailed and emailed pitches this November about the time you sit down to eat your turkey. (Don't wait until after you eat; you'll be much too busy snoring on the couch, just like we will.) We will joyfully receive whatever you can send our way.

WE LOVE ALL OF OUR READERS, of course, whether or not they are able to give money on top of their subscriptions. We especially love those who aren't quite old enough to get an allowance, or even read, for that matter.

Joe Jackson of Provo, Utah, discovered his daughter, **Alaska**, thumbing through a recent edition of *High Country News*, confirming her budding appreciation for nature. "She loves watching the deer, juncos and squirrels," Joe told us in his note. "Thanks, *HCN*, for bringing up the topics that will ensure a beautiful West for her and her little brother to enjoy."

SINCE THE PANDEMIC BEGAN in March of 2020, we've had precious few physical gatherings with our readers, and we've missed them. But in September, we tested the waters with an outdoor party at the home of **Andy Wiessner**, in Snowmass, Colorado. Andy, our longest-serving board member with nearly 40 years under his belt, worked the phones with staff to entice nearly 100 *HCN* supporters for wine, food and words from former U.S. Sen. **Mark Udall** and his conservationist spouse, **Maggie Fox**. They spoke of the deepening environmental and social perils facing the world, but said they were encouraged by the rising tide of young social and environmental activists. Their message to *HCN*: Keep enlarging the tent to include all of the West's citizens in shaping its future. Publisher and Executive Director **Greg Hanscom** outlined the organization's commitment to doing just that while remaining true to our deep roots in the land.

THE DAY AFTER THE PARTY, *HCN's* board of directors gathered virtually for a fall meeting for what we devoutly hope is the last all-cyber board meeting for a very long time. Top of the agenda was passing a new annual budget that reflects the priorities of our now-complete 50th Anniversary Campaign: a larger budget for the editorial team, a new staffer for our marketing team, market-rate pay for all employees (including interns and fellows), and a financial reserve that can cover three months of expenditures should things go south. The board also voted to bring two more stellar humans into its fold: **Wendy Fisher**, the long-time executive director of Utah Open Lands, and **Rich Stolz**, who recently wrapped up a stint as the executive director of One America, an immigrant and refugee advocacy organization. More about Wendy and Rich in a future issue. And finally, the board clarified its role in maintaining *HCN's* editorial independence:

"While the board sets the mission of *HCN* and helps shape the values and editorial direction of *HCN*... it does not get involved with the practice of journalism on the level of individual stories at the magazine. Decisions about which stories to pursue and publish, as well as how to execute them, are made by the staff." —*Paul Larmer, for the staff*



Our philanthropy team in Capitol Reef National Park (top). Joe Jackson's daughter, Alaska, with the September edition of *High Country News* (middle). Readers and staff gather in Snowmass Village, Colorado, to support *HCN* (above).

THE WINN

As the
climate
crisis
worsens,
what will
happen
to snow?

By
Heather
Hansman

SNOW IS ALCHEMY, the exact right mix of cold, water and air. You can feel the difference of man-made — the stiffness and the catch — and the unbroken crystals of newly fallen fresh. Snow is sound, too, the creaky stick of cold storms, the ball-bearings swish of slush corn or the crackle of rime-y ice. That thing about the thousand words for snow is right.

If we lose the ebb and flow of winter — which we soon could — we also lose storm chasing, and the barometric adrenaline of waiting for a storm. There's a risk in pinning your heart to weather, and we skiers hang everything on snowfall. You know you're in trouble when you're constantly watching storm tracks and snow gauges, trying to predict the places where it's going to be the deepest. Letting the real-life logistics of where you're going to live, for instance, fade into the background while you focus on La Niña storm tracks and *Farmers' Almanac* predictions.

The greatest existential threat to skiing is the winnowing of winter. The viability of ski towns, and of the sport, is dependent on snowpack, which is being decimated by global warming. Depending on the emissions scenario you choose, snowfall is predicted to shrink by up to a third by the end of the century. That thin margin of weather is going to have a huge bearing on the future of skiing, and on whether or not people can keep counting on the seasons to eke out a way of life. Not just in the dry Southwest, but in British Columbia, where freezing levels keep creeping higher, and in New England, where almost every ski hill now depends on man-made snow. That problematic future is easy to forget in deep winters, but it's abundantly clear in shallow ones. Skiing is one of the most carbon-intensive outdoor sports, and as it snows less, or rains more, it takes more energy and water to create snow.

The worst winter I lived in the mountains, I volunteer ski patrolled at Arapahoe Basin in Colorado, and in the early season we sidestepped the steep slopes of Pallavicini Face, packing down the snow with our skis so it would stick to the hills. We were trying, vainly, to hold onto some kind of base, to keep the mountain open. Mainly we were trying to hold onto our sanity, and protect everyone else's. When it doesn't snow, the land doesn't look right. A low-slung depression takes hold of the community. Everyone gets antsy. A couple of dry weeks in a ski town makes you wonder about the value of waiting for weather.



OWING OF WINTER



A lone skier is enveloped by clouds created by snowmakers at
Keystone Resort in Colorado. **Chet Strange**

Desperation sets in, and that particular season turned into a series of pray-for-snow parties and burnt-ski bonfire sacrifices to the snow gods. I did a lot of groomer skiing dressed like a hot dog to make things feel even a little bit interesting.

But every new season hinges on hope for deep powder days. Did we used to talk about climate this much? Was it always this dry in December? Can we actually keep doing this if it gets worse?

...

THE EROSION OF WINTER isn't just a bummer for single-focused ski bums and weather nerds. Rising temperatures and shrinking snowpack impact water supply, food security, and economic viability. Shorter, warmer winters, and precipitation that falls as rain instead of snow, screws up everything from electricity generation to fish migration. When the skiing is bad, everything is bad.

The scientific journal *Geophysical Research Letters* found that the snow season in the western U.S. has shrunk by 34 days since the early 1980s. "The overall decline in snowfall has dampened profitability given the fact that industry operators have to incur significant costs in using snowmaking equipment," the study read. It's a hard economy to hold onto even when snowfall is consistent. Ski resorts have launched and faded in the lifespan of people who have witnessed the evolution from rope tows to mega resorts, and by the time today's kids are old enough to work at a ski resort, the world of skiing could change even more.

Liz Burakowski, a climate scientist at the University of New Hampshire, says modeling the future of winter storms isn't easy, because interconnected factors like El Niño, sea ice or snow cover in Siberia, create a complex puzzle. But despite the range of variables, there's a clear warming pattern thanks to the way carbon dioxide traps heat in the atmosphere and warms it up. "The trend toward the end of the century is to see winters that are 8 to 10 degrees warmer," she says. "That puts a lot of places right above the freezing level; the margin is small."

That means some resorts, especially the tiny ones that don't have the capacity to create their own winter through snowmaking, and which are in low elevations or Southern latitudes, are going to have a hard time staying economically viable in the very near future. And as winter gets warmer, even the places that have invested in snowmaking won't be able to do much. Even if you have the equipment to make snow, if it's raining or hot you won't be able to keep it on the ground.

Burakowski is the kind of scientist who can both rationally look at the facts and the modeling, and hold the emotional side of losing winter in her head, which makes her good at talking

about it in real terms — a piece of her job that's feeling increasingly urgent and important.

