

High Country News

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Vol. 53 / September 2021
No. 9 • hcn.org

Voting rights in
Indian Country

Life and death in the
Klamath Basin

The incredible shrinking
Colorado River

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The upper Williamson River snakes through the Rocky Ford Ranch, a 1,705-acre property within its former reservation that was recently repurchased by the Klamath Tribes. **Paul Wilson / HCN**

Know the West.

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



EDITOR'S NOTE



Good neighbors

I'M WATCHING TWO MOUNTAIN LIONS slip down the trail, haunches swaying, their long, tufted tails slung low behind them. The sight elicits in me a certain electric excitement that I can't quite place. They move with a kind of nonchalant ease, as if aware of their status as apex predators. Had I encountered them in person, I almost certainly would have been breathless, my heart racing. But I was on my couch, staring into my iPad, watching trail-cam footage captured at night on my go-to front-country trail. The video was posted on Nextdoor, where a stream of comments had accrued, layer upon layer of surprise, wonder, appreciation and awe.

Similar clips from wildlife cams, security cams and doorbell cams proliferate on Nextdoor. A new one appeared today: a bobcat this time, followed by a skunk. We seem to enjoy knowing who else is out there and what they do when we're not there to see it. Commenters often respond with surprise that such creatures are "right here in our backyard!" They will even use those words, *our backyard*, to describe the foothills or the front country, as if the animals had somehow stumbled into the exclusive domain of the human species. But the truth is quite the opposite: It is we who are the encroachers. Habitat loss due to development is a major cause of threatened and endangered species across the West.

Even as new homes, subdivisions and strip malls push ever farther into the wildland-urban interface, enthusiasm for the wildlife "in our backyards" abounds online. I'm reminded of two black bears whose paws were badly burned during California's 2017 Thomas Fire, which raged for 38 days. The bears were rescued and given temporary paw pads made of tilapia skin, so that their own paws could heal underneath the protective covering. In January 2018, they were released back into the mountains, and months later radio-collar data suggested that they seemed to be doing fine. While tracking the details of this incident, I found a large number of stories: not just in the *LA Times* and *Ventura County Star*, but *Smithsonian*, *The New Republic*, *Mashable* and *Weather.com*. *National Geographic* even posted a video of a veterinarian suturing fish skin to one of the bear's paws. It's a heartwarming story, a beautiful illustration of human concern for the well-being of other animals. But what gets missed in those moments of caring are the thousand thoughtless daily decisions it took to create the conditions for the unseasonable, unprecedented fire that burned those bears and torched 440 square miles of habitat for all manner of creatures.

Being good neighbors to wildlife — especially to apex predators — requires more than a tweet or a like or an awe-inspired comment. This issue's feature story looks at wolves in Colorado and Wyoming, where their protected status is in flux. There is perhaps no more controversial animal neighbor in the West. Their recent delisting as a federally protected endangered species has led to a new patchwork of state laws, including one in Idaho that could allow the killing of 90% of the state's wolves. Without protective laws, it's not clear if humans can be good neighbors to wolves, allowing them places to howl plaintively and bed down safely with their pups.

The other night, on the same trail where the mountain lion video was captured, the animal noises grew increasingly persistent as I finished a hike after sunset. There were trills and screeches, flutters and scampers, and even some uncharacteristically loud footfalls in the brush. For my one set of eyes, focused mostly on the trail ahead, there were a multitude of others. Birds winged overhead, while others roosted in trees, calling out as night fell: *This is where I am. I'm happy. I am just here singing my song.*

Jennifer Sahn, editor-in-chief

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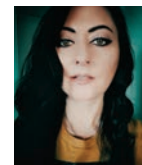
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FEATURE

A Hostile Country

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The Green River corridor holds the promise of a pathway for gray wolves to disperse from Wyoming to Colorado. So why aren't they using it?

BY PAIGE BLANKENBUEHLER | PHOTOS BY BETH WALD

ON THE COVER

Sunrise over the Green River in the Browns Park area where Utah, Wyoming and Colorado meet. **Beth Wald / HCN**

Joe Sondgeroth displays a photo showing one of the wolves that he killed in the Upper Green River area near his home in the Kendall Valley, outside of Pinedale, Wyoming (*above*). **Beth Wald / HCN**

Visitors walk at Lone Rock Beach in Big Water, Utah, by Lake Powell, in an area that used to be underwater. Two decades of climate change-induced drought and rising temperatures, combined with ever-growing demand, have put the entire water system in serious trouble (*right*). **Justin Sullivan/Getty Images**



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The incredible shrinking Colorado River

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Climate change and rising demand are sucking the life out of the Southwest’s water supply.

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Adam Campos, owner of Model Shoe Shine Parlor, Albuquerque, New Mexico.

BY GABRIELA CAMPOS

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LETTERS

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

SUCKED DRY

Thank you to Debbie Weingarten and Tony Davis for their really excellent article, “Sucked Dry” (August 2021), about Riverview LLP’s mega-dairy expansion into southeast Arizona. It’s one of the best pieces of investigative journalism I have read in *High Country News* in some time. The article provides a clear example of several key issues the West is facing today. The lack of groundwater management in rural Arizona is astounding.

As a professional hydrologist (now retired), I disagree with one statement in the article: “pinning the decline of any individual well on a neighboring well or wells is next to impossible. ...” Knowledgeable groundwater hydrologists can, and frequently do, accurately determine the effects of groundwater pumping on nearby wells, groundwater levels, springs and streams. Groundwater hydrology is a sophisticated science, and groundwater hydrologists often serve as expert witnesses on these matters.

Riverview LLP’s spokespersons pretend to care but speak with forked tongues. The company knew it would be able to get away with whatever it planned to do, no matter what adverse effects might occur to the area’s natural resources and its residents.

Barbara Galloway
Whitewater, Colorado

CORRECTIONS

In August’s “Heard Around the West” column, we incorrectly cited Jonathan Thompson’s *Land Letter*, rather than his *Land Desk* publication. We regret the error.

ity and local communities. Per Riverview spokesman Kevin Wulf: “Integrity is about doing the right thing.”

Daniel D. Heagerty
Mill Valley, California

Tony Davis and Debbie Weingarten’s article, “Sucked Dry,” is superb reporting. I can’t thank you enough for such a comprehensive look at this issue, heartbreaking as it is.

Stevan Bosanac
Petaluma, California

Thank you for the August article about the mega-dairy coming to Arizona and its impact on our water supply. This installation is representative of the larger problem of corporate agricultural interests exporting our resources. The political powers are reluctant to do anything about it because the industry promises jobs and revenues.

It can’t go on without serious damage to the environment. I urge *HCN* to keep up the pressure through coverage of the issue.

John Krizek
Prescott, Arizona

HCN’s writers frequently pound on “mega corporations,” perhaps because its audience, over time, has self-selected to people who like that sort of thing.

The concerns about water use are legitimate, but corporate farms do not emit, overall, more pollution than the aggregate of family farms. They may produce more waste in fewer locations, but smaller farms, especially when not well-run, produce problems as well. And family farms do not always achieve the efficiency that can help reduce prices at the grocery store.

Neither large nor small farms are always bad or always good. I would appreciate *HCN* reducing the amount of propaganda posing as journalism.

Ron Aryel
Reno, Nevada

REASSESSING THE DAMS

Sadly, removal of Washington’s Gorge Dam will not slow, let alone reverse, the declining native salmon populations that once thrived in the magnificent 160-plus-mile Skagit-Cascade-Sauk-Suiattle Wild and Scenic River System (“Reassessing the dams,” August 2021).

It’s true that “the licensing process has triggered different conversations on the Skagit’s future.” Unfortunately, the author focused on a tiny, almost insignificant piece of a very large picture. We would be better off spending money improving the environmental practices of people and municipalities in the river system’s riparian zone, actions such as diverting septic waste, sewer and stormwater overflows, stopping fertilizer and petroleum-laced road runoff, enforcing land- and shore-management regulations, reforestation and more. These are the types of actions that might help increase salmon and steelhead runs for tribes in Washington to catch.

Anna Rudd
Seattle, Washington

THE SKAGIT RIVER RECONSIDERED

Great pair of articles about the Skagit River; fascinating and something I’m deeply interested in across the West, but especially as a Seattle resident (August 2021). I think Washington has an interesting opportunity to lead the way and become a model for Western dam removal.

One thing I was left curious about was the cascading climate impact on the energy sources for a growing city. Would Seattle’s share of renewable energy be shifted much? Would it need to shift to gas or coal? Or is there enough capacity in wind and solar?

Thank you for all the great work all of your staff and writers do, and for centering tribal voices.

Loren Drummond
Seattle, Washington



REPORTAGE

Supreme Court ruling could diminish Indigenous voter turnout

In *Brnovich v. DNC*, the Supreme Court upheld two voting laws that will make it harder for Indigenous people and communities of color to vote.

BY JESSICA DOUGLAS

ON JULY 1, 2021, the Supreme Court released its decision in a prominent voting rights case that Indigenous activists and attorneys say will make it harder for people of color — especially Indigenous populations — to vote.

In the case, *Arizona Attorney General Mark Brnovich v. Democratic National Committee*, the court looked at whether a pair of voting policies in Arizona violated Section 2 of the Voting Rights Act, a provision that prohibits voting laws or practices that discriminate on the basis of race, color or language. In a 6-3 vote split between its conservative and liberal judges, the court upheld Arizona's policy disqualifying any ballot cast in the wrong precinct as well as a 2016 law that made it a felony for anyone but a family member, household member or caregiver to return another person's mail ballot — a method known as ballot harvesting or collecting, often used by get-out-the-vote groups to increase turnout.

The latest decision may carry the most perilous consequences

for Indigenous voters since *Shelby County v. Holder* eight years ago, voting rights attorneys say. *Shelby* overturned a portion of the Voting Rights Act, allowing state legislatures to pass voter laws without federal oversight. That paved the way for more restrictive voter legislation, including the Arizona laws at the heart of *Brnovich*. The Supreme Court's decision not only could make voting harder for rural Indigenous voters, Indigenous voting advocates and attorneys say, it will also make it more difficult to challenge new voting rules that disproportionately affect Indigenous populations and people of color.

"The (court) set goalposts that are really hard to meet and said that sometimes discriminatory effects can be small enough that they don't matter," Native American Rights Fund staff attorney Jacqueline De León (Isleta Pueblo) said. "And that is particularly disturbing to Native Americans, because in this instance they were saying some Native communities don't matter."

Activist Allie Young takes a selfie with her ballot after going to the polls on the Navajo Nation last October. A recent Supreme Court decision upheld a law that made it harder for get-out-the-vote groups to collect ballots in order to increase voter turnout. **Talia Mayden**

In Arizona, where 27% of the state is tribal land and about 6% of the population is Indigenous, the nearest ballot box might be from 45 minutes to more than two hours away. "Because of that distance, it was common practice for neighbors, clan, relatives or extended family and otherwise people who are considered kin in terms of tribal relations to pick up your ballot and return it because they were making that two-hour drive," Torey Dolan, a member of the Choctaw Nation of Oklahoma and Native Vote fellow at the Sandra Day O'Connor College of Law at Arizona State University, said.

Unmoved by this reality, the court ruled that Arizona's ballot-collection law did not violate

Section 2 of the Voting Rights Act, saying that having to identify one's polling place and then travel there to vote does not exceed the "usual burdens of voting."

Indigenous people first gained the right to vote in 1924 through the Indian Citizenship Act. But tribal communities' ability to vote has long been hindered by intentional discrimination. Obstacles include a lack of polling stations on reservations, cumbersome traveling requirements and ballots that fail to adhere to the language minority requirement of the Voting Rights Act, which holds that states and local election boards must provide adequate assistance for communities and voters that speak Asian, Native, Alaska Native and Spanish languages. Meanwhile, gerrymandered districts are deliberately designed to dilute the impact of tribal votes.

After the Voting Rights Act passed in 1965, civil rights attorneys and tribes were able to challenge these discriminatory voting practices in court — and win. One of the main weapons in their arsenal was Section 2 of the law. But in *Brnovich v. DNC*, the Supreme Court changed what Section 2 can do to protect voters.

Tribal members on the Navajo Nation and in other rural areas often possess nonstandard addresses that make it difficult for counties to place them in the correct precinct. In addition, unreliable internet access makes it hard to find precinct information online.

Until 2020, even tribal members with internet access lacked a publicly available online tool to verify precincts with nonstandard addresses, Dolan said. As a result, the ballots of Indigenous voters were discarded at a rate higher than those of non-Native, particularly white, voters, in the 2016 election.

While the court acknowledged that Arizona's out-of-precinct policy can burden Indigenous, Black and Latino communities more than non-minority voters, it dismissed the racial disparity as being "small in absolute terms." "A policy that appears to work for 98% or more of voters to whom it applies — minority and non-minority alike — is unlikely to render a system unequally open," Justice Samuel Alito wrote.

This particular ruling is very alarming, Dolan said. "When you consider the court's emphasis on statistics and number of voters impacted, the Supreme Court (might say) 2,000 Native Americans are impacted, and out of this really sizable Native American population — that's not enough to make a difference," Dolan said. "But that number could be an entire tribe."

The Democratic National Committee argued that both Arizona laws disproportionately affected Black, Latino and Indigenous voters and were enacted with "discriminatory intent." Arizona Attorney General Mark Brnovich welcomed the ruling as a means to prevent voter fraud, despite the fact

"One of the really disturbing things that this case did was it allowed this idea of fake voter fraud to serve as a justification for discrimination."

that there has never been a case of voter fraud associated with ballot collection in Arizona.

"One of the really disturbing things that this case did was it allowed this idea of fake voter fraud to serve as a justification for discrimination," De León said. "It didn't require states to prove that there was actually a risk or even a result of voter fraud in their states. They just allowed the lie to be accepted as a justification. And that really just unburdened states in a lot of ways from having to prove their justifications for laws and instead put that burden on litigants."

Midterm elections are still more than a year away, but Indigenous voting-rights activists, such as OJ Semans (Rosebud Sioux Tribe), co-executive of the Indigenous voting-rights advocacy nonprofit Four Directions, are already hard at work. "We're already warning tribes, 'This is coming now, we're going to need to prepare,'" Semans said. Meanwhile, De León believes that Congress needs to act by reforming the Voting Rights Act or passing the Native American Voting Rights Act.

"At the end of the day, the margins on the most consequential elections are exceedingly small, and Native communities are the missing votes in a lot of those communities," De León said. "That's why all of this effort is going into stopping the Native vote. ... They know that it would change the status quo, and that's worth fighting for." ✨

THE LATEST

Tree DNA true crime

Backstory

Poachers began to target bigleaf maple trees in the Pacific Northwest in the early 2000s for the beautiful three-dimensional patterns found in some specimens' grain. In Washington's Gifford Pinchot National Forest, thieves often felled trees in the middle of the night and covered the stumps with moss to hide the damage ("Busting the Tree Ring," 3/20/17). Then, in 2012, a U.S. Forest Service officer learned about extracting tree DNA in order help track down black market lumber.

Followup

In July, for the first time, tree DNA was used in a federal criminal trial as evidence that illegally harvested timber had been sold to local mills, according to *The Washington Post*. "The DNA analysis was so precise that it found the probability of the match being coincidental was approximately 1 in 1 undecillion" prosecutors told jurors — "undecillion" being a very large number consisting of 1 followed by 36 zeroes. The defendant, Justin Andrew Wilke, was convicted as a result, and could face 10 years in prison. — Jessica Kutz



Water and equity in the Klamath Basin

Behind the effort to save Upper Klamath Lake's endangered fish before they disappear from the wild.

BY ANNA V. SMITH | PHOTOS BY PAUL WILSON

C'WAAM AND KOPTU FISH usually arrive in early spring to spawn in the creeks and rivers around Upper Klamath Lake, in southern Oregon. But this year, the fish didn't turn up as expected. The two dwindling species are found only in this basin, and Klamath Tribes biologists thought that maybe, for the first time, the worst had happened — that they would not show up at all.

But, finally, they appeared. On a morning in May, a c'waam swam into view, its thick, speckled body around two feet long. Faryn Case, a biologist at the Klamath Tribes' research facility and a Klamath tribal member, stood waiting in the shallows of the lake, ready to collect the c'waam's

eggs, which are the size of BB gun pellets.

Case had lived in the Klamath Basin all her life, but this was the first living adult c'waam she'd seen in the wild. The fish was probably 30 or 40 years old, and it was breathtaking: elegant in a prehistoric way, with its white belly, bony fins and a downturned mouth ideal for filter feeding. Every year since at least 1991, almost all juvenile c'waam have died, because the wetlands that once acted as a nursery are largely gone, and water quality has plummeted due to phosphorous loads from agriculture runoff and cyanobacteria. As a result, the lake population is old and aging. "She looked so tired. I'd be

Tanikwah Lang and Jimmy Jackson of the Klamath Tribes Fish Hatchery conduct a fish-kill survey on Upper Klamath Lake. Oxygen levels in the lake are low enough that they can be lethal for endangered c'waam and koptu.

tired, too," said Case, a Klamath Tribes descendant and enrolled member of the Confederated Tribes of Siletz Indians. Her grandfather had been a fish handler in the tribes' annual C'waam Ceremony, and her father regularly saw the fish for years. But in Case's lifetime, they've always been endangered; she has never tasted one.

Over the past few years, the Klamath Tribes

have embarked on a mission to collect c'waam eggs in order to rear them in captivity, something senior fish biologist Alex Gonyaw calls "genetic salvage." The tribes plan to release a small batch of 3- to 4-year-old fish next spring. The U.S. Fish and Wildlife Service also began raising c'waam and koptu in 2018, but the lack of a substantial overlap between the wild and captive-raised populations could make the recovery difficult. The fish's historic range has been reduced by 75%, and they need more habitat and better water quality before they can survive on their own.

