

# High Country News



## BEYOND ILLUSION

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A deeper look  
at the Mojave

Tribal power  
on the Colorado

Christmas cake  
in Compton



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On the last day that DeDe's café in St. George, Utah, was open to the public, Sue Holland speaks with Ulrich Scholz while owner DeDe Orton embraces a customer at the counter. **Mikayla Whitmore / HCN**

# Know the West.

High Country News is an independent, reader-supported nonprofit 501(c)(3) media organization that covers the important issues and stories that define the Western U.S. Our mission is to inform and inspire people to act on behalf of the West's diverse natural and human communities. High Country News (ISSN/0191/5657) publishes monthly, 12 issues per year, from 119 Grand Ave., Paonia, CO 81428. Periodicals, postage paid at Paonia, CO, and other post offices. POSTMASTER: Send address changes to High Country News, Box 1090, Paonia, CO 81428. All rights to publication of articles in this issue are reserved. See hcn.org for submission guidelines. Subscriptions to HCN are \$37 a year, \$47 for institutions: 800-905-1155, hcn.org. For editorial comments or questions, write High Country News, P.O. Box 1090, Paonia, CO 81428 or editor@hcn.org, or call 970-527-4898. For correspondence addressed to High Country News, HCN or to the editors, permission to publish will be considered implicit unless specifically stated otherwise.

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**EDITOR'S NOTE**

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## Mythbusting in the Mojave

**ON A COLD, CLEAR EVENING** last winter, I stood on my father-in-law's porch high on a juniper-speckled ridge on the southwestern edge of the Mojave Desert. To the south, the San Gabriel Mountains were silhouetted against the sky-glow of Los Angeles, the only visible indication that a seething mass of 13 million people lived only 20 air-miles away. I considered how the early white colonizers — completely disregarding the Indigenous peoples who have inhabited this landscape for millennia — portrayed the Mojave as a desolate and barren wasteland.

Perhaps this was out of ignorance. Then again, by depicting the Mojave as no more than a blank canvas, they felt free to exploit and abuse it however they wanted, imposing their own desires and dreams on a land they never understood. By imagining it as a wasteland, in other words, they and their successors could turn it into one.

From where I stood, it looked like they succeeded. To the north, the Antelope Valley has become the place where LA exiles all the stuff it needs, but doesn't want to look at: gravel pits and transmission lines; solar facilities and sprawling mono-architecture subdivisions; prisons and Air Force bases. Red lights atop wind turbines flickered in syncopated rhythm along the base of the Tehachapi Mountains. The Los Angeles Aqueduct reflected the day's last light, a pink-tinged silver eel slithering across the dusky landscape.

Yet the Mojave is also a place — if "place" can describe an expanse so vast it warps your sense of space and time — full of wonder and weirdness and diversity and beauty. It draws eccentrics and artists, misfits and misanthropists, the priced-out and disenfranchised, making for a vital human community scattered across the desert. Artists like Kim Stringfellow — profiled in this issue — are trying to capture and communicate the Mojave's unique qualities to permanently dismantle the wasteland myth.

And a coalition of Mojave Desert tribes — descendants of the people the "wasteland" moniker was largely designed to erase — is leading an effort to establish the Avi Kwa Ame National Monument on southern Nevada lands held sacred by Yuman tribes. This enormous swath of the Mojave has stubbornly resisted industrialization; it remains ecologically abundant and culturally significant, a place where springtime wildflowers carpet the rocky earth with stunning yellows, reds and blues, and where anthropoid Joshua trees enthusiastically wave their prickly arms against the blaze-orange sunset.

It is all a testament to the fact that the Mojave has never been a wasteland, but rather a land of immense, indomitable vitality and resilience. Despite everything, the Western landscape and its diverse inhabitants, both human and non-human, endure, tough and tenacious and vividly, uniquely alive.

**Jonathan Thompson**, acting co-editor

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is on leave.*





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FEATURE

## Steeped in Chaos

Kim Stringfellow's transmedia Mojave Project delves into the desert's many histories.

BY MEG BERNHARD | PHOTOGRAPHS BY KIM STRINGFELLOW  
PORTRAIT BY STELLA KALININA

### ON THE COVER

*Amargosa Valley Mural, Shoshone, California (2015).*

**Kim Stringfellow / The Mojave Project**

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*Ghost Development Grid, California City, California (2020) (above).* **Kim Stringfellow / The Mojave Project**

A researcher points to pink snow algae in Glacier National Park in August (*facing*).  
**Sarah Mosquera / HCN**



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BY MIKAYLA WHITMORE

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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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### HOPE FOR MORE

The November 2022 issue gives evidence that some things are getting better and that there is hope for more.

Keeping the balance between despair and hope is important.

**Charles F. Tucker**  
**Swall Meadows, California**

### INSPIRING INTERVIEW

I enjoyed your recent piece on National Park Service Director Chuck Sams (“From dominance to stewardship,” November 2022). What a masterfully done profile, and I especially appreciated the question about parks being “loved to death” and how that evidences a non-Native vision of land without people. And I enjoyed the thread you drew from that to the idea of “wilderness” being a colonial invention. Overall, it was really inspiring and a breath of fresh air to read.

**Tania Lown-Hecht**  
**Portland, Oregon**

### COLLABORATION CONUNDRUM

“The extremism vaccine” (November 2022) presents too rosy a picture of collaboratives. Even the sketch accompanying the article fails to depict the diversity and underlying tension that are present at many meetings. The work is very, very difficult, and it has often failed.

The article needs to let readers know in stronger terms that the collaborative system is not a 100% effective vaccine. While the High Desert Partnership may be having some success, there are many frustrated people and organizations across much of Oregon and Idaho who have reverted to other methods to achieve conservation goals.

**Mathieu Federspiel**  
**Powell Butte, Oregon**

What an excellent job you did on “The extremism vaccine” — very well written and exceptionally readable (and digestible).

**Howard W. Braham**  
**Spokane, Washington**

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### CORRECTIONS

In our interview with Chuck Sams (“From dominance to stewardship” November 2022), we referenced the EOC when it should have been the EEOC (Equal Employment Opportunity Commission). In “Underwater Legends” (October 2022), we said that mit’úla were caught at Celilo Falls; they were actually caught nearby, just downstream. Additionally, we stated that tribal folks harvested as many as 500,000 lamprey annually in the late 1800s. Tribes continued to harvest lamprey sustainably at this time, but it was European settlers who harvested 500,000 lamprey for commercial purposes. Davina Smith (“Races to Watch,” October 2022) would have been the first Diné woman, not the first Indigenous woman, in the Utah Legislature, had she won her race. (She lost to Republican Phil Lyman.) The caption on a photo in our October story “Busting fences” was incorrect: Not all of the books displayed on a table at the James Welch Native Literary Festival were written by Native authors. We regret the errors.

### CAUGHT UP

Seldom does one find such a magnificent marriage of image and idea that begins on the cover and simply does not let up. This is what photojournalism should always look like and feel like and, frankly, be. Sanders and Hansel (“Recollecting,” October 2022) take us where some of us have not been, show us the way, rearrange our theretofore muddled thinking and probably confused feelings, and gently release us at the only logical place. We, too, are caught.

**Dick Shohet**  
**Carlisle, Massachusetts**

### POETRY CONNECTION

I loved the “Pearl & Lee” poem (October 2022). The unfolding structure, the wordplay, the way the names of the lovers made the story of their connection. And how it caused me to imagine how that time had been for them.

**Holly Griswold**  
**Mosier, Oregon**

### LANDBACK LEARNING

I just wanted to reach out after reading the *HCN* piece on the LandBack movement (“6 questions about the LandBack movement, answered,” September 2022). I appreciated your combination of humor and concise, but clear, explanation. It’s a helpful starting point for me to learn more.

**Stacy Eisenstark**  
**Washington, D.C.**

In addition to reporting on important issues that mainstream media ignores, I continue to subscribe to *HCN* because I love to see the reader feedback. It helps to restore my faith in humanity, such as AJ Womack’s “LandBack Love” and Pat Rauscher’s “Superb Snark,” (both October 2022) in which they expressed their support and personal commitment to the Landback movement. The U.S. tax code, an expression of our societal values, make it simple, easy and

tax-free to give land to nonprofit and/or religious organizations. Unfortunately, even if citizens want to give land “back” to Native peoples, they face substantial barriers and penalties. Actions speak louder than words: Let’s make doing the right thing easier, not a punishable offense. LandBack!

**Leaf Hillman**  
**Orleans, California**

### BEST EELS ARTICLE

Just finished reading “Underwater Legends” in the October 2022. It is of great impact. Thank you for writing *the* best article I’ve ever read about lamprey ... “eels,” as you point out. B. “Toastie” Oaster’s wordsmithing is fun to read and very educational.

**Ricardo Small**  
**Albany, Oregon**

### PEOPLE ARE ASSETS

Cheers and kudos to Nick Bowlin and Daniel Rothberg for their coverage in “Trouble at Nevada Gold Mines” (October 2022). For 10 years (2001-2010), I was a contract instructor at the University of Nevada’s Emergency Management Institute and Fire Training Academy. My colleagues and I taught classes in occupational safety and emergency response. Most of those students were employed by Barrick and Newmont, along with firefighters and law enforcement. Shop talk is inevitable in training environments, and there were always unanimous opinions regarding the mining companies’ management ranks. To Mark Bristol and his cronies, I offer a resounding “bovine fecal deposition”: *Listen to and protect your people*. After all, according to you, “Your most important asset in any business ... is its people.”

**Bill Christie**  
**Westcliffe, Colorado**



# Will tribes become Colorado River powerbrokers?

Indigenous nations vie for more influence in crucial water negotiations.

BY ANNA V. SMITH, JESSIE BLAESER AND JOSEPH LEE

**IN EARLY NOVEMBER**, the U.S. Supreme Court agreed to hear a case brought by the Navajo Nation that could have far-reaching impacts on tribal water rights in the Colorado River Basin. In its suit, the Navajo Nation argues that the Department of the Interior has a responsibility, grounded in treaty law, to protect its future access to water from the Colorado River. Several states and water districts have filed petitions opposing the Navajo Nation, stating that the river is “already fully allocated.” The case highlights the growing tension in the region: Tribes are still working to ensure their water rights are fully recognized and accessible, while

states face increasing water cuts amid a two-decade-long drought.

The Colorado River used to provide roughly 15 million acre-feet of water a year. (For scale, one acre-foot of water can supply one to three households annually.) A century ago, states reached an agreement to divide that water among themselves. In recent decades, the river has supplied closer to 12 million acre-feet, but scientists say water managers need to plan for closer to 9 million acre-feet per year, a 40% decrease in a water source that supports 40 million people. No states have made plans to accommodate this drop. Meanwhile, tribal nations are legally entitled to between 3.2

and 3.8 million acre-feet of ground and surface water from the Colorado River system. There are 30 federally recognized tribes in the river’s basin, and 12 of them, including the Navajo Nation, still have at least some “unresolved” rights, meaning the extent of their rightful claims to water has yet to be agreed upon.

Ultimately, Indigenous nations in the Colorado River Basin could be serious power brokers in crucial water negotiations to come — but they face historical, legal and practical obstacles. The Navajo Nation, for example, has rights to almost 700,000 acre-feet of water annually across New Mexico and Utah, along with unresolved claims in Arizona. Owing to a lack of infrastructure, however, up to 40% of Navajo households don’t have running water. For the Navajo Nation and other tribes with allocations in the Basin, building and improving infrastructure means

providing citizens with access to a fundamental human right: water.

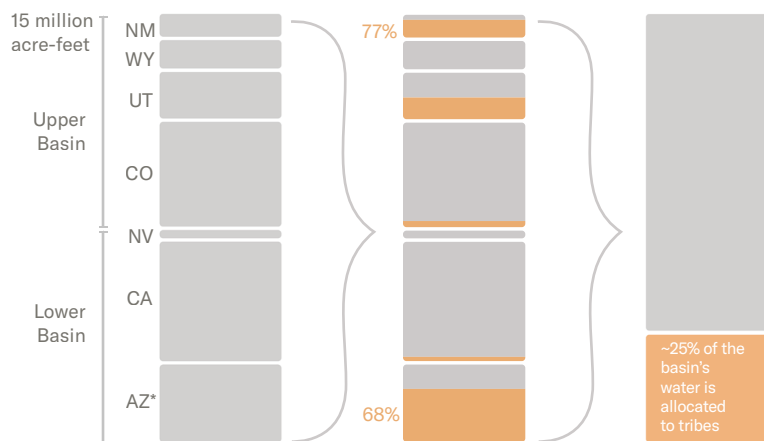
But tribal water use is taken out of state allocations, meaning the more water tribes use, the less states have. It also means that states have less incentive to work with tribal leaders or recognize pending water rights claims. This conflict is not new: It has been built into a century of policies that exclude Indigenous nations.

Tribes often hold senior water rights, meaning their allocations are the last to be cut in a shortage, and Colorado River Basin states are beginning to reckon with this fact. A fundamental shift in how the river is governed — to a system that acknowledges tribes’ sovereignty and gives them greater say — will be key to sustainably and equitably dis-

The Colorado River winds below an overlook at Dead Horse Point State Park, Utah. **Tyana Arviso**

## Along the Colorado River Basin, tribal water rights are significant

In Arizona and New Mexico, **tribal water** accounts for a majority of the states’ allotments.



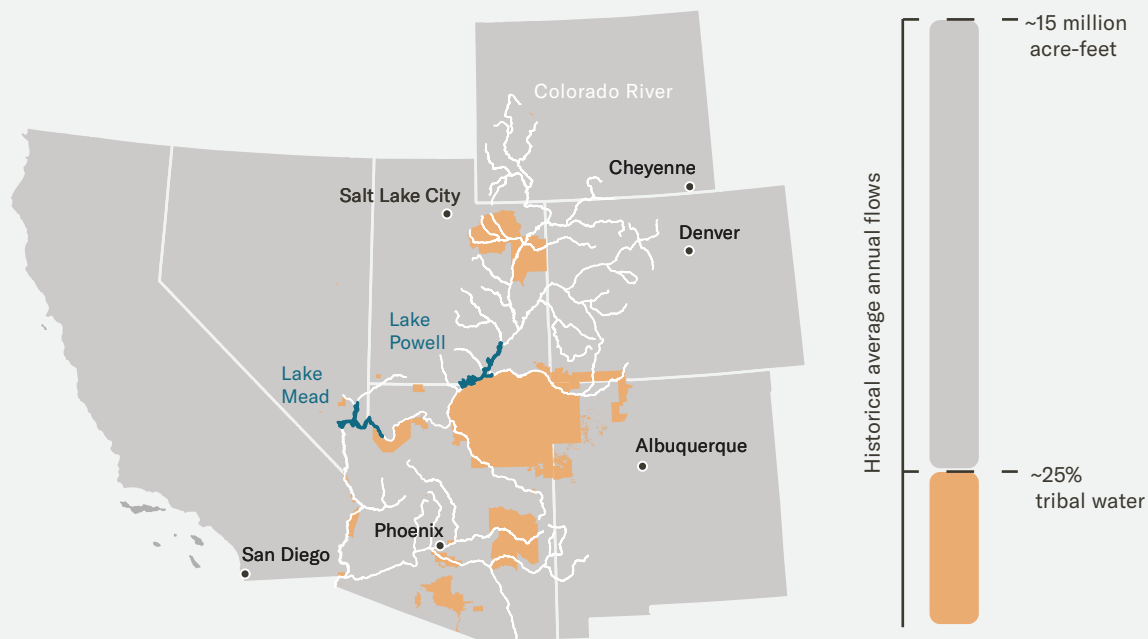
Source: Babbitt Center for Land and Water Policy’s Colorado River Basin GIS Open Data Portal, Womble et al. 2018. Data reflects resolved and partially resolved water rights for surface and groundwater among tribes in the Basin as of 2018. Data reflects a 15 million acre-foot scenario. \*Arizona holds some rights in the Upper Basin.





