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National Parks

THE MAGAZINE OF THE NATIONAL PARKS CONSERVATION ASSOCIATION

A RIVER REBORN

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FEATURES

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BLACK CANYON OF THE GUNNISON NATIONAL PARK in western Colorado.

© DAVE SHOWALTER

COVER:
TEEN MEMBERS of the Capital Juniors Rowing team skim across the Anacostia River. Years of advocacy are bringing Washington, D.C.'s forgotten river back to life.

©TYRONE TURNER

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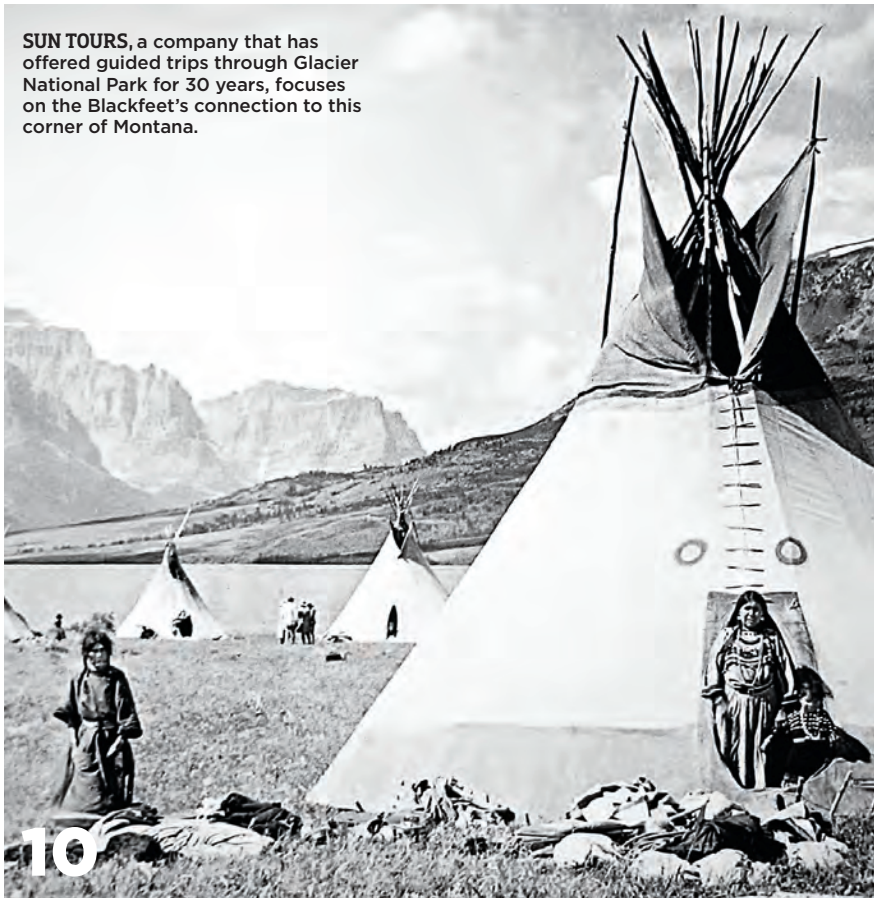

SUN TOURS, a company that has offered guided trips through Glacier National Park for 30 years, focuses on the Blackfeet's connection to this corner of Montana.

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FROM TOP TO BOTTOM: ©KGPA LTD/ALAMY STOCK PHOTO; ILLUSTRATION BY MICHAEL BYERS/LEVY CREATIVE; COURTESY OF NICHOLE THOMAS/ENRICHINGPURSUITS.COM.

DEPARTMENTS

WINTER 2024 / Vol. 98 No. 1

ON THE WEB

Follow NPCA on social media platforms and get park news, travel tips and more on NPCA's blog: **npca.org/blog.**

A Golden Celebration

©KATHY SMITH PHOTOGRAPHY

This spring, for the third straight year, three peregrine falcon chicks took their first flights from the cliffs above the Potomac River in Harpers Ferry National Historical Park, which touches three mid-Atlantic states. Not long ago, this milestone would have been almost unthinkable — prior to this run, it had been nearly 70 years since there had been a successful fledging at Harpers Ferry.

For decades, peregrines, like bald eagles, suffered the effects of the pesticide DDT, which wreaked havoc on their ability to reproduce and pushed them to the brink of extinction. The biologist Rachel Carson sounded the alarm in her 1962 book, "Silent Spring," and her vision helped inspire the Endangered Species Act, though she didn't live to see the landmark legislation materialize. The law ultimately was enacted on Dec. 28, 1973.

Today, both peregrines and bald eagles have rebounded, and this month, we celebrate the 50th anniversary of the bedrock law that led to their recovery. (See "Legal Lifeline," p. 16.) It's one of the most powerful conservation tools we have.

Protecting wildlife has always been central to NPCA's work — the organization's first victory, more than a century ago, was to secure protections for Yellowstone's elk population — but I am especially proud of our efforts to safeguard the most vulnerable species that both rely on and help shape our national parks. Those measures include advocating for the reintroduction of endangered species and aiding in the restoration of the habitats of threatened flora and fauna. We have played a critical role in supporting the protection and restoration of creatures from Florida panthers in the greater Everglades to gray wolves in Isle Royale, grizzlies in the North Cascades and desert tortoises in the Mojave Desert.

We're not alone in our passion for saving these at-risk plants and animals. A recent survey commissioned by NPCA, and conducted online by The Harris Poll, found that 86% of Americans support the ongoing work federal agencies are doing to help with the recovery of threatened and endangered species in the park system. And with good reason — healthier parks, communities and local economies are the result.

As we reflect on the victories — and the work still to be done — I invite you to learn more about the connection between the Endangered Species Act and national parks at esa.npca.org.

With gratitude,
Theresa Pierno

©TYRONE TURNER

CAPTURING NATURE at Kenilworth Park & Aquatic Gardens, Washington, D.C.

'Indomitable Spirit'

Photographer Tyrone Turner had spent some time in recent years at the Anacostia River and Anacostia Park in Washington, D.C., so he knew he'd find rich material for a photo essay. Still, he couldn't believe the take from his first day of shooting for our assignment. "I don't think I've had a more productive full day of photography for a long time," Turner said. "I mean, from sunup to sundown, I was just running into these incredible situations where people were either doing yoga along the river or fishing or teaching tai chi in Kenilworth Gardens or painting the lotus flowers."

It wasn't always so picturesque. The river was so polluted and neglected that locals were reluctant to go there for decades. But as Turner's photos of everyday life along the water document, the river and park that flanks it are undergoing a remarkable turnaround. During three-plus days of shooting, Turner met a broad range of park-goers, from dedicated roller skaters to teenage crew team members (showcased in the cover photo) and a dog named Anacostia. "It's just this beautiful scene," he said.

