



A tall mesh border fence and a lower vehicle barrier separate Organ Pipe Cactus National Monument, Arizona, from Sonora, Mexico. ANDREW CULLEN

FEATURE

12 Desert, Divided

Arizona's Borderlands thrive on connections. What would it mean to sever them? By Maya L. Kapoor

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On the cover

declined to give her

through the border

Nogales, Arizona.

name talks to relatives

Nogales, Sonora, from

A woman who

wall separating

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Editor's note

The great divider

America was once great. Back then, of course, many hundreds of years ago, it wasn't called America, but the many regions it contained nevertheless teemed with greatness. In the Valley of Mexico, which encompasses today's U.S. Southwest,



along with the Mexican states of Sonora, Sinaloa and Chihuahua, sophisticated agricultural societies traded far and wide. Highways 30 feet wide stretched across hundreds of miles, the historian Roxanne Dunbar-Ortiz notes, connecting some 75 different communities. In major trade centers, one could find buffalo hides, tropical feathers, obsidian, flint, copper, shells and turquoise — from trade that "extended as far west as the Pacific Ocean, as far east as the Great Plains, and as far south as Central America."

Today, we call this place the Borderlands, thanks to a relatively modern political distinction that arose after the United States went to war with Mexico over all the land between the Rio Grande and San Francisco. Alongside human networks, black bears, lions and bighorn sheep moved through a land of cactus and oak, spruce and fir, and thousands of other species. Together, they form a tapestry that is unique, and beautiful.

Given the Trump administration's feverish pursuit of a border wall, though, we wanted to know what was happening to those connections. Our Tucson-based associate editor, Maya Kapoor, spent months traveling through the Borderlands, trying to learn what President Donald Trump's \$18 billion "big, beautiful" wall would actually mean to a place that few U.S. Americans understand. The answer, of course, is unsettling. Even without concrete, rebar, fencing, spy cameras and border agents, we're building a psychic wall. That's because humans are so intimately connected to the idea of place. As much as we try to separate our rational minds - our selves - from the rest of the world, we are intricately, intimately connected to place. That's why, time and again, studies show how healthy it is to be out in nature. That's also why Wallace Stegner was able to argue so successfully for the preservation of wilderness - not because everyone needs to go out in it, but because we all benefit from knowing it exists.

The same is true of an inseparable Borderlands. I have never been to the Sky Islands, the Rio Grande, or Sinaloa, Mexico. But I can imagine a place where the desert and forests stretch across a delicate, diverse landscape, where people and their languages mix, where goods and ideas flow freely. I like that place. Now, though, I'm daily forced to consider walling it off, seeing it as split, breaking it apart. Every time the president talks about his wall, he puts another brick in our minds. Pretty soon, Mexico won't need to pay for the wall, and neither will the United States. We'll already have paid for it, one and all, at great, great cost.

-Brian Calvert, editor-in-chief

Trending

an AR-15

No one needs

Mental illness exists

world, of course, but

everywhere in the

mass shootings do

not. "In this country,

that our response to

more death is almost

Writers on the Range

ritualistic," writes

Jaime O'Neill in a

however, they have be-

come so commonplace



A damaged petroglyph in Grand Staircase-Escalante National Monument. BOB WICK/BLM

BLM goes ahead on Grand-Staircase plans

Despite legal challenges to the boundary changes of Utah's Grand Staircase-Escalante National Monument, federal authorities are going ahead with new management plans for the area. Last year, President Donald Trump announced he would shrink Grand Staircase-Escalante from 1.9 million acres to 1 million, dividing the Clinton-era monument into three distinct units.

The Bureau of Land Management began accepting public comment on the plans in January. In February meetings, BLM officials said the plans would be finished within a year and a half; it took over three years for the first management plan to go through the same process. "To try and redo all the work that went into that in four different flavors or variations on an expedited basis with reduced staffing and funding seems like a very difficult, verging on impossible, goal to set," says Scott Berry, board member for Grand Staircase-Escalante Partners, who meets frequently with BLM officials.

The BLM will hold public hearings for the plans in March. At the same time, it will move forward on new management plans for the altered Bears Ears National Monument boundaries. TAY WILES Read more online: hcne.ws/forging-ahead

opinion piece. O'Neill, who is a gun owner himself, argues that no one needs an AR-15. The West's romantic imagery often includes guns but nothing like the kind we see today, such as the AR-15. "Killing many people quickly is the true purpose of these guns, and that has nothing to do with the Second Amendment's 'well-regulated

JAIME O'NEILL

You say

militia.'

PAUL SPENCER:

"I agree. I would like to see a better vetting process to own certain firearms."

DAVE VETRANO:

"Anybody that thinks the AR-15 is the most significant part of the gun debate isn't qualified to debate."

FRANK CVAR: "It's not a need, or want. It's the right of every citizen guaranteed by the Constitution."

Read more online: hcne.ws/restrictingguns and Facebook. com/highcountrynews

577,504
Bureau of Land Management acres,

Bureau of Land Management acres, designated as wilderness study areas that are part of the Wyoming Public Lands Initiative, which seeks local consensus on usage.

Percent of those acres that would be stripped from protection, if a bill proposed by Rep. Liz Cheney, R-Wyo., goes through.

An initiative aimed at reconciling the use of wilderness study areas in Wyoming is at risk of falling apart. Originally launched in 2015, the Wyoming Public Lands Initiative involves 42 BLM wilderness study areas and three Forest Service study areas in 13 Wyoming counties, with eight committees set up to determine land-use questions concerning 750,000 acres of federal lands. But the initiative is suffering, and some say Republican Rep. Liz Cheney and others are rushing the process, while relying on outdated science and not adequately including public involvement.

ANGUS M. THUERMER/WYOFILE
Read more online: hcne.ws/wild-wyoming

5 types of gun laws the Founding Fathers loved

Gun ownership and its regulation have always existed in American history. But misconceptions of the founding principles regarding the Second Amendment lead to its misuse in public discourse. The Federalists who wrote the Constitution believed in well-regulated liberty, as tyranny more often resulted from anarchy, not strong government. Consider these five categories of gun laws that the Founding Fathers endorsed:

1. Registration

All of the colonies, except Quaker-dominated Pennsylvania, enrolled white men aged 16 to 60 in state-regulated militias. They required them to keep track of the privately owned weapons through a registry.

2. Public carry

While modern gun-rights advocates tout the right to carry firearms in public, there was in fact a ban on traveling while armed in populated areas. That changed in the South with the rise of slavery.

3. Stand-your-ground laws

Under English common law, deadly force was a last resort, after retreat was no longer possible. Stand-your-ground laws emerged in the decades after the Civil War.

4. Safe storage laws

Though now these laws are cast as government overreach, they were regarded as common sense back then and seen as part of citizens' freedom to enjoy public health and safety.

5. Loyalty oaths

The Founders engaged in large-scale disarmament of civilians during the American Revolution. The right to bear arms was conditional on swearing a loyalty oath to the government. Those who refused were disarmed.

SAUL CORNELL, FORDHAM UNIVERSITY/ THE CONVERSATION

Read more online: hcne.ws/gun-regulation

▲ Thomas Jefferson's North African Miquelet Jezail musket. SMITHSONIAN INSTITUTION, NATL. MUSEUM OF AMERICAN HISTORY, KENNETH E. BEHRING CENTER. L.373.2012.11

"Far too many people adore him and think that they're hip to Native life because they read his books. If you're one of those people, please set his books aside. Read other Native writers. Don't inadvertently join him in hurting other Native writers."

—Debbie Reese, editor of the literary blog American Indians in Children's Literature, writing about Native writer Sherman Alexie, after allegations surfaced that he has been sexually harassing and intimidating women for years. GRAHAM LEE BREWER

Read more online: hcne.ws/literary-voices



Secretary Ryan Zinke's reimagining of the Department of Interior has received pushback from the Western Governors' Association and others. CARL SEGERSTROM Read more online: hcne.ws/shaping-interior

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WATER IS THAT WATER DOES

Certain types of groundwater issues are often complicated by our antiquated water laws and regulatory framework ("Fight over household wells complicates rural growing pains," HCN, 2/8/18). To the hydrogeologist, and when it comes to real conditions on and in the ground, there is no distinction between surface and groundwater. Groundwater feeds streams and streams feed groundwater in one integrated system. Karst is an extreme example, where water may surface, go belowground, and surface again in a manner of minutes. As long as laws and regulations create an artificial distinction, there will always be train wrecks, and people will suffer.

David Ek Catlett, Virginia

HEALTH, ABUSE AND FREEDOM

As a holistic wellness counselor, I can relate a little to a parent's desire to make his or her own decisions about a child's health ("Idaho protects the rights of faith healers. Should it?" HCN, 2/19/18). But how, in any sane universe, is it not child abuse to withhold medical care and allow a child to suffer and die? I don't see this as religious freedom. If we have a responsibility to report child abuse and remove a child from abusive parental care, it's insanity for Idaho to allow this. Or do they also allow physical child abuse in the name of "discipline"?

Novella Maia Lyons, Colorado

KEEPING THE FAITH

Like many such articles, this was onesided and glossed over important issues regarding state control of our bodies and families (HCN, 2/19/18). I was baptized into the First Church of Christ, Scientist at the age of three days, and while I no longer attend church regularly, my faith is an important part of my life, from overcoming addictions, maintaining health, restoring family relationships and having faith in an unpredictable world. The statement that "belief and practice are two different things" is erroneous. Faith without works is like a dry cloud passing over a parched landscape. There are those who are invested in "protect-



OSMANI SIMANCA, BRAZIL / CAGLECARTOONS.COM

ing" us who have no problem shoving us into the same medical-industrial complex that created polio victims, misdiagnosed breast cancer, spawned a generation of painkiller addicts and created untold deaths from hospital infections. No, thank you. I will keep my faith, and you can keep your profit-driven factory. In the meantime, thank you, Idaho legislators, for keeping your nose out of my health.

Mike Settell Pocatello, Idaho

SOLD OUT

Thank you, Jonathan Thompson, for your great writing and for exposing "The Big Sell-Out" (HCN, 2/19/18). The "orphaned wells" story in the same issue could have just as easily been titled, "How the 'Third Man' always gets the shaft." The Koch brothers' American Legislative Exchange Council, as one dark-money example, writes legislation and buys legislators to socialize their costs in exchange for privatizing the profits. We the people don't "own the place," as Thompson suggests. We merely pay for it on behalf of the private domain and the sullied, salaried "representatives" who sell us out and toss us down the well of abandonment.

Sean Doyle Corvallis, Oregon

PUBLIC ACTION, PUBLIC VOICES

Since President Donald Trump's swearing in, the environment seems to be particularly under attack. The public

has become less and less informed about government plans for our public lands, which has resulted in our being unable to comment on environmental issues. If large energy corporations can take thousands of acres of public land to drill for resources without consideration of public opinion, then how will individuals be able to make a difference for themselves or their communities? Citizens should be made aware of all plans for public land and know how to have their voices heard. They need to be given choices on how their public lands should be managed and changed. There has never

been a time where public action and voices are needed more than the present.

Isabella Gukeisen Chappaqua, New York

DISPARAGING WORDS NEEDED

In response to Brian Calvert's editor's note, "Science Matters," (HCN, 2/19/18), in which he claims to get letters asking him to "stop disparaging the president," I say: "Disparaging words needed, more than ever." Anyone who reads and supports HCN and is offended by disparagement of the president does not, in my opinion, support the goal of HCN to report, and sometimes opine, on matters affecting the management of our natural resources. If you are offended by remarks about this president — or any politician who threatens the environmental and conservation goals we have established over several decades - think about what you really support. Politics play a significant role in almost all environmental regulation and policy, but to ignore how they affect our natural world is to threaten our existence. Cutting rules put in place to protect and manage our natural resources is dangerous and irresponsible. This administration represents an all-out war on our environment and nature not seen since the days of President Ronald Reagan and his Interior secretary, James Watt. Then again, Watt was one of the best things that ever happened to the conservation and environmental movement.

Jim McGannon Denver, Colorado





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Neutral good

Western states lead the fight to maintain net neutrality

BY CARL SEGERSTROM

Late last year, the Federal Communications Commission voted 3-2 to disband protections for net neutrality, the principle that internet service providers cannot choose which websites to favor or block. The change gives internet service providers more opportunity to make money, but may hurt smaller businesses and internet users along the way.

