

# High Country News



PINECONE  
COWBOYS

**DOWNWINDERS  
WAIT FOR JUSTICE  
IN NEW MEXICO**

**INSIDE THE  
EFFORT TO REVIVE  
A GHOST TOWN  
OPERA HOUSE**

**MEET THE CUTE BUT  
DEADLY PACIFIC NEWT**

**THE TERRIFYING  
BEAUTY OF A SUPER  
EARLY SUPERBLOOM**

# HighCountryNews

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Russell Van Dyk, owner of Lloyd's Ice and Water in Rocky Ford, Colorado, closes up his store at the end of the day. The residents of Rocky Ford and surrounding towns rely on purified drinking water because the area's groundwater has been contaminated by uranium and radium. (See story on page 14.) **Michael Ciaglo**

# 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](http://hcn.org) for submission guidelines. Subscriptions to HCN are \$45 a year, \$47 for institutions: 800-905-1155, [hcn.org](http://hcn.org). For editorial comments or questions, write High Country News, P.O. Box 1090, Paonia, CO 81428 or [editor@hcn.org](mailto: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.



# The Earth loves in species

I RETURNED FROM A RECENT TRIP up the coast with a bag of beach pebbles, which I emptied into a sweet little bowl made of Oregon myrtlewood before leaving on another trip. Returning home again, I found the pebbles, nestled in the wood-grain bowl like little planets, each with its own pattern of veins and coloration. There was one jade pebble shaped like a miniature heart — probably Big Sur jade, a unique addition to my collection of heart-shaped rocks.

Rocks shaped like hearts seem to reveal themselves to me. I think of them as the Earth expressing its love. I'm not what you might call a religious person, but I do believe that the Earth gives loving energy. When I discover a heart-shaped rock, my own heart fills with appreciation for everything the Earth provides: food, water, mountains, rivers and all the other species with whom we share the planet. That love serves to counter-balance the heartbreak that follows each new attack on public lands, every attempt to dismantle environmental laws and agencies, the utter disregard for the miracle that each individual species represents. It's hard to be someone who cares about human and ecological communities while so much damage is being perpetuated.

During my recent travels, I had the opportunity to meet with *High Country News* contributors, readers and supporters, and I was reminded again how much this magazine means to people who rely on it not just for information, but to be inspired and feel connected. One supporter said, "My world would feel a lot smaller if we didn't have *High Country News*." This magazine represents a far-flung community of people who are working in their communities to honor the Earth and listen to what it needs — people who mourn the atrocities being committed in the name of capitalism and conquest, while remaining engaged with the essential light that blooms within us upon close observation of a sunset, a moonrise, a flower, an ocean, a mountain, a stream. We thrive through those connections and delight in being united with others who are also keeping this faith.

As I examine each pebble, turning it over in my palm, I make a wish: That all beings be honored for who they are and the gifts they possess. That all have shelter and food. That there will be enough people working together to save all the habitats and species and ecosystems. That we will, in Ed Abbey's words, "outlive the bastards."

**Jennifer Sahn**, editor-in-chief



Preston Keres / Forest Service

## Forest Service overhaul sows confusion, concern

In the Trump administration's reorganization of the struggling agency, there are painful echoes of the Bureau of Land Management's past moves.

By Christine Peterson



Brian van der Brug / Los Angeles Times via Getty Images

## New nuclear safety rules reduce protections for workers, the public

'They're pulling away from what's kept us safe all these years.'

By Alicia Inez Guzmán



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**FEATURES****A Legacy of Disease** 20

Half a million people lived within 150 miles of the Trinity atomic bomb test. Their descendants are still waiting for justice.

TEXT AND PHOTOS BY SOFIE HECHT

**Pinecone Cowboys** 32

The future of Western forests depends on climbers harvesting seeds from the canopy. Now, the profession itself is imperiled.

BY DILLON OSLEGER

PHOTOS BY NINA RIGGIO

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**REPORTAGE****The dubious legacy of a pseudo-Native community** 7

The Red Wind commune raised white people's consciousness about Native issues. The problem? It was all a facade.

BY DINA GILIO-WHITAKER AND ALLISON HERRERA

ILLUSTRATIONS BY RYAN REDCORN

**The winter that wasn't** 10

How a nearly snowless winter landed differently in different places.

BY ANNA MARIJA HELT

**Get to know the Pacific newt** 12

These amphibians may be cute, but they'll kill you if you eat them.

BY B. 'TOASTIE' OASTER

**The absence of clean water** 14

The political drama over Colorado's Arkansas River Valley obscures deeper problems.

BY LUCAS BESSIRE

**BOOKS, CULTURE & COMMENTARY****A ghost town opera house battles the elements** 43

In Death Valley Junction, a legendary ballerina's hand-painted theater is slowly giving way to the brutal logic of the desert.

BY ANGELLA D'AVIGNON

**A beautiful nightmare** 46

The queer horror of an off-season superbloom.

CONFETTI WESTERNS TEXT AND

PHOTO BY MILES W. GRIFFIS

**The resilience of the elusive vaquita** 48

Nature's enduring mysteries buoy efforts to save the most endangered marine mammal on Earth.

ENCOUNTERS

BY RUXANDRA GUIDI

**#iamthewest** 52

Alberto Garcia Rodriguez, Reno, Nevada.

BY DEVIN BLASKOVICH

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**OTHER MATTER**

EDITOR'S NOTE 3

LETTERS 6

COMMUNITY PAGES 17

HEARD AROUND THE WEST 50

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**ON THE COVER**

Cruz McLean makes his way to the top of a giant sequoia to collect the tree's best cones in Sequoia National Park, California. (See story on page 32.)

**Nina Riggio**



A sign shaped like a rocket announces “Alamo,” the local nickname for Alamogordo, New Mexico. White Sands National Park is nearby, and the site of the Trinity atomic bomb test is about 60 miles away. (See story on page 20.)  
**Sofie Hecht**

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## 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](mailto:editor@hcn.org)**

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### INSPIRATIONAL AND INFORMATIVE

Thank you for such a great and informative article on Greater Yellowstone's present and possible future, which is truly under attack ("Defunding the Greater Yellowstone," April 2026). I am a city resident from Nebraska but enjoy two weeks a year in the Teton and Yellowstone areas. Your story will inspire me to continue supporting several wildlife and environmental groups, especially the Grand Teton National Park Foundation.

**Gene Dinkel**  
**Omaha, Nebraska**

### AN ESSAY WORTH READING

Thank you for Ollie Hancock's gentle, proud, plain-spoken essay ("Transition point," April 2026).

**Ashley Daugherty**  
**Forest Grove, Oregon**

### COCKROACHES "R" US

I enjoyed Kate Siber's reflection, "The unsung beauty of flies" (April 2026). It sparked thoughts of other ways animals mirror our humanity while just being animals. What about our hatred for cockroaches? They are very sensitive animals with many fine hairs on their back and antennae, along

with well-developed sensory organs that sense our approach, allowing them to dart away at the last second and causing us to do a crazy "cockroach-stomping dance." Cockroaches are family-centered, incredibly resilient, adaptable and durable, much like us.

If we destroy this planet, I believe the C-suite of species will survive: cockroaches, coyotes, crows. And now I will add flies to my list. They will be just fine.

**Barb Horn**  
**Durango, Colorado**

### GOODBYE SCIENCE, HELLO MARKETING

Agency jobs seem to be shifting into certain nongovernmental organizations ("Forest Service overhaul sows confusion, concern," March 31). It's early, but this is a shift away from science driving the resource needs of our public lands to one where marketing and membership drive the actions on the ground. This move will wipe out a lot of the science and applied science staff. I'm glad I left last April, when Elon was sending emails.

**@redbandia1**  
**Via Instagram**

### CORRECTION

In "The unknown fate of the border's missing-persons list" (April 2026), we included a pull quote that was not in the text of the story, even though the quote was part of the original reporting. We regret any confusion this may have caused.

### LOVE FOR LAURELI

Every time I receive an issue of *HCN*, I flip through to see if I'm lucky enough that it will include the "Lifeways" column by Laureli Ivanoff. They're always my favorite part of any issue — I only wish there were more of them! The March issue's exploration about Susan Butcher was no exception ("Iditarod idol"). Thanks, Laureli, for another inspirational read.

**Bridget Lowry**  
**Santa Cruz, California**

### POWER TO THE PEOPLE, PRESS ON!

I felt seen by Jennifer Sahn's March editor's note ("Look to the future") as she expressed the hope that drives our seemingly quixotic quest to defend Mother Earth from this rapacious administration. We must continue to use our voice and not acquiesce as this administration streamlines, fast-tracks and rolls back as much as possible, steamrolling decades of environmental progress. The stakes are too high not to.

Our communities must engage, make their voices heard, demand transparency and accountability — and, ultimately, justice. Find your people. Make a ruckus. Do not go quietly. Stand up for what's right and for the communities and critics that need your voice and relentless spirit. Our children and future generations deserve nothing less.

**Kitty Craig**  
**Seattle, Washington**

### THROUGH WITH GRAZING

I could read no further when reading "The Bird and the Herd" (February 2026) before writing. I got as far as page 38, where the article states that by early 1900s the livestock herds had decimated native vegetation in the West, and the ranchers needed

help. The only "help" the ranchers needed was education on preventing further damage to the natural environment. Alas, the almighty government stepped in, and here we are today with a huge environmental mess. Absolutely infuriating. I have witnessed what overused grazing has done to BLM lands in southeast Arizona. Unfortunately, money speaks louder than the intelligent, thoughtful treating of Mother Earth.

**Katherine Brown**  
**Cortez, Colorado**

### JAZZ WITH JACLYN

My goodness, can Jaclyn Moyer ever write a wonderful article ("The Sound of Black History in Portland," February 2026)? I live in Portland and am fairly familiar with the jazz and blues history here and was blown away with the thoroughly researched article. Jaclyn's past articles have also been eye-opening for me; her most recent one prompted me to reinstate my *HCN* subscription. I came for the country and stayed for the city.

**John Lokting**  
**Portland, Oregon**

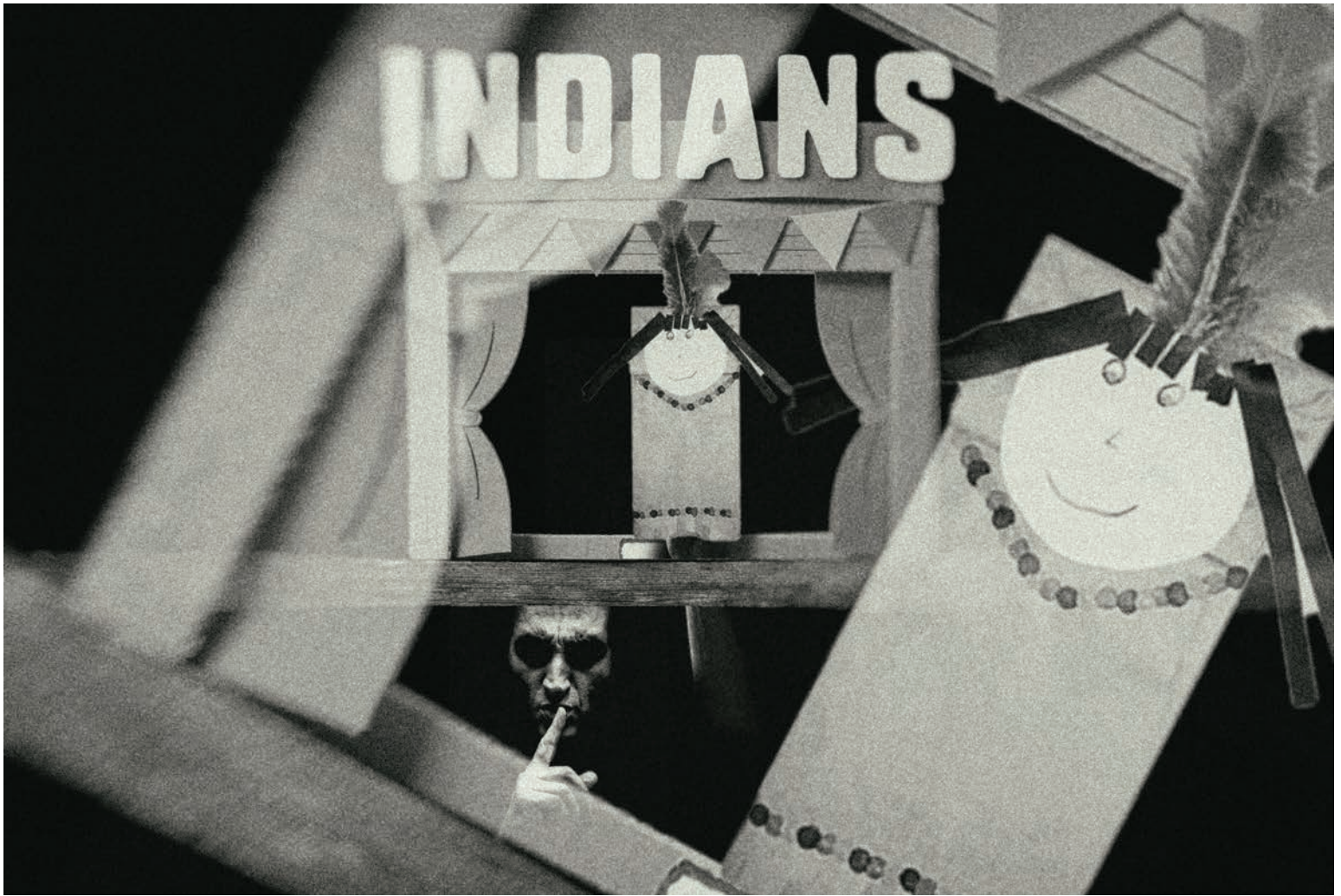
### GEOLOGICAL JOY AND MUSICAL MASTERY

I really got a lot out of both the January and February issues.

The focus on geology in January ("Deep Time in the West") was wonderful; good to take a (much!) longer perspective in response to all the craziness currently going on in the human world.

The February issue about the music scene in Portland ("The Recording Artists") also spoke to me, as I travel through the Albina district multiple times per week, via bicycle or bus, and am familiar with many of the landmarks.

**Marian Rhys**  
**Portland, Oregon**



## REPORTAGE

# The dubious legacy of a pseudo-Native community

The Red Wind commune raised white people's consciousness about Native issues. The problem? It was all a facade.