He's especially fond of the photo on p. 48 of two women fishing. They were attending a fishing event when the sky turned dark, winds kicked up and a storm rolled through. Everyone else ran for cover, but the women were having too much fun to leave. "It spoke to the indomitable spirit of resilience," Turner said. "'The rain's not going to bother us. The storm's not going to bother us. We're here, and we're going to enjoy the river.'"

The waterway is not well known outside of the greater Washington area, but many cities around the country have their own forgotten rivers that tell stories of environmental injustice. The steady march of the Anacostia toward recovery offers hope and a model of what is possible. Turn to p. 40 to see the kind of beauty that can emerge when rivers are restored and city dwellers embrace the wildland in their backyards.

Rona Marech
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NationalParks

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WHO WE ARE
Established in 1919, the National Parks Conservation Association is America's only private, nonprofit advocacy organization dedicated solely to protecting, preserving and enhancing the U.S. National Park System.

WHAT WE DO
NPCA protects and enhances America's national parks for present and future generations by identifying problems and generating support to resolve them.

EDITORIAL MISSION
National Parks magazine fosters an appreciation for the natural and historic treasures found in the parks, educates readers about the need to preserve those resources, and illustrates how member contributions drive our organization's park-protection efforts. The magazine uses the power of imagery and language to forge a lasting bond between NPCA and its members, while inspiring new readers to join the cause. National Parks magazine is among a member's chief benefits. Of the $25 membership dues, $6 covers a one-year subscription to the magazine.

NPCA has been recognized as a USA Top Workplace.

TOP WORK PLACES 2023 USA

MAKE A DIFFERENCE
Members can help defend America's natural and cultural heritage. Activists alert Congress and the administration to park threats, comment on park planning and adjacent land-use decisions, assist NPCA in developing partnerships, and educate the public and the media. Sign up to receive Park Notes, our monthly email newsletter at npca.org/join.

HOW TO DONATE
To donate, please visit npca.org or call 800.628.7275. For information about bequests, planned gifts and matching gifts, call our Development Department, extension 145 or 146.

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If you have any questions about your membership, call Member Services at 800.628.7275. On a selective basis, NPCA makes its membership list available to organizations that our members may find of interest. If you would like your name removed from this list, please call us at the number listed above.

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PRESIDENTIAL PRIDE

I wish to express my great gratitude for the President's Letter, "Saying Their Names," in the Fall 2023 issue. Both the respectful discussion of the murder of Emmett Till, as well as the campaign to create a monument honoring his life and the Till family legacy, are examples of NPCA's excellence and commitment as an organization to the most admirable of civic values and ideals. I am very proud to be a member.

BETH LEWIS
Philadelphia, PA

A VOTING MATTER

Your article, "Battle Lines," is indicative of the problems faced nationwide regarding land use policies. Decisions on whether to permit large, unreasonable and poorly located developments, such as the Prince William Digital Gateway, must not be left to the whims and shortsighted mentalities of a small group of county supervisors. Such decisions must be put to a vote of the people who will have to live with the results.

Major land use decisions can negatively impact the immediate area as well as the greater rural landscape when housing and businesses follow. The result is a permanent loss of rural character. The historical park then becomes an island in suburbia, its significance diminished and ambiance gone.

Land use decisions are too critical a societal issue to be left to easily influenced county supervisors who might not have their constituents' best interests in mind.

RICHARD SARETSKY
Walnut, CA

I want to thank NPCA for the informative article ("Battle Lines") regarding the present-day threat to Manassas National Battlefield Park from the Prince William Digital Gateway. I applaud your courage in covering the data center industry and in highlighting its perceived disregard of the historic heritage of all Americans. I have not had the privilege of walking the Manassas battlefield yet, but I have walked many others, from Fredericksburg and Gettysburg to Vicksburg and Pea Ridge. All Civil War battlefields deserve the peace and serenity commensurate with that deserved by those who gave their lives to sustain American democracy.

SIGURD M. SORENSEN JR.
Idaho Falls, ID

Hats off to Eric Lee for his wonderful cover photo in the Fall issue.

TOM OLKOWSKI
Littleton, CO

SACRED RELEASE

The Fall 2023 article that moved me most was "'How We Heal'" about the Blackfeet Nation releasing a free-roaming herd of bison onto sacred lands adjacent to Glacier National Park.

What our government did to eradicate Indigenous peoples in the Americas, especially during the late 19th century, was morally wrong at best and tragic at worst. It was uplifting to read about the Blackfeet leaders' years of work to release these "iinniiwa" so they could roam as they once did!

JOHN CONNELL
Cheshire, CT

COMMON CALAMITY

All the calamities outlined in the various Fall articles have one common denominator — humans. All too often, encroachment, greed, ignorance or denial are at the root of these problems. It's really sad.

LEE BARTON
Newark, CA

Send letters to National Parks Magazine, 777 6th Street NW, Suite 700, Washington, DC 20001-3723. Or email npmag@npca.org. Include your name, city and state. Published letters may be edited for length and clarity.

1920s Style for a 1920s Price

It was a warm summer afternoon and my wife and I were mingling with the best of them. The occasion was a 1920s-themed party, and everyone was dressed to the nines. Parked on the manse's circular driveway was a beautiful classic convertible. It was here that I got the idea for our new 1920s Retrograde Watch.

Never ones to miss an opportunity, we carefully steadied our glasses of bubbly and climbed into the car's long front seat. Among the many opulent features on display was a series of dashboard dials that accentuated the car's lavish aura. One of those dials inspired our 1920s Retrograde Watch, a genuinely unique timepiece that marries timeless style with modern technology.

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"It is abundantly clear that their mining proposal is a serious threat to the dark skies, the quiet solitude, the viewshed and the endangered species of the Katahdin Woods and Waters National Monument."

NPCA's senior program manager for the Northeast Region, Todd Martin, highlighting the dangers a proposed zinc mine poses to the monument, as quoted in Maine Public. A Canadian company has twice sought to rezone this area, which is 7 miles from the park, to accommodate mineral mining despite objections from environmentalists and representatives of the Wabanaki Confederacy, who hold this landscape sacred.

"This reckless development would drain the desert. It could permanently alter the greater Joshua Tree landscape."

Chris Clarke, NPCA's Ruth Hammett associate director for the California Desert program, speaking to Greenwire about a proposed pumped hydroelectric power plant that would stretch across 2,700 acres of land near Joshua Tree National Park. NPCA has opposed the project for decades, citing its potential to suck up groundwater critical to desert life. This fall, the organization sued the Bureau of Land Management over its decision to grant right of way for the project.

"You don't come to this area of Texas to drive a speedway. ... You come to slow down and take in the landscape."