## Federally recognized tribal lands in the Colorado River Basin

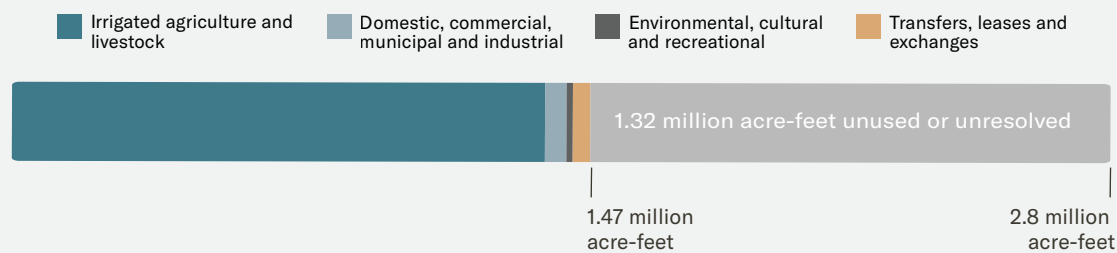
Amid historic drought, many tribes are still fighting for recognition of their water rights.



Source: Babbitt Center for Land and Water Policy's Colorado River Basin GIS Open Data Portal, Womble et al. 2018

## Colorado River Basin tribes are often unable to access their allotted water

Diversion data from 10 of the tribes shows that nearly half of the rights aren't being exercised.



Source: Ten Tribes Partnership Tribal Water Study Data reflects water diversions from 10 tribes in the Colorado River Basin. Data was largely self-reported and does not reflect annual water-use averages. Data visualizations by Jessie Blaeser with assistance from Amelia Bates

tributing water in the years to come.

Tribes “need to be included in every one of those conversations and considered just like a state or the federal government,” Southern Ute Tribal Council Member Lorelei Cloud said at the annual Colorado River District Seminar in September. “You cannot discount us.”

One barrier to equitable distribution is a glaring information gap: There is no definitive source of data on water usage among tribes in the Basin. Historically, federal surveys have ignored tribal water use, and though tribal-led studies have begun to fill in the gaps, the lack of data makes planning for a future river with shrink-

ing flows impossible.

“If you know how much water everyone has or is allocated, then you can come up with a comprehensive solution — not just management of the river but responses to climate change,” Heather Tanana (Diné), a professor of law at the University of Utah, said in an interview.

In Arizona, for example, nearly 70% of the state’s water allocation belongs to tribes, and nearly all the tribal nations with unresolved water rights in the Basin have at least some territory in the state. According to a joint study by tribal nations and the federal government, 10 tribes in

the Basin, which hold the bulk of the recognized tribal water rights, are diverting just over half of what they’re entitled to, mostly for agriculture. It’s unclear what water availability would look like if these tribes had the basic infrastructure to get water to their citizens, or if all the tribes with unresolved rights settled their cases.

“My experience of negotiating water-rights settlements in Arizona is that the state of Arizona very much approaches them as a zero-sum game,” said Jay Weiner, water counsel for the Quechan Indian Tribe as well as for the Ton-to Apache Tribe, which has been in settlement negotiations since

at least 2014. That combative approach, he said, has persisted regardless of governor or political party. “It is something that seems to be deeply embedded in the fabric of Arizona and how it approaches Indian water rights settlements.”

**IN FEBRUARY, THE FEDERAL GOVERNMENT** announced \$1.7 billion for tribes to use for water settlements. That means more tribal citizens and communities could have access to water. It also means that states will have to work with tribes to plan for the future and adapt to climate change.

In some places, tribes and communities have already begun moving in that direction, working together to find place-based solutions that use the resources and infrastructure at hand. The Pascua Yaqui Tribe and the city of Tucson, Arizona, have an intergovernmental agreement for Tucson to store and deliver potable water for the tribe, which lacks the infrastructure to do so on its own. Such partnerships will only become more essential as drought and aridification continue to stress the region. “If folks work together and partner together, the opportunity to solve the problem, I think, is enhanced,” said Robyn Interpreter, an attorney who represents the Pascua Yaqui Tribe and the Yavapai-Apache Nation in their water-rights claims.

The federal Navajo-Gallup Water Supply Project, which is building \$123 million in infrastructure, is another promising example. Its goal is to construct water plants and a system of pipes and pumps that will deliver water to the Navajo Nation, the Jicarilla Apache Nation and the city of Gallup, New Mexico. Crystal Tulley-Cordova, a principal hydrologist for the water management branch of the Navajo Nation Department of Water Resources, said in an interview that there is a new willingness to collaborate, owing to both the severity of the situation and non-tribal water users’ realization that they must work with tribes. “Now there’s a greater desire to be able to work together. So I’m



encouraged by that,” she said.

Meanwhile, tribal nations are also making progress in securing their access to water. In May, the Navajo Utah Water Rights Settlement Act was finalized, granting the Navajo Nation 81,500 acre-feet of water in Utah and authorizing \$220 million in federal funds for water infrastructure projects. “Our families celebrate this moment in history after decades of fighting for the Navajo Utah Water Rights Settlement,” Navajo Nation Council Delegate Charlene Tso said in a statement at the time. “It is clear drought conditions are affecting water levels across the country. Many of our elders haul drinking water from miles away while we work to get proper water infrastructure projects completed. This settlement allows us to begin connecting our water lines to the most rural areas.”

However, tribes still have no direct means of governance over the river, and, as seen in the Navajo water-rights case currently headed to the Supreme Court, states continue to fight tribal communities seeking access to water.

Last fall, more than 20 tribes signed a letter to Interior Secretary Deb Haaland in which they pressed for direct, sustained involvement in renegotiating the guidelines that manage the river, which are set to expire in 2026. In Albuquerque, New Mexico, last March, Haaland and Bureau of Reclamation leadership met with tribal leaders and “committed to transparency and inclusivity for the Tribes when work begins on the post-2026 operational rules,” according to a spokesperson for the Department of the Interior.

“It’s the job of political imagination to see what’s possible,” Andrew Curley (Diné), an assistant professor of geography at the University of Arizona, said in an interview. “That’s something that we collectively, not just Native nations but led by Native nations, can start to articulate. What is a different vision of the river than what has been put into law and these congressional acts and Supreme Court decisions over the years?”

Nancy Bitsue, an elderly member of the Navajo Nation, receives her monthly water delivery in Thoreau, New Mexico (*below*).  
**Spencer Platt / Getty Images**

Conduit pipes for the Navajo Gallup Water Supply Project sit alongside Highway 461 in 2013 (*bottom*). **ZUMA Press, Inc. / Alamy Stock Photo**







## REPORTAGE

# Pink alert for Western snowpack

Scientists seek to understand how snow algal blooms affect water supplies.

BY KYLIE MOHR  
PHOTOS BY SARAH MOSQUERA

**JIM ELSER SCANNED THE SNOWFIELDS** clinging to the lower slopes of Clements Mountain in Montana's Glacier National Park. While nearby tourists snapped pictures of soaring rock faces and searched for wildlife, Elser, an ecologist at the University of Montana and the director of the Flathead Lake Biological Station, concentrated on just one thing: finding snow algae.

Elser and his research team tramped past flourishing purple asters and yellow arnica wildflowers, gaining elevation until they crested a ridge above a small basin. Marmot chirps replaced the sound of idling car engines at the Logan Pass parking lot, which swarmed with August visitors. A soft hum came from the bulky rectangular device strapped to the back of his colleague, Joe Giersch, an aquatic entomologist at the University of Montana; the device, a light-measuring tool, was warming up in preparation for the scientists' data collection.

Then, from roughly 100 yards away, the three scientists noticed a faint blush on the slushy snow ahead. They beelined toward it.

Rouge-colored ribbons of algae ran 400 square feet across the sunny slope — *Chlamydomonas nivalis*, a red-pigmented green algae found in high alpine and polar regions around the globe. The algae's striking

appearance on snow has earned it nicknames ranging from the delicious-sounding — watermelon snow — to the ominous — glacier blood. Scientists believe this algae could play a major role in melting glaciers and snowfields.

Sparkling fresh white snow is the most naturally reflective surface on Earth. When algal blooms take hold, they darken the snow, which then absorbs more heat and melts more quickly. This can create a feedback loop: As temperatures rise and more snow melts, the snow algae — which needs nutrients, light and liquid water — flourishes and expands. The algal bloom alters its own habitat, and appears to alter the surrounding habitat in the process. Just over half of the total runoff in the West comes from snowmelt, but the extent to which snow algae contributes to melting isn't currently included in standard snowmelt models. These scientists hope that their work can help us better understand the role it plays as the climate changes.

This summer, researchers from around the country crisscrossed the mountains of Washington, Oregon, Wyoming, Utah and Montana, looking for stained snow. They collected samples and tested the reflectiveness of snow algae patches. Sometimes, they stumbled across a site too late and found only pools



Researchers Pablo Almela Gomez, Joe Giersch and Jim Elser search for splotches of pink snow algae in Glacier National Park in August (*facing page*).

Elser (right) and Almela Gomez measure the reflectivity of a patch of snow algae (*below left*).

Almela Gomez uses a spectroradiometer to record albedo data from the snow (*below right*).

of blood-red water, where patches of snow and algae had already melted. Finding intact snow to sample became a race against the summer's heat, and the algae's growth. "It's an ephemeral bloom on an ephemeral substrate," Elser said. "The seasonal snow is going, and whether or not those patches have snow algae on them is also unpredictable."

**THE LATE SUMMER** sun beat down on our necks as we examined a patch of snow algae. A third member of Elser's field team, Pablo Almela Gomez, a postdoctoral researcher at the University of Minnesota, held a long wooden pole. At the end of the pole, the spectroradiometer, a small black tube, dangled over a plot of snow. "This is the nicest algae patch we've seen in a while," Giersch remarked. Only a few pine needles and small pebbles freckled the red splotches.

The scientists used the device to record the snow's albedo, a measure of what fraction of the sunlight beaming down is reflected back up. Red snow means lower albedo, which means more absorbed sunlight and faster snowmelt. Other factors also influence albedo, including dirt, dust and ash from wildfires. Sand from the Gobi Desert can blow all the way to

the Pacific Northwest, while dust from the shrinking Great Salt Lake sometimes coats the Wasatch Mountains. The team also measured the pigment concentration of the snow with a second spectroradiometer to figure out how much of the red color spectrum, most likely from the snow algae, was present.

A bighorn sheep supervised from a jagged cliff high above us as the team worked through the rest of their routine: measuring the water content of the snow, collecting bags of snow samples, and taking a snow core that revealed two layers of algal blooms, including a distinct rusty band a few inches below the surface.

Later that day, in a lab at the University of Montana's Flathead Lake Biological Station, Elser and Almela Gomez would use the samples to test which inputs help snow algae grow. They'll melt the snow, mix it together, and add nutrients like nitrogen and phosphorus. Then, after five to 10 days under grow lights in a cold incubator, they'll measure the chlorophyll levels to see how much the algae grew.

The two types of nutrients come from different places. Previous work suggests that the phosphorus is found in rocks ground up by glacial movement, while nitrogen is blown in from the chemical fertilizers and manure in agricultural areas. The researchers suspect that both types of nutrients encourage algae growth, but they're particularly interested in nitrogen. They believe algal blooms might be especially common in the Intermountain Rockies due to wind patterns, and they're hoping to learn more about the dynamics involved.

The team's work is part of the small but

growing field of snow algae research. The scientists hope to figure out what allows snow algae to thrive, and where it's most likely to live. The Living Snow Project, a citizen science initiative created by Western Washington University researchers, asked skiers, climbers and hikers to help collect pink snow samples. Scientists have also converged on surging algal blooms in the French Alps.

Learning what influences snow algae growth is an important step in understanding a changing water supply. More algae potentially means more melt, and knowing where algae might quicken snowmelt is especially crucial for the drought-prone Western U.S. Gradual snowmelt is good; it creates a more predictable water supply downstream for reservoirs, and infuses streams with the cold water that fisheries and other aquatic life rely on throughout hot summer months. Rapid snowmelt, however, brings a host of other problems.

Elser compared the snow's role to ice in a cocktail. "The ice is melting, but your drink is still nice and cold until that last piece of ice goes away," he said. "Then it's like, 'What happened? My drink is warm.'" If snow algae hastens snowmelt or melts all the snow quickly, streams may end up warmer than usual and have less water as the summer advances. "It's a pretty big deal," said Scott Hotaling, a member of the snow algae research team and an assistant professor at Utah State University who studies changing mountain ecosystems. "We talk about the whole West being in a drought, and if there's going to be another factor that perpetuates earlier melt, that's important."





## *Is snow algae's liminal existence in the high alpine a major threat, a pesky annoyance, or something in between?*

**WATER MANAGERS** and snowpack surveyors agree that faster melt is an issue, but they don't necessarily agree on the role snow algae plays. Previous studies suggest that it could be significant: A 2021 article in the journal *Nature Communications* found that algal blooms were responsible for up to 13% of the surface melting that occurs on Greenland's ice sheet, while a study in Alaska suggests that snow algae accounts for 17% of the total melting on one large icefield, a 21% increase. "A lot of studies have been done on these big ice sheets, where you have flat surfaces," said project member Trinity Hamilton, a geomicrobiologist at the University of Minnesota. But mountains, of course, aren't flat. And researchers don't yet understand how variations in topography and slope could shape where snow algae grows. The future findings of Hamilton and her team could locate these missing pieces of the puzzle.

"Really knowing how much water is coming from the snowpack and the timing of that is going to be critical for anybody who needs to know about water supply, whether it's ag producers or for flood control," said Erin Whorton, a water supply specialist with the Natural Resource Conservation Service's Idaho Snow Survey. "Snowpack is incredibly important to the way we operate in the West."

Once snow algae's effects are better understood, Whorton believes they should be included in models that predict the timing of snowmelt. But not everyone agrees. Is snow algae's liminal existence in the high alpine a major threat, a pesky annoyance, or something in between? "There are so many variables in snowmelt that one really just needs to stick to the basics of climate variabilities," said Scott Pattee, a water supply specialist with the NRCS Washington Snow Survey. "It's really no more concerning than dirty or trashy snow, which can (also) accelerate the melt."

After the day of fieldwork in Glacier, the men packed up their gear and started slipping and sliding their way back down the snowfield. The Garden Wall rockface unfolded like a postcard in the distance. The snow we had just walked on now ran in rivulets, emptying onto the rocks below. We picked our way through muddy patches of trail and descended past a small waterfall, driven by an underground spring and snow melt. Some portion of the melt, however small, was caused by the living pink bloom we'd visited earlier that day. Time will tell if it will further dry out the already parched West. "The algae are just trying to survive," Almela Gomez said. "They're not guilty of anything." 🌸

Elser examines bands of snow algae found in a snow core sample (top).

The scientists hunt for late summer snow to test near Logan Pass (bottom).





# The disappearing sagebrush sea

To protect an iconic ecosystem, researchers take a wider view.

BY SARAH TRENT

**EVERY YEAR, THE WEST** loses 1.3 million acres of its iconic sagebrush steppe, according to the newest report from a multi-agency group working to conserve this important ecosystem. That's roughly 2,000 square miles — an area about the size of Grand Canyon National Park, or four times the sprawl of Los Angeles.