She says it can be hard to make sense of it just by modeling ranges and temperature spikes, so a big part of her mission is making the science accessible through storytelling. Talking about how her mother used to ice fish in lakes that no longer freeze over, for instance. She says a big concern for the ski industry is back-to-back terrible winters, because after a few strikeouts, casual skiers start to lose their motivation. If a family of skiers skip a few seasons, their kids may move on to other sports. Suddenly you have a declining population, along with a weakening weather pattern.

The biggest imbalance of climate change, in almost any capacity, is that the burden isn't spread out fairly. The people who are most impacted by warming are often those who are least able to insulate themselves against it. As winter gets warmer and shorter, ski hills that struggle the most — the small ones in low, dry places, where funding is short — start to require more assistance. They need snow guns they can't afford, or water rights for snowmaking, or ways to pass the buck in years they can't open. Some ski areas will actually fare better in the face of climate change, at least for a little while, and those are categorically the ones that are already at a financial advantage, thanks to corporate cover. If the number of skiers remains the same, but the number of viable resorts decreases, somewhere like Mammoth Mountain in California, which sits at 9,000 feet and has a stacked fleet of snow guns, will be busier, while lower-elevation and lower-dollar operations — say, Ski Santa Fe — won't fare as well. The snowy backbone of the country is already stippled with failed ski resorts.

I'm afraid for places like this, and what might happen if they can't survive. Ski Santa Fe, despite the fact that it has thousand-foot-long chutes and steep, peppery tree skiing, caters to families and church groups. It reminds me of places like Cannon, where I grew up skiing icy bumps, or community-owned Mount Ashland in Oregon. It's eastern Washington's Loup Loup or southern Colorado's Hesperus, where you can night ski the creaky slow double chair. Places like that are still hanging on to the idea of winter, even if it comes infrequently now, but could easily disappear.

...

THE REALISTIC FUTURE OF SKIING is a question of what counts as natural, what we try to create or maintain, and how long we can hold on to the past.

There's a halo of goodness around the outdoor industry, a sense that it engenders environmentalists and breeds people who want to protect the mountains. But just because you love skiing doesn't mean you're doing

*Shorter, warmer
winters, and
precipitation
that falls as
rain instead of
snow, screws
up everything
from electricity
generation to
fish migration.
When the skiing
is bad, everything
is bad.*

anything concrete or impactful to preserve it. Half of American ski resorts operate on government-owned Forest Service land, because of last-century ideals about public-land use. That means that anything those ski areas do to gin up visitors, or improve the ski experience, impacts collective resources, be it water supply or wildlife migration. And that's before you even consider the fallacy of federally owned public land, and how the American government came to consider it public after taking it from Native American tribes. We've historically viewed attractive outdoor economies as benign, but just because we love being outside doesn't mean we're not overusing resources or damaging landscapes. It's not just climate change and large-scale warming that impact the skiing experience, it's the way we skiers use resources, and the cascading impacts of snowmaking, transportation, trail cutting and energy demand.

Think about snowmaking — which 88% of resorts in the U.S. use to keep their operations running in shallow winters. "When the snow



was great, it was great, but when there was no snow, we wouldn't open," J.R. Murray, the general manager of Arizona Snowbowl, told me a few years ago, when they were trying to figure out a snowmaking water supply. "We'd have ski seasons that were 20 days long and some where we got 400 inches. The difficulty is you can't plan. You can't hire and retain staff. So we needed snowmaking to stabilize things." It adds some crucial smoothing to the climate curve, but it's expensive and resource-intensive, hard to sustain in a different way, especially because you can only make snow when it's freezing.

In 2020, according to the National Oceanic and Atmospheric Administration, the last five winters were the five warmest on record, and that's not likely to stop. The Intergovernmental Panel on Climate Change says that under a higher emissions scenario (the path we're currently on), the total amount of seasonal snowfall is projected to decrease by 10% to 30% by the end of the 21st century. That impacts far more than skiing. In New Mexico, where the

Rio Grande is the main water source for many of the biggest population centers, the river often runs dry in the summer because of overuse and overallocation. Low snowfall in the mountain headwaters makes it even more precarious. It's all connected, and it's crashing.

Liz Burakowski and other climate experts are trying to translate those numbers and predictions into feelings, to make us act, even when it feels overwhelming and dire. I get a deep gut ache when I think about losing snow, about the contrast between my childhood memories of snow and the gray slush of right now. I'm scared and sad and somewhat perpetually grieving. How could it have gotten this bad so fast?

"Solastalgia" is the name for the feeling of the world changing around you, when you were told it would be stable. It's the existential distress caused by climate change, and the unmoored feeling of the landscape shifting under your feet. It makes you homesick for your own life and uneasy when the weather changes. It's the deep unease of hot, snowless winters. Philosopher

Backcountry skiers climb bare and rocky slopes to ski the south face of Mount Fairchild in Colorado's Mummy Range. **Tucker Stapleton**

Glenn Albrecht, the man who coined the phrase, mashed up solace, nostalgia and desolation to capture that wavy feeling of loss. I feel it almost constantly these days, persistent and creeping in.

Psychologists say that the best way to deal with climate grief is to go to the places that restore you, to remind yourself of the tenacity of our connection to land. But that's extra painful when those spots that are supposed to sustain you can't hold snow anymore.

Up until now, the narrative about exploring in mountains has been about first ascents and descents, but going forward we might more likely be talking about last ones. ☼

Excerpted from Powder Days: Ski Bums, Ski Towns and the Future of Chasing Snow by Heather Hansman © 2021, used with permission from Hanover Square Press/HarperCollins.

Radioactive Neighbors

The only active uranium mill in the nation has plans to import waste from other countries, but its neighbor, the Ute Mountain Ute Tribe, strongly objects.

By Jessica Douglas | Photos by Russel Albert Daniels

ON A WARM JULY EVENING, Yolanda Badback described the noxious fumes that haunt the air where she lives. Unlike the fragrance of sagebrush or the sweet scent of juniper and piñon, the odor is astringent and sulfuric, hard to breathe. Sometimes it forces Badback and her family of eight to stay indoors. At its worst, it causes nausea.

Badback lives in White Mesa, Utah, on part of the Ute Mountain Ute Reservation. The smell comes from her neighbor, the White Mesa Mill, the last conventional uranium mill in the United States. When the mill's tall smokestacks begin to billow and the winds roll off the blue Abajo Mountains, the stench floats five miles south to White Mesa. Badback, like most residents, can smell it from her doorstep.

Badback sat on a gray couch, hugging a pillow to her chest, her long black hair pulled into a loose ponytail. A retired health representative for the tribe, she has devoted her life to closing the mill. Badback's mother, Ute Mountain Ute elder Thelma Whiskers, sat next to her, switching between English and the Ute language whenever her great-grandchildren peered through the doorway or came into the room.

"A lot of people don't understand what we go through here in our community," Badback said. "We want the mill to close. We want them to clean it up."

Badback sounds frustrated and fatigued; at 48, she barely remembers life without the mill. Over the past 40 years, the construction of the mill demolished archaeological and burial sites important to the Ute Mountain Ute Tribe and depleted the tribe's traditional hunting grounds, destroying places where people once gathered plants for basketry and medicine. Radioactive waste has been spilled along the main highway from trucks hauling material from Wyoming to White Mesa for processing. The children can no longer play outside because of the stench and the fear of what might be causing it.

The mill sits in the heart of San Juan County, a few miles east of the original boundaries of Bears Ears National Monument, with Canyonlands National Park to the north and Monument Valley to the southeast. It opened in 1980 to process uranium ore from the Colorado Plateau into yellowcake, a concentrated powder used in energy production and nuclear weapons. Most uranium mines closed in the last half-century. But White Mesa not only remains open, it has become a destination for radioactive material from around the world. Now, its owners want to accept waste from the Northern European country of Estonia, nearly 5,000 miles away.