Erika Pelletier, NPCA's associate director for the Texas region, detailing to the Houston Chronicle how the proposed expansion of a highway that bisects Big Thicket National Preserve could harm the park. This summer, NPCA and allies successfully pushed for a plan that would minimize clear-cutting.

PHOTO: LOCATION OF PROPOSED ZINC MINE NEAR KATAHDIN WOODS AND WATERS NATIONAL MONUMENT.

SUN TOURS, founded by Ed DesRosier, offers the only Blackfeet-led interpretive tours of Glacier National Park. Pictured: A tour van ascending Going-to-the-Sun Road.

COURTESY OF SUN TOURS

'In My Country'

More than a century after Native Americans were displaced to create Glacier National Park, a Blackfeet-run tour company offers visitors a chance to see the park from the perspective of the people who lived there first.

When it came to promoting its hotels and chalets in Glacier National Park, the Great Northern Railway found the Blackfeet enormously useful. After the park opened in 1910, Great Northern hired photographers and artists to capture portraits of the Blackfeet and their scenic camps. They urged tourists to come see "Glacier's vanishing Indians." They hired Blackfeet families to erect tipis outside Glacier Park Lodge and paid them to dress in ceremonial regalia and greet arriving trains.

Not included in this publicity was the fact that most of Glacier was, until 1895, part of the Blackfeet reservation. It went unmentioned that the U.S. government negotiated the purchase of this land at a time when the Blackfeet had been weakened by smallpox, famine and the strategic slaughter of the bison that sustained them. Great Northern's postcards and calendars made no reference to Glacier's disputed boundaries or the fact that the Tribe stood to gain almost nothing from this bourgeoning tourist economy.

"I don't think they ever really asked these Native people about their connection to the land," says Kevin KickingWoman, a high school teacher from nearby Browning and an enrolled member of the Blackfeet Tribe. "It was mostly about posing."

This history is part of what drives KickingWoman, who pulls up to Glacier Park Lodge in a white minibus at 8 o'clock one bright summer morning more than a century later. He steps off the bus dressed in shorts, a windbreaker and a Panama hat, with a beaded medallion around his neck. KickingWoman is a guide for Sun Tours, the first and only company to offer Blackfeet-led interpretive tours of Glacier, and one of the only Native-owned tour businesses to operate within a national park. Now in its 31st year, Sun Tours offers half- and full-day guided trips in the park, part of the ancestral homeland of multiple Tribes, including the Blackfeet and the Kootenai.

Tourists file out of the lodge's Paul Bunyanesque lobby, and KickingWoman checks them in for the day's tour. There's a couple from Wisconsin, a family from Virginia, a pair of barbecue sauce purveyors from Florida, a handful of Minnesotans, an Australian woman and an Englishman.

Once everyone is aboard, KickingWoman takes his seat behind the wheel, adjusts a microphone to

his mouth and introduces himself in the Blackfoot language. "You're in my country now," he continues in English, "so I'm going to greet you in my tongue."

KickingWoman turns the bus north and drives past Lower Two Medicine Lake where he points out a Blackfeet lodge — a tipi, to use the Sioux word — on the green plains ascending toward Appistoki Peak. He explains how Blackfeet lodges, which are made out of cured lodgepole pines and canvas (but used to be fashioned from buffalo hide), are passed down through the generations. The lodges got bigger with the arrival of horses in the early 1700s, when they could be dragged on travoises, but they were always portable, designed to move with the seasons like sunlight across a landscape that had never known a fence.

As he drives the bus along the eastern park boundary, KickingWoman starts in on an unflinching history lesson beginning with the Catholic Church's decree in 1452 that allowed for the enslavement of non-Christian people. Some 300 years later, the U.S. Declaration of Independence described Native Americans as "merciless Indian savages." In 1924, KickingWoman adds, "we got to be citizens of our own country." Meanwhile, the Dawes Act broke up reservation land, and an abusive boarding school system, in which Native children were taken from their families and stripped of their language and culture, continued into the 1970s.

At this point KickingWoman pulls the bus over at a wide turnout where the shaggy forested foothills give way to Rising Wolf Mountain and Red Mountain. "You guys can get out here and do an ooh and an aah," he says.

KickingWoman was born and raised on the Blackfeet Reservation. At 18, he went to what was then called Haskell Indian Junior College, and subsequently joined the U.S. Navy. He served in the Persian Gulf War, and then returned to Montana where he worked as a firefighter and a corrections officer before getting a degree in linguistics, cultural anthropology and music ethnology. Today, he's one of only several hundred semi-fluent speakers of the Blackfoot language in the U.S. He teaches the language and Blackfeet history at Browning High School, and for the last four years he's been a guide in Glacier for Sun Tours. "I love the power and energy of this place," he says.

> "We refer to these mountains as grandfathers. We believe they are energy. They have lives."

A few minutes later, the bus is climbing through silvered dead pines, past beargrass and yarrow, to the boundary of the Blackfeet Reservation at the park entrance, where the wind whips Saint Mary Lake into a froth and keeps the U.S., Blackfeet and Canadian flags snapping on their poles. As we drive along the lake, KickingWoman explains the natural history of this glacial valley, describes the region's medicinal plants and tells Blackfeet stories about Napi, the creator of the animals and the earth. In the middle of a discourse on Blackfeet cosmology, and how Polaris is the bellybutton of the universe, KickingWoman interrupts himself to point out a marsh where he often sees moose.

We continue up Going-to-the-Sun Road, lined with lupine and Indian paintbrush, past Siyeh Bend, all the way to Logan Pass, where some of us scramble along the snow-covered boardwalk toward Hidden Lake as tawny bighorn sheep browse on neon-yellow glacier lilies.

The Blackfeet call the Glacier area Mo'kakiikin Miistakiiks, or the Backbone of the World. "We refer to these mountains as grandfathers," KickingWoman says. "We believe they are energy. They have lives."

In 1895, their population nearly decimated, the Blackfeet sold 800,000 acres to the U.S. government for $1.5 million. Today many Blackfeet argue that a surveying error cheated them out of 45,000 acres and, moreover, that the land wasn't sold but offered to the government on a 99-year lease. The agreement of 1895 guaranteed the Blackfeet the right to hunt, fish, cut wood and gather plants on the land, although those rights essentially vanished after Glacier National Park was created in 1910. Disputes over Glacier's boundaries continue to this day.

The clouds have come in low as we begin our descent back down the highway, but they clear long enough for KickingWoman to point out Heavy Runner Mountain. KickingWoman tells the story of Chief Heavy Runner and his band, who were camped on Bear River (east of what is now Glacier) one frigid winter morning in 1870 when the U.S. Army attacked, killing over 200 men, women and children before burning their lodges. Chief Heavy Runner was among the dead, shot while holding papers declaring him "a friend to the whites."