The largest terrestrial biome in the Lower 48, sagebrush rangeland spans 13 states and once covered a third of the continental U.S. Now, roughly half of it is gone. The report, released in September, includes maps that show the full scale of the loss since 2001 and identify its causes. It's the latest step in an effort by 94 scientists and specialists from 34 government agencies, universities and nonprofits to catalog large-scale threats to the sagebrush biome. Later this winter, the group plans to publish a rangeland-wide set of priorities and strategies to conserve the roughly 115 million acres that remain.

"Problems in the biome don't stay in the biome," said Matt Cahill, head of The Nature Conservancy's Sagebrush Sea Program, who helped produce the report. Rangeland wildfire smoke blankets cities, rivers become silted or dry up and can no longer provide habitat to fish, "and then there are rural communities that wholly depend on having healthy rangelands to support their livelihoods, their cultural identities. Without a healthy sagebrush biome, we're going to see life in rural America in the West become increasingly intractable."

The new maps, created using satellite imagery and two decades of Bureau of Land Management data, are groundbreaking in their scale. There have been more limited efforts in states like Oregon, but the new maps offer the first comprehensive look at the entire sagebrush biome. They categorize the habitat at three levels: core ecosystem with little degradation, "growth areas" that are still recoverable, and rangeland that is too damaged to restore using currently available tools.

The data shows that 73% of the loss — by far the largest amount — stems from ecosystem problems: invasive annual grasses, wildfire, conifer encroachment. Just a quarter of it is due directly to human activities, such as grazing cattle and developing energy infrastructure. While many of the issues are related, this means weed management may ultimately prove a more effective — and less controversial — strategy than regulation. "At the end of the day, everybody hates weeds," said Zack Wurtzebach, a program director at the Center for Large Landscape Conservation who helped develop the report.

So far, climate change does not appear to be a primary factor in the ecosystem's degradation, despite its relationship to many of the identified causes. But a unique aspect of the new maps is researchers' ability to maintain them into the future, tracking accelerating climate impacts and the progress of conservation. "This is something that federal

agencies have not been able to do, because we haven't had the technology," Wurtzebach said.

The maps are part of a larger project expected to culminate this winter in a biome-wide sagebrush conservation strategy. Though conservation at this scale has few precedents in the U.S., it's not the first such effort: The project is modeled after the North American Waterfowl Management Plan, through which thousands of partners have restored and protected tens of millions of acres of wetlands since the 1980s.

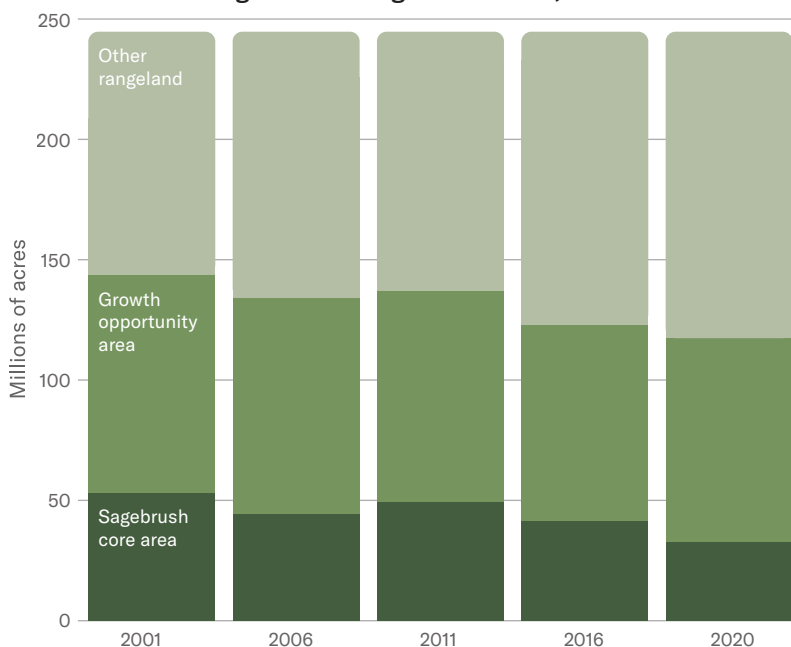
The new sagebrush conservation approach is simple: Agencies, lawmakers, tribes, landowners and other stakeholders would collaborate to defend the intact core areas of the ecosystem and restore those areas that can still be recovered. The strategy is proactive, designed to focus funding on the places where it will be most effective. "Nothing makes a better story than 'Look at this field of weeds that I brought back to beautiful native sagebrush steppe,' right? But unfortunately, that's just not possible in a lot of places," said Megan Creutzburg, coordinator of SageCon, a collaborative conservation partnership in Oregon, who helped develop the interagency report.

The new strategy marks a major shift: A single species, the greater sage grouse, has been the longtime focus of conservation efforts in the region. The revised approach is much broader, considering threats and priorities across the entire ecosystem, which supports 350 other species, including birds, pygmy rabbits and native grasses. "And it isn't just animals; it's livelihoods, it's economies," said Tony Wasley, director of the Nevada Department of Wildlife. His agency will use the maps to inform things like land-use policy related to mining and where to prioritize revegetation projects after wildfires.

The strategy won't dictate specific local actions; interagency group leaders emphasize that local knowledge and partnerships will be essential to future projects. But they hope a more comprehensive set of priorities will help leaders access the newly available funding from the Biden administration's infrastructure and inflation reduction bills.

"We're never going to reclaim all of the biome that we've lost," Cahill said on a webinar launching the new report. "But we can make a serious step forward in preserving what we have and growing it to a sizable extent so we've (still) got a sagebrush biome in 2050." 🌱

Changes in core sagebrush areas, 2001 - 2020





# Rising rivers don't always follow the map

A record flood on the Yellowstone River reveals the politics of risk assessment.

BY NICK MOTT

**AS THE YELLOWSTONE RIVER** rose in June, sandbag walls sprouted like Lego sets throughout the city of Livingston, Montana, population about 8,000. People moved valuables into their cars, ready to hit the road. Hundreds of structures in town were evacuated, including my house, which is located in a so-called 500-year floodplain — a zone with a .2% annual risk of flooding. The high muddy water, later deemed a 500-year flood, caused millions of dollars of damage in the region.

Waiting it out at a friend's place on higher ground, uncertain about the fate of my own home, I realized that the map lines that inform official thinking about flood risk had abruptly become tangible to me. For most people, floodplain maps are difficult to find and even tougher to understand. The city's map — a hodgepodge of smudges, lines and blots — is like a Rorschach test: It may convey very different meanings to homeowners, developers, politicians and scientists, with lasting consequences for how communities cope with floods. Real risk, I learned, doesn't always follow the lines on a map.

**IN THE EARLY 2000s**, the Federal Emergency Management Agency began revamping its flood maps. Those maps detail risk — where homes and property across the country fall within the 100-year floodplain, for example, where there are usually special requirements for development, and owners must purchase flood insurance.

When the agency presented a study by the U.S. Army Corps of Engineers to the city of Livingston, it showed that hundreds of homes were at high risk of flooding, a designation likely to increase costs for anyone thinking of buying a home or developing there. According to city commission minutes, local newspapers and official documents, locals and city officials were incensed and started to push back immediately. The area had experienced record floods in the mid-'90s, but many homes mapped in the floodplain stayed dry.

A makeshift levee, first built in the 1930s and bolstered over the years, ran through town along the Yellowstone River to protect property from floodwater. However, since the levee wasn't officially certified by the U.S. Army Corps — a





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lengthy and expensive process — the mapmakers acted as if it didn't exist at all. "The city commissioners were very concerned," former Livingston City Manager Ed Meece told *The Billings Gazette* at the time. "The Corps study was grossly inaccurate and flawed." Meece didn't respond to multiple requests for an interview for this story.

The situation quickly became political. Montana's U.S. senators at the time — both Democrats — wrote to FEMA, urging the agency to expedite the mapping process. The city had hired a private contractor to do an independent analysis and draw a new map. The contractor's report contradicted the Army Corps' results, and, as Meece told local newspapers, the remapping — a \$270,000 effort — ultimately left the city with a floodplain 95% smaller than what appeared on the original map. That meant that hundreds of properties wouldn't need flood insurance and the other requirements that come with living in areas at high risk of flooding.

FEMA officially adopted Livingston's new map in 2011.

**FLOODS ARE ALREADY** the most common and destructive natural hazard in the country. FEMA predicts that, due to climate change, the area at risk of a 100-year flood from rivers in the U.S. will grow by about 45% by 2100. The problem is even worse in coastal areas. According to some studies, as many as 41 million Americans live in places with a 1% chance of annual flooding. That may sound small, but over the course of a 30-year mortgage, those odds stack up to about 1-in-4.

Sarah Pralle, an associate professor of political science at Syracuse University, studies the politics of floodplain map development. She said that when the National Flood Insurance Program began in 1968, it was meant to discourage people from living in flood-prone areas by making it pricier to live there, as well as to help them recover when floods do occur by providing insurance for at-risk properties. The backbone of the program, she said, is accurate scientific mapping.

While Pralle wasn't familiar with the details of Livingston's case, she said the politicization of floodplain mapping is common. And challenges to flood maps almost always seek to shrink the floodplain designation, not expand it. In a 2014 investigation, NBC News

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*"No one really steps in to say, this is about something bigger. This is about planning for the future."*

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found more than 500 instances where FEMA had remapped waterfront properties — often high-end luxury developments — into a lower-risk category. A smaller regulated floodplain means fewer people shelling out thousands a year for insurance, easier ground-breaking for developers, and a good look for local politicians. "It's kind of human nature not to want to pay for something if you think you aren't going to need it," Pralle said.

That echoed my experience. There's no flood-insurance requirement where I live, so I hadn't given it a second thought since moving into my house. When the floodwaters came, I cursed my own short-sightedness. In the end, we were lucky; our home stayed dry. A few blocks away, though, our friend Celeste Mascari — also mapped in the same 500-year floodplain — was less fortunate. Water damage left her home uninhabitable, and she had no insurance to help with the costs of rebuilding. As of 2020, only about 3% of the homes in Park, Carbon and Stillwater counties — which bore the brunt of the June flood's impacts — were insured against floods.

Pralle said that local conversations around flood maps usually focus on the cost of building and insurance. "No one really steps in to say, this is about something bigger," she said. "This is about planning for the future."

**IN A CITY HALL** conference room about two months after the flood, Jim Woodhull, the director of building and planning for the city of Livingston, unfolded a gray-and-black version of the city's floodplain map. Woodhull, a lifelong Livingston resident, has worked for the city for nearly three decades.

These days, he said, "we don't do a lot of floodplain regulation because there's not a lot of floodplain mapped in the city." He said he didn't remember many details about the conflict between the city and FEMA, but noted that the narrow 100-year floodplain in the 2011 map has helped the city grow. "There's been a lot of redevelopment and a lot of investment in properties that wasn't going to happen otherwise."

Back when Livingston and FEMA were at odds over the floodplain map, the city had

recently annexed a swath of agricultural land east of town. That chunk of land became a central concern in the mapping disagreements. Part of it was sited for a new county hospital, and the rest was slated for development as Livingston grew. FEMA's map had located the property in the 100-year floodplain, where flood insurance and strict development standards would be required, creating logistical and financial barriers to building. The city's new map, commissioned by the private contractor, designated the area as part of the 500-year floodplain. There, just about anything goes.

In the decade since then, the hospital was built — despite opposition from some locals concerned about the flood risk. When the river rose in June, the hospital remained dry, but water surrounded the facility, cutting off access. Officials closed it and evacuated all patients.

Much of the land around the hospital is still undeveloped. But Woodhull doesn't expect that to be the case for much longer, unless the federal government comes up with a new map showing that development would be too risky. If not, "We've already annexed it, we've already zoned it," Woodhull said. "Why not? It's a good location."

Floodplain maps are a snapshot of an ever-changing ecosystem, and climate change is likely to make events like June's flooding more frequent and severe. A nonbinding growth policy adopted by the city in 2021 details a vision for Livingston's expansion. It briefly addresses flood risk: "Current floodplain maps don't take into account climate change," the document says. "This suggests that current floodplain maps are the 'low bar' for predicting flooding."

Woodhull said conversations with FEMA about updating floodplain maps in the wake of the flood are likely to occur soon, though they haven't happened yet. In July, Park County, where Livingston is located, officially asked for updated maps, a process that could take a couple of years or longer.

That means that another battle over the lines on the map could be coming. But this time, as climate change impacts become immediately tangible and Park County faces unprecedented growth, the stakes will be higher than ever. ☀

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The Yellowstone River swells onto an area known as 9th Street Island in Livingston, Montana, during June's historic flooding (*facing page*). **Anthony Pavkovich**

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communities than other industries, lost a million workers during the pandemic. Supply-chain issues and skyrocketing gas prices created a double whammy, adding to the delays and prohibitive costs.

Even before the pandemic, the Ortons struggled to find workers, especially cooks. St. George, population just over 99,000, is among the fastest-growing cities in the nation. But largely because of that rapid growth, the demand for services has exceeded the availability. Kirk has worked almost every day for the past five years just to keep up. He was already feeling overstretched. “But we couldn’t stop,” he said. “Bills don’t take breaks.”

In April, another pair of restaurateurs offered to buy the diner, and the Ortons decided to sell. The decision was bittersweet: Sure, now they could finally retire. But at the same time, they felt like they were losing something — letting go of their idea of the American Dream.

DeDe’s career as a restaurateur began 15 years ago in Cedar City, Utah. Marcia Waggoner, DeDe’s mother and the family historian, told me that DeDe was a fantastic cook who never used a recipe, as well as a natural hostess, “a nester who cares for people.” No one was surprised when she opened her own place, Waggoner said. “Of course, she was going to run her own restaurant.”

DeDe’s was a family business from the start, DeDe said. “From my mom to my 12-year-old grandson, every member of my family has helped some way. That was always my dream: To work with my family.”

Though the Ortons’ first restaurant was successful, they were forced to relocate five years later when the building’s owner died and their rent was raised. DeDe’s café eventually reopened on Valley View Drive in St. George, an hour to the south, in a former wedding chapel and photography studio. To meet city code, it needed work, including a \$50,000 ventilation hood.

“That almost broke us,” Kirk told me an hour before he and his wife shut the restaurant’s doors for good. But he’d been saving for more than 20 years and was able to pay for the hood in cash, even though it meant forgoing the condo he’d dreamed of buying near the restaurant. “It was worth every last penny.”

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Clockwise from left: DeDe Orton works the front register. Kirk Orton cooks up customer orders in the kitchen. A stack of receipts with customer orders piles up in the kitchen. A teary DeDe Orton joins Link Feesago during a video call to his mother, a regular patron who suffered a stroke and hasn’t been able to visit the diner.

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**THE RESTAURANT'S LAST DAY** was slow, a tender mercy on such a difficult occasion. A procession of regulars came in to pay their respects — and to order their favorite dish one last time. There was an acute sense of loss in the air. I felt it myself; I had eaten DeDe's legendary cornflake-battered chicken-fried steak once a week since I first moved to St. George in 2020. As a freelance journalist, I've lived all over the U.S. As soon as I enter a new city, I seek out mom-and-pop restaurants for fast, affordable homestyle cooking. They also serve as my introduction to the community. When I heard the other diners saying sadly, "We wish you weren't closing. We have no idea where to take our friends and our families," I knew exactly what they meant. We were losing our gathering place.

Ulrich Scholz, a longtime volunteer for the St. George Police Department, had a bacon cheeseburger. "DeDe's my favorite lady," Scholz said. "I've had everything on the menu three times over." After paying for his meal, he embraced DeDe. "If I don't see you again," Scholz said, "I'll see you upstairs." He pointed his right index finger at the sky and turned away.