BY DINA GILIO-WHITAKER  
AND ALLISON HERRERA  
ILLUSTRATIONS BY RYAN REDCORN

**IN A GRAINY, UNDATED** video, a camera focuses on an elderly man with braided gray hair and a red headband festooned with feathers. The video, *Grandfather Speaks*, claims to feature the teachings of the “last full-blooded Chumash” in California — Semu Huaute.

In the video, Semu talks about wanting to build an intertribal camp to teach people about “Mother Earth,” describing what later became known as Red Wind. Semu, however, was actually born Paul Olivas and grew up in a working-class Spanish-Mexican family around Ventura, California. Despite his claims, he and his family never “headed for the hills” to avoid the genocide brought on by settlers in early California.

“Right now there’s only quarter-bloods and half-bloods and a lot of them that say they are. All of a sudden it’s fashionable to be an Indian,” he says in the recording.

According to Brian Haley, a professor of anthropology at State University of

New York at Oneonta, Olivas descended from California’s early colonists. “Semu” was known simply as Paul until the 1960s, when the *Los Angeles Times* ran a story in which he claimed he was the last full-blooded Chumash from the Santa Barbara Channel Islands. He said he didn’t speak English until he was 9 and was an intertribal medicine man for the Laguna Tribe in Barstow.

The story of Olivas’ transformation into “Grandfather Semu” is a common, if extreme, example of how American Indian ethnic fraud, aka “pretendianism,” has become commonplace in the United States. This phenomenon intensified in the 20th century on California’s Central Coast — the original homelands of the Chumash people — motivated by a complex mix of a desire for attention, a need for cultural identity and the appetite for material gain.

In California, the Santa Ynez Band of Chumash remains the only federally

recognized Chumash tribal nation in the state. Indigenous legitimacy in California is determined by mission and other Spanish era records. Chumash groups that are not federally recognized include: the Northern Chumash Tribal Council (NCTC) and the Coastal Band of Chumash Nation, the yak tit'u tit'u yak tilhini Northern Chumash (YTT) and three bands of Barbareño Chumash. YTT and two of the Barbareño bands can most accurately document their Chumash ancestry and sustained culture through historic records.

Both the YTT and the Barbareño Ventureño Band document their ancestry through historic records. But according to Haley's research on the NCTC and the Coastal Band, most of their members lack documented Chumash ancestry. He has spent decades chronicling what he calls "neo-Chumash people," people who may or may not have actual Chumash heritage but who did not identify as Chumash until the

1970s. Haley acknowledges that Olivas had some Chumash ancestry but was several generations removed. He was certainly not the last full-blooded Chumash.

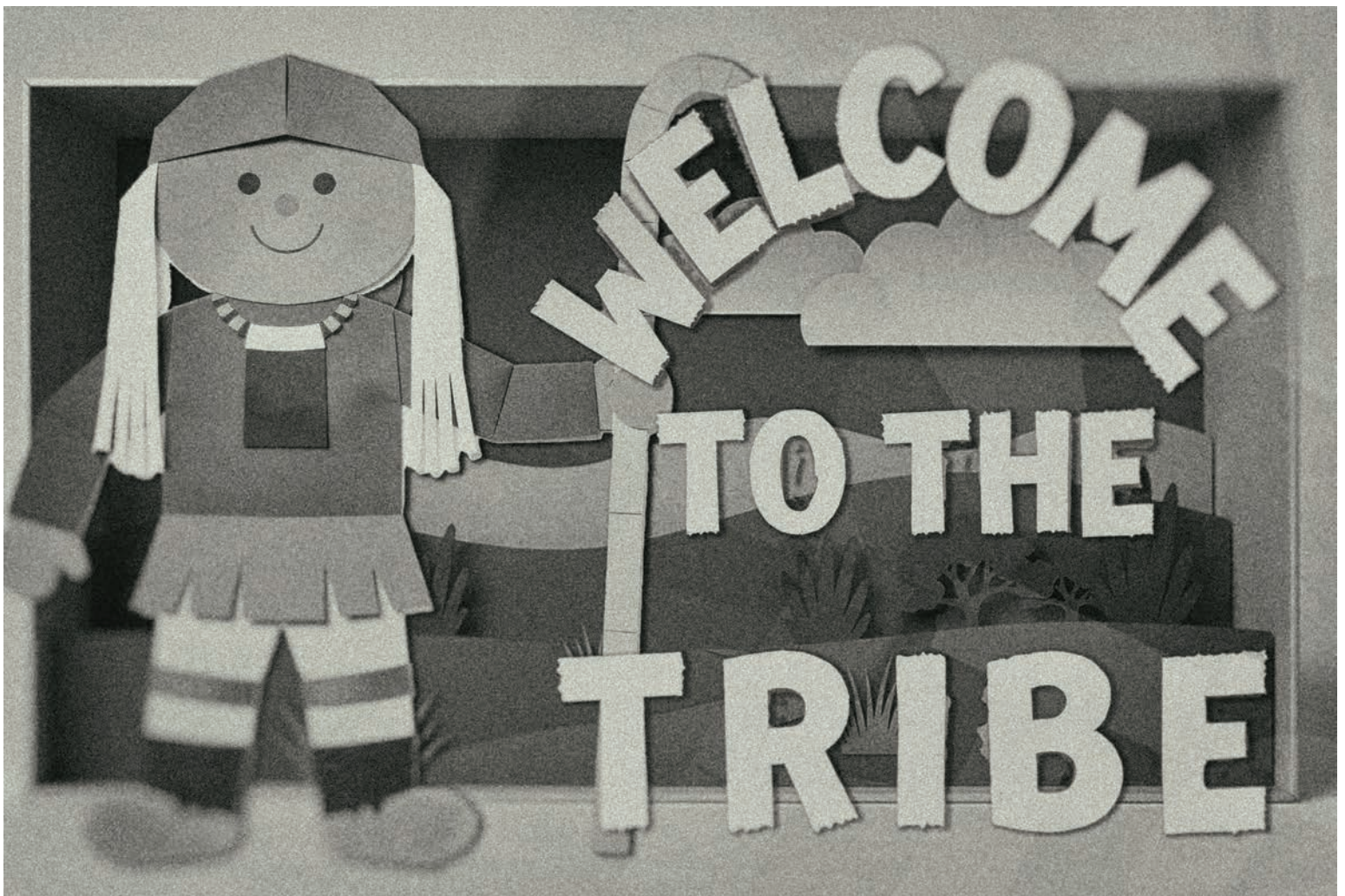
Even though Paul Olivas aka Semu passed away in 2004 and Red Wind is no longer a "Chumash" gathering place, some still regard him as legitimately Chumash despite the evidence that contradicts his claims. People who falsely claim Chumash and Native ancestry often organize as nonprofit groups that make millions of dollars from conservation work and from "cultural monitoring," which involves consulting firms that ensure that artifacts and human remains uncovered by development are handled appropriately.

**A REMOTE 200-ACRE** compound deep in the Los Padres National Forest about 20 miles outside Santa Margarita in San Luis Obispo County, the Red Wind community was

inseparable from the counterculture movement. Semu garnered praise from Marlon Brando and musicians like the Grateful Dead, Neil Young, Jackson Browne and the Eagles, who held fundraising shows for Red Wind. One of Semu's goals, he said, was to show the world "how real Native people lived."

The compound was organized under the title Red Wind Foundation in 1972. A tax filing from 2013 describes it as a registered 501(c)(3) tax-exempt corporation whose primary exempt purpose is "religion."

Penny Pierce Hurt, a tribal council member and cultural preservation administrator for the Xolon Salinan, another Indigenous tribe whose ancestral homelands are in the San Antonio Valley and on the Central Coast, said she was initially drawn to Red Wind because she hoped it would help her connect with her Native identity. She was adopted at birth and only connected with her Salinan father as an adult. He told



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her about her Native heritage.

“I did not know anything at all about being Indian, nothing, and so I was buying everything that they were telling me,” Pierce Hurt recalled. She remembered a conversation with Ernestine Ygnacio-De Soto, a Barbareño Chumash woman revered as the daughter of the last fluent Chumash speaker, who sat her down and set her straight.

“You need to stop hanging out with the people you’re hanging out with,” Pierce Hurt remembered her saying. “She said, ‘You are who you say you are, and you’re giving credibility to these people, even by sitting at the table with them.’”

Pierce Hurt was drawn to Semu by what she thought was his authentic Native culture, even though it wasn’t her own. Looking back now, she understands that Semu wasn’t who he said he was.

Another firsthand account, described in the book *Who Gets to be Indian*, called the camp a “sex cult,” alleging that Semu fled after being accused of sexually abusing an 8-year-old girl.

Others had a more positive image of Red Wind, citing the school it established.

**IN THE 1970S**, the environmental movement was ramping up. Word that a Chumash sacred site along the Gaviota Coast in southwest Santa Barbara would be desecrated by a proposed LNG (liquified natural gas) facility sparked an intense response in 1978. This encouraged the growth of cultural monitoring, which became a lucrative industry that contributed to ethnic fraud in the region.

Development in California is regulated by several state laws. Both AB 52, signed in 2014, and 2004’s SB18 require public agencies to consult with tribes to comply with the 1970 California Environmental Quality Act (CEQA). Whenever burials are unearthed, the laws ensure that human remains and other burial objects are properly and legally handled.

The laws’ implementation is assisted by the state’s Native American Heritage Commission, which maintains a tribal contact list and a “most likely descendant” (MLD) list that developers are required to consult. Those on the list can compete for cultural monitoring contracts, which can result in a lot of money.

According to *ProPublica*’s nonprofit tracker, the NCTC received \$1.36 million

in revenue in fiscal year 2024.

Problems arise due to lax commission rules that enable groups and individuals without accurate documentation of California Indian ancestry to get on the MLD list and establish cultural monitoring firms. The problem is further complicated by the fact there is no law preventing a group from calling itself a tribe. This is how groups like the Coastal Band and NCTC can claim to be tribes despite most members’ lack of documented tribal heritage; the cultural monitoring firms sometimes refer to themselves as “tribes” or “tribal councils.”

*High Country News* reached out to both the Coastal Band and NCTC for comment. Ernest Houston, a member of the Coastal Band who serves NCTC as a tribal cultural resource monitor, vigorously defended both tribes’ Native ancestry.

The tribal homeland of the yak tit’u tit’u yak tiñhini (YTT) in San Luis Obispo County is on the Heritage Commission’s contact list. YTT Chairwoman Mona Olivas Tucker said that publicly available genealogical records prove that NCTC’s founder, the late Fred Collins, had no Chumash ancestry. Yet NCTC benefited from his false claims. Collins’ alleged ancestry was the subject of a defamation suit he filed against the Salinan Heritage Preservation Association, which was ultimately dismissed in 2017 under anti-SLAPP regulations.

The NCTC is currently in the process of purchasing over 200 acres known as the Dos Pueblos Ranch — named for two Chumash village sites — for \$62 million. The purchase is fiercely contested by the Barbareño Chumash, who claim to be the land’s true documented descendants, and the YTT community is supporting their efforts to stop the sale.

“The people who don’t have true ancestry will often say that they’re offended to even be asked who their ancestors are,” said Mona Olivas Tucker.

“I’m not offended to be asked who my ancestors are. I have no reason to keep them hidden, but when somebody tells you, ‘You shouldn’t even ask me that question,’ it always makes me wonder what they are hiding.”

Today, the Red Wind property is still used by religious organizations. During the recent Martin Luther King Jr. holiday, a group of Spanish-speaking worshippers held an evangelical revival there. The property still contains vestiges of its heyday

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*“When somebody tells you, ‘You shouldn’t even ask me that question,’ it always makes me wonder what they are hiding.”*

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as an intertribal camp.

“Looking back, I realized that they were using this as a vehicle to ... monitor and make money off of it. And I think that’s when they all started (to claim Chumash heritage),” said Pierce Hurt, emphasizing the lasting impact Semu’s legacy has had on Native communities.

In the 1970s, the floodgates were opened for people without verifiable tribal heritage to claim tribal identities. Nativeness had become an exploitable commodity. Red Wind attracted a variety of people, some as opportunistic as Semu and others who were genuinely spiritually hungry. Today, people pretending to be Native continue to exploit a system that still lacks serious checks and therefore accountability, including universities, artists and writers, and, in California, even people who claim to protect Indigenous sacred spaces. ✨

*Dina Gilio-Whitaker (Colville Confederated Tribes descendant) teaches American Indian Studies at California State University San Marcos and is an advisor to HCN. She’s the author of Who Gets to be Indian? Ethnic Fraud, Disenrollment, and Other Difficult Conversations about Native American Identity.*

*Allison Herrera is a 2025-2026 John S. Knight Journalism Fellow at Stanford University and a former senior reporter for APM Reports. Her Native ties are to her Xolon Salinan tribal heritage.*

# The winter that wasn't

How a nearly snowless winter landed differently in different places.

BY ANNA MARIJA HELT



Scant snow cover along the South Fork of the Salmon River in Idaho in February. Hannah Adams / Idaho Department of Water Resources

**OLD SNOW** crunched underfoot in mid-January as a dozen people snowshoed near Molas Pass in Colorado's San Juan Mountains. The interpretive hike, hosted by local environmental organizations, covered ecology, climate change and snow. It was the perfect classroom: Beneath an azure sky, the bare ground under trailside spruce and pines provided a local example of what turned out to be a devastating lack of snow across the West.

Mountain snowpack is the West's largest reservoir, providing water for 100 million people and diverse ecosystems. The amount of water stored in the snowpack historically peaks around April 1. But this year, the snowpack in many places was absent, or nearly so, by then — the lowest level in the 45 years since automated measurements began.

A stubborn high-pressure ridge contributed to the snow drought by shunting winter storms north to Canada in January. But the main culprit, according to the nonprofit Climate Central, was exceptional heat from climate change, which also caused a spring heat wave that decimated what snow there was at a time when other dry winters have seen "miracle March" snowstorms.