After the story, KickingWoman starts to sing Chief Heavy Runner's song as we listen in silence. The tune is rhythmic and mournful, a song with no words, just wailed syllables heavy with feeling. KickingWoman wrote his master's thesis on Blackfeet songs, and this is one of many he sings on the tour. "The more songs you know, the more you can help people," he says. "I'm kinda like the Native Susan Boyle of Indian Country."

The idea of a Blackfeet interpretive tour of Glacier faced stiff opposition at first, founder Ed DesRosier told me later that day in Sun Tours' breezy two-story headquarters. In the early 1990s, DesRosier was a young man working for the Montana highway department

in East Glacier. An enrolled Blackfeet member, he felt severed from the park, where he'd grown up camping and finding flint arrowheads and buffalo bones with his parents and grandparents. When he saw the park's iconic red jammer buses, it rankled him. It didn't feel right that Glacier's tourism economy was dominated by non-Native businesses, including the red bus tours. Glacier Park Lodge itself sits within the Blackfeet Reservation, on land the U.S. government sold to the Great Northern Railway for $30 an acre.

"I realized there's money to be made," DesRosier said, "and this big corporate entity is making money off the lodging, the food, the tours, the gift shops."

So DesRosier printed brochures and licensed his business. Then he went to the park superintendent. "This has been our home forever," he told him. "There's not a tour company telling that story."

The superintendent sent him to the tour bus concessionaire, who offered him a job as a driver. "I'm not really looking for a bus driving job," DesRosier said.

Convinced that the agreement of 1895 gave him the right to be a park tour guide, DesRosier recruited a cousin and a high school friend. They started taking tourists into the park in a Ford passenger van. Immediately, rangers booked them for operating without the proper paperwork. Eventually, all three were fined, threatened with misdemeanors and given notices to appear before a federal magistrate, who subsequently found them guilty. The Blackfeet Tribal council paid for an attorney to appeal the case to the federal district court, which also found them guilty, and then to the 9th U.S. Circuit Court of Appeals, the last stop before the Supreme Court.

"Our legal team put together an incredible case built upon the agreement of 1895, the history of the Blackfeet, the rights that were recognized translated to the modern world of a business model, the right that Glacier would give us to survive, basically," DesRosier said.

Meanwhile, DesRosier and others staged protests around Glacier, holding signs that accused the park of being anti-Native American and monopolistic. Eventually the Park Service caved and allowed Sun Tours into Glacier, rendering the court case moot.

"Since then, we've been in the good graces," DesRosier said.

As park visits climb and more people seek out unique cultural experiences, Sun Tours is busier than ever, now with a fleet of 10 buses. And they don't just guide tourists. Last fall they brought 22 Blackfeet youth on a tour, more than half of whom had never been in the park before. This year, the entire student population of a local elementary school got on a bus, and for the first time, the Park Service hired Sun Tours to give a tour to about 40 interpretive rangers.

Back in the bus, as we wind our way to the final stop, KickingWoman invites questions from his passengers and gives us a playful quiz on what we've learned.

"Is Glacier what you expected?" he asks.

"No, it's better!" says a woman from Duluth. "It's more."

Even today, it's not hard to find in Glacier the same misguided Native American nostalgia that Great Northern Railway was promoting more than a century ago. Decorations in Glacier Park Lodge include a plastic statue of a man in a war bonnet called "Indian Joe," and two lampposts outside the front doors are carved to look like totem poles, which have no relevance to Blackfeet culture. "It's like we're not real," KickingWoman says. "Like we're just in the imagination of city folk." But for those who are interested, Sun Tours offers daily proof that "Glacier's vanishing Indians" are still here and still connected to this place.

Before pulling up to the lodge, KickingWoman sings us one final song, a song of gratitude. "If I could go back," he says, "I wish we all had our language. That's our defining characteristic. Our language derives from this earth. That's who we are. And our songs. Our songs bring things to life."

BLACKFEET LODGES are passed down from generation to generation and were designed with portability in mind.

©KGPA LTD/ALAMY STOCK PHOTO

JACOB BAYNHAM is a writer in Montana.

A Mammoth Homecoming

A restored 170-year-old stagecoach returns to Kentucky's only national park.

COURTESY OF MAMMOTH CAVE NATIONAL PARK ASSOCIATION

Greg Davis first glimpsed the raggedy carcass in 1968 while rummaging through a warehouse in Mammoth Cave National Park where he was working for the summer. A farm boy from adjoining Hart County, he recognized wagon parts when he saw them, even if what remained was mostly wheel hubs and metal from the undercarriage. "I asked the guy who was with me," recalled Davis. "And he said, 'Oh yeah. That's the stagecoach. That may be the one Jesse James robbed,'" referring to an 1880 holdup during which James allegedly stole a watch and brooch from a local judge and his daughter.

Between the mid-1800s and 1883, a handful of stagecoaches ferried visitors from nearby towns to Mammoth Cave's limestone entrance. Famous passengers included Dom Pedro II, the last emperor of Brazil, and Edwin Booth, a Shakespearean actor and brother of the infamous John Wilkes Booth. Eventually, rail made the coaches obsolete. All but one would leave Mammoth, their fates unknown.

In 2015, nearly 50 years after first spying those rusty castoffs, Davis hatched a plan to restore this piece of park history. He convinced the concessionaire to donate the vehicle to the Mammoth Cave National Park Association and then worked with the association to pool $50,000, which they sent — along with the coach's remains — to Amish craftsmen in Indiana. Some nine months later, a gleaming vision in crimson and yellow returned atop a flatbed trailer. Unfortunately, the park didn't have a space (or doors) large enough to accommodate the coach, which measures roughly 9 feet tall by 12 feet long. So, park staff collaborated with the designers planning the remodel of The Lodge at Mammoth Cave to ensure the hotel could showcase the wood-sided vehicle in its new airy lobby.

In August, Bobby Bunnell, the park association president, sat in the coach as a team of horses pulled it from the park campground to the nearly finished lodge. Bunnell, whose grandparents were among the 600 or so families displaced by the park, feels a measure of closure with the vehicle's return. He called the coach a monument to the time when the people who lived and worked and died on this landscape also served as guides and early promoters of the cave. "It's a piece of local history coming home," he said. —**KD**

Cause for Hope

These caribou take part in one of the longest land migrations on Earth, covering up to 2,700 miles as they walk from their summer calving grounds to their winter range and back. A proposed 211-mile industrial road and copper mining district would threaten this route and slice through Gates of the Arctic National Park and Preserve in Alaska. This fall, a new analysis pointed out the project's potential to harm wildlife and pollute air and water, opening the door for the Biden administration to put an end to a scheme that NPCA has been fighting for years.


©KATIE ORLINSKY

ILLUSTRATION BY CHLOE ZOLA/LEVY CREATIVE

Old Timey All the Timey

My life with a national historical park fanatic.