Underneath the mill lies the shallow Burro Canyon aquifer, which feeds the sacred freshwater springs the tribe relies on. A layer of sandstone and shale separates it from the deeper Navajo Sandstone aquifer, White Mesa's primary source of drinking water. The Navajo Sandstone aquifer empties into the San Juan River, one of the Colorado River's main tributaries. Data from Energy Fuels Resources, the Colorado-based company that owns the mill, shows that groundwater from the Burro Canyon aquifer contains multiple contaminants — and that it's rapidly getting worse. The company blames naturally occurring contaminants or previous industries, even as the contamination keeps growing.

Now, both the tribe and conservationists fear that if Energy Fuels Resources is allowed to import Estonia's waste, it will not only further endanger the tribe, it will encourage more radioactive byproducts to be imported, prolonging the life of the mill and its impacts on land, air, water and the community's cultural heritage. "At which point will somebody say, 'Enough'?" Peter Ortego, the tribe's general council spokesperson, said to me. "The tribe has already said, 'Enough,' and we wish other people would join us."



Michael Badback and his mother, Thelma Whiskers, stand next to the barbed wire fence at the White Mesa Mill in southeastern Utah.



AS TENSE AND HUMID summer monsoon clouds formed over the mesa, Michael Badback, Yolanda’s brother, drove me around in his nephew’s black Ram truck. We started on the mill’s west side and drove north along a dirt road, following the mill’s boundaries. Badback pointed out a small cluster of buildings and warehouses. Tribal members used to hunt deer and rabbits in this area, he said, and gather the once-lush sagebrush for medicinal tea.

“The sagebrush used to look like turquoise,” Badback said. “And now, you see them, and they’re all dead.”

Badback no longer hunts here. Only a 4-foot-tall barbed wire fence, marked with radioactive warning signs but riven by large

gaps, separates the mill from the hunting grounds. The mesa’s wildlife has easy access to the mill’s five “tailings cells” — pits that hold a poisonous soup of radioactive slurry and toxic waste, leftovers from the uranium-milling process.

Today, the tailings cells cover about 290 acres — the equivalent of 382 football fields. When the mill was first built in 1980, three cells were constructed, with only a single layer of lining to separate the toxic waste from the ground and no leak-detection systems. If it were built today, all the cells would require two layers of liners and a system to detect any leakage.

Badback told me that hunters in the community said they’d seen deer hop the fence and drink from the tailings ponds; some animals

have been found with green-colored meat. Now, tribal members travel great distances to hunt and collect herbs safely.

This wasn’t always the case. For thousands of years, Badbacks’ ancestors called the Four Corners region home. Yolanda and Michael’s mother, like the generations before her, gathered willows for weaving baskets, sagebrush for tea and sumac berries on the open mesas and desert ridges. People hunted deer and elk, and grew squash, corn and beans. The sandstone landscape is dotted with archaeological sites, including kivas, pit houses, petroglyphs and burials.

Life changed dramatically for the Ute Mountain Ute and other Four Corners tribes — the Hopi,

Diné, Ute and Pueblo of Zuni — when the Spanish colonized the area, and were eventually followed by Mormon settlers. Through a series of land cessions and treaties in the late 1800s, the U.S. government drastically reduced the tribe’s ancestral land claims and forced most of its members to move to a reservation in western Colorado, though a few obtained small allotments in San Juan County, Utah. Today, the Ute Mountain Ute Tribe is split between two locations: About 2,000 people live in Towaoc, Colorado, the tribe’s headquarters, while a smaller community of about 300 live in White Mesa.

The lands the U.S. government chose as reservation sites were often remote and rugged, regarded as undesirable by white



Yolanda Badback at her home in White Mesa, Utah (left). The White Mesa community on the Ute Mountain Ute Reservation (right).

settlers. But as Stephanie Malin, an associate professor of sociology at Colorado State University and the author of *The Price of Nuclear Power: Uranium Communities and Environmental Justice*, explained, many of those “undesirable” lands later turned out to be rich in coal, natural gas and, especially, uranium. Suddenly, extractive industries were interested. Uranium mills and mines were built near or on tribal lands; the Jackpile-Paguate Uranium Mine on Laguna Pueblo land, for example, was once one of the largest open-pit uranium mines in the world.

Mining and milling increased rapidly after World War II, once the Cold War began, mostly on the Colorado Plateau, which was home to some of the nation’s

*“The
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And now, you
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largest uranium deposits. Until 1971, the federal government was the sole purchaser of uranium ore in the U.S., and it relied heavily on Indigenous — especially Navajo — labor for mining.

Over 90% of all milling in the U.S. occurred on or just outside reservation boundaries. According to the Environmental Protection Agency, there are more than 500 abandoned uranium mines on the Navajo Nation alone. All that mining has compromised the health of the Southwest’s Indigenous people.

European experience earlier in the century had shown that exposure to uranium had potentially fatal health effects. But the U.S. industry was loosely regulated, and the few regulations that existed were largely unenforced. Little protection was provided for miners.

Today, federal and state governments have regulations concerning environmental protection, worker health and safety, and treatment of contaminated sites. But the regulations lack uniformity, and the responsibility for enforcement is spread across multiple agencies. In 1974, the U.S. government created an independent agency, the Nuclear Regulatory Commission (NRC), to regulate nuclear power plants and other uses of nuclear materials.

The White Mesa Mill opened in 1980 under NRC regulation. An environmental assessment done at the time estimated its lifespan at 15 years, leading the tribe and many other locals to believe it would be a relatively short-lived enterprise, and that reclamation would begin shortly after operation ceased. A few years later, the Utah Department of Environmental Quality’s Division of Waste Management and Radiation Control took over regulatory oversight from the NRC.

Instead of closing after 15 years,

the mill started to process “alternate feed” — uranium-laden waste from contaminated sites across the country — in the early ’90s, including from the Oklahoma Sequoyah Fuels plant near Gore, Oklahoma. The White Mesa Mill processed tens of thousands of tons of radioactive waste from other mills for small amounts of uranium and stored the resulting waste in its tailings ponds, a practice that continues today.

According to Kamran Zafar, former staff attorney for the environmental nonprofit Grand Canyon Trust, this practice exploits a regulatory framework that classifies radioactive byproducts as “alternate feed” rather than conventional uranium ore. Because radioactive byproducts are classified this way, the mill can receive and process them despite the fact that it has to store the leftover materials. More than 99.73% of the shipped material from Estonia will be stored at White Mesa.

“(Energy Fuels Resources) say they’re recycling the alternate feed, which basically means they’re getting out the trace amounts of uranium that are left that other disposal facilities couldn’t,” Zafar told me. “But really what they’re doing is they’re getting paid to dispose of the vast majority of that waste at the White Mesa Mill permanently. And because they’re not a properly licensed radioactive waste facility, they can do it at much cheaper cost than other facilities could.”

Curtis Moore, Energy Fuels Resources’ vice president of marketing, disagrees. “We get license amendments pursuant to state and federal law — it’s not some obscure loophole,” he said.

The company wants to import 2,000 drums — 615 metric tons — of radioactive waste from Estonia, which has no licensed facilities capable of processing its waste. First, however, the company had

to amend its radioactive material license. Utah's Division of Waste Management and Radiation Control received a huge volume of public comments once people learned about it — nearly 12,000 of them opposed, compared to only around 300 in support. Still, it granted Energy Fuels Resources' request this summer.

