

Special Issue: FOOD & POWER in the WEST

High Country News

**WHO
CONTROLS
OUR
FOOD?**

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No. 9 • hcn.org

This issue was produced in partnership with
the Food & Environment Reporting Network.

**ALASKA'S
VULNERABLE
FOOD SUPPLY**

**HOW
MEATPACKERS
EXPLOIT
REFUGEES**

**INSIDE AN
INDIGENOUS
FOOD LAB**



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A road winds through a pecan orchard in New Mexico's Mesilla Valley. This water-guzzling crop has come to dominate farming here despite the area's inhospitably dry desert climate. (See story on page 18.)

Paul Ratje / 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 \$45 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.



Behind the Fork

HOW MANY CORPORATIONS, lawmakers and individuals stand between you and the food you eat? How is that food created, on whose land, with whose labor and with what resources? Who controls the systems that bring food to your community? To try to answer these questions, *High Country News* teamed up with the Food & Environment Reporting Network, an independent, nonprofit news organization. For many months, our two newsrooms have worked together to explore whose hands are on the levers that control the food systems in the Western U.S. Our findings have been at once dismaying and encouraging.

The stories, essays and artwork in the following pages examine the political, economic and environmental conditions that have created our complex and often unjust food system: the exploitation of immigrants, the misuse of natural resources, the legacies of racism and more. But we also looked beyond the magnates who control large portions of the produce and meat that make it to market, finding small alternative food systems that are working to put power back in the hands of farmers, ranchers and ordinary Americans.

As crops are harvested around the West and another growing season draws to a close, we are pleased to bring you this special issue on who holds power over your food. Our food system is fundamentally a transactional endeavor with the land we live on, and it ought to contribute to a sustainable and healthy future for all species and landscapes. When it falls short, as it mostly does, the damage to our health, environment and the social fabric of our communities can be severe and long-lasting. We hope that this special issue of *High Country News* will draw attention to the troubling and surprising stories behind what we eat.

Jennifer Sahn

Editor-in-Chief, *High Country News*

Theodore Ross

Editor-in-Chief, Food & Environment Reporting Network



National Park Service

The national parks are not OK

A former national park supervisor explains how toilets may be clean this summer, but the parks themselves are actually 'hollowed out.'

By Christine Peterson



Colville Confederated Tribes Fish & Wildlife

The Trump administration's repeal of the roadless rule could threaten wildlife

A 2001 policy restricts road construction on Forest Service land. What happens to at-risk species if it's removed?

By Shi En Kim



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Special Issue:
FOOD & POWER *in the WEST*

Food Is Power

Consolidation, shifting politics, water rights and the myth of the cowboy all play into the region's ability to feed itself.

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The Making of an Indigenous Food Lab

It took fighting bureaucracy, raising funds and canvassing communities to launch a program for researching and sharing Native foods.

BY B. 'TOASTIE' OASTER
ILLUSTRATIONS BY ITZIAR BARRIOS GRANADOS

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How Big Ag is threatening New Mexico's water supply.

BY JEREMY MILLER
PHOTOS BY PAUL RATJE

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On the connection between old-growth forests and what's in your fridge.

BY RICK BASS

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The Road Not Taken

Trump threatened Canada, so Canada vowed to tax U.S. trucks traveling the Alaska Highway, and the whole messy reality of feeding the 49th state spilled into view.

BY EVA HOLLAND
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How America's largest beef producer exploits refugees for profit.

BY TED GENOWAYS, ESTHER HONIG, AND BRYAN CHOU
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Acknowledging the work of farmworkers through art.

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Eating Bitterness

For the Chinese immigrants who built the Transcontinental Railroad, food was a tool of both oppression and resistance.

BY PAISLEY REKDAL
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Working Together Is Everything

On the joyful responsibility of cutting fish.

LIFEWAYS BY LAURELI IVANOFF
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"It's important to tell the public who is behind our food production, to highlight the farmworkers. I want to raise awareness of their presence, of their contributions, of their humanity."

—NARSISO MARTINEZ

FRESH IS OUR FAVORITE

*Ink, charcoal, collage and acrylic on red seedless grape box,
24 x 16.5 x 6 inches, 2024. Photo by Yubo Dong.
Courtesy of Narsiso Martinez and Charlie James Gallery, Los Angeles.*



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ON THE COVER

Who Controls Our Food?
Illustration by
Jason Holley / HCN

HighCountryNews



This is a special issue of High Country News, produced in collaboration with the Food and Environment Reporting Network.

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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.

DIGITAL VAMPIRES

The very timely article “The big digital buildup” (August 2025) was in my hands a day after the Tucson City Council voted down, by unanimous approval, Project Blue, which would have annexed desert property simply to enable Amazon and its front men to build data centers using Tucson city water and Tucson Electric Power.

John R. Leech
Tucson, Arizona

All data centers should be required to produce their own energy. Their high demand is requiring electricity rates to go up and be paid for by taxpayers. We did not ask for AI; it’s being forced on us, and the people who are doing the forcing need to pay for the electricity.

Gee DeMadera
Via Facebook

WE CAN’T FORGET THE PAST

“The Presence of Sheep” (August 2025) is a horrific story about

livestock genocide on Diné lands, and a reminder that there are so many grotesque things in our history that are never discussed outside the communities they affected.

s.e. smith
Via Bluesky

MAKING IT WORK

Environmental conservation and protection are much harder under President Donald Trump, but states are still trying to make it work (“From oil field to oasis,” August 2025). Great article, as always, from *High Country News*.

Philip Loring
Via Bluesky

THE POWER OF GOOD PEOPLE

“The Heat Between Us” by Adam Mahoney (July 2025) is a tragic but inspiring story. The work of Tiffany Hawkins and Darren Chapman once again shows us that we the people are not powerless and should never believe that we are for one minute. When I lived in Glendale, Arizona, in the early ’90s, it was already apparent that the orange groves and cotton fields were succumbing to housing developments. We joked then that development occurred at the rate of an acre an hour. It’s easy to isolate oneself in one’s home, especially as one

gets older, and not meet or interact in any meaningful way with the neighbors. It takes courage, persistence and hard work to build well-connected neighborhoods. Thank you, Ms. Hawkins and Mr. Chapman. You are an inspiration. Yesterday, I took one small step in my neighborhood to follow in your footsteps.

Mary J. Talbott
Colorado Springs

TAKE IT OUTSIDE

The July 2025 *HCN* was full of wonderful articles! When I opened the magazine, I actually took the editor’s note’s suggestion to take it outside, and that was just what I needed at that moment. I loved both feature articles — “Seeds of Diaspora” and “The Heat Between Us” — for their messages of hope and community. The seeds article was so beautifully drawn and tenderly written. It really hit home with me in the context of lots of other things going on in the world, not just climate change.

Betsy Moore
Hesperus, Colorado

SCIENTISTS SPEAK OUT

It is difficult to imagine a more critical and timelier article than Ruxandra Guidi’s “Politics and science can mix” (July 2025). Scientists need to speak up loudly, clearly and repeatedly in our fast-changing and often misguided political arena. Guidi mentions Rachel Carson’s book *Silent Spring* about the dangers of several then widely used pesticides. At the time, Carson was vilified by the chemical industry, but her book eventually led to significant and lasting changes.

Another scientist, Linus Pauling (Nobel Prize in chemistry 1954) spoke out strongly about nuclear proliferation. Like

Carson, he was also vilified, but his activism resulted in greater public awareness of the threat and his second Nobel Prize, for peace, in 1962.

Fortunately, as Guidi notes, scientists are becoming less reluctant to speak out. There are many scientists today who can be commended for their efforts to counter incorrect public perceptions and ill-advised public policies. This is no time for anyone — especially scientists — to stay on the sidelines.

John Whitmer
Bellingham, Washington

RESOURCES FOR RESILIENCE

The recent article “Finding community in a world of wounds” (July 2025) profoundly captured the angst that many of us are feeling: a need to seek connection in a world where the natural environment is being overwhelmed by the man-made economy, and a political arena in the United States that feels akin to a Roman gladiator spectator event.

I have been teaching a course in environmental economics for the past 12 years at Colorado’s Front Range Community College — a scientifically sound and rational approach to policy if we can ever develop the political will to implement it. There are other economic policies besides unlimited growth, which is simply suicidal and needs to be called out as such.

The Great Turning by David Korten offers a way to “think outside the box” of the dominant economic paradigm and provides an inspiring vision that would reverse the past several centuries of global conquest and domination, a vision which I am glad to see that *HCN* is helping to bring about.

Rick Casey
Fort Collins, Colorado

CORRECTION

We misspelled the name of Page Hill Starzinger, author of our July poem, “The Cry.” We regret the error.

Food Is Power

Consolidation, shifting politics, water rights and the myth of the cowboy all play into the region's ability to feed itself.

DATA VISUALIZATION BY NICK UNDERWOOD
INTRO BY BROOKE LARSEN

MANY COMMUNITIES have foods that define them: Los Angeles has tacos, Green River, Utah, has melons, while New Mexico's Hatch Valley is famous for its green chiles. Historic power dynamics — from colonization to migration — have always influenced how and why people began growing, cooking and consuming these symbolic dishes and crops. Today, these foods and those who prepare, raise and sell them carry cultural power; people travel hundreds of miles to buy a juicy Crenshaw or sweet canary melon from a family-run stand in Green River. And yet the farmers themselves often struggle to stay afloat. They lose access to markets as large companies buy up smaller, locally run grocery stores.

Most grocery stores across the West trace back to a few major corporations. Whether you're visiting King Soopers in Colorado, Smith's in Utah or Fred Meyer in Oregon, you'll find the same Kroger-brand products. The original names of the once-locally owned grocers might remain, but the shops are now just part of one of the nation's largest grocery corporations.

A handful of companies control the production and distribution of most of our food,

and the West plays a leading role in that system. The U.S. headquarters for the world's largest meatpacker, JBS S.A., is in Greeley, Colorado, while Driscoll's, the largest berry producer, is headquartered in Watsonville, California. These companies rarely confront the riskiest parts of agribusiness, raising the cows and growing the berries. Instead, they produce, brand and ship them.

This global food system has profound impacts on the West's farmers, workers and consumers. It's getting harder for family farms to turn a profit, and those who seek alternatives to the consolidated corporate market must navigate complicated policies and finances in order to sell directly to consumers. Berry-pickers and meatpacking workers — often immigrants — face exploitation and unsafe conditions, with workplace protections varying from state to state.

Meanwhile, food insecurity has increased across the West, and yet Republican-led states, including Utah and Idaho, opted out of a federal summer grocery program for kids last year, in part because of anti-welfare politics.

Beyond its connection to this international system, the West has deeply rooted myths and policies around water and land that

create and sustain other layers of power. In the 1800s, settlers stole land from Native people and killed off bison as they drove tens of thousands of cattle westward. Ever since, the cowboy and his glorified cattle have held cultural power that politicians are rarely willing to tarnish.

As "The Big Four" meatpackers have consolidated most of the beef industry, the economic power of ranchers has dwindled. Only 2% of U.S. beef comes from cows that graze on public lands, and yet multigenerational ranching families and large landowners continue to influence and benefit from antiquated federal grazing policies.

Most land in the Eastern U.S. is privately owned, but the federal government owns nearly half of all land in the West. Ranchers graze cows on huge swaths of public lands, paying fees well below the actual cost of managing those lands. Over the past century, grazing policies have changed little even as cows destroyed native vegetation and degraded waterways. State and federal policies often put the health of livestock above that of the region's arid soils or the lives of large carnivores like wolves and bears.

Ranchers and Big Beef also intersect and overlap with those who control water in the West. Agriculture consumes nearly 80% of the water diverted from the drought-stricken Colorado River Basin, primarily to grow alfalfa and other cattle-feed crops. An investigation by *ProPublica* and *The Desert Sun* found that most of the water consumed in California's Imperial Valley goes to just 20 farming families, with one of them using more than the entire metropolitan area of Las Vegas. Only four of those families use the majority of their water rights to grow foods people consume, like broccoli or onions.

The rest use their water to grow hay for livestock.

Many of these families have senior water rights, and that increasingly means power in the arid and rapidly growing West. Together with livestock associations, irrigation districts and their political allies, they have sought to influence food and water policy.

Yet in some parts of the West, other interests are gaining power. In the Northwest, years of advocacy from tribes and environmental groups led federal agencies to decommission dams on rivers like the Elwha and Klamath. The farmers might worry about their ability to continue irrigating, but tribes are reclaiming their traditional foodways as salmon return.

And the Northwest's rivers aren't the only places where tribes are reasserting their culture and food sovereignty: Indigenous-run restaurants, farms and cooking classes are springing up across the West.

Farmers markets, mutual aid efforts and community gardens are creating new forms of cultural, social and economic power, often led by and benefiting those who are excluded and marginalized, including queer, immigrant and Black farmers. Their efforts encourage people to take back intrinsic food traditions while they act in resistance to the global, capitalist food system.

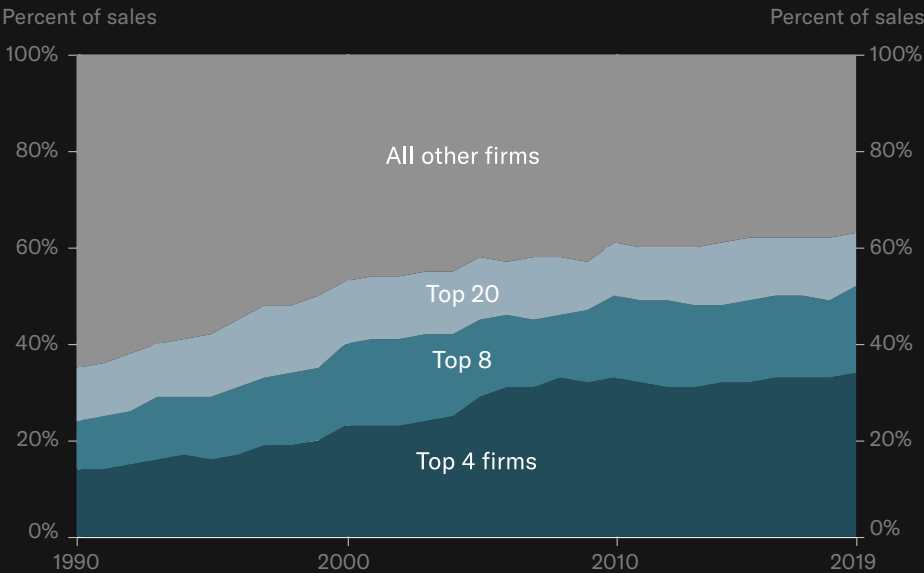
Still, the corporate structures of our food system are so deeply entrenched that they can be hard to fully comprehend or even notice. In this region, food is power, and that power is not equally shared. Before that can change, however, we need to understand the complexities of this system, tracing its roots to the growth of retail giants and the consolidation of Western agricultural production. 🌱

The growth of grocery giants in the West

A handful of powerful corporations dominate the U.S. grocery market. Over the last few decades, these firms have consolidated their control, leaving a shrinking share of the market for local, independent grocers. Grocery giants and their supporters claim that economies of scale enable them to offer lower prices to consumers. But critics say that these conglomerates' size gives them too much power, not only over their consumers, but also over suppliers and workers.

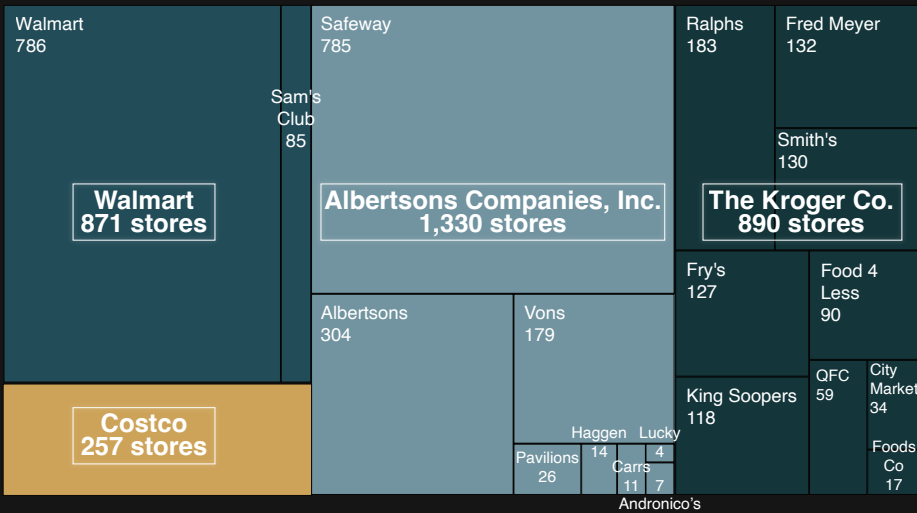


Corporate consolidation in U.S. grocery



Source: USDA Economic Research Service

Breaking down the West's big grocery conglomerates

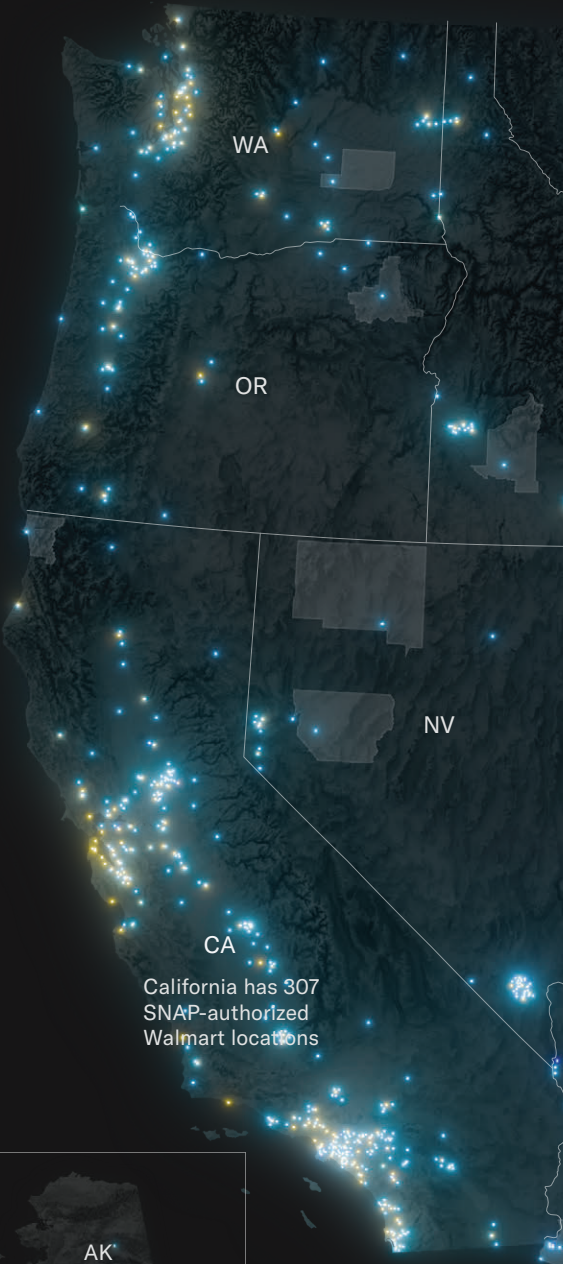


Note: Walmart, Kroger, Costco and Albertsons were the four largest firms in grocery by market share in 2023, according to industry reports. To estimate the footprint of these grocery giants, HCN used USDA data on SNAP-authorized grocery stores. While not every retail location accepts SNAP, we cross-referenced the data with corporate reports and found our totals closely matched the store counts listed by the largest firms.

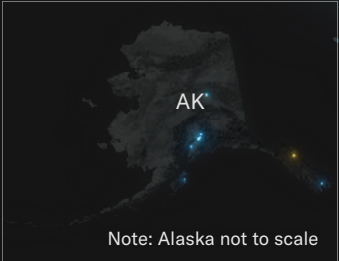


The West's superstore empires: 1,128 Walmart & Costco stores

Walmart/Sam's Club Costco
Area where Walmart's market share was at least 50% as of 2018



California has 307 SNAP-authorized Walmart locations

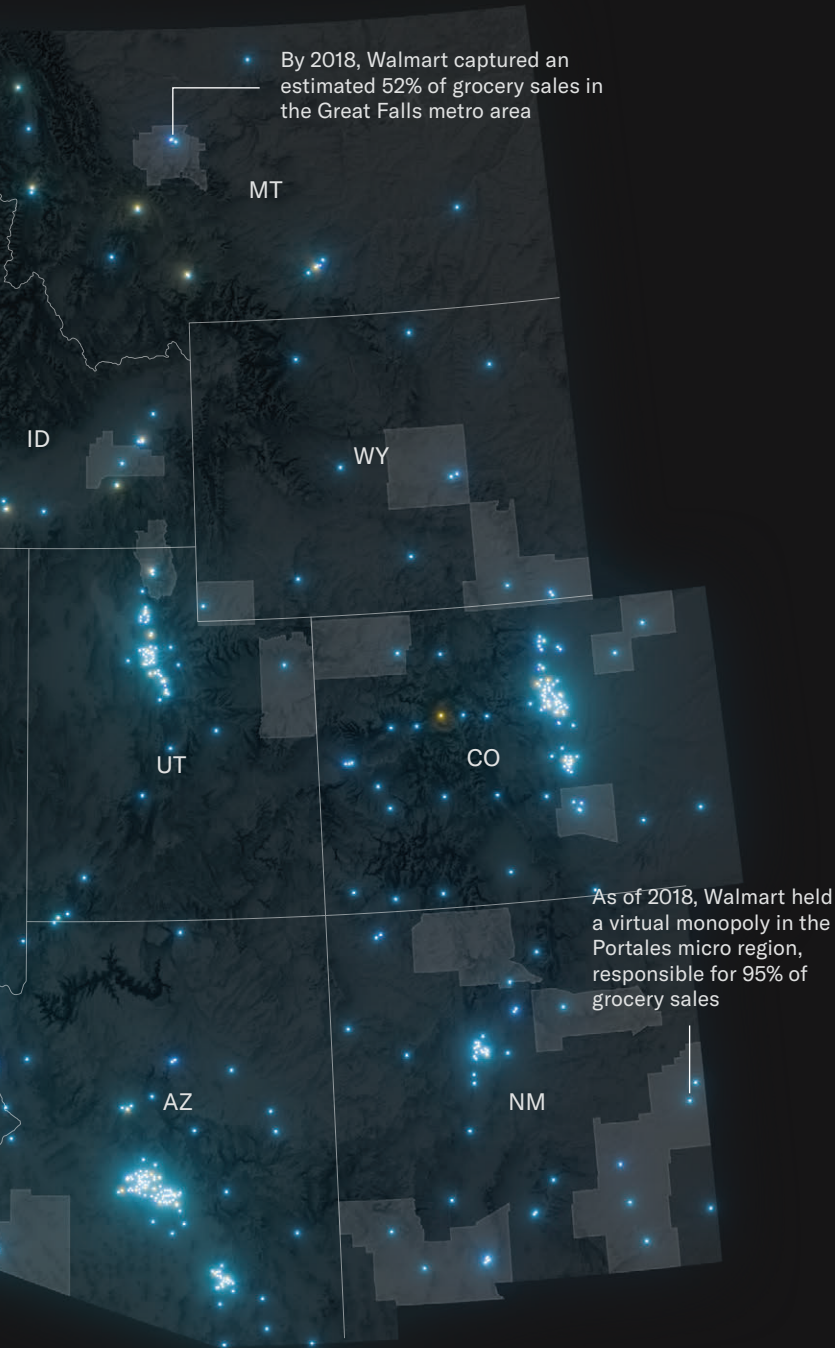


Note: Alaska not to scale

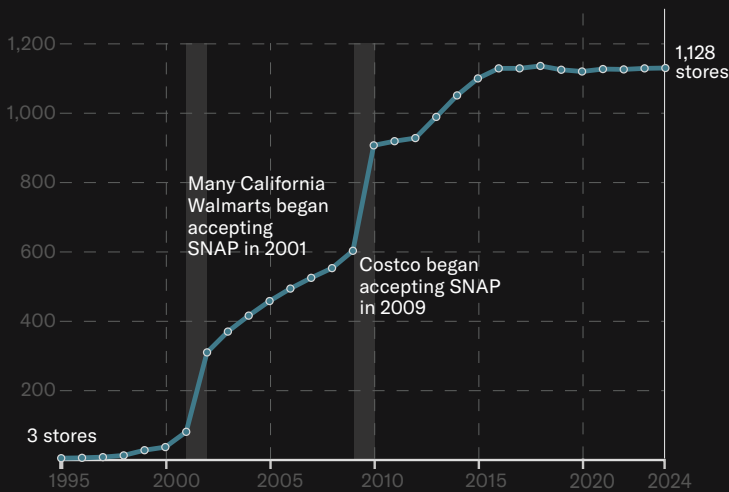
The rise of Walmart and other superstores since the 1980s has fundamentally altered the grocery landscape. By 2018, according to a study by the Institute for Local Self-Reliance, Walmart was responsible for over 50% of grocery sales in **28 statistical regions** in the Western U.S..