Even though the West is home to some of the most important players in the tech industry, its rural areas often suffer from lack of internet access — a problem some argue could be solved by loosening net neutrality regulations. Open internet advocates, however, believe that net neutrality is essential to the free exchange of ideas and information on the internet.

There is broad bipartisan support for the regulations; a University of Maryland poll found more than 80 percent of respondents opposed repealing them. Now, Western states are leading the push for net neutrality, arguing that the regulations are necessary to foster innovation and prevent big corporations like AT&T and Comcast from monopolizing the web.

Montana's Democratic Gov. Steve Bullock was the first state leader to issue an executive order aimed at upholding net neutrality, and the attorneys general of Oregon, California, Washington and New Mexico have joined a nationwide lawsuit against the FCC. Six Western state legislatures are considering or have passed bills that would enforce net neutrality on a statewide level. By opposing the federal policy and enacting their own regulations, states can signal to big tech companies like Google, Facebook, Amazon and Netflix — which all support net neutrality that they are friendly to the cause. "What states are responding to is a very public outcry for net neutrality," said Christopher Ali, a media studies professor at the University of Virginia.

The FCC's recent decision undid its own 2015 ruling classifying the internet as a telecommunications service, which gave the agency the authority to regulate internet providers and prevent them from discriminating against or favoring website content.

In Congress, the net neutrality debate has generally been split along party lines, with Republicans favoring less regulation and Democrats preferring stronger protections. Oregon Rep. Greg Walden, Nevada Sen. Dean Heller and Wyoming Sens. John Barrasso and Mike Enzi are some of the staunchest supporters of rolling back net neutrality rules. They and other critics argue that the FCC was overstepping its authority and that the new regulations were unnecessary. Lighter regulations, they say, would give internet providers more incentives to invest in rural communities.

A March 2016 policy paper from the Senate Republican Policy Committee, chaired by Barrasso, said, "FCC Chairman Wheeler's open internet order will stifle innovation and investment in internet infrastructure and jobs; create uncertainty; and lead to years of litigation."

Travis Kavulla, the vice chairman of Montana's Public Service Commission, said rural consumers could benefit from less regulation. For example, "Providers could partner with companies like Netflix to create cheaper internet packages." Kavulla added that regulators should keep a close eye on one-provider markets — and step in to protect consumers if necessary — but that they should wait for problems to arise rather than making restrictive laws beforehand.

In supporting net neutrality, states are thumbing their noses at the FCC, which had declared that states could not develop their own protections. On Jan. 22, Bullock issued an executive order declaring that Montana would not give contracts to internet providers that don't adhere to net neutrality principles. "There has been a

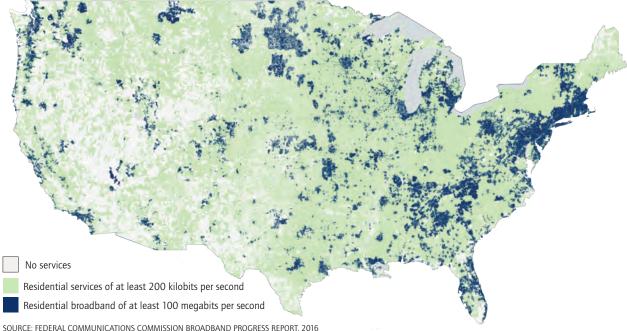
lot of talk around the country about how to respond to the recent decision by (the) FCC," said Bullock. "It's time to actually do something about it," he said. He called on other states to follow Montana's lead, and New York Gov. Andrew Cuomo, D, quickly signed an executive order of his own.

Alaska, Idaho, Oregon and New Mexico have proposed legislation to protect net neutrality on a statewide basis. The California State Senate passed a bill on Jan. 29 that would introduce even stronger protections than those previously in place at the FCC; the bill now awaits passage in the state Assembly. The Washington Legislature overwhelmingly passed a bill on Feb. 27 that prevents internet providers in the state from slowing down or blocking legal content or creating "fast lanes" that prioritize paid content. Attorneys general from Oregon, California, Washington and New Mexico have joined a lawsuit with 17 other states and Washington, D.C., that argues the FCC's recent ruling was not justified and that the changes were not supported by sufficient legal evidence.

Having a patchwork of net neutrality protections that varies by state is not the ideal way to regulate the internet, but it could become the status quo if state and federal lawmakers continue to butt heads. The conflict is the latest example of states pushing back against the Trump administration's broad deregulatory agenda. Western states have been at the forefront of addressing climate change after Trump signaled his intent to pull out of the Paris Climate Accord, and they seem poised to continue the push for net neutrality. "We can't wait for folks in Washington, D.C., to come to their senses and reinstate these rules," said Bullock.

Even though the West is home to some of the most important players in the tech industry, its rural areas often suffer from lack of internet access — a problem some argue could be solved by loosening net neutrality regulations.





Carl Segerstrom is an editorial intern at *High Country News*. **9** @carlschirps

Alaska wilds lose out

An industry-friendly White House helps Sen. Lisa Murkowski score long-sought goals

BY KRISTA LANGLOIS

When President Donald Trump took office in January 2017, Alaska Republican Lisa Murkowski had been a member of the United States Senate for 15 years. She'd pulled off a historic writein campaign, built a reputation as someone who thinks deeply about policy, and helped pass a sweeping bipartisan publiclands deal. But a year after gaining control over two of the Senate's most influential committees on natural resource and energy issues, Murkowski had made little headway in her plans to develop Alaska's protected lands and waters.

Three changes in particular had eluded her. The federal "roadless rule" that spares old-growth forest in Southeast Alaska's Tongass National Forest survived litigation, and Murkowski's efforts to bypass it legislatively had fizzled. The Aleutian village of King Cove was still cut off from the rest of the world by the Izembek National Wildlife Refuge. And one of former President Barack Obama's executive orders kept the coastal plain of the Arctic National Wildlife Refuge closed to drilling.

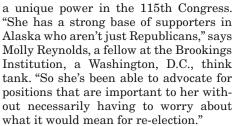
Murkowski, a lifelong Alaskan who believes that her constituents' well-being is inextricable from access to the state's natural resources, was furious. "There is no other way to describe it," she said of the executive order, than "as a war. We are left with no choice but to hit back as hard as we can."

Now, with help from an exceedingly development-friendly administration, Murkowski is successfully hitting back — and ushering in huge changes to some of America's wildest landscapes. Nicole Whittington-Evans, Alaska regional director of The Wilderness Society, says she's never seen "anything comparable to the full-on assault of Alaska's land and waters that we've seen in the last year.

"We've certainly had other large fights before," she adds, "but nothing this comprehensive."

As one of the few Republicans willing to defy both the Trump White House and her party's leaders, Murkowski wields

Krista Langlois writes from Durango, Colorado. **У** @cestmoilanglois

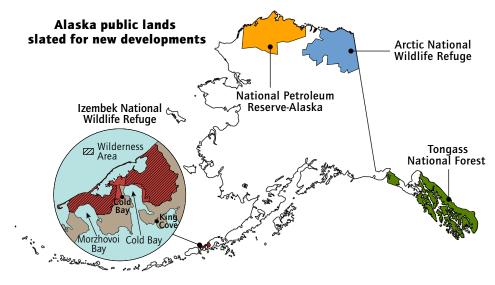


In the past year, this has allowed Murkowski to oppose Trump's Cabinet picks, publicly defend Planned Parenthood, and refuse to overturn Obamacare, which would have cut Medicaid funding in Alaska. Her opposition was a key reason why that legislation failed. And it's why GOP leaders are now willing to tailor legislation to gain Murkowski's coveted vote.

So when Congress drew up a massive tax overhaul in December, the bill included a sweetener that Murkowski couldn't refuse: a provision she'd written to allow drilling in the Arctic National Wildlife Refuge (ANWR).

While much of the 19 million-acre refuge is off-limits to drilling, a 1.5 million-acre parcel known as the coastal plain escaped wilderness designation. It holds

an estimated 10 billion barrels of recoverable crude oil. It's also home to polar bears, migratory birds and caribou calving grounds, and protecting it from drilling has been a priority for environmentalists



SOURCES: FWS, USFS, BLM | VISUALIZATION: BROOKE WARREN

▶ Sen. Lisa

Murkowski listens

as Interior Secretary

decision to construct a

road through Izembek

Ryan Zinke speaks about his department's

National Wildlife

Refuge in Alaska.

SUSAN WALSH/AP



for decades. Alaska Native groups are divided on the issue, torn between economic development and dependence on intact ecosystems, and even the oil-hungry GOP has mixed opinions. In the past, moderate Republicans have voted down measures to open ANWR, and in 2017, a dozen House Republicans urged their party to drop Murkowski's provision to allow leasing on 2,000 acres of the coastal plain.

With Murkowski's support, however, the tax bill passed both chambers of Congress and was signed into law. It marks the first time in more than 35 years that ANWR has been open to oil and gas companies. "Honestly, I think some people were stunned that it actually happened," says Kara Moriarty, CEO of the Alaska Oil and Gas Association.

Opening ANWR to development is part of a broader effort to ramp up America's Arctic oil production, which has decreased from 2 million barrels a day in 1987 to around 500,000 today. That and the low price of oil have plunged Alaska into a fiscal crisis and cost the state close to 10,000 jobs. With Murkowski's blessing — and possible urging — Interior Secretary Ryan Zinke has also made ev-

ery eligible acre of another massive Arctic refuge, the National Petroleum Reserve-Alaska, available for leasing. And the Trump administration has proposed opening nearly all of Alaska's oceans to offshore drilling, including Arctic hunting grounds important to Iñupiat whaling communities.

Though actual oil production in any of these areas depends on industry interest and the outcome of numerous lawsuits, Moriarty sees a "cultural shift" underway that's consistent with Trump's goal of energy dominance. Alaska is key to realizing that vision, she says — as is "Murkowski's leadership and ability to work across the aisle."

Expanded drilling is only part of Murkowski's plans for unshackling Alaska's natural resources. Since her arrival in Congress, another pet project has been to build a 12-mile road through a wilderness area in the Izembek National Wildlife Refuge, a relatively small wetland that's home to grizzlies, wolves and entire populations of shorebirds.

For years, Murkowski has tried to exchange land within the refuge for land outside it to build what she calls a "medical access road." The road would let the 925 residents of King Cove access a nearby airport, as well as expedite shipping between King Cove's fish processing plant and major ports. The Wilderness Society and other conservation groups believe that the road would do irreparable damage to wildlife and set a precedent for development in other protected wildernesses. They also believe there are better options for medical access.

Murkowski's past efforts were blocked by former Interior Secretary Sally Jewell. But on Jan. 22, Murkowski had her revenge: While the government was shut down, Zinke signed off on a deal to build the long-awaited road through Izembek.

Meanwhile, Murkowski is also using her committee chairmanships to reinvigorate logging in the Tongass National Forest, a 500-mile archipelago of giant trees and mountainous glaciers where her family lived in the 1960s. At the time, logging drove the economy of Southeast Alaska, but today, fewer than 1 percent of the region's jobs are connected to timber. Instead, fishing, tourism and other industries are booming.

Buck Lindekugel, attorney for the Southeast Alaska Conservation Council, thinks Murkowski is unwilling to recognize these new economic realities, as evidenced by two riders she's tacked onto an Interior spending bill. One would exempt Alaska from the roadless rule, which blocks the road-building needed to access 2.5 million acres of Tongass old-growth forest. The second would scrap a progressive 2016 plan that recognizes this rule and phases out oldgrowth clear-cutting, returning forest management to an outdated plan that offers fewer protections. Murkowski has also introduced a separate bill to transfer federal land in the Tongass to Alaska Native Corporations, where it could be logged more quickly.

And Murkowski's reach isn't limited to the 49th state. What happens here sets the tone for what's permissible on public lands elsewhere, says Whittington-Evans. Plus, the senator hopes to use her influential chairmanships and GOP majority to pass one more controversial measure: a massive energy bill that would modernize the West's electric grid and permanently authorize the Land and Water Conservation Fund, while also expediting pipeline construction and making it easier for companies to access natural gas, oil, renewables and hydroelectric power on Western public lands.