Both the tribe and environmental watchdogs are worried about the quality and longevity of the older tailings cells, concerned that they'll leak into the aquifers below — if they haven't already.

"These three older cells have been there for 40 years, and they were not designed to be there for 40 years," Scott Clow, the environmental programs director for the Ute Mountain Ute Tribe, told me. Clow believes, "It's not whether they leak, it's how much they leak."

Energy Fuels Resources, which bought the mill in 2012, has already reported that one of its cells emitted more radon into the air than allowed in 2012 and 2013 according to court records. The EPA identifies radon as the number one cause of lung cancer in nonsmokers. In 2014, the Grand Canyon Trust sued Energy Fuels Resources in Utah District Court, alleging that the company was violating the Clean Air Act. After three years of litigation, the judge ruled in the company's favor. Three state regulators filed declarations in support of the company.

No one was surprised; Energy Fuels Resources is an influential power among government agencies and top officials. In 2017, a *Washington Post* investigation revealed that the company had urged the Trump administration to shrink Bears Ears National Monument, saying this would allow the industry access to uranium deposits. In a letter to the Interior Department, Mark Chalmers, the company's president and CEO, said that the monument could impact future mill operations. "There are also many other known uranium and vanadium deposits located within the (original boundaries)

that could provide valuable energy and mineral resources in the future," he wrote.

ALDEAN KETCHUM, a Ute Mountain Ute elder, professional flute player and Bear Dance chief, has noticed the changes to the land. His great-grandfather and the generations before him were sheepherders in and around the greater Bears Ears region. As a young boy, Ketchum was responsible for his grandfather's sheep. Every summer, he rose early to corral about a hundred animals, guiding them north toward Elk Ridge along Cottonwood Wash, an important tributary to the San Juan River, leading them toward the freshwater springs.

"That's how my people survive," Ketchum said. "Over the years and even through the Depression, we were out there, surviving and living off of the land."

But now, vegetation near the mill is drier than it used to be, the springs are at risk of contamination and the water that flows from the pipes of homes like Ketchum's tastes metallic. "There was a time when we lived and our water that we had here was so delicious and so sweet, you'd drink it all day," Ketchum said. Today, like most locals, Ketchum either boils his water before drinking it or travels great distances to purchase water in bulk.

Groundwater monitoring on the mill's property has increased since the late '90s, but public data collected from Energy Fuel Resources' monitoring wells and processed by tribal scientists reveal that contamination has gradually worsened. Starting in the late '90s, some plumes — a release or movement of contaminants in the groundwater — were detected beneath the mill. One of them was a chloroform plume, which was identified as laboratory waste left over from previous activity. However, a nitrate/chloride plume was also identified, and data has shown the groundwater is contaminated with multiple heavy



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metals, including uranium.

All the while, groundwater is becoming more acidic. Normal drinking water possesses a pH level between 6.5-8.5, but data from the tailings cells shows pH levels between 1-3, with one of the oldest cells possessing a pH level less than 1 as recently as 2020. Significant lowering of pH has been seen in groundwater plumes associated with other contaminated uranium mill sites, such as the Bear Creek uranium mill in Wyoming. "We've gone from no data indicating groundwater contamination, to some data indicating groundwater contamination, to a lot of data indicating groundwater contamination," Clow, the tribe's environmental programs director, told me.

Energy Fuels Resources contends that the pollution is related to changes in the geochemistry or previous industrial activities that occurred on the

property. “There’s no evidence that there’s any leaking or anything happening at those sites that I’m aware of, so (we’re) certainly not contaminating the groundwater of the Utes or whatever,” Moore, the company’s vice president of marketing, told me. “We’re in full compliance with all laws and regulations, so you know, there’s been no adverse environmental or health impacts from the mill that we’re aware of.”

The state says that there’s no proof that any cells have leaked. “You can have natural rising trends, a decrease in trends that could basically be from changes in concentration of pH in the wells, but also could just be, you know, some years you have more water and less water,” Phil Goble, uranium mills and radioactive materials manager at the Utah Division of Waste Management and Radiation Control, said. “Depending on what the elevation is for the groundwater, it can change some position with concentrations that naturally happen.”

Meanwhile, the state — at Energy Fuels Resources’ request — continues to move the goalposts for acceptable contamination. When any of the several monitoring wells exceeds the levels allowed, the company is required to determine the source of the contamination and report it to the state. Since Energy Fuels Resources bought the White Mesa Mill, it has requested modifications to groundwater compliance levels, often increasing the level permitted, at least 27 times in the past nine years. The Utah Division of Waste Management and Radiation Control has granted all its requests, occasionally asking for more data analysis. “If the licensee can meet the criteria that’s outlined in federal and state law, we’re obligated to say yes, we can’t legally say no,” Goble said.

In a letter to the Utah Division of Waste Management and Radiation Control in 2020, the Ute Mountain Ute raised concerns about the contamination in several wells on the mill’s property. The tribe pointed out seven instances

near the end of 2019, when wells exceeded contamination levels. The tribe urged the state to investigate and “identify and address the root causes of the contamination, rather than artificially relaxing groundwater contaminant levels (GWCLs) to excuse noncompliant data and allow further degradation of water quality.”

The state says it takes the tribe’s concerns seriously. However, it sides with Energy Fuels Resources. “We understand the concerns of Ute Mountain Ute Tribe, but based off of what we’ve seen over the past 16, 17 years of regulating the White Mesa Mill after receiving it from the NRC, we have no evidence to support any kind of assertions the mill is harmful to human health or the tribe,” Goble said. “We can definitely understand their concerns, but we haven’t seen anything that says the mill is harming the members of the tribe.”

Even if the contaminants were naturally occurring and the mill was not contributing to groundwater pollution, the state should be monitoring it closely, Colin Larrick, the tribe’s water quality program manager, said. “We’ve been telling the state that if they really believe that this formation is naturally acidifying and releasing contaminants to toxic levels ... that’s a big deal, and they should be studying this and alerting people,” he said. “But there’s none of that.”

On a hot morning in July, Larrick showed me some of the tribe’s monitoring wells. We drove north along Highway 191 and turned west onto a gravel road about a mile south of the mill. He stopped about a hundred feet from the highway and pointed to a 2-foot-high square yellow structure. It’s small and easily overlooked, but its importance is sizable: It is the tribe’s latest monitoring well, placed on Bureau of Land Management land as close as possible to the mill’s boundaries. The well’s location will enable the tribe to better track any changes to the groundwater closer to the reservation, and to compare that data to

the information the mill is obtaining from its own wells.

As we drove on, the gravel road turned to rust-colored dirt, dampened by yesterday’s monsoon rains. As we descended from the flat mesa, junipers began to appear in greater numbers, cottonwood trees emerged, and the vegetation glowed a brighter green, indicating that water was nearby. Below the mesa, a spring brought freshwater to the

Aldean Ketchum in his yard at White Mesa, Utah (*facing page*), and his granddaughter, Makiah Little, playing in a puddle left by recent monsoon rains (*below*).



desert, not in a gushing surge, but in a slow and steady trickle. Small droplets fell from the porous rock above the spring, and a sliver of a stream, about the width of a pencil, flowed out of the rock into the ravine. Steep cliffs rose above it. At the top, there were remnants of Puebloan structures: The water had clearly been relied on for thousands of years.