The whiplash should have been the first indication that I was dating someone different. Driving down a sun-dappled state road in South Carolina in 2006, my boyfriend, Daniel, said, "Oh hey, I wanna show you something," and suddenly veered left onto a side road toward the site of an 18th-century plantation.

"Mmkay," I said, shaking off a neck ache. What were we doing here?

"Ever heard of Charles Pinckney?" Daniel said. I couldn't say that I had. Daniel didn't keep me in suspense for long, however. With the same energy as that of Swifties making their way backstage at the Eras Tour, he practically squealed, "He was a signer of the Constitution, and he lived here!"

At a complete loss, I blinked into the August sun. "Wow. No kidding?"

"Yes!" said Daniel. "Let's go tour the exhibit!"

How could I say no?

Inside, Daniel pocketed the brochures and asked for a lay of the land to see all the highlights of Charles Pinckney National Historic Site. As sweat dripped down my back, I learned about the controversial founding father. Pinckney fought for religious freedom at the same time that he defended the vile institution of slavery. It was a weird date destination, for sure, but I had to admit, it was interesting, which was more than I could say of the last date I'd had before I'd met Daniel.

Back in the car, his buckle made a satisfying click. "Well, what did you think?"

I thought I was being punked, but it wasn't an act. I soon learned that my history major boyfriend wasn't just into the past — he was a time traveler. We're talking about a man who, when told by a grocery cashier, "That comes to $18.44," would respond, "Ah yes, the year James

K. Polk defeated Henry Clay for president." Here was a guy who never passed a historical marker on the freeway without stopping to read it (front and back, mind you), could name all the presidents in order, and kept a tiny copy of the Constitution in his wallet.

Now, I'm not entirely ignorant of history. My folks took my little sister and me to museums and historic sites near our Pacific Northwest home and on trips to the East Coast, but that was nothing compared to Daniel's childhood in Virginia. In the Commonwealth, you can't walk out your front door without tripping over a battlefield or colonial landmark. Many of these sites are managed by the National Park Service, and visiting places such as Yorktown, Jamestown and Appomattox Court House propelled Daniel to eventually become a high school history teacher.

So naturally, this love of historic parks served as the backdrop of our courtship. We were living in Charleston at the time. Daniel would suggest a beach walk, and somehow, it would always end at Fort Moultrie, just off the shore, looking at cannons. On other days, he'd lure me with the promise of a ferry ride around Charleston Harbor. I'd gladly agree, only to be shuttled to Fort Sumter, the site of the first shots of the Civil War.

After Daniel proposed — I said yes — we moved from the Lowcountry to Burlington, Vermont, so he could attend grad school. What I figured would be a weeklong romantic getaway to get there was not what Daniel had in mind. He saw it as an opportunity for a national historic park-a-thon, or as I've come to remember it, a joyride through American history horrors.

He saw it as an opportunity for a national historic park-a-thon, or as I've come to remember it, a joy ride through American history horrors.

First up: Petersburg National Battlefield, site of the longest siege of the Civil War and home to the "Crater," a vast hole where some 352 Confederates were blown up and scores of Black Union troops were killed and injured in the battle that followed. Nothing says romance like pondering 19th-century amputation. Next, we exited the interstate in Maryland to consider the bloodiest day in American history at Antietam. Here, 12 hours of fighting resulted in the death or wounding of around 23,000 men. And then, to cap off the holiday fun, we stopped at Morristown National Historical Park in New Jersey, where Gen. George Washington's Continental Army survived the coldest winter on record.

Now, after 14 years of marriage and more visits to national historic sites than I can count, I can confess that, yes, I've complained once or twice on these outings (or odysseys, as they sometimes feel during hour three of wandering a battlefield). But I've also, dare I say, come to appreciate being married to a historical park fanatic. Many sites have opened my mind, and some have even opened my, big gulp here, heart. Take New York City's Lower East Side Tenement Museum, a site affiliated with the Park Service. Before visiting, I thought I had a good understanding of the emotional and physical challenges immigrants faced. But it's hard to fully wrap your head around the adversity so many desperate people overcame when moving to this country until you've stood in a 325-square-foot apartment that was home to a family of 10.

I had a similar epiphany at Ford's Theatre, the site of Abraham Lincoln's assassination. Walking into the small room across the street where he was laid after being shot by John Wilkes Booth, I was overwhelmed with grief. Here died the man who had worked to protect the Union, who had emancipated enslaved people, who had carried the burden of a floundering country despite the death of his son Willie while he was in office. For four years, Lincoln had embodied our nation's hope for democracy, and in an instant, that hope appeared to be dashed. It was only after touring the museum that I fully appreciated the bewildering poignancy of this historic event.

All this is to say that what I didn't realize on that first visit to the Charles Pinckney National Historic Site was that Daniel was doing more than force-feeding me historical facts. He was holding up a mirror to America and gently pushing me to view the reflection in all its awesome and sometimes awful reality. What I learned was that by wrestling with the past, really getting into the thick of it — at the actual sites where history was written — we can discover that what haunts us can become what guides us to do better moving forward. Once we are honest about past events, we can improve our future.

At least that's what I tell myself and our now 8-year-old son, Wells, when we hear my husband utter his oh-so-familiar "Well, guys, there is this historical park site nearby we could check out." I still roll my eyes, then I crack my neck and start loading the car.

KINSEY GIDICK is a freelance writer based in Virginia. Her work has been featured in publications including The New York Times, The Washington Post, Garden & Gun, Explore Parts Unknown and Roads & Kingdoms.

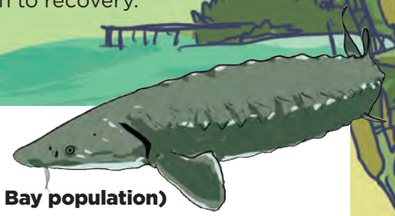
Legal Lifeline

Celebrating 50 years of the Endangered Species Act

This year marks the 50th anniversary of the Endangered Species Act, a law designed to safeguard the country's most imperiled plants and animals. To date, the landmark law has helped prevent the extinction of 99% of the listed species, with over 50 — such as the bald eagle and Channel Island fox, to name two — now considered "recovered." National parks play a vital role in this success, protecting the habitat of nearly half the 1,300-odd plants and animals currently listed as threatened or endangered in the United States and its territories. Through volunteer efforts, advocacy, litigation and education, NPCA helps ensure that the species below — and so many more — continue on the path to recovery. Learn more at esa.npca.org.

Desert Tortoise
(Mojave population)
Status: Threatened

Only 5% of the soft-shelled, bite-sized young of desert tortoise survive to adulthood. Toss in habitat fragmentation and deadly run-ins with vehicles, and you've got a dire situation. To tip the scales in favor of this burrow-dwelling resident, NPCA has fought ill-conceived desert developments near park borders, helped replant Joshua trees in wildfire-ravaged parklands, and successfully pushed for new park designations in California and Nevada.