“No other corporation in history has ever amassed this degree of control over the U.S. food system.”

—Stacy Mitchell, Institute for Local Self-Reliance, describing Walmart



SNAP-authorized Walmart & Costco stores in the West



Note: Includes SNAP-authorized Sam's Club stores, which are owned by Walmart. Store totals are for the 12 Western states.

The rise of Walmart

Walmart expanded into groceries in earnest with the opening of its first SuperCenter in 1988. Throughout the 1990s, the retail giant's market share soared as it used its massive scale and influence over suppliers to offer lower prices than traditional grocers could.

2001	The retail giant became the largest seller of groceries in the nation.	X
\$314 billion	Estimated sales by 2023, according to industry reports.	X
29%	Share of the U.S. grocery market Walmart held in 2023.	X
SUBTOTAL		0.00
TOTAL		0.00
CREDIT TEND		0.00
CHANGE DUE		0.00

ACCOUNT #
APPROVAL # 08597L
REF # 973709900492
TERMINAL # 6909574704

ITEMS SOLD 3

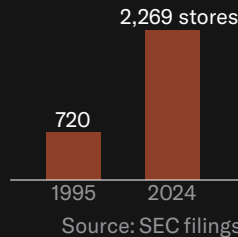




Behind the illusion of competition, a consolidated grocery market

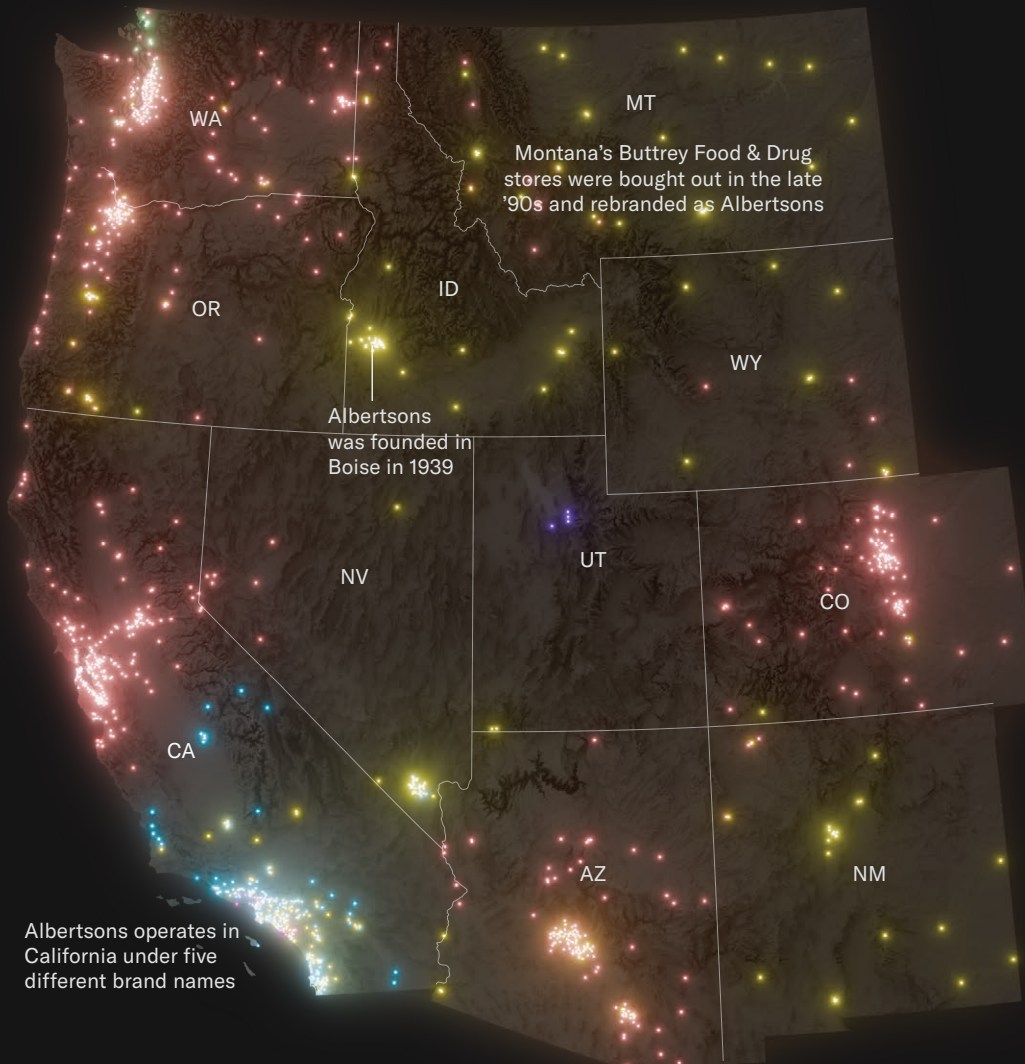
Confronted by Walmart's growing power, traditional grocers like Albertsons and Kroger responded with a spate of mergers and acquisitions starting in the early 1990s. Albertsons now owns over 1,300 stores in the West, though few of the shoppers patronizing Safeway and Haggen may realize that those stores are owned by the same firm. In December of 2024, the Federal Trade Commission blocked a proposed merger between Albertsons and Kroger after a number of Western states sued, arguing that it would further limit competition and raise prices for consumers.

Albertsons' U.S. growth



Albertsons stores across the West

● Albertsons ● Safeway ● Vons ● Pavilions ● Haggen ● Lucky ● Andronico's



Bellingham as a case study in consolidation

The shifting grocery options available to SNAP-recipients in Bellingham, Washington, from 1995 to 2024 epitomize wider trends in the West. In 1995, most of the possible alternatives were local — chains like Haggen, which was founded in the city, or independent grocers like the Community Food Co-op.

By 2024, the rise of the superstores and the merger craze in the traditional grocery market had left its mark on Bellingham. Giants Walmart and Costco had entered the market, as well as Target and Trader Joe's. Haggen and Fred Meyer were snapped up by Albertsons and Kroger respectively.

Despite the arrival of these grocery behemoths in Bellingham, independent grocers have managed to survive and even increase in number. But this isn't the case nationally: USDA statistics show that by 2015 independent grocers' market share shrank to just 11%. From 2005 to 2015, the total number of independent grocers nationally stayed even at about 21,000, despite significant population growth.

Bellingham now boasts three farmers markets instead of just one, as well as a number of independent grocers catering to Hispanic and Asian immigrant populations.

Farmers markets throughout the U.S. have exploded in popularity since the 1990s.



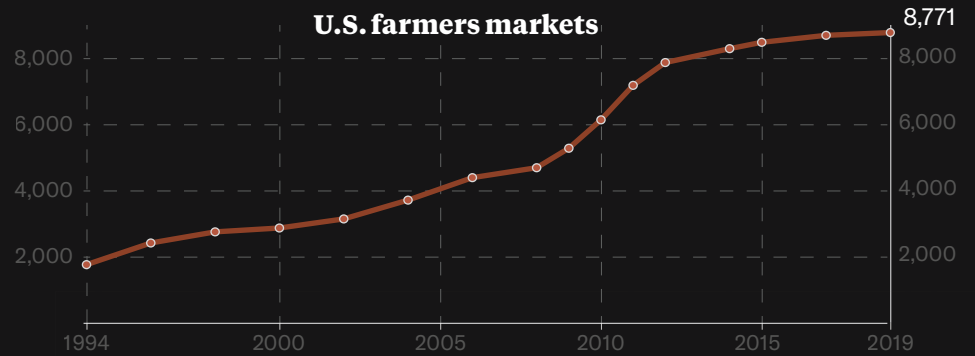
- Independent grocers, farmers markets
- Local/regional grocery chain
- National/large grocery chain

Costco
Fred Meyer (Kroger)



Farmers markets — a bright spot in the grocery landscape

The rise in the popularity of farmers markets since the mid-1990s has been a positive counterpoint to the relentless march of corporate consolidation. Nationally, the number of farmers markets more than quadrupled from 1994 to 2019.



Farmers markets in the West

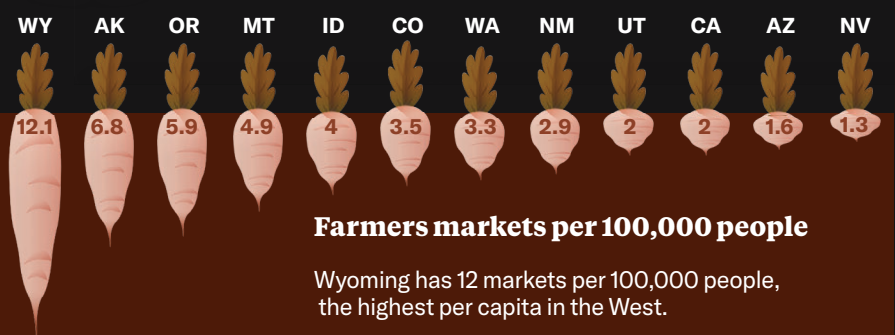
In 2025, there were an estimated 2,070 farmers markets and on-farm markets scattered across the 12 Western states, according to USDA's Local Food Directories, with the majority located in densely populated metro areas.

County without farmers market

No farmers markets are listed in 136 counties (31% of the region's total), mostly rural counties with fewer than 30,000 people



Despite being an agricultural hub with a population of more than 180,000, Imperial County has no farmers market listed



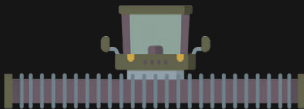


Get big or get out: Consolidation in agricultural production

The small family farm holds a special place in the American imagination. Today, however, a modest and diminishing portion of our nation's food is grown on small-holder farms. Production is shifting to larger-scale factory farms in every Western state and across nearly every commodity.

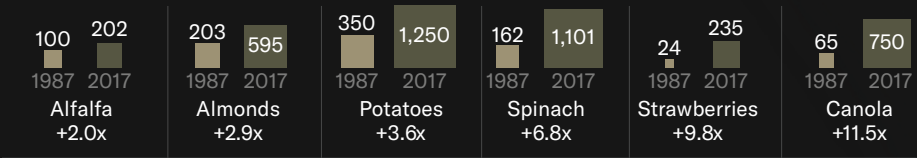
Production shifts to larger farms

Midpoint acreage by state

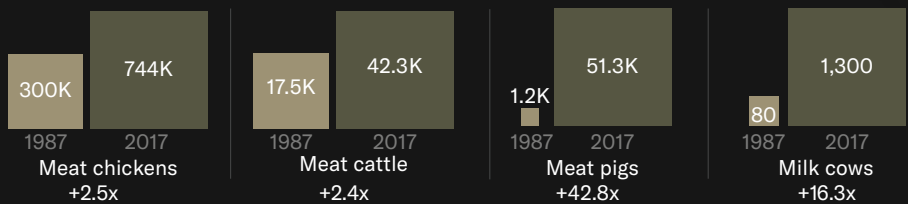


Marked growth for select goods

Crops, midpoint acreage



Livestock, midpoint animals sold/inventory (scale varies)



Note: The midpoint represents the acreage where half of all cropland is on farms larger than the midpoint size, while the other half is on smaller farms. This measurement is a robust measure of central tendency that takes into account the weight of each data point.

Source: James MacDonald / Census of Agriculture 1982-2017; Icons by Freepik / Flaticon

Giants of agricultural production

Since the 2018 Farm Bill was passed, agribusiness has spent more than half a billion dollars influencing elected officials through lobbying and direct campaign donations, according to the Union of Concerned Scientists.

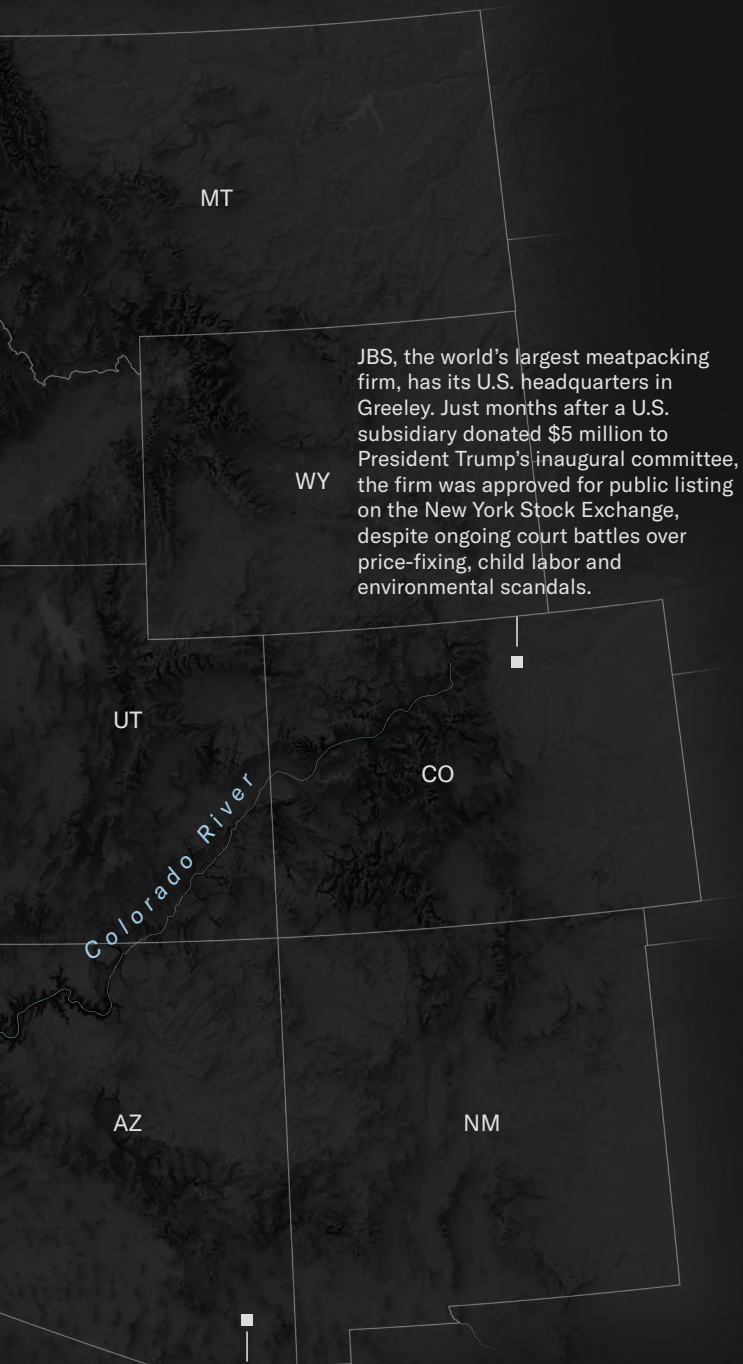


78%

Market share held by 6% of U.S. farms (105,384 large farms)

1.8 million

The number of smaller farms that hold the remaining 22% of the market

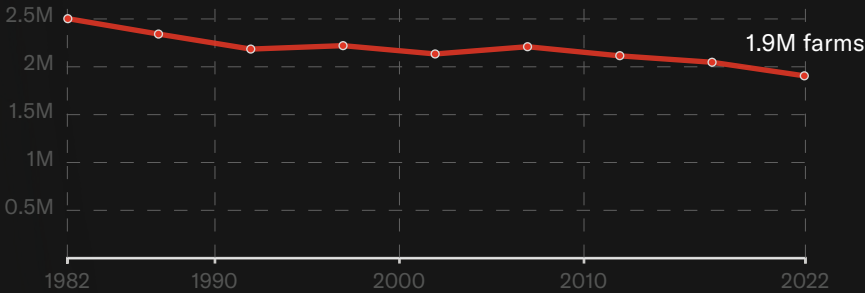


JBS, the world's largest meatpacking firm, has its U.S. headquarters in Greeley. Just months after a U.S. subsidiary donated \$5 million to President Trump's inaugural committee, the firm was approved for public listing on the New York Stock Exchange, despite ongoing court battles over price-fixing, child labor and environmental scandals.

Minnesota-based mega-dairy Riverview LLP, which owns at least 25 facilities in five states, bought out nearly 30 local farmers in Arizona's Wilcox Basin and has been blamed for depleting the region's groundwater.

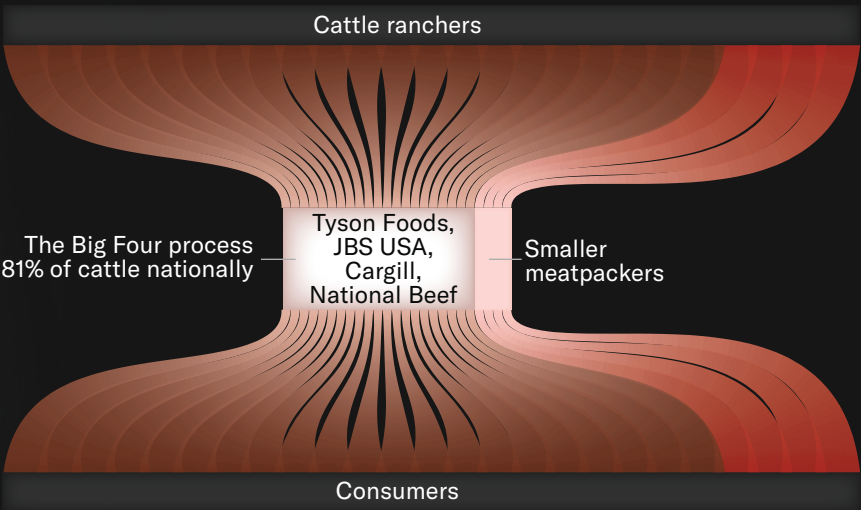
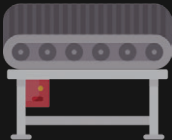
Net loss of 600,000 U.S. farms 1982-2022

The trend towards consolidation in the food system has made it increasingly difficult for smaller farmers to compete and stay in business.



Concentration in meatpacking

The meatpacking industry is concentrated to an extraordinary degree, with an estimated 81% of U.S. cattle and 65% of hogs processed by "The Big Four" meatpacking corporations as of 2021. Critics say this market stranglehold gives The Big Four too much control over both ranchers and consumers.



Source: USDA Agricultural Marketing Service, 2021

The above hourglass power dynamic is not unique to meatpacking; it's also conspicuous in the seeds, agricultural chemicals and food retail markets. The concentration of power in these industries allows a handful of companies to dictate prices and production methods, trapping Western consumers in a food system that prioritizes corporate profits over sustainability, diversity and equity.



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The Making of an Indigenous Food Lab

It took fighting bureaucracy, raising funds and canvassing communities to launch a program for researching and sharing Native foods.

BY B. 'TOASTIE' OASTER | ILLUSTRATIONS BY ITZIAR BARRIOS GRANADOS

A MUG OF NETTLE TEA steams by a fresh slice of huckleberry pie. The oven stands dormant, sinks quiet and clean. Baskets, jars of herbs and bulk ingredients like dried plums, tricolor popcorn and several varieties of seaweed adorn the shelves alongside gleaming pots and hanging garlic braids. It's not an auntie's kitchen on the rez, or a new Bay Area restaurant. It's a university research lab — the Rou Dalagurr Food Sovereignty Lab and Traditional Ecological Knowledges Institute. "We want people to feel invited into the space, to encourage them to learn with and from Indigenous knowledges and sciences," said Cutcha Risling Baldy, who speaks and moves as though unafraid to take up space as she serves up pie and tea.

At Cal Poly Humboldt in Arcata, California, Risling Baldy (Hoopa) is associate professor and former chair of the Native American Studies Department, which founded the Food Sovereignty Lab. It's the first lab in a California State University dedicated to researching Indigenous food systems — the acorns, salmon and seaweed of the Wiyot, Karuk, Yurok, Hoopa and Tolowa people along with Native foods from other regions, like maize. But it's also for sharing Indigenous foods with the public and serves as a refuge where students can hang out, prep meals and learn about personal health. Over pie and tea, Risling Baldy told the story of how the lab came to be.

It started with a former convenience store, which in 2019 stood empty on campus. "It was a store that primarily served, like, donuts and Red Bull," Risling Baldy said. She had been teaching a class on Indigenous natural resource management, and instead of assigning term papers, she asked students what they wanted to work on. They decided to research how other California campuses had

Indigenized and to compare their findings with Cal Poly Humboldt.

They saw a need for a centralized space for the Native American Studies department. The empty convenience store seemed perfect. Students then canvassed local Native communities to find out what they wanted. "Out of that came that the community wanted a food sovereignty lab," Risling Baldy said. "But we didn't know what that was."

Hampered by the pandemic lockdown, students nevertheless moved plans forward. They held additional interviews with community members who said they wanted a space for cooking, workshops and Indigenous art. The Native American Studies Department designed a lab to meet those needs.

Risling Baldy says their food sovereignty lab proposal did not initially get an enthusiastic response from university administration. The Facilities Advisory Committee denied the proposal, later indicating that they wanted the space to serve the general student population.

"They didn't want us to take the space, and they kept getting us excuse after excuse," said alumnus Carrie Tully, a steering committee member who, as a student, had helped plan the lab. "We really had to fight and be really organized at a time when the world was on fire, essentially."

Cal Poly Humboldt said the reason they initially denied the application was because it did not identify funding sources. "We recognize that the process of establishing the (lab) was long and, at times, difficult for those most deeply involved," said university representative Aileen Yoo in an email to HCN. "As with many first-of-their-kind initiatives, there were complex logistical, budgetary, and space-planning considerations that had to be

worked through — especially during a time when University resources were limited."

But at the time, the administration emailed Risling Baldy, saying that "the committee has considered (the space) for a function that will serve as a general student space that may be accessed by all." Instead, the committee proposed creating a student lounge that the Native American Studies Department could reserve for events.

The Native American Studies Department replied that "dismissing Native knowledges as being too specialized or not for the 'general student population' effectively stereotypes and propagates attitudes that have always functioned to marginalize and dismiss Indigenous ways of knowing, our philosophies, and our place in higher education."

For Tully, who is non-Native, the denial was eye-opening. "How could the university tell us no," she said, "for this incredible project that we had worked so hard on, that was student- and community-driven, and was going to serve the community and the university and students and everybody?"

So, Risling Baldy said, the class's community engagement project became about navigating bureaucracy. Students documented support from 71 other students representing 33 different majors, plus alumni, faculty, two tribal nations, community members and even a professor from another university. It worked: In May of 2020, Cal Poly Humboldt greenlit the food sovereignty lab.

But it still wouldn't fund it. The Native American Studies Department had to raise a quarter million dollars. "The students were like 'Well, what do we do now?'" said Risling Baldy. "And I said, 'Now I'm going to teach you guys how to fundraise.'" So the learn-by-doing

odyssey adapted again, and students shape-shifted into fundraisers. They wrote grants and held a “Zoom-a-Thon” with skits, music and art donated by volunteers. University foundations helped with grant writing and fundraising. Within a few months, the students hit their \$250,000 target. “That was enough to cover the initial construction estimate, and then that construction estimate nearly doubled by the time of completion,” said associate professor of Native American Studies Kaitlin Reed (Yurok, Hupa and Oneida), who co-directs the lab with Risling Baldy. Much of the funds, she added, were small donations from individual community members, students and alumni,

which “kind of speaks to the community support of this space.” Over the years, Reed and Risling Baldy have submitted 29 grant proposals through university foundations, raising upward of \$2 million.