This freshwater spring is important to the Ute Mountain Ute, who use it for drinking water, sweat lodges and ceremonial purposes. This spring and others in the area have maintained a steady flow and good quality water for decades, but Larrick and the tribe worry that contamination from the mill could soon change that. In the meantime, Larrick said, “These are the standards that we aim to protect these resources; that’s the type of use we expect springs to support into the future.”

In addition to amending its

license, Energy Fuels Resources plans to build two more tailings cells. The Utah Division of Waste Management and Radiation Control has yet to grant the company permission to expand, but the possibility concerns the Ute Mountain Ute. The mill is in the White Mesa archaeological district, which is home to hundreds of Ancestral Puebloan and sacred archaeological sites. Many of them are hard to distinguish owing to erosion caused by weather, cattle and farming.

When the mill was first proposed in the late ’70s, its original owners had to comply with the National Historic Preservation Act. Archaeologists had to survey the property, identify any cultural sites and suggest mitigation strategies to reduce the impacts of construction. They discovered large pit houses and kivas, storage structures, burial sites, fire pits, middens and numerous artifacts. Despite the survey,

however, officials with the Ute Mountain Ute Tribe say they were not consulted, and most of the sites were destroyed during construction. Photos show bulldozers destroying what appears to be a kiva. “It’s a terrible photograph, and it just brings tears to your eyes,” Ortego, spokesman for the tribe’s general council, told me.

The tribe fears that if Energy Fuels Resources is allowed to construct new cells, more cultural sites will be lost. The company has continued to excavate on the property, but according to Terry Knight, the tribe’s historic preservation officer, the tribe has rarely been notified of any archaeological findings.

According to a Cultural Resources Easement Agreement from 1985, the BLM was aware of the archaeological sites when it first transferred the land to Energy Fuels Resources’ predecessors. The BLM’s Moab District was supposed to inspect them every three years, at least, in order to monitor and mitigate any damage. The proposed locations for the new cells include some or all of the same BLM land.

“The Bureau of Land Management has a trust responsibility for the protection of those cultural resources,” Clow, the tribe’s environmental programs director, told me. But when *High Country News* asked the BLM to confirm that the required inspections were being carried out, the agency declined to comment despite public records that indicated the BLM was aware of its responsibility back in 2004 and referred *HCN* to the Utah Division of Waste Management and Radiation Control. *HCN* has obtained some public records from the BLM and the Utah agency, but none of them show that any archaeological surveys were performed after 1985.

THE FIGHT TO CLOSE White Mesa Mill has been a multigenerational journey for Yolanda Badback and her family. As a young girl, she accompanied her uncle, Norman Begay, to meetings where he and other tribal members spoke out against the mill, fearing it would



“The Bureau of Land Management has a trust responsibility for the protection of those cultural resources.”

Colin Larrick, water quality program manager for the Ute Mountain Ute Tribe, inspects Entrance Spring near the entrance of the White Mesa Mill.

contaminate their water, land and community. After his death, Badback and her mother, Thelma Whiskers, formed a group called White Mesa Concerned Community to educate their neighbors about uranium, which can cause both short-term and long-term health problems, including lung cancers, kidney problems, birth defects and miscarriages.

Meanwhile, the mill continues to affect the community of White Mesa, disturbing the landscape and possibly impacting the locals’ health. Badback has witnessed it all: the smokestacks, the changing water, the mining trucks that speed by, the death of the vegetation. Over the years, she has attended public hearings and testified before county commissioners and lawmakers from Blanding to Salt Lake City, arguing that the mill needs to be shuttered and the land reclaimed. She is often one of the few to speak up in town halls full of people from the nearby town of

Blanding, many of whom support the mill or have jobs there. At times, Badback’s efforts have been met with furious opposition, and she’s been accosted and harassed while grocery shopping in Blanding.

But Badback and other tribal members are determined to keep fighting, submitting public comments, writing letters to the Utah DEQ, and holding an annual protest, marching from the White Mesa community center to the gates of the White Mesa Mill. Most recently, the tribe filed petitions to review and to intervene against the amendment to Energy Fuels Resources’ radioactive waste license. One day, they hope, the mill will be gone and cleaned up, and future generations will be able to thrive in the landscape their ancestors knew thousands of years ago.

Beyond its impacts on the Ute Mountain Ute, the mill’s critics say its story illustrates the enduring legacy of environmental racism, as well as the ways that Indigenous communities have been exploited by extractive industries. According to the EPA, there are 15,000 abandoned uranium mines scattered across 14 Western states, mostly Colorado, Utah, New Mexico, Arizona and Wyoming. About 75% of those mines are on federal and tribal lands.

“These companies, even the government, identify poor, brown, Black communities and intentionally pollute us, knowing that they capitalize off of it. This has a direct impact on the psyche of Native peoples,” Talia Boyd (Diné), the cultural landscapes manager for Grand Canyon Trust, said. “Because these are sacred places, these are places where we go to heal, these are places where we go to gather medicine. When it’s compromised by radioactive contaminants or contamination, then we are exposed, (because) it compromises the integrity of our landscape to heal us.”

As for Badback, she has made her position clear. “I will stand my ground,” Badback told me. “I will not stop until the day that I get this mill to close and get it cleaned up.” 🌻

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WHICH WE BELONG, WE MAY BEGIN TO
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-ALDO LEOPOLD



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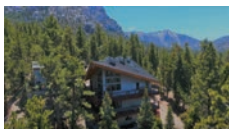
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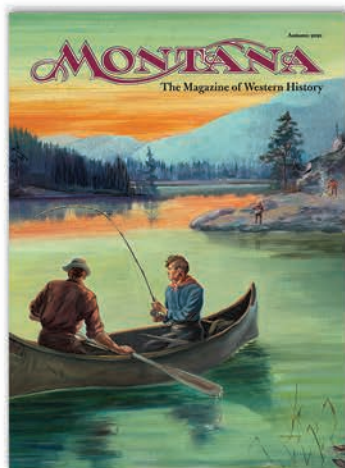
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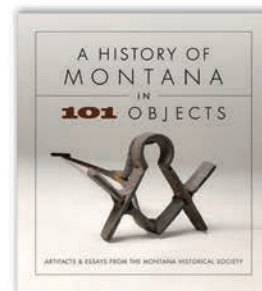
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The White Sands discovery only confirms what Indigenous people have said all along

Once again, the media has excluded Indigenous peoples from our own story.

BY NICK MARTIN

“WE HAVE BEEN HERE since time immemorial.”

There might be no phrase more ubiquitous in Indian Country than this. The meaning of the phrase is clear: Indigenous peoples have existed on and stewarded these lands for far longer than modern conceptions of time or human history have ever acknowledged. This truth — this *fact* — is enshrined through our stories, through our bodies, and through our natural relatives. So why is it that Indigenous findings and voices continue to be ignored, even when they are proved correct?

In September, *The New York Times* covered a study published in *Science*, which found evidence of a set of preserved footprints in White Sands National Park in New Mexico dating back 23,000 years. This novel discovery, as it is framed in the *Times*, officially extends the confirmed appearance of human activity on the North American continent a full 10,000 years beyond the previous mark enshrined by the purported experts in the field of archaeology.