Atlantic Sturgeon
(Chesapeake Bay population)
Status: Endangered

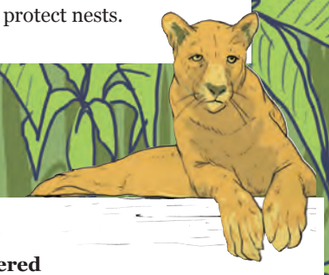
Despite its fearsome size and armored body, the Atlantic sturgeon faces long odds in the Anthropocene. Nets snag them, boats strike them, power plants suck them in, and dams and dredging disrupt their spawning and feeding. NPCA's efforts to save this prehistoric species include pushing for policies to protect the Chesapeake Bay watershed, organizing cleanup projects and seeking habitat remediation to redress damage caused by the construction of transmission towers in Virginia's James River, one of only 22 remaining sturgeon-spawning rivers.

Piping Plover
(Atlantic Coast population)
Status: Threatened

Weighing about as much as a tennis ball, these petite flyers require largely undisturbed beaches to nest and fledge. Cape Hatteras National Seashore staff members have monitored plover territory in this North Carolina shorebird stronghold since 1985, managing off-road vehicle use and erecting fences to protect nests.

Cumberland Bean
Status: Endangered

The Cumberland bean is one of five endangered mussel species within the 125,000-acre Big South Fork National River and Recreation Area in Kentucky and Tennessee. Mussels, considered one of the most endangered groups of organisms in the United States, feed and breathe by filtering water, purifying it in the process. But what's helpful for waterways can spell doom for these long-lived, oblong creatures as pollutants accumulate in their tissues. NPCA's successful battle to stop surface coal mining in the headwaters of the Big South Fork supports the long-term survival of these at-risk bivalves.

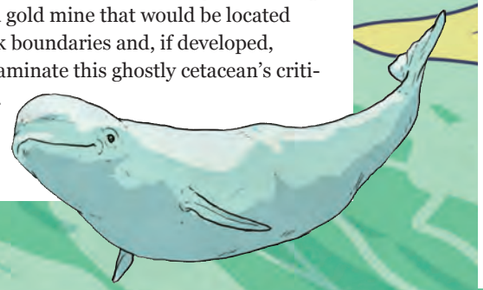


Florida Panther
Status: Endangered

Panthers ranged throughout much of the Southeast, from South Carolina to Texas, until overhunting brought them to the brink of extinction. In 1995, a bold recovery plan, partly funded by NPCA, rehomed eight panthers to the wilds of South Florida. Today, vehicle collisions, which kill upward of 30 cats a year, remain a prime concern, as does habitat loss, spurring NPCA to press for increased habitat protections.

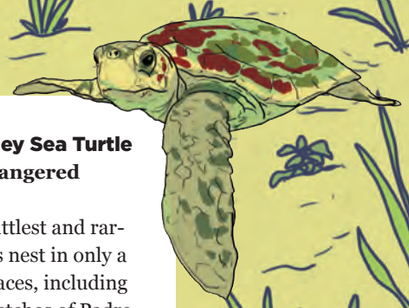
Ghost Orchid
Status: Nominated

One of more than 30 orchid species found in Florida's Big Cypress National Preserve, the ghost orchid clings to trees in the deep, dappled swamp, swapping photosynthesized sugars for nutrients via a symbiotic relationship with a fungus. For years, NPCA has decried plant poaching and habitat-destroying oil and gas exploration in the preserve, and this fall, the organization joined with coalition partners to sue the federal government for delaying the orchid's listing under the Endangered Species Act.



Beluga Whale (Cook Inlet population)
Status: Endangered

Alaska's Lake Clark National Park and Preserve extends from the Aleutian and Alaskan mountains to the shores of Cook Inlet, where an endangered population of beluga whales swims year-round. NPCA is closely monitoring a proposed gold mine that would be located within park boundaries and, if developed, could contaminate this ghostly cetacean's critical habitat.



Kemp's Ridley Sea Turtle
Status: Endangered

The world's littlest and rarest sea turtles nest in only a handful of places, including the sandy stretches of Padre Island National Seashore in Texas. The Park Service actively tracks these gentle creatures at sea and protects their nests and hatchlings on shore.

Grizzly Bear (North Cascades population)
Status: Functionally extirpated

Federally endangered since 1975, grizzly bears haven't been spotted in Washington's North Cascades for more than 20 years. This fall, after relentless advocacy by NPCA and its allies, the National Park Service and the U.S. Fish and Wildlife Service unveiled a draft restoration plan for the keystone species, which could result in a small population of bears being released into this rugged park landscape.

Gray Wolf (Isle Royale population)
Status: Endangered

In 1948, wolves wandered across a Lake Superior ice bridge and settled at Isle Royale National Park in Michigan. Over time, the apex predators contributed to a healthier forest by preying on the island's overabundant moose. But a deadly virus and a drop in migration from the mainland (owing to fewer ice-bridge years) eventually whittled their numbers to two. The Park Service — with decisive NPCA support — began introducing new canids to the park in 2018. The island now hosts some 30 wolves.

ILLUSTRATION BY MICHAEL BYERS/LEVY CREATIVE

ILLUSTRATION BY EVAN BARBOUR

THE PLUCKY Big Bend gambusia was first collected in 1928 by naturalist Frederick Gaige. The species measures around 2 inches in length and thrives in warm water.

The Little Fish That Could

The Big Bend gambusia were down to three fish. A difficult — but remarkable — recovery ensued.

IN THE BEGINNING were Adam and Eve — and Steve. The year was 1957 A.D., and the three diminutive fish, presumably christened by one of the biologists who cared for them, were given a monumental task: to save their species.

Salvation was by no means assured for the Big Bend gambusia, a fish whose entire range at that point had consisted of just two locations, both within Big Bend National Park. One of the two springs that were home to the gambusia had dried out in the 1950s, so staff rushed to collect several fish from the other pond, which was being overrun by aggressive invasive competitors. Early reintroduction efforts failed, and biologists were left with just the three, which were kept in a tank in Austin. Gambusia have a life expectancy of about a year, so time was running out. A refuge pond was built quickly, the three survivors were released in it, and park staff hoped for the best.

There would be more brushes with extinction for the gambusia over the following decades, and plenty of threats to their existence remain to this day. But the plucky little fish have benefited from the assistance of generations of park stewards and other allies. While the gambusia are not out of the proverbial woods (or cattails), their population now numbers in the thousands, and their near-term future is no longer in doubt.

"I think we've done a lot for this fish," said Thomas Athens, the park's wildlife biologist, "and without the park and the Fish and Wildlife Service and all these people that were involved in this in the beginning, this fish wouldn't be here. It just wouldn't."