C'waam and koptu — also known as Lost River and shortnose suckers — were thriving as recently as 70 years ago, supporting tribal fishing families and Klamath Tribes cultural practices. Since then, however, drought, hotter temperatures, dropping water levels and worsening water quality have all increased, threatening the fish's survival. Given that agriculture, wildlife refuges and endangered coho salmon all need water, too, the Klamath Basin has long been notorious for infighting and litigation among irrigators, tribal nations and the federal and state governments. But this year's historic drought and the colossal Bootleg Fire have brought more attention to the need for long-term solutions.

All the conversations around water — who gets it, how much — in the Klamath Basin are inextricable from the colonialism that resulted in drained wetlands, new dams and irrigation canals and displaced the Klamath and Modoc Tribes and the Yahooskin Band of Snake Indians, which today collectively make up the Klamath Tribes. Upholding the rights of the tribes must be as much a part of those conversations as the science behind wildlife management and water allocations, said Klamath Tribes Chairman Don Gentry. "We want justice. ... We expect for the treaties to be honored," Gentry said in Klamath Falls this summer. "We can't continue doing what we've been doing. That way is not sustainable."

ON A BRIGHT MORNING in July, before the midges started swarming, Faryn Case and tribal fishery aquatics technician Jimmy Jackson climbed into a small skiff in Pelican Bay, on the northwest edge of Upper Klamath Lake, where clear springs burble up through the ground. They were conducting the tribes' first fish-kill survey of the year, a weekly outing to recover any suckers that may have died in order to monitor the status of the fish population. There are an estimated 24,000 c'waam left, and just 3,400 koptu — since 2002, the wild c'waam population has dropped by 65%. The surveys normally begin in August, but this year's high temperatures forced them to begin a month early.

At an inlet called Ball Bay, Jackson slowed the



motor as the propellor churned out green water in the boat's wake. "That's crazy," he said. "It doesn't usually look like this till August." Squiggles of neon-green filaments bobbed in the water below. Cyanobacteria and blue-green algae appear annually in Upper Klamath; once the algae bloom and die, their decomposition consumes the lake's oxygen, suffocating the c'waam, koptu and other organisms. The algae also produce microcystins, neurotoxins and possible carcinogens that can't be boiled or easily filtered out of the water. Swimming in it can cause rashes, and ingesting it can cause kidney failure in humans, and sicken or kill dogs and other animals.

Off the boat's port side, back on land, a huge pivot sprinkler cast Upper Klamath Lake water over a farm field. The c'waam and koptu's critical habitat is both a reservoir and runoff receptacle for the Klamath Project, a Bureau of Reclamation irrigation operation that waters 1,200 farms on 240,000 acres of farmland that was once wetland. This year, the farms received almost no water from the project because of drought. Neither did the two national wildlife refuges in the basin, nor the endangered coho salmon downstream in the Klamath River. Now, even domestic wells are beginning to fail.

Proposed solutions range from small-scale changes on private property to landscape-level riparian restoration. One example: The Klamath Tribes are piloting a solar-powered aerator in Upper Klamath Lake to help add oxygen to the water, beat back toxic algae and maintain small



A pair of juvenile c'waam in a fish tank at the Klamath Tribes Fish Hatchery and Research Station (above left). First light on a farm near Barkley Spring, Oregon, along Upper Klamath Lake. Despite this year's record-setting drought, this field has remained a lush green (above right). Chairman Don Gentry of the Klamath Tribes (above).



pockets of clear water for suckers. Eventually, more aerators could be added throughout the lake. Another example: The nonprofit Ducks Unlimited recently received funding from the U.S. Department of Agriculture to create the Klamath Basin Farming and Wetland Collaborative, a program to pay farmers to flood irrigate fields, creating standing water to support migrating waterfowl and revitalize the soil.

The aerator and the flooding address some of the immediate concerns but don't address the basin's root problems. That would require a measure of undoing — repairing the fractured relationship between land, water and species. In 2017, for example, the Fish and Wildlife Service, a local landowner, the Klamath Tribes and nine other partners completed a 25-year project to reconnect Sun Creek, a tributary to the Wood River, which empties into Upper Klamath Lake. Sun Creek had been diverted, partially filled in and used as an irrigation canal for 100 years, cutting off a native bull trout population. That kind of restoration, which requires buy-in from the landholders and federal agencies, needs to happen all over the basin.

Large-scale restoration has been on the table before, in the form of the 2010 Klamath Basin Restoration Agreement, signed by the Klamath Tribes, Karuk Tribe, Yurok Tribe, governors of Oregon and California, ranchers, nonprofits and the federal government. It contained plans to reintroduce salmon, which have been absent from the upper basin — in violation of the Klamath Tribes' treaty rights — for over 100 years due to several dams. The agreement would have helped the tribes acquire 92,000 acres of land, started Klamath dam removal, provided water certainty for irrigators, curtailed litigation and led to a drought-year plan.

But finalizing it required congressional approval, and legislators failed to pass it before it expired in 2015. The dam removal, the cost — \$800 million over 15 years — and the land return were part of what made it controversial, said Chairman Gentry. Concessions were made on all sides; the Klamath Tribes agreed to give up their water rights to the Klamath River, for example, while irrigators agreed to forgo a portion of their water allocations for ecosystem restoration.

Now, agriculture leaders like the Klamath Water Users Association (KWUA) are once again calling for a settlement, but the balance of power has shifted since 2010. The state of Oregon now recognizes the Klamath Tribes as holding the most senior water rights in the basin, and the tribes are no longer willing to enter into an agreement that requires them to give up water. The c'waam and koptu, they say, can't give up any more.

A FEW SUMMERS AGO, Klamath tribal member and racial justice advocate Joey Gentry was out on her hemp farm in the Klamath Project, trying to fix her MacGyvered irrigation system, when she accidentally stumbled into the cyanobacteria-infested water. "It was terrible," she said. "My legs were on fire."

Gentry farms hemp because it requires less water than other crops. This epitomizes her ethos for farming in the basin: Instead of pushing for more water, simply adapt to what's available. "We're farming a desert region, and we obliterated ecosystems to do so," said Gentry, who is from Klamath Falls and began farming in the last few years. "So now how do we protect what's left? How do we farm with less water?"

That has not necessarily been the prevailing view of agricultural groups like the Klamath Water Users Association or Klamath Irrigation District. This year, in response to the news that irrigators would receive hardly any water from the Klamath Project because of drought and prioritization of sucker species, KWUA President Ben DuVal said that "water users are extremely upset with what the federal government is doing to us, and with good reason. Taking water from project irrigators for ESA species is a failed experiment that has produced no benefit for the species." But that response ignores the Klamath Tribes entirely, as well as their sovereignty and their efforts to restore culturally critical species.

"That is how racism reveals itself here, is failure to even say our names," said Joey Gentry; the tribal chairman is her brother, but she does not speak for the tribe. It has historically shown up in other ways, too: During the last bad drought year, 2001, three white men drove through the town of Chiloquin, shooting 12-gauge shotguns and screaming "sucker lovers" in what the local sheriff called an "act of terrorism." Tribal members



reported being driven off the road, even beaten up.

These days, anti-Indigenous rhetoric peppers Facebook posts in community groups. While some posts focus on the genuine frustrations of the agricultural community, others attack the tribes and the suckers, linking the basin's problems to wild conspiracy theories regarding government takeover. The tribes don't put their name or emblem on their vehicles, clothing or projects around the community, out of concern of vandalism or violence. Local leaders have yet to publicly acknowledge the anti-Indigeneity that tribal members experience afresh during each drought year. "Make our fish go away, and then maybe the tribes will go away," Gentry said. "It is that level of erasure."

THE NORTHEASTERN EDGE of Upper Klamath Lake, at the mouth of the frigid Wood River, gives a glimpse into what hundreds of thousands of acres once looked like. Today, over 3,000 acres of thick stands of cattails, tule reeds and wocus — a hardy lily with lemon-yellow

flowers and an edible bulb harvested by tribal members — commingle in the clear, cold water as swallows swoop to snatch bugs out of the air and birds chatter from the cottonwoods. "That is what it should all look like," said Taylor Tupper, news department manager and former councilmember for the Klamath Tribes.

Between 1940 and 1957, landowners built a 6-foot levee separating the Wood River from the surrounding wetlands. The dried-out wetlands became ranch land, and the Wood River became a shallow, channelized canal. In 1995, the area was transferred to the Bureau of Land Management. To restore it, the agency shortened the levee, dug out the fill from the historic riverbed, re-created its meandering bends and floodplain and stabilized its banks with boulders, willows and other vegetation. It's a small undoing of the damage done to a river and wetland — a world once nearly erased, now made visible again.

This year, the tribes completed a land transaction that doubled their land holdings near the headwaters of the upper Williamson River.

Klamath tribal members kayak in the headwaters of the Wood River in 2019. Sharing an aquifer with Giiwas (Crater Lake), the headwaters of the Wood River are turquoise blue and shockingly cold.

There, four miles of river wind through 1,705 acres of riparian meadow, wetlands and timber, within the tribes' former reservation boundaries. The property is located near historic tribal hunting and fishing camps. The tribes have yet to develop a management plan, but are eager to lead the effort to restore the relationships among the land, water, wetlands and suckers. "It's still beautiful here, and that's why there's a hope for turning the corner," Chairman Gentry said.

Tribal biologist Faryn Case agrees. For Case, the encounter with the wild adult c'waam earlier this year was a vision of what the fish the tribes are raising will one day become, and motivation to continue the c'waams' lineage, unbroken. "Our best solutions are to try to restore what we degraded," Case said. "There's not a solution where we get more water." ☀

Will Klamath salmon outlast the dams?

Four dams on the Klamath River are slated for removal in 2023, but that may be too late for salmon.

BY BRIAN OASTER | PHOTOS BY PAUL WILSON

GREEN ALGAE BLOBS choke handmade gill nets that should be filled with salmon. The Klamath River is warming, heated by drought and dams, and that allows the algae to thrive, making it harder and harder to catch fish. Some days, Yurok tribal members capture nothing but green goop.

And some algae is toxic; one microscopic blue-green variety has made the water hazardous to the public. Warming conditions have also encouraged the spread of *Ceratonova shasta*, which infected 97% of juvenile salmon in the Klamath last spring, killing 70%. The crisis extends to the communities that depend on the fish for sustenance.

“We’re not able to catch enough fish to feed our people anymore,” said Barry McCovey, Yurok tribal citizen and director of the Yurok Fisheries Department.

Finally, after two decades of paperwork, the dams are scheduled for demolition in 2023. Now it’s a race between the opaque machinations of the Federal Energy Regulatory Commission, or FERC, in the East, and *C. shasta* on the West Coast.

Before the California Oregon Power Company (COPCO) Dam split the Klamath Basin in 1918, anadromous chinook and coho salmon and species like Pacific lamprey could reach the upper tributaries to spawn and die, enriching the ecosystem with omega fatty acids and other marine-derived nutrients. The nutrient-rich sediments ultimately returned to the ocean.

Later, COPCO built a companion dam, COPCO 2, and then the John C. Boyle Dam and the Iron Gate Dam, the lowest on the Klamath River. COPCO evolved into PacifiCorp, and both PacifiCorp and the dams are now owned by Warren Buffet’s company, Berkshire Hathaway. Two other dams on the upper Klamath, the Keno



A toxic algae bloom in Iron Gate Reservoir along the Klamath River. Inhabitants of nearby communities receive annual notices to stay out of the river during summer months because of the public health hazards for people and animals alike.



Iron Gate Dam, the westernmost dam on the Klamath River, blocks salmon from swimming up and sediment from flowing down the river below.

and the Link River, are not slated for removal, in part because they have fish ladders and provide irrigation for farms.

The four lower dams confine the salmon to the basin's lower half and keep sediment in the upper half. "If you look at the river below Iron Gate Dam, it is sediment-starved," said Mike Belchik, the Yurok Tribe's senior water policy analyst. The result is an "armored bed condition," perfect for annelid worm colonies. "It turns out that these worms are secondary hosts for this fish disease."

The four dams provide no irrigation and are unconnected to the upper Klamath's irrigation crisis. They only produce hydroelectric power. But new wind farms more than offset the amount of power the dams currently generate, enough to power 70,000 homes, so their removal will not affect the grid.

"They're not particularly good at making electricity," said Craig Tucker, the Karuk Tribe's natural resources policy consultant. There's no economic reason to keep the dams, he said. "There's no argument that really holds water. No pun intended."

The push for removal began in 2001, when the George W. Bush administration diverted so much water for irrigation that it sparked the largest fish kill in Northwest history. PacifiCorp's dam licenses were up for renewal, and Tucker saw it as the perfect time to reassess whether the dams were serving the public interest. At first, Belchik said, their suggestions for removal weren't taken seriously. But the Yurok and Karuk persisted, along with partners and allies, hoping for a 2010 removal date. When PacifiCorp realized updating the dams for environmental compliance would be more expensive than removing them, the company agreed to talk. The first agreement set a target removal date of 2015. That date slipped to 2020. Bureaucratic delays pushed it to 2021, then 2022, and now to 2023. If it slips again, it could be too late.

The dams' titles first need to be transferred to new owners and then surrendered before removal can begin, and both processes require FERC's approval. In June, FERC approved title transfer from PacifiCorp to the Klamath River Renewal Corporation (KRRC), a nonprofit specif-

ically created for removing the dams. It's a big step forward, but not home plate.

"We have turned all of our attention now to the surrender proceeding," said Mark Bransom, CEO of KRRC. But the surrender application must be approved before removal can begin, and FERC has no guaranteed timeline.

FERC has scheduled the completion of its environmental impact statement for September 2022. That's not soon enough for the 2023 timeline, Bransom said, as it would delay removal for another year. Still, Bransom remains hopeful that FERC will be on an expedited schedule. FERC did not respond to repeated requests for comment.

Dismantling will happen in stages. First, the reservoirs will be drained down to existing riverbeds, discharging the 5 million to 20 million cubic yards of sediment that has been trapped behind the dams for 100 years. Because sediment can smother salmon eggs and even suffocate juveniles, removal has to be done in the winter, after the fall runs and before the spring out-migration of fry.

In May or June, once the risk of significant flooding has passed, the concrete dams — COPCO 1 and 2, and part of J.C. Boyle — will be drilled and packed with controlled explosives to break them into removable chunks. Iron Gate is a clay-core earthen dam, so its material will be returned to the nearby "borrow site" to fill the crater from which it came. The newly exposed reservoir beds will then be stabilized with native trees, shrubs and grasses; a Yurok seed collection crew has been gathering and germinating seeds for two years in preparation.

By the end of December, in whatever year this finally ends up happening, the salmon should be returning. Jason Jackson, the Hoopa Valley Tribe's administrative assistant to the chairman, is hopeful, but skeptical about the timeline. "In 2023, the Klamath will be free," he said, adding, "but we'll see."

But this story is not just about the fish. Restoring salmon, Jackson explained, is a way of caring for elders and youth. "It reduces the risk of diabetes, high blood pressure. It's brain development food for our youth.

"We don't manage for just the next generation, but the next seven generations," Jackson added.

Yurok tribal member Tenayah Norris, who is raising two babies in a small community about 60 miles inland, said she relies on the relationship with the river: "We share emotions." The Yurok officially recognized the personhood of

the Klamath in 2019. Norris said it's hard seeing the current conditions. "We still check it out, say hi," she said. "We're helping these places when we go there and show it love and clean it up."

The Yurok Reservation is a food desert, without any kind of supermarket, McCovey said, so "to be able to go into your backyard and catch one of the finest protein sources that exists in the world is pretty special."

The tribe needs 11,000 fish, minimum, to feed its people. This year, they'll get only about 6,500. "We're keeping the fish on life support," said McCovey. "One of the main things we can do is get those dams out and open up 400 more miles of spawning habitat."

McCovey believes there will still be fish in 2023. "Salmon are extremely resilient. They've been through a lot, and they're a lot stronger than we think." The current juvenile run is over, but with temperatures rising and the dams still in place, the salmon remain under threat.

Belchik agreed that they won't disappear overnight. "If you start getting below too low a number of returning fish, individual tributaries will start winking out. It's not that we'll lose every salmon in the entire basin all at once." But the situation is dire. "If we have one more event, then we're really screwed here."

"If we keep putting in this effort," said McCovey, "the fish will see all we're putting into it, and they'll see the love that we have."

Salmon get attention because they're iconic. "If we say we're fixing this river for lamprey, no one's going to listen," McCovey laughed. "It's just another way that the salmon are helping us. They've kept us alive since the beginning of time, and now here they are helping us again, restoring an entire ecosystem because we're using their good name to get our message out there."

He said the fish won't remember the upper tributaries, but they're evolutionarily programmed to find their way up them anyhow. Salmon usually spawn where they were born, but about 5% wander into nearby waterways instead. It's how they repopulate rivers after other disasters, like volcano eruptions. McCovey has faith in that 5% to come through and restore the salmon population. "They never fail us," he said.

"Everything is interconnected," McCovey added. "We know this. And when you put a dam in a river, you block that connection." The dam's less-studied impacts ripple out at least as far as the orca, who also depend on salmon. Before European contact, McCovey said, the tribal people of the basin worked to maintain balance. "And now we're working on restoring balance." Someday, he hopes, they'll get back to maintaining balance again. "We're always going to be working towards that." ❀

SPOTLIGHT ON THE KLAMATH



PERSPECTIVE

The familial bond between the Klamath River and the Yurok people

How a tribal community's health is intimately connected to the health of the river.

BY BROOK THOMPSON

FOR THOSE WHO LIVE on the Klamath River, its health reflects the people, positioning us on the precipice of life or death. The Klamath is magical and meandering, a river surrounded by towering redwoods and mountains. But the controversy over its water has lasted for decades, and the big questions — whether to remove four dams, who gets the water during drought years — often put farmers and Natives at odds. Meanwhile, blue-green algae blooms make the river unsafe for swimming and spread deadly diseases among fish. To outsiders, the tribes' desire to have

water for salmon survival and ceremonies might seem almost frivolous, a mere "want" compared to the "practical needs" of agriculture. Most media coverage fails to express the implications of dam removal for Indigenous people.