“I think this is probably the biggest discovery about the peopling of America in a hundred years,” Ciprian Ardelean, an archaeologist at the Autonomous University of Zacatecas, told the *Times*. This story, and this quote in particular, were shared thousands of times. People across America —

the majority of whom only arrived in the last five centuries — most likely raised their eyebrows and considered the news revelatory only in the sense that it deepens a history that matters very little to them. After all, archaeologists and biologists aside, what is the difference between 10,000 years and 23,000 years of Indigenous land management if the systems and structures of the present moment are designed to trap us — and our sovereignty — in the depths of this cavernous past?

The academy’s interest in pinpointing the precise time and year that humans first set foot on these lands has drawn an immense amount of funding for digs and field sites, published studies and mainstream news stories, all while failing to even feign the slightest interest or concern for Indigenous people and what we might have to say or think about the ivory tower’s confirmation of our ancestors’ existence. Anyone who read only mainstream coverage would walk away without a clue that this is actually an Indigenous story, not merely a triumphant discovery of capital-s Science. Not a single Indigenous citizen, historian, elder, story-holder, biologist, geneticist or archaeologist was quoted in the piece, nor did the word “Indigenous” or “Native” appear once. This discovery and the knowledge accompanying it, you see,

are entirely owned and framed by people who, in the grand scheme of history, have only known this land for a blink of time. Apparently, they can’t help but regard the footprints they discovered, not as Indigenous, but merely as evidence.

This is made all the more frustrating by the fact that Indigenous experts like Paulette Steeves, a Cree-Métis archaeologist and author of *The Indigenous Paleolithic of the Western Hemisphere*, have worked tirelessly within the colonial structures of the academy to enter indisputable claims of Indigenous life and culture that extend far beyond the 23,000-year mark set by the team of 15 researchers on the White Sands footprints study. And just as verbal claims of Indigenous existence since time immemorial are met with eyerolls by non-Indigenous visitors, academic attempts to Indigenize starkly colonial fields like archaeology are met with the same response.

In a profile of Steeves published in the *Vancouver Sun* in 2016, for example, she describes how archaeology’s subservience to the “Clovis first” hypothesis has acted as a firewall against Indigenous archaeologists. “Clovis first” holds that Indigenous North Americans arrived only within the last 16,000 years. “The bias against pre-Clovis is so strong that many archaeologists who found older sites and reported on them



An undated photo shows fossilized human footprints at White Sands National Park in New Mexico. Courtesy of the National Park Service



were academically destroyed,” Steeves said. Immediately after she concluded her presentation of her work — which, again, exists within the same academic struc-

ture as the “Clovis” theory — the *Sun* brought in Stuart Fiedel, an archaeologist with the consulting firm Louis Berger Group. Fiedel proceeded to label Steeves’ claims

as “absurd,” dismissing Indigenous oral history as nonscientific, and — with the smugness only a white man on Native lands can muster — he stated as undeniable fact that “the ancestors of Native Americans arrived no more than 15,000 to 16,000 years ago from populations in Eurasia.”

While it gives me great pleasure that Fiedel and his ilk have now been proven wrong by their own cherished institutions, it remains an indictment of those same institutions that this Indigenous truth was ignored by non-Indigenous archaeologists for so long. Why is it so hard for an Indigenous truth to become an American fact? The White Sands discovery’s biggest accomplishment lies less in its scientific merits than in the way the fallout to the news highlights the lengths to which colonialist institutions — the academy, the scientific journal, the mainstream newspaper — will go to avoid conceding that their grand discovery is merely a physical acknowledgement of something Indigenous people have been saying all along. Few media outlets bothered to pick up the phone and speak with an Indigenous citizen, and even then, their perspective has been relatively minimized: “(It) just gives us goosebumps,” Kim Charlie, an advisory board member of the Pueblo of Acoma’s Historic Preservation Office, told *National Geographic*.

The *Times* and the Eurocentric university system have chosen to believe only what their systems of validation — which were built to exclude Indigenous knowledge — tell them. And so these “discoveries” of ancient Indigenous life will likely continue, one surpassing the other, for the foreseeable future. Scientists and reporters could save themselves a lot of time by simply listening to Indigenous experts next time. ☀

Nick Martin is an associate editor for HCN’s Indigenous Affairs desk and a member of the Sappony Tribe of North Carolina.

*Anyone who
read only
mainstream
coverage
would walk
away without
a clue
that this is
actually an
Indigenous
story, not
merely a
triumphant
discovery
of capital-s
Science.*



Kyle T. Mays (left) and Alaina E. Roberts (right).
Lauren Crow / HCN

AFRICAN AMERICAN history and Native American history have long been considered kindred by those who see the original sin of the United States as twofold, a dual theft by European settlers: the taking of Indigenous lives and land, and the seizure of Black bodies and labor. Both groups suffered the loss of language, culture and freedom.

There are many ways the two peoples' histories have overlapped since they first came into contact over 500 years ago. In African American popular culture, those early interactions often take the form of romanticized tales: Native people working with Black people to battle the colonial system, or a Native ancestor who sheltered runaway slaves and bequeathed her long straight Black hair to her descendants. But there are others who seek to center Black lives by overlooking the shared historical experiences of the two groups and ignoring the modern-day Native encounter with issues of poverty, racism and police violence. Meanwhile, in many Native American communities, African Americans are viewed through a prejudicial lens similar to the kind that many white Americans use: as a people who may have been hurt by racism through enslavement, at one point, but who refuse to pull themselves up by their bootstraps, as it were.

The real history between African Americans and Native Americans is complex and requires acknowledging both the times and places in which they joined together to resist oppression as well as the times they participated in that oppression. It's these deep complexities that shape the ideas Black and Native people have of one another today.

I am part of a new crop of scholars who explore this history from the perspective of being a people of mixed-race heritage. My own book, *I've Been Here All the While: Black Freedom on Native Land* (University of Pennsylvania Press, 2021), used my family's memories of being enslaved by and related to Chickasaw and Choctaw Indians to

tell the story of Black, Native and white settlement in what is now the state of Oklahoma. My research and my daily life are shaped by the fact that people with my background are not yet accepted by the Chickasaw or Choctaw Nations as tribal citizens, despite treaty promises to the contrary.

Historian Kyle T. Mays is different. Both his African American and Saginaw Chippewa communities welcome him, and his relatives have had a hand in shaping the dissemination of Afro-Indigenous education. His aunt, Judy Mays, even founded the Medicine Bear American Indian Academy in Detroit, a public school with a curriculum focused on Native American and Black history and culture. Mays opens his new book, *An Afro-Indigenous History of the United States* (Beacon Press, 2021) by framing his personal identity as crucial to his understanding of historical knowledge and the gaps therein. In his home and in his life, Native American and Black lifeways were communicated as the interconnected story they are. Why wasn't this the case for other academics and writers? Mays has set out to rectify this.

As two of the still-rare Afro-Indigenous historians who

study their own communities, Kyle and I have crossed paths before. But when we sat down, via Zoom, for this conversation, I wanted to know more than I'd heard from him previously. I wanted him to speak about how he has seen the Native "community" split time and time again over anti-Blackness. And I wanted to know who the audience for his book is: Black and Native folks who want to see a certain story told, or white Americans hoping for their next social justice creed.

This interview has been edited and condensed for clarity.

Alaina E. Roberts: Congratulations on your book! I was very glad to read it.

In our field of Black-Native history, there are people like you and I, who write from our positions as members of the groups we study. So I wanted to start by asking you: Do you feel that being part of the group that you're writing about produces academic work that asks questions, or seeks answers, that are only legible through this positionality?