The lack of snow was unusually widespread across the Western U.S. But considering it as a whole makes it easier to miss the regional manifestations and implications of a winter that also brought record flooding and record dryness in addition to record heat. Here's how the snow drought played out in a few regions that exemplify this winter's variability:

## WHIPLASH IN WASHINGTON'S CASCADES

Winter in Washington's Cascade Range started and ended in "wet" snow drought — with precipitation falling as rain instead of snow. In December, over 2 feet of rain fell in two weeks in some places, melting much of the nascent snowpack and causing catastrophic flooding west of the Cascades. But it also replenished reservoirs in the Yakima Basin, on the drier eastern side of the range, which were only 8% full in October, a quarter of their normal volume.

Dry snow drought hit in January, when little precipitation fell. While pockets of Washington's Cascades saw near-normal precipitation in February, most of the mountains stayed dry, and the range's snowpack remained well below average. Then, despite several feet of snow landing in March, rain followed and washed it away.

That's a problem for the Yakima Basin, which lacks the reservoir capacity to store enough runoff to meet the region's needs. The snowpack typically serves as an additional reservoir, storing water as snow into summer, said hydrogeologist and geochemist Carey Gazis of Central Washington University in Ellensburg.

South of Ellensburg lies the Yakima Valley — the "fruit bowl of the nation" — where snowmelt is essential for irrigating crops, including cherries, apples, grapes, hops and mint. It also supports the Yakama Nation's efforts to restore populations of culturally important migratory fish. As of March, the Bureau of Reclamation had forecast that many farmers in the Yakima

Valley would receive just 44% of their usual water supply this growing season due to the snow drought.

One long-term solution is to create more water storage by augmenting aquifers. "There's all this space under the surface that can hold more water," said Gazis, who studies such processes. Projects pumping runoff or enhancing passive water infiltration into the ground are already happening in parts of the basin, including on the Yakama Nation reservation.

## NORTHERN ROCKY MOUNTAIN HIGH

As in Washington's Cascades, winter in the Rocky Mountains of Idaho, Montana and western Wyoming was bookended by wet snow droughts, with a dry January in between. However, colder temperatures at higher elevations allowed for a near- to above-average snowpack in some areas that persisted into mid-March, leaving them in better shape than most of the West in early April.

That helped places dependent on winter tourism, such as Idaho's Wood River Valley. "It's as busy as ever, if not a little busier, because we have snow," unlike many other winter destinations, such as those in Colorado, said the director of the valley's Environmental Resource Center, Ashton Wilson, in February.

Additionally, Russell Qualls, Idaho's state climatologist, speculated that the Wood River Basin and others nearby may do "fairly well" this summer in terms of providing water for the towns and agriculture that depend on them.

But little to no snow at middle and lower elevations in Idaho, Wyoming and Montana — and ongoing unseasonable heat — might mean a long fire season unless sufficient rain arrives in spring and summer. Indeed, while fire season usually starts in May or June in Montana and Wyoming, both states experienced wildfires over 1,000 acres in March.

### BUT HIGH AND DRY IN COLORADO

Colorado also experienced such medium-sized wildfires, but they started much

earlier — in December. Both December and January were abnormally dry, and one of the few storms that did arrive dropped rain at up to 11,000 feet — unusually high for winter, and unprecedented in much of Colorado.

This was evident at the January snowshoe hike near Molas Pass, led by the San Juan Mountains Association and Mountain Studies Institute. Outdoor educator Colin Courtney guided attendees wielding avalanche shovels in digging a snow pit to measure the snowpack's depth and water

content. With a dull *thunk*, shovel blades hit dirt just 2 feet down. As he melted snow samples over a camp stove, Courtney noted that the snowpack at the pass held 23% as much water as in an average year — the snow water equivalent, a more meaningful measurement than depth alone when planning for annual water needs and wildfire risk. "It's a very real thing to be concerned this year," said Courtney.

There are ecological threats, too. Research in New Hampshire and Finland has shown complicated effects on tree health when root systems lack an insulating layer of snow during winter. The impact on trees here — already stressed from the worst megadrought in 1,200 years — isn't known.

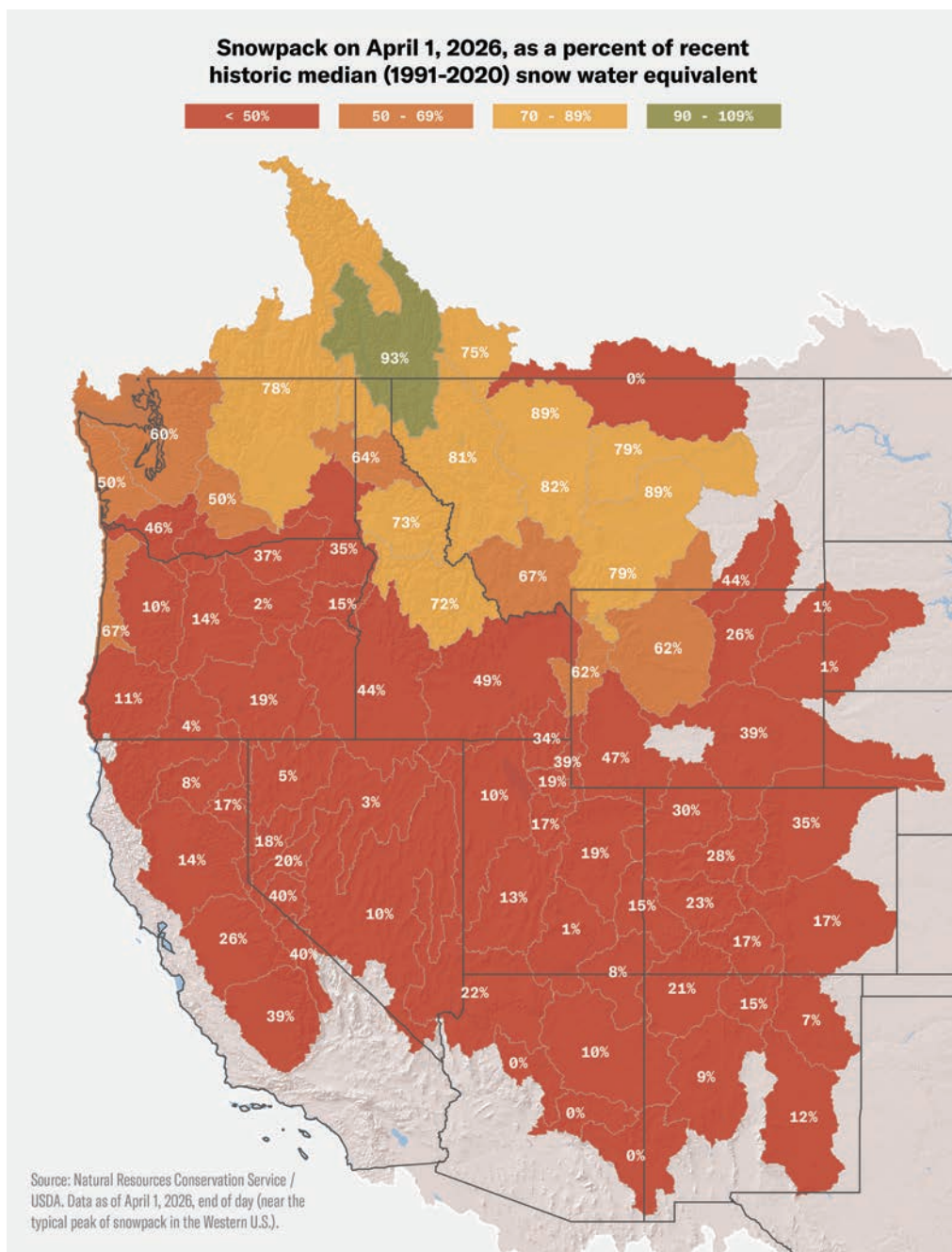
"This is our worst snowpack on record," wrote climatologist Allie Mazurek of the Colorado Climate Center in an early April email. She blamed the West's record-breaking March heat wave for tipping the state past its prior historic low, in 1981.

Denver has already initiated water restrictions. But the implications go beyond state lines: Colorado's snowpack also provides water to 18 other states, dozens of tribal nations and parts of Mexico. The Colorado River Basin provides drinking water for one in 10 people in the U.S., irrigates over 5 million acres of cropland and generates substantial hydroelectric power. This year's snow drought is exacerbating an already fraught fight among the seven states in the Colorado Basin over how to manage the dwindling river.

"One caveat to some of this is El Niño," wrote Mazurek. The climate pattern may bring lots of rain to Colorado, and forecasters expect it to develop in early fall. "Still, rain tends to do much less for our water supply than snow," she added.

And snow is a resource that will likely be in shorter and shorter supply in the years to come in the West, where researchers expect climate change to shrink snow-supplied water by about a quarter by mid-century. Mazurek summed up the region's predicament succinctly: "We should probably be preparing for less water to be coming down from the mountain snowpack than usual." ❄️

*Anna Marija Helt is a freelance writer, herbalist and scientist.*



# Get to know the Pacific newt

These amphibians may be cute, but they'll kill you if you eat them.

BY B. 'TOASTIE' OASTER



**THE GENUS *TARICHA***, or Pacific newts, includes four species of toxic cuties: the California newt, the rough-skinned newt, the red-bellied newt and the Sierra newt. These semiaquatic, nocturnal amphibians live in misty forests from Alaska to Southern California, seeking underground spots like rodent burrows or cracks in granite where they can stay cool and moist.

When the winter rains arrive, they emerge from their hidey-holes and migrate to lakes and streams to breed, skipping years when it's too hot and dry to travel or the wet season is late.

After breeding, females return to their forest hideaways, while males linger to cannibalize a few eggs and larvae before following suit. Pacific newts are indiscriminate diners: They eat mostly bugs and

worms but will happily devour other amphibian eggs — even other unfortunate amphibians, if they can get their jaws around them. Not too many predators eat Pacific newts, according to Julie Vance, an environmental program manager at the California Department of Fish and Wildlife. Instead, their biggest threats include climate irregularities and roads that separate their forest homes from breeding waters. In some areas, California has listed *Taricha* as a “Species of Special Concern” and is encouraging building tunnels under roads to reduce mortality. ☀

*B. 'Toastie' Oaster is an award-winning journalist and a staff writer for High Country News writing from the Pacific Northwest, and a citizen of the Choctaw Nation of Oklahoma.*

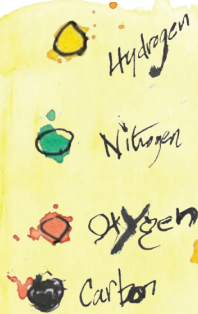
## THAT'S AMORE

If you see an underwater mass of newts in the wintertime, that's a mating ball. There's a lone female somewhere in the center. Pray for her.



## POP ART

Pacific newts usually lay their eggs on submerged roots or sticks. “Unlike a lot of other amphibians, their eggs are not like a squishy loose water sack,” said Vance, adding that it’s firm and “feels kind of like silicone. And when those eggs hatch, it almost looks like popped bubble wrap.”



**DOOM TOXIN**

The newt's bumpy skin glands produce tetrodotoxin, the neurotoxin in pufferfish and blue-ringed octopuses, which Vance calls "more hardcore" than common alkaloid amphibian skins. If you eat a newt (please don't), death begins with a tingling that spreads from the mouth to the extremities. The colorless tetrodotoxin crystals block sodium intake, shutting down nerves and muscles. About an hour of nausea, floating sensations or feelings of doom precede total respiratory collapse. There is no antidote.







**NEWT PATROL**

In the Santa Cruz Mountains, newts migrate to and from the banks of Lexington Reservoir every year for mating season. The journey involves crossing Alma Bridge Road, a winding mountain lane that kills thousands of newts each season. A band of citizen scientists called the California Newt Patrol has stepped in to assist. According to their numbers, newt deaths on Alma Bridge Road have declined. But it's not because more newts are surviving: There just aren't that many newts anymore.



**WHEREABOUTS**  
Pacific newts live all along the West Coast, with Sierra newts holing up as far inland as the Sierra Nevada.

-  Rough-skinned newt
-  Red-bellied newt
-  Sierra newt
-  California newt

Source: CaliforniaHerps.com



**TAG, YOU'RE IT**

Newts, including *Taricha*, can regrow lost limbs and toes. This means biologists can't toe-clip a Pacific newt to tag it; that toe will just fall off and later reappear. Instead, scientists tag newts with injected or implanted PIT tags, like the microchips used for pets.



**FAFO YOGA**

When threatened, newts flash their bright underbellies to warn predators about their poison. This is called aposematism, i.e., the FAFO (fuck around and find out) signal, which dares anyone to try. Females are more toxic than males, though it's unclear why. Rough-skinned newts, which live farther north, are the most toxic of the four species — especially the ones in northern Oregon. An urban legend from Oregon's Coast Range claims that three hunters died when they drank *Taricha* coffee after a newt got into their camp kettle. Newts on Vancouver Island and around Crater Lake, however, produce less poison.



## REPORTAGE

# The absence of clean water

The political drama over Colorado's Arkansas River Valley obscures deeper problems.

BY LUCAS BESSIRE

**THE WESTERN STRETCH** of the Arkansas River, which flows from its headwaters in the Rocky Mountains across the plains of southeastern Colorado, is in trouble. That trouble is compounded by uncertainty about what, exactly, is polluting and drying the river, and how such problems can be fixed.

Overshadowed by the ongoing political brawl over the Colorado River, the Arkansas

River Valley rarely appears in national news. But since Dec. 30, when President Donald Trump vetoed a bipartisan bill that would have secured favorable terms for funding to complete a \$1.39 billion, 130-mile water pipeline, the region has become the stage for yet more drama about water in the Western U.S.

The Arkansas Valley Conduit is part of a decades-long effort to replace the dwindling,

contaminated water in this stretch of the Arkansas Valley with clean water from Colorado's Western Slope and the Pueblo Reservoir. If completed, it will supply water to roughly 50,000 valley residents, many of whom can no longer count on municipal supplies for safe drinking water.

Pundits portrayed Trump's veto as retaliation against Colorado politicians: Republican Rep. Lauren Boebert, who helped force the November vote for the release of the Epstein files, and Democratic Gov. Jared Polis, who has resisted pressure to pardon Tina Peters, a county clerk in western Colorado convicted of tampering with voting machines during the 2020 election. Sens. Michael Bennet and John Hickenlooper, both Democrats, condemned the administration for "putting personal and political grievances ahead of Americans." The Salida-based *Ark Valley Voice* declared a "Reign of Retribution Punishing Deep Red Southeastern Colorado." The *New York Times*, emphasizing the same irony, observed that

“A Trump Veto Leaves Republicans in Colorado Parched and Bewildered.”