The university acknowledged that it didn’t front the money for initial construction, but Yoo said the university eventually contributed \$239,088 for things like construction, IT, equipment and supplies, and positions for interns and research assistants.

In the spring of 2024, the Rou Dalagurr Food Sovereignty Lab and Traditional Ecological Knowledge Institute opened its doors. *Rou dalagurr* is Wiyot for “all are

working/making,” according to Wiyot Tribal Administrator Michelle Vassel. Opening the lab had taken years of uphill work — literally; it sits at the top of a steep campus hill. A class project about collective decision-making, bureaucracy and fundraising took its final form: a research lab for traditional ecological knowledge, food systems and Indigenous cuisine.

“We’re incredibly proud of the Native American Studies department faculty,

Cutchá Risling Baldy (Hoopa), associate professor and former chair of the Native American Studies Department at Cal Poly Humboldt.





“The idea that on campus you could smoke salmon. You could process berries. A space like this would have given me so much.”

students, staff and all NAS partners,” said Yoo. “Their leadership and their dedication to honoring Native culture made the Rou Dalagurr Food Sovereignty Lab and Traditional Ecological Knowledges Institute a reality.”

Tully said the experience shifted her worldview from one that prioritized the input of formally trained experts to one that sees value and expertise in community perspectives. “That’s having a community-driven project,” she said, “to be able to understand and share and learn and grow from everybody — not that it’s just the experts that can drive a project.”

On the steering committee with Tully was then-undergrad Cody Henrikson (Dena’ina Athabaskan and Sugpiaq). When Henrikson came to Cal Poly Humboldt as a marine biology major, they were going through a tough time, missing their community back home. Getting involved with the Native American Studies department helped, they said. “When I’m in a bad mood, salmon and blueberries always make me feel better,” Henrikson said. “Not having access to those foods really impacted me in ways that I didn’t fully understand until I started taking these courses.”

Henrikson said they want the lab to serve future struggling students. “The idea that on campus you could smoke salmon. The idea that on campus you could process berries,” they mused. “A space like this would have given me so much.”

With the lab open, Reed and Risling Baldy enlisted a chef-in-residence, Sara Calvosa Olson (Karuk), to give cooking demonstrations, hold workshops and plan projects with students for two semesters. “They have created this really interesting base

where the Native students can come and go, and they feel taken care of, they feel heard,” said Calvosa Olson.

Some mornings, students came in to make breakfast, or work on homework. Calvosa Olson realized some didn’t know how much daily protein they needed. She showed them how to prep healthy, inexpensive foods. “I wasn’t used to how earnest and how invested emotionally these kids are in traditional foods.”

One day she sat around a table cracking acorns with pre-med students, who’d grown up seeing their aunties and uncles struggle with diet-related diseases like diabetes. “They go to doctor’s appointments with their mothers and aunties, and they are treated so poorly,” Calvosa Olson said. “And they are fired up about bringing in some equity to public health and treating people with dignity and respect.”

Some projects were more playful. Calvosa Olson taught students to make windowpane pasta with dulce, a red Pacific seaweed. One experiment recalled the building’s previous incarnation: Students made Takis from traditional ingredients like blue corn, acorn, mesquite and cedar powder.

Starting this fall, Oakland restaurateur Crystal Wahpepah (Kickapoo) will be the lab’s second chef-in-residence. She said she hopes to show students, for example, how her restaurant returns buffalo squash seeds to farmers to support heritage food propagation, or how she makes acorns palatable to the general public by putting them in something familiar like crepes. “I love feeding the community,” Wahpepah said. “That’s what sovereignty is, is giving back to your community and feeding your community medicine — and that is food from this land.”

According to Reed, food sovereignty means people having a say in the production and distribution of their food. “But when we talk about Indigenous food sovereignty,

we are also thinking about relationships to homelands and traditional foods,” she added. “Do people have access to foods that are culturally and spiritually significant to them as a people?” Grocery stores, she said, require a specific type of relationship to the land and other species. “In the process of creating the commodities that we find at grocery stores, we have to violently transform more-than-human relatives into natural resources.”

“This was a deliberate act to separate us from our traditional foods and to remove us and our connection from the land,” Calvosa Olson said. “How do we reestablish these connections when we’re still facing the same challenges?”

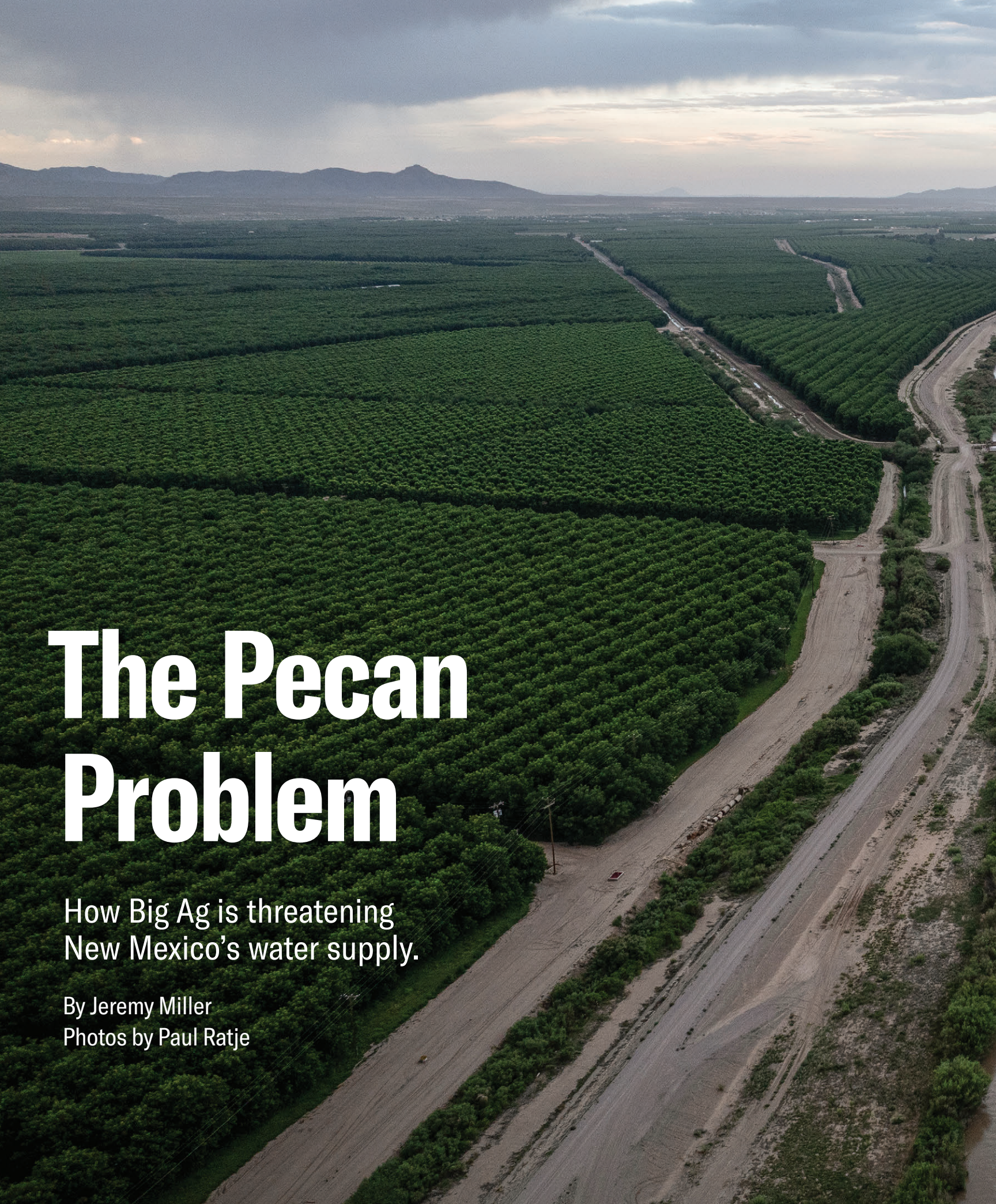
Today, the lab extends into an outdoor learning space, Wiyot Plaza, with an Indigenous garden and a stand of redwoods for traditional ecological knowledge demonstrations, and plans for a salmon cooking pit, an acorn-processing station and other learning centers.

The second Saturday of October, Wiyot Plaza will be dotted with booths and smoldering with fragrances as the lab hosts an Indigenous foods festival. The lineup includes speakers, vendors, dancers, singers, “and lots of food to eat,” said Reed. “So that’s just like a fun day to hang out.”

It’s a way to engage the general public, but Risling Baldy said the festival is also for “inspiring Indigenous peoples to feel really welcome to a college campus,” where Indigenous knowledge has not always found acceptance or support. “I want them to see that their knowledges have a place in higher education.” ☼

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Kaitlin Reed (Yurok, Hupa and Oneida) co-directs the Rou Dalagurr Food Sovereignty Lab and Traditional Ecological Knowledges Institute with Risling Baldy.



The Pecan Problem

How Big Ag is threatening
New Mexico's water supply.

By Jeremy Miller
Photos by Paul Ratje



Aerial view of the Rio Grande with pecan orchards and the surrounding Chihuahuan Desert taken near the Mesilla Dam in New Mexico.

GREEN IS NOT THE COLOR one expects to see in the cactus-and-yucca-dotted Chihuahuan Desert of southern New Mexico. But for more than a hundred miles along the I-25 corridor, between Truth or Consequences and the Texas border, a rich vein of greenery runs through the endless sea of beige.

It's a cultivated woodland made up almost entirely of a single species — *Carya illinoensis*, the pecan. Native to the lower Mississippi Valley, the trees were imported here, to the Mesilla Valley, in the early 1900s. In those early years, they were planted sparingly; the average precipitation is a scant 9 inches per year, hardly enough to sustain this Eastern hardwood. It wasn't until after 1916, when the Rio Grande Project and its centerpiece, Elephant Butte Dam, were completed, that the trees began to flourish.

Below the dam, the river is hemmed into a narrow channel between levees, and nearly all of its flow is shunted into a vast network of irrigation canals. The transformation has been staggering: In 2018, just over a hundred years after the completion of the Rio Grande Project, New Mexico surpassed Georgia as the nation's leading pecan producer, a title it has retained off and on to the present day. Much of that agricultural production comes from this dry basin in Doña Ana County, near the Texas border.

On a 95 degree day in late May, I met Rafael Rovirosa, whose family has been growing pecans in New Mexico since 1932. Today, the Stahmann family has 3,200 acres of pecan trees in some of the richest farmland along the Rio Grande River. We met in the parking lot of one of Stahmann Farms' pecan-processing plants south of the town of Mesilla.

Rovirosa threw open the door of his pickup. "Let's go for a ride," he said, and we set out for the pecan groves.

Rovirosa is lean, with deep-set eyes and dark stubble. He looked more like an academic than the operations chief of an agricultural outfit the size of a small city. He piloted his truck through a maze of roads

leading into one of the oldest groves in the valley. Some of the pecans were 45 feet tall and close to a century old, planted in perfect rows spaced 30 feet apart to maximize yield. A luxuriant carpet of grasses below the lush canopy gave the orchard the feel of an East Coast hardwood forest.

"Some people might say this isn't the most efficient way to grow pecans, that they ought to be trimmed back," said Rovirosa. The lower limbs scraped the top of his pickup. "I don't care. I think it's beautiful."

The region has paid a steep ecological price for this agricultural abundance. Beside us as we drove, I could see a shallow, concrete-lined irrigation canal carrying a steady flow of water, clear as a mountain stream. In many places, water pooled around the bases of the trees; flood irrigation is still standard practice here. Pecans are prodigious water guzzlers. A single mature tree — which can produce 50 or more pounds of nuts in a season — requires around 30,000 gallons of water per year. In southern New Mexico, over 50,000 acres are currently in production. New Mexico pecan farmers have become the state's largest single agricultural water user, slurping up an estimated 93 billion gallons per year — enough to supply a city of around 3 million — according to a 2023 report by Food and Water Watch.

Some of the farm's soils, Rovirosa noted, are sandy, and water is absorbed very quickly, meaning that it must be applied frequently. "This actually isn't necessarily a bad thing," he said. "We want the water to percolate down, because that's how we recharge the aquifer. Agriculture is the number-one recharger of

the aquifer when times are good."

But times aren't good. Mired in a nearly 25-year-long drought, the Rio Grande, one of the great rivers of the West, wends its way through pale desert just beyond the western edge of these verdant groves. And for the last nine months, it has run completely dry.

DESPITE ITS NAME, the Rio Grande is not a large river; its average annual flow, which derives mostly from distant snowpack in southern Colorado and northern New Mexico, is less than one-sixth that of the Southwest's other great river, the Colorado. But more than 13 million people in Colorado, New Mexico and Texas — and across the border in Mexico — depend on it for drinking water and other uses. It also irrigates over 2 million acres of farmland. For centuries, small-scale subsistence agriculture was the only kind of farming practiced in this dry and unforgiving region. Spanish settlers created communal water systems called *acequias* that sustained a patchwork of small farms throughout Nueva Mexico.

Before the Rio Grande Project, the river sometimes ran dry, though seldom for extended periods. Today, however, during the few months when there is water in the riverbed, it has been released from upstream dams. Most of it is sent downstream to Texas to meet New Mexico's obligations under the Rio Grande Compact, a water-sharing agreement between the two states and Colorado that was signed into law in 1939. Under this agreement, New Mexico is obligated to send 47% of the water it receives at Elephant Butte

Rafael Rovirosa, whose family owns Stahmanns Farms, stands over an irrigation canal in one of the family's pecan groves near Mesilla, New Mexico.



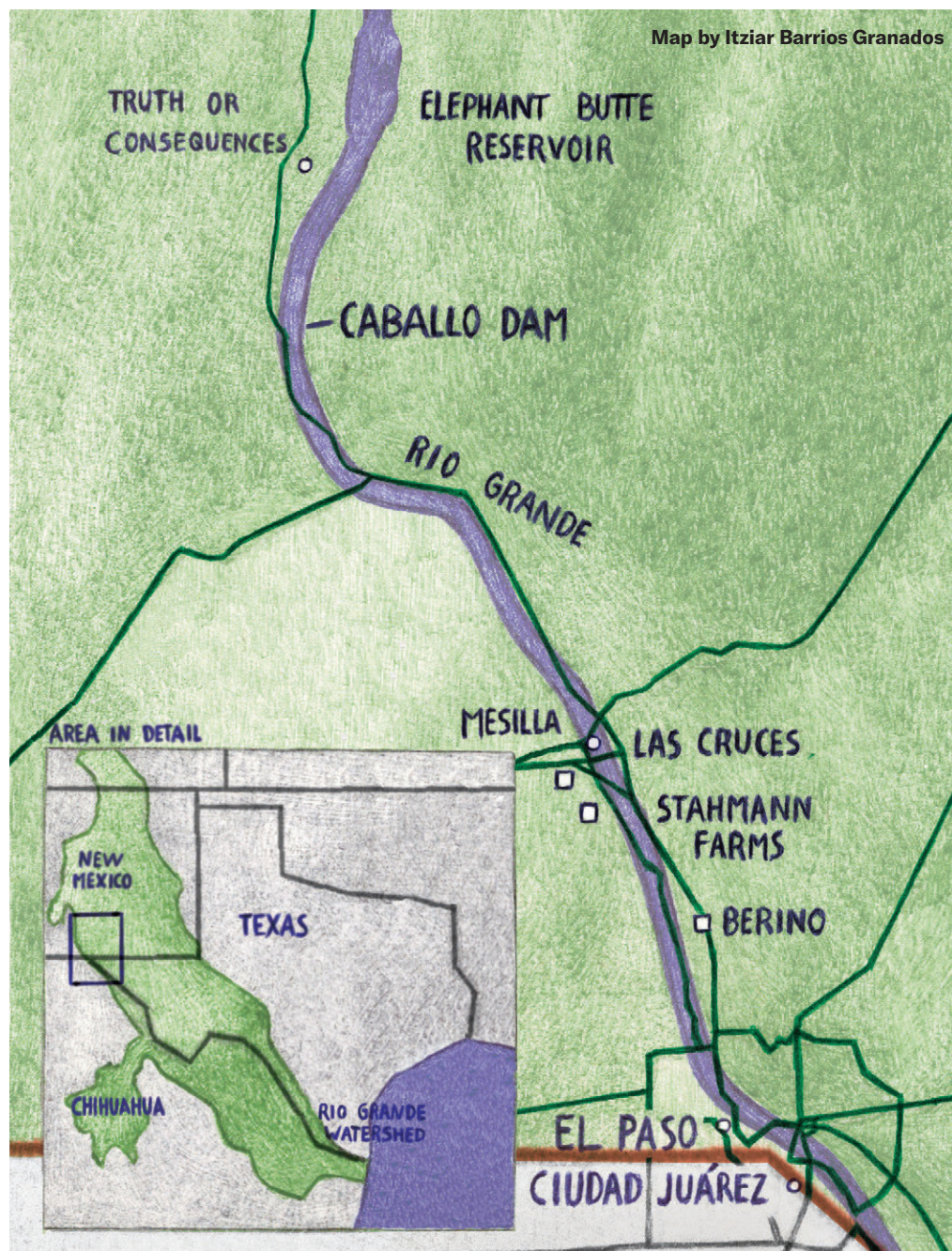
Reservoir to Texas. In 2013, Texas sued New Mexico, alleging that groundwater pumping by the state's farmers had compromised the flow of the river. (Groundwater pumping near a river can draw water away from it.)

The Rio Grande's flow, when it exists, is not nearly enough to supply the Mesilla Valley's commercial farmers. To make up for the surface water deficit, pecan (and alfalfa) growers pump groundwater at a ferocious clip, dredging up millions of gallons last year alone — vastly exceeding nature's ability to replenish it.

That water use is a stark display of economic power. Last year, the growers generated an estimated \$167 million in revenue, making pecans the largest food crop in New Mexico. In the mid-2000s, local farmers mounted an aggressive campaign to export the nuts internationally, including to China, which at the time still lacked a word for this uniquely American tree-fruit. Today, China remains a key destination, but most of the nuts go to Mexico, where they're de-shelled, packaged and then shipped back to the United States for export or domestic sale. (Rovirosa's family orchard does its own shelling.) The harvesting is done almost entirely with machines, and few laborers are required. Little of the profit goes to benefit the local economy.

There are also biodiversity costs. By the start of the 21st century, several species of fish, including the shovelnose sturgeon, longnose gar, American eel, speckled chub and Rio Grande shiner, had become rare in the river below Elephant Butte Dam, or been extirpated altogether. The bosques, vast willow and cottonwood forests in the river's wide floodplain, once provided tens of thousands of acres of habitat for birds, reptiles, insects and fish. The wetlands and riparian woodlands also offered flood protection and a buffer against drought. Today, several endangered animals — including the southwestern willow flycatcher, western yellow-billed cuckoo and New Mexico meadow jumping mouse — cling to existence in the few remaining pockets of native forest and grassland.

As of May 1, snowpack in the river's headwaters was projected to provide only 12% of the water it normally does. Elephant Butte Reservoir was only 14% full on April 18, and water managers at the Elephant Butte Irrigation District, or EBID, announced that



allocations would be cut by 83%. Instead of a full allotment of 3 acre-feet, farmers received a mere 6 inches. At the end of May, roughly 5,000 acres of farmland had been fallowed across the district under the state's Groundwater Conservation Plan. Throughout the valley, dry fields with pale soil and withered stalks of chile, onion, alfalfa and cotton hinted at the row crops that have been lost. (Perennial tree crops like pecans cannot be fallowed; without water, the trees perish.) In April, the USDA's Farm Service Agency

declared a state of emergency for 15 New Mexico counties and announced that it would offer emergency loans to local farmers, ranchers, and dairies.

The river's condition when it reaches Elephant Butte Reservoir is the byproduct of environmental, infrastructural, managerial and political factors largely beyond the irrigation district's control. For example, under the Rio Grande Compact, Colorado farmers — many of them alfalfa growers in the San Luis Valley — are allowed to divert between



Fallow fields await rain from an incoming storm in Doña Ana County, New Mexico, in July.

30% and 70% of the river's flow, depending on snowpack, before it crosses the state line. Today, the river carries a much smaller volume of water on average than it did before European settlement.

Downstream, Texas is not only embroiled in a legal battle with New Mexico, it's also fighting with Mexico over its failure to meet the terms of an 81-year-old treaty requiring Mexico to deliver an average of 350,000 acre-feet of water to the U.S. annually over a five-year period. Mexico, facing the same extreme drought as New Mexico, hasn't delivered its share to Texas via the Rio Conchos, the Rio Grande's largest Mexican tributary, and is now nearly 400 billion gallons in arrears. Texas Gov. Greg Abbott, R, has echoed the Trump administration's confrontational posture, declaring in a press release last November that "Mexico's blatant abuse and disregard of water obligations ... must not be allowed to continue."

The Bureau of Reclamation predicts that the Rio Grande watershed will continue to warm and dry, losing as much as one-half of its hydroelectric capacity by the end of the century. Many climatologists say that "drought" is no longer the right word for the situation: "Aridification" more accurately describes the massive ecological shift afoot in the Southwest. Dust storms, once infrequent, now turn the sky an eerie ruddy brown, blotting out the sun. Several times this spring, blowing dust scoured from desiccated, overgrazed desert soil closed highways across the region. "We are starting to see a shift in the

weather patterns," said Ryan Serrano, the Rio Grande manager of the New Mexico Interstate Stream Commission, which oversees the state's water resources. More troubling, the monsoonal rainstorms, which once came reliably between mid-June and late September, delivering the bulk of the region's annual rainfall, are not materializing as they once did. "We're either not seeing the monsoon rains, or they come later and later in the season, when it's not the most ideal time for that to happen."

And there are larger questions about the sustainability and equity of a system that has all but erased a major river while delivering the lions' share of its water and profits to a handful of wealthy and influential farmers. "They're still flood irrigating, but they're not feeding us anymore, and they're not employing us," said Israel Chávez, an activist and attorney whose family has lived in the Mesilla Valley for generations. "The state heralds it as a boost to the economy. But when no one can be employed, and when no one can eat any of this, then it begs the question: Who is this for?"

IN MAY, I attended EBID's monthly board meeting in Las Cruces. The conference room was decorated with black-and-white photos showing Elephant Butte Dam's construction. The proceedings opened with the Pledge of Allegiance and a prayer led by Gary Esslinger, EBID's treasurer-manager from 1988 to 2024. "Father God," he said. "Please send the rains."

Few people know the inner workings of the district's sprawling, complicated plumbing system, which delivers water to close to

7,000 farmers across roughly 90,000 acres via 357 miles of canals, as intimately as Esslinger does. The next day, he drove me south along Highway 28, past Mesilla's adobe square and into the verdant heart of pecan country.

The orchards were a beehive of activity. White pickups bearing EBID's insignia swarmed; the "ditch riders," as Esslinger called them, were preparing the canals to receive an upcoming release of water from Caballo Dam into the Rio Grande and its system of canals. Esslinger doesn't believe the doomsday climate talk. Drought is part of a cycle, he said, and the wet years will return. He sees the current situation as a temporary setback — a management problem to be solved.

The first order of business, he said, was to make the irrigation system more efficient, mainly by replacing the old dirt-lined canals with large underground pipes to reduce seepage and evaporative losses. "We're, like, only 55% efficient, and that's not good when you're in a drought scenario," he said, gesturing to the groundwater gushing into a dirt ditch from a candy cane-shaped pipe. Along its edges grew *Equisetum arvense*, a weed better known as horsetail, which, he said, can quickly overwhelm a canal.

Much of the water loss in the Mesilla Valley happens even before water reaches the ditches. Several studies have found that Elephant Butte Reservoir loses around 140,000 acre-feet per year — roughly 6% of its maximum capacity — to evaporation. The loss would be staggering in any agricultural region, but in one suffering through a 25-year drought, it is existential.

Esslinger said there was a larger strategy here beyond repairing leaky canals. The updates, he said, will make the system less reliant on Rocky Mountain snowpack and better able to capture water from monsoonal storms and the remnants of the tropical storms and hurricanes that sporadically hit the valley. "We have 300 miles of drainage canals here, and they're cut 30 feet deep," said Esslinger. "That's a lot of storage, if you think about it. It's just a matter of trying to adapt the canal to receive flood water

instead of irrigation water.”