Kyle T. Mays: I don't think that just because you're X person, you can write a better history. On the other hand, I do think being an Afro-Indigenous person gives

you a neat perspective about how to approach (this work). It's not always just going to these archives as historians and then finding these answers, and then writing about it. Because you also have deep commitments to people. Even if you're not writing about particular subjects, you still feel a responsibility to try to represent these histories equally. So what I try to do is what many of us try to do as historians; (I ask) what are some of the best stories to tell? And how do I tell these stories to an audience that can appreciate them? So whether you're a white person, a Native person, an Afro-Indigenous person or none of those, you can still relate to and think about how these particular histories intersect within a broader understanding of U.S. democracy. That's kind of how I tried to approach this book.

AR: Reading your book, I felt like you were talking to me and Afro-Indigenous people like me. But this is a trade press book, so you're also talking to a broader white audience as well, right?

KM: There's really two audiences: Afro-Indigenous peoples like ourselves, on the one hand, and on the other hand, the people who might not question what U.S. democracy is. Is it legitimate? Is it legitimate in its relationship to settler colonialism? It's for those people to (begin to) question that. And if we question that, where do we go and what do we think about from there? For me, it's a future that requires legitimating the criticisms by Black and Native people historically and today, and allowing them to reimagine how society can function in the future.

AR: In the book, you examine case studies that you describe as "unexpected," so not necessarily the Five Tribes — the Cherokee, Chickasaw, Choctaw, Creek and Seminole Nations — which I agree are probably the most written about in this vein. And you're demonstrating how the twin oppressions of

anti-Blackness and settler colonialism have been, as you call them, “a central site through which racial and gender formations have occurred in the United States.” You start in the 1700s, with people like Phillis Wheatley and Paul Cuffee, and you draw a through line going forward to our modern day. In your first book, *Hip Hop Beats, Indigenous Rhymes: Modernity and Hip Hop in Indigenous North America*, you are more focused on the modern day, but you’ve also written about the early 20th century in various articles. So, with a deeper look at the past, as you do in this book, do you see the same sorts of struggles for Afro-Indigenous peoples historically and today?

KM: Some of the similarities certainly are dealing with being pulled in two different directions because of an outside force ... like (today), we live in a white supremacist society, and they lived in a white supremacist society. And because of that, they were labeled as Black, even though they might have had different identities. ... And that’s something that exists in the present: No matter where I go in the world, I just am a Black person to people, and I’m cool with that because I know who I am. But that’s a result of white supremacy.

And, frankly, being discriminated against by Native people — “How legitimate are you?” — I think that’s a through line historically (and) into the present.

AR: There’s this refrain that I’ve often heard from some Black people: “Why do you not want to be Black? Why are you trying to find this kind of other more interesting or exotic identity that apparently is not ours to claim?” And the idea of this kind of necessary separation between Black and Native people is present historically. Like when you talk in your book about Frederick Douglass or James Baldwin, these people who we think of as Black radicals and important Black leaders who use anti-Native sentiment to promote

“I think a lot of the non-Afro-Indigenous Native folks have a lot of work to do amongst themselves. I don’t think it’s always our burden, our job, to be like, ‘Yo, y’all gotta stop being anti-Black.’”

Black progress or Black migration. How do you explain this relationship between Black and Native people?

KM: It pains me to write those things. I love our uncle, James Baldwin, and our great-grandfather, Frederick Douglass. Who doesn’t, right? They were great advocates for Black people, and I think there’s a lot to say about the contributions they made overall. But they also used these ideas of Black progress as based on Native erasure, or the constant talk of genocide or the so-called backwardness of Native people to project this idea of a Black future (and) ... you can’t do that if all of us are supposed to be going to the same future.

One of the challenges I’ve had, ironically, is ... I was always like, “Oh, there’s some non-Black Native people who really love what I’m doing when I make these critiques.” And I’m always skeptical when they get a little bit *too much praise*. And I’m like, “Why do you like this? Is it because you want to engage in some anti-Blackness? Are you trying to make sure we have a shared future?” It got me thinking — maybe I have to curtail some of the criticisms in a certain way. Not that they’re not legitimate. But I’ve now had to think about how people are taking my work. And once it’s out there, it is what it is. But the point is not to just say James Baldwin or Frederick Douglass is trash; it’s to say, “Let’s just look out for some of these issues that can happen, so we don’t continue the erasure of Native peoples.”

AR: I talk about Frederick Douglass in my book as well. And yeah, that’s always something that is commented on: People are always surprised, people are always so disappointed. ... But I use it to show that it’s part of this mindset that everyone is buying into at this point in time, and Black people are not somehow outside of that.

KM: Exactly! Right. They’re trying to get their own freedom. And I

can only imagine what it was like to be under slavery. You hear all these white supremacist things, as well. ... You adopt them, and you’re still trying to get respect for your humanity and also freedom. How do you do that? Well, you think, “These (white) people talk trash about Native peoples. Let me do that, too.” And it’s like, well, you don’t have to do that. Or let’s just slay these people to show that we’re civilized so we can keep our land. You don’t have to do that either! So it’s a weird conundrum that it’s hard to get out of whether I’m in a barbershop or wherever. ... You still hear the same nonsense today.

AR: I’m imagining you having these kinds of conversations in a barbershop. ... Do you really?!

KM: Oh, yeah. It goes from sports talk to, you know, someone asks you what you do. I try to keep it simple, but they often keep pressing. ...

AR: What do you feel Indian Country can do to make progress toward accepting Afro-Indigenous people?

KM: Well, I think a lot of the non-Afro-Indigenous Native folks have a lot of work to do amongst themselves. I don’t think it’s always our burden, our job, to be like, “Yo, y’all gotta stop being anti-Black.” And, you know, because of the social media performances around it, who knows if it’s legitimate or not. ... I’ve just seen a lot of nasty stuff on these sorts of tribal social media spaces.

Why can’t we just get some elders together, and some young people, and let’s just sit down and talk? The conversation can be moderated by whomever, it doesn’t have to be on camera. There’s so much vitriol, though, that it can be very difficult to even do that. People just don’t want to admit they’re playing what people call the “Oppression Olympics.” Who cares about who has what worse? What are some of our goals? And how do we want to get our collective freedom? ☀



ESSAY

Prometheus' children

On the fires that sustain us and those that threaten to unravel everything.

BY JOE WILKINS

FROM DREAMS OF a vast, water-dark hall filled with all the people of my life — those of my High Plains boyhood looking strange and magnificent in their boots and work jeans, those of my Oregon life now asking and asking me what it all means — my children wake me. They hand me my glasses. Tell me they've got it ready, that they're cold, that I need to hurry.

The sun hasn't yet lifted over Rattlesnake Ridge, and the long, drawn mountain dawn is windless and cool, a slight rain falling, a dense fog filling the canyon below. In the front room, I blink and gather my wits, see that my children have stuffed the Fisher woodstove with crumpled paper, sticks gathered only minutes ago in the rain-wet meadow, and one

massive red madrone log the two of them somehow horsed in from the woodbox. Last night, with late summer rain on the way and the temperature dropping, I'd promised them a fire, the first of our time here in this off-the-grid cabin in the Klamath Mountains, and now, just past 6 in the morning, here they are, sitting on their knees in front of the woodstove, ashes on their cheeks, eyes already wide and burning with anticipation.