I grew up on the Klamath in Northern California, a member of the Yurok Tribe, canning fish with my father and grandfather, pulling in salmon and basking in the thought of doing what my ancestors did, thousands of years before me. But those days faded as the dams and drought took their toll. I was 7 during the 2002 fish kill, a day forever ingrained in my mind — the eye-watering, nose-puckering stench of thousands of dead rotting salmon in *(continued on page 20)*

Yurok tribal attorney Amy Bowers, a friend of the author, watches her gill net while fishing for salmon on the Klamath River earlier this year. **Brook Thompson**

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“Top-notch photographic journalism helps us all envision the changing landscape of the West, spurred by social awareness and the impacts of climate change.”

—Joyce Trygstad Nelson, Golden, Colorado



Kylie Mohr



Brian Oaster



Sarah Sax



Theo Whitcomb



Wufei Yu

Dear Friends

IT'S A MUTUALLY BENEFICIAL arrangement: In exchange for six months' training as full-fledged members of our editorial team, *HCN's* interns and fellows produce an astounding array of stories. In many ways, this program — which has nurtured more than 240 individuals — is *HCN's* secret sauce. As Executive Director Greg Hanscom says, "If all *HCN* ever did was its intern and fellow program, we'd still be making a great contribution."

We're proud to help launch the next generation of service-minded journalists and now, thanks to your contributions to our 50th Anniversary Campaign, we've expanded the program. This summer, we welcomed three new interns and two new fellows. **Wufei Yu** (he/him), our newest Virginia Spencer Davis fellow, just completed his *HCN* internship in Albuquerque, New Mexico.

Climate justice fellow **Sarah Sax** (she/they) took a roundabout route to journalism. Her post-college bike trip from Vancouver down the Pacific Coast ended unexpectedly in Santa Cruz, California, with a knee injury. Eight years in academia followed, eventually leading to an environmental reporting job at *VICE News Tonight*. Sax fell in love with journalism because "it had everything academia didn't. At its core, journalism is about trying to make information accessible in a coherent way." Sax, based in rural Washington, aims to produce intriguing stories about climate justice, biodiversity conservation

and the intersection of environmental issues with systemic structures.

For intern **Kylie Mohr** (she/her), three years in the greater Yellowstone region reporting for the *Jackson Hole News&Guide* catalyzed her interest in Western landscapes. Mohr, who grew up in Spokane, Washington, has since written for *National Geographic* and *Hakai Magazine* and recently earned a master's degree in environmental journalism at the University of Montana. At *HCN*, Mohr wants to "be holistic about the stories I get to write, mainly to help people care about Western communities and environments that are new or different to them." She reports from Missoula.

Indigenous Affairs desk intern **Brian Oaster** (they/them), a citizen of the Choctaw Nation of Oklahoma, has always been a storyteller. Raised in the Santa Cruz Mountains and Colorado's Front Range, they were initially attracted to animation, because "it brings together so many forms of art into a story-making bundle." After graduating from the Rocky Mountain College of Art and Design and spending several years wandering Cambodia and Costa Rica, Oaster settled in Portland and wrote about Indigenous issues for outlets like *Indian Country Today*. "While animation is very imaginative," Oaster said, "journalism is intellectually rigorous and allows me to participate in meaningful change." Oaster wants to spotlight colonialism's environmental consequences, while helping Native people tell their own stories.

A Fulbright fellowship teaching English and creative writing at a community college in southeast India led intern **Theo Whitcomb** (he/him) to journalism. Writing about how the restoration of India's Couum River is displacing poor locals "really hooked me," said Whitcomb, a 2019 graduate of the University of Redlands in California, who has written for *Undark* and *The Baffler* and co-founded the literary

publication *Counterbound*. Born in Ashland, Oregon, and now living in Portland, Whitcomb is eager to cover natural resource politics in the Klamath-Siskiyou region. "I want to challenge the harmful stereotypes about whose place this is, how land is supposed to be treated and how we engage with each other."

A side benefit of this great program is that sometimes we get to hire graduates; five current staffers and three part-timers are former interns. This issue, we welcome **Jessica Douglas**, who has just completed a year as an intern and fellow, as a staff writer for Indigenous Affairs. For the next 10 months, she'll fill in for **Anna V. Smith**, who just begun a prestigious Ted Scripps Fellowship in Environmental Journalism at the University of Colorado. Smith isn't just on holiday in Boulder, she assures us: "I will be taking media theory and Indigenous studies classes and working on a project to center Indigenous voices within media, starting with sourcing!"

We don't just hire interns and fellows. Outgoing staffer **Laura Dixon** came to us five years ago with deep experience in nonprofits, and she tackled every project we threw her way, from selling advertising and syndicating stories to organizing board meetings and executing events, including our online 50th Anniversary Celebration this past June. We will miss Laura, but are thrilled that she's enjoying her retirement in her new hometown, Bend, Oregon.

And we say hello to **Shirley Tipton**, who takes over some of Laura's duties with *HCN's* board of directors, while providing administrative support for Hanscom and our Paonia, Colorado, office. Shirley, a former executive director of the Colorado Department of Higher Education, also served as a La Plata County (Colorado) commissioner and successfully fought to regulate the oil and gas industry. We remain amazed at the rich human constellation *HCN* attracts!

—Paul Larmer, for the staff

Welcome new and renewing Sustainers' Club members!

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Thank you

You're simply the best!

You — yes, you! — have helped *HCN* achieve our implausible dream of raising enough money to launch this 50-year-old institution into a dynamic new era of news production and outreach. We want to inform and inspire even more individuals and communities to take action to create positive change, both here in the West and beyond. Your support will help us reach those audiences and sustain this operation.

More than 1,500 of our 35,000 subscribers and supporters gave an *extra gift* over the last two years to *HCN* — providing us with **\$6.5 million** for the operation and allowing us to hire more staff, launch new marketing initiatives, sustain our business model and bolster our fundraising capacity to support the growth and mission of *High Country News*.

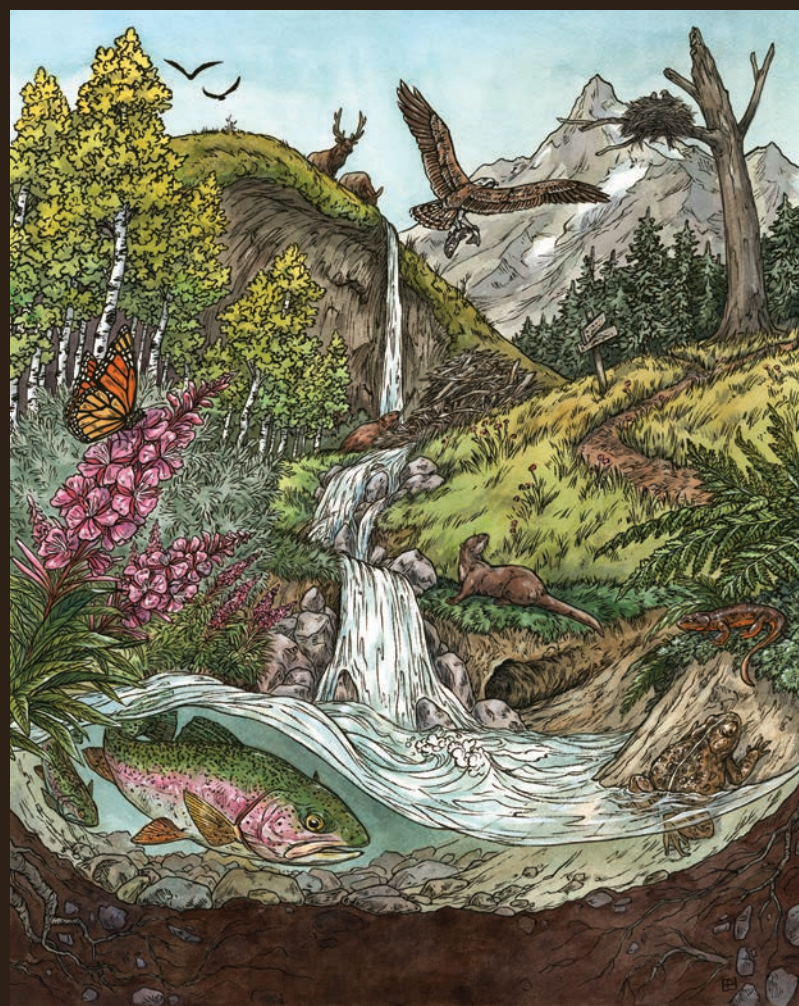
We couldn't have done any of this without your generosity. Thank you!

In return, we're sharing this beautiful complimentary art poster with you (attached here), in commemoration of *HCN*'s 50th anniversary. This one-of-a-kind artwork highlights water as an essential element of life, deeply entwined with the flow and interdependency of the many species in our ecosystems. See how many different species you can identify! (*See answer below.*) On the back, we extend a special thank-you to the donors who contributed to this campaign. Consider it a small token of the great love and appreciation we feel for all of you.

If you have not yet made a gift to the 50th campaign, it's not too late. You can donate now, online: hcn.org/50more or call/email our helpful staff and let them know your wishes. We are still accepting one-time gifts, multi-year pledges and future bequests: 800-905-1155 or development@hcn.org

With deepest gratitude,

Your friends, the staff and board of *HCN*



Species in poster: Species on poster include crow, Roosevelt elk, osprey, quaking aspen, lodgepole pine, beaver, Pacific willow, fireweed, Western monarch, river otter, lady fern, rough-skinned newt, Western toad, rainbow trout.

For more information about the artist, Emily Poole, visit her website: www.epooleart.com

(continued from page 15)

the sun along the rocky shoreline of my homeland. It was the largest West Coast salmon kill in history: Over 30,000 salmon died from diseases that spread in warm waters. I learned what it felt like to lose those close to me.

After that fish kill, everything changed; life along the river became more somber. This July, I had the privilege of catching salmon with my family again, after three years of setting my nets in vain. My dad was sick, so he wasn't with me, but my cousins were there. My work as an environmental engineering graduate student focused on water resources has helped me respond directly to the problems on the Klamath. My greatest desire is to be a part of the solution.

My formal education took place off the reservation. I learned that the non-Indigenous world measures health solely by physical markers. But the Indigenous concept of health considers community, mental and spiritual well-being in addition to the physical factors, and it relies on people's direct contact with land and water.

Growing up at the mouth of the river, I often had a salmon patty, scraped from the backbone, with an egg for breakfast. I snacked on the salmon my dad canned earlier that week, and several days a week had fresh salmon for dinner, fried or on a stick. A 2005 research paper described how Karuk people traditionally ate approximately 450 pounds of salmon per person per year. That 450 pounds was reduced to only five by the early 2000s. I was born in 1995, so I've seen a drastic reduction in my lifetime. Now, eating salmon at all is a rarity.

The nearest grocery stores are two hours to a full day away from the Klamath Reservation, and most locals cannot afford to buy fresh food there. We used to sell our salmon for \$2 to \$5 per pound. Today, that same salmon in the store would cost \$30 to \$50 per pound, meaning I could not afford the salmon I once caught. Tribal members must rely on buying processed food with a long shelf life. We believe that our intentions have real-world implications: Think about a warm, home-cooked meal prepared by someone who loves you, compared to a frozen, store-bought meal manufactured by a machine. The difference can be tasted, and the love can be felt. The opposite is also true; food prepared by someone we don't like can make us feel bad or sick. Even if we could afford the salmon in the supermarket, the taste is different, and it would not have the same effect on our spiritual health and well-being as fish that is caught by a friend.

The dams were built between 1911 and 1962, about the time diabetes first appeared in the Karuk Tribe. The 2005 study showed that Karuks were 21% more likely to have diabetes than the

*These salmon are a direct tie
to my ancestors — the physical
representation of their love for me.
The salmon are my relatives.*



average U.S. citizen. And when tribal members cannot fish, hunt and gather wild food, it further reduces their daily exercise.

When Yurok people fish, we're taught to give to others first. Sport fishermen sometimes say we are greedy, catching all the salmon; they don't see that many of those fish will be given to our elders, the disabled and those who are sick. As my uncle, Dave Severns, a Yurok redwood canoe builder, says, it is a cultural value to give fish to your elders first; no fish ever tastes as good as the one that you provide to someone who needs it. For Severns, salmon is less about the tasty meat than about passing down our values. We depend on each other, knowing we will not prosper individually until we all succeed as a community, strengthening our connection and mutual trust. Severns says he knows he will always have a place to stay or eat on the river, because there will always be a family willing to offer a bed and share a warm meal, however little they may have. Uncles and aunts act more like parents in the traditional tribal community, and cousins are more like siblings. It takes a commu-

nity to raise a Native child.

As a child, living with my grandfather, Archie Thompson, we often had family stay over for days without warning. We believe in a type of cosmic karma described as luck. Last July, my Uncle Bobo gave me a salmon and a hug without a second thought, because he knows I seldom get to be home to fish anymore, and that my dad was not doing well. That same fish was given to him by my cousin, Toni Ray, who caught it earlier that morning. Later that day, I went down to the river. I didn't have a boat or a net, but my cousin Pete, without hesitation, let me go in the boat with him. My family, my community, have my back, and I do anything I can for them.

Tribal communities have coexisted in managing the salmon population since time immemorial. Many of our ceremonies revolve around salmon. Most tribes on the Klamath had a First Salmon Ceremony to honor the salmon for the coming year. But they were forced to stop practicing this ceremony: Until the American Indian Religious Freedom Act of 1978, such Indigenous practices were considered illegal.



The author, Brook Thompson (in pink) poses with a big catch from the Klamath River, c. 2006 (*facing*). At left, Melanie Thompson (Brook's stepmother), Mike Carlson and Brook Thompson with their salmon.
Snapshots courtesy of Brook Thompson

Meanwhile, the salmon were disappearing because of the dams, logging, overfishing and pollution. Our ceremonies are incomplete without our salmon. The chinook and coho in this river return from the sea to their birthplaces. My people have lived on the Klamath for thousands of years, and I know that the salmon today are the descendants of those my ancestors managed. These salmon are a direct tie to my ancestors — the physical representation of their love for me. The salmon are my relatives. When the elders in the tribe are sick, they often ask for traditional foods like acorn soup and salmon. When my dad was ill recently and his family came together to bring him salmon, I knew he would benefit mentally and spiritually, as well as physically.

Despite the happiness of being with my family on the river this summer, I remember the 2002 fish kill — the salmon massacred because of decisions made by people who do not understand our connection to the water here. Each summer brings the fear that I will see more piles of dead salmon. And that fear grows with the increasingly frequent droughts. Even tribal

youth who never saw that fish kill are anxious. I keep a jar of unopened canned Klamath salmon in my refrigerator. I don't dare eat it; I'm afraid it might be my last. There's no guarantee we'll be able to catch salmon next year.

In 2016, the Yurok Tribe declared a state of emergency for tribal mental health. The loss of our fish contributes to our poor mental health. Many of us rely on commercial fishing for economic stability, either through selling fish or through sport-fishing tourism. Youth who cannot participate in cultural activities become depressed and turn to drugs and alcohol. Tribal members are haunted by epigenetic trauma — from the fish wars in the 1970s, when Native people were banned from fishing on the river, and from previous generations, when our grandparents were taken away to boarding schools and their culture was beaten out of them. The devastation of the river has added to the colonial impact on tribal mental health. Our problems are not inherent to our culture; Native people prospered for thousands of years. The trauma stems from generations of oppression, the loss

of our water and our sovereignty.

Removing the dams will lessen the stress on the salmon, and therefore it will ease the stress we feel.

When I returned home in July, I saw the sky-blue dock that my father was married on, which I helped paint and maintain every year. Now, it's only half its former size, with just fragments of the faded blue paint remaining. I could not even reach the fishing cabin on my family's property, with our nets, buoys, and anchors; its door was grown over with prickly blackberry bushes that stretched up to the roof.

I wonder if my younger cousins will experience the joy of collecting salmon to give away, and the pleasure of taking a break from a long day to swim in the cool crisp water. I consider myself to be a water protector, not by choice but necessity. Instead of spending time with my family, practicing basket weaving, singing songs in Yurok and Karuk, and canning salmon, I spend my time arguing with people who do not understand the basics of Indian law and culture, people who simply cannot understand the depth of the issues I address. Even so, I know I must participate to protect my people's right to live. My vision of protecting a healthy river and community keeps me motivated. Education, for my allies and myself, is the first step, but it's never the last.

The Yurok people recognized the personhood of the Klamath River, but we could not give it a vote. Therefore, we must speak on behalf of the Klamath. Dam removal is the beginning of a much greater effort to restore the health of the Klamath River, the salmon and my people. After the dams are removed, there will still be issues to resolve — sedimentation and water allocation, the complicated questions around beneficial use, rights and priorities. A healthy river will require organization by those affected and support from allies. Together, we must bring Indigenous voices to the forefront to make change possible and to keep the river alive. ☀

Brook Thompson is an enrolled Yurok tribal member and has Karuk ancestry. Currently she is pursuing an M.S. in environmental engineering at Stanford University, with a focus on water resources. Follow her @brook_m_thompson on Instagram or at brookmthompson.com.