The Big Bend gambusia is, all things considered, a plain-looking fish. It's less than 2 inches long and is silvery-yellowish in color with a faint stripe running along its flanks. It is one of a few rare species of desert fish (such as the Devils Hole pupfish residing in Death Valley National Park) and the only endangered fish in Big Bend, according to Athens. The species was first collected in 1928 by naturalist Frederick Gaige from a marsh near the Boquillas hot springs, some 16 years before the park was created. The gambusia thrives in water temperatures between 92 and 95 degrees Fahrenheit, so even under the best circumstances, its range never extended much beyond

a couple of warm springs, but its precarious situation took a turn for the worse when western mosquitofish were found to have invaded the gambusia's limited territory. The mosquitofish is native to other parts of the U.S., but it was introduced in water bodies across the country starting in the early 20th century because of its appetite for mosquito larvae. It turns out mosquitofish also enjoy eating the aquatic invertebrates that make up most of the gambusia's diet, and they've outcompeted the gambusia in all but the warmest parts of the ponds they have shared.

Mosquitofish don't seem to prey much on gambusia, but other fish do. In the 1960s, campers apparently dumped a couple of predatory green sunfish into one of the ponds in a misguided effort to be helpful, and nonnative blue tilapia have encroached on gambusia territory at least twice, including in 2008 when the flooding waters of the Rio Grande brought the undesirable fish all the way to the gambusia's habitat. A precipitous drop in temperature can also be deadly, and a cold snap in 1975 caused a massive gambusia die-off. (An insurance population of gambusia was established at a hatchery in New Mexico in 1974, but gambusia there also kept dying in the winter until managers figured out they needed to keep the fish in warmer water.) Of course, without water there is no gambusia, so if the springs that feed into the fish's ponds were to dry out because of groundwater overuse or a detrimental change in rainfall patterns, the consequences would be catastrophic. "If we somehow lose that water, that spring water, then these fish won't survive," Athens said.

To their credit, wildlife managers quickly realized the gambusia needed help if it were to survive these unfavorable odds. The species was listed under the Endangered Species Preservation Act of 1966, the precursor to the landmark Endangered Species Act. Park staff built the first refuge pond in 1957 and created a second one in 2007. Both are fenced in to keep errant livestock and humans at bay, and one is equipped with an electric pump that adds warm water to the pond. Park managers also shifted the water source for the Rio Grande Village campground to a well farther away from the ponds to minimize the potential impact on the gambusia's springs. Other actions designed to help the gambusia have included decommissioning a service road and burning nonnative vegetation.

> "Without the park and the Fish and Wildlife Service and all these people that were involved in this in the beginning, this fish wouldn't be here. It just wouldn't."

A few years ago, the park also enlisted the help of Sean Graham, then a biology professor at Sul Ross State University, to monitor the gambusia population. Graham recruited a few motivated graduate students and made many two-hour trips to trap and count gambusia and measure the ratio of gambusia to mosquitofish where both coexisted. While there, Graham and his team also endeavored to improve potential gambusia habitat in a nearby ditch by trapping and removing the creatures that didn't belong there — from mosquitofish to tilapia, red shiners and red-eared slider turtles. Unfortunately, that work came to a halt during the pandemic when Graham and his family moved to Australia, his wife's country of origin. Leaving the gambusia behind was not easy. "I really kind of fell in love with the gambusia and was really looking forward to kind of making a difference with those guys," said Graham, a herpetologist who now works for Ozfish Unlimited, an Australian fish conservation organization.

In the meantime, the gambusia hasn't been hung out to dry. Park staff go out every year to remove excessive vegetation from the ponds, and Athens recently completed an agreement with curators at the ichthyology collections of the University of Texas to create a survey protocol and resume monitoring gambusia next year.

Additional threats loom, including climate change's uncertain impact on water availability and a disease Graham spotted in a few specimens caught outside the refuge ponds. While the gambusia can continue to count on a few dedicated souls, it can also tap into its own survival skills. Graham was shocked during his surveys to find that some gambusia had persisted in a pond overtaken by all sorts of predators and competitors. "They're battlers," he said.

Kelsey Wogan, one of the graduate students who accompanied Graham on his gambusia-monitoring outings, said the gambusia's best chance is to continue doing what Adam, Eve and Steve — and their countless descendants — did so well: multiply.

"One thing that makes me hopeful for the Big Bend gambusia is they are good at procreating," she said. "They're not like the giant panda."

NICOLAS BRULLIARD is senior editor of National Parks magazine.

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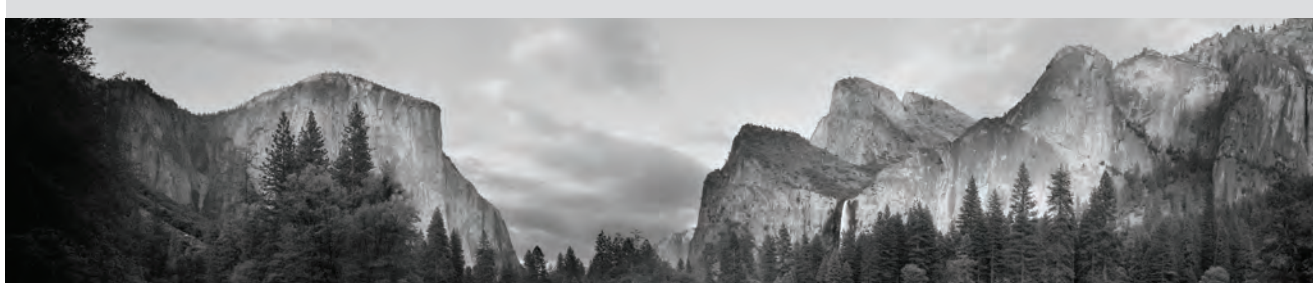

THE LONG HAUL

BY NICOLAS BRULLIARD • PHOTOGRAPHS BY EMILY SIERRA

For more than four decades, Jill Baron has studied the changes to the air and water quality of a small corner of Rocky Mountain National Park, and her research exposed one of the biggest threats to the park's alpine ecosystems.

On a blue-sky spring day, Jill Baron, a petite 69-year-old, inflated her packraft on the snow-covered shore of The Loch, an alpine lake in the middle of Rocky Mountain National Park. When she was done, we hopped in and rowed toward a barely visible buoy in the middle of the lake, which is part of the Loch Vale watershed. Once there, Baron dropped a pancake-sized device called a Secchi disk into the water to measure the lake's transparency, an indication of the amount of sediment or phytoplankton.