By strategically installing a series of pumps, Esslinger believes that the district can capture the stormwater that, in the past, was simply shunted into the river channel. “Our drains are connected to the groundwater table, and so it’s a great way to recharge the aquifer,” he said.

Doing so effectively, however, requires being able to predict where and when the storms will hit and then quickly evacuating water from the canals to prevent flooding. “We need to modernize our systems, to know when these storms are going to be able to hit in advance,” he said. Despite Esslinger’s technocratic optimism, the unspoken message was one of desperation. As snowpack fades in the Southern Rockies, the irrigation district will become increasingly reliant on the summer storms that, in the drying climate, have become less dependable.

Paying for these kinds of large-scale fixes has also become far more uncertain under the Trump administration. Federal allocations authorized under President Joe Biden have halted, and DOGE-led firings and resignations have paralyzed federal agencies, leaving the district’s funding in bureaucratic limbo. A \$15 million infrastructure improvement allocation awarded to the district by the USDA in 2024 has yet to be dispersed. “I just don’t know what happened to that money.”

Esslinger showed me a centerpiece of the district’s infrastructure improvement plan: a network of canals around the antiquated Mesilla Dam, which sprawls like a concrete battleship across the Rio Grande’s dry riverbed. The scheme utilizes a series of small channels called spillways that are cut perpendicularly into the riverbed and designed to return water to the river in emergencies. “In a flood event, ditch break, a car in a canal, any event where you’ve got to evacuate water, you have to have these spillways available,” he said.

Esslinger says these safety valves have a unique feature: When there’s water in the river, it backs up at Mesilla Dam and fills the spillways. “It just sits there,” he said. “And so, I was thinking, what if I put pumps in these spillways and lifted the water out of the river and into the canals? That would save 40 miles on the delivery of water.”

Esslinger has done just that, installing two large submersible pumps in the canal.

When they’re operational, he said, the district will be able to pull water from the spillway and fast-track it to local farms. The design, I thought, seemed to show that EBID’s leaky, antiquated irrigation system could be vastly improved simply by allowing water back in the river.

But Esslinger balked at this assertion. Allowing any “extra” water to flow downriver out of the district toward Texas, was, to his mind, unimaginable. “People moving here from places where there’s water — Idaho, Ohio, Iowa — ask, ‘Where the hell’s the river? It’s a public good, isn’t it?’ And I say, ‘No, it’s not public water. It’s paid for by the farmers.’” (EBID members pay \$100 for 2 acre-feet, according to Esslinger.)

It seems that decisions about whether the Rio Grande is a river or a sand trap are not left to scientists, the public or even politicians, but to the Elephant Butte Irrigation District and its largest agricultural clients.

“I DON’T CONSIDER them farmers at all,” Israel Chávez, the Las Cruces attorney and activist, told me. “Farmers feed people. Pecans aren’t feeding anyone (here). They’re a luxury crop that are non-native to this area.” We climbed into his cluttered Prius, driving 20 minutes north to the small town of Doña Ana, where Chávez grew up. On the town’s outskirts, we merged onto the El Camino Real de Tierra Adentro, which once connected Mexico City and Santa Fe. An old weed-filled ditch, completely dry, paralleled the road. Chávez said this canal was part of the town’s original *acequia* system, which carried water from the Rio Grande to small local farms.

Founded in 1843, the village was named for Doña Ana Robledo, a Mexican colonist who died fleeing the 1680 Pueblo Revolt in northern New Mexico. The small, dusty community sits atop a small bluff. One- and two-story adobe buildings, many in disrepair, radiate outward from a central square. We walked past a bronze statue of the town’s namesake pouring water from a

bucket into two clay vessels.

He remembered running through nearby green fields as a child. “Any type of vegetable you can imagine was planted across the street from my house,” he said. He gestured to the floodplain and what was once a bosque, where a sprawling orchard now sidled up to



Gary Esslinger, former Elephant Butte Irrigation District manager, at a spillway on Stahmann Farms (top).

Attorney Israel Chávez in his office in Las Cruces, New Mexico (right).

the edge of the hill. “All those fields have been replaced with pecans.”

Chávez said his paternal grandfather came to the Mesilla Valley from Mexico in the Bracero Program in the 1950s. “He was able to work for a farmer who was growing all sorts of things, and that farmer ended up giving him some land and letting him grow on his own parcel,” he said. That kind of arrangement is rare in the era of industrial-scale pecan farming, Chávez said. “We have seen a major downturn in labor. I don’t think that that’s happening in a vacuum.”

The high cost of farmland coupled with the scarcity of water rights — and water itself — has not only kept new pecan farmers from entering the arena, Chávez said. It has also crowded out smaller farmers growing seasonal row crops — onions, beans, corn, squash and chiles, the most famous of which come from the nearby town of Hatch — on smaller plots of land.

Yet some farmers are still trying to gain a foothold and redefine agriculture in the valley. Ryan Duran works with her partner and his family on Big Moon Farms, their 13-acre plot near the town of Berino, 30 minutes south of Las Cruces. Their list of crops is extensive: collard greens, Swiss chard, broccoli, carrots, radishes, onions, garlic, okra, corn, calabash gourds, melons, beans and several different types of chiles. “It’s hard work because things are coming up at different times,” she said. “Some things don’t make it. Some crops fail because it’s too hot.”

Big Moon, she explained, gets a little surface water from EBID, but it’s a drop in the bucket compared to what commercial-scale pecan farmers receive. Unlike the region’s pecans, Duran said the crops grown on her farm are consumed locally. “The government is trying to pay farmers not to farm, to conserve water, which is concerning,” she said. “We should be protected. We shouldn’t have these giant orchards taking all the water.”

SPRING RELEASES OF WATER from Elephant Butte Dam are used to meet New Mexico’s water-delivery obligations under the Rio Grande Compact. Rather than a single sustained release, said Tricia Snyder, rivers and waters program director for the environmental group New Mexico Wild, regulators should allow more consistent water releases throughout the year to mimic the natural

cycles the large dams have erased.

These “environmental flows” — most of which occur in the upper and middle reaches of the river above Elephant Butte and the Rio Grande Project — are meant to emulate the spring snowmelt and summer monsoon runoff before the infrastructure was built. “The plant and wildlife communities that have evolved around this river depend on that timing,” she said. “So how do we approach that, given the realities of climate change?”

The river below Elephant Butte, Snyder said, needs to be managed with its many shareholders, both human and non-human, in mind. “We might say, OK, agriculture needs this much water at this time, and this species may need a pulse flow at this specific time of year. There are different needs. So how do we tie those all together to meet as many of those needs as possible?”

Others hope to restore the river’s lost bosques and wetlands. Not only do riparian zones provide critical wildlife habitat, they also aid with water storage and floods, like the one that struck this stretch of the Rio Grande in 2006, devastating cities across southern New Mexico and West Texas. After storms dumped up to 30 inches of rain, floodwaters overwhelmed man-made drainage systems, washing away roads and buildings. Restored riparian zones could act as buffers, slowing down water and spreading it more evenly across the floodplain. Vegetated areas also improve a river’s “baseline” flow, releasing water into the channel slowly throughout the year, even during the dry season.

One such riparian restoration project is underway 20 minutes northwest of downtown Las Cruces on a 30-acre experimental plot known as the Leasburg Extension Lateral Wasteway #8 Restoration site. Here, a small forest of willows, cottonwoods and native shrubs is taking shape. The project is overseen by the International Boundary and Water Commission, or IBWC, the agency within the U.S. State Department that oversees waterways shared by the U.S. and Mexico.

The Leasburg site, one of 22 being managed by the IBWC, is the product of a 16-year collaboration between the federal government, local water managers and conservationists to enhance habitat along the Lower Rio Grande. Between 2009 and 2021, IBWC planted over 122,000 native trees and shrubs and removed thousands of invasive



saltcedars across its sites. “At first there was some pushback among farmers,” said David Casares, general operations supervisor with the IBWC, who is overseeing the restoration. “They didn’t understand what we were doing here. But once they saw it, they learned to accept it. The way EBID sees it, we’re farmers, too — farmers of native trees.”

Though the Leasburg plot is small, the birdsong and the rustle of leaves are potent reminders of a lost Rio Grande. Indeed, this is as close as one can come to the verdant bosques that once lined the river for hundreds of miles. These small islands of restored



native biodiversity, most of which are off-limits to the public, comprise roughly 500 acres, and a dozen of them have been managed to create habitat for a species that has come to epitomize the destruction of the lower river's riparian ecosystems: the endangered southwestern willow flycatcher, a small songbird that once thrived in the riverside wetlands and forests. Surveys by the U.S. Bureau of Reclamation have found the birds at or near several of IBWC's sites.

When I visited, two IBWC workers were hacking at vegetation with rakes and hoes in several small canals, preparing for the release

of water from Caballo Dam and wanting to ensure that nothing would impede its flow to the trees. (The IBWC, like the surrounding farms, bought water rights from the Elephant Butte Irrigation District and was waiting for the upcoming agricultural releases.)

The water couldn't come soon enough. A closer look revealed that the small cottonwoods, no more than 15 or 20 feet tall, showed signs of water stress. Their leaves, which should have been a vivid green, were a pallid greenish yellow. Mature cottonwoods with their extensive root systems can withstand successive dry years, but young cottonwoods need a steady

Native trees like cottonwoods grow densely at the Leasburg Extension Lateral Restoration Site in Doña Ana County, New Mexico.

water supply. But Casares was confident that the trees and grasses would survive, even with this year's limited water allotment. "Once we start irrigating, the water tables go up," said Casares. "These are small areas, but they are having a big impact."

RAFAEL ROVIROSA, whose family has profited from pecans for generations, said



he is also seeking solutions. As we drove through his family's pecan grove, he told me that the current situation, in which surface water deficits are covered by water pulled from shrinking aquifers, is clearly unsustainable. "If the wet years don't come for another decade, we might be OK," he told me. "If the wet years never come again, then there needs to be drastic changes in the way that we use water here."

We left the green grove and drove into the desert. In the hazy distance, the Organ Mountains jutted into the ruddy sky. We passed a small fallowed plot and reached a field covered in tightly spaced rows of tiny

trees. They were pistachios, not pecans, something Rovirosa is just beginning to experiment with. Some of the leaves were dry and brown around the edges. But he thought it was only cosmetic, an unsightly but ultimately harmless drying caused by the winds that rake the valley. The trees, he said, were taking hold.

Pistachios require less water and are more salt-tolerant than pecans. Rovirosa also said that he thought they were more popular with U.S. consumers than pecans.

In this plot and another one a few miles down the road, Rovirosa was experimenting with two other varieties of trees — a species of Spanish oak and an Italian pine. Their bounty

is not found aboveground but in their roots: Both species are hosts for truffles, which Rovirosa says can bring more than \$300 per pound. If Rovirosa can fine-tune these higher-value crops to grow in the desert, he can bring in more money per acre with less water. "I don't know if it's going to work," he said. "It's been a challenge to keep the trees going. They love the summer. They're fine in the winter. But they die in the spring." He cracked a little smile: "But this time it seems like we got it right."

He said he's taken some heat from older farmers for branching out and searching for crops that might thrive better in a drier, hotter climate. "People get used to doing things a certain way," he said. "It's on me to figure out how to do it so that I can show everyone else how."

Rovirosa's main insurance policy, however, involved looking for farmland elsewhere. "One of my long-term goals has been to start to diversify geographically," he told me. "It's hard to pick a good place. They say the Southeast is going to get destroyed by hurricanes and the Southern Appalachians are going to get devastated by floods."

But he thought he'd found the place, located in another besieged agricultural region: California's Salinas Valley, the Steinbeckian refuge of Dust Bowl refugees in decades past. "I think the Salinas Valley gets a little bit more water than what they get in Spain," he said. "The temperatures are about the same. So I don't think that they would need that much water there, just a little bit of supplemental irrigation in the summer, and that's it."

Rovirosa added: "It's absolutely beautiful there," he said. "We'll see." ☀

Jeremy Miller lives in Richmond, California. His recent stories have appeared in publications including Harper's, The Economist 1843, Sierra and bioGraphic.

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Well water is pumped into an irrigation canal in a pecan grove in Mesilla, New Mexico.

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DEAR FRIENDS

After 85 years, Luis Torres stands strong — and optimistic

It's been 20 years since Laura Paskus worked at High Country News, first as an intern and later as a staffwriter and editor. "I still find meaning in the work," said Paskus, who has covered the environment in New Mexico for a long list of print, online, radio and TV outlets. "But right now, it's easy to feel lost."

*She sometimes finds solace stepping into a stream or hiking in the mountains. But lately, she has sought the counsel of elders, including HCN board member emeritus, 85-year-old **Luis Torres**, who served on the board longer than anyone can remember. The following is drawn from two visits earlier this summer.*

"I'm a hopeless optimist," said Luis, after we devoured our chile-smothered plates at his favorite restaurant in Española, New Mexico.

That attitude, particularly in these times, is a testament to his tenacity and generosity of spirit — and to everything he has witnessed in more than eight decades of life in northern New Mexico.

The youngest of eight sons, Luis grew up on a ranch near Black Lake. The ranch sat at a high elevation south of Angel Fire, and it was rugged and cold even in midsummer. But the small disability pension Luis' father received from his military service in World War I enabled him to buy a pickup truck, a rarity in rural New Mexico in the 1940s and '50s.

Luis recalls his father helping neighbors or driving for hours to Raton to ask the school board to send a teacher to the community. An unofficial alcalde, his father negotiated for rural road repairs and fought to bring electricity to the community, a place so remote it didn't even have a village.

"I eat, drink and sleep community involvement, and that, I got from my father," said Luis, who later worked for Community Action Agency, the American Friends Service Committee and the Southwest Research and Information Center on issues related to land, water and community.

His family also grazed about 60 head of cattle in the surrounding mountains, and Luis would often rise early, saddle up and follow his father along the creek behind their house.

"In this creek, there was a riparian area with a lot of willows in it," he recalled later at his house. "When you went through that little area early in the morning, the birds were singing so loud that my dad would turn around — he'd be in front on his horse, and I'd be in back on my horse — he'd turn around like that and look at me and grin and cover his ears." Luis laughed.

"I never hear the birds sing like that anymore," he said, becoming serious. He pointed to his porch. "Now, I see a hummingbird come through my feeders out there and I run out, trying just to admire it." There might be a few magpies around the yard, but most of the birds are gone, he said.

The news coming out of Washington, D.C., can be just as bleak, but Luis believes that people will step up in time to steer the country toward something better. "In turning it around, people will be stimulated to think in very progressive ways, because, the mess this guy

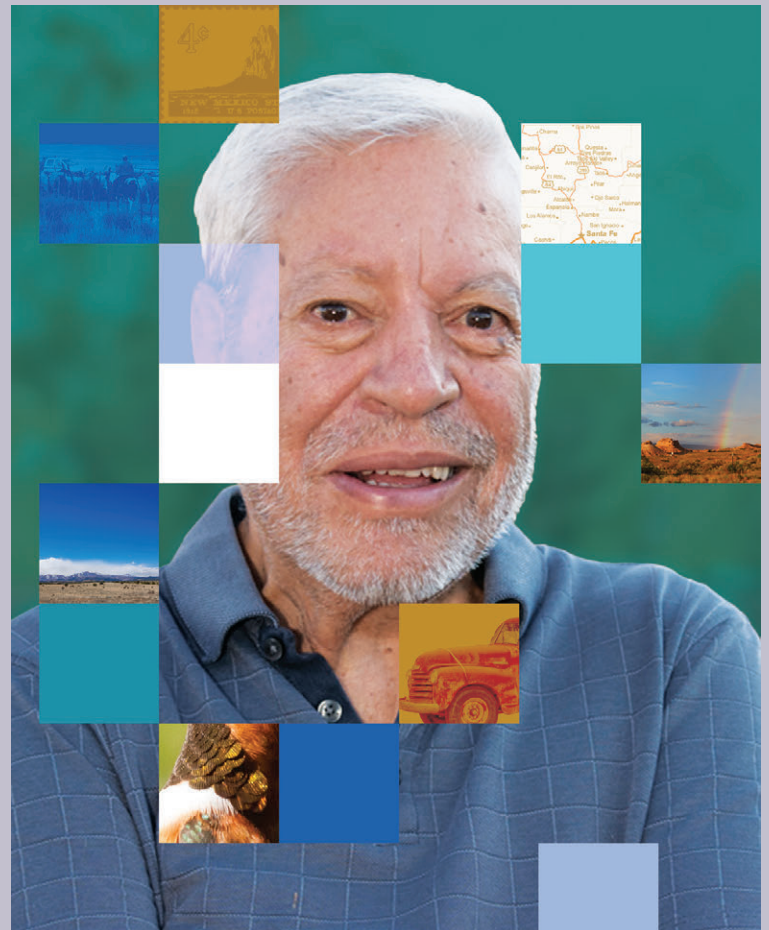


Photo by Stefan Wachs / HCN; Photo illustration by Marissa Garcia / HCN

(President Donald Trump) has made, we won't be able to fix it in a couple of years," he said.

And the genius of democracy, he said, is that answers will come from *el oro del barrio*, the gold of the community.

He finds particular hope in young people. Recently, while visiting a nearby mesa with a group of students, he found himself remembering his father's delight at the deafening bird song more than 70 years ago. He choked up.

"I was a little bit embarrassed," he said. "These poor little 16-, 18-year-olds, they didn't know what to do, watching an 85-year-old man crying in front of them. But such is how it is."

He hopes, at least, that trips like these make an impression. Those shy kids might be the ones to come up with new ideas that challenge society's acceptance of biodiversity losses, injustice and environmental degradation. They could be the ones who fight to give the land, the birds, a chance to come back.

"The environment responds, you know?" he said. "You treat a piece of land well, and boy, within a very short period of time, it's saying, 'Shit, yeah, well, let's make this place go,' you know?"

"Answers come from the darndest places," Luis said. We just have to stop following the most powerful people — and listen to one another.

— Laura Paskus

An aerial photograph of a vast, dense forest. The majority of the trees are dark green, but several individual trees stand out with bright yellow and orange foliage, indicating the onset of autumn. The perspective is from directly above, looking down on the canopy.

Guardians of Our Food

On the connection between old-growth forests
and what's in your fridge.

BY RICK BASS



ASSUME FOR A MOMENT that our Earth is a bubble, containing finite physical material, moisture and the solar energy that's delivered to us each day. Anything organic is ultimately food for something else.

Our own species' relatively narrow food requirements are what we're usually most concerned about, and the solution to meeting our needs is not complicated. To provide food for all, rather than having billions among us go hungry, we need more efficient food production and better foods and/or fewer people: Impossible Burgers rather than Wagyu beef. Backyard tomatoes rather than mass agriculture that's produced far away and flown, then driven, vast distances to our dinner tables, etc.

At scale, this requires policy change, but also cultural change. Hence swapping out light bulbs does play a part in these matters. As we run out of food and water there is the excellent and well-timed opportunity to recalibrate our relationship with nature. But what stories — what seeds — can help encourage that change?

I WORK TO GET the bulk of my protein from wild game — a deer, an elk, a couple of ducks and pheasants, some grouse — but that's because I'm incredibly fortunate to live in the heart of the 2.2 million-acre Kootenai National Forest in northwest Montana, in an unincorporated community composed of a few homesteads and "town"— two bars and a mercantile. The northernmost half of the Kootenai is

called "the Yaak," with Canada's wilderness at our back. I'm incredibly fortunate to live in the only ecosystem in Montana I'm aware of where stream temperatures have not yet begun to rise, sheltered as the Yaak is by a diverse mosaic of microsites — twists and turns of geomorphology that create a bewildering landscape of rumpled north slopes and frost pockets.

I live off the grid and heat partly with firewood, but my chainsaw runs on the magic elixir of the Paleozoic, summoned from 3,000 feet beneath the Earth, thousands of miles away. Even when I walk a hundred yards from my cabin in the autumn and sit quietly waiting for a deer to walk past, I will have had a cup of 4 a.m. coffee prepared on a stovetop and poured into a metal cup.

I do not hunt with a cedar bow and deer ligament bowstring and flint or obsidian arrowheads. I use copper bullets instead of lead to avoid contaminating the meat, but the copper, rest assured, does not come easily from the Earth's embrace. My meat is stored in a propane freezer.

The word "sustainable" is a good word to bear in mind in all matters, but I think it is important to remember with humility that humanity's current position on the tree of life precludes sustainability. For us to be here in any significant number, much has already had to step off — or been pushed off — into oblivion, and the accounting is not yet finished. Our needs and our population numbers long ago evolved beyond sustainability.

Everything exists because of everything else, and sometimes in direct opposition to it, despite our best intentions. It is our lonely birthright to forever take more calorically and thermodynamically than we give.

A view of the mixed conifer forest in early fall outside Troy, Montana. **Forest Woodward**

We cannot ever be sustainable — not in life. But we can pump the brakes on the mad adventure of our brief existence — our voracious passion and profligate appetite for the world's finely wrought treasures.

WILD NATURE is not a crop but a cathedral, and a single old-growth forest is a databank containing more info than any legions of supercomputers could hold. Forests belong in a Department of Climate Defense, a Department of Homeland or of Global Security, a physical and spiritual Department of the Interior. So why is the U.S. Forest Service housed within the Department of Agriculture? It's a relic of an earlier era of convenient ignorance, when we were told that animals do not feel pain, and that forests were just crops of fiber that could be farmed like corn. How did DOGE's whiz kids overlook this fiscal and silvicultural mismanagement?

Forests absorb about a third of the world's annual carbon emissions globally — but older trees absorb far and away the most. Our old and mature forests are an enormous asset in this planet's climate portfolio. And yet the Forest Service is still working to clear-cut old growth. In the West, 75% of the agency's current proposed timber sales are at least a mile or farther from the "wildland-urban interface" — the small towns and villages in harm's way from the dragon breath of global warming.

Protecting the cool shade and wet groves of old and mature forests worldwide is the single best thing we can

do to slow the meteoric rate of climate change, but the agency is racing to clear-cut these old forests before their true ecologic and economic worth can be accounted, claiming that it needs to log these giants so far in the backcountry in

order to protect communities against wildfire.

In the Kootenai National Forest, there's a region called Black Ram that is an inland rain forest, and a primary forest: one that's never been logged. Much of it shows no evidence of fire

scarring. Fire has passed over and will continue to pass over the West like the meteorological phenomenon it is, but the Yaak ecosystem is projected to be the least vulnerable to wildfire in the Northern Rockies all the way through the rest of this burning century.

And, ironically, the greatest lesson the old forest has for us at this particular point in the burning is not how to achieve more fiber product per acre, but, instead, how to keep from further aridifying our food system, and everything else.

I know of no scientist willing to say our current agricultural system can survive peak global warming.



THIS ISSUE of *High Country News* explores the theme of food and power, and at the risk of hitting the nail on the head too squarely, the old forest does not offer us food directly. Instead, it stands guard over our food, for a while longer. The old forest stands guard over our water, cools and stabilizes the one thing — weather — that determines the food supply, not just for Montana and the West, but for the world.

The old forest at the center of the Black Ram country, which has almost never been in a hurry, buys all of us — farmers and ranchers, musicians and hunters, teachers and students, saints and sinners — the rarest and most precious of commodities: *time*; time, here among the living to figure out how to take less and share more. That is why my neighbors and I are hell-bent on saving it, through an organization we founded a few decades ago called the Yaak Valley Forest Council. We have proposed that the Black Ram country be designated the nation's first Climate Refuge — a 265,000-acre mass of public land dedicated to storing the maximum amount of carbon possible.

I know of no scientist willing

Hemlock shadows play across a barkless silver snag in the proposed Black Ram logging area of the Yaak. **Forest Woodward**

to say our current agricultural system can survive peak global warming. Old forests like the one at Black Ram are a lifeboat, and we are its passengers.