Link Feesago's wife, Charmaine, had stopped in, too. She connected DeDe with Feesago's mom, who lives in a care facility in Las Vegas, via Facetime to say goodbye. "We're Polynesian," Feesago told me. "We've got a big family, and they're all coming to say goodbye today."

Later, DeDe walked over to a corner table, tears streaming down her cheeks. "It's hard," she said. "I'm excited about the future, but I'm going to miss the family and friends we've made. This was more than a business for me; it was my life."

By 3 p.m., only a few people remained. A man had just finished mopping the floor when Holland, the auburn-haired server, smiled mischievously. "Oh!" she said. "Can I do my happy dance one last time?"

She shuffled to the nearest section of still-wet floor and began dancing. The man smiled, resigned to her messing up his work. The Ortons and their crew laughed. Then, Samantha Turrentine, another longtime server, reached over and pulled a plug. The "open" sign in the window ceased its buzzing, and DeDe's diner went dark. ✨

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From top: A group portrait of staff, family, and friends. From left, David Dudley, Sue Holland, Samantha Turrentine, Marcia Waggoner, Kirk Orton, Dede Orton, Amber Esplin, Jake Printz and Zeke Jones. Sue Holland leaves the diner after saying her goodbyes to coworkers and friends.

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*"I'm excited about the future, but I'm going to miss the family and friends we've made. This was more than a business for me; it was my life."*







Residential Hall in Richfield, Utah. One year later, he took yet another Greyhound to the Santa Fe Indian School in New Mexico.

This was life as a boarding school student in northern Arizona and southern Utah — constantly being shuttled around on buses or flatbed trailers, never told where you were going or who would be waiting for you when you finally arrived. The only stability to be found was in the black shoes on their feet and the buses that trafficked them from school to school.

Grayeyes survived his boarding school experience. Not everyone did. Some students never returned; they went missing or were buried in unmarked graves at various boarding schools across the country. The survivors' accounts of their experiences — along with the grisly discovery of bodies at residential schools in Canada and the reports of similar discoveries at schools in the U.S. — have finally prompted a federal investigation by the Department of the Interior, led by Secretary Deb Haaland (Laguna Pueblo) under the Federal Indian Boarding School Initiative. Earlier this spring, Haaland and Assistant Secretary of Indian Affairs Bryan Newland released the first volume of their investigation. The initial report laid the groundwork, noting that 408 federal schools operated between 1819 and 1969, and that the report's authors have found unmarked burial sites at 53 different boarding schools, a number that is expected to rise.

Newland and other Interior officials made it clear that this first report was never intended to be conclusive; rather, it should be seen as merely the first step in a long review, with a follow-up report slated for 2023. Meanwhile, there remain countless untold histories — experiences that could be lost if the federal review process doesn't reach the survivors in time to hear their stories. As investigators listen to survivors and try to map the lingering impact of the boarding schools in the Southwest, one memory comes up over and over:

## REPORTAGE

# The night the Greyhounds came

On the Colorado Plateau, memories of boarding school roundups haunt survivors.

BY ALASTAIR BITSÓI | ILLUSTRATION BY JD REEVES

**THEY TOLD** Willie Grayeyes (Diné) to sleep in his clothes — to not even take off his black shoes. At any moment, the Tuba City Boarding School staff members said, the 7-year-old would be called upon. Not knowing what that meant, he obeyed.

“We were treated in Tuba City like we were in the military,” Grayeyes said, remembering the boarding school system that tried to assimilate him and many thousands of other Indigenous children. “We were marched; we were physically abused by being kicked. I did not know anything at the time of the decree.”

The decree in question was the compulsory attendance mandate employed by the federal boarding school system, which often resulted in the physical, emotional, sexual and spiritual abuse of Indigenous children. Any parents, guardians or clan relatives who resisted the mandate were punished by law. Grayeyes, now a San Juan County commissioner, was just 6 years old when he entered the Navajo Mountain Boarding and Day School in 1953.

“That was my first encounter with an Anglo, a white lady, by the name of Elizabeth Eubank, who was a schoolmaster and teacher,”

Grayeyes said. “Ms. Eubank arranged everything, as far as who is going to be transferred and so forth.”

After a year at Navajo Mountain, he was transferred to the Tuba City school in Arizona, established in 1903. He loaded up his suitcases and rode in the flatbed trailer of a government vehicle to get there, 93 miles away from his homelands in Paiute Mesa in the community of Naatsis’ááni, San Juan County, Utah. After just a few months at Tuba City, staff woke him in the middle of the night. They put him on a Greyhound bus, which he rode all night to Richfield



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being lined up to board one of those infamous Greyhound buses.

“I remember everybody on a certain day would go up to the local day school, and there would be these Greyhound buses parked up there,” said Leigh J. Kuwanwisiwma, a Hopi historian, former director of the Hopi Cultural Preservation Office and a Christian boarding school survivor. “There used to be just piles of suitcases out on the sidewalk, and they would be loading that (bus) up.”

Hopi students from the villages of Hotevilla and Bacavi boarded buses that took them to the Phoenix Indian Industrial School, more than 200 miles away. Kuwanwisiwma had spoken to other students and felt somewhat prepared for boarding school. His older sister was forced to attend the Ganado Mission School, and her experience there helped him navigate not just school but also the strange customs and fashions, such as the blazer and tie that he had to wear to church on Sunday.

“I remember just kind of going on the road and staring out of the back, just thinking, ‘Man, I’m leaving the rez,’” Kuwanwisiwma said, recollecting riding in his parents’ 1955 pickup on his way to the Ganado Mission School. “I had this inner feeling of uncertainty inside as we drove through the villages.”

Kuwanwisiwma often felt lonely at the school, but he enjoyed some of the extracurricular activities — becoming a student athlete at the Hopi Mission School and later at the Ganado Mission School, both Presbyterian-run institutions. He says his experience differed greatly from that of his ancestors, who endured the trauma of compulsory attendance, military discipline

and having their hair cut, back in the days when Hopi leaders were jailed for resisting Bureau of Indian Affairs roundups of their children, years before the Greyhounds came.

**THE GREYHOUND** generation remembers more than just the buses and their polished shoes. They also remember the stories of those who went before them.

Kuwanwisiwma’s father and grandfather both went through the BIA boarding school system. His father was forced to attend the Albuquerque Indian School, where he was punished for speaking the Hopi language with other Hopi students. Kuwanwisiwma’s father wanted to protect his own children from the BIA boarding school system, so he encouraged them to go to the mission schools instead, for their primary and secondary education.

As early as 1875, the BIA focused on recruiting Hopi students, often around 4 and 5 years old, from various Hopi villages. In the early 1900s, Kuwanwisiwma’s grandfather was rounded up by U.S. soldiers and forced to attend Keams Canyon Boarding School. His grandfather said that he was out herding sheep when he saw other young Hopi children crying for their parents, and the parents crying for their children. He stood there watching, believing that since he was older, he would not have to go. But the BIA agents told him to come with them anyway. Kuwanwisiwma’s grandfather resisted, running away. He fled from the agents until they fired warning shots into the air. Then he froze, surrendering.

The soldiers took him and the other Hopi children to a small building in Kykotsmovi Village,

where the children cried all night while their mothers wept, calling out their Hopi names. The next morning, his grandfather’s long black hair was shaved off. “All their hair was being snipped off, girls and boys. Of course, long hair was culturally important to both the Hopi boys and men. Long hair meant spiritual strength and courage to face the enemy,” Kuwanwisiwma said. “That’s what long hair means to the Hopi people.”

When his grandfather arrived at Keams Canyon, at the Hopi BIA Agency, the administrator told the soldiers that the boy was too old to attend the school. They let him go, but he hesitated to go home, ashamed of his newly shaven head. His parents wondered where he was, and he soon returned.

“I tell this story, because around that time, around the turn of the century, there was a big division among the villages of what to expect from the white men,” Kuwanwisiwma said. “The white man was imposing education, and some of the people, the conservatives, the traditionalists did not want that. There was a big conflict developing.”

Ultimately, Kuwanwisiwma’s grandfather sided with the traditionalists and vowed to fight against the white men forever, he said.

“He became a die-hard conservative and traditionalist throughout his life, and those are some of the values I grew up with,” Kuwanwisiwma said.

Kuwanwisiwma holds the same values and is proud that his Hopi people held on to their language, ceremonies and agricultural lifeways. As a historian, he said, he knows that many tribes were less fortunate than his people

— the Paiutes, for instance, who were nearly exterminated by the forced boarding school system. For the Paiute Indian Tribe of Utah, as well as Shivwits Band of Paiute Indians and Kaibab Band of Paiutes, the trouble started at the former Panguitch Boarding School, which operated from 1904 to 1909. Superintendent Walter Runke — who started his career as a disciplinarian at Tuba City Boarding School — believed in compulsory attendance, meaning that attendance was enforced at gunpoint, according to a news clipping of the *Coconino Sun* in the Arizona Memory Project. Historical records from an independent researcher show that at least 12 Paiute children were buried at the Panguitch Boarding School. The site is now part of Haaland’s federal investigation.

Corrina Bow, chairwoman of the Paiute Indian Tribe of Utah, said that a memorandum of understanding between the tribe, the two bands and Utah State University, which leases the former school’s land from the state, has been under negotiation for the last year. The conversations, first reported by the media in August 2021, sparked the investigation of USU’s agricultural lands in the predominantly ranching Mormon community of Panguitch. On behalf of her people, Bow said that she is pleased to have the former boarding school included in the ongoing federal investigation by the Interior Department. Before all the publicity, the Panguitch school wasn’t widely known.

“As a Tribe, we continue to address the former Panguitch Boarding School and are still saddened by the treatment of our little ones at that school,” Bow said in a statement. “We thank you for respectfully honoring our wishes to address this heartbreaking piece of our history privately following our cultural practices and beliefs.”

Steven Lee, an independent researcher who assisted the tribe, says that the overall narrative around Indigenous boarding

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*One memory comes up over and over:  
being lined up to board one of those  
infamous Greyhound buses.*

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schools, including Haaland's federal report, confirms what he has learned so far: that some Paiute children never returned home, and that the story of the former administrator, Runke, did not end with his tragic stints at Panguitch and the Tuba City boarding schools. Runke went on to oversee a Navajo boarding school, and in 1916, was arrested for killing a Diné man, Taddy Tin, who resisted his recruitment tactics. Runke was acquitted by an all-white jury and later served two terms as an Arizona state senator.

Lee has worked with Bow to find out whether children were buried at the school, studying the school's old records. He first learned about the traumatic history of Panguitch when he was the town's events and marketing director. His discovery that a schoolteacher had died from an opium overdose back in 1905 inspired him to do more research, and that led him to the death records of at least 12 Paiute children. But city officials discouraged his research, and he resigned from his job working for the town.

The Interior Department's first report, Lee said, confirms his own findings: Indigenous children were highly sought after by townspeople, who used them as cheap labor. The report said that USU is waiting for tribal approval to investigate the possible remains of Paiute children, according to Judson Finley, an anthropologist and archaeologist at Utah State University.

Meanwhile, Haaland and her team are hosting listening sessions for their second report. Earlier this month, they held a second listening session in the Midwest, giving boarding school survivors the opportunity to tell their stories, some for the first time in their lives. Another listening session for survivors is slated for Arizona later this fall or winter. For the survivors, it's a start.

**DESPITE THOSE** memories of endless Greyhound rides, Grayeyes takes pride in the resilience he and others showed in the face of

a system designed to strip him of his cultural identity, starting with his hair. Today, he proudly wears his *tsiyéél*, a Diné hair bun, as he fulfills his various leadership roles — including sitting board president of the Navajo Mountain Boarding School.

In his efforts to reclaim the school for the community, Grayeyes has relied on his own experience as a boarding school survivor to inform his decisions about how the school should serve its students. He believes in the importance of parental involvement, something that his generation and the ones before him were denied by the boarding school system. Grayeyes thinks parents need to get involved in their children's education if they want to help shape the minds of their children in a healthy way.

This same line of thinking informs his beliefs as to what tribal nations and boarding school survivors should get out of the ongoing federal review. The survivors' needs — their mental health, first and foremost — must be centered. But they deserve more than simply the chance to be heard; they deserve justice and an actual sense of closure. In Grayeyes' opinion, the first report "should have had more depth." But achieving that depth, as well as any justice or sense of closure, may require more litigious methods than a review process whose continuation depends on a favorable presidential administration.

"If it were up to me," Grayeyes said, "I would go for a lawsuit (against the federal government). The treatment of Native American students — with the idea to extinguish their lifestyle, their songs, their language — is pretty well planned out."

Until that happens, however, Grayeyes, like so many others from his generation, will hope for the best from Haaland and her agency. And he will continue to work to provide a stable, healthy educational environment — one free of Greyhounds, guns and polished shoes. \*

## POEM

### *Déélgééd, the Horned Monster*

*By Tacey M. Atsitty*

Insist on reaching, into thorns to blow  
off ants, or wind your fingers around webs,  
beads of raindrops run together in slow  
succession, an edging down anchor threads:  
would you believe me if I told you: night  
comes piercing in like antelope horn, right

in and out the midsection, bearing all  
but head. She left you— a nearby gully  
swaddled you with yucca leaves and petal.  
Baby's breath, as they sometimes call it, ugly  
with fly egg sacs is sometimes used to line  
diapers: it masks the smell of sin & urine.

**WEB EXTRA** Listen to Tacey M. Atsitty recite her poem at [hcn.org/horned-monster](https://hcn.org/horned-monster)



# Carbon capture convolution

A complicated process, explained.

BY JONATHAN THOMPSON  
ILLUSTRATION BY FIONA MARTIN

## CARBON CAPTURE AND SEQUESTRATION

sounds like a bit of a no-brainer. I mean, carbon emitted from industrial facilities' smokestacks is bad, right? So why not just put a big vacuum thing on the stacks, capture the bad stuff and blow it back into the ground where it originally came from?

Simple, right?

Not really. Capturing and sequestering carbon, especially from coal plants, is complicated, convoluted, energy-intensive and rather expensive. And the technology has yet to be proven on a large scale. Still, it may be fossil fuel companies' best bet for continuing to rake in

a profit while doing something about climate change — or at least appearing to do something.

So, corporations have asked the federal government for help, and Congress and various presidential administrations have responded, offering subsidies for research and development and tax credits for every ton of carbon the companies capture and store — even if it's pumped into aging oilfields to stimulate production of more fossil fuels.

All-purpose carbon-storage tax credits might make sense for hard-to-decarbonize facilities like cement factories, but when applied to coal plants it gives the operator an incentive to

### 10,000 metric tons

Amount of methane, a potent greenhouse gas, that is vented from the San Juan Mine into the atmosphere annually. Over the short term, that has the heat-trapping potential of about 860,000 metric tons of carbon dioxide. These emissions would not be mitigated by the power plant carbon capture equipment.

### 5.7 million metric tons

Amount of carbon dioxide emitted from the San Juan Generating Station in 2021. Enchant Energy hopes to capture 95% of the carbon emissions, leaving 0.3 million tons to be emitted annually. But this is a very ambitious goal and would be far higher capture rate than existing carbon capture projects have achieved.

### 1.2 million pounds

With or without carbon capture technology, the amount of toxic chemicals, including known carcinogens, such as chromium, cobalt and nickel compounds, released by the San Juan Generating Station annually through its smokestacks or as solid waste.

### 500 pounds

Amount of mercury, a potent neurotoxin, the San Juan Generating Station released annually.