For those managing the project, the veto is a setback but not a showstopper. The first dozen miles of the conduit have already been completed, and enough capital is on hand for at least three more years of construction. “Some (coverage) has been saying it’s the end of the project, which is totally false,” said Chris Woodka, senior policy and issues manager of the Southeastern Colorado Water Conservancy District. “It’s still being built; the veto was not for any reason that had anything to do with the project, and we’re working in every way we can to make this affordable.”

For valley residents, the issue is personal. This rural region is more culturally aligned with western Kansas than with Front Range cities. Like people throughout the Great Plains, the local residents are grappling with eroding social services and the rising cost of living. The scarcity of safe water magnifies uncertainty. “If you don’t have clean water,” said Jack Goble, general manager of the Lower Arkansas Valley Water Conservancy District and a sixth-generation rancher, “you really don’t have anything.”

“**HOW EASY IT IS,**” wrote William Mills in his 1988 book *The Arkansas*, “to take a river for granted.”

The Arkansas Valley of Colorado is the ancestral homelands of the Plains Apache, Comanche, Kiowa, Cheyenne and Arapaho peoples. A geographical corridor across the Southern Plains, it was a route for incursions and ethnic cleansing by non-Native fur trappers, traders, military expeditions, hide hunters, railroad developers and settlers. Those settlers include my ancestors; I grew up in southwest Kansas, where generations of my family farmed and ranched along the dry Cimarron River. The Arkansas Valley, with its dwindling water and flatlands, feels like home.

By 1900, settlers had diverted the Arkansas into a maze of ditches. Irrigation and migrant labor supported sugar beet factories, vegetable cultivation and Rocky Ford’s famous melons. Such practices remade the riverbed, increased salinity, and reduced flow. As with the Colorado River, water rights were assigned partly on wishful thinking. Today, the Arkansas Valley is one of the region’s most over-appropriated basins, and the river’s annual flow has dramatically

declined. A short distance past the Kansas line, the river is entirely dry.

The Arkansas is being drained in new ways. Climate change and a record-breaking snow drought are intensifying the scarcity. Over the last half-century, growing Front Range cities have purchased water rights from farmers in the valley. Exchange agreements allow cities to swap these rights for ones farther upstream, leaving the downstream flow diminished and dirtier. Between 1978 and 2022, nearly 44% of the irrigated farmland in the Lower Arkansas Valley Water Conservancy District was taken out of production.

Critics call it “buy-and-dry.” They say the removal of water has disastrous consequences for an agricultural region. “If you take all of that water out of an economy that completely depends on it,” Goble said, “it just breaks a community.” Faced with the prospect of litigation from local water districts, cities like Aurora claim to be developing more sustainable arrangements.

**THE ARKANSAS’ WATER** is changing, too. The river is diverted into dozens of canals and fields. What doesn’t evaporate or get absorbed returns as runoff or sinks through the alluvial gravels that connect to the riverbed. Each time a drop of water returns, it carries more dissolved minerals. As the river’s volume lessens, the concentration increases in what is left. By the time the river reaches the Kansas border, the water regularly contains 4,000 milligrams or more per liter — making it about eight times saltier than a typical sports drink and unsuitable for growing many crops.

Minerals are not the only problem. The river basin and alluvial gravels are also contaminated with radium and uranium. Last year, a study by the Colorado Geological Survey found that the levels of radioactivity in more than 60% of the private wells sampled in the valley exceeded federal standards.

The radionuclides are called “naturally occurring.” But natural uranium usually stays locked in rock. In the valley, irrigated agriculture sets it into motion. Uranium is mobilized by complex interactions between oxygen, sediments, water, microbes and nitrate. Nitrate is a common fertilizer. One study found that valley farmers had over-applied it for decades. This pulls out radionuclides, turns them loose, and

Unburied sections of the Arkansas Valley Conduit in Pueblo, Colorado (opposite).

A resident prepares to fill jugs with purified water at the Rocky Ford Food Market in Rocky Ford, Colorado. The town’s water supply is contaminated with unsafe levels of radium and uranium (below).

Lawrence Armijo, maintenance operator for the town of Manzanola’s water treatment plant. While the plant filters out most toxins, it is not equipped to remove radium and uranium from the groundwater (bottom). **Michael Ciaglo**





Orlando Rodriguez, Pate Construction foreman, climbs out of a hole where sections of the Arkansas Valley Conduit will be connected. **Michael Ciaglo**

flushes them into the river's shallow aquifer. Levels rise as the river moves east through agricultural lands.

Contamination is not news in the valley. People have worked on cooperative solutions for decades. To meet safe water standards while the conduit is under construction, the towns of La Junta and Las Animas installed filtration systems. But cleaning the water creates hyper-contaminated wastewater, which is currently diluted and poured back into the river. "The only true solution," said Bill Long, president of the Southeastern Colorado Water Conservancy District board, "is a new source."

**THE CONDUIT WOULD PROVIDE** safe water to a region too often disregarded. But the project also raises questions about what can truly be bypassed and what cannot, and

about the fate of the river itself.

Near Cañon City, upstream from the conduit, the Lincoln Park/Cotter Superfund site contains a former uranium mill, millions of tons of radioactive waste, coal mineworks and tailing ponds. The site sits less than two miles from the Arkansas River. It is known to be contaminated with the same compounds — radionuclides, selenium, sulfates — that affect communities downstream.

Local residents have worked for decades to raise awareness and hold a revolving cast of agencies, regulators and owners accountable for the pollution. "It has taken us a lifetime," said Jeri Fry, co-chair of Colorado Citizens Against Toxic Waste. "As the years have gone by, we have been the ones holding the memory."

Without memory, they say, contamination is normalized as background, treated as an isolated issue, or denied. "We've been stonewalled on many of our legitimate concerns," said Carol Dunn, vice-chairperson

of the Lincoln Park/Cotter Community Advisory Group. She believes state regulators avoid testing for fear of uncovering inconvenient facts.

The most inconvenient would suggest connections between contamination in the valley and industrial pollution upstream, which affects not only Cañon City but the communities of Leadville, Pueblo and Fountain Creek. For Fry, all of the known and unknown pressures on the river point to the same fundamental problem. "We are not treating our water as though it is a sacred thing," she said. "And it is. It's got to be." ❁

*Lucas Bessire is co-director of the Center for Ethnography at the Colorado School of Mines and author of Running Out: In Search of Water on the High Plains.*

*This story is part of High Country News' Conservation Beyond Boundaries project, which is supported by the BAND Foundation and the Mighty Arrow Family Foundation.*

■ DEAR FRIENDS

## What happens when we die?

A NEW NOVEL BRINGS MANY LONGTIME SUBSCRIBERS TOGETHER TO PONDER AN AGE-OLD QUESTION.

**A RECENT GATHERING IN SEATTLE** drew a colorful flock of *High Country News* readers. Longtime subscriber **Edith Forbes** read from her new novel, *The Lawnmower Lady*, which opens with the death, in a New England pig shed, of Fay Kirkwood. Fay is surprised to find that not only has she not blinked out of existence, she is very much still present — and becomes privy to the capers that ensue when her niece honors Fay’s request that her remains be turned into “coyote lunch.”

Specifically, Fay had imagined that, rather than being embalmed or burned into so many greenhouse gases, her body could be left out to “be eaten by crows and coyotes and shat back into the soil to bloom as a trout lily.”

Is that so much to ask? Maybe. The request sets in motion what Forbes called “a comedy about death” in which she explores the question, “What if heaven or hell actually consist of finding out the results of everything we did while we were alive?”

In the audience were Edith’s sister **Julia Forbes** and her husband, **Ed Waddington**, also longtime subscribers. Edith and Julia, who grew up on a ranch in Sheridan, Wyoming, recall that it was their mother, **Sarah Paine Forbes** (“Sal” to her friends), who first introduced them to *HCN*. Sal strongly supported conservation, and she let lawmakers know it. After her passing in 2011, the kids were surprised to learn that her Xerox machine, which she used to make copies of letters that she sent to members of Congress, somehow found its way to the Smithsonian in Washington, D.C.

We’re not sure if Sal knew *HCN*’s founder, Tom Bell, but they were certainly kindred spirits and probably traveled in the same circles. (Tom ranched near Lander, Wyoming.) Julia and Edith’s sister, **Cherry Wunderlich**, was also a longtime subscriber before her death a few years ago. We were sorry to hear of her passing, and that of her husband, **John**.

Also at the reading were subscribers **Susan Yates** and **Patti Brandt**. Susan, who said she’s been reading *HCN* for decades, introduced Patti to the publication. Patti said she especially appreciates our Indigenous Affairs coverage.

And speaking of books, we recently heard from longtime journalist/conservationist **Peter Carrels**, who just published a new volume called *Cascades of the Big Sioux River*. It documents the influence of the national environmental movement on Sioux Falls, South Dakota, in the early 1970s, and the visionaries who saved the falls from industrialization.

Pete covered the Northern Plains for *HCN* in the 1980s and



Edith Forbes and her new novel, *The Lawnmower Lady*.  
**Greg Hanscom / HCN**

’90s, and was part of the team that produced “Western Water Made Simple,” the project that won *HCN* the prestigious George Polk Award in 1986. (Shameless plug: You can buy an updated version of the map that was created as part of that project, which reimagines the Colorado River Basin as plumbing, at *HCN*’s online store at [hcn.org/co-river-plumbing](http://hcn.org/co-river-plumbing).) This is Pete’s third book, and it’s dedicated to *HCN*’s former editor and publisher, **Betsy and Ed Marston**.

**FINALLY, WE SHOULD HAVE KNOWN BETTER!** Last month, I wrote that wolves would soon be introduced to Ouray County, south of *HCN*’s homebase on Colorado’s Western Slope. **Erin McIntyre**, co-publisher of the *Ouray County Plaindealer* (and one of *HCN*’s partners in the newly formed Western Environmental Reporting Collaborative) wrote to say that “the state’s wolf reintroduction plan is on hold now, after much controversy. This happened in January and there are no plans to release wolves here soon.”

Erin also said that the best way to support the *Plaindealer*’s environmental reporting is through Report for America, which serves as a “fiscal sponsor.” To make a donation, go to [hcn.org/plaindealer/](http://hcn.org/plaindealer/).

Our apologies for the mix-ups!

**Greg Hanscom**, executive director & publisher

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Got a story you’d like to share? Someone deserving of recognition or remembrance? Write it down and send it to us:

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We’ll do our best to get it into the Community Pages.

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**ANNA HELM**  
HIGH COUNTRY NEWS READER  
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*“I appreciate the quality of the journalism and also I am particularly interested in Indigenous issues. I continue to share the ‘Land-grab’ issue (March 2020), and a reprint would be a good thing.*

*What I would like to see is that every child early on, from the day they start school, be guaranteed a free education at a state college or university. It in no way compensates what has been taken from people, but I think it would go a long way to address what has been taken. If students grow up knowing they have access to free education it would help them and their families have an interest in education. Especially families who can’t send their children to school.*

*Land-grant colleges and universities that have benefited from land need to make that option available.*

*When I talk about the issue and talk about the land-grant universities article, the feedback I get is surprise: ‘This issue is not covered in the mainstream media.’”*

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Family photographs hang on the wall in Andrea Carrillo's mother's home in Tularosa, New Mexico. Carrillo's sister died of cancer a few years ago, and many other relatives and local residents have cancer that they attribute to radiation from the Trinity atomic bomb test.



# A LEGACY OF DISEASE

**Half a million people lived  
within 150 miles of the  
Trinity atomic bomb test.**

**Their descendants  
are still waiting for justice.**

TEXT AND PHOTOS BY SOFIE HECHT



**Radiation at Trinity Site**

Radiation levels in the desert, ground zero area are very low. The maximum levels are only 10 times greater than the average natural background. Many places on Earth are naturally more radioactive than Trinity Site.

A new house built in the lower desert area will need to be a very long time to plan, depending on the concentration of radon gas in the soil.

To put this in perspective, Americans receive an average of 360 millirems every year from natural and man-made sources. For instance, the American Nuclear Society estimates that average Americans get about 100 millirems from the sun, depending on what elevation you live. We receive about 60 millirems every year from our food. Living in a brick, stone, or concrete house adds several millirems of exposure every year, compared to living in a frame house. Finally, living close to a coast by jet gives an exposure of about five millirems.

One source of radiation exposure not contained in old calculations is from radon gas. Radon gas now estimates that Americans average 200 millirems of exposure per year from radon.

Finally, the green glassy substance found in the ground zero area, contains several radioactive elements and is an alpha and beta particle emitter.

Although radiation levels at ground zero are low, some feel any extra exposure should be avoided. The decision is yours.

Typical radiation exposures per year for Americans according to the American Nuclear Society:

- One hour at Trinity Site ground zero = one half year
- One year from radon in an average house = 20 years at 100 mrem
- Radiation levels in rocks and soil = 50 years at 100 mrem
- Background dose rate in air and soil = about 100 mrem
- A chest X-ray = six years at 100 mrem
- Working in a plutonium plant = 100 years
- Consumption of 100 lbs of meat

Sources for good information about radiation are the American Nuclear Society and U.S. Nuclear Regulatory Commission.

Radiation comes from the nucleus of individual atoms. Simple atoms like oxygen are very stable. Its nucleus has eight protons and eight neutrons and holds together very well.

The nucleus of a complex atom like uranium is not so stable. Uranium has 92 protons and 146 neutrons in its core. These neutrons come loose or break down into more stable, simpler atoms. When this happens, the atom emits some radiation, called gamma rays. This is where the word "radioactivity" comes from.

Some elements are concerned with four emissions from the nucleus of these atoms. One of these radiations is the alpha particle which is relatively large and travels slowly compared to other atomic particles. Alpha particles are composed of two protons and two neutrons. They travel about one to three inches in the air and are easily stopped by a sheet of paper.