In addition to our climate justice campaign to save all old and mature forests in the Yaak — the seed of that action then gaining momentum and support to transform into a campaign to create a global Curtain of Green — our group advocates for the recovery of grizzly bears: Ours is the most threatened population in the United States. But it is, of course, not just the grizzlies in our community whose existence is stressed as never before. Our county, Lincoln County, has one of the highest poverty rates in Montana, and each village's food bank — Troy, population 900; Libby, population 3,200; Eureka, 1,600 — exists chronically at the edge of collapse, but none more so than the utterly unincorporated remote Yaak (population unknown), where a volunteer food pantry that's only open two hours a month serves half the valley. Even while we're advocating for grizzlies and old forests and restoring riverbanks degraded by clear-cuts and literally taking the temperature of our ecosystem daily with stream and lake thermographs, we spend more and more of our time rallying donations for the Yaak pantry.

This wasn't something we ever thought we'd be doing when we formed nearly 30 years ago. But in this ecosystem — one of the very few in the U.S., and perhaps the only one, where nothing has gone extinct since the last Ice Age — it is not a cliché to say that all things are connected. It is instead a hyper-specific reality.

In these burning days, we all find ourselves making

adjustments, inhabiting a world few imagined or foretold, and, increasingly, we look to the mysteries of the ancient forest for instruction, leadership and the best kind of hope: hope that leads to action.

One does not commonly think of a female grizzly up above treeline in the wildflowers of summer, breeze ruffling her fur, as having much sway one way or the other over the cost of a loaf of bread, or even the existence of a loaf of bread. But the grizzly bear is far and away the major cornerstone of the ecosystem — tenuous though her hold is now — and the Endangered Species Act, which requires protection of her habitat, is all that stands between the liquidation of these shady, unroaded forests, where she spends an increasing amount of time. Where would *you* go on a broiling summer day if you were wearing a 70-pound fur coat?

With the complex and crafted integrity of her species, she protects the old forest, which cools our planet. In that forest is a dream of a Climate Refuge, first here and then in green belts encircling the world at northern latitudes — a fringed, breathing, semi-permeable Curtain of Green that allows us to continue dreaming our dreams — not sustainable, mind you, but beautiful — of feeding and caring for ourselves, and our kind and kin. The old and mature forests do not grow our food. But their cooling breath makes possible the food for all. ❀

Rick Bass is the author of more than 30 books of fiction and nonfiction, including Winter: Notes from Montana and The Ninemile Wolves. He co-founded The Montana Project and is executive director of the Yaak Valley Forest Council. He lives in Montana's Yaak Valley.

POEM

What to Make

By Natasha Sajé

when A & D come to dinner? Last time: minestrone and vegetable tart--roast asparagus and carrots on feta creamed with a clove of garlic on crisp baked pastry. Dessert? Those thin and crunchy gingersnaps with oats and buckwheat? What else? Cold outside in mid-March, so not ice cream. Not rice pudding cake. Also not dried figs cooked in sherry. A year ago it was D who cracked the blown glass bowl, although it could have been any of us. Figs and bowl thrown into the trash. Don't use a silver spoon to cut figs in a blown glass bowl. But this dinner: maybe chard, pine nut, and white bean filo strudel (chard stems add crunch, miso adds umami) with red pepper coulis followed by those small Japanese cheesecakes that never fail and I'll have leftovers for breakfast. Or with the same amount of work and more luxury: coconut (organic, no guar gum) crème caramels with star anise, cardamon, grains of paradise. Inverted on a plate, a tenuousness I aspire to. Soft wobble with spice. *Nothing is so satisfying as the imagination's rendering of it*, said Proust. Well, he didn't say that exactly, but he lived it, over and over. Like me now. Like you, reading.

WEB EXTRA Listen to Natasha Sajé read her poem at hcn.org/what-to-make

The Road Not Taken

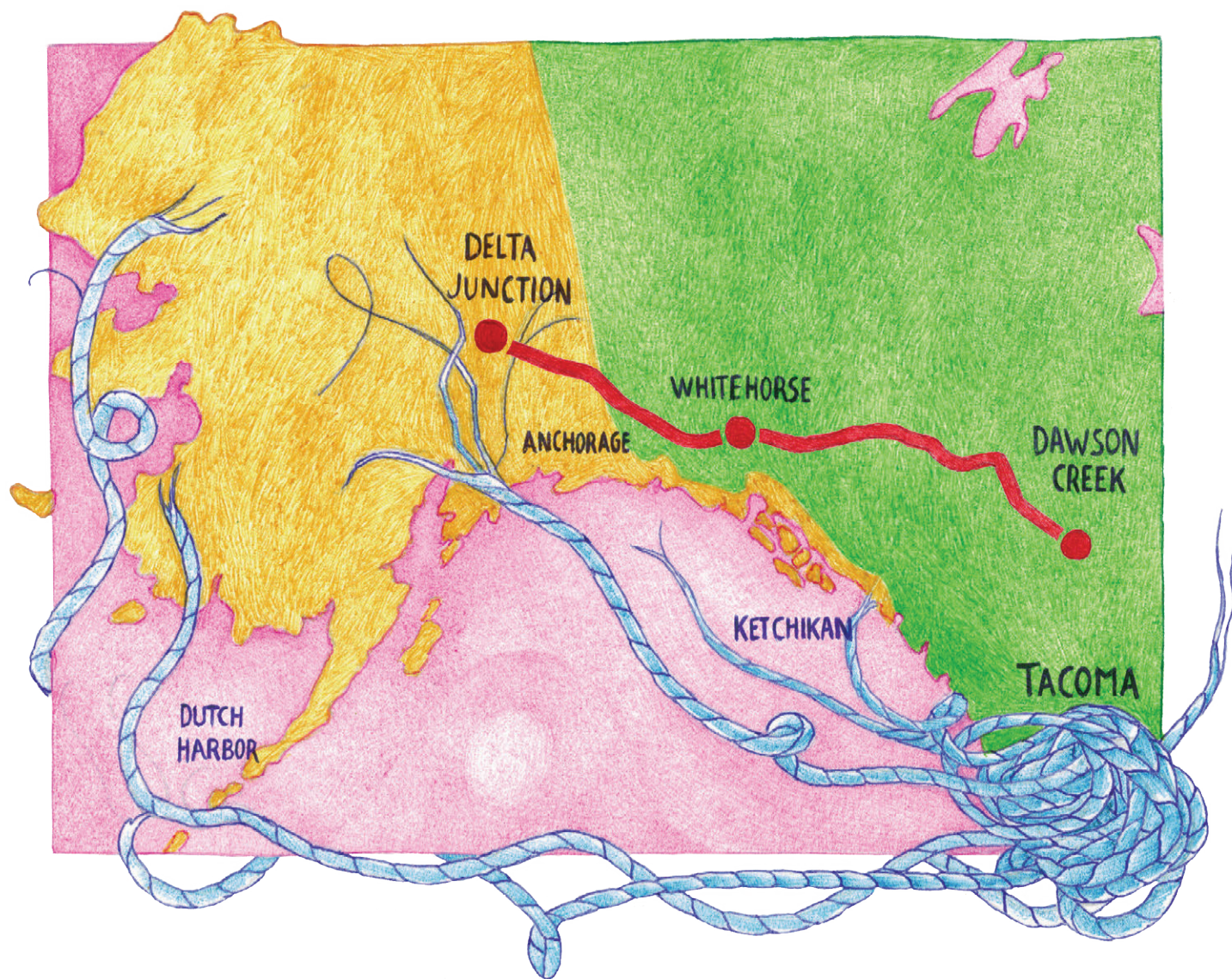
By Eva Holland
Illustrations by
Itziar Barrios Granados

Trump threatened Canada, so Canada vowed to tax U.S. trucks traveling the Alaska Highway, and the whole messy reality of feeding the 49th state spilled into view.

IT'S HARD TO REMEMBER NOW — a lot has happened since — but there was a time, back in February and March, when things got rather heated along the traditionally friendly, extremely long and largely unguarded Canada-U.S. border.

In response to President Donald Trump's tariff threats and talk of annexing Canada, provincial liquor authorities stripped American booze from store shelves. Canadian tourism to the United States plummeted. And British Columbia's premier, David Eby, threatened to place tolls on commercial trucks traveling from the U.S. through B.C. to Alaska along the Alaska Highway. Doing so would further increase the state's already high cost of living and possibly disrupt its food supply chain.





The Alaska Highway, or AlCan, was built in 1942 to keep the state supplied and defended in the event of a Japanese attack. Mile Zero is located in the very small city of Dawson Creek on the eastern edge of British Columbia, near the Alberta border. To reach it, Alaska-bound trucks can enter Canada at any of several border crossings in northern Washington, Idaho and Montana; I-5 hits the border at Blaine, Washington, while I-15 arrives at Sweetgrass, Montana. Various highways funnel traffic toward Dawson Creek, the options thinning as drivers head north, until there's just the one road and the AlCan begins. From there, it climbs north and west to Beaver Creek, Yukon, Canada's westernmost community, and then crosses the international border, plunging deep into Alaska's sparsely populated interior before officially dead-ending in the town of Delta Junction — 1,387 miles

from Dawson Creek — where it joins the older Richardson Highway to Fairbanks.

I've lived alongside the Alaska Highway, where it passes through the Yukon capital of Whitehorse, for most of the past 16 years. The tolls have yet to be implemented — although Eby's government has created the legislative framework to do so — but I was fascinated by the threat, and by the paradox of a road built for Alaska's defense transformed into a glaring weakness by unpredictable foreign relations. I pictured Alaska as a balloon bobbing at the end of a very long string, with Canada, an unexpected adversary, wielding a pair of scissors.

Getting fresh food to Alaska has been a challenge since the first settlers began scratching in the creek beds for gold. It was just too far from the continent's more populated areas, separated from the contiguous United States by cold, stormy seas and, on the

few precarious overland routes, avalanche-prone mountain passes. During the Klondike Gold Rush in the late 1890s, authorities feared that the hordes of prospectors would starve, and stories from that time — almost legends at this point — depict entrepreneurial types struggling to bring unbroken eggs all the way to the Yukon gold fields or herd reluctant cattle over Alaska's Coast Range. Thirteen decades later, the challenges remain. Alaska's food prices are second only to Hawai'i's. One recent federal study found that prices in Anchorage were 36% higher on average than those in the Lower 48. A 2023 report commissioned by the Federal Emergency Management Agency (FEMA) described Alaska's food supply chain as “unique and vulnerable to disruption.”

I wasn't the only one surprised by Eby's apparent willingness to threaten that supply

chain — to hit Alaskans in the gut. “It’s going to be a big deal,” Alaska state Sen. Robert Myers, R, who also works as a commercial trucker, told the *Alaska Beacon*. “Fresh produce — the vast majority of our fresh produce ... gets trucked up. If you want to get something up here fast, you put it on a truck, not a barge.”

The truth is, Canada doesn’t have nearly as much power over Alaska’s food supply as Myers or I assumed. The supply chain was never just a long thin string. It’s actually more of a tangled ball of yarn, and the Alaska Highway, it turns out, is just one thread.

THERE’S NO DOUBT THAT TRUCKING is the fastest long-haul option. No railroad connects Alaska and the Lower 48, and air freight is financially viable for only a few high-end commodities — non-Alaskan seafood, say, and time-sensitive produce like cherries. It takes around 40 hours of nonstop driving to cover the more than 2,200 highway miles from Seattle to Fairbanks via the AlCan. Even factoring in some halfway-decent rest time for the driver, that’s still a lot quicker than the several-days-long container-ship-to-port-to-truck relay that moves goods to Fairbanks from the Port of Tacoma through Anchorage. But I wanted to confirm that assumption, and to know how much food actually came up the highway every year. I had visions of digging up delightful trivia: *How many thousands of gallons of milk bounced over potholes to Alaska each year? How many loaves of bread?*

I reached out to the Yukon Department of Highways and Public Works, which oversees the highway weigh station in Whitehorse that I’ve cycled and driven past countless times. The department replied apologetically that it didn’t have the data I wanted; it tracks cargo by weight, dimension and destination, but not by content. U.S. Customs and Border Protection couldn’t help either, I was told, because freight traveling through Canada to Alaska was considered neither an export nor an import, but rather “domestic in-transit freight,” and its contents were not inventoried at the border. The Canada Border Services Agency directed me to Statistics Canada, which didn’t keep data on such in-transit goods either.

These agencies did, however, share a few data points. Customs and Border Protection told me that in fiscal

It takes 40 hours of nonstop driving to cover the 2,200 highway miles from Seattle to Fairbanks, a lot quicker than the several-days-long container-ship-to-truck relay that moves goods to Fairbanks from the Port of Tacoma.



year 2024, 8,298 commercial freight-hauling trucks entered Alaska from the Yukon. That’s fewer than 23 trucks per day — not nearly enough to account for the roughly \$2 billion worth of food that enters the state annually to feed its nearly 750,000 residents. Meanwhile, Statistics Canada was able to give me details on the foods that Canada exports directly to Alaska, as opposed to those it simply allows to pass through. In 2024, that list included salmon (fresh, frozen and smoked), cattle and buffalo, honey and seed potatoes, dried peas and lentils, cranberries and cumin, and an assortment of grains — durum wheat, barley, oats and malt. (It also included “caviar substitutes, prepared from fish eggs other than sturgeon,” and even Communion wafers. You’re welcome, Alaska.)

I also contacted several grocery chains with multiple stores in Alaska, to see if they could tell me how much food they were bringing up the highway. I emailed the Alaska Commercial Company, Fred Meyer (via parent company Kroger), Carrs-Safeway (via parent company Albertsons), and Three Bears, but no one responded with the data I was looking for. It wasn’t until I talked to a woman named Kelly, who works in deliveries but wasn’t authorized to speak to me by her employer, a major grocery chain, that I realized the highway was something of a red herring. “I can’t speak for every grocery store,” she said, but “our stuff comes up on the barge, the vast majority of it.” They used to do more trucking, she explained, but despite its slower pace, shipping had proven consistently more reliable. Highway delays caused meat and milk to spoil, in particular, so they basically phased that out.

Rachel Lord, the advocacy and policy director for the Alaska Food Policy Council, confirmed Kelly’s comments. There are exceptions, she told me in a Zoom call from her office in Homer, but most of the state’s imported food now comes by container ship from Tacoma.

I told Lord that I had been struggling to find solid data on food imports, and she laughed. “It’s not you, it’s all of us,” she said. The data as I envisioned it — so many thousands of gallons of milk, so many loaves of bread — doesn’t yet exist in any coherent way. “It’s not there.”

It’s commonly said, for example,



that 95% of Alaska's food is imported. "There are no data citations you can pull for that," Lord said. "It was mentioned by somebody at some point in some report, but there were no data citations associated with that, right? It's a feeling, it's probably fairly accurate, but it's not — it's just made up. But we *can* say the vast majority of the food that Alaskans buy at a store is imported from outside. That is solid."

HILLARY PALMER IS AN Alaska-based program manager at Dewberry, a national design, planning and construction firm. She was the Alaska lead on the 2023 report commissioned by FEMA, so she has about as firm a grasp as anyone of just how vulnerable Alaska's food supply chain is, and where its weak points lie.

According to Palmer's report, roughly 4% of Alaska's imported food comes via the AlCan. Walmart hauls a good chunk of that 4%, trucking its fresh meat and produce from Washington to seven of its nine Alaska locations. (Walmart's Ketchikan and Kodiak stores are not on the road network.) "They haul with two drivers," Palmer told me, "so that one can be sleeping while the other is driving." Walmart has also developed specialized equipment to help protect the trucks' chassis from frost heaves and other cold-weather damage to the road. Walmart's team knows where the reliable refueling stops are located along the most remote stretches of the highway, and the drivers haul their own backup fuel, just in case.

But the retail behemoth is an outlier. Most of the rest of the state's imported food comes by sea — and that brings its own logistical challenges.

In broad strokes, Alaska's food supply chain currently looks like this. It's important to remember that imports from the Lower 48, Canada, Mexico and elsewhere are only one piece of the picture — a big slice, but not the whole pie. "A huge amount of, especially rural Alaska, has subsistence wild foods that they rely on," Rachel Lord says. That means salmon, of course, and caribou, and other fish and game, as well as foraged berries and plants and more. (Palmer's report found that 65% of all the state's residents, and 98% of the rural ones, engage in some form of subsistence food-gathering. Rural Alaskans, for whom rates of food insecurity can be twice as high as those living closer to cities and major roads, each harvest on average 300 pounds

of wild food each year. Altogether, Alaskans consume somewhere between \$450 million to \$900 million worth of wild foods every year.)

And there's been a surge of new farms in the state as well: The number grew by 30% from 2012 to 2017 in Alaska, while the United States as a whole saw a 3% decline. "We can't grow avocados, but we can grow a lot," said Lord — everything from livestock feed to fruits and vegetables, the latter sometimes supported by greenhouses or hydroponic systems. Alaska-raised meats and aquaculture products, like oysters, also are available, and there's even a handful of vineyards.

But the traditional subsistence foods that nourished Alaska Natives for thousands of years before the gold-seekers arrived are beset by climate change and other man-made stressors, such as industrial fishing and habitat destruction from mining. And while the state's agricultural sector is growing, it's a long way from being able to replace all food imports; 43% of the state's farms are less than 10 acres in size.

Which brings us back to the imports, what bush Alaskans sometimes call "store food." Imports generally depart from the Port of Tacoma in Washington and spread out in three directions. Unalaska, in the Aleutian chain, receives direct shipments from Washington and then serves as a transport hub for southwest Alaska. Southeast Alaska, too, has a direct line to Tacoma, with shipments to Ketchikan, Juneau and beyond. But the vast majority of shipping crosses the Gulf of Alaska and heads for the Port of Alaska in Anchorage, where more than half the state's population lives. Two large container shipping companies, TOTE and Matson, do the hauling, with deliveries arriving twice a week, and a complex network of barges, trucks and planes takes it from there, spooling out across the state's vast interior.

"We are a ship-to-shelf state," Lord said. "So when food comes into the port and goes out, it is, I've heard, anywhere from three to seven days' worth of food. That is an extreme vulnerability." (Kelly, the longtime grocery worker, agrees. "I have seen people on Facebook say, 'Oh, surely they have stuff in the back room,'" she told me. "Well, we have a couple days' worth.")

In the Lower 48, by contrast, food is collected in regional distribution centers — whether it came from U.S. fields, off trucks from Mexico or elsewhere in the Americas, or by ship

from Europe or Asia — before being doled out to individual stores, according to Benjamin Lorr, the author of *The Secret Life of Groceries*. Alaska lacks that middle step; even Hawai'i, in comparison, keeps up to two weeks' worth of food in its warehouses at any given time.

Once the food has made its way to Alaska, whether by sea or by land, it faces a whole new tangle of logistical challenges. While a solid majority of Alaskans live along the state's sparse road network, mostly concen-

**For a state
where many
residents pride
themselves
on their self-
sufficiency, their
food supply
is unusually
dependent
on public
infrastructure.**

trated in greater Anchorage, its semi-rural suburbs in the Mat-Su Borough, and in greater Fairbanks, 82% of the state's communities are not reachable by road. The systems that carry food across all that land and water are vulnerable in myriad ways. Many small, fly-in communities are eligible for a subsidized air freight program administered by the U.S. Postal Service. Bypass Mail, as it's called, is a lifeline — but it's also, as Mike Jones, an economist at the University of Alaska Anchorage, explained, susceptible to delays and spoilage. As the food gets transferred from larger air

carriers to much smaller ones, making its way from, say, Anchorage to Nome and then on to an array of often-icebound coastal villages, it sits in hangars and on airstrips. And sometimes it freezes. Or thaws. Or just goes off.

I've visited a few of those communities, with their thinly stocked store shelves and stratospheric prices. I've even been an ad hoc fruit-and-veg mule myself, hauling strawberries and kale salads and other produce onto passenger flights for the people I was visiting. I thought I understood the difficulties. But the system was even more precarious than I'd imagined.

The list of potential obstacles that Alaska's incoming food must clear before it lands on anyone's plate was dizzying. Palmer's report grappled with everything from earthquakes, tsunamis and avalanches to cybersecurity, fuel availability and wildfires.

It struck me that, for a state where many residents pride themselves on their self-sufficiency — and Alaskans in general are some of the most quietly competent and resourceful folks I've ever met — their food supply was unusually dependent on public infrastructure. Down South, private sector producers might rely mainly on a functioning road network to get their food to private retailers. But in Alaska, so much more was in play, across ocean, land and air.

Keeping Alaska's supply chain healthy is a shared effort — a civic project. And I might be biased, given my position on the other side of the border, but it seems to me that the biggest threat it faces is not some Canadian political bluster, but a failure to understand, and support, the role of public works and collective interventions in keeping the state fed. The Alaska Highway was, famously, completed in a matter of months. But the unglamorous task of maintaining port pilings and shipping berths, of filling potholes and keeping remote airport weather stations online, of caring for the herds of wild ungulates and schools of fish that feed people far from the nearest big-box grocery store — that work never ends. ☀

Eva Holland is a contributing editor at High Country News, focusing on stories from Alaska. A freelance journalist based in Whitehorse, Yukon, she is also a former correspondent for Outside and the author of the book Nerve: Adventures in the Science of Fear.

THE KILL FLOOR

**HOW AMERICA'S LARGEST BEEF PRODUCER
EXPLOITS REFUGEES FOR PROFIT**

BY TED GENOWAYS, ESTHER HONIG AND BRYAN CHOU | ILLUSTRATIONS BY BEATRICE CACIOTTI



Swift **Swift & Company®**

Greeley Beef Plant

800 N 8th Ave

- Swift & Company
- Safety Office
- Supply
- Personnel
- Victims
- Administration





A

ROUND 7 A.M. ON DEC. 12, 2006, half a dozen buses and a small convoy of government vans quietly encircled the Swift & Company beef packinghouse on the northeast edge of Greeley, Colorado. It was just 19 degrees that morning, the sun not fully up, as local law enforcement exited their vehicles and formed a perimeter around the cavernous plant — one of the nation’s largest, where thousands of cattle were butchered every day. Inside, line workers, many of them Mexican and Guatemalan immigrants the government suspected of

using false papers to get hired, had already donned hard hats and chainmail gloves and gone to their workstations, hooks and knives in hand, ready for the massive chain-driven conveyor system to bring the first carcasses of the day. Drivers had just begun herding cows into the chutes where they would be slaughtered when more than a hundred heavily armed federal agents, wearing black windbreakers with POLICE ICE on the back, barged through the doors.

Agents from Immigration and Customs Enforcement, or ICE — a division of the Department of Homeland Security, which had been formed in 2002 — poured inside. Concepción Sánchez, an immigrant from Chihuahua, had just donned a smock to prepare for her job sweeping blood and waste into a drain in the kill floor. Around her, workers ran for the exits but found them barred, she remembered recently. Others sprinted for the bathrooms and locked themselves inside or jumped into cattle pens or threw themselves into dumpsters. Sánchez says a few even lifted the grate over the floor drain and leaped into the bloody pit, hoping to find a way out. None escaped. All of the captured workers were taken into the cafeteria and separated into two groups — those who claimed to be citizens and those who didn’t — and then they were questioned by agents.

Shortly after the raid started, a representative from the United Food and Commercial Workers (UFCW) arrived and demanded to speak to union members. ICE agents refused, insisting they were “conducting a federal criminal investigation.” The union later claimed that workers were denied the right to make phone calls. “If certain employees needed immigration documents outside the facility to confirm their lawful status,” the government later responded in court filings, “these employees were allowed to contact family and friends by telephone to bring those documents to the Swift plant, and present them to the ICE agents at the gate.”

Across town, Sánchez’s daughter, Yesenia, a senior at Northridge High School, was pulled from class after her aunt called and explained what was happening. Yesenia, she said, needed to retrieve her mother’s proof that she had residency papers. Yesenia drove to their house.