Though that package has been tangled in political bickering for years, Murkowski is confident she can see it through. "I think," she said last year, "that's a statement that you can take to the bank."



Berkeley Pit. NASA

THE LATEST

Backstory

Butte, Montana, is home to the infamous Berkeley Pit, a former open-pit copper mine. After operations ended in 1982, it began filling with acidic, metalladen groundwater. At 950 feet deep, it's the nation's largest body of toxic water, and the area was designated a Superfund site in **1983** ("Mining the Past," HCN, 6/7/99). Federal cleanup plans called for treatment to begin by 2023.

Followup

The Environmental Protection Agency put Butte on a Superfund "emphasis list" to speed up remediation, and in February, the mining companies responsible, **Montana Resources** and Atlantic Richfield, said they'd start pumping and treating the water ahead of schedule. perhaps as soon as this year. The companies will pump 3 million gallons per day, treat the water and then discharge it into a creek. "For 30 years, we've watched the pit control the groundwater," Mark Thompson, Montana Resources' vice president for environmental affairs. told *The Montana* Standard. "It's time we show we can control the pit."

JODI PETERSON

THE LATEST

Backstory

The Tonque River flows from Wyoming into Montana, providing water to farmers and ranchers. The 1950 Yellowstone River Compact governs how those states share it and three other Yellowstone tributaries. In 2007, Montana sued **Wyoming for using** too much water and violating the Compact, and in 2011, the case landed in the U.S. Supreme Court ("Where has Montana's water gone?" *HCN*, 5/20/11).

Followup

This February, the

court ruled that Wyoming had shorted Montana nearly 1,400 acrefeet in 2004 and 2006, and it ordered Wyoming to pay more than \$38,000 in damages and interest, plus court costs of \$67,000. If Montana places a "call" for more water, Wyoming must deliver it by ensuring that only users with water rights prior to 1950 are diverting or storing water. The decree should avert further wrangling over the Yellowstone Compact. "We are pleased

to see this decade-

long dispute finally

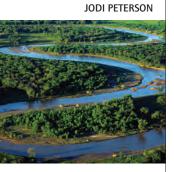
resolved," Attorneys

General Tim Fox of

Montana and Peter

Michael of Wyoming

said in a statement.



The Tongue River.
LARRY MAYER/
BILLINGS GAZETTE



Trash trailers

Derelict homes keep a busted uranium town from moving on

BY JESSICA KUTZ

A dead potted plant dangles from the ceiling of a derelict trailer in Naturita, a former uranium-mining town in western Colorado, its spindly tendrils reaching toward a large broken window. It is easy to imagine that someone once hung it there to give the room a cozy touch. I navigate around piles of old clothing and cassette tapes, Cheerios and uncooked pasta crunching underfoot. John Riley, the mayor of Naturita, stands by the door and picks up an empty Corona bottle. A few drops of stale beer trickle down his arm.

This mobile home is one of several abandoned after the nearby uranium mines closed in the early 1980s, spurring a mass exodus. Riley, who has lived here 53 years, has witnessed many such booms and busts. "It was a lifetime experience for most of them," he said about the local workers. "And then to be out of work, and not being able to pay their bills — one by one, they left."

Squatters and neighborhood kids have helped nudge these abandoned trailers ever closer to total squalor, but the process is accelerating. Years of harsh weather have ripped away the cheap siding; pieces of insulation blow throughout the neighborhood. As one resident noted, things have deteriorated to such a point that "even the squatters are not interested" anymore.

That's why in 2014, Riley, an older man with yellowish-white hair and a pocket full of pens, ran for mayor. "I wanted to get these things out of here and get things cleaned up a bit," he said. Not only

Jessica Kutz is an editorial intern at *High Country News*. **☞** @jkutzie

are these "zombie trailers" a public health hazard, a breeding ground for rodents and other pests; their unsightliness impedes the town's budding tourism economy. But even though most everyone wants them gone, removing them has proved far more difficult than Riley or anyone else could have anticipated.

A bandoned properties are a common issue across the West, exacerbated by the extraction economy's periodic busts. County commissioners in New Mexico, for example, began talks last February to address the problem of uninhabited mobile homes attracting "children, pets and even packrats." In Douglas County, Oregon, a study was conducted to test ways to handle the blight.

In Naturita, the first hurdle — figuring out who owns the property — is difficult to clear. Many of these mobile homes were abandoned so long ago that their ownership details are murky, and it is very difficult, legally, to dispose of private property without the owner's consent. Town officials have tried to reach owners. but "we are just kind of playing a waiting game," said Mike Mortensen, a town councilman. To save the town the legal headache of dealing with property rights, Naturita passed a resolution that would fine abandoned-trailer-owners \$50 a day, but the town hasn't been able to hire an ordinance officer to enforce it.

Financing the removals is another barrier. Naturita has struggled since the mines closed. Even if officials managed to secure titles and legally remove the properties, it would cost up to \$6,500 for each trailer — a burden that would fall



to the town.

Property taxes present their own catch-22. Owners pay higher taxes for vacant properties than they do for those that have "improved residential structures" like mobile homes. If a property owner removes a trailer, her property taxes could jump significantly. Montrose County Assessor Brad Hughes says it can be hard to tell whether a property should be classified as abandoned. "There is a really fine line as to what is considered usable and





- Exposed insulation from a trailer in Naturita, Colorado, falls apart after the siding blew away in the wind.
- **◄** A kitchen in an abandoned trailer exists in disarray.
- ◀◀◀ Cheerios lie scattered on the floor of an abandoned trailer, where belongings left behind have been strewn about by squatters and local kids.



having utility and could be rented."

And so the zombie trailers remain, as defiant as ever. Still more properties have been abandoned in the last decade. According to Deana Sheriff, an economic development recovery coordinator who works with the West End Economic Development Corporation (WEEDC), a Naturita-based nonprofit, there are 17 abandoned properties in town alone. That number jumps to 35 when the surrounding area is included, and there are likely

more that have yet to be identified.

Sheriff said there is growing urgency to resolve the issue. Naturita will face another economic downturn when the nearby Tri-State power plant and accompanying New Horizon coal mine shut down in 2022. But opportunities are on the horizon, including hemp production and rebranding the area as a tourism and recreation destination. There are already plans for a new brewery and a "glamping site" that would accommodate 30 upscale

tepees on a plateau overlooking town.

In the meantime, WEEDC is applying for grants from The Telluride Foundation and the Paradox Trust, two nearby economic development organizations, to pay for the trailer removals. Naturita is also looking to partner with the neighboring town of Nucla to hire a code enforcement officer. "It is a fairly complicated problem," Sheriff said. "But I hope that we can have some kind of answer in the next six months."

▲ Naturita is working on beautifying the town as part of an economic development project. The town's mayor wants to prioritize getting rid of the abandoned trailers in town, since they are a public health hazard and a visual eyesore.

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Climate scientist Jane Zelikova and Billy Barr take snow measurements. THE END OF SNOW FILM

THE END OF SNOW Morgan Heim and Jane Zelikova, Day's Edge Productions. 21 minutes

Streaming at www.endofsnow.com, 2016.

From rugged peaks to a sprawling ranch, The End of Snow seeks out people working to understand the past, present and future of snow. Jane Zelikova, a climate scientist who traces her love of snow to her birthplace in Ukraine, interviews a University of Wyoming researcher who dredges the bottom of alpine lakes to trace historic climate variations, a Colorado man who has been meticulously recording snowpack for 40 years, and a Wyoming rancher trying to cope with the uncertainty of a fluctuating water supply.

When I started on this adventure, I wanted to learn what was happening to our snow," Zelikova says in the film, which assesses the state of snow in the mountains of Colorado and Wyoming. The film makes it clear that snowpack is decreasing, and the question becomes not how to reverse the decline, but how to adapt to a future with less snow. "We can either weep to see it go or do something about it," Zelikova says. "I know which one I choose." CARL SEGERSTROM

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Seasonal changes

A couple of dry months have given way to some much-needed snowstorms here in Paonia. Colorado. While the snowpack is still short of normal, we're happy to see it trending in the right direction. This has gladdened the hearts of farmers and ranchers and allowed for something of a ski season for staff and writers at High Coun-

HCN correspondent Sarah Tory and our associate photo editor, Brooke Warren, put the new snow to the test by competing in the Gothic Mountain Tour, a 22-mile ski traverse in nearby Crested Butte, both finishing in the top 10 for women racers.

Late February brought some familiar faces to the office. Dave Linden, a subscriber from Durango, Colorado, spoiled us with some tasty cookies that didn't last long. Other visitors included Steve Hinchman and his wife, **Debbie Weis**. Steve was an intern with HCN in 1986 and continued working with the magazine until 1994. He recalled some of the more laborious tasks, like clipping newspapers for hours and packing and shipping the magazine. Steve and Debbie now live in Maine, but said that coming to the Western Slope always feels like coming back home. For what it's worth, Steve, interns these days spend much more time writing for the magazine than shipping it. Thank you for the reminder!

This month, we're saying good-bye to one of our dearest staff members, JoAnn Kalenak. JoAnn starting working at High Country News in 2002 with the production team and has become one of our most valuable assets, as marketing and promotions manager. She has been instrumental in helping us reach our subscription goals and in spreading the word about the magazine. Last month, we saw one of our highest circulation numbers ever, more than 35,000 and climbing, due in no small part to JoAnn's work.

"This has been the best place I've ever worked, there's no doubt," she said. "The readers are so dang smart, you can't get away with anything." Joking aside, she said, "It's been an honor to work for High Country News. We're small, but elegantly impactful, and I love being impactful." JoAnn will continue to work for HCN as a consultant, helping us find new readers across the country. She'll also be on the lookout for professors and other educators who want to sign up for free classroom subscriptions through our HCNU program.

On a final note, thanks to support from our readers, HCN was able to raise over \$26,000 through a Kickstarter campaign to launch a new series called "A Civil Conversation." In it, HCN board member (and promising journalist) Wayne Hare will spend the next six months documenting the history and modern experiences of African Americans across the West. Next stop: Portland, Oregon!

—Carl Segerstrom, for the staff



JoAnn Kalenak, during one of the last days at her desk. She has filled many crucial roles for the organization over the past 15 years. BROOKE WARREN

Desert, Divided

Arizona's Borderlands thrive on connections. What would it mean to sever them?

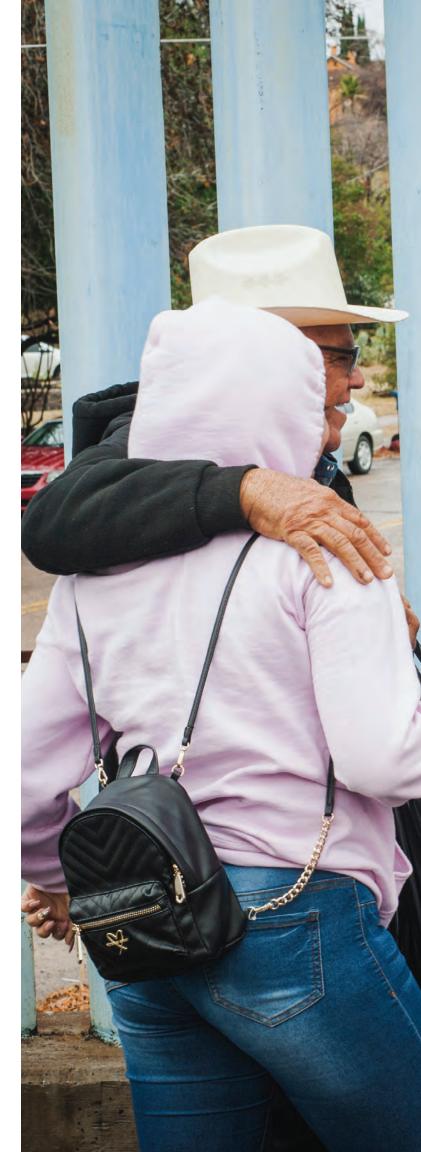
n early January, almost everyone in the country seemed to have the flu, including U.S. House Rep. Raúl Grijalva. "My grandkids made me sick!" he exclaimed over the phone from Washington, D.C., sounding congested. Grijalva, a Democrat, represents Arizona's 3rd District, which comprises most of the state's southern border, including Nogales, a town of one- and two-story buildings, nestled in a valley and named for the groves of walnuts that once thrived in the surrounding hills. It's separated from Nogales, Sonora, by the international border. The binational city is known as Ambos Nogales, or "both Nogales." When Grijalva asked me how the weather was in Nogales, I wondered if he was homesick.