FACTS & FIGURES

The incredible shrinking Colorado River

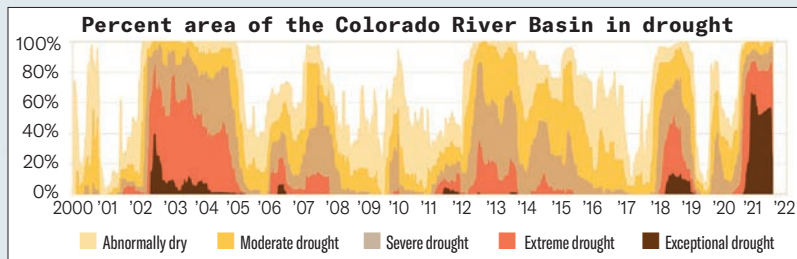
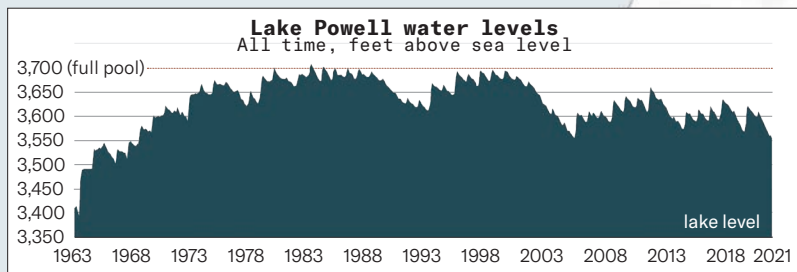
Climate change and rising demand are sucking the life out of the Southwest's water supply.

BY JONATHAN THOMPSON
MAP BY ALISON DEGRAFF OLLIVIERRE,
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ONE OF THE MOST VISIBLE SIGNS of the state of the West's water supply is the big bathtub ring around the sandstone rim of Lake Powell, the nation's second-largest reservoir. Whenever the massive hydrological system that delivers water to the lake dwindles, the whitewash halo grows, shrinking only when — or rather, if — that system is replenished by rain and winter snows.

By July 23, the halo occupied some 150 vertical feet of shoreline, showing that the lake's surface had fallen to its lowest level since 1969, before it was completely filled for the first time. Boat-launch ramps, which had already been extended repeatedly, were finally unusable. The hydropower-generating capacity of Glen Canyon Dam was in danger of disappearing altogether. Even more worrisome, though, is what the diminishing reservoir tells us: The Colorado River watershed is terminally ill.

Two decades of climate change-induced drought and rising temperatures, combined with ever-growing demand, have put the entire water system — and the flora and fauna and more than 40 million people that rely on it — into serious trouble. Now local, state and federal water managers are being forced to reckon with a frightening reality: the incredible shrinking Colorado River system.



Two decades of dryness Since 1999, not a year has passed without part of the Colorado River Basin being in drought to some extent. The record-breaking winter of 2002 had set the dry-year benchmark. But today — thanks to year after year of heat and scant snowfall — the situation is even worse: Now, 100% of the basin is in drought, with 80% of it classified as extreme or exceptional.

1 Hundreds of headwaters The Colorado River emerges on the Continental Divide as a clear stream meandering through mountain meadows, gathering strength and volume as gravity pulls it toward the Gulf of California. This scene is repeated hundreds of times at the high-country headwaters of the Colorado's many tributaries — the San Juan, the Dolores, the Green and the Gunnison.

2 Mountain snowpack Each winter, a giant natural reservoir fills up with water in the form of snowpack on mountains and in alpine basins. And each spring, as it melts, the water wanders into the Colorado River system, filling artificial reservoirs across the West before the dry, hot days of summer. Or at least that's how it's supposed to work. But decreasing snowfall — and warm temperatures and dust, which team up to melt and evaporate the snow earlier — have diminished flows on virtually all of the Colorado's tributaries.

3 What's that sucking sound? Even as Colorado River water users are getting cut off, the Utah Board of Water Resources wants to spend \$2 billion to build a Lake Powell Pipeline to pull up to 28 billion gallons of water out of the system and pump it to southwestern Utah, to water lawns and golf courses and irrigate alfalfa.

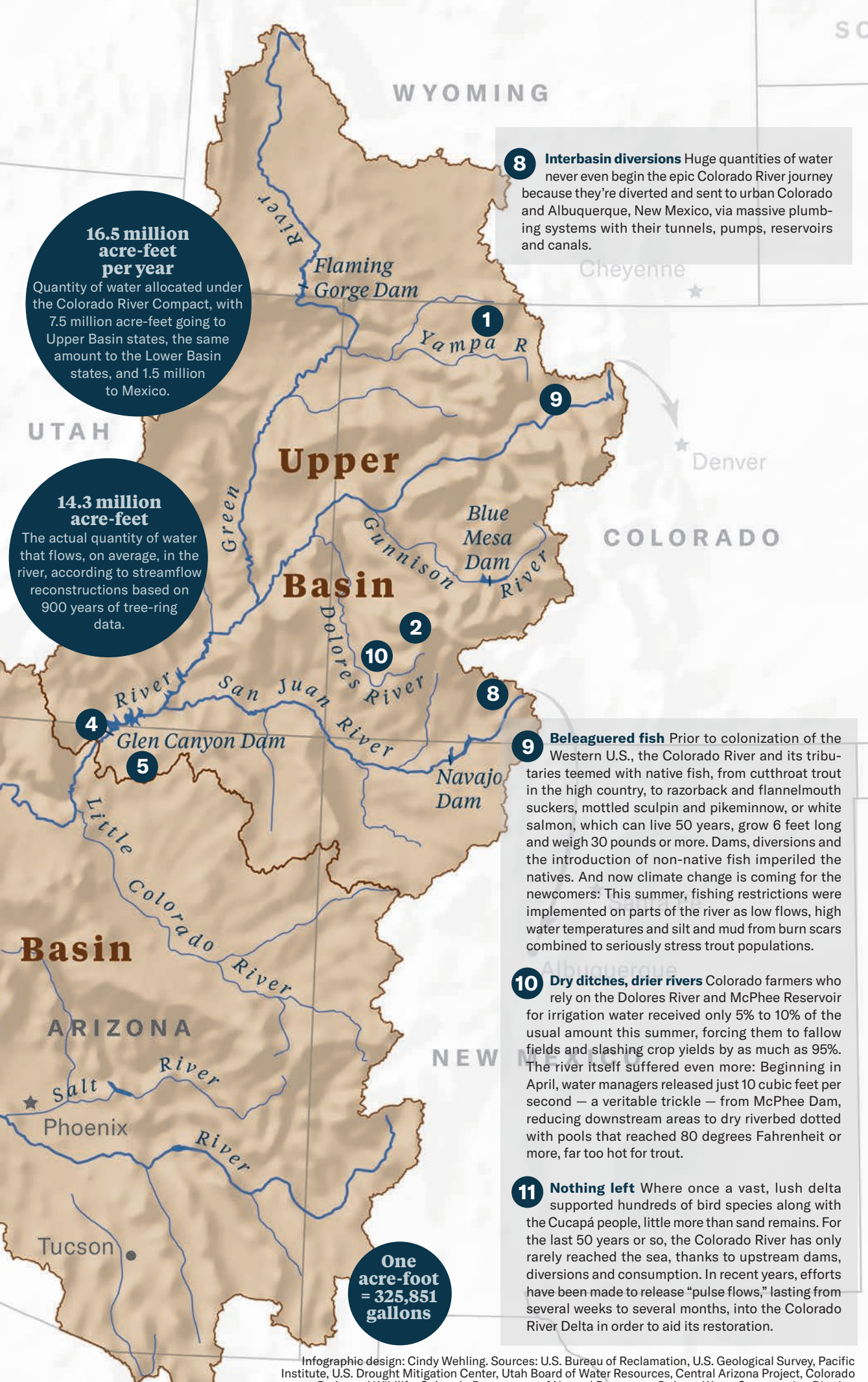
4 Robbing Peter to save Powell Glen Canyon Dam is one of the Southwest's biggest hydro-electricity generators, but as Lake Powell drops, so does power-generating capacity, stopping completely when it reaches "minimum power pool." This summer and fall, in order to slow Powell's draw-down, water managers are releasing extra water from upstream reservoirs, thereby reducing their levels to all-time lows.

5 Energy-water nexus The now-shuttered Navajo Generating Station on the shores of Lake Powell drew billions of gallons from the lake for cooling and steam production. Some of the electricity it produced powered the pumps that move around 500 billion gallons per year through Central Arizona Project canals to Phoenix and Tucson. Although the Navajo plant closed in 2019, dozens of power plants continue to draw water from the river system.

6 Betting on Lake Mead In 2015, Las Vegas completed its \$817 million third intake on Lake Mead in order to keep drawing water from the beleaguered reservoir. At just 300,000 acre-feet, Nevada has the smallest allocation of any basin state. Even as runaway growth continues unabated, the region's water district has encouraged efficiency measures — including partially banning ornamental lawns — to try to stay within its limits.

7 Farmers lose first This August, federal officials declared the first level of shortage, known as Tier 1, on the Colorado River, meaning the states will have to cut back next year, with Arizona losing about 500,000 acre-feet of its 2.8 million acre-feet allocation. Arizonans will still be able to shower and even fill swimming pools, but farmers will lose most if not all of their surface irrigation water, forcing them to dig more deeply for dwindling groundwater or else sell out to developers, because housing uses less water than most agriculture.





16.5 million acre-feet per year
Quantity of water allocated under the Colorado River Compact, with 7.5 million acre-feet going to Upper Basin states, the same amount to the Lower Basin states, and 1.5 million to Mexico.

14.3 million acre-feet
The actual quantity of water that flows, on average, in the river, according to streamflow reconstructions based on 900 years of tree-ring data.

One acre-foot = 325,851 gallons

8 Interbasin diversions Huge quantities of water never even begin the epic Colorado River journey because they're diverted and sent to urban Colorado and Albuquerque, New Mexico, via massive plumbing systems with their tunnels, pumps, reservoirs and canals.

9 Beleaguered fish Prior to colonization of the Western U.S., the Colorado River and its tributaries teemed with native fish, from cutthroat trout in the high country, to razorback and flannelmouth suckers, mottled sculpin and pikeminnow, or white salmon, which can live 50 years, grow 6 feet long and weigh 30 pounds or more. Dams, diversions and the introduction of non-native fish imperiled the natives. And now climate change is coming for the newcomers: This summer, fishing restrictions were implemented on parts of the river as low flows, high water temperatures and silt and mud from burn scars combined to seriously stress trout populations.

10 Dry ditches, drier rivers Colorado farmers who rely on the Dolores River and McPhee Reservoir for irrigation water received only 5% to 10% of the usual amount this summer, forcing them to fallow fields and slashing crop yields by as much as 95%. The river itself suffered even more: Beginning in April, water managers released just 10 cubic feet per second — a veritable trickle — from McPhee Dam, reducing downstream areas to dry riverbed dotted with pools that reached 80 degrees Fahrenheit or more, far too hot for trout.

11 Nothing left Where once a vast, lush delta supported hundreds of bird species along with the Cucapá people, little more than sand remains. For the last 50 years or so, the Colorado River has only rarely reached the sea, thanks to upstream dams, diversions and consumption. In recent years, efforts have been made to release "pulse flows," lasting from several weeks to several months, into the Colorado River Delta in order to aid its restoration.

1922
The year the Colorado River Compact was signed, divvying up the river's water between the Upper Basin states — Wyoming, Colorado, Utah and New Mexico — and the Lower Basin — Arizona, Nevada and California.

90%
Proportion of the system's water that originates in Upper Basin states.

16.52 million acre-feet
The quantity of surface and groundwater withdrawn from the basin in 2010.

13.6 million acre-feet
Amount of that year's total used for irrigation.

8.62 million acre-feet
The average annual "unregulated inflow" into Lake Powell from 2000-2021. (Unregulated inflow means the approximate natural flow, i.e., the Bureau of Reclamation's estimate of how much water would run into the lake without upstream diversions or withdrawals.)

3 million acre-feet
Projected unregulated inflow to Lake Powell during the 2021 water year (Oct. 1, 2020, to Sept. 30, 2021).

5.2 million acre-feet
Quantity of water diverted out of the basin and into other watersheds — largely to provide water to urban areas such as Denver, Albuquerque and Los Angeles — in 2010.

\$803 million
Value of hay grown in Colorado River Basin states and exported in 2020, mostly to China and Saudi Arabia.

328,000 acre-feet
Consumptive use of Colorado River water for thermo-electric power production (coal and natural gas) in 2010. (Consumptive = water that isn't returned to the stream after use.)

372,000 acre-feet
Approximate amount of water that evaporated from Lake Powell in 2020.

35,000 acre-feet
The amount of water that will be delivered to the Colorado River Delta this year for environmental restoration.

25.8 million acre-feet
Amount of water in Lake Powell as of July 14, 1983.

7.9 million acre-feet
Amount of water in Lake Powell as of July 25, 2021.

Infographic design: Cindy Wehling. Sources: U.S. Bureau of Reclamation, U.S. Geological Survey, Pacific Institute, U.S. Drought Mitigation Center, Utah Board of Water Resources, Central Arizona Project, Colorado Parks and Wildlife, Colorado Department of Natural Resources, Dolores Water Conservation District.

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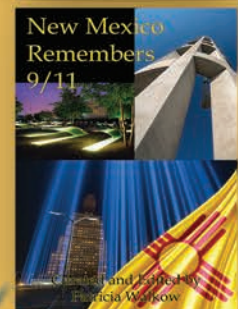
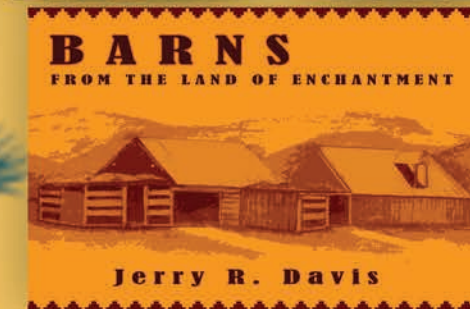
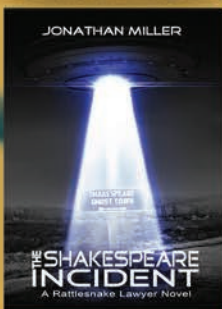
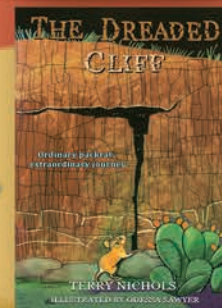
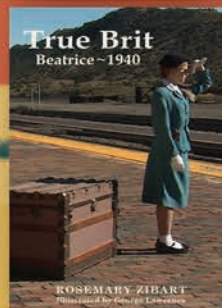
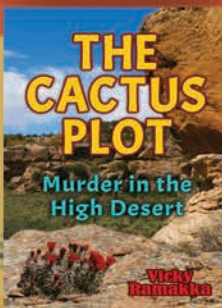
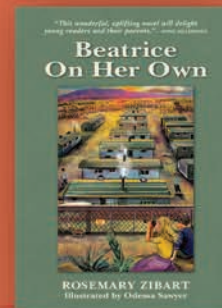
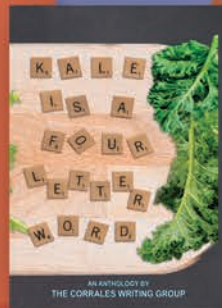
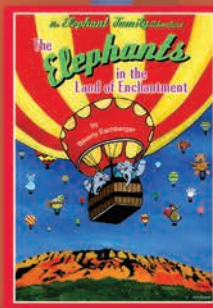
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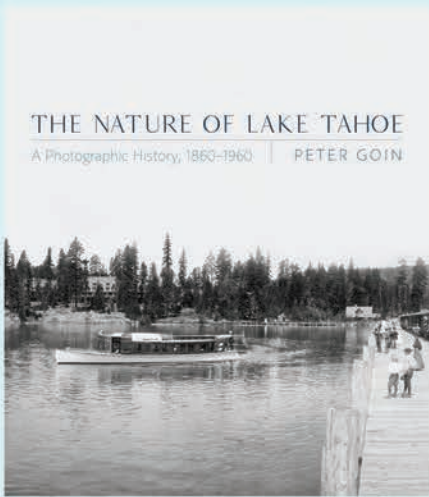


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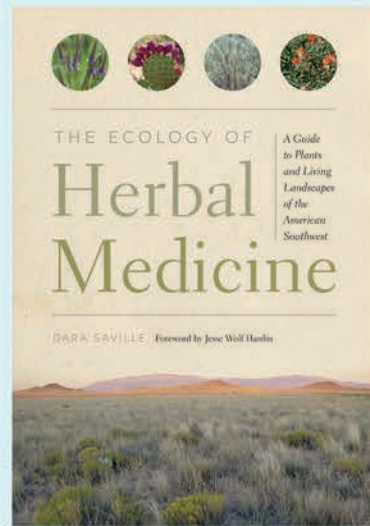
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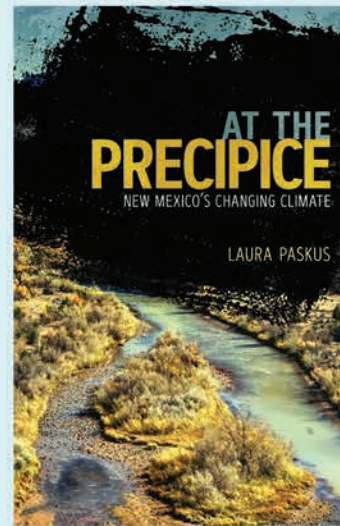