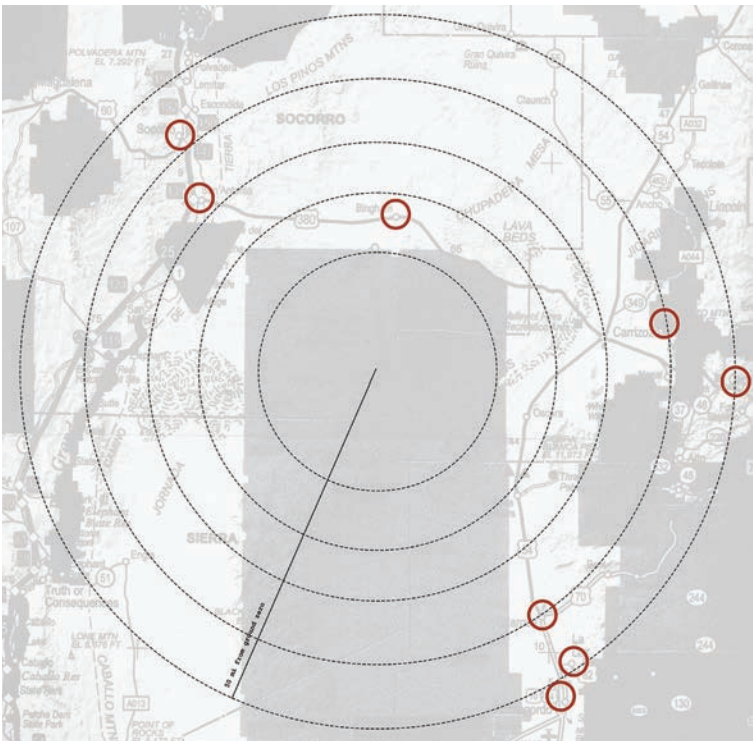
Another radiation is the beta particle, basically a very light electron that moves at less than the speed of light. Beta particles are more energetic than alpha particles, but can be stopped by a thin sheet of metal or heavy clothing.

The third form of nuclear radiation is the gamma ray. This is a type of electromagnetic radiation like visible light, radio waves and X-rays. They travel at the speed of light, take at least an inch of lead or eight inches of concrete to stop them.

Finally, neutrons are also emitted by some radioactive substances. Neutrons are very penetrating but are not as common in nature. Neutrons have the capacity of striking the nucleus of another atom and changing it into a different, often unstable, and therefore, radioactive one. Neutrons emitted in nuclear reactors are contained in the reactor vessel or shielding and cause the vessel walls to become radioactive.

Radioactive elements emit these radiations until they have reached a stable state. For some man-made radioactive materials this occurs in a few seconds. For other elements a small amount can emit radiation for thousands of years. As they break down they turn into other elements.

At ground zero, the elements emitting gamma rays and alpha and beta particles are Europium, Cesium, Cobalt, Strontium and Plutonium.



**LUCY BENAVIDEZ GARWOOD** was 13 years old when the Trinity atomic bomb test was detonated at the White Sands Missile Range in New Mexico, 50 miles from her home in Tularosa, on July 16, 1945. A prototype for the plutonium bomb that would be dropped a few weeks later on Nagasaki, Japan, it was the culmination of years of research at Los Alamos National Laboratory (LANL) for the top-secret Manhattan Project.

Half a million people — including including Neuvomexicano, pueblo and Navajo communities — lived within a 150-mile radius of that atomic bomb test. In the decades that followed, Benavidez Garwood, who is of mixed Spanish and Navajo descent, though not enrolled, lost both of her parents, three of her 10 siblings and one of her own daughters to cancer or complications from cancer, along with many other close relatives, who all grew up in Tularosa and believed that their illnesses were linked to the atomic bomb test. Over 80 years later, Trinity’s dark legacy endures in the ongoing rates of cancer and illness in nearby communities. The locals, many of whom call themselves “downwinders,” commonly say, “We don’t ask *if* we’re going to get cancer; we ask *when*.”

On July 16, 2025, the 80th anniversary of the Trinity test, New Mexicans gathered outside White Sands Missile Range to celebrate the installation of a new sign commemorating the state’s downwinders. The sign showcased a map made by Bryan Kendall in 2021, which



People attend the Trinity Site open house on April 1, 2023, on White Sands Missile Range, an active military base. The site is only open to the public once a year in October (facing, top).

A map showing the 5-mile radius from Trinity. Red circles indicate the places where these photographs were made (facing, bottom).

A vacant house in Bingham, New Mexico, near where Pat Muncy Hinkle's family grew up, just 13 miles away from the Trinity Site (left).

Pat Muncy Hinkle writes over an image of her and her sister playing outside their home in Bingham, New Mexico, in the early 1950s (below).

## “WHEN SOMETHING’S ARBITRARY, THEN IT’S NOT JUSTICE.”

— Tina Cordova

revealed the radiation fallout from the bomb alongside quotes from some of the downwinders. Later, the evening's mood became more solemn as downwinders invited community members to remember loved ones who had died by decorating a park with luminarias dedicated to their memory. Hundreds of paper bags formed a glowing spiral across the field, and the ceremonial reading of the deceased ones' names went on for hours.

But last year's sign dedication was also a time for celebration. Not only had the Tularosa Basin Downwinders Consortium (TBDC), the advocacy group that represents New Mexico's downwinder communities, successfully petitioned the state government to memorialize their experiences with the sign outside the Trinity Site, they also succeeded in gaining amendments to the Radiation Exposure Compensation Act (RECA) that would finally include and benefit New Mexicans.

In 1990, the Department of Justice established RECA to provide compensation to people with exposure-related illnesses. The original bill, however, did not include New Mexican downwinders. In July 2025, after a 20-year legislative campaign, they were finally added to RECA through President Donald Trump's One Big Beautiful Bill Act (OBBBA). This amendment acknowledges the entire state of New Mexico as “an affected area” and allows anyone who resided in the state between Sept. 24, 1944, to Nov. 6, 1962, to apply for a one-time



payment of \$100,000 if they can prove that they were diagnosed with certain cancers covered under the bill. Descendants of those who have died can also apply and divide their ancestor's payment among family members. This is a considerable improvement, although there are still severe limitations to compensation for the many people who have been impacted by 80 years of radiation and contamination in their soil, water and communities.

“We were a sacrifice zone,” Tina Cordova, co-founder of the TBDC, said about the decision to detonate the bomb in New Mexico. “The government knew in 1945 that they were going to damage us, but they didn't care.” Cordova receives calls every day from people who are going through the RECA application process and need help accessing

old documents that could prove they or their family members are eligible for compensation.

“It’s definitely a victory,” Cordova said about the July amendments to RECA. But “our fight is not over. They did away with the health-care coverage; they didn’t add all the areas that have downwinders, like our brothers and sisters in Guam, Colorado and Nevada.”

Cordova described some of RECA’s provisions as “arbitrary”: the kinds of cancers that are covered, for example, as well as the date cutoffs and the geographic boundaries. “When something’s arbitrary, then it’s not justice,” Cordova said. “We have to go back until we get what we are after.”

Since the amendment was enacted last summer, 9,757 downwinders have applied for compensation. Most of these claims are still processing, but 1,218 of them have been approved, resulting in a total payout of \$121,800,000. A team of volunteers from TBDC assists people with applications and tracks how many claims are approved each week. The process has been slow, and many people will wait a long time to receive compensation because, Cordova said, the Department of Justice is “woefully underprepared for what they are going through,” an “issue that has developed out of them ignoring us for 80 years.” Now, Cordova and the TBDC are working with the New Mexico Department of Health to train staff at field offices to assist downwinders with tracking down records and working on claims.

Benavidez Garwood’s skin cancer is not on the list of eligible cancers, and so she cannot receive compensation. However, her daughter, Doris Walters, has applied for compensation for breast cancer. Like Cordova, Walters has been an important resource for community members searching for decades-old medical records. She answers phone calls most days, “guiding (people) where to go ... because I know what I went through. I know how hard it is. ... We all work together.” Sticky notes in Walters’ home hold the names of helpful contacts at archives and medical facilities. “A lot of people I know are not getting to file because they were born after the date,” she said. “If they’ve lived in New Mexico all their life and they got cancer, (the government) should either give them health care or compensation or both,” Walters said, adding, “It’s the young ones that are suffering now.”

Paradoxically, the One Big Beautiful Bill, which has opened up the possibility of compensation for previously ineligible downwinders and post-1971 uranium miners, continues to support the rapid development of extractive energy, including coal, uranium, oil and gas, while making it harder to develop renewable energy like wind and solar power. Both OBBBA and other Trump administration bills are eager to provide tax breaks to nuclear energy while encouraging more coal power development and jumpstarting domestic uranium mining. Meanwhile, the fight continues — for environmental regulation, the cleanup of abandoned uranium mines on the Navajo Nation and full federal recognition of downwinder suffering.

“In New Mexico, we’re all downwind of something,” Cordova said. ✨

*Sofie Hecht is a documentary photographer based in Albuquerque, New Mexico, since 2019. Her projects are committed to uplifting community resilience, honoring individual agency through the photographic process, and building lasting and accountable partnerships.*



Lucy Benavidez Garwood and her oldest daughter, Margaret “Cookie” Baldonado, around 1950. Baldonado, who died in 2014 from complications related to uterine cancer, grew up in Tularosa, New Mexico, just 55 miles from the Trinity Site. Five generations of the family have had cancer (*above*).

Lucy Benavidez Garwood was 13 years old when the Trinity test was detonated just 50 miles away from her home. She lost both of her parents, three of her sisters, and one of her daughters to cancer or complications from the disease, as well as many other family members who grew up in Tularosa and link their illnesses to the test site’s proximity (*facing*).

**“WE WENT ON WITH OUR LIVES  
LIKE NOTHING HAPPENED...  
UNTIL EVERYBODY STARTED DYING.”**

— Lucy Benavidez Garwood





Josephine Duran and her niece Doris Walters sit in Duran's house on Sept. 22, 2023, watching Duran's great-granddaughter play. Walters' mother, Lucy Benavidez Garwood (Duran's sister), was born in this very room they sit in 94 years ago. Duran, Walters and many other family members who grew up in Tularosa developed cancer that they attribute to the fallout from the 1945 atomic bomb test 50 miles away (*above*).

In 2023, Walters shows the spot on her breast where she had a lumpectomy (*right*).



**“IF THEY’VE LIVED IN  
NEW MEXICO ALL THEIR LIFE  
AND THEY GOT CANCER (THE  
GOVERNMENT) SHOULD EITHER  
GIVE THEM HEALTH CARE  
OR COMPENSATION OR BOTH.”**

— Doris Walters



**“HOPEFULLY,  
THE NEXT GENERATION  
WON’T SHUT UP.”**

— Pat Muncy Hinkle

The house that Pat Muncy Hinkle’s grandfather built in the 1950s, just 13 miles away from the test site of the world’s first atomic bomb (*left*).

In this image from Pat Muncy Hinkle’s photo collection, Hinkle’s mother stands on the far left alongside a family friend and neighbors (*below*).





Wes Burris, photographed in his home near Socorro, New Mexico, in 2024. Burris, who was almost 5 years old when the Trinity test was detonated, remembers the window in his house breaking, the house shaking and everything being “so bright you couldn’t see.” He asked his dad, “Did the sun blow up?” Many members of his family have died of various types of cancers. He himself suffers from sterility that he believes is from radiation exposure (*above*).

Paul Pino, photographed outside his home in Sandia Park, New Mexico, in 2023. Pino is a member of the steering committee of the Tularosa Basin Downwinders Consortium. Pino grew up on his family’s ranch in the Carrizozo area, roughly 40 miles from where the Trinity test was detonated. His family has a history of cancer, which they believe was caused by the detonation of the Trinity bomb (*right*).



Med List 7/2024

Naltrexone	50mg	1X daily
Bupropion	200mg SR	2X daily
Quetiapine	120mg ER	1X daily
Trulicity	.75/0.5 (inject)	1X Weekly
Ondansetron	4mg	As Needed
Admelog	Fast Act Insulin	3x daily
Topiramate	100mg	1X daily
Duloxetine	60mg	1X daily
olic acid	1mg	1X daily
Naproxen	550mg	2X daily
Famotidine	40mg	1X daily
Vitamin D	50,000 units	1X weekly
Singulair	10mg	1X daily
Valtaren Gell	Topical	As Needed
Kelexin	200mg	2X daily
Albuterol	Inhaler	As Needed
Sodium Bicarb	650mg	1/2 tab 2x daily
Sulfasalazine	500mg	2-3X daily
Baclofen	10mg	1/2 tab 3x daily
Metformin	1000mg	2X daily
Gabapentin	800mg	3X daily
Propofol	.25mg	2 tabs nightly
Methotrexate	2.5mg	6 tabs 1X weekly
Cholestyramine	4gm (powder)	3x daily
Insulin Glargine	Long Act Insulin	50 units 1x daily

→

**“THE HARDEST THING FOR ME IS THE THINGS I GAVE UP... I HAD THESE DREAMS... THEN I STARTED GETTING SICKER.”**

— Amber LaMay



Amber LaMay's daily pill routine in 2024. At only 39, she has many autoimmune diseases that are rare for her age, and many of her friends and neighbors are also getting sick in their 30s and 40s. LaMay believes that people get sick in Capitan because “(the radiation) is in the soil” (top and left).



Louisa Lopez photographed at her ranch in San Antonio, New Mexico, in 2023. Lopez's husband died of cancer six years ago, and his family has been plagued by cancer for generations (*above*).

Tina Cordova, co-founder of the Tularosa Basin Downwinders Consortium, kisses her mother at the 80-year commemoration of the Trinity atomic bomb test on July 16, 2025. Members of the community celebrated the new sign installed by the New Mexico Department of Transportation that acknowledges the suffering of New Mexican downwinders who lived near Trinity (*right*).

The Tularosa Basin Downwinders Consortium remembers the lives lost to the atomic bomb at their annual candlelight vigil at a high school baseball field in Tularosa, New Mexico, in 2024 (*facing*).

**“IN NEW MEXICO,  
WE’RE ALL DOWNWIND  
OF SOMETHING.”**

— Tina Cordova





# PINECONE COWBOYS



By DILLON OSLEGER / *Photos by* NINA RIGGIO



The future of Western forests depends on climbers harvesting seeds from the canopy. Now, the profession itself is imperiled.

Kyle Merlic harvests red fir cones on Forest Service land leased by timber company Sierra Pacific Industries outside Dorrington, California.