I sat outside a sandwich shop in Nogales, Arizona, under soft gray clouds that quilted the expansive desert sky. It was just cool enough to justify my jacket. In the distance, sunlight poured onto dark mountains. Grijalva spoke from the nation's capital, where something called a bomb cyclone was buffeting the Eastern Seaboard with snow, ice and gusts of up to 50 mph.

I'd called Grijalva to talk about the legislative storms also buffeting the capital. Last fall, Donald Trump's acting Secretary of Homeland Security rescinded the Deferred Action for Childhood Arrivals, or DACA, program, an Obama administration initiative that offered temporary protection from deportation and work permits to some undocumented immigrants brought to the country as children. As Grijalva and I spoke, members of Congress threatened to hold the nation's budget hostage in exchange for a renewed DACA program. Then, in early 2018, a federal budget passed without a DACA program fix. Dreamers' fate seemed more than ever to be a bargaining chip for border wall funding and restrictions on legal immigration.

Since Grijalva and I spoke, a federal judge in California ruled that DACA must stay in place while cases against the recission wind through the courts. Still, hundreds of thousands of Dreamers who don't have DACA status can no longer apply for the program. According to the Center for Migration studies, in 2014, two-thirds of undocumented immigrants entered the United States by overstaying visas — yet somehow, the fates of both Dreamers and the Borderlands have become

▶ A young woman surprises her relatives by crossing over from Nogales, Arizona, to Nogales, Sonora, while other relatives look on from behind the border wall in the U.S. The family declined to give their names. ANDREW CULLEN





ensnared in the search for comprehensive nationwide immigration reform.

"What's been lost in that process is a real appreciation, an examination, of what the Borderlands are, what they were, and what they can be," Grijalva told me in January. "That loss of perspective is, I think, what bothers me the most."

Grijalva, now 70, grew up on a ranch near Nogales. When he was a boy, the family moved to Tucson, today part of Grijalva's legislative district. Grijalva considers the Borderlands a doorway to Latin America, to trade and commerce, to "integrating all the great diversity we have in this nation." But he has witnessed the changes that politics have wrought on the region. "My tías lived on the other side in Nogales, Sonora. For us, passing back and forth, it was part of our daily lives. Our family events were on both sides of the border." While, many Americans have a "dark picture" of the region, he said, its reality is different, and it holds important lessons for the rest of the country. "Diversity is not a plague upon our nation, and in fact has contributed to the uniqueness of the Borderlands," Grijalva said.

Grijalva believes that the people who live here, including tribal members, Mormon pioneer descendants, Latino residents, and others, have the best solutions for the region's problems, such as using technology instead of a wall for immigration enforcement, and focusing on organized crime: drug traffickers, human traffickers, gunrunners. Instead, people in Washington, D.C., who have never been to the Borderlands, want to militarize it, without consulting local businesses, the faith community or others whose daily lives are affected.

The Borderlands, in other words, is more than a place to draw a line. It's a region of ancient animal migrations and vital human trade. Now, though, Washington politics bear down on the Borderlands, severing economic and ecological connections, strand by strand. Trump campaigned on a promise to "build a wall," and his administration has begun projects in Texas, New Mexico and California, invoking post-9/11 legislation to waive more than 30 federal regulations and fast track border construction. The state of California and environmental organizations have pushed back, but in February, U.S. District Judge Gonzalo Curiel found that the Department of Homeland Security is acting within its authority.

Grijalva told me how he would like other people to see the Borderlands: as an example of a region that "without any help defines itself, and a region now that is fighting like hell to keep its identity." Before we hung up, he urged me to get a flu shot.

BRUCE BRACKER'S GRANDPARENTS moved to Nogales and purchased an Army surplus store in 1924. Over time, Bracker's evolved into one of Ambos Nogales's bestknown department stores, selling tailored men's clothing, evening dresses, fur coats. (Grijalva purchased his first pair of Levi's there.) But in the fall of 2017, Bracker shuttered his store. When I met him at his office, in a quiet municipal complex with a lovely view of the surrounding valley, I asked him why. "Pardon me," he said, standing up to fish a cough drop from a computer bag slouching on a metal file cabinet. He'd been hit by the flu, too. For three generations, Bracker's business relied on the easy flow of shoppers across Arizona's southern border. But more restrictive border policies meant his customers couldn't reach his store anymore. Eighty percent of them came from Mexico, Bracker said, and the other 20 percent earned their income there. The store was 100 percent dependent on Mexico. "We made it through the Depression, but we could not make it through the last eight years," he said. With more than 300 vacancies, Nogales has some of the most severe port of entry staffing shortages, according to the union that represents Border Patrol agents. The lines to enter the U.S. for a day have become so onerous that shoppers with money to burn are turning to Mexican stores instead, Bracker said. In the Borderlands, commerce goes two ways, a reality that outsiders sometimes miss.

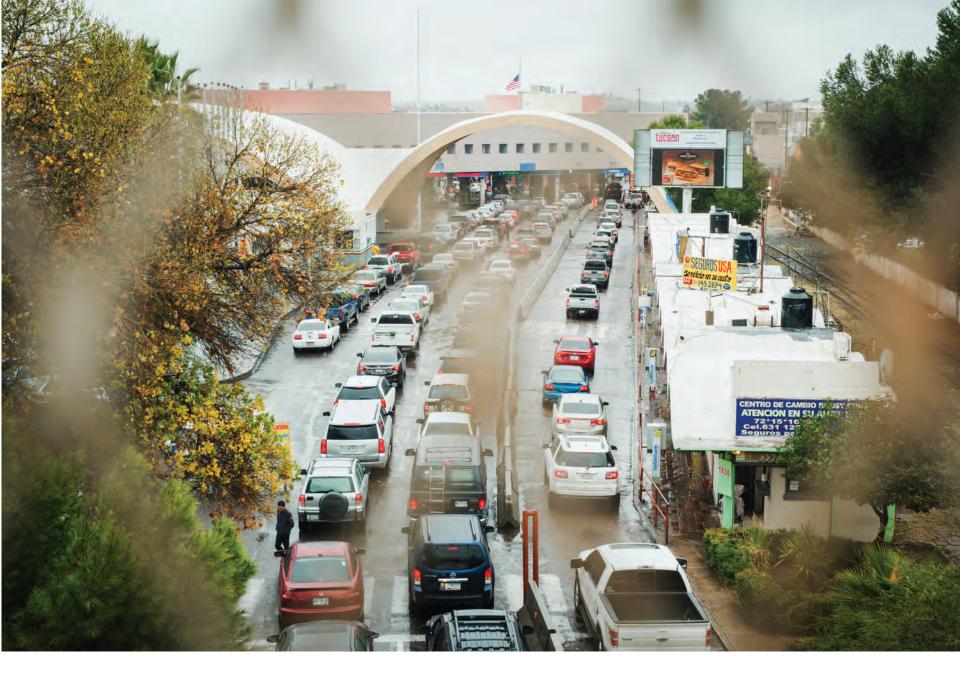
"The commerce coming into the country, the travelers coming into the country through these ports of entry, are really what create economic security in the border states," said Bracker, who is now a supervisor for Santa Cruz County, in southern Arizona. While the country debates stopping the flow of people across the U.S.-Mexico border, Bracker works to make that flow more efficient. He focused first on renovating ports of entry in Arizona, and now he wants more Border Patrol agents so that more lanes can stay open. But Border Patrol's staffing troubles create a shortage that's throttling local commerce.

More than undocumented workers, Bracker worries about an end to the North American Free Trade Agreement, NAFTA. Trade regulations would revert to World Trade Organization rules, which Bracker said would mean that certain manufactured components used in Mexico would no longer have to come from the United States. At the same time, the environmental and worker protections in Mexico that were part of NAFTA would be lost. "If we're negotiating, if we're at the table, those things are included in the agreement. If we're not at the table, those things are not included in the agreement," he said.

The border backup is just one problem that Bracker is wrestling with these days. He and other Borderlands county commissioners have organized a committee to pressure the state to help deal with these issues. Bracker worries about maintaining roads and rerouting traffic when he has the tax base of a rural community and the road traffic of one of the region's largest overland ports of entry. And road maintenance is absolutely essential: At the height of the busy season, 1,400 trucks per day carry winter vegetables through town. Thousands of eighteenwheelers rumble down these roads each year, moving produce and supplies both north and south of the border. But Bracker also doesn't want Mariposa — the Nogales port of entry used by trucks — to lose shipments to Texas or California. Bracker recalled learning of much shorter







wait times at other states' ports of entry and realizing, "We're gonna get our a--..." He stopped himself, noted that I was recording his words, and tried a different analogy. "Houston, we have a problem." In 2010, Arizona broke ground on an updated Mariposa port of entry in Nogales. Bracker believes average wait times for trucks have gone down from three or four hours to under one hour, although I could not confirm this, because the Border Patrol does not accurately measure wait times for trucks crossing the border.

The border-counties commission that Bracker started is young, and it's still setting its goals and finding its voice. Along with road maintenance, commissioners worry about the strain on their judicial systems arresting and trying international travelers who commit crimes in their communities.

At this point, Bracker seems resigned to some form of border infrastructure. But he thinks that most people who support the idea of a wall just want to feel that their government is trying to keep them safe. A physical wall won't do that, he said: "Technology and manpower is really the answer to make that happen."

What he wishes that people outside the borderlands knew about the place that he grew up — beyond just how important it is for the fruit and veggies that appear on their plate each January — is that "it's an amazing, amazing place," he said. A place that, in order to thrive, needs more flow and movement, not less.

After talking with Bracker, I decided to investigate the ports of entry he'd described. I headed south from Tucson one early February afternoon under a cloudless sky. Southern Arizona had barely had a winter. Without more rain to wake them, the desert's wildflowers wouldn't make much of a show this spring. Last year's dead grasses lined the roadway, under leafless mesquites and chamisa just starting to turn bright green.

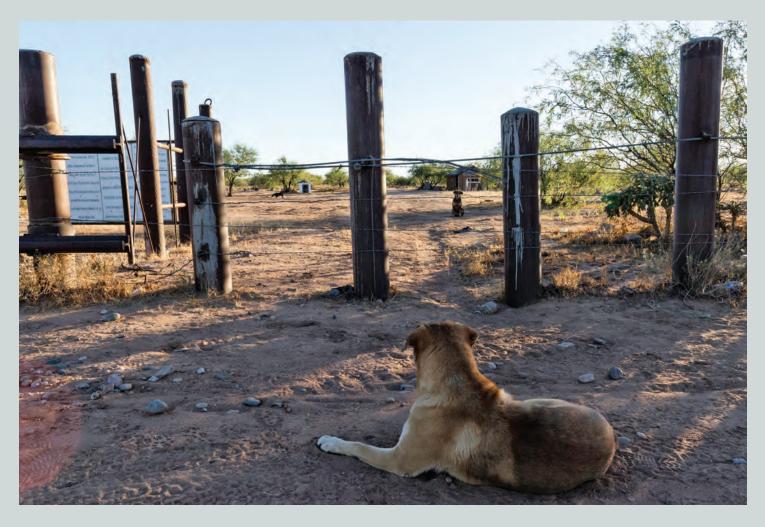
I'd never driven across the southern border before, only walked, and I found the zigzag of white-lane barriers disconcerting to navigate as the sun sank behind a distant ridge of mountains. Almost no one seemed to be crossing south with me, and I questioned whether I was going the right way. Then suddenly I was in Mexico. To my surprise, I broke into a cold sweat, realizing that I didn't have in-



Traffic backs up, top, at the border crossing in Nogales, Sonora. Above, Bruce Bracker, whose grandparents started the Bracker's department store in the 1920s, closed the store in 2016 because the flow of shoppers from Mexico had dwindled. "We made it through the Depression, but we could not make it through the last eight years," he says.