### 3 million tons

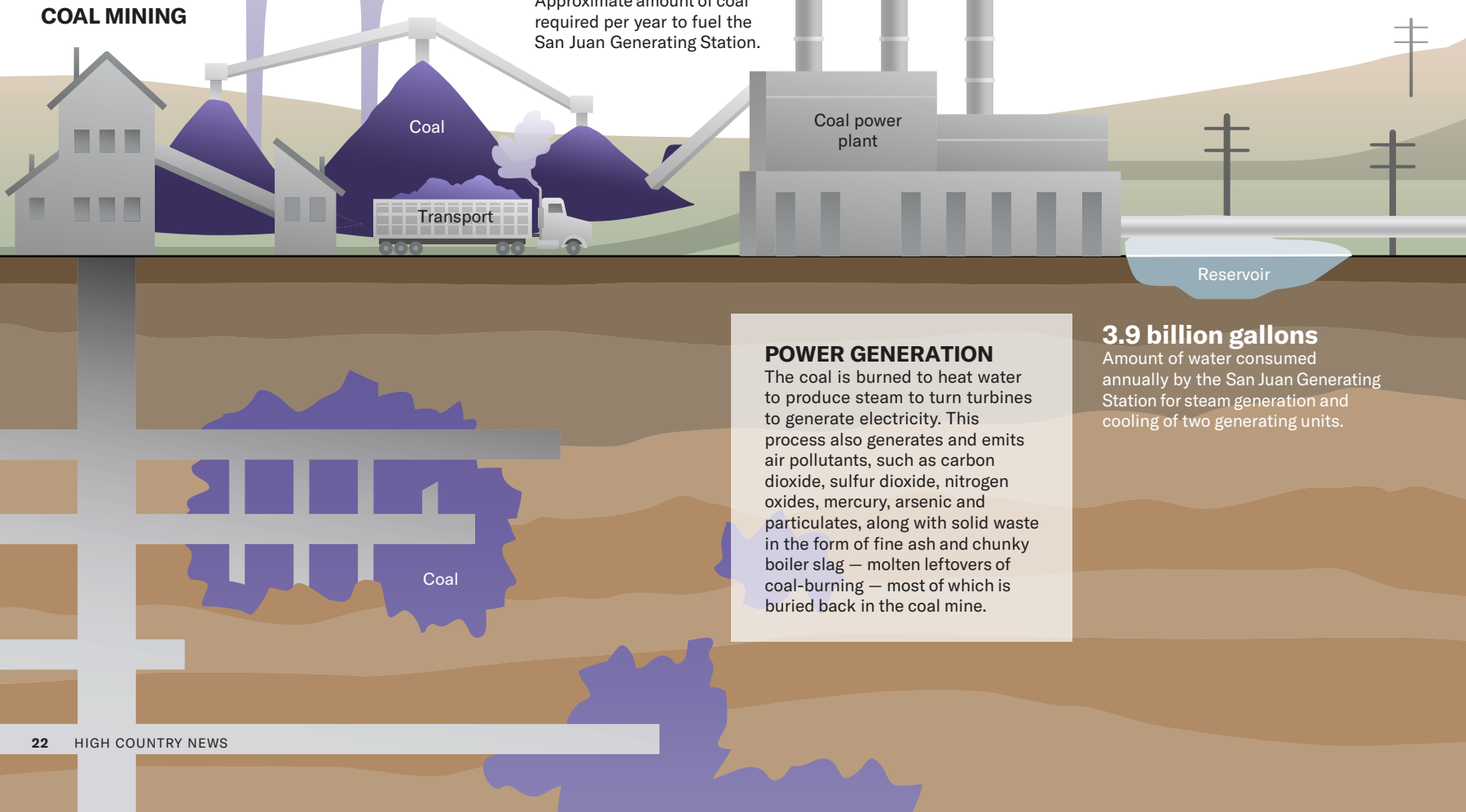
Approximate amount of coal required per year to fuel the San Juan Generating Station.

### 3.9 billion gallons

Amount of water consumed annually by the San Juan Generating Station for steam generation and cooling of two generating units.

### POWER GENERATION

The coal is burned to heat water to produce steam to turn turbines to generate electricity. This process also generates and emits air pollutants, such as carbon dioxide, sulfur dioxide, nitrogen oxides, mercury, arsenic and particulates, along with solid waste in the form of fine ash and chunky boiler slag — molten leftovers of coal-burning — most of which is buried back in the coal mine.





transform a power plant that spews carbon dioxide as an undesirable byproduct into a carbon factory that produces electricity as a desirable byproduct. Operators could end up burning more coal to produce more carbon so they can get more tax credits. Meanwhile, other types of pollution, from sulfur dioxide to coal ash, continue to spill out of the plant to sully the air, water and land.

The following diagram is based on Enchant Energy’s plan to restart and retrofit the recently shuttered San Juan Generating Station in New Mexico with carbon capture equipment. It would be the biggest carbon capture project on a

coal plant to date — if it overcomes a growing set of hurdles that includes tightening regulations and scarce financing. The proposed technology is the industry standard for coal-power-plant carbon capture. ✨

SOURCES: Environmental Protection Agency Toxic Release Inventory, EPA Greenhouse Gas Inventory, Rocky Mountain Power, Enchant Energy.

### CARBON CAPTURE ISLAND

The emissions from coal-burning that would normally go up the smokestacks are instead redirected to the carbon capture facility, known as an “island.” There, carbon dioxide is absorbed by a solvent derived from natural gas, an energy-intensive, carbon-emitting process. The carbon is then removed from the solvent and pressurized into pipeline-grade carbon dioxide. While Enchant hopes to capture 95% of the carbon emissions — or about 5.2 million tons per year — other facilities have not had nearly that success rate.

**\$1.6 billion**

Estimated cost to retrofit the San Juan Generating Station with carbon capture equipment and build pipelines to transport it.

**30%**

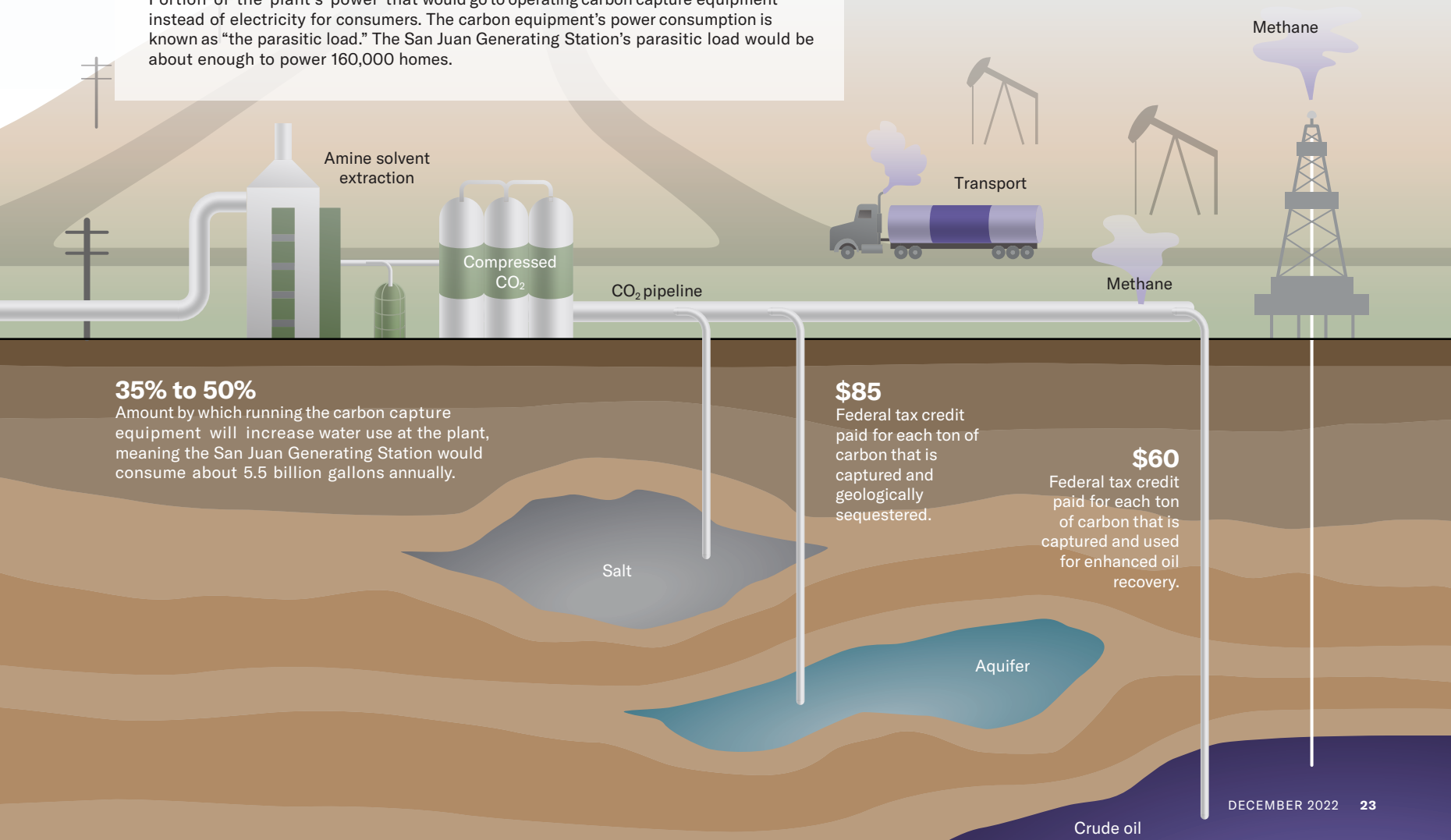
Portion of the plant’s power that would go to operating carbon capture equipment instead of electricity for consumers. The carbon equipment’s power consumption is known as “the parasitic load.” The San Juan Generating Station’s parasitic load would be about enough to power 160,000 homes.

### CARBON SEQUESTRATION AND/OR ENHANCED OIL RECOVERY

The captured carbon would either be sequestered geologically (stored underground), or piped to oilfields in southeast New Mexico to be injected into depleted wells to stimulate production — aka “enhanced oil recovery.” Yes, you read that right: The captured carbon would be used to pull yet more hydrocarbons out of the ground, which would then be burned and emit yet more greenhouse gases.

**\$100**

Amount an average ratepayer’s monthly utility bill would go up to pay for installing and operating similar carbon capture systems on aging Wyoming coal plants that are slated for retirement, according to an analysis by Rocky Mountain Power. Public Service Company of New Mexico, the San Juan plant’s operator until its retirement, will not buy power from the plant, so current ratepayers won’t be affected by the carbon capture plan.



**35% to 50%**

Amount by which running the carbon capture equipment will increase water use at the plant, meaning the San Juan Generating Station would consume about 5.5 billion gallons annually.

**\$85**

Federal tax credit paid for each ton of carbon that is captured and geologically sequestered.

**\$60**

Federal tax credit paid for each ton of carbon that is captured and used for enhanced oil recovery.



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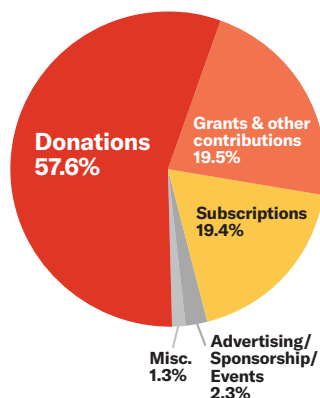
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Image (above) from HCN's July 2020 feature, "Fish Out of Water." Roberto (Bear) Guerra





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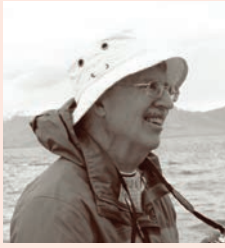
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DEAR FRIENDS

## Happy holidays!

**THIS ISSUE MARKS THE END** of a busy year here at *High Country News*. Back in February, the page you're reading, Dear Friends, got an inviting new look — a sign of our desire to use this space to find new ways of building relationships with readers.

So far, we've shared a lot of news from our end. We've introduced you to staff members, shared survey results, touted special events and even launched our first-ever summer reading contest. The reading program was especially fulfilling. Dozens of folks sent in bingo cards, recommended favorite books and shared their thoughts, ideas and suggestions.

This year also marked *HCN's* active return to the outside world. We were once again able to meet with readers in person and trade stories in cafés and breweries, at people's homes and even at a couple of honest-to-goodness special events. It seems like years (because it actually has been years) since we last shook hands, and it's great to see that you're still the same wonderful bunch of interesting people doing good work in the world.

And so our hope as we head into the new year is that the trend persists, and we get to see and meet with even more of you. In the meantime, drop us postcards from your slice of the West and keep us up to speed on what you're doing. Your *HCN* community wants to hear from you. Keep in touch at [dearfriends@hcn.org](mailto:dearfriends@hcn.org).

— Michael Schrantz,  
marketing communications manager



*HCN staff and board members blew off steam following our September board meeting by walking in the woods with longtime HCN supporter Charley Rosenberry and his herd of pack llamas. It was exactly what we all needed — a reminder of the amazing people and landscapes that inspire our work every day.*

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Dan Gribbin photo



## We lost some good ones in 2022

We learned recently of the passing of two longtime *HCN* readers and supporters.

**Tim Crawford**, a rancher and photographer who lived outside Bozeman, Montana, was an “all-around maverick,” according to longtime *HCN* contributor Ray Ring. Tim grew up in a ranching family in Southern California — an experience, he said during a recent visit, that cured him of ever wanting to work with cattle. He and his wife, Kathy Hansen Crawford, a professor emeritus of geography at Montana State University, had chickens instead.

Tim was a conservationist, a hunter and a nature photographer. He was also a writer and an avid reader — C.J. Box novels were one of his guilty pleasures, he said. And while Tim made no secret of his distaste for Bozeman's growth in recent years, the town's sidewalks will lose a little of their charm with his passing: He often greeted passersby with a wisecrack, usually at his own expense, or a greeting that elicited a smile.

Longtime Wyoming institution **Gil Ordway** was a character in his own right. In remembrances published in the *Jackson Hole News & Guide* this summer, his wife of 50 years, Marge, recalled the day Gil bought her a pig at the Teton County Fair. “How many men buy their wives a pig for a birthday present?” Their kids recalled getting a white burro as a gift for a 7th birthday, and a pair of gelding llamas as a housewarming present.

Gil was a dedicated hiker and conservationist who gave generously to conservation groups in the Greater Yellowstone area. “Gil loved Wyoming, loved the West — its landscapes and animals and people,” a longtime colleague recalled. “When I asked him why he purchased the River Bend Ranch in Bondurant” — now protected by a conservation easement through the Jackson Hole Land Trust — “he replied: ‘Because I love the land.’”

Our hearts go out to Kathy Hansen Crawford, Marge Ordway, and Gil and Marge's daughters, Kitty and Gigi, and son Griffin.



# STEEPED IN CHAOS

Kim Stringfellow's transmedia  
Mojave Project delves into the  
desert's many histories.

By Meg Bernhard | Photographs by Kim Stringfellow  
Portrait by Stella Kalinina





Kim Stringfellow at home in Joshua Tree, California.





### TECOPA HOT SPRINGS

*Five bathers, mostly nude, one wearing long sleeves and a black beanie, lounge among ocher and brown reeds, the murky water of the hot springs coiling through sand. A blue camp chair draped with a towel stands nearby; behind it, clothing is piled on a rock. The water holds the image of a cloudy sky, muted blue rippling through white the texture of cotton balls. In the background, sand dunes are framed by towering navy-blue mountains smeared with rusty pink. The hot springs appear isolated; there is no other water. The undulating, arid landscape extends to the edge of the frame, hinting at the desert that lies beyond.*

### PAHRUMP

In early fall, Kim Stringfellow, a landscape photographer, camped in the Pahrump Valley, a stretch of the Mojave Desert just over the Nevada border, near a fenced-off solar facility owned by a subsidiary of NextEra Energy Resources, a Florida-based company. The Yellow Pine Solar project was still under construction, and partially assembled solar panels gleamed in the late afternoon light. Conservationists were there to protest the way they claimed it had destroyed Mojave yucca and disturbed the habitat of the protected desert tortoise, just as previous industrial-scale renewable energy developments had. Stringfellow, who considers herself an environmentalist, gave a brief speech before the assembled activists and writers about

energy extraction in the desert. Consumerism, she said, was fueling our need for energy. “We can cover the entire planet (in solar panels),” she said, “but it will never be enough.”