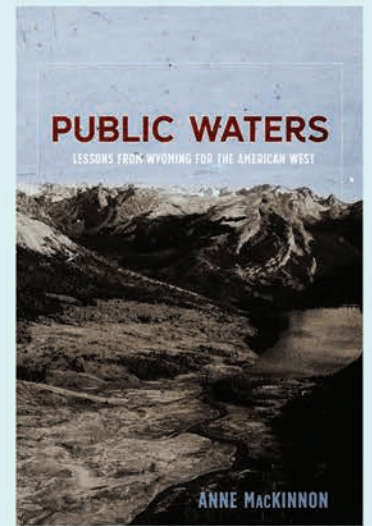
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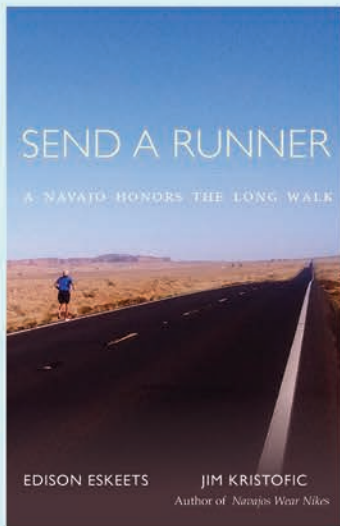
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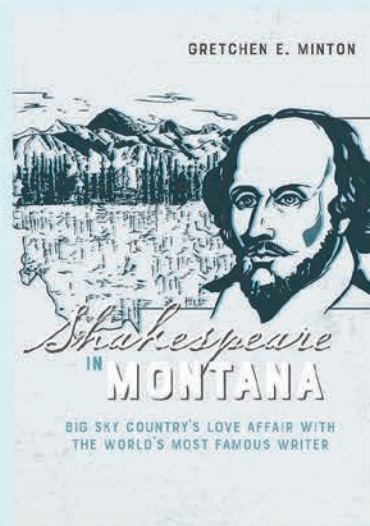
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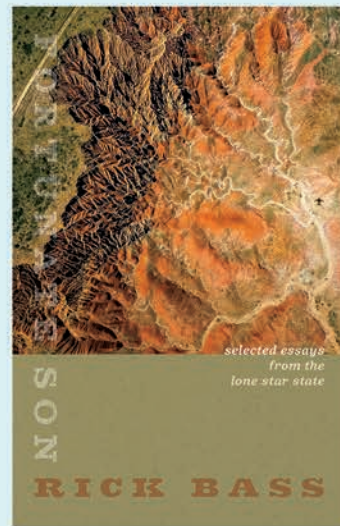
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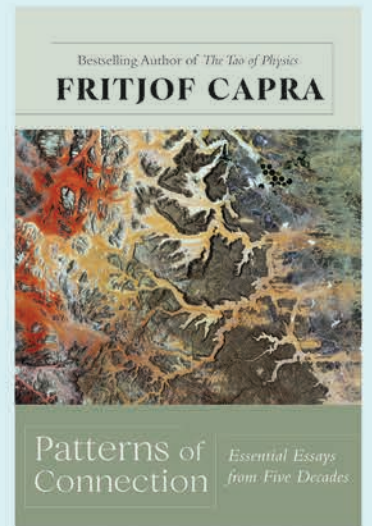
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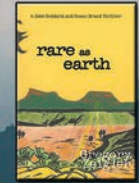


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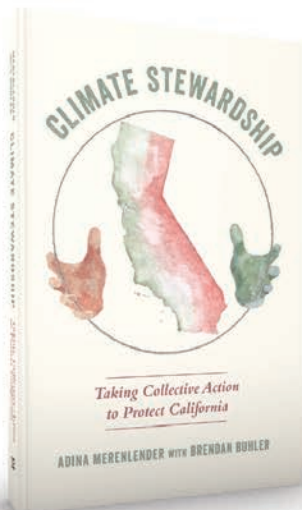
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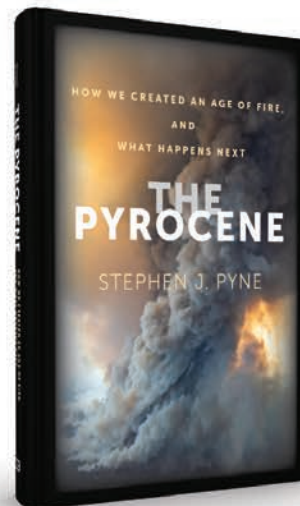
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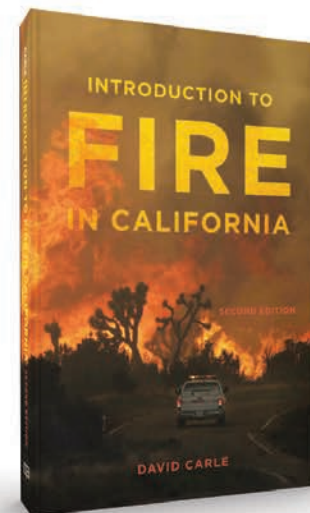
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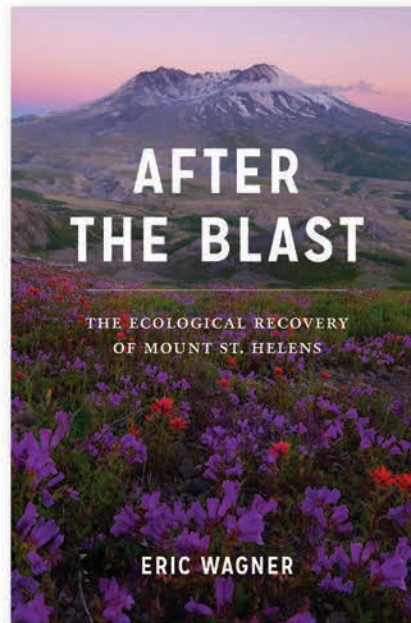
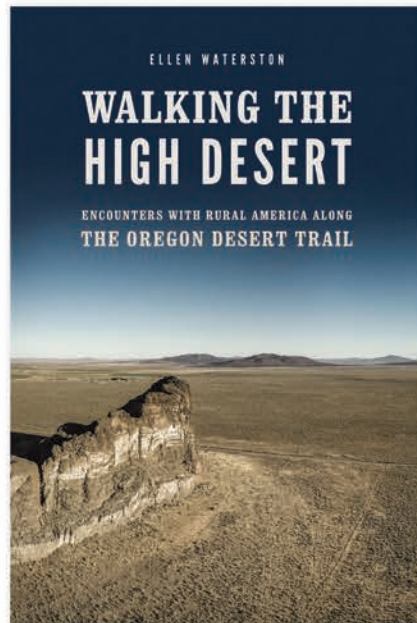
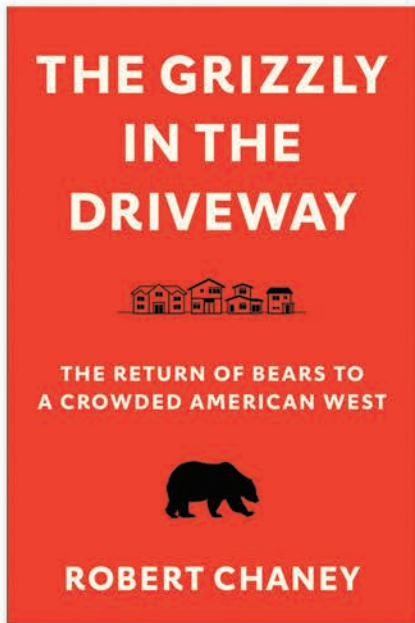
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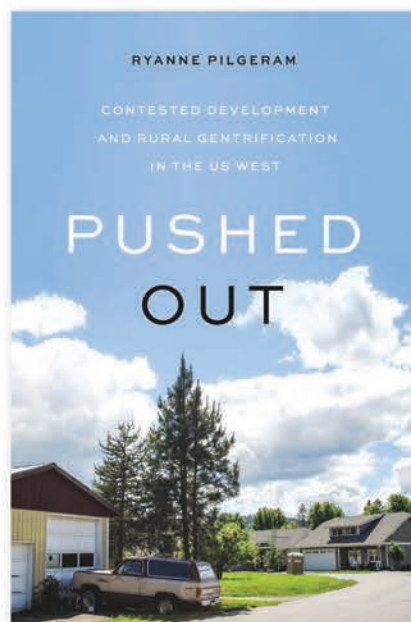
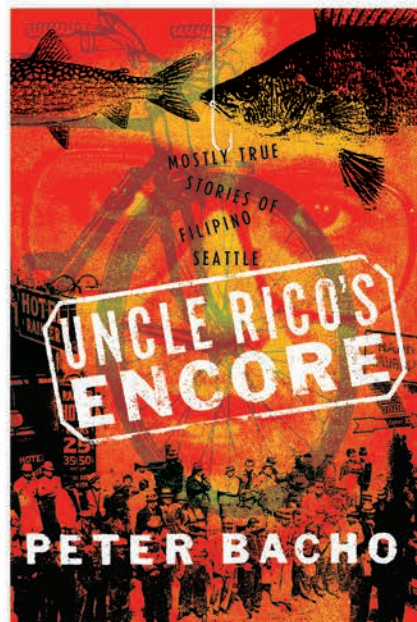
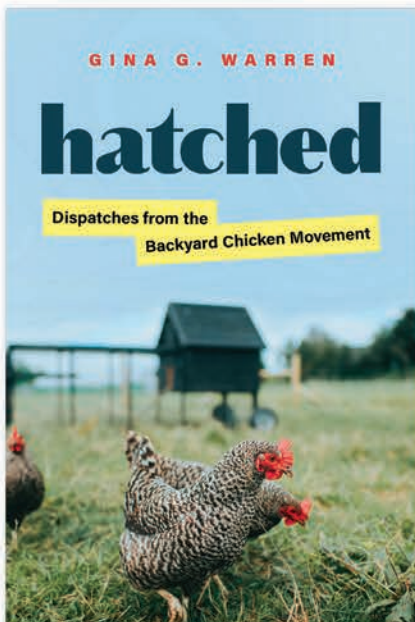




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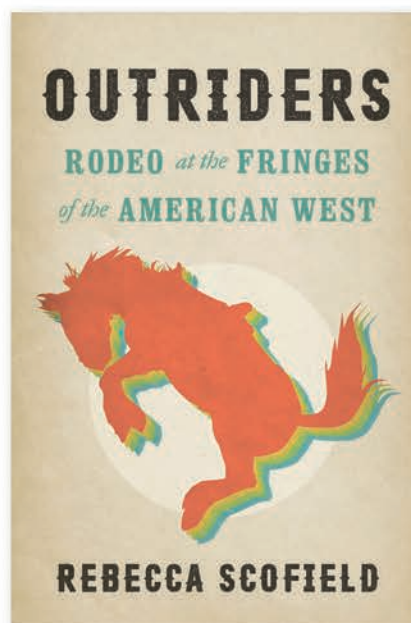
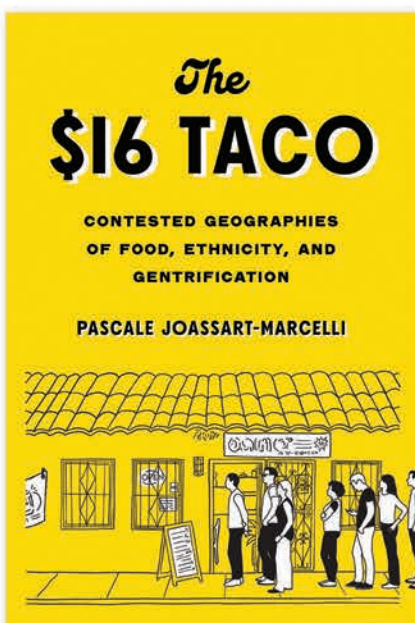
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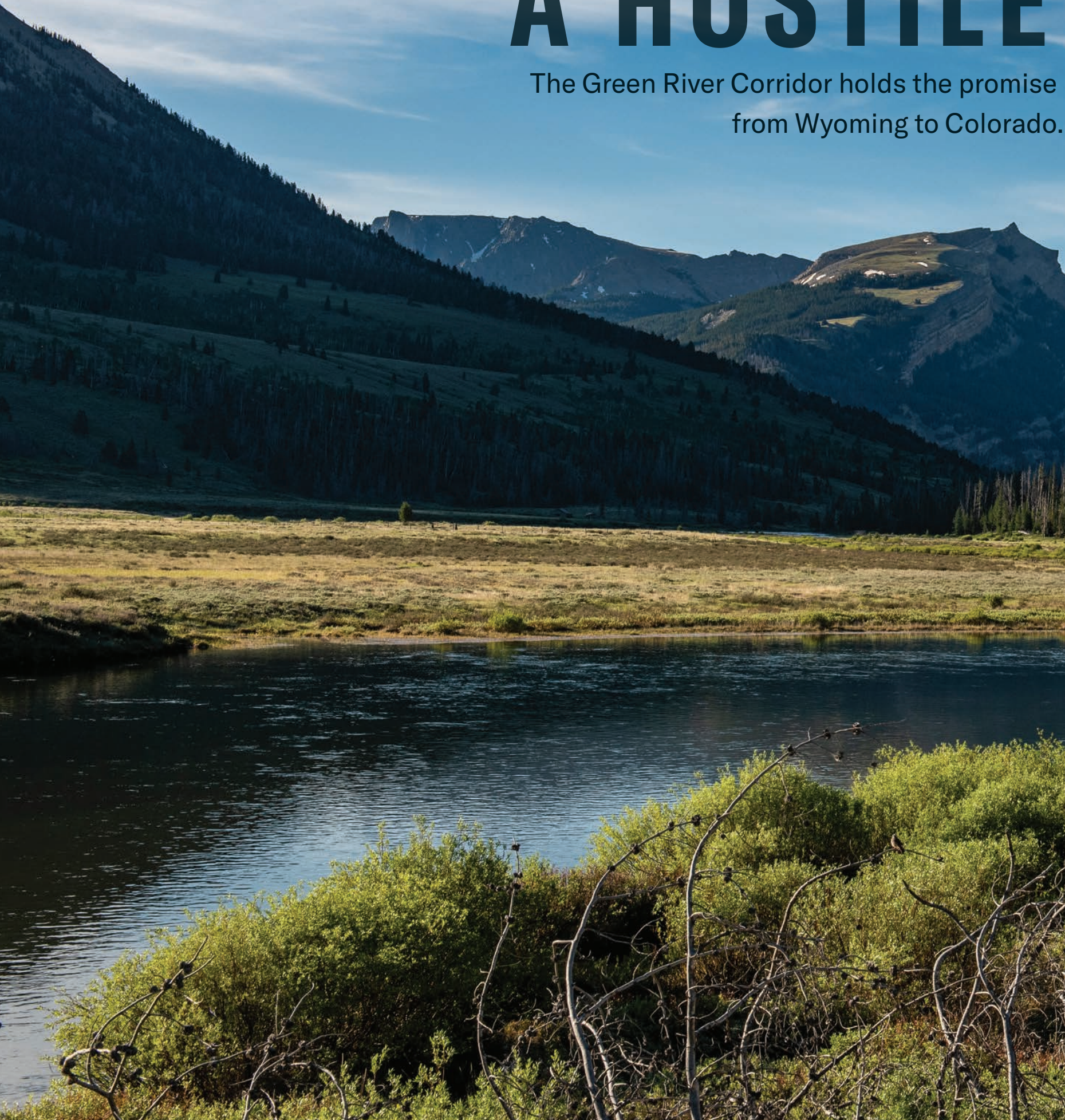
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A HOSTILE

The Green River Corridor holds the promise
from Wyoming to Colorado.



COUNTRY

of a pathway for gray wolves to disperse
So why aren't they using it?

By Paige Blankenbuehler | Photos by Beth Wald



Green River Lake at the headwaters of the Green River, Bridger-Teton National Forest, outside of Pinedale, Wyoming.



N THE EARLY DAYS OF OCTOBER 2020, a soft breeze blew across Cold Spring Mountain, rustling the sagebrush and aspen groves. Three prominent conservationists camped near the weathered land marker that identified the junction of Utah, Colorado and Wyoming, hoping to hear something that had long been absent from this landscape: the howling of a pack of wolves.

Karin Vardaman, who is widely recognized as one of the nation's experts on wolves, was collecting data for the Working Circle, a nonprofit she founded that works to reduce conflicts between predators and livestock producers. That winter, a wolf pair and as many as four others were spotted in Moffat County, Colorado — the first pack of wolves documented in the state in more than 80 years. But within a few months, after they crossed the nearby border into Wyoming, three of them had been shot and killed, their deaths confirmed. Throughout that summer, wildlife biologists conducted howl surveys of the area to see if any of the others had survived. Vardaman, who had been tracking the pack, was a key part of those efforts.

"We were able to put together the pieces of the puzzle about how these wolves were using the landscape — where they were hunting, where their rendezvous spots were," Vardaman told me by phone in May.

At the same time, Gary Skiba, a wildlife biologist who had worked for Colorado Parks and Wildlife for more than two decades, and Matt Barnes, a scientist for the Northern Rockies Conservation Cooperative, were searching for the pack along the Green River.

Wildlife scientists tend to be lone wolves themselves, with a strong protective streak; they often keep their findings and the locations of their cameras private, obscuring details, such as pack movements, so the wolves they're tracking can't be easily targeted. Vardaman had crossed paths with Skiba and Barnes before, however; the "wolf world" is a small place, as Skiba likes to say. Vardaman told them that she had heard howls in the area a few days earlier, so they all camped nearby, staying close together and hoping to hear them again. Vardaman recalls chatting with the others, sharing information, and then Barnes and Skiba went back to their campsite. They sat up drinking and discussing the landscape.

And then the howling began: At least three distinctive sorrowful

peals, long and deep, carried along by the slight breeze — faint but unmistakable amid a chorus of higher-pitched yips from a pack of coyotes. It lasted scarcely more than a minute, but Skiba said it made his hackles rise. It was “primal,” Skiba told me. “It’s very emotional, a real connection to wildness and a connection to this bigger landscape. It’s a feeling of recognizing a system that’s functioning properly.”

In the world of wolf restoration, that feeling is exceedingly rare. Gray wolves are native to this part of northwestern Colorado. They once flourished across the Western United States, ranging the Rocky Mountains in numbers at least into the tens of thousands. But years of lucrative trapping — much of it government-sponsored — in the 19th and 20th centuries, followed by liberal hunting regulations and development and habitat loss, devastated the population, and constantly changing federal and state guidelines haven’t helped. Now there are only around 2,000 gray wolves in the Western U.S. outside of Alaska, and they reside almost exclusively in the Northern Rockies. Skiba, Vardaman and Barnes knew that the wolves they heard that night were among the only known wolves in Colorado — the few surviving members of what some were calling the Pioneer Pack.