Dogs gaze across the fence that runs along the border between the Tohono O'odham Nation in the United Sates and a ranch in Mexico. A sign nearby — in English, Spanish and the Tohono O'odham language — informs people they must be inspected before they cross.

ANTHONY COLLINS



One nation, divisible

How the U.S.-Mexico border has split the Tohono O'odham

BY CHELSEY LUGER

f you're driving the 70 miles from Tucson to Sells, Arizona, you might want to stop for a break at the Sells grocery store. It looks a lot like any other small-town American market. But the sign above the pizzas reads S-gewi haiku huk, not "frozen foods," because this small town is the center of business and government for the Tohono O'odham Nation. and the signs are in O'odham Neogi, a language you've probably never heard of.

Keep heading south along the twolane highway, and you'll see a stunning desert landscape with a jagged mountain backdrop. In just 20 miles, though, you'll have to stop again. Not for a break, but because the road ends here, at a big empty lot near a fence. Border Patrol agents are parked here, and you are not allowed to cross the border into Mexico.

Lately, the only entities allowed to cross freely are dogs. They don't appear to have owners, but they don't look too hungry: The Mexican ranchers south of the fence, the Tohono O'odham, who are American citizens, in the north, and the Border Patrol agents in between them somehow manage to keep the dogs fed.

For the dogs, life on the border is simple. For everyone else, it's complicated.

Before Mexico, before the United States, before the Tohono O'odham were a federally recognized tribe, and long before the era of modern border security, the Tohono O'odham — desert people, they call themselves — lived in what is now southern Arizona and northern Sonora, Mexico. For thousands of years there was no border, and even after its creation, it had little impact on the tribe. But today, the tribe is divided. A security fence separates their ancestral lands and citizens, and the Border Patrol monitors their territory so closely that tribal members cannot cross freely to conduct business, attend religious or spiritual gatherings, or visit family and friends. Today, the tribal government spends \$3 million annually on border security, and the tribal police force spends half its time on border-related issues, including illegal drugs and immigrants. Border freedom is a privilege reserved only for dogs.

DURING PRESIDENT DONALD TRUMP'S

campaign, when "the wall" was arguably his hottest issue, a brief media storm passed over the reservation. Reporters parachuted in and painted a simple picture, saying the tribe was opposed to the border wall and, therefore, largely against border security. The first part is true; the latter, less so. Popular opinion and the tribal government are nearly

unified in their anti-wall stance: "Over my dead body we will build a wall," the Tohono O'odham Vice Chairman Verlon Jose famously said. But the wall is only a small piece of the border puzzle. When it comes to O'odham approaches to border security, the opinions of people are as diverse as the desert is dry.

The older generation is reflective of many American baby boomers: more conservative, more willing to cooperate with the federal government, and with a track record of supporting and enhancing border security in their roles as government officials, law enforcement and community leaders. They want to protect their tribe's youth — and by extension, the United States — from the dangers of illegal immigration and drug cartels. For years, the tribal government has actively cooperated with all relevant agencies to police illegal border activity, particularly since 9/11, when the federal government and the tribe built a vehicle barrier along the border.

But there is also the younger, activist generation: idealistic and educated about international Indigenous issues, eager to put tribal sovereignty above the needs of the federal government. They believe in "decolonizing," and they are aggres-

Please see Tohono, page 18

ternational car insurance, that night was coming, that the roads were narrow and the traffic fast, and that I had no idea where I was going, other than farther away from the U.S.

I checked my rising anxiety. What was I afraid of, really? A fender-bender? Insurance problems? Or, despite all my smiles, my polite attempts at Spanish, my starry-eyed conversations about living in a multicultural region, was I simply afraid to be hurtling so resolutely into el otro lado — the other side? I tried to imagine that this was a one-way voyage, that the border behind me was a boundary between my past and my future. That I couldn't go back, not now, not for years. maybe never. I made the first U-turn I could. It took an hour and a half to clear the two miles of bumper-to-bumper traffic back to the U.S. checkpoint.

"What was the purpose of your trip?" the guard, a blond man in his 20s, asked me.

"To get dinner, but I didn't even get out of the car," I answered, through my open window. "The line coming back was so long, I turned right back around."

"People are going over to watch the Superbowl," he said. "In *Mexico*. Makes no sense to me."

SOME THINGS, LIKE FOOTBALL, require picking a side. But the Borderlands residents I spoke with repeated the same underlying message: We're all on the same team. If this region survives, it will be together. That interdependence stretches into the Borderlands' natural systems. Southern Arizona is one of the country's most biodiverse regions, and, as boundaries harden, researchers struggle to predict what will happen to the animals that inhabit it.

On a sunny day this winter, I met Aaron Flesch, an ecologist at the University of Arizona's Desert Laboratory, a collection of low-slung rock buildings built a century ago to study how plants survive in drylands. Today, the research station is a protected pocket of Sonoran desert just west of downtown Tucson, where scientists still study desert ecology. Dark-haired and lean, in his early 40s, Flesch explained why regional connectivity matters for the area's unique natural history. "If you just eliminate movement across the border, then continuity is gone," Flesch said. And that means many species would likely disappear from the Borderlands. As we sat at a table near a saguaro cactus, a bee buzzed around us. "It'll be dead by tomorrow," Flesch observed. "There's a freeze coming tonight."

For more than a century, biologists such as Flesch have been drawn to the Borderlands by its climate and geography, by the way that life forms from the Americas meet here and mingle. The Borderlands is a mixing place for Sonoran desert and Chihuahuan desert life forms, with incredible biodiversity. And different species grow at different elevations, from grasslands to pine forests. Nearctic and

neotropical species intermingle, using sky island mountains as stepping stones. Rivers flow back and forth, crisscrossing the international boundary line, shaping valleys between mountain ranges, adding to the region's complexity and connectedness.

With so many peripheral species wandering up from Mexico, Arizona is an "amazing place for naturalists," Flesch said. "Birders from all over the country come here to see all of our special neotropical species that just get up across the border." I am not a birder, but as Flesch spoke, I remembered, with a pang of guilt, that I'd missed the chance to see an elegant trogon — an iridescent bird with a crimson chest and long green tail, related to Costa Rica's splendid quetzal — that took up residence in a canyon east of Tucson several years ago.

Because the Borderlands brings together species at the limits of their ranges, as well as relict species marooned on high-elevation islands as the deserts around them warmed, many plants and animals here have very small population sizes. Those species need good habitat and plenty of it, but they also need to be able to move freely between the resources that sustain them. "It's not just us not benefitting from jaguars moving north," Flesch said. "Black bears need movement from Arizona into Mexico to sustain populations, in all likelihood, especially in the sky islands."

Flesch would like to see the Border Patrol use more high-tech monitoring — a virtual wall, employing technological solutions in areas of high animal movements — so that scientists can help the agency limit illegal immigration while minimizing the impacts on wildlife. "People climb walls," Flesch said. "I don't care how big Donald Trump builds them. People are going to climb over, tunnel under, for the cost of one load of cocaine. That's the absurdity of this; we're designing a first-century solution to a 21st century problem. It makes no sense, and it's really frustrating."

Even when a species may not be globally or even regionally rare, the unique natural history of the Borderlands means that local populations may wink out if faced with an uncrossable barrier. When a very small population becomes isolated, it is much more vulnerable to random extinction events. Creatures may struggle to access good-quality habitat, and with just a few individuals spread out across marginal habitat, they can have a harder time successfully reproducing.

Flesch previously researched ferruginous pygmy owls, one small, feathered piece in the Borderlands' biological mosaic, and concluded that a border wall could prevent young birds from crossing the international boundary to find new territory. Most people don't think of a wall as an obstacle for birds, but most people don't know that these palm-sized raptors live in woodlands and other dense vegetation, where they fly amid and even under low

plants. This helps them catch small prey, such as insects and lizards, while avoiding the bigger raptors' talons. Ferruginous pygmy owls use what Flesch called a "perch and pounce" pattern, where they sit on a perch in search of prey, then fly in a low U-shaped pattern to the next perch, rarely getting more than a few feet above the ground. Flesch estimates that some 50 pairs of pygmy owls dwell on Arizona lands, with an unknown additional number on Tohono O'odham nation land. For them, Trump's proposed wall could prove insurmountable.

Even the infrastructure that accompanies a wall — the roads, lights, traffic — poses formidable challenges to the diminutive birds, which, unlike most owls, are diurnal, and stick to cover as much as possible. "They don't readily leave areas of dense cover," Flesch said. If a young male in search of his own home range found himself crossing open ground, he would fly even closer to the ground than usual, and time his flight to the waning light of dusk or dawn. Some young birds seemed to lose their nerve entirely, retreating at the sight of open farm fields and heading back the way they'd come.

THE TRUTH IS, NO ONE TRULY KNOWS the effects of border infrastructure on wild-life: In 1996, Congress authorized building fences on the nation's borders. Then, in the wake of the 9/11 attacks, Congress passed further legislation allowing the Secretary of Homeland Security to waive any federal laws slowing down that construction, including the Endangered Species Act and other environmental regulations. Now, more than a decade later,

A mountain lion balances on a border fence near Naco, Arizona.

ARIZONA GAME AND FISH DEPARTMENT



"The (Tohono O'odham) Nation is afraid that if we don't do our part as American citizens to protect America, then that puts us in danger as a tribe — especially with the Trump administration."

—Amy Juan, a Tohono O'odham community organizer who is fighting a proposed "virtual wall" for U.S. Customs and Border Patrol to monitor the border as it crosses tribal land





Tohono O'odham community organizer Amy Juan, above, opposes Border Patrol surveillance. Tribal Councilman Art Wilson, standing near a Border Patrol truck on the southern end of the Tohono O'odham Nation, says, "It's complicated."

Tohono, continued from page 16

sively opposed to the militarization of their reservation. They value Indigenous nationhood over allegiance to America. Some critics dismiss them as conspiracy theorists.

And then, there are those in between, like Art Wilson, Tohono O'odham legislative councilman. "It's complicated," he said.

Like many in his generation, he appreciates the security that the U.S. Border Patrol and the fence offers, but he is upset by the increasingly clear separation between O'odham people, based on which side of the border they live on.

"I don't want to be separated from our relatives in the south," he said. "When we can't gather with them, I really have seen, over the years, how that impacts our people's involvement in ceremonies, and how it tears families apart."

Wilson, whose tribal affiliation makes him a U.S. citizen, was born on the Mexican side of the border but grew up crossing it freely between home and school.

"When I was young, this fence wasn't here," he said. "We spoke mostly O'odham, and we always crossed back and forth from school to home."

O'odham then not only identified as O'odham first but also lived, functioned and socialized as O'odham first. The distinction of American or Mexican was secondary. But in the 1990s, when Mexican drug cartels began to infiltrate the reservation, violence exploded. Today, tribal officials still consider drug activity to be at a crisis level and have been actively — and fairly successfully — working to control it.

According to the Tohono O'odham Department of Public Safety, migrant apprehensions on the reservation dropped by 84 percent from 2003 to 2016, thanks in large part to the tribe's contribution of resources and efforts. During that time, the Tohono O'odham Police Department and U.S. Border Patrol worked together to seize a yearly average of about 300,000 pounds of illegal drugs on the reservation.

Integrated Fixed Towers, otherwise known as IFTs, are now the focus of conversation about the border for the Tohono O'odham. Described as a "virtual wall," IFTs are solar-powered surveillance systems equipped with infrared and video technology to detect movement. According to U.S. Customs and Border Protection, the towers use surveillance cameras to help Border Patrol agents detect and respond more quickly to border incursions.

Right now, there are 52 IFTs up and running in southern Arizona. None, however, are on the Tohono O'odham Reservation. Both the tribal chairman and vice chairman support IFTs, as do many other leaders and citizens, but the nation's young activists are staunchly opposed.

"We got a lot of press on the wall, but there's a huge gap in coverage regarding the IFTs," said Nellie David, a tribal member who is writing her dissertation on border security issues at the University of Arizona. "These towers are a huge violation of our rights."

"Once they go up, we'll be watched 24/7," said David. "This is unprecedented surveillance toward an entire community, and it's unconstitutional encroachment on our rights and privacy."