Stringfellow spoke of her own sprawling Mojave Project, an ever-growing art project that includes a reported essay and a photo series about industrial solar development in the desert. “The work I’m most interested in is work that is about the environment,” she told me. “It’s art as activism.” To Stringfellow, Yellow Pine and similar developments reinforce an anachronistic stereotype of desert as wasteland, desert as barren, a landscape from which humans could take and take until there was actually nothing left. To counter that stereotype, Stringfellow, who

is 59, has dedicated much of the last 25 years to documenting the complexity of life — both human and nonhuman — in the Mojave and Colorado deserts.

Using photography, her primary medium, as well as audio, video, and essays written by herself and others, she examines the ways in which humans intervene in the landscapes we inhabit, from homesteading in Wonder Valley to the Manhattan Project and Cold War-era radioactive testing and manufacturing in southeast Washington. For decades, urban artists have flocked to the Mojave, often gawking at the desert’s extremities or using the landscape as a canvas rather than a subject in itself. Stringfellow’s aim is to resist exploitation of all kinds — including artistic — by creating a





multi-decade project massive in scope, one that relies on months of research per essay and hours spent interviewing people who live in the Mojave. It's also participatory: Through field tours, she brings people into the places she documents.

The online header graphic for The Mojave Project is a map published by *Time* magazine in 1955, whose defined points of interest — mineral extraction sites, military installations and national monuments — reflect the “archaic values” that she seeks to repudiate, Stringfellow wrote in an essay for the magazine *Desert Report*. “Absent are references to the Mojave’s many Indigenous nations or their respected boundaries,” she wrote. “Nor are there any references to the complex

biodiversity of the Mojave Desert. Over time, I hope that The Mojave Project rewrites *Time*’s 1955 map into an inclusive topography that celebrates the region’s underrepresented histories, voices, and richly diverse ecology.”

#### **OLD WOMAN MOUNTAINS**

In one photo, Matt Leivas Sr., a Chemehuevi elder and founding board member of the Native American Land Conservancy, holds a long walking stick as he poses in front of a rust-brown boulder surrounded by shrubs and protected by a wooden gate. Another photograph shows a petroglyph, which, according to Leivas, depicts a map of the Lake Havasu region, pre-contact. In the main photo for Stringfellow’s essay, titled “Bringing Creation Back Together

Again: The Salt Songs of the Nuwu,” Leivas sits, face tilted upward, behind a rock outcrop at the Old Woman Mountains Preserve, a sacred site for the Nuwuvi (Southern Paiute) people. The sky is white and gray; spindly cholla and hedgehog cactus spring from granite crevices. He is singing part of the Salt Song, an interconnected ritual song map of the Nuwu’s spiritual and physical landscapes, of which the Old Woman Mountains are a part.

Leivas met Stringfellow, who is white, about a decade ago, at a dinner hosted by a mutual friend, the late ethnic studies scholar Phil Klasky. Afterward, Leivas said, they kept in contact, and eventually she invited him to participate in the Mojave Project. “I said, ‘Certainly,’ because nobody really knows about

*Bathers at Tecopa Natural Hot Springs, Tecopa, California (2016) (facing).*

*Ivanpah Solar Electric Generating System, Ivanpah, Nevada (2022) (above).*

our history here,” he told me.

Stringfellow’s work, he soon found, unfolds slowly, with weeks, and sometimes months, of reading, driving and interviewing behind each dispatch. Over what he estimated were 40 hours of conversation with Stringfellow, both in person and over the phone, Leivas covered a wide span of topics: his family’s displacement from the Chemehuevi Valley after damming flooded the region in the 1930s; his spiritual awakening when he moved back to the valley as the chief tribal game warden, once the



United States federal government recognized the Chemehuevi people and their rights to parcels of land in the area, his work to preserve the Salt Song cycle and his local environmental activism.

He appreciated Stringfellow's inquisitiveness, her candid questioning. "It was like talking to a friend," he said. Leivas had felt an urgent need to tell his story, too, because his health was in decline. "I had a lot of friends who didn't have any inkling that I was deeply involved in a lot of these land protection or sacred site protections," he said. "Now they're all finding out."

### MOJAVE

The Mojave Desert spans 16 million acres across four states. The xeric shrublands in the Sierra Nevada's rain shadow are home to 200 endemic plant species, hundreds of animals, rock formations that are billions of years old. Indigenous peoples have lived here for millennia: The Fort Mojave Indian Tribe's point of creation is the mountain Avi Kwa Ame; for the Southern Paiute, creation stems from Mount

Charleston and Mount Potosi, in Nevada's Spring Mountains. Across the desert, Stringfellow has photographed, interviewed and written about a wide range of groups: Rockhounds and land racers. Amateur rocketeers. Water conservationists, UFO enthusiasts and small-claim miners.

In an interview for KCET, the Southern California public broadcasting outlet that has co-published most of *The Mojave Project's* essays, Stringfellow spoke of the kinship she felt with Catherine Venn Peterson, a homesteader who initially moved to the Mojave in the 1940s, during a homesteading boom prompted by the Small Tract Act of 1938.

Stringfellow told me that she related to Venn's independence, her love of the desert's solitude, while also acknowledging that such homesteading, much like her own relocation to Joshua Tree, is often only available to the privileged. Stringfellow has never married. "I'm hard to be with," she told me. She's intense, a private person, and her work is often all-consuming. Her life has little to do with her art,

she said. And yet, the personal and the artistic collapse in *The Mojave Project*: The desert is both her subject and her home.

Stringfellow is a newcomer to the desert, part of a movement of largely-white artists to the area starting in the 1960s. Raised in Renton, Washington, she grew up visiting her grandmother in Carson City, Nevada, and became fascinated with the desert ecosystem of the Great Basin. In 2010, she moved to Joshua Tree in search of creative community.

With tourists flocking to the national park, a popularity boom spurred, in part, by the pandemic, Joshua Tree has gentrified even more in the 12 years Stringfellow has lived there. The median housing price shot up more than 80% between the spring of 2020 and the spring of 2022. The number of short-term rentals in Joshua Tree grew by 64% during this same period. On Stringfellow's street alone, three Airbnbs have sprouted in the past several years; one short-term rental owner chainsawed a Joshua tree to build a pool.

Meanwhile, over the last

century, the Mojave has warmed by 3.6 degrees Fahrenheit. Bird species are declining, and Lake Mead is at an alarming historic low. Humans are part of nature, but, Stringfellow told me, "I wish we weren't taking so many other things down with us."

The morning after the protest at the Yellow Pine Solar project, Stringfellow and I drove back to Joshua Tree together, about 200 miles. We curved along a mountain road and descended into the Amargosa Basin, a region at the entrance to Death Valley, where the Mojave meets the Great Basin. The desert there was lush, nurtured by the 125-mile-long Amargosa River, which flows, mostly underground, from Pahute Mesa in Nevada to its terminus in Death Valley's Badwater Basin. Thick vegetation — native screwbean mesquite and smoke trees, and non-native saltcedar and arundo — fawned over the road. "It's almost like blackberry thickets," Stringfellow said.

The Mojave is a dynamic landscape: Sands shift, dry lake beds fill with rainwater and evaporate, towns boom and grow and sometimes die. This dynamism is often





natural, but humans cause much of the change, a theme to which Stringfellow frequently returns. In one essay, she examines the growth, promise and pitfalls of Antelope Valley, where development has beckoned people priced out of the city of Los Angeles and its suburbs, many of them people of color. In the early 1990s, Palmdale was the country's second fastest-growing city, and its Black population grew nearly 1,000%.

Development has also brought something more sinister. A photo accompanying the essay shows a suburban subdivision walled off from a patch of desert, Joshua trees and a juniper scraggly in the foreground. The caption indicates it's a neighborhood in Lancaster. Soil from the site, Stringfellow writes, has tested positive for *Coccidioides*, the fungus that leads to an infection that can cause valley fever, a potentially severe respiratory illness for which there is no vaccine.

#### INTERSTATE 15

"I think that destination travel from city to city, like LA to Vegas, reinforces the desert as wasteland,

conceptually," Steve Williams, a biologist who accompanied us on our drive, said. We'd been talking about Interstate 15, the major Western freeway that runs from San Diego to Sweet Grass, Montana.

Claire Vaye Watkins, who is from Twentynine Palms and the author of two novels and one short story collection based in California and Nevada deserts, told me that Stringfellow is one of the few artists she's seen who "gets" the Mojave, who depicts her home as it is, as opposed to rendering it empty, or romantic.

She especially appreciates The Mojave Project's wandering ambience. "What's so pleasing about the dispatches is that they have the feeling of turning off a main road with your bravest friend," Watkins said. "It's unhurried, deep hanging-out."

In an essay titled "Anyone for Hounding Rocks?", Stringfellow recounts how curiosity took her from her intended research in Boron, California, to a locale that caught her eye: the gem and rock shop Desert Discoveries, owned by David Eyre, a "fortyish looking man

with a serious rockabilly pompadour." She ended up dedicating an entire essay and photo series to him, describing him as "a gem and mineral collector/distributor, third-generation Boronite, community good deed doer, and hot-rod enthusiast who drives a different classic car or bike every day of the week." Her portraits bring his character to life. In one, the rockhound, wearing a red plaid flannel shirt, his brown hair flipped upward like a dolphin fin, grins in front of a retro sign reading, in all caps, "ROCKS." In another, he holds a small square piece of calcite between his index finger and thumb and peers into its depths, his brow furrowed.

"It's a pacing issue," Vaye Watkins said. Slowing down — that's when you begin to see.

#### SALTON SEA

Yes, Stringfellow has made romantic photos for The Mojave Project: A sunbeam piercing clouds over serrated red rock, a dramatic storm swirling over golden dunes. But for the most part, her images are, in her words, "harsh" and "deadpan." She has taken many of her photographs

in the heat of the day, when the light is extreme, almost expressionless — the time most photographers avoid. "I don't want to romanticize the desert," she told me. "I want to show that it is formidable and it is intense, and if you are not prepared properly, you can die."

It is a style she developed in the '90s, when she started photographing the Salton Sea. It was her first time there, and she was drawn in by the landscape: the ruined remnants of a once-thriving resort community set on an eerily beautiful shore. When California drained 90% of its original marshland over the 20th century — more than any other state in the nation — the Salton Sea became a major stop for migrating birds. But over time, agricultural runoff contributed to the water becoming increasingly brackish, and ecological disaster ensued. Photographers had already been working in the area: In the 1980s, Richard Misrach shot airy, quiet photos of the Salton Sea for one of his "Desert Cantos" series examining human impact in the desert Southwest, and Christopher Landis made haunting black-and-white



Matt Leivas Sr., *Salt Song Singer*, Old Woman Mountains Preserve, California (2019) (facing). The Nevada Desert Experience 2019 Sacred Peace Walk and Protest, Mercury, Nevada (2019) (left). Kubo, Hells Belles Racing Team, Southern California Timing Association (SCTA) September 2014 Time Trials, El Mirage, California (2015) (above).



Participants Collecting Pink Halite at the 2014 Gem-O-Rama, Searles Lake, Trona, California, (2014) (right).

Former Lodging at Zzyzx Mineral Springs Resort, Zzyzx, California (2017) (below).



images. Stringfellow appreciated their work but wanted to develop a style that would differentiate her vision from theirs.

In the years that followed, Stringfellow returned to the area to shoot photos for her master's thesis exhibition with the School of the Art Institute of Chicago, which she later turned into a book titled, *Greetings from the Salton Sea: Folly and Intervention in the Southern California Landscape, 1905–2005*. Her stark, saturated photos documented the tragic consequences of overdevelopment: fish carcasses rotting on the water's surface; a rusting bus sinking into a noxious red puddle; a snow goose slumped lifeless near the shore. "It was meant to be a mirror into the future," Stringfellow told me.

In later projects, she examined the controversial environmental history of Los Angeles aqueduct system and documented

the environmental justice battles along Interstate 5 in California. She recounted the cultural history of Wonder Valley's homesteads, a physically demanding project that involved miles of walking in the desert to shoot photos of abandoned cabins. The project also included an audio tour, so people could see these places for themselves.

The Mojave Project is her longest and most involved work. It has no end date, in part to reflect the ever-shifting nature of the Mojave — the way time in the landscape feels nonlinear, layered. Checko Salgado, a photographer from Las Vegas, told me that the photos are "like she shoots from the hip," documentation the focus, not necessarily aesthetics. Take, for example, a photograph of a pile of spent heap leach — rocks and other waste left over from cyanidation, a heap-leaching method that uses

aqueous cyanide — part of a three-part series on gold mining. In the foreground: a dirt road with tire tracks, and a rusty chain-link fence with a sign reading "No hunting or trespassing." In the background: the pile, a brown hill dotted with shrubs. The photo would be unremarkable without the context; in the caption, Stringfellow writes, "Notice how the mountain of ore has been graded to appear more 'natural.'"

Stringfellow's work, which she calls a social practice, crosses disciplines, incorporating geography, ethnography and biology, though she's formally trained in none of those fields. The Center for Land Use Interpretation, a research-based arts organization that examines the relationships between humans and nature, has long been a model for her. The organization has led trips, including a 2009 boat tour through Houston — Texas' "petrochemical

artery" — and it creates virtual and gallery exhibitions, using sound recordings, photos, maps and videos to address themes as varied as the ways in which landscapes influenced American presidents and industrial fertilizer production.

According to Hikmet Loe, an art historian who has taught at University of Nevada, Las Vegas, Stringfellow's work can feel overwhelming: There is so much information, and some of it, like hydrology and the mechanics of mining, can be dense. Forty-four essays, 26 audio recordings and more than 100 photos are available on her website, in seven print books, and, occasionally, in exhibition settings. And her subject is impossibly large. Inevitably, Stringfellow leaves out stories and perspectives. (Absent from the project, so far, is a dispatch on Las Vegas, a major Mojave city.)





Wild Burros in the Panamints, Death Valley National Park, California (2016) (below).



Yet taken in at a slower pace, each piece of the work unearths another layer of the Mojave’s complexity. Stringfellow sees her audience as general, made up of desert dwellers and aficionados, though she’s pleased when experts respond to her work. Recently, a professional water manager reached out to say he’d shared her dispatch on the overused, drought-shrunken Colorado River with his colleagues.

Though The Mojave Project has been showcased in museums across the desert, Stringfellow is not making art for the “white cube” of gallery interiors. Her work, which is primarily funded by grants and fellowships, is not particularly commercial: “I’m not interested in decorative.” Rather, her art involves “critically looking at the world around us,” she told me. “It’s less about the personal, and definitely not about the market.”

### DEVILS HOLE

In April, Stringfellow held an immersive arts and earth sciences field tour over the course of a weekend to bring people into some of the areas she’s documented. Stringfellow acted as a curator. It’s a role she plays throughout her work. Her presence hovers in the background of her essays; she writes in the first person when she’s on the ground, interviewing people, but she is never central to the work. In the past, she has brought guests to Joshua Tree and around the Morongo Basin, as well as to communities in and around Death Valley. This time, the tour was set in the Amargosa Basin.