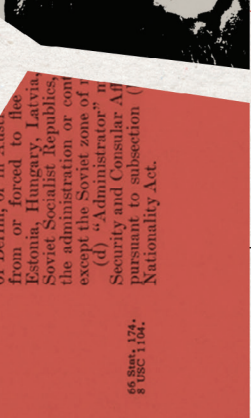
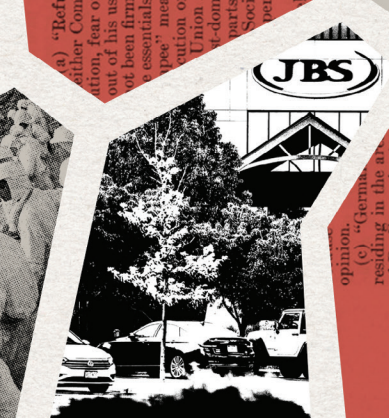
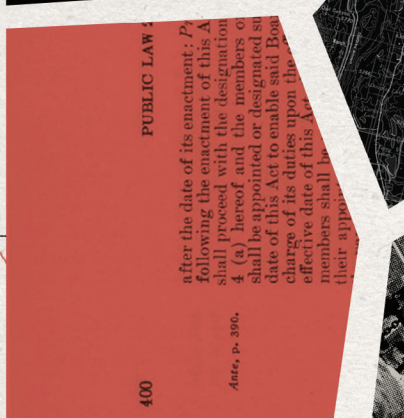
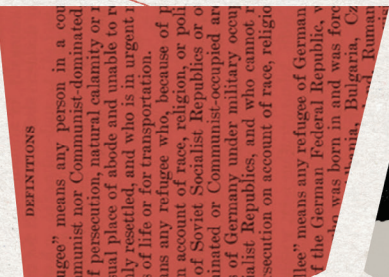
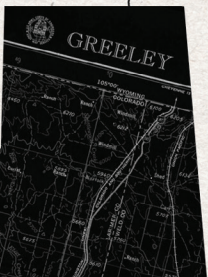
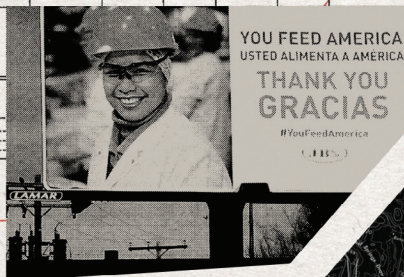
“I ended up grabbing what I could,” she recalled in a recent interview. “And then, I went and I waited.” It was still cold, but she paced outside the plant along the shoulder of the highway, her black hoodie pulled up over her ears, calling family and friends and trying to get any information.

By early afternoon, agents had interviewed all 1,400 Swift employees working that shift. Sánchez was released, but roughly 260 workers were arrested on charges of unlawful entry into the United States. Their hands were zip-tied, their legs shackled, and they were taken outside. One worker later remembered being dragged onto a waiting bus, its windows whited-out. Agents barked orders in English, which he didn’t understand, and wouldn’t tell him where he was being taken. The buses were driven out of the gates while helpless family members stood outside the locked fence, crying and calling out. The workers were driven to the Denver Federal Center, more than an hour away, where they were Mirandized and assigned registration numbers as deportable aliens. After midnight, some were taken to a detention facility in Aurora; others were sent to the Park County Jail and then even farther away, to the Otero County Prison Facility in New Mexico. Eighteen were held in the Weld County Jail in Greeley on charges of identity theft and fraud.

What happened in Colorado that day was unprecedented, but it was not an isolated incident: More than a thousand ICE agents conducted similar raids simultaneously at five other Swift plants in Texas, Iowa, Nebraska, Utah and Minnesota. Nearly 1,300 workers were taken into custody as part of the largest single worksite immigration enforcement action in U.S. history. The government called it

SCHEDULE OF LAWS REPEALED—Continued

Date	Statutes at Large					U. S. Code	
	Chapter	Title	Section	Volume	Page	Title	Section
1947—July 9.....							
Do.....							
Do.....							
Do.....							
Do.....							
1947—July 11.....							
July 25.....							
Aug. 1.....							



June 25, 1948
[S. 224]
[Public Law 774]
Displaced Persons
Act of 1948.
"Commission."
"Displaced person."
"Eligible displaced
person."

Operation Wagon Train, but others remembered it simply as the Swift Raids. The raids not only transformed the racial, religious and cultural makeup of the half-dozen affected communities, they also changed the face of labor in middle America and then its politics. The mass arrests of undocumented immigrants inspired big meatpackers, both American and foreign-owned, to rebuild as an economy of refugee labor. The resulting shift in small-town demographics also gave rise to a predictable backlash that eventually coalesced into a new era of nativism — and culminated a decade later in the 2016 election of Donald J. Trump.

Over the last year, *High Country News*, in partnership with the Food & Environment Reporting Network, examined the records of nearly a hundred lawsuits, Equal Employment Opportunity Commission complaints, government investigations and union statements — nearly two decades' worth — in order to chart how the industry's attempt to create a "deportation-proof workforce" enabled the brutal exploitation of refugee labor while also exposing the nation's most vulnerable immigrants to virulent racism and religious discrimination.

Now, with Trump back in office and determined to take immigration crackdowns to their extreme conclusion, workplace raids have resumed to the applause of hard-liners in his base. But the raids also threaten to finish off declining rural towns, upend commodities markets for struggling farmers and ranchers, and send the nation's skyrocketing food prices even higher. More importantly, Trump's second term seems to be forcing a reckoning: After two decades of relying on refugees as an essential part of the workforce, has our country

grown so anti-immigrant that we will allow ICE to deport the people who feed us?



GREELEY IS A MID-SIZED CITY on the eastern plains of Colorado. Over an hour away from the iconic Rocky Mountains, it may seem like a quiet place. There's a main avenue lined with local businesses — a large brewery, a Mexican grocery store and a mosque discreetly tucked into a strip mall. There's the University of Northern Colorado with its rolling fields of green grass and the tall bleachers of the football stadium. On the other end of town, the packinghouse sits out where North 8th Avenue turns into Route 85, a hulking concrete structure surrounded by high, spike-topped fencing. It is designed to be inconspicuous — the kind of industrial building you accelerate past without even noticing, much less wondering what goes on inside. In the surrounding countryside, hay fields and cow pastures stretch as far as the eye can see.

Greeley is cattle country. With an inventory of more than 2.5 million head, Colorado's beef brings in more cash than any other agricultural commodity in the state. Most of Greeley is deeply connected to meatpacking. And so the 2006 raid was a crisis of epic proportions. The government arrested nearly 10% of the plant's workers, forcing the company to run at reduced capacity. Swift was the nation's third-largest supplier of beef and pork, with close to \$10 billion in sales most years, but the company announced it expected to lose \$80 million in the weeks after the raid. Thousands of ranchers, farmworkers and

truckers depended on the labor of the Greeley plant. The uncertainty seemed to embody all of the incongruities of the moment — the isolationist fervor of the post-9/11 era juxtaposed with the industry-friendly anti-regulation administration of George W. Bush.

In announcing the operation, Homeland Security Secretary Michael Chertoff had explicitly cited *The 9/11 Commission Report*, noting that valid identification was Homeland Security's best method "to ensure that people are who they say they are, and to check whether they are terrorists." And he vowed not to stop with the raids. "We all know that the primary economic engine that draws in illegal migration is work. And when businesses are built upon systematic violation of the law, that is a problem that we have to attack." Seven of the 18 workers held on criminal counts in Greeley had their cases dismissed in return for testimony against Swift. But no trial ever happened: "ICE dropped the ball," Weld County District Attorney Ken Buck told the *Greeley Tribune* one year after the raids. (Buck went on to serve multiple terms in Congress before resigning in 2024.) He said that his office had enough evidence to go after executives at Swift. ICE, however, decided not to press charges. "It was a great injustice," Buck said, "that higher-up people at Swift were not prosecuted."

Under such scrutiny, Swift couldn't risk hiring more undocumented workers. But the company needed to replenish its workforce fast. So executives settled on recruiting a new class of foreign employees: refugees.

At a corporate office, Swift executives posted maps on the walls and circled target cities to advertise openings. In Colorado, they passed out fliers to workers at other meatpacking plants, particularly the Somali immigrants at a Cargill beef plant in nearby Fort Morgan. They also targeted Tyson beef plants in Kansas, where Somalis had faced prejudice in small towns. The recruiting efforts were aggressive. The company's HR team advertised on the radio and in local newspapers. They bought space on a billboard and hung posters in restaurants. Swift even offered to help fill out job applications, to provide moving and housing expenses, and to pay signing bonuses of up to \$1,500. "Our survival was at stake," one executive said.

But it wasn't enough. The raids had crippled the company, and in May 2007, Swift announced it was being sold to the Brazilian-owned company that owns meatpacker JBS in a deal worth about \$1.5 billion. With the purchase, JBS became the largest beef processor in the world — and immediately stepped up Swift's refugee hiring, in order to maintain and then increase production.

JBS' decision would have a radical impact. Its strategy spread throughout the industry and eventually reshaped entire small communities across the middle of the country, from Texas to the Dakotas, from Utah to Iowa, as refugee protections were expanded to other groups of asylum seekers through executive authority, temporary protected status (TPS), humanitarian parole and visas for victims of trafficking or violence. More broadly, however, the raids triggered a shift in how the country resettled refugees seeking safety within the nation's borders. People who once landed in cities now increasingly found themselves in rural areas, navigating profoundly alien cultures and small-town dynamics with limited support.



WIDESPREAD RESISTANCE TO NEW ARRIVALS is nothing new. For more than 80 years before the Swift Raids, the United States tried to limit immigration with the explicit intent of maintaining the nation's whiteness. In 1924, as the notion of fencing the U.S.-Mexico border was first being seriously discussed, the U.S. Immigration Act barred migrants from Asia and lowered quotas for legal new arrivals based on the 1890 census — literally aiming to return the country to the 19th century. (An earlier version had proposed using the levels of 1790, when the Naturalization Act had only allowed "free white persons" to apply for citizenship.) Public support for these constraints weakened in 1939, after an ocean liner carrying more than 900 Jews fleeing Nazi persecution was denied permission to land on the coast of Florida, sending many to their death in the Holocaust — a decision that the U.S. State Department formally apologized for in 2012. To avoid repeating such tragedies and establish our new role as a leader of the free world, the government began to recognize "refugees" as a separate category of immigrants.

Congress passed a series of piecemeal legislative measures — the Displaced Persons Act of 1948, the Refugee Relief Act of 1953, the Refugee-Escapee Act of 1957, the Immigration and Nationality Act of 1965 — but it wasn't until 1980 that comprehensive legislation capped annual admission at 50,000 refugees (roughly 10% of overall admissions). Almost as soon as it was enacted, President Jimmy Carter extended temporary status to additional Cuban and Haitian refugees. In so doing, he established a precedent.

Throughout the Reagan era into the Bush years, the government tended to grant entrance to immigrants who had fought for democracy against communist states or were fleeing repressive regimes. In 1990, Congress formalized temporary protected status (TPS) to grant asylum to Salvadorans fleeing the civil war. But that temporary designation created a sense of vulnerability. People who are officially refugees have legal immigration status, which protects them from deportation, but the process to get official status often takes years. In the meantime, many asylum seekers also apply for employment-based resident status under a provision of U.S. law that welcomes unskilled laborers to perform work "for which qualified workers are not available in the United States." To do so, they have to prove they have "a permanent, full-time job." From a management perspective, this makes asylum seekers perfect employees: hard-working, compliant, desperate to keep their jobs.

For a long time, the federal government settled refugees in

**"SO, YOU GET FEDERAL MONEY
TO WORK WITH REFUGEES.
CAN YOU USE THOSE DOLLARS
TO BUS THOSE PEOPLE
OUT OF HERE?"**



urban areas where there was a concentration of service agencies and jobs. St. Louis became a mecca for Bosnian culture. Many Southeast Asians ended up in Louisiana and California. Iraqis tended to settle in Michigan. But then, after the Swift raids in 2006, that started to change. Refugees were increasingly resettled not just in Greeley but in dozens of other rural meatpacking towns — elsewhere in Colorado and also in Iowa, Nebraska, Kansas, Minnesota and Texas.

Paul Stein, who was the coordinator of the Colorado Refugee Services Program around the time of the raids, noticed that more and more refugees were moving to Greeley. A local Denver newspaper reported that recruiters were visiting the city's mosques and African-owned businesses, offering people \$1,500 if they signed up for a job, and more if they referred a friend. In a matter of months, more than a thousand refugees, many from Somalia, came to Colorado. But they needed translation services and help navigating local aid resources — how to find the food pantry, how to register kids for public school — none of which was available in Greeley. In response, the nonprofit Lutheran Family Services opened an office for refugee resettlement. "It is a story of backing into a plan rather than having the plan," Stein said recently. "It totally started because of meatpacking. It was employer-driven."

And the refugees continued to come. In a matter of months, JBS decided to bring on a second shift, and the plant began to operate roughly 18 hours a day. But that required 1,300 additional workers, and so even more refugees — including Black Muslims from Somalia — were hired. Refugee resettlement agencies always needed jobs for new arrivals and, due to the high rate of injury and worker turnover

(as high as 50% in a year), the meatpacking plants always needed new workers. It was the perfect match. Meatpacking has had the fifth-highest concentration of refugee workers in the U.S., after nail salons, manufacturing, taxi and truck driving. And it offers an entry point to other opportunities: Refugees have been more likely to start a business and have a higher rate of employment than native-born Americans.

Still, they often struggle: Refugees are overrepresented in low-skilled work and earn less at first than all other immigrant groups. Getting an education or learning English is a luxury. Even those refugees who have a profession rarely find work in their chosen field because the certification process is so complicated. Worse still, many face overt racism and religious discrimination.

By 2007, just one year after the raids, the foreign-born population of Greeley had exploded to around 12,000 — more than 12% of the town and a 60% increase from just seven years earlier. Somalis, many of whom had fled discrimination in Kansas, were now under increasing attack. A local mosque that had been in the area for years and served students from the local college was shot at in broad daylight, leaving three holes in a cracked window. A Greeley resident organized an "Anti-Sharia Law" protest outside the plant. Forty people gathered, waving American flags and holding signs that read "Make steaks not Sharia."

And it wasn't just Greeley. When comprehensive immigration reform failed to pass Congress in 2007, local governments made their own rules. In Fremont, Nebraska, where immigrants made up the workforce of a Hormel pork-processing plant, the city government sought to require proof of citizenship before a person could obtain an apartment lease. Similar measures were introduced or passed in other small towns,

including Farmers Branch, Texas; Hazleton, Pennsylvania; and Valley Park, Missouri. These measures, which faced lawsuits, were drafted in part by Kris Kobach, a Kansas attorney and politician who later became the de facto leader of Trump's Commission on Election Integrity, which claimed that "millions" of undocumented immigrants cast illegal votes in 2016. Stein, who left his role as coordinator in 2014, says a Colorado county commissioner called him up one day out of the blue and said, "So, you get federal money to work with refugees. Can you use those dollars to bus those people out of here?"

Even as locals struggled to adjust to their new immigrant neighbors, the new arrivals had trouble adapting, too. Many were unprepared for Greeley's long and unrelenting winters. They didn't have cars to traverse the sprawling Western town. Many were traumatized victims of war who now found themselves without mental health services; alcoholism and reports of spousal abuse increased. The Somali workers, who made up the majority of the first wave of new arrivals at JBS, were overwhelmingly Muslim and found the post-9/11 environment in the United States to be hostile to their beliefs, both inside and outside the plant. After months of mounting pressure, the volatile mixture finally exploded days after the start of Ramadan in September 2008.



ABDIRIZAK AMED CAME TO THE U.S. from Somalia in September 2007 and, less than a year later, found a job at JBS-Swift on the cutting line — what the company euphemistically calls "fabrication." In a complaint submitted as part of a subsequent class action suit, he testified that he quickly learned the plant's not-so-invisible hierarchies. "Swift gives new employees white (hard) hats and tells them that once they learn the job satisfactorily, they will become 'qualified' for a raise and will receive a gold hat," Amed said in his filing. But he claimed that Somali employees never qualified or got promoted. Instead, they were moved laterally from department to department, in order to avoid having to promote them. Amed said it often took Somali employees weeks or even months to qualify for raises that other workers received in a matter of days. By the start of Ramadan, on Sept. 1, Amed had been at the plant for more than a month and still hadn't received a gold hard hat. "When I asked my Hispanic supervisor why," he said, "he told me it would happen any day."

Near midnight on Sept. 1, as the B shift ended, according to a complaint filed with a Colorado district court, dozens of Muslim

employees went to the superintendent's office to request that their meal break be moved from 9:15 p.m. to 7:30 p.m., so that they could complete the final daily prayer of Ramadan and break their fast within 15 minutes of sunset. At first, the company agreed. Then, after some white and Hispanic workers complained about what they perceived as special treatment, the Somali workers were informed that their break had been moved back. Supervisors shut off restroom sinks and water fountains to prevent the Somalis from washing for prayers. "Management made it clear that they did not want us to pray," Amed said. The Somalis decided to break at 7:30 anyway. They left the line, pursued by supervisors into restrooms, locker rooms and the break room. "When we attempted to take our break," Amed said, "management called security."

Guards hauled praying workers out of the bathrooms. Even before this melee, multiple workers later reported in affidavits, guards and other white and Hispanic workers had shouted insults and slurs. In the men's room, Abdirashid Hussein alleged he was kicked and called "Saddam." Raawi Sahal claimed her prayer mat was taken from her and she was called the N-word. Other men said they were called "monkeys" and told to go back to Africa. One woman who wore a flowing jilbab said she was told that she "must be ugly underneath." Numerous workers reported being called terrorists.

"Some supervisors pushed Muslim employees into the lunchroom like they were herding cattle," Amed claimed. Workers were eventually told that they had participated in an "unauthorized work stoppage," in violation of the collective bargaining agreement. They protested that they had simply been trying to pray, as their religion required. Some said they wouldn't go back to work until they were allowed to complete their prayers. Others, who tried to return to the line, were blocked. "They told us to leave," Amed said. "So we left the building." Between 100 and 150 workers were fired, including Amed; dozens of others later joined a class action suit against JBS, alleging that they suffered systematic abuse and discrimination throughout the remaining weeks of Ramadan.

And anti-Muslim sentiment spread to other JBS facilities. In Grand Island, Nebraska, at another plant that was hit during the 2006 Swift raids, more than a thousand Hispanic employees protested changes to the work schedule to accommodate Ramadan prayer times. "They are arrogant," one Mexican American worker told the *New York Times*. "They act like the United States owes them." Margaret Hornady, then mayor of Grand Island, said the sight of Somali women wearing hijabs on the streets of her town made her think of Osama bin Laden and the 9/11 attacks. "I know that that's horrible and that's prejudice," she said. "I'm working very hard on it." Inside the plant, Christian workers from South Sudan joined protests against Somali workers. By 2009, police were warning of an alleged gang war that had broken out between Somali and Sudanese immigrants at the Autumn Woods apartments on the edge of Grand Island.

In 2010, the Equal Employment Opportunity Commission brought suit against JBS on behalf of Somali former employees, alleging that the company engaged in a pattern and practice of discrimination, retaliation, hostile work environment and failure to accommodate the plaintiffs' religious needs. After more than a decade, JBS agreed to pay \$5.5 million. A subsequent suit alleged that the company's corporate leadership had not done enough to improve its treatment

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of Muslim workers. “Unfortunately, such harassment, discrimination and retaliation continues to be its standard operating procedure,” the suit claimed. In fact, the complaint alleged that anti-Muslim mistreatment had grown and gotten worse with the presidential campaign and election of Donald Trump.

Shortly before the 2016 election, the FBI announced that it had arrested a ring of Trump-inspired anti-Muslim militia members in Garden City, Kansas, who were plotting to blow up an apartment complex housing hundreds of Somalis who worked at a Tyson meat-packing plant nearby. “You are safe,” the local police chief assured the community, “and we will continue to make every effort to make sure you are safe.” But the Southern Poverty Law Center reported that there was a 200% increase in the number of anti-Muslim hate groups in just one year — much of that rise in small towns. In Colorado alone, town officials had to ask a Longmont man to remove an anti-Muslim yard sign, a man in a hoodie smashed out the windows of the Fort Collins Islamic Center, and in Fort Morgan, Somali workers at the Cargill beef plant claimed that they were prevented from buying land to open a mosque. The county sheriff there told the Associated Press: “There’s a general feeling out there of, ‘Let’s slow this train down a bit.’”

Kacem Andalib, a Muslim from Morocco, started working at JBS in late 2014. He began by overseeing workers trimming fat from carcasses and was soon promoted to HR supervisor over the entire B Shift. Andalib was the only Muslim employee in human resources, so he was frequently put in charge of disciplining and firing Somali workers. He had a reputation as a tough manager. But when Anthony Rickoff, a white employee, joined the HR department in spring 2017,

shortly after Trump’s inauguration, Andalib alleged in a complaint that Rickoff accused him of favoritism toward Muslim workers. According to court documents, when Andalib expressed concern that Trump’s travel ban on majority-Muslim countries, including Somalia, might make it impossible for many workers at JBS to visit family back home, Rickoff flew into a rage. “It’s all your fault, you freaking terrorists!” Andalib remembered Rickoff saying. Later, when Andalib questioned Rickoff about why he had fired a Somali employee, Andalib claimed in court documents that Rickoff said he was “doing his share of making America great again!” After Andalib was fired in early 2018, he sued; his claims of racial discrimination and retaliation were later dismissed after he was cited for “failing to follow court orders.” Rickoff was promoted and is now the head of human resources for JBS’s pork division.

Tensions reached a peak in April 2020, as COVID-19 outbreaks at JBS beef plants in Greeley, Colorado; Cactus, Texas; and Grand Island, Nebraska, became early hotspots of the pandemic. Amid thousands of worker illnesses and mounting deaths, the UFCW called on JBS to provide enough personal protective equipment, such as masks and face shields, for workers to get safely through shifts on their crowded packinghouse floors. By then, restaurants had closed, supply chains collapsed, grocery stores declared shortages. Food prices were soaring, and the op-ed pages and airwaves were filled with pundits stating what seemed obvious: We simply couldn’t go on as before. Even JBS seemed to acknowledge this. Amid an April outbreak that eventually claimed at least six workers in Greeley, the Colorado Department of Public Health and Environment and county public health officials ordered

the company to suspend operations for almost two weeks — and JBS publicly announced that it would obey.

But emails later obtained by *ProPublica* revealed that the company had appealed to Gov. Jared Polis and then to Vice President Mike Pence, asking that its plants be declared “critical infrastructure” and protected from being shut down. Within days, the North American Meat Institute, which counted the largest meatpackers’ leaders among its executive board members, sent a draft executive order to Trump officials that allowed meatpacking plants to remain open, despite the risk to workers. Trump issued an order with similar wording a week later. At the same time, Republican politicians began to blame the largely refugee and immigrant workforce for the spread of the illness. Kristi Noem, then governor of South Dakota, defended the Smithfield Foods plant in Sioux Falls, where OSHA reported nearly 1,300 workers were sickened. “We believe that 99% of what’s going on today wasn’t happening inside the facility,” Noem said in an interview with Fox News. “It was more at home, where these employees were going home and spreading some of the virus because a lot of these folks that work at this plant live in the same communities, the same buildings, sometimes in the same apartments.”



IN GREELEY, KIM CORDOVA, president of the UFCW Local 7, says that the deaths of the JBS workers had a galvanizing effect. “We started to see workers mobilize, stand up, fight back,” she said in an interview in the union offices near Denver. By then, more than 45% of meatpacking workers were foreign-born, according to a report by the American Immigration Council. Cordova estimated that the number in Greeley was much higher — perhaps 80% or even 90% of the workforce. But because workers at JBS felt so unprotected, employees who had other options began quitting and seeking jobs elsewhere. JBS and other meatpackers tried to cover the shortage by requesting permission from the federal government to fill vacancies with temporary foreign workers holding H-2B visas. In 2021, the U.S. Department of Labor issued more than 20,000 temporary work visas to meat industry employees.

But it still wasn’t enough. The big meatpackers faced critical labor shortages and were in a weakened position politically. The largest companies were all facing a civil lawsuit alleging price-fixing, not to mention a Department of Justice probe into allegations of monopolistic and antitrust practices. A bribery scandal in Brazil forced JBS’s parent company to settle a Foreign Corrupt Practices Act investigation brought by the Securities and Exchange Commission in October 2020. The agreement, which included consenting to a finding of what the SEC called “brazen misconduct,” saved JBS from criminal charges but its parent company pleaded guilty to “conspiracy to violate the FCPA,” effectively ending its bid to be publicly traded.