David and other opponents say they are also concerned about the IFTs' environmental impacts. Even though an environmental assessment has been completed, activists contend that there isn't enough data to ensure that, say, bird and bat migration patterns won't be affected. And many of the towers would be built in areas considered sacred to many O'odham. (U.S. Customs and the Border Patrol did not respond to repeated requests for comment on IFTs.)

"We have sacred mountains where the community can't even live because they're so sacred — our medicine men are buried in those mountains," said David. "And that's one of the mountains where they plan to put some towers."

"The (Tohono O'odham) Nation is afraid that if we don't do our part as American citizens to protect America, then that puts us in danger as a tribe — especially with the Trump administration," said Amy Juan, an anti-IFT activist who also works for the International Indian Treaty Council. "I understand the political game. Everybody's hope is that if we approve the towers, we won't have to deal with the wall. But at the end of the day, we might just end up with both."

The day I visited the border, where the road from Sells ended, I stood near the fence with Art Wilson, listening to stories from his childhood. As we talked, a Border Patrol agent approached us and warned us, respectfully, that without permission from the Tohono O'odham government we would have to leave the area and take our cameras with us. Wilson showed the agent his tribal I.D. and the issue was settled, but it seemed odd to me that a Tohono O'odham tribal member in his own homeland would need to carry identification for American border agents.

Wilson appeared unbothered. But as we drove north along the rough, dirt road, I asked him what he would do to solve the problem.

"I want them to pick up that fence and move it south so that all of our O'odham people can be together." \square



Chelsey Luger is a freelance journalist and a member of the Turtle Mountain Band of Chippewa.



the U.S. has no large-scale or systematic scientific studies to examine the impacts of border fencing. The Trump administration has invoked the decade-old legislation to once again build unregulated border fencing in California, Texas and New Mexico.

To truly understand what fencing would do to the Borderlands, researchers need more data. But some worry that cross-border research will see a chilling effect brought on by the Trump administration. Louise Misztal directs the Sky Island Alliance, a nonprofit focused on researching and conserving the biodiversity of the mountain ecosystems that dot the arid Southwest. In the sky islands, Misztal told me by telephone, neotropical species such as trogons and jaguars live amid black bears and mountain lions. Stressors in the Borderlands, such as climate change, cross boundaries. But with the growing politicization of the region, research on these connections becomes harder. Travel is increasingly difficult for U.S. government employees and their Mexican counterparts, in part because of longer wait times at understaffed border crossings. Funding for projects that support travel, interpretation or translation for Mexican partners receives more federal scrutiny and is harder to get, Misztal said. "There's a lot of fear and caution in

staff I'm working with about not putting it in the budget or talking about it."

Randy Serraglio, who works on the Center for Biological Diversity's campaigns against the wall and border militarization, told me that building infrastructure willy-nilly has had real consequences for the residents of the Borderlands. In all, 650 miles of barriers were built in the mid-2000s without environmental analyses. "It was all done for mostly political reasons, the 'Mexican Invasion,' "Serraglio said. "A lot of politicians in Washington were using that fear and that xenophobia to win points and whip up support with constituents."

In Organ Pipe National Monument, for example, the Border Patrol built pedestrian fencing without the kind of inspection mandated by the National Environmental Policy Act, or NEPA. During heavy flooding in 2008, debris piled up against the fencing, inundating the park's headquarters and Border Patrol facilities. "It was very embarrassing for Border Patrol," Serraglio said. "If they had done a NEPA (review), it wouldn't have happened."

Border construction also has proven dangerous. During a 2008 construction push, the Border Patrol, without informing Mexico, built a 5-foot concrete barrier inside a storm-water tunnel that undocumented migrants used to move between Nogales, Sonora, and Nogales, Arizona, effectively creating an underground dam. That July, monsoon rains flooded eight feet deep on the streets of Nogales, Sonora, buckling roads, destroying homes and cars and causing \$8 million in damages. Two people drowned. It turned out that the barrier was built on the Mexican side of the border, not the American side, "but that's just salt to the wound," Serraglio said.

"This whole drumbeat of fear that comes out of D.C., it's just so hollow," Serraglio added. "It just distorts and misrepresents what the reality in the border region is. It would be a real shame to sacrifice this region on the pyre of politics."

IN THE BORDERLANDS, walls divide cities, deserts — and people.

Apprehensions of undocumented migrants in border states have fallen over the past decade to levels not seen since the early 1970s. Yet the number of people who die attempting to enter the United States through the desert keeps growing, as border crossers follow increasingly rugged landscapes. These are places that, a decade ago, no one thought anyone would cross — jagged mountains rising from remote desert, empty washes, open range. They include the Tohono O'odham

A border fence runs west from Sasabe, Arizona, before ending abruptly on a hillside. ANDREW CULLEN

tribe's ancestral land, which was divided by the U.S.-Mexico border. Following Trump's election, tribal vice chairperson Verlon Jose told YES! Magazine that the U.S. would build a wall across tribal land "over my dead body."

Last November, I went hiking with my boyfriend in the Baboquivari Wilderness Area, Tohono O'odham ancestral land now administered by the U.S. Bureau of Land Management. Baboquivari is a chiseled, squared peak that rises dramatically from the surrounding shrublands of southern Arizona, some 20 miles north of the U.S.-Mexico border. It holds the tribe's place of emergence and the home of its Creator. As the Border Patrol squeezes migrants away from easier terrain, more and more people venture across this extremely remote, almost roadless landscape of rugged peaks and steep trails. Near the top of Baboquivari we found many traces of their passing — always slightly off-trail, in shady spots, under bushes or hidden near trees: a gallon jug holding down a black garbage bag, an antique glass juice bottle, an anti-diarrheal medication pouch, children's clothing, a denim slipper with carpeting sewn to one side, worn to hide tracks in the sand.

In the evening, as we headed downhill to the trailhead, the light turned to liquid gold. From the side of the mountain, Arizona looked like a green sea, dotted with islands of jagged red rocks. One distant fin resembled a hunched inchworm,

munching its way through a carpet of emerald mesquites.

Someone was waiting near the car. "Hablas español?" the man asked. I walked closer in the fading light. He wore camo-print pants, a dark colored shirt, and had short hair and a black plastic water bottle. In Spanish, he continued: "I want to go to La Migra. I want to turn myself in." His words tumbled and caught, like flotsam in a flooding stream. His name was Cosme, and he was in his mid-20s. He'd been traveling with a group for two weeks from Michoacán, Mexico. Two days earlier, the Border Patrol had chased his group with helicopters, motorized vehicles and dogs, scattering people in the desert, a tactic of "prevention through deterrence" that human rights groups blame for many deaths. As he ran, Cosme slipped and caught his backpack on a bush, tearing it. He lost his phone, which he used as his map, and all his food. He had no idea where he was. Hungry and lost, he was ready to surrender, but he couldn't find anyone to surrender to.

I gave him what food I had: some trail mix, two apples. I assured him that if he stayed where he was, at the base of a trail near a stone house where a caretaker lived, La Migra would come. He only had to wait until morning. I tried to dissuade him from walking anywhere. We were at least a 20 mile trek to the nearest town.

As we spoke, the temperature dropped and the sky darkened to an onyx black awash with stars. I suddenly saw how forbidding the sky was, how small we were, how long the night would be. He asked me to drive him to Indiana. I pulled out my phone. We stood, shoulders pressed together, as I showed him where we were, where he'd started his journey two weeks ago, where Indiana was. He began crying again. "Take me to Tucson," he begged. "Take me to Tucson. Take me to Tucson. Take me to Tucson."

To get back to Tucson, my boyfriend and I would drive through a Border Patrol checkpoint, but I did not want to give Cosme a ride; I was worried that I could be charged with trafficking. In the summer of 2005, the Border Patrol charged two No More Deaths volunteers with federal crimes, including aiding and abetting and obstruction of justice, for trying to drive three severely dehydrated undocumented migrants to emergency medical facilities. Instead, we would leave him at the empty trailhead. Cosme turned and looked up and said a prayer I didn't understand. He seemed to be speaking directly to Jesus. I rummaged through the car for things he might need — Band-Aids, a daypack, electrolyte tablets, a headlamp. Nowhere in my car could I find what I needed — the sense, when I encountered a stranger suffering so close to my home, that I was free to help. Cosme stood in the headlight beams, watching us back away, and then the darkness swallowed him.



Associate Editor Maya L. Kapoor writes from Tucson, Arizona. @Kapoor_ML

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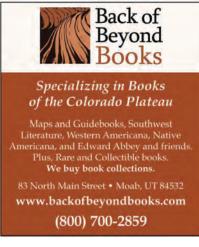
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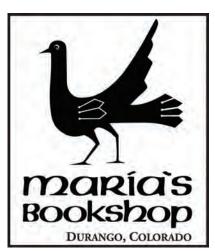


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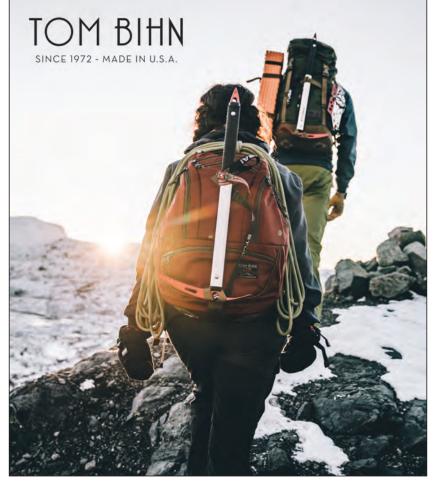
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Can cannabis in California be kept cottage?



OPINION BY DESDEMONA DALLAS

On Jan. 1, weed aficionados in California were finally able to do what they say they've always wanted — legally buy marijuana, no prescription required. But small farmers who had been selling on the black market were not uniformly delighted by the change.

For decades, the illegal weed industry has been lucrative. Then came increasing legalization, which created its own boom: In the United States, the total medical and recreational market for pot is expected to hit \$2.6 billion in revenue this year, reports the *Financial Times*. Nine states have now legalized recreational sales, and 29 states have legalized medical marijuana. Colorado alone has recorded nearly \$4.5 billion in sales since recreational stores opened on Jan 1, 2014.

But many small farmers in California worry about this new world of legal pot. They've been the backbone of the industry through the drug-war years of heavy enforcement and heavy penalties, and they know all too well what it's like to live as outlaws. They now fear that big agriculture will take over the industry that some of them pioneered and worked in for generations.

Under Proposition 64, also called the Adult Use of Marijuana Act, after Jan. 1, 2023, there will be no state cap in California on the size or production amount of marijuana farms. David Bienenstock, former editor of *High Times Magazine*, fears that this lack of a size limit invites consolidation by corporations with deep pockets. What he'd much rather see are "as many small, sustainable, eco-friendly farms as possible."

Right now, there are an estimated 50,000 cannabis farms in the state of California. These farms are run by everything from multi-generation families who have worked the same land for decades, to recently formed groups of tech-industry dropouts. It's no secret that people have flocked to the California hills over the last decade to join what is being called the new California "green rush."

The black market has allowed growers to earn an exorbitant amount of tax-free wages without ever having to build a business profile or work within legal systems. For many, one of the major draws of the marijuana-farming lifestyle has always been its freedom from government oversight and pesky regulations. But going legal now means paying licensing fees and taxes and wading through paperwork just like any other businessperson.

Jonathan Collier, on the executive board of The Nevada County Cannabis Alliance, lives in Nevada County, home to over 4,000 marijuana farms. He's lobbied hard to get black-market growers in his area to come out of the shadows and capitalize on being legal. He tells small pot farmers that they can do well if they decide to "position themselves in the artisanal market, establishing branding and higher-quality processes."

But Collier said many successful marijuana farmers don't want to go legal because they've got "millionaire blinders." Rather than accept a reasonable income as a legal pot farmer, some want to stay in the background and just keep doing what they're doing, under cover.

Many of the newly legal growers

"Durban poison," "strawberry cough," and "super silver haze" — these are a few of the names buyers will find at dispensaries these days. At the moment, organic and non-organic marijuana seem fairly similar in quality. In some dispensaries, organic marijuana is sold for an even lower price than its non-organic counterpart. Most consumers I've talked to say they're interested in smoking designer, high-end strains; they don't particularly care about sourcing and growing practices. But this may change as big agriculture starts to



A boutique marijuana farmer waters plants on land outside of Nevada City, California.