The fate of the Pioneer Pack was a painful reminder of the obstacles faced by gray wolves in the West: Since January 2021, federal protection for the majority of gray wolves has been stripped away in the Lower 48, and those wolves are managed by whatever state they happen to wander into. They are trapped in a web of overlapping and intersecting barriers, from the protected territories within Indigenous lands and national parks to the hostile country in Idaho, Utah and Wyoming, where most wolf takes are legal and culturally acceptable. Wolves that cross the invisible boundary into Wyoming, into its “predator management area,” are

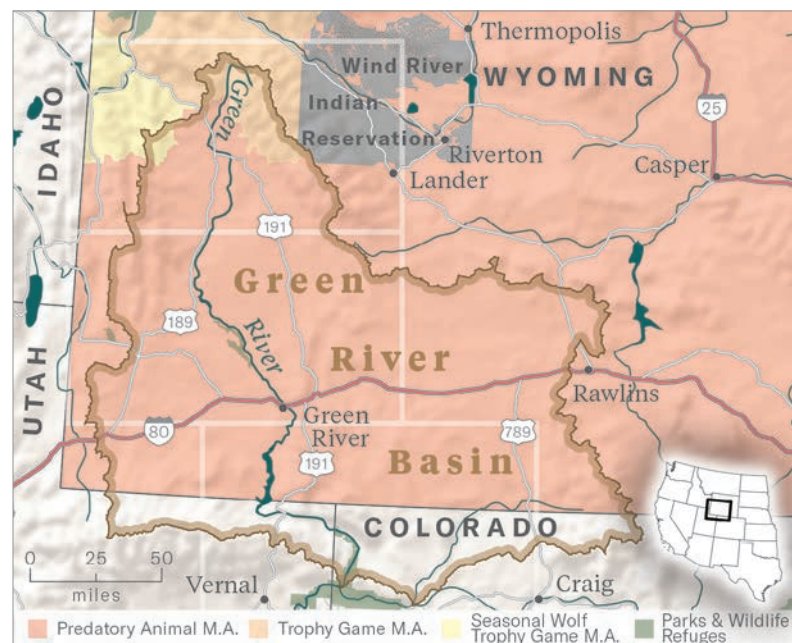
Wolves are trapped in a web of overlapping and intersecting barriers that complicate their existence, from protected territories within Indigenous lands and national parks to hostile country across Idaho, Utah and Wyoming.

A rain cloud moves across the complicated landscape on the east side of Flaming Gorge Reservoir, as seen from Highway 191, south of Rock Springs, Wyoming.

vulnerable to the state’s draconian policies, which allow wolves to be killed any time of the year without a license. In Idaho, where the Nez Perce Tribe successfully oversaw the reintroduction and management of wolves for more than a decade, the state now permits the killing of up to 90% of the population, which is currently about 1,500. In Utah, ranchers don’t need a license to kill wolves that prey on

Once wolves are back on the landscape, a long-broken link in the chain will be mended: Wolves will be connected along the Rocky Mountains from Canada to Mexico for the first time since the early 20th century. Conservationists believe this will increase biodiversity at a time of catastrophic global loss.

Now it’s up to Colorado to establish viable packs, not just by getting wolves into the state, but



The Green River Basin and Wyoming’s wolf management areas. (White outlines indicate the detail maps that appear on the following pages.)

livestock. Since Colorado adopted a management plan in 2005, wolves are welcome — as long as they get into the state on their own.

In November 2020, Colorado took yet another step toward wolf restoration, when residents — primarily people in left-leaning urban, suburban and micropolitan areas like Telluride and Aspen — voted to pass Proposition 114, which mandates wolf reintroduction. The people who live where the wolves will reside — mainly rural, ranching and conservative western Colorado — largely voted against the proposition. (Moffat County, where the Pioneer Pack had localized, overwhelmingly voted “no.”) Now, Colorado Parks and Wildlife, the state’s wildlife agency, has until the end of 2023 to establish a sustainable population of gray wolves.

by making sure they can survive. Gray wolves are excellent dispersers and habitat generalists that have long flourished across their native historic range. Their survival doesn’t really depend on finding vast swaths of connected habitat and lots of prey to eat — it depends on human tolerance for them. But rural and ranching communities have viewed wolves as a threat to their way of life for more than a century. Achieving a sustainable population means convincing these communities that coexistence is in their own best interest — and that won’t be easy.

It also means protecting wolves as they move through the landscape. Wolves can travel 60 miles at a stretch, though some have been documented traveling hundreds — and, in rare cases, even

Alison DeGraff Ollivierre, Tombo Maps & Design / HCN



thousands — of miles, typically in search of mates. For long journeys like that, they often rely on natural wildlife corridors, which cross state lines and pass through zones with conflicting rules about protection.

Corridors require habitat that is connected across vast distances, where a wider ecosystem of flora and prey animals can flourish. Since so much habitat has been developed or fragmented, these pathways are rare and becoming rarer, as urban newcomers move into rural communities. This makes finding viable corridors critical to wolves' survival: If a route could be shown to offer that degree of connectivity, then public awareness of its potential could lay the groundwork for its protection, not just for the sake of dispersing predators but for other wildlife, too.

In the spring, after Colorado passed Proposition 114, Matt Barnes, one of the three scientists who heard the wolves in Three Corners, started finding clues that wolves were traveling the Green River corridor. The Green snakes from the Wind River Mountains through southwestern Wyoming and into the Southern Rockies, where the Uinta Range begins in Colorado and Utah. It wasn't yet widely considered a potential dispersal corridor, but Barnes hoped it might prove to be a safer option than crossing Wyoming's Red Desert.

"If you look at it broadly, not just the water itself, but the entire corridor, plus a little buffer distance on either side, it actually is a more direct line from the thick wolf and grizzly bear country of the Wind River Range and the upper Wyoming Range to the northwestern corner of Colorado," he

told me at a coffee shop in Ignacio, Colorado, in March. "(The Green River) is the only river that very nearly connects the Northern Rockies to the Southern Rockies."

But the Green River corridor also passes through some of the most dangerous territory for wolves in the entire West, and Barnes knew that the likelihood of wolves making it safely through the area was low. So he decided to scope out the corridor by river this summer. From late May to June, Barnes canoed, kayaked and packrafted 400 miles of the river in what became a mission to see how viable the corridor was.

I joined him for part of the journey to see for myself. For a two-week period in June, I explored the corridor by river and by land, hoping to better understand what's preventing gray wolves from repopulating the Southern Rockies on their own.

IN JUSTIN WRIGHT'S living room, leering at you from beside his television set, is a stuffed gray wolf mounted on wheels. The wolf is nearly five feet high at its shoulders, and it stands on a fake rock accented with wisps of fake prairie grass. The wolf's eyes are fixed, its paw pointed. Wright calls it the "Minnesota Mount," because he sent the wolf to Minnesota to get the body mounted. The wheels are useful, because he likes to move it between the living room and kitchen.

Wright, who lives at the northern point of the Green River Valley in Cora, Wyoming, has built his life around proximity to big game. He owns several businesses: the Kendall Valley Lodge & Saloon and Mule Shoe Outfitters, which are 20-plus miles from the from the Green River's headwaters. He leads guided



hunts for bighorn, mountain lion, bear, elk and deer in the Bridger-Teton National Forest. Wolves that wander onto his land (and many do) are vulnerable to Wright's rifle.

Wright has decorated his lodge and saloon with bleached wolf skulls and pelts from some of those hunts. Inside the saloon, a poster of a busty, bikini-clad blonde aiming a bow hangs next to a blown-up photo showing Wright's arms wrapped around a recently killed wolf. Its glazed eyes are fixed on the camera, its paws are bloody, and its mouth turned up in what can only be described as a grin. Wright's arm is draped across its shoulder, his wedding ring and blood-covered fingers visible in the animal's thick gray, black and white coat.

Despite wolves' propensity to range, Wyoming Game and Fish has managed to keep them concentrated mostly in the 8,250 square miles of its Trophy Game Management Area,

simply by making it legal to kill them if they wander too far away from it. Outside the trophy game area lies the state's predator management area, where wolves are considered vermin and can be killed any time of the year without a license. The predator area comprises about 85% of the entire state. For wolves that leave the manufactured habitat of northwest Wyoming, the first leg of a southward journey leads through the Kendall Valley and then the predator area. Wright told me that he'd been exploring the idea of guided wolf hunts, but for now, it was off the books, done only by request. "Knowing where they are," he told me, "we think we can offer the likelihood of a pretty successful hunt."

Wyoming's wildlife managers, legislators and the wider public see this conditional existence as a good thing; the habitat in the state's northwest corner supports what they consider a sustainable



After a morning of herding cows, diners eat breakfast in the restaurant of the Kendall Valley Lodge, near the Upper Green River outside of Pinedale, Wyoming. The many trophy heads and skins adorning the walls were shot by Lodge owner Justin Wright and his wife (top).

Justin Wright, one of the owners of the Kendall Valley Lodge and a hunting outfitter business, poses with a wolf he shot on his property, in his home on the Upper Green River (above).

wolf population. And the threshold of human tolerance for living alongside predators seems to have been carefully calibrated over the nearly three decades since wolves were reintroduced in 1995. If the wolves leave that boundary, well, they're fair game. "This is all density-dependent," Ken Mills, a large-carnivore biologist with Wyoming Game and Fish, told me. "The more (wolves) you have, the more likely they're going to get in conflicts and the more you have to kill, so we're holding the population down in this 160-range. Humans are the single limiting factor for exponential growth in wolf populations."

In the evenings, Wright's saloon is filled with tired ranch hands, property owners and construction workers. Nobody I spoke to there said they would pass up the opportunity to kill a wolf — though later that night, I caught a group of the construction workers outside howling at the waxing moon with a kind of drunken admiration.

One of Wright's regulars is Joe Sondgeroth, whose family has lived in Wyoming for generations. Sondgeroth told me about a hunt last fall where he shot a wolf at a dead run. "That thing was sprinting away from me, but I could make it out, and I got my shot," he said.

Sondgeroth, who is 70, has killed three wolves in his life so far. He has shiny eyes and wears a faded hat from the Rocky Mountain Elk Foundation. He and his wife, Annie, a former public health worker from California, earn much of their income from renting the multiple properties they own in the area. They are especially proud of their home, which they have spent over two decades renovating. When I visited them there, in between showing me photos of wolf hunts and laying out pelts on the living-room floor for me to admire, they gave me a tour of their new master bedroom and bathroom.

For Sondgeroth, who grew up in the nearby town of Pinedale, wolf encounters are an uncomfortable part of an otherwise idyllic

life spent working in the area and watching the Super Bowl at the VFW Hall. "I don't hate them," he told me. "But I don't want them to be in my yard."

Sondgeroth views himself as a protector, defending not only the local people and animals, but also a place that he loves. "I feel like I'm helping all the game in this area," he said. "(Wolves) are eating machines. ... They have no mercy."

This is an attitude that goes back generations. Like many people in the Cora and Pinedale area, Sondgeroth has a connection to the ranching tradition in western Wyoming. As a young man, he sometimes worked as a ranch hand, occasionally helping his friends run cattle into the summer grazing allotment in the high country by way of the Green River Drift, the oldest continually used stock drive in Wyoming.

The Drift is an intensely contested piece of land. Only 11 ranching families in the Cora and surrounding Green River area use it, but many view it as a living connection to the West's ranching heritage. Environmentalists oppose grazing cattle in the Upper Green River watershed, but Wyoming's politics remain firmly on the side of ranching.

Ironically, the Drift makes for a bad cattle run. In sections, it is a relatively narrow corridor, like a conveyor belt into the high country with barbed wire on each side. There, a herd traveling it becomes elongated; the individual cows can get separated from each other, making them more vulnerable to predator attacks. It's unlikely that a wolf or a grizzly will attack a dense herd of hundreds of cattle, but spread the animals out, and occasionally a few will get picked off. According to 2020 data from the Wyoming Game and Fish Department, these types of kills are rare. Wolves prefer to prey on wild ungulates like elk or moose. But whenever an incident does occur, it leaves an outsized impression on the ranchers. One multigenerational Cora ranching family, who asked not to be identified for fear



of harassment by environmentalists, repeated a claim I'd heard from others: That wolves kill for fun, that they "are vicious." "They don't just go after (a calf), sometimes they'll cripple or kill three or four (cattle) and then only eat one. People don't understand that."

THE IDEA THAT WOLVES are vicious killing machines has deep colonial roots. Across the continent, Indigenous peoples have lived alongside and hunted wolves long before Europeans arrived. Fossil evidence suggests an ancestral offshoot of gray wolves was abundant in North America as far back as 500,000 years ago. In many Indigenous nations' spiritual beliefs, wolves are seen as protectors that model hunting behavior, sharing the bounty from their kills.

In 2007, the Northern Arapaho Tribe and Eastern Shoshone Tribe published a Wolf Management Plan for the Wind River Reservation, where, in 2020, at least 21 wolves were documented. The tribes spent two years developing it. They included interviews with tribal elders, who summed up the traditional views of both tribes as people who recognize wolves "as deserving of respect and placed here by the Creator for a purpose." According to an Arapaho oral history, a young

boy got so engrossed in playing that he did not realize that his tribe was breaking camp. He was accidentally left behind. "As night fell, he began to cry," the report said. "A wolf appeared and told him not to be afraid — that he would help him." Wolves gathered around the boy, collected brush and used flint to start a fire. They took care of the boy and raised him. "Wolves could teach virtuous things to people," one Shoshone elder told officials. "They were an example of how to care for family members, because they took good care of the young as well as the old." Today, the Shoshone and Arapaho people regard gray wolves as "kin, as helpers, as strong," according to their wolf-management plan.

In some powwows, Shoshone people have a traditional social dance in which wolf hides are worn over the dancers' heads. The dance celebrates bravery and wisdom, and it is considered honorable to wear the skins of an animal one is trying to emulate. Neil Thagard, director of the Nez Perce Tribe's Wildlife Division, which oversaw the successful restoration of gray wolves in Idaho beginning in the mid-1990s, says that the tribe's management of the species had been an intentional reversal of colonial policies. "Their summer range, transitional range



Ranch hands herd cows down a dirt road heading into the Gates of Lodore section of Dinosaur National Monument in northwestern Colorado (top left). Matt Barnes paddles a canoe through the Browns Park section of the Green River, in northeastern Utah (top). A dead coyote on BLM land along the Green River north of Fontenelle Dam, Wyoming (above).

and winter range has been disrupted by man," Thagard told me by phone in August. "And the human footprint continues to expand. Today, we don't have a lot more space on the ground — at least in the Lower 48."

It wasn't until European colonization that wolves in North America became a threatening symbol. The wolf-trapping era, which spanned from the 1850s throughout the early 20th century, took place as beaver and bison populations were being decimated. Many former trappers went on to kill wolves in staggering numbers as their pelts rose in popularity. In Montana alone, between 1870 and 1877, professional and civilian wolf hunters,



known as “wolfers,” purportedly killed an estimated 100,000 wolves per year. An article in the *Northern Wyoming Herald* from this period laid out the stock-raisers’ goal: to eliminate “practically all of their tormentors within two years’ time.” In 1905, the U.S. government instituted its own eradication program, in which federal wolf hunters killed more than 24,000 wolves in under 30 years, including the last wolf killed in Yellowstone National Park. By 1960, wolf populations in the Lower 48 had hit a low point, yet government-backed bounties of up to \$50 per wolf continued to be offered until 1965.

But the United States’ political relationship with the predators was about to shift: In 1973, the Endangered Species Act was signed into law to be administered by the U.S. Fish and Wildlife Service. Eastern timber wolves and Northern Rocky Mountain wolves were listed as “endangered,” among the first class of species to receive federal protection under the law. The designation — with the protections it afforded — was expanded to the majority of remaining wolf populations in the Lower 48.

In 1994, Fish and Wildlife announced it would begin reintroducing wolves in Yellowstone National Park, which includes parts

of Wyoming, Montana and Idaho. Some of the animals had already begun to disperse throughout the West, flirting with parts of their historic territory in the Northern, Central and Southern Rocky Mountains. In the 1980s, for the first time in decades, a naturally recolonizing wolf pack from Canada, known as the Magic Pack, denned in Glacier National Park, Montana. And in 2015, a pack known as the Shasta Pack returned to California for the first time in nearly a century.

Around that time, DNA tests confirmed that a gray wolf was living near the North Rim of the Grand Canyon — the southernmost point the species had been confirmed in almost 100 years.

But just as more wolves began to resettle on the landscape, they began to lose federal protections. Once beleaguered animals begin to recover, there’s less reason to keep them on the endangered species list. In 2000, the Fish and Wildlife Service under President George W. Bush proposed changing the wolf’s status from endangered to threatened, a designation that carries milder protections. And by March 2008, gray wolves in the Northern Rockies — meaning the packs in Montana, Idaho and Wyoming — were taken off the list altogether. The day protections were officially removed, one of Yellowstone’s most recognizable wolves, 253M — known as “Limpy” because of his wobbling gait — was killed near an elk feeding ground in the Green River corridor, outside Daniel, Wyoming.

In the wake of delisting and Limpy’s death, environmental groups sued Fish and Wildlife en masse over the delisting. When President Barack Obama took office in January 2009, the administration paused the decision, but months later the Interior Department reaffirmed it, and the states were eventually put in charge of managing their gray wolf populations. A decade later, the Trump administration finalized the delisting of gray wolves in the Lower 48 — blowing up any distinctions between gray wolves in the Northern Rockies and

their cousins in the Great Lakes. A half-dozen environmental groups responded by suing to reinstate Endangered Species Act protections, while the National Rifle Association joined to defend the federal government and uphold the delisting. The case is still pending.