At the same time, meatpacking workers began to embrace their influence as “essential workers.” “There were walk-offs, not just here, but around the country,” Cordova said. “Workers were not going to die for their job.” After the Trump administration forbade plant closures, workers demanded hazard pay, lobbied to be among the first to receive vaccinations, and pushed the Colorado Legislature to mandate sick leave for meatpackers and other food workers. The workforce at JBS in Greeley was so united that it did not approve the collective

bargaining agreement reached between the company and the UFCW International. “We actually went back to the table,” Cordova said, “and we were able to bargain an even stronger collective bargaining agreement, not with just more money, but we put a lot of language in around safety interventions, a stop to the work-while-sick culture. We fought for respect and dignity here at this plant.”

Quickly, however, the workers, many of them refugees, saw their newfound power undercut by the same process that had brought them into the plant. JBS “really started to be aggressive with their discipline against current workers,” Cordova said, firing workers who refused to work while sick or pushed for the independent bargaining agreement. JBS could dismiss them, Cordova says, because the company had found a new source of refugee labor: Haitians who had recently received temporary protected status from the Biden administration. As with the Somali, South Sudanese and Burmese workers before them, these workers arrived in the U.S. with few English language skills, little cultural knowledge and a desperate need for jobs.

In December 2023, a Haitian would-be social media influencer, after allegedly consulting with a Beninese middle manager in HR at JBS, created a simple TikTok video to recruit Haitians for shifts at the Greeley plant. They hoped to fill 60 openings. But the video went viral, and hundreds of inquiries poured in. The Haitian influencer claimed the JBS hiring manager encouraged him to keep recruiting more refugees, to keep picking them up at the airport and delivering them to Greeley. The new workers were crowded into rooms at a highway motel near the plant — four people and then six and then eight or even 10, in rooms that had only one bed. And workers alleged they were charged for application services, for rent, for driving.

Worse still, in a complaint filed by the UFCW Local 7, the Haitians said that inside the JBS plant they were being asked to work at “dangerously unsafe” speeds — sometimes almost twice as fast as workers on the day shift. In September 2024, the union publicly accused JBS of abusing immigrant workers and claimed that the misrepresentation of their work and living conditions during recruitment constituted human trafficking; they filed complaints with the Department of Labor, the Occupational Safety and Health Administration, the National Labor Relations Board and other government agencies. JBS denied the allegations, and a spokesperson insisted that the company followed all laws and regulations. But the Haitians said that they were essentially being held in slavery.

Less than two months later, Donald Trump was elected to a second term. In January 2025, Pilgrim’s Pride, one of JBS’ subsidiaries, was the largest single donor to Trump’s inauguration — offering more than Amazon, Google, Meta, Microsoft and PayPal combined. Within weeks, Trump’s administration had removed key members of the agencies that had been asked to investigate JBS. By executive order, he paused enforcement of the Foreign Corrupt Practices Act, and in April, the SEC allowed JBS to offer shares on the New York Stock Exchange. *Forbes* expressed shock at the move, citing the company’s convictions for “bribes to Brazilian meat inspectors, kickbacks to government financiers and illegal campaign contributions to more than 1,800 Brazilian politicians,” in addition to “accusations in the U.S. of JBS and companies it owns price-fixing, wage-manipulating and violating child labor laws, plus allegations of discrimination and harassment.” In June, Wesley Batista Filho, the CEO of JBS USA, stood with his

UNDER THE GUISE OF OFFERING SAFE HAVEN, WE HAVE BROUGHT REFUGEES FROM AROUND THE WORLD AND RELEGATED THEM TO BRUTAL MANUAL LABOR IN ONE OF THE MOST DANGEROUS AND LEAST-REGULATED INDUSTRIES.

father, Wesley Batista, and grandfather, José Batista Sobrinho, and rang the bell of the New York Stock Exchange. When the *Wall Street Journal* asked the new CEO about his vision for the future, Batista Filho deflected. “It’s just doing what we’re doing, having fun, growing the business,” he said. “When you do stuff that you like, when you’re having fun, you don’t work.”

It’s a strangely naive statement. The jobs at JBS are among the most dangerous in America, and few, if any, people would describe the work as fun. And, at the same moment that federal restrictions on JBS are loosening, Trump’s White House has begun turning up the heat on JBS’s refugee workforce. Exploiting the weakness of executive authority as a tool for lasting change, Trump has eliminated temporary protected status for millions of people, arguing that he is returning TPS to its “original status” as “temporary” — and the Supreme Court has affirmed his power to do so. As of this month, September 2025, TPS has been canceled for people granted humanitarian entry from Haiti, Venezuela, Afghanistan and several other countries, forcing them to prepare to leave the country. Also, new entries have been entirely banned from these countries as well as from Burma, Somalia, Sudan and several other Central African nations. In essence, the entire workforce of the U.S. meatpacking industry — as pioneered by JBS 20 years ago — has been ordered out of the country and been blocked from re-entry under any circumstances.

On the day that the Supreme Court affirmed Trump’s power to cancel TPS, a Haitian former JBS worker, who is now employed at the Immigrant and Refugee Center of Northern Colorado in a suburb of Greeley, prepared for the uncertainty ahead. “It’s going to be overwhelming,” he said. “*What can I do? What can I do? What will be the next step?*” It’s a question we will all have to answer.

What do we owe refugees? Given that we brought them to the U.S. and offered them a new life here, is it fair that they should suddenly face deportation? These are people who entered the country legally, via rigorous and well-defined programs — men and women who had demonstrated that their lives were in imminent danger in their home countries. Is it right to just send them back — or, as the Trump administration has also proposed, to send them elsewhere, to some other third country?

On June 10, law enforcement agents raided the Glenn Valley Foods meatpacking plant in Omaha, Nebraska. The plant sits near another JBS beef plant, and initial reports on social media spread that the JBS plant was also being raided. It wasn’t true — but more than 70 Glenn Valley workers were taken out in handcuffs, including five who were criminally charged with resisting or impeding a federal officer. Glenn

Valley now reports that its company is struggling to stay afloat. “It’s a wipeout,” owner Gary Rohwer told the *New York Times*. “We’re building back up from ground zero.” For people in Greeley, it was a frightening echo of the Swift Raids.

Concepción Sánchez was released by ICE on that frigid December day in 2006 and worked for JBS for another 15 years — until fears over COVID and persistent pain from a workplace injury forced her to retire. Still, she worries now that the administration will revoke her green card. On a recent trip to Chihuahua, she was concerned that she might be held at the border and prevented from re-entering. This is precisely the fear and unease that the latest round of immigration crackdowns are intended to create, in order to encourage self-deportation, or, at the very least, maintain a workforce that feels freshly vulnerable and is unlikely to complain about unsafe or unfair conditions.

JBS declined to comment on the specific history contained in this article, but a company spokesperson did offer a statement. “We are focused on hiring team members who are legally authorized to work in the United States, and will continue to follow the guidance provided to us by the U.S. government. If that guidance changes, we will act accordingly,” it reads, in part. “At this point in time, our facilities are operating normally and our production levels remain unchanged.” But for how long?

Almost from the dawn of the meatpacking industry, U.S. beef, pork and poultry have been processed under brutal conditions by people fleeing war and tyranny around the world. In the two decades since the Swift Raids, the largest meatpackers and the federal government have worked together to formalize that system. Under the guise of offering safe haven, we have brought refugees from around the world and relegated them to brutal manual labor in one of the most dangerous and least-regulated industries. This is what we have presented to the world’s most desperate refugees as their gateway to the American dream. Now, having exploited their labor and left many with lifelong injuries, is it right that we should simply discard them? If Trump gets his way, if the workforce at JBS is rounded up and deported, if the number of new refugees is shut off or slowed to a trickle, who will work all the jobs they’ve been doing?

What makes us think that this country will function without immigrants? ☼

Ted Genoways, Esther Honig and Bryan Chou reported for more than a year with support from FERN, the University of California, Berkeley 11th Hour Food and Farming Fellowship and the Watchdog Writers’ Group at the University of Missouri.

DIGNIFIED

Acknowledging the work of farmworkers through art.

ART & TEXT BY NARSISO MARTINEZ

WHEN I STARTED THIS WORK, I didn't know where I was going to go with it, but I like creating things using discarded materials. To me, it's a platform to talk about the experiences of farmworkers in the fields. It's important to tell the public who is behind our food production, to highlight the farmworkers. I want to raise awareness of their presence, of their contributions, of their humanity. Dignify farmworkers — that's the goal.

Historically, the more vulnerable communities have worked the fields, here in the United States and abroad. It's amazing to me that this group of people have been denied a dignified life when they are the ones who are actually picking the food that sustains us. I work in the fields, and whenever farmworkers are taken into account, it makes us feel like we are somebody, like we are part of a community. We need to be seen. We need to be taken into account.

I feel like farmworkers have been used politically as a scapegoat.

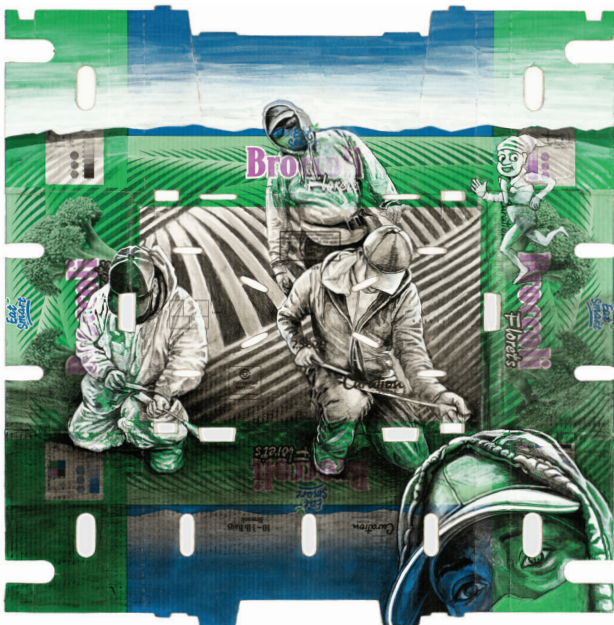
Farmworkers are human beings. Beyond our contributions, we are human beings with goals, dreams, aspirations, struggles. I can't believe the people who are in the fields, picking the food, are being persecuted now. I'm grateful for the organizations that are supporting farmworkers, educating people about how to defend themselves against deportations or kidnappings. I've seen crazy images of the military in the fields. It's unbelievable. But it is the reality that we are living in now.

When I came to the U.S., I had no education. I didn't even understand my own culture. I learned English, and as soon as I was able to have a conversation with my teachers, they made me believe that I could actually have an education. And through continuing my education, I realized that we are part of this land. Once, this was Mexico. This place was colonized, and my own country was colonized, and a whole system was instilled in us by force. So, it's a constant battle for equity. And it's a struggle to be included. It's a struggle, but it is possible. ☀

Narsiso Martinez (b. 1977, Oaxaca, Mexico) came to the United States when he was 20 years old. His work, which is drawn from his own experience as a farmworker, focuses on the people who perform the labors necessary to fill produce sections and restaurant kitchens across the U.S.



HOLLYWOOD & VINE
 Ink, charcoal, gouache
 and acrylic on produce
 boxes, 97.5 x 63.5
 inches, 2022.
 Photo by Yubo Dong.



SELFIE WITH THE HOMIES
Ink, gouache and charcoal on produce cardboard box, 40 x 39 inches, 2021.
Photo by Yubo Dong.

LOS DOS AMIGOS
Ink, gouache, charcoal and acrylic on paper grocery bags mounted on canvas, 84 x 48 inches, 2025.
Photo by Yubo Dong.

SUN FED
Ink, gouache and charcoal on produce cardboard, 16 x 31.25 inches, 2021.
Photo by Yubo Dong.





GOOD FARMS

*Ink, gouache, charcoal and matte gel on found produce box,
20.75 x 19.75 inches, 2020. Photo by Michael Underwood.*



USA PRODUCT
Gouache, charcoal,
collage and matte
medium on cherry box,
35 x 28.25 inches, 2021.
Photo by Yubo Dong.

GOLDEN CROP
Ink, gouache, charcoal
and acrylics on juice
carton, 11.75 x 15.25
inches, 2021.
Photo by Yubo Dong.

EASY GRAPE
Ink, gouache,
collage, charcoal
and matte gel on
recycled produce box,
27 x 30 inches, 2019.
Photo by Michael
Underwood.



FRUIT CATCHER

*Ink, charcoal and gold leaf on produce cardboard box,
20 x 15.50 inches, 2021. Photo by Yubo Dong.*

All artwork courtesy of the artist and Charlie James Gallery, Los Angeles.

Eating Bitterness

For the Chinese immigrants who built the Transcontinental Railroad, food was a tool of both oppression and resistance.

By Paisley Rekdal
Illustrations by Jia Sung





AGAINST A VAST WASH of sagebrush and volcanic rock in Utah's West Desert, Chris Merritt, an archaeologist with the State Historic Preservation Office, took me on a tour of the old Transcontinental Railroad's route through Promontory Summit, from Corinne to Umbria Junction. The line was replaced during World War II by the Lucin Cutoff, which now runs straight through the Great Salt Lake, shearing off some of the original line's distance and allowing its iron tracks to be recycled for war munitions. That change turned all of the Promontory Summit settlements into ghost towns.

I was visiting those sites throughout 2018 and 2019 as research for a poem commissioned by The Spike 150 committee to commemorate the sesquicentennial of the Transcontinental's completion in 1869. At the time, I was Utah's poet laureate — the first person of Asian descent to hold the role. I wanted to write a poem based on the letters and diaries of the Central Pacific Railroad's Chinese workers, which, I thought, were surely somewhere in the company's archive. But the CPR's records — absorbed long ago into the Union Pacific's, after the CPR's purchase — had no such materials. To date, not a single written document by a Chinese Transcontinental worker has been found. Absent any record, then, I turned to the landscape.

And the landscape offered much. As we walked the ghost town of Terrace, the era's rigid racial segregation was still apparent: All the Chinese artifacts, the buried remnants of its Chinatown, were found near the town's dump. Merritt pointed out fragments of broken opium pipes and dishes ground down in the sand. I dug up buttons and bits of glass. Some rice bowl shards were decorated with the Four Seasons or Bamboo patterns popular on Chinese dishware in the late 19th century.

Merritt said you might find similar bowls in any of the Western ghost towns where Chinese miners and railroad workers lived. It suggests the paucity of material choice for them, yes, but also the close ties they developed with the same trading partners — likely other Chinese migrants eager to make money in the U.S. by supplying plum wine, rice, soy sauce and dishes to the Chinese workers that white merchants wouldn't sell to.

As I thumbed a rice bowl shard, a phrase returned to me, one common to Chinese and Chinese Americans households: *Chi ku* — “to

eat bitterness” — a stark reminder that we all must suffer life's injuries without complaint. It was my mother's master philosophy for succeeding in America: Keep your head down and chin up, blind to setbacks and deaf to racist remarks. During the first months of a teaching job where an older colleague told me, in a hissed hallway conversation, that I was just another in a long string of “diversity hires,” I considered bringing a complaint to the department chair. But my mother batted it down. “You'll never get promoted,” she warned. “Just work hard and ignore him.”

Eating bitterness is a concept familiar to many immigrant families. The philosophy itself is not that original. What is unique is its subtle glorification of pain, the use of the verb “to eat” rather than “to endure.” To eat is to feed, to sustain: It is to grow the soul itself. Suffering represents, in this sense, a kind of power — one that nourishes what it threatens to destroy.

But these rice bowl shards also reminded me how much these Chinese workers desired to preserve their culture, to stay Chinese. It's a myth of American exceptionalism that the Chinese Transcontinental workers wanted to become American themselves. Most ate bitterness for money, not citizenship. Like the Chinese workers, the merchants who supplied them probably had little interest in staying in the U.S. Instead, they saw themselves as “sojourners” — travelers eager to milk America for money, just as America was eager to milk a war-torn, famine-stricken southern China for cheap labor.

We know this from more archaeological evidence. Many 19th century Chinese graves across the West are empty, part of an elaborate death ritual. Chinese men in the U.S. paid a *huiguan*, a district association, to bury their bodies and then have a bone collector exhume them months later, scraping away the flesh and breaking the bones to fit into earthen jars or metal boxes. These were shipped to the Tung Wah Hospital in Hong Kong, which distributed the remains to the workers' families. The *Shasta Courier* in 1897 cited the boxes

as evidence of Chinese workers' unsanitary, disease-spreading habits.

Not every body that arrived in Hong Kong, however, was collected. The hospital still hosts many unclaimed boxes from the last two centuries — stacks of men left to languish at the border of home.

IF WE CAN IMAGINE how the Chinese felt about America from their death rituals, we might also intuit something about their lives from what they ate. Layers of trash and coprolites from sites like Terrace can be read as an archive. Besides plum wine and opium, the Chinese appeared to stick to grains and vegetables familiar from home. But there are some interesting discrepancies: The trash is littered with bones from subsistence meat like jackrabbit and with pine nuts.

Pine nuts are used in southern Chinese dishes and are also a staple of the Paiutes, one of the Great Basin's Indigenous nations. The seedpods are shiny and tough: You have to split them with your teeth to reach the nut — sweet and oily, not bitter like its Asian cousin. You have to pick and pick to keep yourself fed; it is a subsistence diet, and the railroad workers wouldn't have had the time. Did they trade with traveling Paiutes or buy from Cantonese merchants? Without written records, it's hard to say whether the nuts suggest cross-cultural exchange or insularity. Likely the latter: Contemporary reports suggest the Chinese were as afraid of Indigenous people as white railroaders were. Like their Anglo counterparts, they were prejudiced against anyone they saw as “other.”

In 1852, Norman Asing, a Chinese restaurant owner in San Francisco, wrote to California Gov. John Bigler after the state enacted policies to prevent Chinese from entering. Asing chides that immigration “transferred (your nation) ... from childhood to manhood and made you great and respectable throughout the nations of the earth.” And he reminds Bigler that he, too, is the descendant of immigrants, since he would surely “not boast of being a descendant of the red

*Absent any record, I turned to the landscape.
And the landscape offered much.*



man.” Asing brags that the Chinese “exercised most of the arts and virtues of civilized life; that we are possessed of a language and a literature, and that men skilled in science and the arts are numerous among us.” Their cultural achievements, he argues, make it impossible to compare the Chinese to Black people. “We are not,” he declares, “the degraded race you would make us.”

Not much is known about Asing, but his letter shows how profoundly the Chinese understood that their identity was triangulated against Black and white, and that their own bid to be treated as equals relied on presenting themselves as ethnically and racially superior. This is the dark underbelly of eating bitterness: the suggestion that anyone who presents himself as a model sufferer becomes, too, a model citizen. If the promised power of *chi ku* is success, then eating bitterness demands that you live at the margin of politics and power to achieve it. You become, at best, a shadow of the powerful, replicating their arbitrary hierarchies and rules. It is subsistence nourishment, just as railroading is subsistence labor. Pain is the final result of both.

AFTER OUR VISIT TO TERRACE, Merritt drove me to see a famous 10-mile section of track that was laid down in a single day, mostly by Chinese workers — the longest section completed in the shortest amount of time — and I both marveled and winced at the achievement. For an instant, on that shelterless plain, buffeted by an endless wind, I understood what it meant to say that every foot of the Transcontinental’s trestle and inch of grade was built by humans.

Suffering is the definition of such work, and it’s even more bitterly astonishing to know the Chinese weren’t even the CPR’s first choice to do it. Charles Crocker, one of the railroad’s partners, urged his co-owners to hire young men from Guangzhou because they would be cheaper than whites. Most Americans at the time viewed the Chinese either as direct competitors, or as “less” than men. Chinese men wore robes that resembled women’s dresses, their black hair tied in long braids called *queues*. Because many — especially after the Gold Rush petered out — worked as domestics, washers in laundries or cooks in restaurants, they garnered the stereotype of being like women: weak, homebound, small.

The 1875 Page Act effectively banned immigration by Chinese women by assuming they were all coming to work in prostitution, but it also implicitly aimed to prevent Chinese men from marrying and raising Chinese families on American shores. The men had to live in close-quartered, segregated “bachelor societies,” further convincing their Anglo detractors that they were sexually perverse — effete homosexuals or opium-addicted rapists. CPR co-owner Leland Stanford didn’t think Chinese men were fit for the dangerous work of railroading. But they were seemingly less volatile than white workers as they didn’t drink, weren’t known to frequent the prostitutes that trailed the railroad, and kept to themselves. Only the Mormons, hired by the Union Pacific, were as hard-working and dependable. Most importantly, Chinese workers were cheap. The CPR only paid them about \$26 a month for 12-hour workdays, and they had to buy their own supplies and food. The Irish, by contrast, were paid \$35 and had their expenses covered.

The Chinese protested this injustice during an 1867 strike. They had struggled that summer to complete the hardest work on the western half of the line, working from dawn till dusk, blasting through the Sierras. The Chinese demanded 10-hour workdays and a pay increase to \$35 a month. “The truth is, they are getting smart,” wrote E. B. Crocker, Charles’s brother and CPR’s legal counsel. The real truth was that they weren’t smart enough: The Chinese never allied with the Irish or Black railroaders because of the groups’ mutual prejudice and racism. When Charles Crocker cut off food for the Chinese, it broke the strike.

It’s uncanny how often food and its metaphors for power and violence intertwine in the story of the Chinese in America. Hunger starts a strike, starvation stops it. Famine sends men fleeing from Hong Kong; American mines and railroads devour their labor. Hunger is the thread that binds us. After the Transcontinental was completed, some Chinese workers stayed in Salt Lake, growing gardens and selling produce to the Mormons, who regarded the gardeners with suspicion even as they became dependent on their business. In 1893, a white 17-year-old crushed a Chinese vegetable peddler’s head with a stone, killing him. In 1900, another vegetable seller named Tom Loung was shot and robbed.



Perhaps the inevitable result of *chi ku* is debilitating rage.

When Merritt and I walked along the track to the sign commemorating that famous 10-mile section, I felt both pride and dismay at the Chinese workers' achievement. It was undeniably astonishing to see their legacy physically carved into the landscape. But later, listening to the staticky voice of the president shouting about Chinese viruses, Wuhan and travel bans over my car radio, I thought about that section of track. What was the purpose, I wondered as I drove home, of working so hard for people who refused to work hard for us? What was the purpose of pain, if the only people who remembered it continued to suffer?

IF FOOD AND PAIN are the entwining metaphor for Chinese American resilience, how to interpret the fact that so much of Chinese political resistance has revolved around food production and restaurants? Asing was a restaurateur. So was Wong Kim Ark, born in 1873 in San Francisco, who worked as a cook in a Chinese restaurant before suing the U.S. for the right to re-enter as a citizen after visiting China — the case that established what, until the last election, we understood as the principle of birthright citizenship.

Or perhaps it makes sense that Chinese agitators sprang from the restaurant industry, since restaurants, like laundromats (in which my grandfather worked), are common in Chinese American families. The tongs, the backbone of Cantonese labor culture in America, supplied them with workers. Tongs are benevolent societies that help young men find work, with membership based on the man's home district, family name or dialect. In late 19th and early 20th century America, almost all male Chinese migrants joined tongs for physical protection, from the police as well as from white mobs. But as the tongs gained power, some turned to organized crime.

Because of the Page Act, tongs understood that women had become a commodity that, like opium, could be sold throughout the West. An exceptionally attractive woman bought for a few hundred dollars in Canton could bring as much as \$3,000 in San Francisco. The tongs trafficked Chinese girls

who thought they were coming to the States to marry eligible men. Many believed they'd entered an indentured servant system that required them to serve as prostitutes for a period of time. Women couldn't read, so they signed contracts they didn't understand. Girls who didn't end up in fancier parlor houses were locked into barred, street-facing cells called "cribs." Just 25 cents could purchase a girl for a few minutes; prostitutes were pushed to service as many men as they could in an hour.