DESDEMONA DALIAS

joined cooperatives to help process and market their marijuana. Until Jan. 1, the distribution cooperative Allegria, based in Nevada City, north of Sacramento, worked to help farmers bring their individualized product to consumers. Executive director Michelle Carroll makes this analogy, "People will pay more for craft beer. We went to farmers markets in San Francisco twice a month, and got to deal face-to-face with the consumers (who) want the best product."

Allegria, which had strict policies against the use of pesticides, assembled a group of growers who sold direct to a distributor, who then focused on branding and sales. This allowed farmers to concentrate on quality control. "We feel like if we all work together, we will get to a better place," Carroll said. But Allegria went out of business when tighter regulations took their toll.

move into the business.

As more states legalize the weed industry and corporate consolidation changes the market, only knowledgeable consumers will be able to keep small, boutique farms alive. That means the once-illegal folks on heritage farms have the chance to change the future of cannabis — if they can step out of the blackmarket they grew up in.

Desdemona Dallas is a writer and photographer based in Brooklyn, New York. She learned about the cannabis industry while living in Nevada City, California, a hotspot for cultivating pot.

Writers on the Range is a syndicated service of High Country News, providing three opinion columns each week to more than 70 newspapers around the West. For more information, contact Betsy Marston, betsym@hcn.org, 970-527-4898.

WEB EXTRA

To see all the current Writers on the Range columns, and archives, visit *HCN*'s Web site, www.hcn.org



Rep. Mike Noel greets guests arriving at the Utah Capitol in December 2017, where President Donald Trump signed a presidential proclamation to shrink Bears Ears and Grand Staircase-Escalante national monuments.

FRANCISCO KJOLSETH/THE SALT LAKE TRIBUNE VIA AP

Local hands on public lands

When it comes to monuments, Utah lawmakers have conflicts of interest



ANALYSIS BY JONATHAN THOMPSON

While the fight over President Donald Trump's shrinking of Bears Ears National Monument has mostly migrated to the courts, another Bears Ears battle continues to rage. This one is over a congressional bill sponsored by Rep. John Curtis, a Utah Republican.

At first glance, H.R. 4532 seems to give monument proponents everything they asked for and then some. While it would lock in Trump's shrinkage, it would also put all of the 1.35 million acres in the original monument off-limits to future mining claims and drilling leases, just as a monument would have done. Not only would the original Bears Ears Commission, an advisory group made up of tribal representatives, remain intact, but it would be joined by a "tribal management council" that would oversee the Shash Jáa (Navajo for Bears Ears) unit of the monument.

So why are the tribal leaders who fought for the monument asking Curtis to withdraw his bill? For starters, the bill codifies and perpetuates Trump's nose-thumbing at those tribes, since the bill was devised without consulting tribal leaders. Meanwhile the so-called tribal management council is merely a sneaky way to put control of public lands into the hands of a small group of locals, a situation that can jeopardize the public good and the health of the land.

The tribal council would be made up of just one federal land management official, who would be mixed in with two local county commissioners, three members of the Navajo Nation and one member of the Ute Mountain Ute Tribe. Significantly, the Navajo and Ute council members would not be official representatives of the respective tribal nations, but individual citizens, appointed by the president in consultation with the Utah congressional delegation (again, with no

input from the tribal nations themselves).

This new national monument, then, would be run by a committee of local individuals.

On one level, this makes sense. When it comes to making decisions on public lands, the residents of the rural communities adjacent to the land have an inherent advantage over bureaucrats who take their orders from Washington. Locals tend to know the land in which they live, hike and work on a regular basis more than those who reside far away. A live-in landlord will always be a more responsive steward than an absentee one.

Yet the live-in landlord — or the local land manager — is also far more likely to have a personal, financial interest in what happens on that land. These sorts of conflicts of interest are an unavoidable part of life in small rural communities.

Take, for example, Utah State Rep. Mike Noel. When Interior Secretary Ryan Zinke "reviewed" national monuments last year, he turned to Noel for advice. Noel is a longtime Sagebrush Rebel from southern Utah and an outspoken opponent of national monuments in his home state. Noel not only had an ideological interest in the outcome of the review, but some personal and financial interest as well.

In February, the Western Values Project, a conservation group, published documents that showed that Noel owns property within the Grand Staircase-Escalante National Monument, which he failed to disclose in his conflict-of-interest filings for the Utah Legislature. When Trump redrew the boundaries of the monument, it was done so that Noel's parcel fell just outside the monument boundaries. As such, it has all the desirability of being adjacent to protected federal land, without the difficulties of access that can plague private inholdings.

There's more: As executive director of the Kane County Water Conservation District, Noel has long been a booster for the proposed Lake Powell Pipeline, which would benefit the water district and deliver much-needed water to portions of the 500 acres Noel owns in the county. The pipeline's proposed route ran through the original monument, obliging it to extra regulatory hurdles. Now it doesn't, thanks to Trump's monument shrinkage, which brings the pipeline one step closer to fruition.

Given how small the local population is around Bears Ears, Curtis' Shash Jáa management council is almost certain to be plagued by similar conflicts of interest. A council member might own property next to, or grazing allotments within, the monument; she may work as an adventure guide who takes clients into the monument, or have an ATV rental shop that would be affected by monument trail restrictions. Would they really make decisions in the best interest of the land if it might hurt their own bottom line or even put them out of business? Being local does not a good steward make.

That's not to say local voices should be dismissed. But when it comes to public land, locals should have the same say that all other Americans do. We Westerners may scoff at bureaucrats, but they have one thing going for them: It's their job to make decisions based on the greater public good. And in the end, public lands are for the American public, not for the communities that happen to lie closest to them.

Jonathan Thompson is a contributing editor at High Country News. He is the author of River of Lost Souls: The Science, Politics and Greed Behind the Gold King Mine Disaster.

The currents young Wyomingites swim against

"(Wyoming is) a poor, friendly, hardworking state that exports everything, especially talent. The state leaks brain power like thin tea through a colander."

I was shocked — yet gratified — to read such a blunt description of my home state in the first pages of Samuel Western's *Pushed Off the Mountain, Sold Down the River: Wyoming's Search for Its Soul.* I, too, was once a talented (if ornery) Wyoming high school student who saw no opportunity here and split after graduation.

Thirteen years later, I'm back, and Western's slim yet sweeping politicaleconomic history has fleshed out my understanding of the state and why people like me so often leave. I recognized the outlines of the book's characters — state leaders, drunk on the myth of Wyoming's "rugged independence," betting that cattle, oil, gas and coal would bring us eternal abundance. Western filled in those outlines with anecdotes and observations: "Out of (Wyoming's) 112 years of existence, probably only forty were not lean," he wrote. "For example, in 1968, after the United States had enjoyed one of the longest economic expansions of the twentieth century, then-Governor Stanley K. Hathaway discovered that Wyoming had \$80.00 in the state's general fund. ... How could one of the leading energy states in the nation be so poor?"

Pushed Off the Mountain had been

out for more than a decade when I finally read it in 2014. In the interim, fracking brought Wyoming an energy boom. Not much had fundamentally changed — the state's economy remained homogenous, young people continued to leave in droves, and lawmakers hadn't a clue how to stop it. So I wondered what else had happened since Western's book was published in 2002.

Now, a damning sequel of sorts provides some answers.

Jeffrey A. Lockwood's Behind the Carbon Curtain: The Energy Industry, Political Censorship, and Free Speech tracks how mining companies colluded with politicians during Wyoming's 2000s boom to suppress science, art and dissent. Lockwood, an entomologist and creative writing professor at the University of Wyoming, identifies entire constellations of these instances, showing how corporate power, political cowardliness and the "learned helplessness" of Wyoming's citizenry have preserved the state as a lucrative playground for mining companies devoid of much opportunity for anyone else. He quotes a community leader from Carbon County, where the median income is lower than Mississippi's despite its mineral wealth: "You graduate from high school over in Hanna, and then what are you going to do? If you want to earn a living, you're going to have to go to work in the mines, and if you don't want to do

that, you're screwed."

Western rooted *Pushed Off the Mountain*'s narrative in Wyoming's frontier history of failed homestead agriculture and imperial cattle barons. These factors, he wrote, helped develop a culture lacking entrepreneurial spirit. Settlers became accustomed to quasi serfdom. Since the farming was bad, they had no choice: Work for the big ranchers or leave the state. Today, Lockwood says, fossil-fuel CEOs have replaced cattle barons, and young people, lacking other jobs, are funneled either into the energy industry or out of Wyoming.

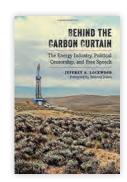
Lockwood draws his story largely from interviews with people who have learned firsthand how jealously these new barons guard their power. He quotes an art museum curator in Casper who received threats from a state legislator and Anadarko executives over an exhibition of photographs that depicted mining's damage to the land: "(The curator) was deeply shaken by 'how such an enormous, successful, powerful, wealthy industry remains so thin-skinned to even the smallest criticism or challenge, so petulant and angry when questioned."

Throughout the book, Lockwood reveals how energy corporations suppress information they find disagreeable, and not just in Wyoming. Indeed, scientists worldwide have lost funding and jobs, citizens have been harassed and silenced, and government agencies have been cowed into a submission much like that described in *Carbon Curtain*.

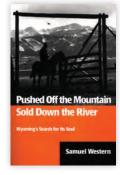
Less common, perhaps — at least in the "free world" — is the suppression of art. But the Casper museum canceled that photo exhibition when its oil-rich benefactors threatened to cut its funding. Worse, the curator was forced to sign an agreement stating that future exhibitions had to be approved by the board. Lockwood describes how this emboldened coal companies a couple years later to demand that the University of Wyoming remove an artwork that referenced global warming.

Today, the boom is dying — coal, oil and gas prices are all down — and Wyoming once again faces lean years. The state is losing population while lawmakers struggle to fund public schools and infrastructure. Many of the leaders Lockwood vilifies remain in power, but a new generation is working to figure out how to stop Wyoming from remaining a poor state that exports talent.

No how-to manual for this work exists. But Western and Lockwood's books show us the currents against which we must swim.



Behind the Carbon Curtain: The Energy Industry, Political Censorship, and Free Speech Jeffrey A. Lockwood 304 pages, softcover: \$29.95. University of New Mexico Press, 2017.



Pushed Off the Mountain, Sold Down the River: Wyoming's Search for Its Soul Samuel Western 128 pages, softcover: \$14.95. Homestead Publishing, 2002.



Roy Merrill, an engineer at a Wold Energy Partners drilling site near Rolling Hills, points out various parts of an oil rig. More oil and gas jobs have become available recently in Wyoming, despite the dying boom. JOSH GALEMORE/CASPER STAR-TRIBUNE

The primordial sea, and me

ESSAY BY PAUL VANDEVELDER

arly one summer morning, while balanced on a knife-edge of basalt high above the churning surf at Yaquina Head on the Oregon coast, a familiar voice boomed out to me from the eddies of ground fog that swirled across the cobbled beach, far below.

"Yo, hey," hollered my guide, John Borowski, a marine sciences teacher. "You've gotta come see this!"

I had always viewed coastal tidal zones as a kind of evolutionary skid row, a waste bin for genetic castoffs and derelicts. Now, my comeuppance was at hand, literally and figuratively. After I scrambled down a treacherous path to the beach, John pointed at the golden-colored invertebrate in the well of his palm. "This little guy has a notochord as a larva, but he loses it when he becomes an adult," he explained. "I have the honor of introducing you to your distant cousin, Mr. Tunicate, better known as a sea squirt."

We had arrived at Yaquina Head at first light, followed by a stream of cars and mini-vans carrying scientists, painters, photographers, teachers and students from as far away as Nebraska and Colorado. This accidental parade was prompted by a phenomenon Borowski calls "a monster minus," a once-a-year tidal event that exposes — for a few precious minutes — exotic creatures from the basement of Earth time, a primordial world that is neither land nor sea. Here, in the intertidal zone where terra firma meets the ocean, the first ticks of biological time were measured in the gently throbbing ectoplasmic clock of our planet's first living cells.