AS I TRAVELED SOUTH along the Green River corridor from its headwaters in Cora, Matt Barnes was paddling down the river. I met up with him just north of Fontenelle Reservoir, in mid-June.

Barnes is a lanky man of 46, with wiry arms and sharp features. Some days, once we reached camp — even after rowing more than 20 miles — he changed into fitted Wrangler blue jeans with a large silver belt buckle. He’s an easy person to be on the river with, laid back but a little lofty; he considers himself a modern-day adventurer, but in a good-humored rather than arrogant way. When the wind on the river was too strong and the sun too hot, we would pull over and search for clues — a mule deer or elk carcass, scat or prints — that might indicate that a wolf had passed through. In the dirt amid a constellation of pebbles on a rocky ridge overlooking the reservoir, I found nothing more than a small skull. “Rabbit?” I guessed. “Good find,” Barnes said.

Reservoirs are an impediment to dispersing wolves, and Fontenelle is on the westernmost boundary of Wyoming’s massive Red Desert, a formidable landscape with little cover for any wolves that are trying to follow the movements of an abundant food source: the nation’s

largest elk herd, which roams this arid 361,000-acre swath of land.

This is a risky landscape for a wolf to travel. There is little vegetation to hide in, leaving the animals exposed to ranchers, farmers and hunters. Any passerby with a gun in the truck could legally kill a wolf on sight. In 2020, 43 wolves were killed in the predator zone, and chances are that many of the wolves that dispersed from their northern packs never even made it as far as Fontenelle.

We camped at the dam on the reservoir’s southern point. All night, I could hear the *plink, plink, plink* of a single pump jack, like someone methodically plucking a guitar string. I awoke to the sound of two beavers smacking their tails and splashing in the river. On the opposite side of the dam were smokestacks. It was a dusty scene, with little to see but yellowed bunchgrass and concrete and garbage. But a ferruginous hawk circled overhead, and I enjoyed my coffee in the company of my wild neighbors, who didn’t seem to mind the industrial décor.

South of the dam, the Green River flows through the Seedskaadee National Wildlife Refuge, a long and narrow ribbon of protected land that links forest and desert. As we neared the refuge, I noticed the water changing. The reservoir above Seedskaadee had been more opaque; now the water became so clear that the stones of the riverbed were visible. Beavers swam around us, and trout hunted smaller fish around our canoe, like little sharks.

Despite the beauty — *because* of the beauty — we were hyper-alert,



Heavy truck traffic slices through the Green River Basin on Interstate 80 west of Green River, Wyoming, creating a hazard for wolves and other wildlife (*below*). The view from Pilot Butte, on the edge of the Green River Basin, Wyoming (*right*).



almost jittery, and we jumped at the movement of anything larger than a pine marten. On and off the water, we searched for even the slightest hint — a bedded-down area in the trees, fragments of bone — that a wolf might have been around recently.

But there have been no definite wolf sightings in Seedskadee. Tom Koerner is the refuge’s manager. He’s of medium build, with a graying red beard and brown hair, and his mouth curves on the side of his face, like a crescent moon, when he talks, somewhere between a smile and a smirk. Koerner, who has been at Seedskadee for more than a decade, told me that over the years he has had some surprise visitors. In the mid-’90s, Koerner remembers his wife telling him that she had spotted a North American river otter, *Lontra canadensis*, a species never before documented on the refuge. He doubted it at the time — until he saw the animals for himself. Now, he estimates that some 35 otters live in the refuge year-round. Still, he has yet to confirm a wolf sighting.

“We’ve had reports of wolves shot outside the refuge — above us, below us,” Koerner told Barnes and me. “So logic tells you, just like any canine, they’re going to need some water at some point.”

He had heard whispers about

a recent wolf kill at Pilot Butte, a landmass that rises like a pyramid out of a flat expanse of sagebrush and greasewood, some 40 miles outside the refuge. Koerner, Barnes and I looked out at Pilot Butte from the back deck of the refuge headquarters.

Back on the river, Barnes and I reached the boundary of the refuge too soon. It marked the end of 44 safe river miles for wolves. Now, the corridor becomes a checkerboard of private, state and federal lands in the predator area.

“The intentional return of predatory animals — that the ancestors of today’s ranching community worked so hard to extirpate — is like a repudiation of an entire worldview and one version of what the future of landscapes in the West should be,” Barnes said, as we paddled along.

“It’s not the wolves themselves, but what they represent to people that really, really matters.”

In the refuge, the river was lined by cottonwoods, but the closer we got to the boundary, the sparser the trees became. The cover afforded by Seedskadee — shade from the sun shining harshly at altitude, a community of flora, fauna, insects and birds all sharing the cottonwoods, willows and sage



— all but disappeared.

The landscape after the refuge could not be more different — sparse, sunbaked and dirty. Yellow foam gathered on the banks of the river and oil slicks beaded on its surface.

We floated down the river toward the intersection with Interstate 80, around 60 miles from the Colorado border and a major barrier for wolves. Outside of James Town, Wyoming, an old railway bridge and powerlines crossed overhead; Green River Garbage Collection had tied rusted car parts and other metal waste in dense bundles along the riverbank. Barnes was quiet through much of this. “An industrial wasteland,” he called it later.

“We haven’t been in decent wolf habitat for quite a long time now,” Barnes said soberly.

During the weeks Barnes and I spent on the river together, we often talked about the lone female wolf, known as 314F, who made the journey from Montana through Wyoming, passing in and out of the Green River corridor, more than a decade ago. She left Montana’s Mill Creek Pack in 2008, and her incredible and erratic journey, documented by a radio collar attached to her by the then-Montana Game and Fish Department that summer, defies logic. She pinballed her way through Wyoming’s Wind River Range, winding through parts of the headwaters of the Green River. She was most likely searching for a mate outside her own pack. Three separate times, she encountered Interstate 80 and was turned around, but all the time she kept steering toward Colorado.



“The interesting thing to me about her journey is how it looks like she was determined to go south,” Barnes said one day.

As we paddled through some of the same country, we traced her steps, using a crude map of her long, strange trip. Though she didn’t use the Green River as her guide, she did find her way back to it and its tributaries again and again — first through Wyoming and then in Utah, and finally in Colorado. As we pushed south, much as she had, we took note of the places we knew she had skirted.

We imagined her traveling at night, when she would have been safer from a landowner’s gun. We thought about how she might have gotten by, how she ate and where she found water. Often during the trip, I remembered my own drive through the Uinta Mountains in Utah on my way up to the put-in for the Green River. She had traveled solo through the same area. Around a hairpin turn that crested at the top of a mountain pass, I stopped my car and looked out at an expansive view of the Uintas. If I were a wolf, I thought, I would have enjoyed hanging out in a place like that — lush, steep and rocky, with alpine flowers just beginning to bloom on that early June morning.

I longed for 314F’s survival, even though I already knew what had happened to her.

When we floated quietly, rather unnervingly, under a bridge covered with nesting cliff swallows while Interstate 80 roared overhead, we pictured her anxiously approaching and turning away.

On the final leg of our journey, toward the latter half of June, Barnes and I paddled through Red Canyon near Dutch John, Utah, just a few miles from Colorado. When the Green River flows over the Utah border and into Colorado, it enters the Browns Park National Wildlife Refuge. Though gray wolves don’t take note of such borders, there is a marked change in the landscape within this refuge, too.

According to Fish and Wildlife, which manages Browns Park, there are 68 species of mammals, 15 different types of reptiles and amphibians, and more than 220 bird species in the refuge. It’s a lush riparian zone, teeming with milkweed and evening primrose. Floating through, we counted pronghorn and mule deer on the banks; I’d never before seen so many trout swimming in schools, uniformly packed together. If 314F had traveled through hostile country in Idaho, Wyoming and Utah and then finally ended up here, in Colorado, its vibrant landscape must have felt like a relief. For whatever reason, after traveling at least a thousand miles across five states, this time she decided to stay.

THE WEST COLD SPRING Wilderness Study area in Colorado, just five miles south of the Wyoming border, stretches across the deep draws and plateaus of the O-Wi-Yu-Kuts Plateau. One of the tallest peaks is Cold Spring Mountain, and the Green River Valley and its tributaries snake through mountain mahogany, sagebrush and Douglas fir, where mule deer and elk bed down. This was the summer territory of the Pioneer Pack, whose howl’s Skiba, Vardaman and Barnes likely heard, before its remaining members disappeared.

This is the northern tip of the Southern Rockies and its old-growth, rumpled landscape looks like the promised land — a sea of green after the arid expanse of southwestern Wyoming. In February of 2009, 314F arrived in the Cold Spring area of northwest Colorado; she meandered along the Yampa and Little Snake rivers within the Green River Valley and continued pushing west. She was 22 months old, of breeding age, but because she kept trekking west and south, the wildlife biologists charting her journey assume she had not yet found a mate. Onward she ventured, moving deeper into Colorado.

By March 31, 2009, her collar had stopped transmitting data. According to documents obtained by WildEarth Guardians through a Freedom of Information Act request, one official wrote: “It doesn’t look good ... I think she may be dead. She is ~ 6 miles north of Rio Blanco.”

Wildlife officials found her carcass about 24 miles north of Rifle, Colorado. With its mountainous surroundings, Rio Blanco’s landscape is similar to Montana’s Paradise Valley, where 314F was born.

Wolf 314F’s death dispels the notion that the Southern Rockies — and Colorado — are a sanctuary for predators. This mix of private and public land makes for a deadly conflict zone between predators and private property owners, and Rio Blanco is a conservative ranching county with attitudes similar to those in southwestern Wyoming. In the spring of 2021, the Rio Blanco Board of County Commissioners unanimously passed a resolution to become a “Wolf Reintroduction Sanctuary County,” declaring that Colorado Parks and Wildlife’s “artificial reintroduction” would not be allowed.

After years of investigating, agents with Fish and Wildlife concluded that 314F was killed by Compound 1080, a lethal predator poison that was banned in 1972, following its widespread misuse, including the death of an untold number of birds. (It became legal

again in 1985 and remains in use today.)

“You couldn’t have come up with a more tragic, ironic ending,” Barnes told me.

Wildlife managers will soon restore wolves in Colorado. The missing link of the chain between the Northern Rockies and native wolf range in the Southern Rockies will be replaced. But while technically the range will be connected, have the politics and perspectives changed enough to make connectivity actually possible?

In early June, as Barnes and I made our slow and steady progress down the Green, Colorado Parks and Wildlife staff conducted observations of the rumored den site of a recently localized wolf pair in Colorado. Two gray wolves — M2101 and F1084 — had made separate dispersal journeys into Colorado, found one another and denned together in North Park, in north-central Colorado. Agency staff observed the site and confirmed six pups, the first known wolves born in the state in more than eight decades.

The news spread like wildfire. Colorado’s Democratic governor, Jared Polis, welcomed the state’s “new wolf family.” The parents were dubbed “John” and “Jane,” and the state buzzed with excitement.

“With voter passage last year of the initiative to require reintroduction of the wolf by the end of 2023, these pups will have plenty of potential mates when they grow up to start their own families,” Gov. Polis said in a statement.

But Colorado’s new pack remains vulnerable. The state still has to reckon with the same anti-wolf attitudes that pervade much of the Western U.S., and certainly Colorado’s Western Slope. Cora, Wyoming, the Kendall Valley and Wyoming Game and Fish have calibrated their own idea of coexistence, a conditional balance where only small populations of wolves are tolerated. Meanwhile, at least so far, the wolves that have arrived in Colorado on their own — like 314F and the Pioneer Pack — have not managed to survive here for very long. ☀

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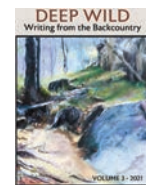
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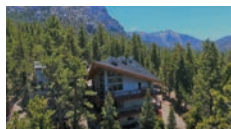
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The making of our greater selves

Douglas Chadwick shows how coexistence with nature and mutual flourishing remain possible.

BY MAGGIE DOHERTY

THE UNPRECEDENTED HEAT and the early and relentless wildfires of the summer of 2021 are a grim reminder that, no matter where we call home, the climate crisis and a warming planet know no political, geographical or cultural boundaries. For humans to have any hope of turning around our time on this beautiful planet, we have to focus on all the ways in which we are similar, rather than on our tiny differences — similarities that, according to writer and wildlife biologist Douglas Chadwick, go well beyond our human family.

Chadwick has tracked Wolverines through the remote Many Glacier Valley in Glacier National Park and confronted grizzly bears along the southern coast of British Columbia. With a career that spans nearly five decades, the prolific environmental writer and longtime contributor to *National Geographic* knows a thing or two about how ecosystems are connected. In his latest book, a collection of essays called *Four Fifths a Grizzly: A New Perspective that Just Might Save Us All*, Chadwick reminds us that every single living organism — from strawberry, to rhinoceros

eros dung beetle, to grizzly bear — is connected at the genetic level. Until we humans realize our interspecies commonalities, the world will continue to burn.

Chadwick, who holds a bachelor's degree in zoology and a master's in wildlife biology, opens with a story from a boyhood spent peering through the lens of an old Bausch & Lomb microscope. Countless hours employed marveling at a hidden world made visible led Chadwick "to focus on nature and stay amazed." Chadwick's lifelong commitment to nature and his decades of gritty fieldwork helped shape the resulting collection. He arrives at a simple but profound conclusion: All life belongs to a connected natural system, and nature is never outside of us. It is these connections, he says, that lead us "into the making of our greater selves."

Four Fifths doesn't read as an outdoor adventure story, unlike Chadwick's previous books, such as *The Wolverine Way* and *Tracking Gobi Grizzlies: Surviving Beyond the Back of Beyond*. *Four Fifths a Grizzly* is part introduction to biology and genetics — featuring chapters like "The Living Planet Quick Guide" — with a hopeful prescription for how to keep the planet's diverse and often invisible lifeforms from hurtling into oblivion. From examining life at the microscopic level to recalling an intense confrontation with "Teen Grizz," a 5-year-old male grizzly, Chadwick covers an impres-



Armando Veve / HCN

sive range of biology in just 13 chapters, each accompanied by stunning photographs from a who's-who of accomplished photographers.

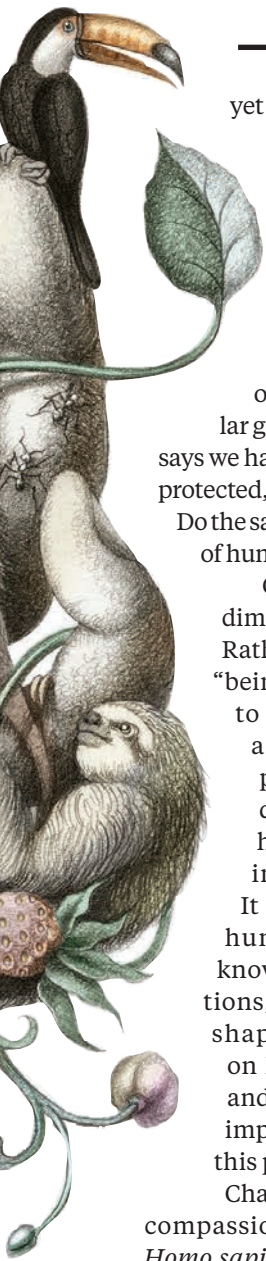
Four Fifths highlights the myriad ways that conservation efforts can temper the flames of devastation on a planet smothered by 7.8 billion *Homo sapiens*. One particularly meaningful and ambitious example is the Yellowstone to Yukon Conservation Initiative

(Y2Y), which was launched in 1993 to create a connected, sustained and flourishing ecoregion from Wyoming's Wind River Range to the headwaters of the Peel River in Canada's Yukon Territory.

Chadwick's own home — in Whitefish, Montana — is in Y2Y's ecoregion. This is territory defined by an impressive diversity of wildlife and plants. Chadwick acknowledges his personal bias toward the area,

**Four Fifths a Grizzly:
A New Perspective that
Just Might Save Us All**

Douglas Chadwick
288 pages, hardcover: \$28
Patagonia, 2021.



yet the project's scope and magnitude is a perfect and necessary example of the kind of border-spanning effort needed to blunt the force of the Anthropocene. For the Y2Y coalition and other projects with similar goals to thrive, Chadwick says we have to "keep nature truly protected, keep nature connected. Do the same to enrich the quality of human life."

Chadwick is not out to diminish, or judge, humans. Rather, he reminds us that "being more closely related to avocados, ants, and aardvarks than most people suspect doesn't dilute our stature as humans but instead increases it manyfold. It renders us more than human." The more we know about these connections, he says, the more it shapes our perspective on how we see ourselves and shows us how we can improve life for all during this precarious epoch.

Chadwick offers grounded compassion toward his fellow *Homo sapiens*, an emotion often absent from the conversation on climate change and the environment. "In fact," he writes, "I think we environmental writers might want to reconsider our habit of shaming humans for having acted like humans. I could just as truly write that our species has a special gift for dreaming about what's over the edge of the known world, trying out new things, successfully adapting to different circumstances, and going on from there." Ultimately, he says, the best way to inspire hope and change is through encouraging fascination and interconnectedness to nature.

To that end, Chadwick presents a simple but revolutionary adaptation of the golden rule: "Do unto ecosystems as you would have them do unto you." ✨

REVIEW

Endings from beginnings

Nawaaz Ahmed chronicles family, culture, politics and heartbreak in the modern West.

BY HILLARY LEFTWICH

IN *RADIANT FUGITIVES*, his richly textured debut novel, Nawaaz Ahmed chronicles the complications of family relationships, revealing how the impacts of culture and politics ripple through time and across the generations.