**HIGH IN THE CROWN** of a giant sequoia, the world becomes a cathedral of green and amber, hushed but for the creak of ancient wood and the sharp, rhythmic snap of cones being pulled from boughs. Dan Keeley, 31, moved around with a practiced, fluid economy, suspended by thin lines of high-tensile rope 200 feet above the ground on the western edge of California's Sequoia National Park. To his left, the sequoia's cinnamon-colored bark provided a steady presence as he leaned out over the negative space between branches.

"There is a lot of trust that goes into this work," Keeley said, speaking over the wind. He eyed a cluster of green, egg-sized cones. "Trust in the trees, predominantly, but also trust in the system — that I'm being sent to the right trees, at the right time, and for the right reason, not all of which are always the case."

Keeley, a lean, tanned former rock climber and arborist, is what some in the forestry industry call a pinecone cowboy, a freelance contractor hired to harvest the genetic future of Western forests. He climbs trees of important or threatened species to collect ripe cones for seeds intended to be used for reforestation.

**A relationship that's existed for 350 million years now rests on the shoulders of climbers who collect cones one 45-liter bag at a time.**

These 50- to 70-year-old conifers were among the trees burned in the 2020 Castle Fire in California's Giant Sequoia National Monument. **Al Seib / Los Angeles Times via Getty**

A Civilian Conservation Corps enrollee plants trees in 1933 as part of the Corps' reforestation program. **National Archives**

Keeley is part of a specialized workforce that's become the primary resistance against the rapid erasure of a Western landscape. As megafires — fueled by climate change and a century of heavy-handed forest management and fire suppression — incinerate millions of acres in the West, natural regeneration is failing. Cones from serotinous species, which open their scales and drop their seeds in response to low-intensity wildfires on the forest floor, are now incinerated in increasingly common crown fires — high-intensity blazes that leap into the canopy. Meanwhile, other species' seeds, dropped into the soil by wind and animals like squirrels and birds, are choked underneath layers of ash or outcompeted by invasive shrubs. The future of a relationship between trees and wildfires that has existed for 350 million years now rests on the shoulders of rope-suspended climbers who collect the trees' cones one 45-liter bag at a time.

The tree that Keeley balanced in stood in a thriving grove. Just over the next ridge, however, lay the blackened slopes of recent megafires: vast, silent expanses from which the forest had been effectively erased. In the region's 2020 Castle and 2021 KNP Complex fires, an estimated 13% to 19% of the Sierra Nevada's



large giant sequoias were destroyed. That same year, wildfires across the West consumed over 10 million acres — an area larger than the state of Maryland. Keeley’s task is to gather seeds from healthy trees to ensure that the seedlings planted on those burn scars possess the genetic blueprint they’ll need to thrive in their specific soil, elevation and ecosystem.

The forces that elevated Keeley into the canopy are a blend of medieval ballistics and modern arboriculture. On the forest floor, Keeley aimed a retrofitted crossbow equipped with a fishing reel into the tree’s crown, then fired a weighted lead line over a sturdy branch, using it to hoist a thick static climbing rope up and over the branch. Cinching into a running bowline anchored against the trunk and using mechanical ascenders — cam-based metal handles that grip the rope — Keeley braced himself against the tree and pulled his way up, meter by meter, until he reached the tree’s peak.

Climbers like Keeley hoist themselves into the treetops because that’s where the cones are most plentiful, while the chance of self-pollination — when a tree’s male cones pollinate its own female ones, creating less genetically robust offspring — are lowest. (The highest cones are more likely to be cross-pollinated, or fertilized by other trees, since the process is primarily driven by wind.)

Standing on a branch, Keeley plucked a cone and used a utility knife to deftly cut it in half, revealing a cross-section of the hundreds of seeds tucked into the crevices between spiraled scales. Pulling out a single seed roughly the size and appearance of an oatmeal flake, he demonstrated how he could lay it on the palm of his leather glove and slice it in half as well, then peer through a loupe — the kind of 10x magnifying lens that jewelers use — to assess the embryo. (In practice, he often just bites the seed in half and eyeballs it.) Keeley would check one or two dozen seeds this way; if there are embryos — the miniature root and stem that will break free of the seed casing once it’s exposed to soil and water — in 30 to 50% of the seed cavities, then the seeds had an acceptable chance of becoming seedlings at the nursery, and Keeley would harvest all the tree’s available cones. If not, he’d descend to the forest floor and move on.

While up in the canopy, Keeley’s focus was almost microscopically trained on the job in front of him. The issue he was trying to solve, however, is geographic in scale. During



last year’s cone-collecting season — which for Keeley runs from August to November — he logged over 20,000 miles commuting between collection sites in several Western states, akin to the range of a long-haul trucker. It’s a data point that shows not only how rare his skillset is, but how widely and desperately it’s needed.

After filling his 45-liter bushel bag full of cones, Keeley maneuvered the 60-pound load around a thick limb, attached it to a static rope and gradually lowered it to the forest floor. This seemingly slow, methodical practice, he noted, was in fact a race against time. “Our work is a response,” he later told me, to a “quiet crisis of urgency.” Keeley and his colleagues aren’t merely racing the weather, which can dictate cone ripeness, and the animals that compete to eat the cones’ seeds; they must also outrun the changing climate, which is wiping out forests faster than they can grow. Meanwhile, these pinecone cowboys — among the only people with the skills and knowledge to save our future forests — are being abandoned by the system that both employs them and needs them most.

**IN 1933, PRESIDENT FRANKLIN D. ROOSEVELT** established the Civilian Conservation Corps, and within it, what became known as his “Tree Army,” a division

of the U.S. Forest Service that employed up to 300,000 men at its peak. They climbed into the canopy using boot spikes and waist ropes and collected cones for reforestation.

At the time, logging, drought and unsustainable farming practices had depleted the nation’s forests and grasslands, causing disastrous erosion. The denuded landscape was also the result of a century of forced removal of Indigenous people, who for thousands of years had actively taken care of the continent’s forests. Through cultural burning — the practice of lighting frequent and low-intensity fires — some tribes cleared the understory and promoted a diverse ecosystem and the growth of healthy trees. In many ways, the Tree Army sought to mechanically replicate the regenerative work Indigenous people had achieved by fire. By 1942, it had gathered enough cones to plant over 3 billion trees.

But federal budgets for reforestation were primarily tied to timber sales, due to a 1930 law. This worked during the post-war housing construction boom, when the agency’s labor model also shifted toward contractors, with the Forest Service stepping into an administrative management role in order to meet the country’s huge timber demand. But when timber harvesting plummeted in the late 20th



century and wildfires replaced chainsaws as the leading cause of deforestation, funding for reforestation fell, resulting in a growing backlog, according to a 2022 congressional report and a 2015 Forest Service report.

This funding decline — and the emergence of firefighting as a priority — hollowed out the agency’s professional forestry core, according to the reports. From 1998 to 2015, the Forest Service’s non-fire workforce declined by nearly 40%, eliminating the silviculturists, botanists and hydrologists who monitored tree stand health and managed nurseries along with the forestry scouts and foresters who mapped backcountry stands and selected trees for cone collectors to harvest from.

The 2021 REPLANT Act attempted to enable the Forest Service to address its 4 million-acre reforestation backlog over the coming decade by authorizing up to \$140 million annually on top of the agency’s small annual appropriations-based replanting budget. But the money it allocated was restricted to funding projects; it did not grant the agency the funding to hire employees to manage these projects. Today, we still lack enough foresters, scouts and other staff to gather the upfront intelligence or administer contracts, said Robert Beauchamp, owner of Sierra Cone, one of the West’s largest cone-collection contractors. The agency’s 2026 budget shows that \$337 million of the

“There is a lot of trust that goes into this work.”



Robert Beauchamp, owner of Sierra Cone, one of the largest cone collection contractors in the West, reaches for a red fir cone outside of Dorrington, California (above).

In Sequoia National Park, California, reforestation workers Ruby and Stella Beauchamp carry crossbows used to hoist climbing ropes up and over tree branches (right).

Stella Beauchamp holds a giant sequoia cone (top right).

REPLANT fund has not been used. (Asked about this, the Forest Service issued a written statement saying that it allocates funding in accordance with agency priorities, “including active forest management and reforestation.”)

The staffing shortage has been exacerbated under the Trump administration. In 2025, the agency lost 16% of its permanent non-fire workforce, according to a report by the USDA Office of the Inspector General, in part due to the Department of Government Efficiency (DOGE). Those employees included people who managed cone-collection contracts; Keeley says several of his jobs have been canceled due to the departure of key staff, including scientists and administrators.

The entire reforestation pipeline, from the initial scouting of seeds to the planting of seedlings, is constricted by this shortage of agency personnel, said Britta Dyer, who until March was senior director for California and the Pacific Islands at the nonprofit American Forests, which helps agencies like CAL FIRE and the Forest Service secure funding and labor for reforestation. “There is a workforce sitting there waiting to be deployed that isn’t being deployed,” said Keeley.

Meanwhile, experienced pinecone cowboys are aging and retiring, and the profession lacks a succession mechanism, according to Beauchamp. There is no school for cone-collecting; skills are traditionally passed down through an informal apprenticeship model — though that, too, has been gutted by the instability of seasonal contracts, as experienced climbers and contractors cannot guarantee new hires consistent work. While employment statistics aren’t available due to the profession’s small and seasonal nature, cone collectors are part of a 38% reduction in employment in forestry since 1994, according to a 2021 paper in the journal *Forests*.

The industry also struggles to offer stable, well-paying jobs, Keeley told me one day, calling from the tailgate of his truck. The Toyota’s camper shell served as both his mobile headquarters and bedroom, with a wooden sleeping platform and a cooler tucked under a nest of ropes and climbing gear. When we were together, he had rifled through the plastic bins stored under the platform to show me his possessions — journals and a camp stove, satellite phones, radios and first aid kits.

Cone collection is dangerous work with a short season and an increasingly lopsided

risk-to-reward ratio. In a productive season, an experienced climber might earn \$60,000 in contracts, Keeley said, without accounting for climbing gear, business insurance, gas and truck maintenance. Companies like Sierra Cone can gross over \$1.5 million from contracts annually. But both individual contractors and companies deal with unpredictable delays in the harvesting season caused by factors ranging from wildfire smoke to government shutdowns, which cut the 2025 fall season by half. During delays, cones can overripen and collectors lose an entire harvest, meaning, as Keeley said, “We don’t get paid.”

Finally, the industry lacks adequate standards or certifications that help to set contractors apart. This can make it difficult for land managers to vet contractors, Beauchamp explained. The Forest Service staff who write requests for proposals (RFPs) are often young and inexperienced, he said, and budget-strapped state and federal agencies regularly accept the lowest bids for cone collection, scouting and planting. This sometimes results in new

contractors lacking experience in tree-climbing winning bids, then failing to fulfill collection contracts and wasting ripe cones because they aren’t prepared for the job. When this happens, it isn’t the lost income that irks Beauchamp, but the opportunity for the forests. “You can’t just ‘redo’ a harvest after the first guy fails,” he said. “You miss the weeklong window to harvest a tree; you miss the year of replanting.” (In a written response to *High Country News*, the Forest Service said that, in accordance with federal contract regulations, “Contracts are typically advertised and awarded based on multiple factors, including but not limited to, cost.”)

The result is an annual reforestation shortfall that is compounding and transforming entire ecosystems. The Forest Service produces 30 million to 50 million seedlings a year, according to American Forests, a mere fraction of the 120-million annual seedling goal the REPLANT Act established. Roughly 80% of those seedlings will survive, while it takes about 220 trees to reforest each burned acre. Altogether, the agency meets just 6% of its





## It would take 15 to 20 years to reforest what's already been lost in California.

Red fir cones are prepared for transportation by Sierra Cone (top and opposite).

More than 60 seed types are stored for decades inside a sub-zero-degree freezer at the CAL FIRE L.A. Moran Reforestation Center in Davis, California (above). **Emily C. Dooley / UC Davis**



post-wildfire planting needs annually, according to its 2022 *Reforestation Strategy Report*.

And that's just on Forest Service land: Wildfires on both public and private lands have affected, on average, 7.8 million acres a year over the last decade, according to the National Interagency Fire Center. In California alone, current seedling production and planting rates mean that it would take 15 to 20 years to reforest what has already been lost, while each additional fire "puts us further behind," said Kuldeep Singh, operations manager of seed production for CAL FIRE. While the Forest Service considers a tract reforested after seedlings survive their first five years, research says that a functioning ecosystem like the one the fire destroyed won't return for several decades.

When a forest fails to regenerate, either because it wasn't replanted or because new seedlings didn't survive, it often becomes scrubland, in a permanent ecological shift known as type conversion. The new brush-based ecosystem creates a more flammable fuel bed that resists the forest's return, effectively locking the land into a cycle of fire and scrub. In areas like South Lake Tahoe, California, for example, fields of 8-foot-tall manzanita and buckbrush now dominate hundreds of acres where conifers once stood. In Oregon, Washington, Idaho, Wyoming and throughout the Southwest, Forest Service research says that high-severity burn areas — which are difficult to regenerate regardless of human intervention — are increasingly repopulated by invasive grasses or the flowering plants called *Brassicaceae*, which store less carbon and prevent conifers from taking root. This process is permanently altering the hydrology, fire cycle and carbon-sequestration capacity of the West.

During a February video call, Kayla Herriman, a national seed specialist with the Forest Service, said that the agency was attempting to fill its current reforestation funding and staffing gaps through a three-pronged approach: training employees across the agency, including those in non-forestry roles like recreation and wildlife, to climb trees; borrowing labor from other agencies, including workers not formally trained in seed collection; and hiring some private contractors. Herriman added that the acres reforested by the Forest Service have increased since 2023. "Small collections, repeated annually, may not seem impactful," she said, "but they're pretty mighty once they add up."

## THE L.A. MORAN REFORESTATION

Center in Davis, California, sits between a babbling creek and agricultural ranching fields. It smells like a lumberyard; the sharp, tannic tang of fresh pine resin blending with the scents of woodsmoke and manure.

Before they can return their seeds to the forest, the cones in Keeley's bushel bag take an industrial detour. Inside the facility, massive metal tumblers hummed. Over the course of 24 to 72 hours, the tumblers shook the seeds loose from the cones. Workers cleaned them and then either tucked them into meticulously labeled bags that identified species, stand and elevation — planting a tree from a 2,000-foot elevation site at 7,000 feet is often its death sentence — then stored them in sub-zero freezers or else sent them off to the nursery. In the back of the warehouse, under rows of greenhouses, hundreds of thousands of seedlings sprouted out of trays inoculated with the seeds of the species requested by land managers. Conifer seedlings in the greenhouse take

from one to two years to reach planting size — roughly the length of a pencil. Then they're loaded onto trucks and driven to burn scars.