Billions of years later, tidal flows controlled by the moon and sun are still the celestial royalty that rule here. Everybody eats, everybody has sex, everybody dies. Though I'd always thought of myself as a mountain person, coming back to the ocean is the return ticket on a round-trip journey that began eons before my birth. I'm nine-tenths water, and every drop of me evaporated from this water and was carried inland on a cloud. Through myriad hydrologic processes, each drop found its way to me. And you.

For all but a few hours of the year, this primordial soup kitchen is fiercely hostile to hominids in sneakers. Yet for 500 million years, the creatures that live here have never had a day off! That's because the intertidal zone is the great seaside takeout window on which all of the earth's pelagic species depend. Every spawning sea star, for example, releases several million eggs. A few will ripen into adults, but the remaining millions — wave after wave of protein and lipids — will feed dozens of hungry species waiting for lunch in deeper water. Marine zoologists estimate that 90 percent of the world's oceans are biological deserts. The remaining 10 percent are home to 90 percent of all living creatures. The intertidal zone is their front porch.

"What's fascinating is the zonation you see between these species on these big minus tides," explains Borowski. "Competition for space is intense. If you live in one of the zones, you have to take care of your next-door neighbor because she's probably your next meal."

The exotic creatures that live here have developed specializations that enable them to travel between zones. The hard-shelled chiton (pronounced ky-ton) and soft-shelled crab, for example, have rigid exoskeletons that protect them from drying out when the receding tide exposes them to wind and sun. Crea-

tures in the deeper zones, such as anemones and sponges, have flexible bodies that absorb the ceaseless pounding of waves. Sea stars, the alpha predator of the deeper (laminaria) zones, always go out to dinner. The keystone species in their restaurant of choice is the tidal zone's most prolific progenitor, the common mussel. A healthy community of mussels will support 7,000 individual members per square meter. "Every one of these little guys," says Borowski, "filters microbic proteins from 7.5 liters of seawater, per hour. That's 14,000 gallons of filtered water per hour, for one tiny community of mussels. Now, multiply that by a couple of hundred million years."

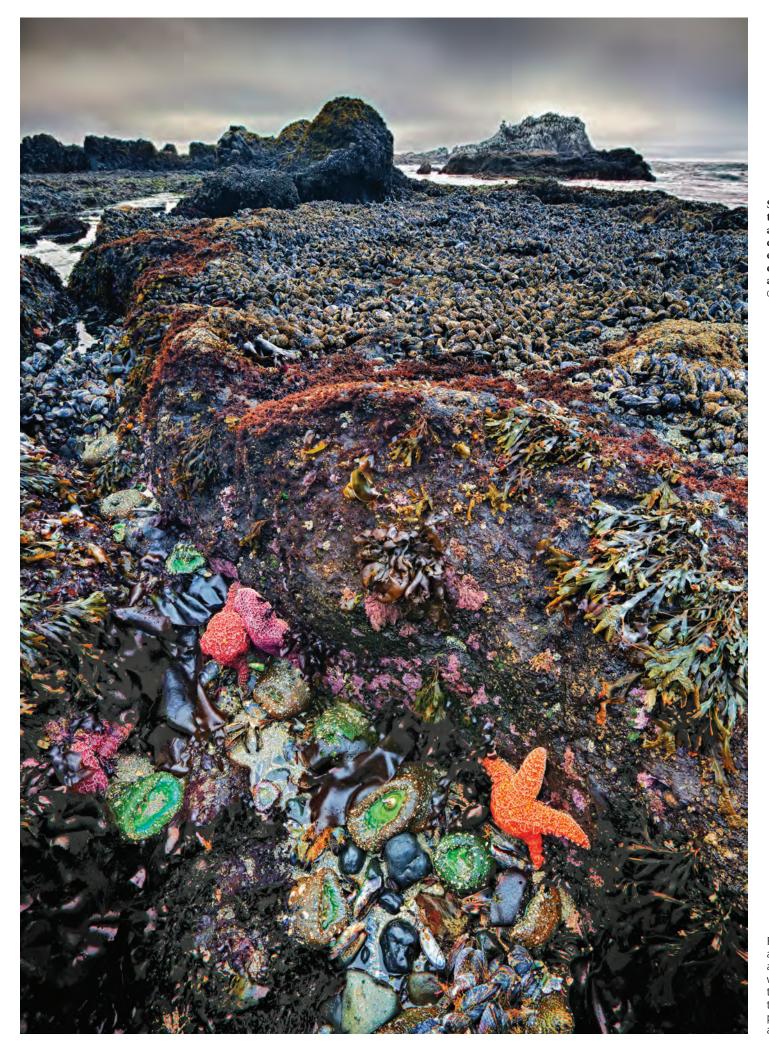
Those kinds of numbers give me vertigo, but the intertidal zone is a great deal more than a smorgasbord of protein and bivalve filtration. It is also the testing ground for species, the giant mixing bowl of life in which precise adaptation to the fierce press of elements has been the indispensable ingredient for survival for hundreds of millions of years. "Relatives of every major group of invertebrates on the planet can be found in a single tide pool on this coast," says Borowski, as he hovers over a community of bright pink cnidaria, or anemones. "It's all here. We know where life started."

As Rachel Carson explained in her book The Edge of the Sea, the only sounds on our planet during the Precambrian Era were those of wind against rock, water against sand, and volcanic eruptions. In that prepossessing silence, the building blocks of life as we know them — hydrogen, oxygen, nitrogen - were coming together in the intertidal zones as continents took shape. Billions of years later, I marvel at the fact that the salinity of my blood, sweat and tears is precisely the same as the primordial soup sloshing about in these tidepools. Yet I also know that 54,000 miles of saltwater shoreline in the United States is under siege from a rogues' gallery of sinister threats; deforestation, shoreline developments, coastal erosion, oil spills, ocean acidification, and industrial and agricultural pollutants of every kind. Pesticides, herbicides and the ubiquitous nitrates in fertilizers lead the charge. Fortunately, the intertidal zones on this iconic Oregon shoreline have escaped most of the manmade perils, so when the sea pulls back her skirts on this rare day, she reveals a universe of spectacular beauty. Perched on a ledge that was under 20 feet of seawater just hours ago, I watch a tiny crab emerge from its rocky nook and take a look around. Its neighbors, a colony of green anemones, are closed like eyes against the wind and sunlight. As purple urchins and nudibranchs doze in the sun, we hominids scurry from one pocket universe to the next, the pages of our field guides fluttering in the breeze as we announce our discoveries with shrieks of amazement.

At tide's nadir, Borowski lets out a whoop from the edge of the laminaria zone. He has found what he came for, a rare sunflower star, the shyest member of the peripatetic echinoderms. If you are lucky enough to see one of these creatures, look quickly, because this glimpse into the basement of time is also a signal from the moon and the sun that they have lost their grip on the ocean. In minutes, the returning waves will slip from their ephemeral grasp and chase us back to the cobbled beach.

There, as the silence roars around us, we gather in little knots and gaze in wonder as the crucible of life disappears beneath the gossamer flux of the sea, leaving us high and dry. And breathless. Dusted with awe. \Box

This glimpse into the basement of time is also a signal from the moon and the sun that they have lost their grip on the ocean.



Sea stars, mussels, tunicates and anemones are exposed for human eyes to see when the ocean tides sweep away. CRAIG MCCORD

Paul VanDevelder is an author, journalist and screenwriter whose interest in all things wild has led to a life of carefree poverty and ceaseless adventures.



HEARD AROUND THE WEST | BY BETSY MARSTON

CALIFORNIA

In the Northern California town of Auburn, population 14,000, a wildlife drama began when careless humans threw away a large plastic jar with something yummy still adhering to the inside. The odor tempted a covote, who had clearly not read Winnie the Pooh, to investigate by sticking her head into the container. Then — surprise! — her head got stuck and she could no longer clearly see. Dozens of people tried to help catch the jar-headed canine, reports KTXL. Yet the wily coyote eluded them for 10 days, and though unable to eat, still managed to continue drinking at streams. Finally, volunteers got the chance to sneak up on the weakened coyote — who stank of skunk following yet another misadventure and grab her by the hind legs. They then used a net and crate to move her to an animal hospital, where the jar was cut off. The coyote was expected to fully recover, and when strong enough she'll be released to the wild.

WASHINGTON

Sneaky Seattle homeowners seem to be slow to learn. Two years ago, the city sought \$1.6 million in fines against two groups of residents who believed the view from their homes was so important that they stealthily chopped down "public trees" in a greenbelt. Their illegal logging was messy — they left big trees scattered haphazardly on the steep slope — and they were soon identified and sued. In a settlement, the city accepted \$440,000 for the damage, reports the Seattle Times, and extensive revegetation was planned. Unfortunately, a different group of West Seattle homeowners then thought, "Hey, great idea!" and sneaked out to shear off an acre of old trees in the same greenbelt, only to be caught and fined \$360,000. When the next deluge comes, all these self-centered homeowners may have more reasons than financial to regret their destruction: The 150 trees that were cut in the two incidents were protecting a steep slope that "had been designated by the city as an environmentally critical area at risk for landslides."

Meanwhile, clucking was in the air in Edison, Washington, population 133, when the town's annual Chicken Parade took over the



COAHUILA, MEXICO **Take that, border patrol.**

main drag. More than a thousand people came to ooh and ahh at the birds, many of which were on leashes, and also at their oddly dressed owners, some of whom were decked out like chickens themselves. This was definitely a parade to arrive at on time: "The parade lasts two blocks for the birds, more or less, and it takes about 12 minutes. It took three times as long for the marchers to assemble than to walk the route," reports the *Seattle Times*. The marching songs, emanating from both chickens and their human companions, consisted of hearty renditions of "Bu-GAWK! Bu-GAWK!"

ALASKA

There really is no throwing something "away," not even on Alaska's Denali, the tallest mountain in North America at 20,310 feet. Glacier geologist Michael Loso calculates that climbers left behind 215,000 pounds of solid human waste on Denali's Kahiltna Glacier between 1951 and 2012, assuming it would be ground up over time into harmless matter. But his research finds that the poop will never "fully disintegrate," he told The Associated Press. Since 2007, the National Park Service has required climbers to keep waste off the mountain itself, but at the same time the agency allowed climbers to continue throwing biodegradable bags of waste into crevasses on the glacier, the main route up

to the peak. Loso worries that the waste might resurface downstream "as stains on the glacial surface" — stains that might also contaminate ice that climbers melt for drinking water. Officials have proposed new regulations instructing climbers to drop waste into only one high crevasse "where a huge ice cliff is thought to pulverize the poop and render it inert." As for anywhere else, the 1,100 climbers during the short climbing season will have to carry out their own waste.

THE NATION

Speaking of clean water, a group called Food & Water Watch says Americans— who spend about \$16 billion a year on bottled water — could save money by just filling a bottle from the tap: "64 percent of bottled water is tap water, and it costs 2000 times more," reports *Ecowatch*. And in 2016, the plastic packaging for bottled water "required an energy input equal to at least 45 million barrels of oil."

UTAH

Thousands of people protested at Utah's state **Capitol** in December after President Donald Trump eviscerated two of the state's newer national monuments, Bears Ears and Grand Staircase-Escalante. But probably nobody there could have predicted that their photos would end up reproduced on trend-setting clothing. It's all because of designer Chris Leba, who turned candid shots of people defending public lands into colorful statements on his clothes, described by the Salt Lake Tribune as "Mad Max with khaki and camouflage." One of his men's T-shirts, for instance, features an image of a "Protect Wild Utah" sign, and a "Utah Stands with Bears Ears" poster decorates a women's jumpsuit. Protest fashion now elevates Utah's national monuments into an unexpected new world — one "sexy enough to take a turn on the catwalk."

WEB EXTRA For more from Heard around the West, see **hcn.org**.

Tips and photos of Western oddities are appreciated and often shared in this column. Write betsym@hcn.org or tag photos #heardaroundthewest on Instagram.



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I stitch together the fragments of bottomland wildlife refuges and un-tillable river bluffs converted to state parks. I bind these public spaces together with the private places I visit by invitation...

Still, I lack solitude.

Julianne Couch, in her essay, "What Westerners take for granted," from Writers on the Range, hcn.org/wotr