At Devils Hole, a limestone cavern at the base of a peak near the Nevada-California border, Ambre Chaudoin, a biologist for Death Valley National Park Aquatics Program, talked about the site’s enduring mysteries. The cavern,

she told us, was full of “fossil water,” which left its main source in Nevada’s Spring Mountains some 10,000 years ago and eventually bubbled up at the edge of Amargosa Valley. Much is still unknown about the cavern — how deep it is, for example, or why an isolated species of pupfish subsists there, in the consistently 93-degree water. “Are they considered the rarest fish in the world?” Stringfellow asked. “One of the rarest,” Chaudoin said. “We like to say it’s the smallest habitat for any vertebrate species, and it’s one of the most extreme.”

At the cavern, Emily Eliza Scott, a professor of the history of art at the University of Oregon, and Derek Berlin, then a graduate student studying land-use conservation, peered from a platform suspended 50 feet above the pool. Underneath its murky surface, more than 250 remaining pupfish lived. “Did (Chaudoin) say anything about the

impacts of climate change?” Berlin asked Scott and me.

“That’s an interesting question. There must be so much less snowpack,” Scott said, referring to the aquifer’s source, the Spring Mountains. “Hopefully the rate of evaporation is low, because it’s so protected.”

Berlin asked Chaudoin how climate change was affecting the cavern. “Is it evaporation? Is it less flow of the aquifer that feeds in?”

It’s both, Chaudoin said — along with the heat. “These air temperatures over that shallow critical habitat, they’re already spiking up, like beyond really what the fish can survive.”

The conversations I overheard during the weekend were inquisitive and roving, touching on urban environmentalism, wildfire ecology and earthworks, the guests exchanging knowledge and expertise. The 60 or so in attendance





included a lawyer who was fighting to achieve threatened species protections for the western Joshua tree, several curators and a local date farmer. “I’m a photographer, but that’s really not the experience I want you to have,” Stringfellow told us the first night. “The art is about the conversations you have with one another.”

### THE AMARGOSA CHAOS

On the last day of the field tour, Marli Miller, a geologist at the University of Oregon, brought us to the Amargosa Chaos, an area in Death Valley that geologists have been puzzling over for years. The area is highly faulted, so “thoroughly broken up and shuffled that nobody’s been able to put everything back in its place,” Miller wrote in an essay for The Mojave Project. No one knows how to date the rocks there, or what geological event, or series of events, created

such disorder.

“We all experience time in a different way,” Miller said as we gathered around a rock formation. “One of the things I find most moving about studying the earth is to think about geologic time and how vast and incomprehensible it is.” She picked up a rock from the ground and identified it as a Precambrian siltstone, latticed with mud cracks, likely 600 million years old. It is both humbling and horrifying, Stringfellow said, to know that humans occupy such a small frame on the Earth’s geological timeline. “Something that is 600 million years old — how do you fathom that concept and place yourself?”

Stringfellow told me she needed to understand geology to write about the Mojave. Not just the surface of the desert, but what was underneath — the layers of bedrock and crust that revealed the story of

this place. “For me to understand a landscape — this is what I’ve come to understand myself — I can’t just go out and go, ‘Oh, this is attractive, I’ll photograph this,’ and not know that this yucca could be 1,200 years old,” she said. “How can I be a landscape photographer if I don’t truly know what I am pointing my camera at?”

“We are part of this larger system, and we’re all related,” she told me later. “There’s no hierarchy, or exceptionalism for humans.” She often refers back to Devils Hole, where water has sloshed up the cavern’s sides in the minutes after distant earthquakes; on Sept. 19, a 7.6 magnitude earthquake near the Colima and Michoacán states in Mexico triggered four-foot-high waves in the pool. “We are implicitly tied to Earth’s natural systems, its rhythms and overall health, just as Devils Hole is connected to some unlikely distant spot on

*Thunderstorm, Death Valley National Park, California (2015). This storm system damaged Scotty’s Castle and several park roads on Oct. 18, 2015.*

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the planet some 2,000 miles away,” Stringfellow wrote in a 2015 essay on the cavern.

Ultimately, The Mojave Project is a celebration — and an appeal. Through its essays, photos, and various events, Stringfellow shows her audience that places like Devils Hole and the Amargosa Chaos and the Pahrump Valley exist, and not only that they exist, but they are complicated, wondrous, and, on the geologic time scale, fleeting. Stringfellow is saying, *Look. Look at what’s here. Look before it’s gone.* ✨

*This piece was supported by the International Women’s Media Foundation’s Howard G. Buffett Fund for Women Journalists.*





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## Home place

Rooting a new life under a juniper tree.

BY NINA MCCONIGLEY  
ILLUSTRATION BY TARA ANAND



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**MY HUSBAND ASKS** what I plan to do with my placenta.

It is spring, and we have been unexpectedly gifted some elk meat. He removes all the contents of our freezer to make room for portions of another animal's body. Parts of its shoulder, its haunches, and pieces of its belly line our counter, wrapped and packed into neat blocks of meat.

My placenta has been in the freezer for months, and now it is sitting on the counter, too, frozen like a steak in a biohazard bucket. I insisted this part of my body come home with us to Wyoming after I gave birth, and now I can't decide what to do with it.

The word "placenta" is derived from the Latin word for cake. Most mammals eat their placentas immediately after birth. I don't want to eat this particular cake, but I do make some Marie Antoinette jokes about it. A girlfriend sends me a webpage about how to "encapsulate" my placenta — you dehydrate it, grind it up and then tuck it inside pill capsules for easy ingestion — though she swears I'll have more energy and heal more rapidly postpartum if I just eat it. Instead, I just push the bucket farther back into the freezer and cover it with pints of ice cream, frozen burritos and a casserole I made in anticipation of the baby.

My daughter was born last year, on a crisp fall night. She was six weeks early, so I was transported by helicopter to a hospital in Colorado, as there is no NICU in our rural Wyoming town. For the first weeks of her life, she was sustained by medicine, lights, IVs, monitors. Her room was a cocoon of plastic and masks and gloves, completely cut off from the natural world. We were masked at all times, owing to COVID-19; she could not feel our breath, or the fresh air outside the hospital.

I asked to see the placenta after she was born. They took her away quickly; she weighed only 3 pounds, and she looked like a baby bird. The team that had moments before filled the room disappeared. Now it was just me, my doctor and a nurse. The nurse held the organ up. It looked like a sapling, I thought: Like a ball of roots, the thin cord like a trunk. The nurse asked if I wanted to keep it, and I didn't hesitate. Of course.

**IN SOME CULTURES**, the placenta is treated like the baby's twin. Others believe it is the baby's guardian angel. And many, many cultures believe in burying the placenta — that picking an auspicious place will give the child meaning, will connect them to place. I spent hours postpartum reading about placental traditions and superstitions, and I finally told my husband that

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## *Trees know about belonging, so I decided to bury the placenta under a tree.*

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we had to bury it to give our daughter a home.

"Isn't our house her home?" he asked. I thought of the crib he assembled, the rocker he moved up the stairs to be near our bed, the outfits that were washed and waiting on tiny hangers, the walls we painted yellow for her nursery.

I didn't want her to feel like me, unsure of what home means. Home for immigrants is slippery. I know about making a home, but I also know how it feels to miss one. Home is more than a house. Home is land. Home is having a solid place to come back to. Home is something I still have trouble explaining.

I grew up in a place marked by transience. My hometown of Casper, Wyoming, sits on the Pony Express and the Oregon, California and Mormon trails. So many people passed through here on their way from one home to another, heading farther West. Those who stopped here and stayed for good must have felt like us: here by weird happenstance or happy accident.

My family moved to Wyoming from Singapore when I was 10 months old. Wyoming is what I have always known; I took my first steps on Wyoming soil. And yet I have always felt othered, even though I am part of a long history of settlement, one that begins with the stolen homes of the Arapaho, Shoshone, Lakota and Crow. Every time I see or hear a land acknowledgment, all I can think about is all the homes that were lost.

When I was in my early 30s, I lived in India for a year. For the first time in my life, I was not in the minority on a daily basis. In India, people commonly asked me, "Where is your home place?" I knew it was because I did not seem Indian: My attempts at Tamil were laughable, my clothes not right.

"Wyoming. I am from Wyoming?" I would place Wyoming by its distance from better-known states. "Two states over from California?" Or I would just say "Yellowstone."

In the U.S., when people ask where I'm from, my answer — "Wyoming" — doesn't satisfy them. "No, where are you *really* from?" They can't imagine the West as home to someone who looks like me.

**MY MOM LOVES** big-box stores because they are some of the only places you can buy big bags of rice. We don't have an Indian or Asian grocery in Casper, and my mother laughs at the 32-ounce bags at the grocery store. Only in the membership stores can you find 20-pound burlap sacks of rice with images of the Taj Mahal stamped on them.

At these stores, we see other Indians. I recognize their carts, overflowing with boxes of mangos, tins of butter cookies and rice. The one thing I love about being Indian in a rural place is that the usual divides fall away: In the West, we are too few to segregate ourselves by language, caste or geography. Instead, we all recognize kin. We all see home when we see others who look like us. And yet we are all strangers, all explorers in this place.

When I think my placenta looks like a tree, I remember reading at a museum exhibit that trees recognize other trees of the same species in a process known as kin recognition.

Trees know about belonging, so I finally decide to bury the placenta under one of them, a juniper tree I pass every time I walk my dog on the prairie outside Laramie. A tree that, despite unforgiving wind and little moisture, continues to thrive. At my first in vitro fertilization transfer, I kept a branch of it, laden with navy berries, in my pocket in my hospital room. Months later, I gave birth to my daughter, Juniper.

I don't know if burying my placenta next to the juniper tree will give my daughter a sense of home or place. But I plan to teach her the things that have made me know home: birdsong, the familiar profiles of mountains, seeing patterns in the stars so far away from city lights, the smell of ponderosa bark, the conversation of the wind. And the special kinship that forms in this sometimes unforgiving place, where only a few stop to stay. ☀

*Nina McConigley is a writer and professor at Colorado State University. She is the author of *Cowboys and East Indians*. In her "Township and Range" column, she writes about the intersection of race and family in the interior rural West.*



# The ghosts of the tidepools

Queer history is all around us, even if it is obscured from sight.

BY SABRINA IMBLER

**WHEN MY PARTNER, T, AND I** pulled into the parking lot near Pillar Point on the California coast, the sky was still midnight blue. I was surprised to see we were alone; I'd expected the parking lot to be swarmed already, a squeaking flurry of rainboots and aurora of headlamps as other visitors hurried out to the rocky shore near the end of December, during an unusually low tide. But it was just the two of us amid daybreak's unspooling fog, which blurred the hard edges of the horizon. The lot was so resolutely empty that I peed in the port-a-potty with the door wide open, afraid of being trapped inside the squelching dark. I watched T adjust the plastic bags knotted around their feet and under their shoes, and then we trudged toward the dirt path that snaked around Pillar Point Harbor and toward the tidepools.

As we walked, the sun conjuring more and more horizon, T and I spoke of what we hoped to see at the tidepools: anemones, crabs, and, if we were lucky, the electric sherbet fringe of a sea slug called the opalescent nudibranch. I kept looking over my left shoulder, not in fear of a stranger but to see if the fog had lifted enough to reveal the harbor itself. By the time we'd reached the tip of the bluff, time to turn right and descend on the exposed reef, I looked back to the harbor to see nothing — only a veil of fog.

I admit I was rubbernecking. I wanted to see the stretch of beach where someone had died, or, rather, where their body was discovered in the sands — stabbed, beaten and strangled — on the morning of Nov. 26, 1983. Decades later, the murder still unsolved and body still unidentified, they'd become a cold case, known as Pillar Point Doe. I did not know them, was never alive when they were alive, but ever since I'd learned about their case, I thought of them occasionally and wondered about their life.

The day Pillar Point Doe died, they were dressed casually — yellow capri pants and a turtleneck, adorned with a silver-colored cross necklace. They wore a bra with foam padding, fishnet hose and two pairs of underwear. Despite their obviously feminine presentation, the

medical examiner deemed them male, John Doe #83-26, and the police released sketches that showed a man. So, for 35 years, their identity remained an enigma.

I learned about Pillar Point Doe while reporting a story about a debate in forensic anthropology over whether it is possible, or productive, to infer a victim's race from their skeleton. I'd read all I could about the unknowable gap between a person and their bones, how often and how long people can stay unidentified, and the many reasons why — the limits of technology, the presence of bias, the vanishing nature of the past. And I came across a story about the Trans Doe Task Force, which researches the cases of missing and murdered people who may have been queer or trans. The task force had taken on the case of Pillar Point Doe and commissioned a new forensic sketch, imagining a young person with ruddy lipstick and smoky eyeshadow. They used a genetic genealogy kit to track down Pillar Point Doe's next of kin, tracing their family from Wales to Utah, until they came across a high school yearbook photo that looked just like Pillar Point Doe. The team gave Pillar Point's birth name to the police, who have declined to release it.

Around that time in the fall, T and I booked tickets to fly home to California — our first visit since the pandemic started. I had never gone so long without visiting the Bay, and I desperately wanted to see the ocean again. After years of living in New York, busing to city beaches, I'd grown to love the gentle warmth of the Atlantic. But there was nothing like the Pacific, whose crashing waves and chilling waters made me feel vanishingly small. I wanted to take T tidepooling, to see the glassy pools of life caught between land and sea that had helped me fall in love with the ocean and all that teemed inside it.

I hadn't tidepooled since childhood, so I Googled all the best spots in San Mateo, cross-referencing them with the tide chart for the week we'd be in town. One spot seemed perfect, a rocky reef near an Air Force station that was "something of a holy grail for nudibranchs,"

according to a blog I read. I knew the slugs were hard to spot, shrouded by strands of seaweed and often no bigger than an almond or even a grain of rice. But it wasn't until I plugged the spot into my phone on the drive over that the name registered. Pillar Point: a harbor, a beach, a parking lot, a grave.

When T and I reached the reef, I saw the tide was low but not as low as I'd hoped. Many of the rock pools remained submerged, obscured by gleaming water. The tide appeared too high to have trapped any nudibranchs, or at least any that we could find. But what we did see astounded us: beetle-green anemones with pinwheeling tentacles, veined starfish clinging to rock, the pleated plates of a chiton. Whorled pearly shells lurked in every crevice, housing moon snails or hermit crabs — the only way to tell was to watch and wait to see how they moved. We identified everything we could — sunburst anemone, keyhole limpet, red rock crab — but many creatures' names eluded us. Oily ribbons of kelp gleamed in the morning sun, and we left with the rising tide. The fog had lifted too, revealing the entire harbor, which was unremarkable when compared to the reef, just tiny waves lapping a scythe of sand. I don't know what else I expected to see; of course, there would be no marker or memorial. We trudged along a trail by the harbor that disappeared into a green fringe of succulents. Wanting to leave no trace, or at least not step on anything living, T and I turned around. When we got back to the parking lot, I slipped off my bagged shoes to find the ocean had rendered my feet unrecognizable, wrinkled pink like a brain.

I didn't tell T about Pillar Point Doe until we left the parking lot. At the time, no moment felt appropriate to casually disrupt our day of wonder and slime with such an old tragedy. Enough trans death and trans trauma had happened in this decade, in our own lifetimes, and I suppose I wanted the moments we had with nature to feel precious and unspoiled by the real world. A time outside society, a time only for joy.