The final link in the reforestation pipeline is the job of planting seedlings. Keeley described the grueling intensity of this phase, recalling monthslong projects in Sequoia National Park where specialized forestry technicians carried 40-pound bags filled with dozens of seedlings over charred logs and up steep ash-covered slopes. The work required not just stamina, but conscientiousness, Keeley said. "You have to place each tree perfectly. If you tuck the roots wrong, that tree is dead in a year."

Planting can provide work for tree climbers beyond the three- to four-month harvesting season, but jobs are few and far between, making it hard to earn a year-round income, said Keeley. Today's professionally trained domestic tree planters make inflation-adjusted earnings that are 15% to 30% less than they were in the 1970s, according to the 2012

book *Pineros: Latino Labour and the Changing Face of Forestry in the Pacific Northwest*. This stemmed partly from the demise of worker cooperatives like the Hoedads, which helped negotiate wages before modern-day federal contract regulations came into effect, requiring the government to prioritize lowest-bid contracts and putting downward pressure on prices, argued the book *Of Forests and Fields: Mexican Labor in the Pacific Northwest*.

Today, over 85% of the planting on private timberlands and national forests is performed by migrant laborers on H-2B visas, according to the Forest Resources Association, an industry trade organization. The workers are subcontracted by forestry companies and often face abuse and exploitation, according to the Southern Poverty Law Center, reportedly earning as little as 16 cents for every seedling they plant. The Forest Service responded that it "has contract officers as well as contract officer representatives in the field that work together to help ensure contract provisions are



administered in accordance with laws, regulations, and guidance.” But the dynamic creates a stark disparity in the reforestation process: Specialized climbers like Keeley can earn up to \$1,000 a day, while the final, critical work of restoration is performed by low-wage labor. It is a hard job that requires bending over up to a thousand times a day, often under pressure to plant higher volumes, said Dyer. “Planting mistakes do happen.” This can undo the careful collection efforts of the cowboys in the canopy.

Advocacy groups like The Nature Conservancy and American Forests are currently lobbying for the Post-Disaster Reforestation and Restoration Act (H.R. 528), introduced by Democratic Rep. Brittany Pettersen in January 2025. If passed, it could theoretically create more opportunities for pinecone cowboys by mandating that the Department of the Interior, which manages the Bureau of Land Management and National Park Service, prioritize reforestation projects like the Forest Service does. But every expert I spoke to, from cone collectors to government foresters, said that solving the reforestation bottleneck will require rebuilding the appropriate agency workforce — something that seems unlikely under the

current administration. In the wake of the recent exodus of federal employees, combined with the administration’s lack of support for reforestation and other climate-adjacent projects, Dyer anticipates less federal work this season. “Contractors should, and are, bracing for chaos,” she said.

Meanwhile, some agencies are attempting to professionalize the cone-collection trade. In 2022, CAL FIRE, in partnership with American Forests, began piloting two-day “cone camps,” training workers at all levels, from scouting to climbing to planting, and teaching them skills like how to estimate bushel volumes, rig ropes and carry out cone-cut tests. CAL FIRE has also implemented formal cone-collection standards, in order to ensure that students are equipped to meet its contract requirements. Yet while over 300 participants have completed the program, few have pursued careers in the industry, Singh said. “Climbing trees,” he added, is still “a declining profession.” A certificate cannot change the seasonal, hazardous and unpredictable nature of the job, nor the fact that being a privateer like Keeley hardly pays a living wage.

Keeley, for his part, was still primarily motivated by his enjoyment of the work

and his love for the forest. His focus, he said, was “the genetic preservation of threatened species.” It’s why, despite the challenges and weight of responsibility, he remained committed to his career — a dedication that becomes apparent when you watch him perform the difficult, delicate work of cone collecting.

When Keeley finally descended at sunset in Sequoia National Park, he was covered in pine resin, and his muscles ached from the pull of the harness over eight hours. The seeds he gathered would take at least three years to reach blackened slopes like those a mile or two away as seedlings, and the forest would not return to its previous state in his lifetime. But as he tossed the bushel bags into his truck bed, he sounded hopeful. “It seems like a slow progression towards a solution,” he acknowledged, getting into his cab, “but to a forest’s timeline, we’re making a difference.” He pulled the truck door shut and began the long drive toward the next stand. ✨

*Dillon Osleger is the author of Trail Work: Restoring the Paths and Stories of America’s Public Lands. He is a geologist and trailbuilder with a decade of hands-on conservation experience across the West.*

Moonlight just outside Sequoia National Park, near the Alder Creek Grove.



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The Amargosa Opera House photographed in Death Valley Junction, California, in 2015.  
**Kim Stringfellow**

ESSAY

## A ghost town opera house battles the elements

In Death Valley Junction, a legendary ballerina's hand-painted theater is slowly giving way to the brutal logic of the desert.

BY ANGELLA D'AVIGNON

**DRY MUD TRACKS** trace a path across the deep red and green carpets of the lobby of the Amargosa Hotel and Opera House, and down the hall, hotel manager Emilee Brown is vacuuming — again.

“Every day when I come in, I don’t know what to expect, whether it’s the plumbing or flooding or the crumbling walls,” said Brown, who has managed the Death Valley Junction, California, hotel since 2022. “But I love hearing the stories that guests bring in.” Ancient plumbing, heating and roof leaks are just some of the daily challenges that come with working in a 103-year-old adobe hotel in Death Valley’s harsh climate.

On the brick fireplace mantel, the staff has hung pink satin ballet slipper stockings beneath a framed portrait of Marta Becket, a gifted performer and the longtime proprietor of the Amargosa Opera House and Hotel,

whose work and legacy the dedicated staff and board members are determined to preserve.

As the story goes, in 1967, Becket and her husband, Tom, rambled into Death Valley Junction to fix a flat tire. At the time, it was basically a ghost town, with nothing open save an auto shop and a gas station.

The crossroads had long been an established trade route for the federally recognized Timbisha Shoshone Tribe, who lived year-round in the desert until they were forcibly removed in the late 19th and early 20th centuries, displaced by mining expansion and the creation of Death Valley National Monument in 1933.

By the 1960s, the area was mostly deserted: The old borax mill had moved south to Boron, the Tonopah-Tidewater railroad was ripped out for wartime materials in the 1940s, and Corkhill Hall — the Spanish

Colonial-style adobe hotel, workers' camp, garage and theater — had fallen into disrepair.

The old hotel sat at the edge of the Amargosa Desert (Spanish for “bitter”) in a basin vulnerable to monsoons, which flooded the region then and continue to batter it with increasing intensity.

Becket, a seasoned touring ballerina on a brief vacation over Easter weekend, peeked through the locked doors of the old adobe theater at the end of the colonnade. She spotted a stage and fell instantly in love. A split-second decision to contact the owner and lease the complex for \$1 and a handshake would transform both the ghost town and the rest of Becket's life. Over the next five decades, she turned the abandoned theater into an opera house and revived the old hotel.

“I longed to find a place where I could dance and dance — creating a new repertoire of beauty,” she told *Desert* magazine in 1972.

From 1968 to 1972, Becket renovated the hotel and repainted the theater by hand. She painted the stage walls in *trompe l'oeil* style to mimic red velvet drapery and elaborately carved and gilded Rococo woodwork. A wraparound mural animated the theater's adobe sides and back wall, depicting balconies filled with life-size figures from 16th-century Spain. Two of Becket's cats — one orange, one black — are shown curled beneath painted seats, while white clouds and pink cherubs float overhead on a blue-sky ceiling.

Renamed the Amargosa Opera House,

from the time it re-opened in 1972 until 2012, Becket performed *en pointe* every Friday, Saturday and Monday night, rain or shine, with or without an audience. Sometimes only her cats watched. The theater existed to showcase her dancing, and her final performance was on Feb. 12, 2012. Every one of the theater's 113 seats was full, and people stood in the aisles to watch the 84-year-old dancer in “The Sitting Down Show,” so named because she could no longer perform on her feet.

“The theater interior looks just the way it did when Marta painted it,” said Fred Conboy, board director of Amargosa Opera House Inc., the nonprofit Becket founded in 1974 to preserve her work and legacy. Theater lights made from old Folgers coffee cans still shine down on the stage. “Conservation of



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Marta Becket at home in Death Valley Junction, California in 2015 (facing).

The stage at the Amargosa Opera House (right).  
**Kim Stringfellow**

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the murals is tied to the conservation of the structure,” Conboy explained.

Becket, who died in 2017, created a destination unlike anything else in Death Valley, in an area where the population has, at times, dwindled to fewer than four people.

Since her passing, the nonprofit has hosted occasional lectures and concerts. “We once had a tribal blues band — the vibrations nearly peeled the paint off the walls,” Conboy recalled. This past February, the Opera House enjoyed a sold-out Valentine’s Day and 57th anniversary event with community groups like the Desert Players, who performed a variety show inspired by Becket’s work.

Across the street from the hotel, the old stucco garage where the Becketts had their tire fixed nearly 60 years ago is still standing. Becket’s old costumes — velvet bodices with metallic braiding and soft bell-shaped skirts of layered tulle — decorate the windows of a single-room storefront and one-time art gallery adjacent to it.

But sustaining an arts complex in Death Valley isn’t easy. The 1972 *Desert* magazine article mentioned the area’s precarious weather, particularly the seasonal rains that threaten the century-old adobe. Since then, the problems have only worsened: At least four “1,000-year rain events” have occurred each year since 2022, and last year’s summer monsoons flooded the theater. November 2025 was the wettest in 115 years, with nearly a full year’s worth of rain falling that month alone.

And Becket’s artistic legacy is at risk: Without significant repairs, the Opera House and Hotel face closure, or worse, the buildings physically collapsing.

After the flooding in 2025, the hotel staff and board team — about five people — initiated Campaign Amargosa to raise funds for repairs and preservation. According to Conboy, the infrastructure is the top priority — plumbing, electricity and the leaky roof, which has blown off the building more than once.

Private giving and donations through Campaign Amargosa are the foundation’s



secondary source of financial support; the hotel — which barely breaks even — remains the main source of operating revenue. It’s one of the only places open for lodging when Death Valley is busy, especially in spring, when the wildflowers bloom. In late fall, as the holidays approach, every room in the hotel is booked.

Los Angeles-based artist Patricia Fernández Carcedo, who has been visiting the hotel since she was a teenager, cited Becket’s project as deeply influential. One November, she brought friends to the hotel to camp and cook a Thanksgiving meal together.

“A couple of bikers came through, and they knew about Amargosa; there was this sense of magic in knowing that someone could love this strange and quiet and beautiful place as much as I did,” Carcedo said. She added, “I haven’t returned to Amargosa for a few years now, as a way of preserving my own dreams and memories of this place.”

“Standing at a junction, the site of Marta’s Opera House will always be part of the desert’s very layered and complex historical landscape. It feels very important to remember Marta as an artist and visionary whose life was unpredictable in many ways.”

If ever there were a metaphor for arts funding in the United States today, especially in rural areas, this is it: a crumbling

but delicately appointed adobe arts complex, slowly succumbing to the elements while a team of enthusiasts works overtime to keep it from dissolving into the landscape around it.

Even Becket realized that preserving her dream would always be an uphill battle. “Even if it’s torn down tomorrow, no one can take away the hours of joy I spent painting it,” she said in the 2000 documentary *Amargosa*, eyes glimmering in the desert light. “It’s the experience that matters.”

A mural in the lobby shows the town’s eventual fate, painted presciently by Becket: a sun-washed desert framed by a painted archway, as if the wall itself opened onto the landscape just beyond. Sparse shrubs dot the sandy plain of the Death Valley desert floor, while the two low, colonnaded ruins of the complex stretch inward from either side, their repeating arches casting long, rhythmic shadows. Soft brown swirls suggest the gusts of powerful winds that blow across the valley.

In the distance, above the Black Mountain range to the west, a ghostly silhouette of Becket in her tulle ballet skirt spirals into the sky. ✨

*Angella d’Avignon is a writer and reporter based in Southern California whose work focuses on art, land use and cultural history in the Western U.S.*

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## CONFETTI WESTERNS

Exploring the queer natural and cultural histories of the American Southwest.



## A beautiful nightmare

The queer horror of an off-season superbloom.

TEXT AND PHOTO BY MILES W. GRIFFIS

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## IN OUR CORNER OF THE DESERT

Southwest, it's been spring since the fall.

The spell of October's chinchweed marked the unexpected start of a *second spring* that I didn't think would last beyond Halloween. *Pectis papposa* naturally comes to light weeks after summer monsoons, but I had never seen the tiny yellow flowers spill so magically across the Mojave. Especially so late in the year. Their bright display was a struck match to my exposed cornea, hypnotizing me into oblivion. It was disorienting — experiencing so much life even as the Northern Hemisphere began to tilt away from the sun.

Fall was supposed to be a time of shedding sunny summer habits, harvesting and hunkering down for cold, snowy nights. But the second wind of spring meant those cozy habits could die hard: We baked in the sun like chuckwallas, planted penstemons and searched for fairies in the buds of our bladderpod.

Howling storms hit the desert one after another, flooding nearby communities with wildfire debris and turning our dirt road into a date shake. Hints that second spring was transforming into *forever spring* came queerly as the days grew shorter but stayed warm. Some Joshua trees bloomed around Thanksgiving, and botanists worried they might not be serviced by the yucca moth, their only pollinator. But it wasn't until the winter solstice that all hell broke loose: The flowerfields of Anza Borrego Desert State Park gushed with color three months early. My husband and I skirted the Salton Sea to see them and were lulled by tens of thousands of devil's lanterns as we walked toward the looming phantom of a mountain. Giant white evening primrose flowers (*Oenothera deltooides*) lit the way and led us deeper into a beautiful nightmare.

What else could we do but attempt to enjoy the world out of sync? What's the difference between strolling through an unusual bloom with chronic climate dread and attending Lady Gaga's Mayhem Ball while LGBTQ+ rights are torched? Bright lights, whether flowers or strobes, can ignite us in dark times. But they can also be distractions: *Did the deep state seed the clouds to cause the blooms and sidetrack us while they built concentration camps and mined our mountains to arm war criminals?* Slow down, Sherlock; it's OK to occasionally photosynthesize and expose our

showy sex organs in the breeze as we monkey-wrench dystopia. We might lose ourselves if we don't.