The story unfolds in San Francisco during the George W. Bush era, when the administration's policies brought tensions between Iraq and the U.S. to the breaking point. On the domestic front, racism and anti-LGBTQ sentiment are running high throughout the American West. In Laramie, Wyoming, a hate crime brutally ended the life of Matthew Shepard

Radiant Fugitives

Nawaaz Ahmed
384 pages,
hardcover: \$27
Penguin Random
House, 2021.

in 1998, while in California, in 2008, the state flipped on Proposition 8 — the notorious "freedom to marry" bill — which halted new same-sex marriages in the state and set a national precedent. Seema, an immigrant woman of East

Indian descent, finds her place among lesbian activists, even as her sexual identity, race and culture put her directly at odds with the status quo. We witness what follows primarily through the omniscient eyes of Ishraaq, Seema's unborn child. Born in India but exiled to California after coming out as a lesbian, Seema finds a new life in San Francisco, working on Kamala Harris' campaign for California attorney general in the tumultuous days at the start of Obama's presidency. Ahmed's commitment to his reality-based world initially distracts the reader from getting to know the characters, but that slightly disconnected feeling is resolved as the story unfolds.

Fugitives traces Seema's final days — foreshadowed by her unborn son but as yet unknown to Seema and her family, who are dealing with their own accumulated struggles. The narrative travels back and forth across time and presents multiple points of view, including those of both Seema and Bill, Ishraaq's father. The perspectives of the other characters — Seema's sister, mother and estranged father — converge as they strive to support Seema during her unexpected pregnancy.

The ground Ahmed covers is complex, both politically and in the backstories of the myriad characters. The narrative isn't hard to follow, but it's easy to get bogged down in the details — lost in the history of Seema and her ex-husband, Bill, for example, when

a tighter focus would have told us more about the couple's relationship. Do we need to know everything about every character? Still, Ahmed pays meticulous attention to the politics of the era, providing an unflinching reminder of how far we have yet to go culturally.

It's easy to find echoes of Ahmed's novel in our post-Trump world and its massive cultural upheavals. Consider immigration, beginning with the former president's "Muslim ban." Western readers will find relevance in the continuing turmoil along the U.S.-Mexico border, with its wall and detention centers and children separated from their families. Finally, there is the federal government's ongoing failure to respond to the needs of rural, low-income, and Black and Brown communities — especially Indigenous people. All are painful reminders of the political challenges evoked in *Radiant Fugitives*.

Ahmed, who was born in Tamil Nadu, India, and holds an MFA from the University of Michigan-Ann Arbor, seamlessly navigates the multiple perspectives as the novel moves toward a final resolution. All the relationships, including the characters' interactions with the world they live in, are complex, and Ishraaq's in utero observations are startlingly keen. Will these conflicts ever be resolved? Ishraaq wonders: "Are our endings foretold in our beginnings?" Ahmed's choice to lean on the neutral voice of Ishraaq, using that immature voice of reason to examine a family conflict that spans generations, is smart. The author helps us understand the complexity of cultural relationships in a way we can all relate to, no matter what kind of family we come from.

Ultimately, *Fugitives* is a family story, but it's not just one family's story. It is the story of the human family and how our roots are shaped by the complications of our world. Ahmed shows that, despite our surface differences, there are more similarities connecting us than we realize. Through the author's deft touch, readers will realize just how important family members, even those yet unborn, are to maintaining a culture's rich history. Ahmed draws this conclusion gently, without judgment, and with an ease that bears witness to how beautiful complex storytelling can be. The climax is an emotional roller-coaster, a dizzying reminder that we should all take note of the people important to us and resolve petty issues before they fester — before we run out of time. ✨



Sally Deng / HCN

PERSPECTIVE

A new Conservation Corps for the climate

What it means to contribute to the future of a place.

BY SURYA MILNER

WEARING LEATHER GLOVES caked dry with mud, I grasped a pickaxe and began to hack. Beyond the occasional ring of metal striking mineral, there was no sound where I stood, on a rough-hewn alpine trail in Montana's Absaroka-Beartooth Wilderness, under the breezeless blue of a summer sky. I paused, taking in my broken, unfinished line of dirt, then watched the rest of my crew move upward under spruce trees, away from the objects of our recent lunchtime adoration: wild raspberries, peanut butter and jelly, coveted 10-minute naps. By day's end, we'd be spent, having cut a dozen yards of trail with miles more to go.

At 18, I had come to these mountains in response to the Montana Conservation Corps' call to "find your place." With family scattered across a 2,000-some-mile swath of the U.S. and the West Indian state of Maharashtra, I approached the corps hoping to anchor myself in this particular area. I wanted a visceral connection to these gentle, sloping foothills and granite peaks, which I would wrangle, in my mind, into some idea of home.

But "home" is a fickle concept, swiftly muddled when projected onto an actual, climate change-addled landscape. One week, my crew cleared underbrush to lessen the impact of future forest fires, working from a basecamp of a half-burnt forest floor encircled by fallen, scorched logs. It reminded me that no matter what sliver of the Earth I call home, an unstable climate suspends any illusion of continuity in that place.

The Montana Conservation Corps is a reincarnation of Franklin Delano Roosevelt's Civilian Conservation Corps. In late July, Congress convened a subcommittee on another potential reinvention of the CCC: the Climate Conservation Corps. Nestled within President Joe Biden's January executive order on the climate crisis and his American Jobs Plan in March, the corps would expand a number of existing AmeriCorps programs, including Montana's, to create a hybrid program focused on conservation and climate change mitigation.

By creating jobs in clean energy and climate resiliency, the new CCC would revive the old CCC's multibillion-dollar public relief program, formed during the Great Depression in 1933. In its early iterations, the CCC plucked young poor men from Eastern cities and shipped them to the forests of the West. Many had never swung an ax. The program sprang from the economic desperation that plagued countless American families at the time; participants earned \$30 per month and were required to mail \$25 home to their families, many of whom subsisted on government relief.

FDR's immediate goal was to get 250,000

men to camps across the United States within four months. This was a task of war-sized proportions. "Never in peacetime had such a mass of men been recruited," wrote CCC alum Robert Egan, in a 1983 article titled "Remembering the CCC: City Boys in the Woods." The specter of war, and the American investment in war, appear throughout the archival materials that document the CCC's nine-year existence. "CCC soldiers," or the "forest army," as enrollees were called, fought wildfires, planted trees and built trails, bridges and campground structures.

In many ways, the CCC of the 1930s set out to rescue what the U.S. then deemed two of its most precious resources: land and young men. As the Great Depression hollowed out the economy, there were fears that the latter had become listless and disaffected. When the program died, it was because resources were diverted to a new battlefield: World War II.

While the original CCC was lauded, receiving broad bipartisan support in Congress, it served an exclusive group of Americans: Most enrollees were young and white, and the relatively few Black and Indigenous corps members — and the veterans and women — were segregated from their fellows. The camps were separate and not equal: The corps proposed monthly wages of \$5 per month in the women's camps, compared to the men's \$30. Still, some non-citizens enrolled, and some camps celebrated "I Am An American Day" to honor newly naturalized citizens. In 1942, as the program came to a close, the government retooled abandoned CCC camps across the West, from Idaho to Montana, into Japanese American internment camps.

The CCC was born out of, and conformed to, the structural inequities inherent in the federal government at the time. These structures still persist, albeit often in more subtle ways — today, national parks see mostly white visitors, for example, and environmental groups still have a diversity problem — and they will inevitably inform the CCC's next iteration. Perhaps to remedy this, in July, dozens of lawmakers sent a letter to congressional leaders supporting a new CCC that prioritizes investment in "environmental justice communities." The authors don't define this term but instead point to collaboration with tribal members, immigrants, refugees, people granted asylum, veterans, out-of-school or out-of-work youth and the formerly incarcerated.

It remains to be seen whether focusing on "environmental justice communities" will result in a more diverse and equitable corps, or if the term is an incoherent label that few claim as their own. Whatever the case, it's possible to design a new CCC that attracts a multiracial

workforce, one that's generously compensated — not by a volunteer's sense of pride, certificates or other intangible promises. Corps members willing to brave the intensifying climate crisis could do so because they care about softening its blows and because it's a solid job.

During my time with the Montana Conservation Corps, I earned just \$270 in four weeks; I was pursuing the program's promise that I'd find my place rather than a paycheck. On some of those long summer afternoons with my crew, several miles up a winding, unfinished trail, I considered whether my actions — me and my ax, working in the wilderness — were in fact about me finding my place. Up there, thousands of feet above sea level, I found a series of fleeting and tangible sensations: sinking my knees into tawny, fragrant soil; arching my neck toward wildflowers; swatting horseflies with more vigor than I swung my tools.

I don't recall a summer spent building a relationship with the land. I remember arguments about the merits of Lana Del Rey's woozy ballads, which dominated the airwaves that summer, and conversations with my nonbinary, polyamorous crew leader about the mechanics of open relationships and the subtle misogyny of calling women "chicks." The landscape's sweeping vistas were merely a backdrop to these scenes. In the end, I didn't find my place. But what I did find was enough: the seed of a realization that *not* having a romantic attachment to this stretch of land could coexist, beautifully, with a real resolve to care for it.

Late one afternoon, my crew and I traversed the ground we'd broken over the past few days. Within 10 minutes, we'd reached the end of our fresh-cut trail and stepped onto the section others had carved in previous years. I grasped, then, the size of our enterprise, decades in the making, and the work it would require in the years to come. This changing landscape wasn't my home, but what we did here — the trail-building, the brush-clearing, the learned resolve — might ensure some semblance of one for others, in a future world. As I fell into step with my crew, my eyes traced the trail, its crooks and contours, on the long walk down. ☀

Surya Milner is a former editorial intern at High Country News. She is currently based in Bozeman, Montana.

Heard Around the West

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

BY BETSY MARSTON

COLORADO

Driving up western Colorado's gorgeous McClure Pass, we spotted a banner in front of a ranch house, proudly proclaiming: "BEEF AND JESUS." Apparently Hindus have the right idea after all. In any case, it's nice to see ecumenicism thriving in the rural West.

THE WEST

The long-running disaster movie we used to call "Summertime" began with a series of unsettling events. In Northern California, record-high temperatures — over 110 degrees Fahrenheit — caused more than 100 young Cooper's hawks, none yet ready to fly, to leap out of their nests, reports *The Washington Post*. Many were injured or died in what Portland Audubon staffers dubbed a "hawkpocalypse."

In Pendleton, Oregon, where temperatures hit 117 degrees, up to 20% of the birds brought to the Blue Mountain Wildlife rehabilitation facility died. Unable to bear their hot nests, some took to the air in desperation, falling from as high as 60 feet to the ground. "This was definitely happening across the entire state," said Sally Compton, director of the nonprofit Think Wild.

In Alaska, reports *Inside Climate News*, the permafrost has proved less than permanent, getting so warm in places that steel supports for the Trans-Alaska Pipeline slumped or started sliding. Workers were forced to install "chillers" to keep the ground around pipeline supports frozen.

What climate scientists are calling a "megadrought" meant that Grand Junction, Colorado's 58,000 people had to dip into the

rapidly shrinking Colorado River for drinking water, reports the *Colorado Sun*, for the first time in more than 50 years.

PACIFIC NORTHWEST

Snake River sockeye salmon already struggle to reach their spawning grounds, 900 miles from the sea. This summer they braved more than a blockade of eight dams; extreme heat made the last 300 miles of their uphill swim impossible. The fish need rivers 70 degrees or cooler to survive, but at Lower Granite Dam in southwest Washington, the water temperature was already into the 90s. The solution? "To bypass the heat, sockeye take the highway," reported the *Los Angeles Times*. Some 400 salmon had already passed the dams' fish ladders during the previous weeks, but on this particular July day, only eight were captured. All were placed in a tank of ice-cooled water in a pickup driven by state biologist John Powell, who served as salmo-

nid chauffeur. Powell faced a long drive to reach an Idaho hatchery by nightfall, punctuated by emergency stops to buy chlorine-free ice to keep the fish tank's water below 70 degrees. His trip was just one of several planned for this summer. Over the decades, \$18 billion has been spent to save the increasingly endangered fish. Though retired biologist Steve Pettit acknowledges that the salmon's situation is dire, he continues to believe the rescue effort is worth it: "The sockeye still coming back to Idaho are in my opinion museum pieces." And reporter Richard Read's fast-paced story ended hopefully: Turns out that one of the eight chauffeured salmon, No. 3DD.003D45155, is "ready to become a father."

There is a sensible solution, and Idaho Rep. Mike Simpson appalled many of his fellow Republicans by proposing it: His \$33.5 billion plan would tear down the four lower Snake River dams, replace hydropower with

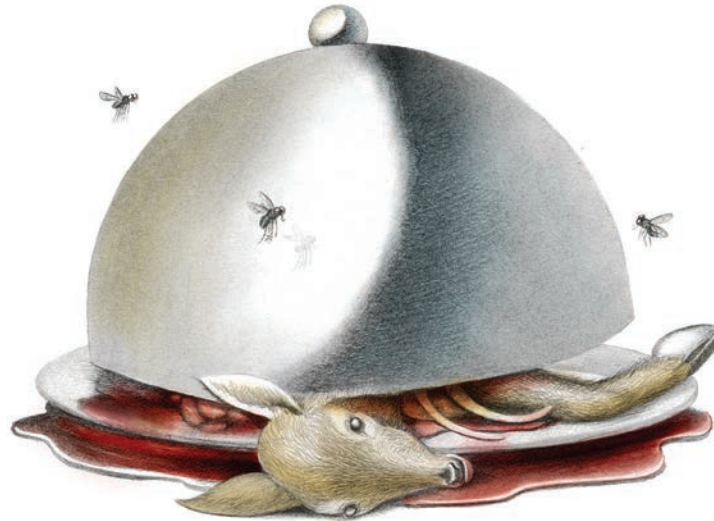
other energy sources and compensate businesses, among other measures. He hopes to give the economically valuable fish, which once numbered in the tens of thousands, a fighting chance. Simpson put it simply: "I think you need to preserve those species that God has given us."

COLORADO

Like so many places in the West (and the nation), the resort town of Crested Butte, Colorado, is short on both workers and housing to put them in. Town finance director Rob Zillioux bluntly told the town council that even "staff members are losing hope to have a life here. ... The economy is broken when you can't live and work in the same place." Meanwhile, he added, the town's funky vibe was disappearing, losing the classic "dirty hippie element" that was "a big reason many of us came here." The town is now considering an "empty-house tax" on second homes to raise money for affordable housing.

WYOMING

You won't go hungry in Wyoming now that roadkill is back on the menu, reports *The Associated Press*. Since April, deer, elk, moose and pronghorn found dead on the road have been fair game for cooks as Wyoming follows the lead of some 30 states, including Idaho. Even People for the Ethical Treatment of Animals applauded the new law, saying roadkill is healthier than meat "laden with antibiotics." Wyoming averages an estimated 3,000 wildlife collisions a year, so roadside dining has never been easier. ✨



Armando Veve / HCN

What do you think about High Country News?

In April, we surveyed you — our friends and readers — for the first time in years.

We asked what you thought about *HCN*'s work, what else you read and how you put that knowledge into action. We'd like to thank the hundreds of you who took the time to get back to us.

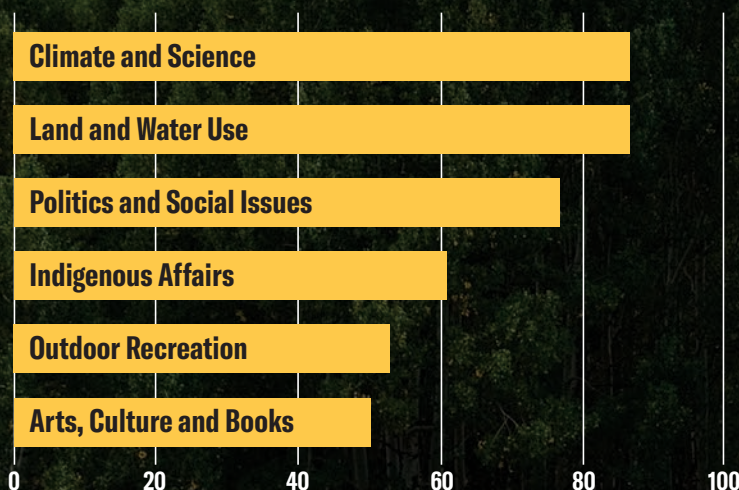
"A few years ago, I used old issues of the magazine to pack an item for my sister. She actually read all the crumpled pages and looked forward to getting a gift subscription for her daughter."

"*HCN* covers many facets of living in the West that one cannot find anywhere else. I like the in-depth reporting. I support the new emphasis on Indigenous residents."

"I would like you to stop printing so many fawning, self-congratulatory letters."

What else do you read?

Topics by the share of readers who said they were interested in them.



Do you participate in groups related to those interests?

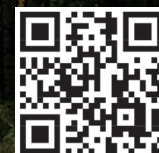
Over half of respondents said they do.



And we're not done. We're going to keep asking questions, such as what you think of *HCN*, what else you're doing, and what motivates you to take action on behalf of the West. Why? Because friends ought to keep in touch, and asking what you're up to helps us feel more connected — and, we hope, it also makes you feel more connected to *HCN*.

So, keep in touch:

Take our current reader survey at hcn.org/survey



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#IAM THE WEST

ADAM CAMPOS

Owner of Model Shoe Shine Parlor
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I enjoy taking an old pair of shoes and making them look new again. If you get your hair cut, it makes you feel good, and if you get your car washed, it seems like your car runs better. I think it's the same thing with a shoeshine: When your shoes are clean, it adds a little pep in your step. Another of my favorite parts of the job is talking to people. People come in and share things that they might be going through, and I try to give them the best advice I can. Maybe I had a similar experience, and I can share how I dealt with it. I know everybody from the governor down to the mayor, state representatives, firefighters and police officers, investment guys, bankers and small-business owners. And I treat everyone the same. Whether they are a judge or a homeless guy, I treat everybody with respect.

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

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