But so much of the queer history we have is



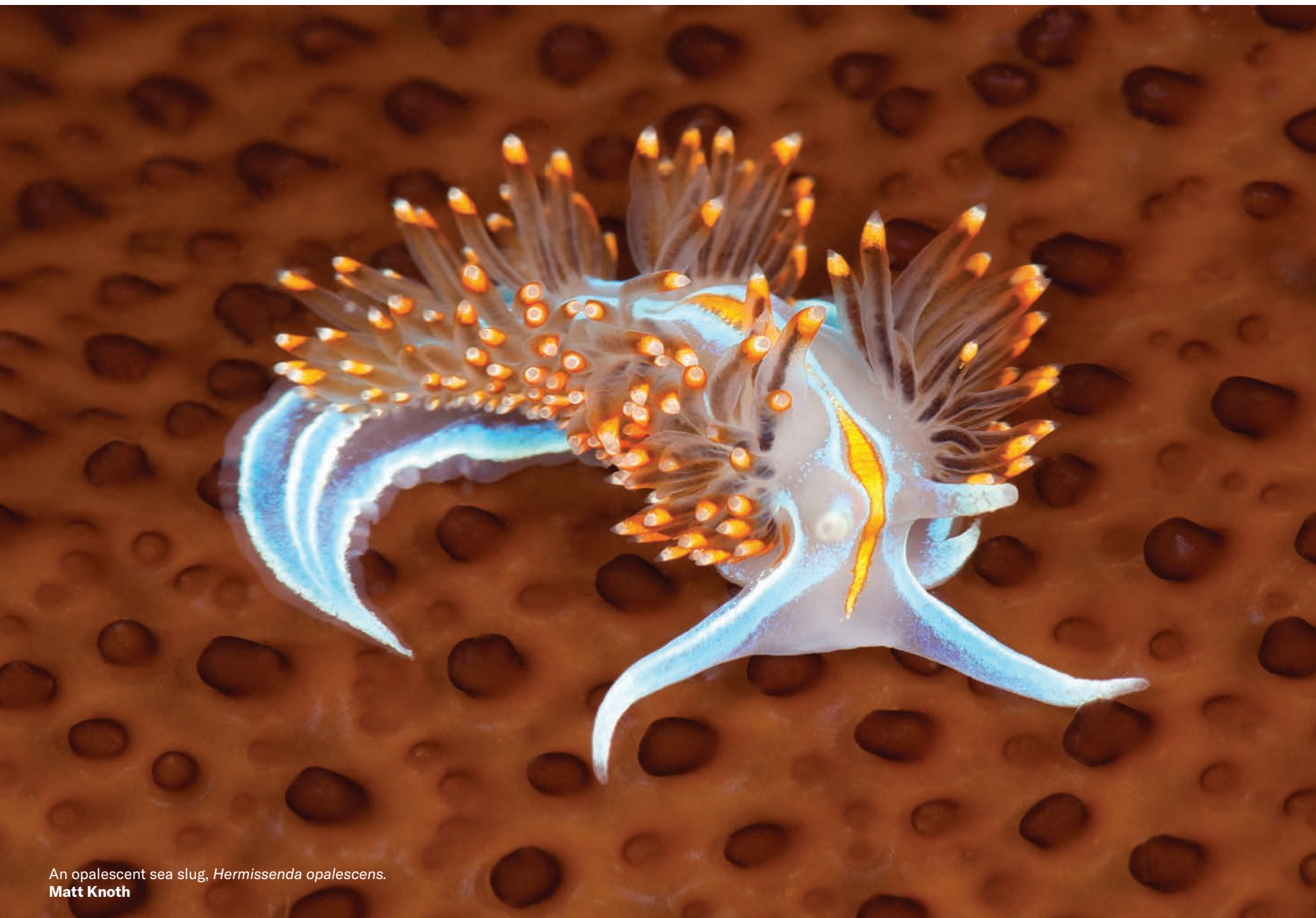
inseparable from tragedy. We learn that people existed through records of arrest, incarceration and invasive medical studies, all of which remember people by criminalizing or disordering their queerness. Sometimes these records are our only opportunities to remember.

The truth is that many of the living things we saw on the reef that day were surrounded by dead ones. Half of a rock crab, tossed between two gulls. The cracked shells of sea urchins. Smashed and opened mussels still adhered to rock. However idyllic the pools appear to us, they are rugged, extreme and constantly changing worlds. The creatures that make a living between water and land must adapt to drowning and drying out, holding fast amid crashing

waves. Life on the reef is precarious for anything not evolved to survive it. Perhaps this is why the opalescent nudibranch, born without any defensive toxins, steals the stinging cells of its prey to defend its own soft body on the reef. We cannot change how we are born, but we can change the way we live.

I have yet to see a nudibranch at Pillar Point, but I know they are there. A quick skim through iNaturalist reveals a scrolling grid of the bright shimmering sea slugs living in these waters — creamsicle-colored clown nudibranchs, flame-feathered aeolids, nubbly and kumquat-shaped orange-peel dorids. They were there, brilliant and gleaming and safely hidden, obscured from our sight. ✨

*We identified everything we could — sunburst anemone, keyhole limpet, red rock crab — but many creatures' names eluded us.*



An opalescent sea slug, *Hermisenda opalescens*.  
Matt Knoth



# Making Christmas cake in Compton

Reviving a family tradition eases holiday grief.

BY JENISE MILLER | ILLUSTRATION BY SIMONE MARTIN-NEWBERRY

**THE SWEET, SPICY AROMA** of cinnamon, allspice and rum wafted through the apartment, a hint of goodness to come. The fruitcake appeared once a year in our apartment in Compton during the Christmas Eve festivities my Panamanian family celebrated. As a child, I waited all day for my mother to place the cake at the center of the table, carefully positioned like a star on the Christmas tree. Though she had not made it in years, on the first Christmas after she died, I yearned for that glorious fruitcake.

Preparation usually began months, if not years, before Christmas. Rum and Manischewitz Concord wine remained in our kitchen cabinet solely for the purpose of soaking dried fruit in a one-gallon plastic jar. The jar of fruit sat on top of the refrigerator, the flavors melting into each other, long before the cake's advent. I knew of no other dish so virtuous that it required such patience.

I decided to make the fruitcake at the last minute, during the grief-stricken season that fell between my mother's November birthday and the December holidays. I had moved into my own home in Compton a decade before, but I didn't keep Manischewitz wine or dried fruit. I didn't have years to prepare a fruitcake, or any of my mother's instructions to guide me. She passed along burial insurance paperwork years before she died, but none of her recipes came down.

My mother saved recipes-to-try in a manila folder stuffed in a

kitchen drawer, but family recipes went unrecorded. Everyone in our family just knew how to cook. One of my paternal great-grandfathers, who came from Antigua, even worked as a cook for the U.S. Panama Canal Company. Recipes existed in memory and were activated through the senses. But making a cake requires specific measurements, and I had no handwritten, batter-splotched document to reference. Too much flour might yield a bread instead, an Easter bun out of its season, a shame to its maker.

The way my mother made fruitcake reflected our family's ties to the Caribbean countries of Antigua, Jamaica, Barbados and St. Lucia. I looked online for recipes for Caribbean fruitcake and found something called black cake, its color, ingredients and time-intensive preparation similar to the fruitcake I remembered. Guided by several recipes, a Caribbean cookbook, and the spirit of those before me, I conjured a recipe.

The first step was to replicate the jar of magic. I enlisted my father's help. He knew all the local stores that would have what I needed. Compton's location as the "Hub City" placed us within short driving distance of the Caribbean markets in South Central Los Angeles, including Stone Market on Crenshaw Boulevard, where we bought coconut milk and curry powder. We also shopped at Central American markets in South Gate and Huntington Park. Terms like "food desert" did not

reflect my experience. Living where we lived gave us access to the foods that enabled my parents to recreate dishes from their home country.

In Compton, we lived among families with roots in Peru, El Salvador, Mexico, Hawaii, Virginia, Louisiana, Texas, Mississippi, Samoa, Tonga, Panama, Compton. When our sixth-grade class held a parent potluck, my father asked my mother to make pan-fried chicken in spicy tomato sauce and fried plantains, an introduction through the food we ate to the places we came from. Neighbors with gardens and green thumbs often knocked on our door, offering bags filled with oranges, lemons, avocados or guavas. Our community had its own kind of bounty.

My father, pleased with his own resourcefulness, found raisins, currants and dried cherries at the grocery store and containers of lime-green and red candied fruit at the dollar store, instead of at the specialty stores we frequented. He supplied a Panamanian-brand dark rum from his sacred stash. I had all the ingredients only two weeks before Christmas Eve. Using everything but the candied fruit, I poured the fruit, rum and Manischewitz wine into a glass jar and closed it tight. I placed it in the corner of the counter until it was time to make the cake.

I already had basic ingredients — flour, sugar, brown sugar, salt, baking powder, baking soda, allspice, cinnamon, cloves, nutmeg — because of the kitchens I was

raised in. They were usually small spaces with two short composite-wood counters facing each other, a stove and a refrigerator with plastic vegetable and fruit magnets stuck to the door. We had three small-to-large canisters labeled sugar, flour and tea on the counter, a plastic picture of a flower bouquet or a wooden fork and spoon hung on the wall, and a cabinet filled with seasonings and dried herbs. I was never too far from the kitchen, always well-positioned for the first taste of every dish.

The kitchen was a space of my imagination. With no chimney, I thought Santa Claus entered in liquid form through the vent over the stove, then reconstituted himself to leave gifts under the tree. After watching a food show on TV, I sliced a chocolate candy bar and served the pieces with toothpicks to whoever was home. There were no break-ups or separations in the kitchen. Instead, it inspired the best moments that our family experienced together. Even when we ran the gas burners to heat the apartment, not knowing the danger, the kitchen provided us with its warmth.

When Christmas Eve came, I created a playlist of the salsa songs my mother cooked to, pausing during the dance breaks to spin me around. I assembled the ingredients on the counter. I made browning, an essential syrup that lends the cake its color, by simmering brown sugar in a pan, once and then a second time after the first batch burned. I mixed the wet and





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dry ingredients in separate bowls, then folded them into each other. I scooped some of the fruit out of the jar and chopped it finely, adding it to the bowl along with the juice. The mixture resembled chocolate cake batter.

The cake baked for hours. The moist and dense texture meant the toothpick test would not work. It was ready when the edges pulled away from the pan and its familiar scent filled my home. I set it on a rack to cool.

There were years when the cake did not appear. After my family left Compton, we moved almost 10 times over the span of three years, between North Long Beach, East Long Beach, Upland and Watts. No jar of fruit sat atop the refrigerator then. When we finally settled in an apartment in Watts, the jar appeared again, a sweet sign of rebuilding after loss. And then my mother stopped making fruitcake.

After the cake cooled, I cut a slice for myself and my father. “Put it in my hand,” he said. No plate or fork was necessary; the aroma welcomed every bite. “For your first time making it, it’s pretty damn good,” my father approved. I thought so, too.

I first ate fruitcake in my childhood apartment in Compton. Now, I made it in my own home in Compton, without the mother who first made it for me. I was preserving a memory like fruit soaked in wine. There was much I would still have to figure out on my own. But I had already been shown the way. ✨

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# 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 ARMANDO VEVE

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## CALIFORNIA

A middle school in Jurupa Valley reported a coyote running around the school and entering a restroom without a hall pass. The coyote, dubbed “Wile E.,” after the Looney Tunes cartoon character, had been spotted near the campus before, but until now, he’d never entered the school. Officer Will Luna of the Riverside Department of Animal Services cornered the coyote next to the toilet, according to the Palm Springs *Desert Sun*, and successfully captured him. Luna also filmed and narrated the encounter, which concluded with Wile E.’s release some distance away from school property. A spokesperson for the coyote community blamed the entire incident on “the road runner problem,” adding that a lawsuit had been filed against ACME Co. for selling faulty dynamite.

## UTAH AND ALASKA

We’ve all put on a few COVID pounds over the last couple of years, and the squirrels in Zion National Park are no exception. KSL NewsRadio reports that the park initiated Fat Squirrel Week hoping to help the rotund rodents slim down a tad. There’s nothing more adorable than a chonky squirrel, but you can have too much of a good thing, and the park says that “some of the fattest squirrels on Earth make their home on Riverside Walk.” The nut gatherers’ extra girth comes from all the goodies — banana and orange peels, etcetera — visitors leave behind. The park urges snack-toting humans to become “squirrel stewards” by learning about rock squirrels and not leaving food waste behind.

If Fat Squirrel Week sounds

familiar, that’s because Zion borrowed the idea from Katmai National Park’s Fat Bear Week, Alaska’s annual quest for the fattest and grandest brown bear in all the land. This year, the competition had to deal with scandal by way of voter fraud, but ultimately, 747, aka “Bear Force One,” won the title against some fierce competitors.

## WASHINGTON

When Khristopher La Plante told us that Washington Gov. Jay Inslee was renaming the state’s 26 ferries after the Seattle Mariners, we thought the change might be permanent. And it got our dander up: Not only are the boats beloved by residents of the Salish Sea Islands — including Khris, who has commuted to Seattle by ferry for decades — but the ferries were originally named after Washington’s tribes and regions. Fortunately, the renaming is temporary. Washington

State Ferries tweeted out: In honor of the @Mariners, @Govinslee has directed that all 21 vessels in our fleet be temporarily renamed after players and personnel starting tomorrow 10/13 through as long as the #Mariners remain in the 2022 @MLB Postseason.” *The Seattle Times* helpfully listed all the vessels’ temporary monikers: “Cathlamet: M/V Diego Castillo; Chelan: M/V J.P. Crawford”... and so on.

## NEW MEXICO

It’s fitting that someone named Zip Stevenson would own Denim Doctors, a vintage clothing company in Santa Rosa. Stevenson teamed up with Kyle Hauptert, who works in vintage clothing in San Diego, to bid on a pair of Levi’s found in an old New Mexico mine-shaft by “denim archaeologist” Michael Harris, according to NPR. The jeans, which date from the 1880s, were in great shape, although

slightly roughened up, and the clothing dealers walked away with them for the winning bid of \$76,000 — \$87,000 with the 15% buyer’s premium. NBC BayArea.com reports that the jeans offer “a snapshot of the era,” and not a flattering one, owing to the loaded phrase imprinted on one pocket. Levi Strauss & Co. said that the words “The only kind made by white labor” were added to its products following the Chinese Exclusion Act of 1882, which established a 10-year ban on Chinese laborers seeking to immigrate to the U.S., despite the role they played in building the nation. What’s to become of the \$87,000 jeans? Stevenson said, “Most of the jeans that are known are in institutions,” but he and his business partner are willing to sell these for, um, “at least \$150,000.”

## WASHINGTON

When some civil servants/merry revelers in Prosser, Washington, demonstrated their Halloween spirit with a “Karen”-themed exhibit outside of City Hall, upset residents protested, with one gentleman — who was *not* named Karen — accusing the town of being “distasteful, hurtful, totally inappropriate, childish and mean,” the *Washington News* via *Tri-City Herald* reports. “Scary Karen” was created for the annual Halloween decoration contest, but after the complaints, city officials, noting that “Karen” was considered a “controversial pejorative aimed at privileged white women,” ordered the display to be taken down. Sometimes demanding to “speak to the manager” really does work, it appears. ☀





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# #IAM THE WEST

**JUSTIN FAVELA**  
**Multidisciplinary Artist**  
**Las Vegas, Nevada**

The desert is home to me. My family's here. The air is different; the sun just hits you a little bit harder. It's still the wild West out here, and it is such a unique experience living in a place where the world comes to play. People come to get rowdy and to let their guards down, which is ripe with inspiration for my visual art. I am interested in exploring the notions of authenticity, place and identity using familiar materials to make large-scale installations, sculptures and paintings. My interest in art history, Latinx culture, community, celebration, home, and my obsession with pop culture, informs my practice with the intention of dismantling institutional hierarchies. I can breathe a little lighter when I get off a plane in Las Vegas. Desert people are just different; they were born to survive.

Do you know a Westerner with a great story?  
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