In true spring, after winter's big rains, Anza Borrego's flowerfields are often filled with Northbound songbirds, bees and the flap of over a billion painted lady butterflies. But that afternoon, during one of the darkest days of the year, there was an eerie silence that stopped my husband and I in our tracks. I knew then our reality had become a modern Southwestern Gothic. All the components of terror were there in our tale: supernatural plants, a chronically ill narrator ("*Greetings ...*"), a generational curse called climate change,

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## *What else could we do but attempt to enjoy the world out of sync?*

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a vampire (more on that later) and, of course, a lone raven *quorking* by the road.

I'd been thinking of *The Picture of Dorian Gray*, perhaps one of the queerest Gothics, which some view today as an allegory for climate colonialism. Oscar Wilde's main character, handsome Dorian Gray, descends into reckless hedonism throughout the book. One day, he wishes for a portrait of himself to "bear the burden of his passions and his sins" while he remains forever young. As the portrait's face becomes hideous over time, he locks it away in a secret room. At one point, after a loved one dies, Dorian even declares, "If one doesn't talk about a thing, it has never happened." This denialism is prevalent in our 21st century and at the heart of why some authors are increasingly drawn to the Gothic as they write about climate change. "The Anthropocene remains a prophesy, a promise of future violence, and thus a

ghostly, haunting presence," the editors of *Dark Scenes of Damaged Earth: The Gothic Anthropocene* wrote.

Things only got creepier as *forever spring* was interrupted by summer-like heat spikes that broke California records in March. We followed more blooms during one heat wave, dropping to the floor of Death Valley, where we found sprawling gravel ghosts (*Atrichoseris platyphylla*) and caltha-leaf phacelias (*Phacelia calthifolia*). BEWARE THE PURPLE FLOWERS, a small visitor center sign declaimed like a soothsayer, warning of dermatitis. We slept naked without sheets under the "Worm Moon" before it eclipsed in bloody streaks, sweating the whole night through. In that silvery light, I could see the haunting bodies of flowers outside our tent. We humans often report ghosts of people, sometimes animals, but rarely other lifeforms. Especially extinct ones. Imagine crushed endangered buckwheat haunting Cybertrucks. Or a ghost eubacteria, like *prochlorococcus*, appearing at the foot of an oil company CEO's bed on Christmas Eve.

Waking up to sunwashed flowerfields was the Dr. Jekyll to the night's Mr. Hyde. We moseyed through desolate washes and canyons to find yet more uncanny blooms. Following a wash within a maze of an alluvial fan, we came to a lovely vista. The hills below us rolled, and 3-foot-tall sunflowers danced on every crease. We got low on the sand beside the flowers for a bug's-eye view, looking up like the sphinx moth caterpillars that were munching their leaves. Joy and whimsy were *so back*.

But then we discovered a horrific murder scene: a sunflower strangled by bright orange vines. A small-tooth dodder plant had leapt out of the ground, pierced the desert gold with its "teeth" and was extracting its resources like a pumpjack. This slow violence on a 94-degree winter day was the key that unlocked Dorian's secret room for me. Inside hung the ghastly portrait of the parasitic human greed that had caused this bizarre and worrisome Western winter. What happens when the haunted castle we were taught to fear is actually a superbloom? ✨

*Miles W. Griffis is a writer and journalist based in Southern California. He is the executive editor of The Sick Times, a nonprofit newsroom that covers long COVID.*

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## ENCOUNTERS

An exploration of life and landscape during the climate crisis.



# The resilience of the elusive vaquita

Nature's enduring mysteries buoy efforts to save the most endangered marine mammal on Earth.

BY RUXANDRA GUIDI

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**THE GULF OF CALIFORNIA**, just four hours from my home in Tucson, Arizona, is a wonderful place to escape to during hot landlocked summers.

French conservationist Jacques Cousteau dubbed it “The Aquarium of the World.” In 1987, his team captured never-before-seen footage of the Gulf’s sea lions, sharks and great diversity of fish. I think about this every time I swim in its waters or eat the local seafood: Will we ever understand all its riches? Around 10% of the species are found nowhere else on Earth, and Cousteau warned us years ago about the dangers of excessive commercial and illegal fishing.

Mexican scientists have been concerned about one particular bycatch: the vaquita, a porpoise found only in Gulf of California’s northwesternmost tip, an area that’s just under 900 square miles of the approximately 62,000-square-mile Gulf.

We know little about them: Adults can reach five feet and frequent shallow coastal waters, eating fish, squid and sometimes krill. Unlike dolphins, which they resemble, vaquitas are shy, avoiding vessels and surfacing briefly before returning to their secret underwater lives. This makes studying them challenging for scientists used to collecting data from boats or onshore.

The scientific community only learned about vaquitas in 1958, when two American zoologists found a skull on a beach. Almost three decades later, a whole carcass turned up. By then, experts speculated that the vaquita was disappearing fast — the most endangered marine mammal on Earth.

**IN 1997**, there were an estimated 567 vaquitas, and scientists predicted they would be extinct by 2021. Every year, the odds increase that this little porpoise will vanish. And yet, it persists, along with multiple campaigns to save it.

In 2023, I traveled to the Baja California town of El Golfo de Santa Clara, a sparsely populated area peppered with estuaries and wetlands near a desert devoid of tourists. There, I met Carlos Tirado, the leader of

a regional federation of small-scale fishers, who told me that “99% of the local population” engaged in subsistence fishing. In this little corner of the “world’s aquarium,” the vaquita also finds its nourishment.

Tirado saw a dead vaquita when a fellow shrimper caught it in his gill net in 2014. It was beautiful, he said, with dark rings around its eyes and mouth. Mexican newspapers estimated there were only 11 or 12 vaquitas left at the time, based on echolocation recordings and rare sightings.

“Of course, I wouldn’t want the vaquita to disappear,” Tirado said, adding that he believes fishers have a right to earn a living.

In the early ’90s, the Mexican government created a protected area near the Golfo de Santa Clara coast that permits some commercial fishing. The vaquita population seems to have stabilized since then, hovering around 10 individuals. Sea Shepherd, a global conservation organization, patrols its range. But fishers and environmentalists still disagree over the use of gill nets.

**MYRIAD EFFORTS** — cross-country interventions, collaborations, funding — have been dedicated to saving the vaquita, maybe even encouraging its reproduction in captivity. Many are devoted to saving it, yearning to understand it before it’s gone.

Conservation isn’t just a race against extinction: It is a story of determination, even when you can’t always see what you’re trying to preserve.

In 2017, three years after Tirado saw the dead vaquita, the Mexican government and a San Diego-based conservation foundation launched VaquitaCPR, an emergency rescue mission to capture and temporarily relocate as many vaquitas as possible to a marine sanctuary off the Gulf of California coast. They only caught two: A young vaquita that showed signs of distress and was released. The other, an adult female, went into shock and died. The most ambitious such program to date, became “a setback for vaquita conservation,” according to VaquitaCPR scientist Barbara Taylor.

**VAQUITAS ARE BELIEVED** to have lived in the Gulf of California for 2.5 million years, even though we’ve only known about them for decades. A long game of observation and interventions, conservation is always a bet

against previous mistakes, often a progress-and-setback scenario full of mysteries and surprises. The vaquita’s story exemplifies this, time and time again.

Nonetheless, recent efforts to tell the vaquita’s story, nourish cross-border scientific collaboration and curb illegal fishing through education programs and alternative job opportunities seem to be paying off. I met a number of fishers who were aware of the vaquita’s range and vulnerabilities and eager to engage in sustainable fishing to do right by the sea that feeds them and their families. Yet this February, the Mexican government announced plans to shrink the area in the Upper Gulf of California where gill nets are prohibited by 85%, bowing to fishers’ demands. Conservation groups are sounding the alarm again: Two steps forward, one step back.

The latest findings suggest that vaquitas may survive, even with a reduced genetic diversity, if illegal fishing ends. One theory suggests its population has been relatively small, yet resilient all along. We simply don’t know enough about the enigmatic creature — either about its mating behavior or its actual population.

We do know that females give birth to a single 2-to-3-foot-long calf around March every other year. Last October, two acoustic and visual monitoring projects confirmed there were around 10 vaquitas — a small number, but one that remains steady, rather than showing a continuous decline. In a drone video released by Sea Shepherd, there is also recent proof of new calves: footage showing a mother and her baby coming up for air ever so briefly before they swim next to each other playfully and then disappear into the bright turquoise depths.

Suddenly, the vaquita became real — not just for conservationists and local fishers, but for millions around the world. This little porpoise isn’t a collection of facts. It’s not yet a story of extinction in real time, but one of lessons — about conservation, collaboration, and the importance of advocating for an extraordinarily elusive species. Lessons that must be as tenacious as the vaquita itself. ✨

*Ruxandra Guidi writes from Tucson, Arizona. She is a former correspondent for High Country News.*

## NEVADA

It's not hard to see Elvis when you're in Vegas — or, if not the real guy, a half-dozen or so elaborately costumed impersonators. Recently, however, an exotic toucan stole the spotlight, at least according to PawBoost, a website for missing pets. Sam the toucan — named after the eloquent spokesperson for Froot Loops, a colorful fruit-free breakfast comestible — escaped his enclosure in November. For months, he eluded rescuers like SouthWest Exotic Avian Rescue (SWEAR). But Sam's Free Bird days ended after he flew into a northwest Las Vegas home's garage and was recovered, KVVU reported. Dozens of locals reported seeing the large-beaked bird flying around or perching in trees, though Katherine Eddington initially thought that the big black bird she saw was a crow with a banana. Eddington was driving north on Simmons when Sam flew over an intersection and "landed in this tree next to Burger King," SWEAR president and co-founder Skye Marsh was relieved. "You can tell he's had some run-ins with things. The tip of his beak is chipped off. So he's got some stories in that little bird brain." She was surprised his condition wasn't worse, given that toucans are native to humid climates, not the hot dry desert. Sam is currently in quarantine and undergoing bloodwork to ensure he doesn't have bird flu. We hope Sam once again achieves peak, and beak, performance, and remembers what his large-beaked namesake said: "Follow your nose," ideally homeward. Good advice; toucans are better than one.

## OREGON

They've been washing up on Pacific beaches every year for decades, and in March they returned: *Verella vellella*, more poetically known as



## Heard Around the West

Tips about Western oddities are appreciated and often shared in this column. Write [heard@hcn.org](mailto:heard@hcn.org).

BY TIFFANY MIDGE | ILLUSTRATION BY DANIEL GONZÁLEZ

"by-the-wind-sailors." These 2-inch-long floating hydrozoans are "close relatives of jellyfish and corals" and can form "vast blue and purple armadas stretching for miles." Each has a small transparent fin that works like a sail to travel the sea's currents. And "they feed from the surface, using stinging tentacles to hunt krill underwater," Oregon Public Broadcasting reports. Strong winds wash them ashore "in staggering numbers," sometimes amounting to "the trillions on beaches around the world, including the West Coast," according to University of Washington researchers, *The Oregonian* reports. In photographs they resemble blue-tinted sea glass or even stacks of bluish mussel shells. Are they a hazard?

Not really, although Oregon State University says walking barefoot through fresh "strandings" is not advised, and it's best to avoid touching your eyes or mouth after handling them. Or don't handle them, period: They're like most decaying creatures, slippery when wet, and stinky. And better not let your dog eat too many of them; you'll both be sorry.

## IDAHO

If you prefer your coffee — or yerba mate — with a side of capybara and an extra helping of fluffy snuggles, then Coeur d'Alene's new sipping spot, the Capy Hour Café, is the place for you. The family-owned team behind Big Red's Barn dreamed up this reservation-only immersive

experience that lets you hang out with adorable capybaras while enjoying açai bowls and Brazilian-inspired specialty coffees and teas. "There's something incredibly gentle and grounding about these animals. We're excited to create a space where people can experience the joy they bring in a completely new way," Ginger Harris of Big Red's Barn told *Coeur d'Alene/Post Falls Press*. The world's largest rodent, the semi-aquatic capybara (*Hydrochoerus hydrochaeris*) resembles a giant guinea pig. Native to Northern and Central South America, capybaras are extremely laid-back and highly sociable herbivores that live in packs. The Capy Hour Café donates a portion of every ticket it sells to the Wildlife Foundation Program, which supports wildlife conservation, reforestation efforts and ongoing programs dedicated to protecting animals in the wild. Start the day right, and wake up and smell the capy. As far as immersive experiences go, it's considerably more relaxing than attempting yoga with crocodiles or taking cooking classes with grizzly bears.

## CALIFORNIA

If you've seen *Ace Ventura: When Nature Calls*, particularly the scene where a rhinoceros appears to "give birth" to Jim Carrey, then you probably have no need to ever see it again. But on the off chance that this remains one of your favorite memories, we regret to inform you that you just missed your chance to bid on the actual mechanical rhino, which was removed from the Planet Hollywood Collection and auctioned off by Propstore Auctions. The rhino sold for \$60,000 to Ripley's Entertainment, as in *Ripley's Believe It or Not*, *yahoo.com* reported. We definitely believe it, Ripley's, and think the rhino's new home is completely apropos. ✨

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# #IAM THE WEST

**ALBERTO GARCIA RODRIGUEZ (HE/HIM)**  
Washoe County Public School System  
counselor, leader of Reno ICO (Inspiring  
Connections Outdoors), arts volunteer  
for the Holland Project  
Reno, Nevada

I know we say this often, but every year and every month and every week feels like we are experiencing the worst. It's hard to process, and not only for adults. I think about how difficult it must be for my students. My biggest responsibility is how I show up as a trusted adult. How can I make the short time that we have together meaningful and see them develop and continue to grow? Luckily, we live in Reno and have access to some of the most beautiful terrains, trails and landscapes you can possibly imagine. When a student visits Tahoe for the first time and is extremely blown away by it, telling me, "I can't believe it was only a 25-30 minute drive!" it reminds me that the work I'm doing matters: I'm giving someone an experience they probably wouldn't have access to until later on in their life, if ever.

Do you know a Westerner with a great story?  
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Devin Blaskovich / HCN