When I was a boy, I'd ride two or three times a year with my grandfather up into the Bull Mountains of eastern Montana. We'd drive the dirt roads that led to the Klein Creek Mine, where we'd buy a pickup load of greasy black bituminous coal. Home again, we shoveled it into the cellar, shoveled for better than an

hour. Then an auger — which often had to be unstuck or set right or otherwise worried over — bore the coal lump by lump to our roaring, belching furnace. One of my jobs was to clean that ancient furnace, shovel the ash and lift the twisted clinkers out with a long black fork. I hated the job — the smoke, the stinging heat — but knew it had to be done if we were to stay warm through the long Montana winter. I knew where our garbage went, too, since I dumped it into the burn barrels and touched a match to it myself. I'm not saying I'd do it the same way now. I wouldn't. I haven't. But back then, at least, I knew what was burning. As I do now, here in the mountains, in our season off the grid.

We pull on our boots and coats and tromp out to the woodshed. In a canvas tote we gather slim Doug-fir kindling, a couple more logs of good red madrone, a few of stout Oregon oak. These are the very trees we know from hikes and picnics and afternoons lounging in the shade of the forest below the cabin. Now my son holds a length of kindling out at arm's length, as if to re-fit it, as if to remember.

Back in the cabin, we dislodge the wet sticks and carry them to the porch to dry. We'll burn those later,

I tell them, thanking them for their help. Over the crumpled paper, up against the madrone log's ochre length, we lean four slender sticks of fir, one for each in our family. Then we lay out six or eight of the next size up on the bricks below the stove.

"Are you ready?" I ask. They nod, their faces serious, intent.

I touch a flame to the paper.

Fire is one of our first and most essential technologies. Culture began here, around the fire — in the meat cooked, the small ones kept warm against the bitter cold, the long stories unwound night after night, the animals drawn in charcoal across the walls, hands rubbed together above the flame. We are, always and ever, Prometheus' children.

Yet so much has changed: We've hidden away our fires, and, unseen, the raging flames rise higher yet, threatening now to run away. Maybe traveling some rotten stretch of interstate you spy blackened stacks, raveling smoke, and wonder, What's burning? We ought to ask the same each time we step into a comfortably warmed or cooled room, each time we click on a reading lamp or plug in a phone. Here in the Klamaths, living off the grid, my laptop is powered by a solar panel, but if the rain keeps up I'll have to fill the generator with gasoline and let it burn dinosaurs to charge. (The past few days of fog have been instructive, and a little scary: a loud, burning hour of the generator doesn't even give you all that much laptop charge.) It sounds simple, but it's true: The first step to calling back the outsized flames gathering even now at the edges of our warming world is to know what's burning. To be aware. And to care.

Here on the mountain, my children lean toward the heat radiating from the stove. They call out colors, talk about the quality of the roaring, lay carefully the kindling sticks across the flames. "Look at that madrone log," my daughter says, her eyes bright in the fiery light. "Look — it's burning." ❁

Heard Around the West

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

BY BETSY MARSTON

ARIZONA

Jocelyn Gibbon has been a Colorado River guide in the Grand Canyon for 21 of her 41 years. When the *Boatman's Quarterly Review* inquired about the craziest question she'd ever been asked, she replied: "I have actually been asked that famous one about whether we'll take out at the same place we put in." Apparently, most tourists don't expect rivers to actually go anywhere, no matter how fast they move — rather like modern life. When not boat wrangling, Gibbon is a lawyer who works as a water policy consultant.

THE WEST

If you thought nothing could thrive in the extreme cold of a glacier, think again. On Paradise Glacier, high up on Mount Rainier in Washington, you can find hundreds of thousands of tiny black worms, "wiggling through glacial ice eating snow algae, bacteria and anything else that ends up on the snow," reports *AccuWeather*. Ice worms aren't newbies; they were first discovered in 1887 on Muir Glacier in Alaska. But nobody has ever studied the wigglers much, though NASA is said to be interested in how, and perhaps why, they manage to survive.

THE WEST

"Manifest destiny — flawed, damaging, racist doctrine that it was — couldn't have 'manifested,'" says *Atlas Obscura*, without the want ads that preceded today's online dating websites. In the 19th century, as the government killed or forcibly removed Native Americans from the West, single white men swarmed into the region. But

once there, many miners, farmers and ranchers found themselves sorely in need of companionship, aka wives. One homesteading act, for example, offered 640 acres of land to a married couple — twice the 320 acres a single man got. The invention of the steam printing press in the early 1800s helped bachelors spread the word: "Wives Wanted." Newspapers were cheap to produce, and by mid-century, many featured personal ads. And not just from lonesome dudes: A Philadelphia paper in 1837 reported a "super-abundance of women in urban areas back East (who were) largely restricted to marriage and domestic work, such as sewing and laundry." Going West offered enterprising women a way out of poverty and into adventure. The ads were anything but coy. While today's personals might beat around the

bush, they were refreshingly direct and practical, particularly about finances. In 1894, the *San Francisco Examiner* was clear that getting hitched ASAP was the goal. No need to promise "long romantic strolls along the beach"; people were blunt: "A young widow would like to rent a nice room to an elderly gentleman of means who would assist her with a view to matrimony." Equally frank was this ad: "A GENTLEMAN aged 35, German by birth, a mining engineer and owner of valuable mining property, desires the acquaintance of a lady with independent means — object matrimony." And for many, the ads worked. Francesca Bauman, author of *Matrimony, Inc.*, a history of personal ads, describes a courtship that began in 1869 with an ad in *Frank Leslie's Illustrated Weekly*. The couple corresponded for a year, and finally 24-year-old Sara Baines



Armando Veve / HCN

— who placed the ad — traveled 1,500 miles from Louisiana to Fort Bridger, Wyoming. A day later she married Jay Hemsley, 48, and the newlyweds immediately moved to Placerville, California, and opened a general store. The marriage lasted 51 years. At the time, some criticized personal ads as "too markedly transactional" and even potentially dangerous, Bauman writes. But they flourish today in the form of dating apps, says Bauman, where people of all genders share their hopes and fears about relationships. As she says, "Any marriage is a leap of faith — you never know what you're getting into."

UTAH

The *Salt Lake Tribune* headline was intriguing: "A bizarre story about a Utah State Representative." Perhaps Travis Seegmiller's actions made sense to him, but the residents of a rural area near St. George were alarmed when he shot a deer in the neighborhood, then dragged "the carcass off private property to his car," according to the *Cedar City News*. When confronted, Seegmiller told a sad story, claiming he was unemployed and needed meat to feed his family. His legislative profile, however, said he was managing director of the Executive Leadership Institute and an associate professor of law at Dixie State University. Seegmiller was appointed to the Utah Legislature in 2018 to replace a representative who abruptly resigned "following a report in a British tabloid that he met a Salt Lake City call girl twice for sex while staying in a publicly funded hotel room." Who knew Utah's politics were so lively? ❁

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#IAM THE WEST

APOLLO RODRIQUEZ
Photographer, activist
Paonia, Colorado

Changing in small communities is really hard. I feel like a lot of people don't change around here, because it's really easy to be content — because it's comfortable. But when you're LGBTQ+, or if you're neurodivergent, or if you're more artsy in a sports-centered grade, you start to change differently than everyone else. Since coming out as trans, I feel way more confident now. I'm always paving the way for something; that's what my high school principal said. There's a lot of other trans kids in my school, but I got a unisex bathroom for us. And I'm working with our principal to ask, "How can we support trans people?" It's not surprising that now I'm like a role model and the leader for that. But it is kind of nice. Even though it is really hard, changing has been really good for me.

Do you know a Westerner with a great story?
Let us know on social.

Luna Anna Archey / HCN

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