Who eats bitterness, and who forces others to? Who does not eat bitterness at all? The more I try to understand the cultural resonances of *chi ku*, the more history itself complicates the boundaries of suffering and success. The novelist Tom Lin, whose *The Thousand Crimes of Ming Tsu* recasts the classic Western with a Chinese outlaw protagonist, has argued that pain was itself the subject of the Western and that suffering is glorified because it was required to settle the land. That's why the West's fictionalized landscapes are depicted as bleak, he says, its violence random and relentless. For Lin, "eating bitterness" is the subject of the genre itself. Why not see these novels, then, as part of a Chinese American literary tradition, just as I might argue that the Transcontinental was Chinese infrastructure, and the Chinese the people that finally colonized the West?

The regulation of power and race in America has long been achieved through violence or its threat. It's a story as old as the Western itself, and with the same sad message behind it: Groups that might see each other as allies vilify each other as enemies, jealously guarding an ever-shrinking territory bordered on one hand by racist laws and on the other by growing class divisions between generations of immigrants. That's what happened to my family, at least. I am not the same kind of Chinese American that my mother and my grandmother were, nor are we like my grandfather, who was born and raised in Guangzhou. Even as I am distinctly a result of them all, I am, I recognize, no longer Chinese at all.

Still, I am evidently what my

grandparents wanted, because my mother and uncles speak no Chinese, and so their children speak no Chinese. We left our Chinese enclaves and were encouraged to toughen up when bullied. Today, we eat sticky rice with roast beef at birthday parties; our Christmas tables groan with platters of ham and Peking duck and Santa-shaped sugar cookies. We eat Dungeness crab smothered in five-spice gravy. We intermarry and force our white spouses to eat steamed egg custards laced with stinky black beans. We buy but no longer make *dong tay*. We eat the culture that's been constructed for us, losing more and more of our heritage in order to become what our parents hungered for us to be: citizens with passports and memories unshaped by grief.

PERHAPS THE INEVITABLE RESULT of *chi ku* is debilitating rage. If we cannot let ourselves protest what constrains us, we turn to the vocabulary of cruelty. We lash out at those we *do* have power over, and our anger becomes the bitterness they swallow in turn. My mother had a contentious relationship with her mother, my Po Po, who treated my mother with the imperiousness of any Chinese matriarch overseeing her daughter's training. It was something my mother, an ambitious woman who wanted to become a doctor, couldn't stand. While my mother went to college (to become a teacher) and also graduate school, she was raised with the belief that she should be a servant in her own house, caring for her brothers and father, putting aside her ambitions at times to be an obedient and docile helpmeet.

But outside the house, my mother encountered an America convulsed by feminism. Her intelligence and drive opened up a world of travel and work possibilities unavailable to women like my Po Po. The cognitive dissonance of living between worlds, caught between my grandmother's desires and her own, was, I believe, deeply painful to my mother. Struggling to attain her own ingrained sense of Chineseness while also pleasing herself, and struggling, too, to act like the perfectly competent housewife at home, sent my mother into near-frenzied rages. At times of stress, she alternated between screaming tantrums and ice-cold silence — fits of rage my father and I could neither anticipate nor interpret. Even as a child, I sensed this anger had little to do with me and more to do with something my mother



privately endured. In public, she appeared perfect: polished and intelligent, affable and hard-working. Only at home could she let herself express the rage that was denied her.

I remember once being in a grocery store with my mother when I was a child, watching the checkout cashier speak to her in pidgin. My mother, a woman who was not only fluent in English, but who had been born in this country, who had a Ph.D., was being talked to like an illiterate child. She smiled tightly at the cashier, picked up our sack of groceries,

and walked me to the car. She said nothing all the way home, but later — while I was practicing piano — she kicked in a small glass panel of our kitchen door.

Perhaps rage is an attempt to reclaim power, a rejection finally of *chiku's* “feminine” endurance of pain in favor of the assumed masculine ability to inflict it.

OF COURSE, this history is itself rapidly changing. When the *New York Times* assigned me to write about Bing Kong Tong,

a Transcontinental holdover in Salt Lake City, Willy Chun, its 92-year-old leader, told me that tongs like his were dying out. Bing Kong Tong was no longer linked to organized crime; it's a social club that helps with scholarships and offers prayers for the dead Transcontinental workers. At the tong's meeting hall on State Street, Willy pulled out a battered briefcase to show me the documents the tong had collected for the past century. The papers were a messy stack, photos and enrollments and charter documents tossed together. The



tong's remaining members, restaurant cooks and construction workers, sat in a corner, smoking and playing mah jong on the new mechanized table Willy had bought them. They looked embarrassed when I approached, because they didn't speak much English, and I can't speak Cantonese.

These men were stuck in historical limbo: neither fully integrated into America nor interested in returning to China. Willy emigrated from Guangzhou, the same place the railroaders were recruited, working as

a busboy for another tong member in his restaurant until he was promoted to cook and eventually opened his own café. Ten restaurants later, Willy is a prosperous man, the leader of the tong that once supported him.

Talking to Willy reminded me of a conversation I had with a Chinese American friend while researching the Transcontinental. He was complaining about Andrew J. Russell's iconic photo, *East and West Shaking Hands at the Laying of the Last Rail*. It was not the absence of Chinese workers from this photo that enraged him, though, but the fact that today's Chinese Americans were so outraged by it. He is a wealthy and successful entrepreneur in San Francisco, and to him, the Chinese railroad workers were a source not of pride but embarrassment, the pain their bodies endured merely proof they'd been mindless cogs in the machine of someone else's industry. "Who cares if the Chinese weren't photographed?" he said. "Those men invented *nothing*, they owned *nothing*. Their labor was for others with more imagination than them."

His argument echoed Asing's letter, with its insistence that only those who could claim their cultural superiority over others should be offered the opportunities America promised. I began to see *chi ku* as a ladder on which we each claw and fight to ascend, rung by rung, all the while demanding those lower down suffer more, suffer harder, suffer in greater silence.

When Willy dies, will he be buried in America or shipped back to Guangzhou? And what about his wife? In the 19th century, only men received elaborate death rituals. Women, children, suicides, even murder victims were buried where they fell. Even in death, some lives matter more than others. It's a lesson I don't want to believe, though I have been taught some version of it all my life: I am commendable because I work harder than others, I am smarter about weaponizing my talents, I am uncomplaining and biddable. For all these reasons, and because I can endure the worst insults and accidents, I deserve to be respected.

My father, who is white, admires this philosophy. He says eating bitterness is part of what has made the Chinese, including my mother, successful in America. And it has — just as it has made me successful, too. Throughout my life, I have been promoted,

given opportunities and praise, partly based on my persistence and uncomplaining attitude. But while *chi ku* has benefited me, I wonder what it has cost others *like* me, what my conditioned acceptance of it has meant to people studying my behavior? What lessons, I wonder, am I demonstrating to my female and Asian students through my reputation for being an unflappable workhorse? In the end, eating bitterness does not only mean we endure hardship without complaint, but that our endurance makes it impossible for others in worse conditions to complain. It limits the vocabulary of care we have for each other, which limits, too, our connection and responsibility. In that, paradoxically, eating bitterness atomizes culture even as it suggests a shared temperament.

The last time I saw Willy, I was invited to eat with him and the senior tong members at a Chinese restaurant. The dinner was meant to celebrate Willy and to thank me and the photographer sent by the *Times* to document the tong. The food was comforting and familiar: bird's nest soup, a platter of squid and *char siu*, shrimp with lobster sauce, boiled chicken and duck, a few vegetable dishes. I scooped rice into my bowl after I finished my soup, piling meat and vegetables on top. The photographer sat back and picked at his food.

"I'm eating with my girlfriend later," he said. I urged him to eat, whispering it would be rude if he didn't. "My girlfriend will be angry," he replied. I shrugged. One of the tong members, Richard, leaned over and grinned. "I don't think you've seen food like this before," he told the photographer. Then he turned to me. "But you have," he said. "You know how to eat it."

I felt a sharp prick of pride. It faded as I looked around the table. Willy looked tired, the senior members contemplative. The restaurant was one of Willy's. Servers came and went, solicitous, smiling at him. The food, frankly, was not very good. Willy had never been interested in cooking as art, he'd told me, just in making a living. The restaurant, I sensed, wouldn't last. Even as we ate and ate this feast he offered, ours was the only populated table. The rest of the restaurant, I saw, was empty. ☼

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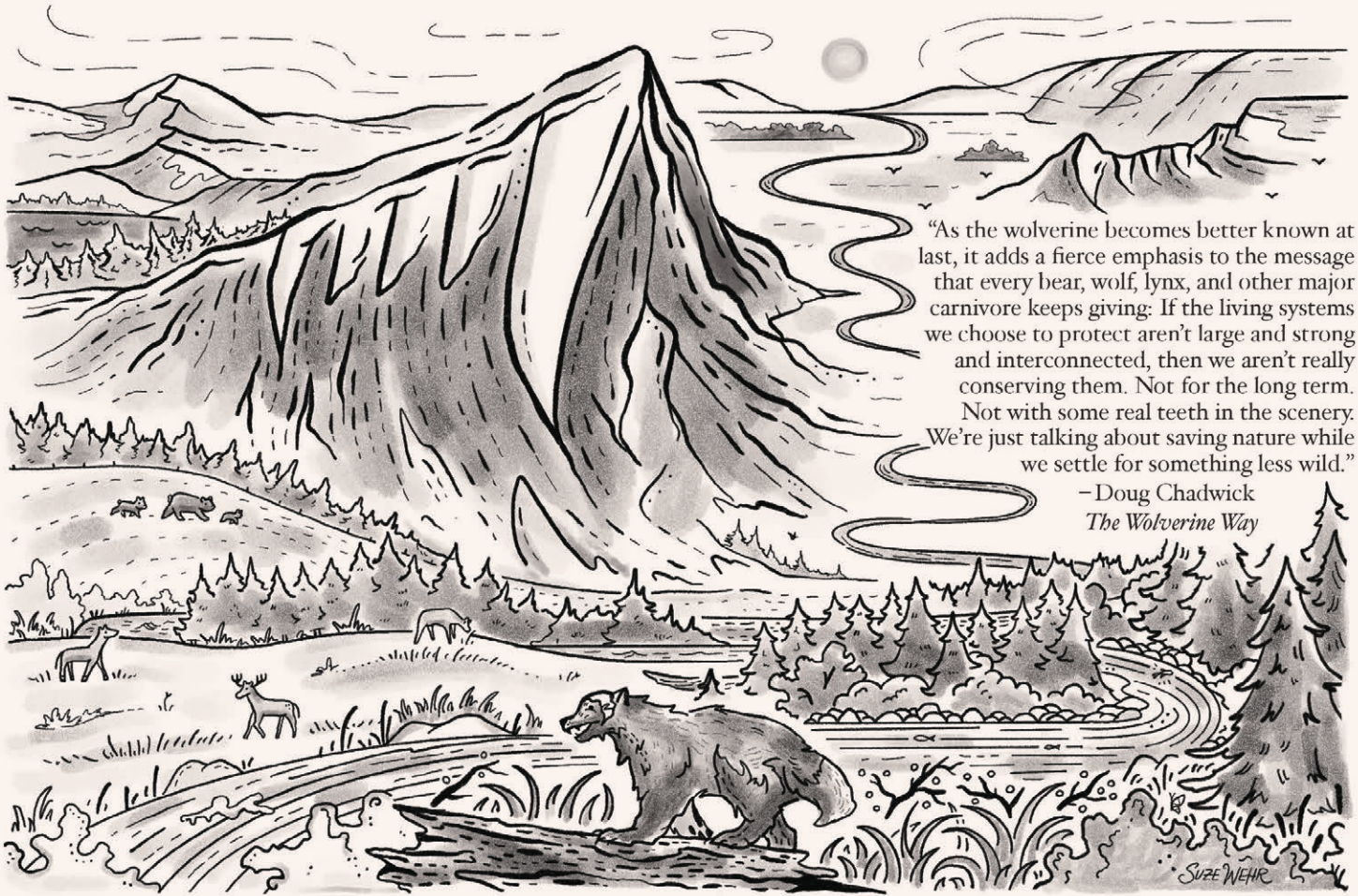
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Working Together Is Everything

On the joyful responsibility of cutting fish.

BY LAURELI IVANOFF

EVERYONE HAD A JOB. The men and boys drove the boats upriver to dip the nets in the river and seine. The women waited. Never wondering. There were always enough. The salmon that filled the boats when they returned weren't huge — humpies aren't — maybe a foot long. But they were plentiful and made for good drying.

My cousins and I played in the water. Swimming. Doing somersaults or handstands, holding our breath, eyes closed tight, our hands squishing in the mud on the slough side of the sandbar island our family called Eaton Station, in the Unalakleet River. Eaton Station: The best resort. We played badminton in the sand. Tanned on hand-sewn calico blankets laid on the beach. We ate Norton Sound red king crab, fatty grilled king salmon, and, if we were lucky, *akutaq* made by Mom or an auntie. It seemed like the sun was always shining. And it probably was. Climate change wasn't a part of our daily vocabulary, and persistent summer rains and winds weren't a thing back then. July was for sun and salmon.

Once the boats returned, slow and heavy, the women gathered at the fish-cutting tables. My favorite part. They said funny things when they were working. They always knew the answer to everything. They always seemed to be smiling and laughing. The cumulus clouds above us, like whipped cream on grandma's white cake with a sprinkle of fresh tart blueberries, laughed with them. My belly, my cheeks, my jaw, the oil and juice making up my eyeballs relaxed. Safe. So safe.

Life flowed easy.

My first job at the cutting table, when I was maybe 7 or 8, was to clean the slime and blood off the fish my aunties and Mom cut for drying. Three fish in each hand, I'd waded out

on the river side of the island, the sun so hot it didn't matter that the water was cold. I'd go past my knees, far enough to ensure that the fillets, attached by the tail, wouldn't touch the river bottom and stayed free of any sand. I swished the orange flesh in the sparkling, fresh, clear water. The gulls, those greedy cousins, flying and squawking for any piece of flesh or eggs. Or milt — now and then I'd toss a piece of the white sac from a male, just to see it disappear whole, the gull's head tilted to the sky.

One day, Mom handed me her ulu at the fish-cutting table. It was a graduation. A commencement. I was on to bigger things, the handover said. I was ready to learn the real craft. With real technique. With her favorite tool. I didn't realize that from that point on, I'd stand at the table with Mom and my aunties and learn the secrets of the world when the boats came back.

With guidance from Mom, I cut my first humpie, a small female. I sliced down the belly, pushing harder than I anticipated. Then down the back. A few other cuts, and the fillets were attached at the tail, ready for the *tirraqs*, or angled slices, that ensure bite-sized bits in winter. When I was done, the heart was still attached. The purple morsel hung from the collar at the bottom of the fillet. I didn't know that leaving the heart attached to dry was considered a skill. I hadn't meant for that to happen.

"Wow, Paniuq!" Papa Ralph said, his voice ebullient, like cold Tang. "The heart still on there! The best way!"

Papa handed me my diploma with those words. Words warmed by the love and pride in his inflection, feelings that also flowed from his eyes and heart that day at Eaton

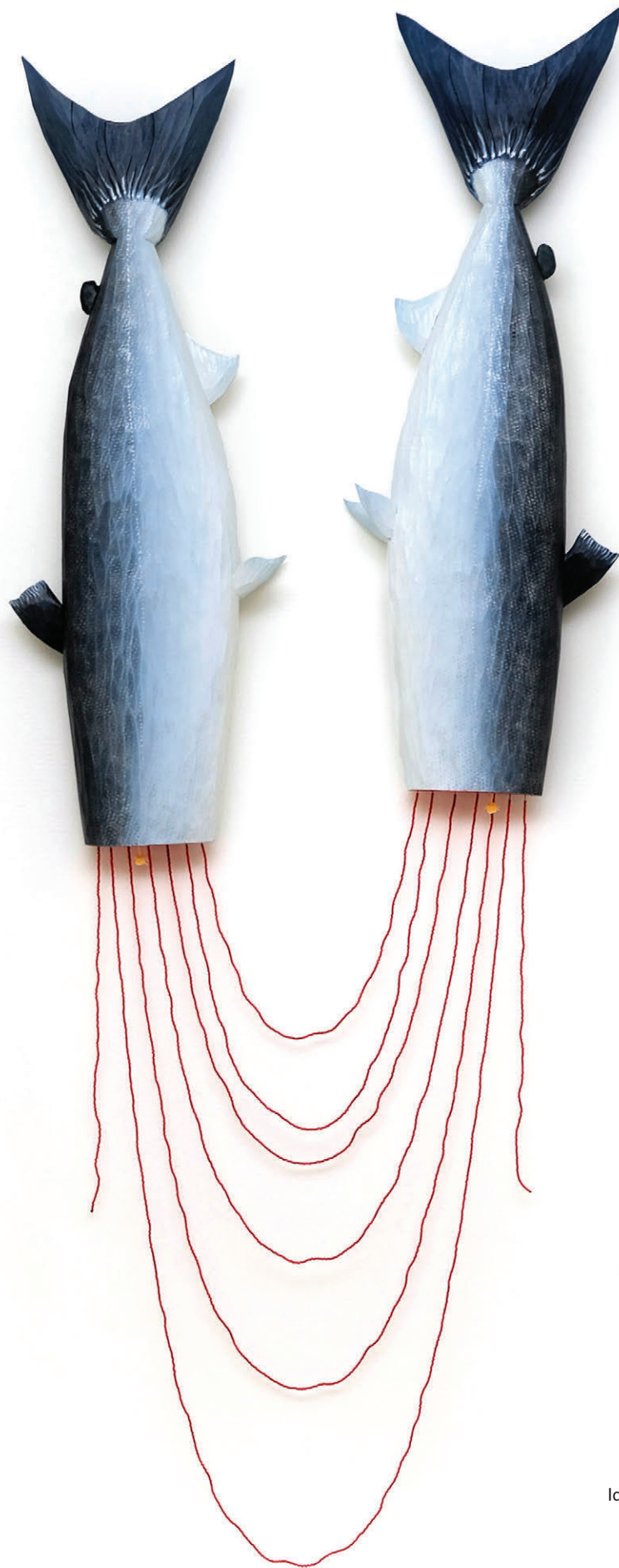
Station. Words I can return to any time, to feel grounded in love. *I am important*, he said to me. *I will do important work*, he said to me. *I am doing good*, he said to me.

The pride seeped through my marrow. I waded out into the clean water of the river and swished the humpie, the cottonwoods and birches on the other side of the river practically clapping for me. I hung the cut fish on the drying rack made of cottonwood poles that my dad, brother and uncles put up every year.

We no doubt ate *uurag* that night for supper. Boiled pink salmon steaks and fish eggs with onions, potatoes, salt and pepper in a broth like no other. Mom would have put either kimchi or ketchup in hers. Dad, seal oil. If there was leftover *uurag* in Mom's stainless steel pot, blackened on the bottom from the fire, she tossed it into the river. White fish and grayling ate the pink meat and boiled eggs. We washed out our bowls at the river, using sand as dish soap for scrubbing.

My job of cutting fish returns, year after year. My favorite job. My favorite job because, thanks to my teachers, it is done with love and was born from love. Because we all work together, and together is the cornerstone of everything that gives meaning in life. My favorite job because cutting fish means I belong. To a family, to a community that shares, and in the process of doing, I remember I belong to a long line of ancestors who made cuts just like the ones my mom showed me. It's more than just food for the winter. Salmon remind me that I am important and loved. ☀

Laureli Ivanoff is an Inupiaq writer and journalist from Unalakleet, Alaska, now based in Anchorage.



Iqalukpik (salmon) double from Kenai Lake.
Erin Ggaadimits Ivalu Gingrich

WYOMING

When you visit a beautiful place like Grand Teton National Park, you don't expect to have to worry about larcenous foxes or canid cartels. But after a fox at Lizard Creek Campground started absconding with footwear — some 32 shoes as of July 11 — “Wanted: For Grand Theft Footwear” posters began to appear, the *Jackson Hole News&Guide* reported. Park officials have not determined exactly what the klepto-critter — aka “Swiper the Fox,” “the Sneaker Snatcher” or “the Midnight Mismatcher” — is doing with the shoes. (Maybe reselling them on eBay for extra cash?) But visitors are advised to secure their Manola Blahniks, as well as their munchies and toiletries, so that foxes (and other wildlife) don't associate people with food and other goodies. Stealing food from campers is bad enough, but heaven only knows where this brazen shoe-snagging will lead. Then again, the legendary bandit “Zorro” was inspired by, or at least named after, a fox, so maybe we have a new folk hero in the making! Just think of the ballads we'll sing around the campfire one day ... barefoot, maybe, but still happy.

YELLOWSTONE

Local tour guide MacNeil Lyons captured some dramatic photographs in Yellowstone National Park showing a close encounter between a very eager German shepherd and a young gray wolf. The wolf was noshing on a carcass near the road when a German shepherd leaped out of a passing car and took off after it. Lyons' photos show the dog chasing the wolf down the road while a different tour guide tries to catch up with it. Another photo shows the two canines facing off, less than 15 feet apart, with the wolf refusing to back down. It could have gotten nasty, but Lyons

said the encounter between the canid cousins was over and done with as quickly as it began, like *High Noon* without the gunfight: “It was a stare down for a hot second,” he told *Outdoor Life*. “I think there was a moment where the wolf didn't quite understand what was happening.” But then the German shepherd returned to its owner, perhaps to dream that night about *Call of the Wild*, as all domesticated pooches do, or so we imagine.

COLORADO

A wild marmot somehow hitched a ride inside the wheel well of

a Denver Zoo Conservation Alliance field truck and ended up taking a three-hour road trip from a field near Minturn, Colorado, all the way to Denver — quite an adventure for the fuzzy little chonk, who came out of it completely unharmed, *The Denver Post* reports. The Animal Care, Veterinary Medicine and Field Conservation team gave him a clean bill of health, and he was returned the next day to the same area where he first hopped on. “Upon release, he darted to a nearby rock pile, kept a close eye on us for a few minutes, and then called out as he disappeared



Heard Around the West

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

BY TIFFANY MIDGE | ILLUSTRATION BY DANIEL GONZÁLEZ

back into the wild,” the Alliance's Facebook page said. The parting photograph is absolutely adorable, with the little guy appearing to smile and giving a cheery “Thanks for the lift, guys!” wave goodbye.

WASHINGTON

The tooth fairy is alive and well and living in Seattle. For the last 20 years, Purva Merchant, a pediatric dentist, has been moonlighting as the semi-mythological entity and answering emails from parents and children — 6,000 emails at last count, *The New York Times* reports. The kids' letters address a multitude of concerns, one telling the fairy exactly where to find the tooth — “under the black pillow” — and another reminding her not to “bump into the heater,” while rummaging around in the dark after whichever baby bicuspid just went bye-bye. Some of the letters are short and sweet — “I love you” — others apologetic — “I'm so sorry I swallowed my tooth” — and a few are downright enigmatic: “Do you type with your feet?” One in particular stands out: Seventeen years ago, 6-year-old Piya Garg lost a tooth down a drain while vacationing in Singapore. Devastated by the loss — and worried about whether she'd be reimbursed in the right currency once she got home to Hong Kong — she emailed the tooth fairy and received a reassuring reply. Recently, Garg, now a 23-year-old living in London, had a wisdom tooth extracted and remembered that email. So she wrote to Merchant thanking her for her long-ago response. The tooth fairy replied instantly: “Thank you for reminding me that kindness, no matter how small, leaves a lasting impact on the world. I REALLY needed that reminder today.” ☼

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Coalition, Fourth World Farm, and I-Collective
Mancos, Colorado

AMBER LANSING (ACOMA/DINÉ/SHAWNEE)

(SHE HER) Co-founder of Four Corners Food
Coalition, executive director for Dolores Family
Project and Dolores Community Garden
Dolores, Colorado

Mesa Verde, Sleeping Ute and Dibé Nitsaa (Big Mountain Sheep) surround this southwest Colorado valley, but its Indigeneity does not exist anymore. Rematriation began as a necessary response to the introduction of whiteness, capitalism and patriarchy. Now, our landscape is covered by hayfields, and we and our plant and animal relatives are surrounded by invasive species. But at Fourth World Farm, we have rematriated over 70 native species, which encourages the repopulation of the valley in and of itself; everything that has been erased gets to seed and go back out into the zone. That is our objective: A decolonial, traditional framework of agriculture in motion. —M. Karlos Baca

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