Next, Baron took out a few sampling bottles. Some had been baked or acid-washed to remove potential contaminants, but others still needed a little lake-water rinse. "I see a dog hair," said Baron, who has a yellow lab at home, before dipping the bottle into the icy water. Following her established protocol, she collected samples of surface water. She then lowered the flexible tube of a hand pump to sample the water just above the lakebed, 13 feet below. "I don't want to hit the bottom," she said. "It would stir up a bunch of stuff." After a couple of minutes of strenuous pumping, up came lake water — with chunks of algae in it. "That's unfortunate," Baron said. After two more attempts, clear water finally flowed through. Baron filled up her sampling bottles, and we pulled up the anchor and rowed back.

Hundreds of times since the early 1980s, Baron, an ecosystem ecologist with the U.S. Geological Survey and Colorado State University, has made the hour-and-a-half drive from her home in Fort Collins and hiked, snowshoed or skied up to The Loch and Sky Pond, a more remote alpine lake, to collect water samples, lake sediment cores, air pollution data or other information. And over the years, her field technicians and collaborators have gone on scores of sampling trips of their own. Leveraging the resulting massive datasets, Baron and her colleagues have documented the profound and rapid changes in the chemistry and biology of these high-elevation lakes, including the emergence of algal blooms

"It takes someone with a long-term vision and a lot of tenacity to sustain that over decades."

that could have cascading effects on the lakes' food web. Their broad-ranging research into the causes of those changes — especially the impact of increased nitrogen pollution — has yielded crucial insights and potential mitigation strategies that could be used to protect fragile alpine ecosystems well beyond Colorado.

"The research that's come out of this program is not only important to Rocky Mountain National Park," said the park's resource stewardship division lead, Koren Nydick, who was a graduate student of Baron's two decades ago.

Overseeing one of the longest-running ecological monitoring projects of its kind has not come easy, and Baron has faced many literal and figurative headwinds along the way. The weather can turn dangerous, especially in winter, and securing funding has been a perennial challenge. To save money, she assembled a weather station between the two main lakes using some equipment donated by federal agencies. For several years, she couldn't afford to hire a full-time field technician. "We had to make it up as we went," she said. Baron has also contended with several government shutdowns, one catastrophic flood and a pandemic — not to mention the occasional tampering with her equipment by humans and animals alike. "It takes someone with a long-term vision and a lot of tenacity to sustain that over decades," said Brenda Moraska Lafrancois, a National Park Service aquatic ecologist and one of numerous Loch Vale alums — many of them women — who now occupy prominent positions within federal and local agencies.

In the early 1980s, Baron was working in what is now the Park Service's water resources division in Washington, D.C., when she wrote a proposal to collect sediment cores from lakes in Rocky Mountain to analyze the possible impact of acid rain, which had been identified as a major environmental issue in the 1960s in Scandinavia. Meanwhile, in 1980, the National Science Foundation had started setting up several long-term ecological research sites across the country, and a Park Service colleague, Raymond Herrmann, established four such sites. "He had the vision to say national parks ought to have this, too," she said. Baron looked for a suitable site in Rocky Mountain and eventually settled on Loch Vale, a 2.5-square-mile watershed located just east of the Continental Divide. Most of it consists of bare granite, gneiss and tundra, with an old-growth forest of spruce and fir at lower elevations.

During Baron's initial research in Rocky Mountain, she saw little evidence of acidification due to acid rain, but she and her colleagues were stunned by a different discovery: "We found a lot of nitrogen instead," she said. "When we realized that nitrogen was falling out of the sky far in excess of what background values ought to be, we started a number of studies."

JILL BARON on the hike up to The Loch in in July (above). Opposite page: Baron (left) and graduate student Mollie Hendry cross a patch of snow. Previous pages: Baron in the Loch Vale watershed, an area she has studied since the early 1980s.

Nitrogen occurs naturally in the soil, air and water, and it's fundamental to all forms of life. (It's an essential component of the molecules that make up DNA, for example.) In the form of compounds such as ammonia and nitrate, nitrogen also provides food for plants, which, when they die, return nitrogen to the soil, and some portion of it eventually goes back into the atmosphere. The problem is that emissions from livestock, fertilizer, vehicles, coal-fired power plants, and the oil and gas industry cause excess deposition of nitrogen everywhere, including in the most remote corners of Rocky Mountain National Park. Baron was one of the first to document that deposition in alpine environments, and since then, she, her graduate students and other scientists, including some from the Park Service, have conducted numerous studies to understand what happens when you inject a large dose

BARON (LEFT) AND HENDRY at the Loch Vale weather station (top). Above right: Baron tosses a hand pump used to collect lake water into a packraft as Tim Weinmann, who was the field manager at the time, looks on. Above left: Loch Vale is in a designated wilderness area, where most motorized vehicle usage is prohibited, so the team resorts to mules to carry heavy batteries for the weather station.

“We realized that nitrogen was falling out of the sky far in excess of what background values ought to be.”

of what essentially is fertilizer into a fragile ecosystem. Among other experiments, they stimulated the growth of 700-year-old conifers with fertilizer pellets and surveyed the algal communities at the bottom of The Loch with an underwater camera appropriately nicknamed “Nessie.” Baron even estimated how much nitrogen comes from elk urination.

“We looked at forest soils, we looked at lakes and streams and discovered that everywhere we looked, we saw evidence of fertilization,” Baron said.

So what’s so bad about fertilization? Though nitrogen is good for plants, too much of it can kill them. Also, excessive nitrogen in a lake can fuel the growth of green algae, which, when they die and decompose, can create a dead zone with little or no oxygen. One of the Loch Vale project’s most striking discoveries is evidence of a measurable increase in nitrogen-hungry green algae around the year 2000, possibly at the expense of the lake’s diatoms. Later, those green algae even formed algal mats visible from the surface. Isabella Oleksy, who studied under Baron, found that green algae were absorbing nutrients and growing faster when the temperature rose. In other words, climate change likely played a major role in the algal bloom. “Probably these warmer conditions accelerated this trend that was already starting to happen,” Oleksy said. There hasn’t been much research into what this means for other lake organisms, but the consequences are likely substantial and could ripple through the food chain. “It allows some species to thrive and other species to be shaded out, essentially, or outcompeted,” Baron said.

Demonstrating the ecological impact was the first step on the path toward remediation. The Regional Haze Rule, which mandates federal and state agencies to improve visibility — and therefore air quality — at national parks such as Rocky Mountain, helps to reduce nitrogen emissions indirectly (and Colorado recently retired several coal-fired units, a move advocated by NPCA), but astonishingly, there is no federal regulation that specifically targets ammonia, one of the main sources of nitrogen pollution. Baron has published dozens of academic papers, but it is the public talks she’s given that have spurred action. Alarmed by her findings, Environmental Defense Fund and Colorado Trout Unlimited in 2004 petitioned the then-secretary of the Department of the Interior to intervene. It worked, and soon after, the U.S. Environmental Protection Agency, the Park Service and the Colorado Department of Public Health and Environment created a task force charged with finding ways to reduce nitrogen pollution in the park by half by 2032. Without a regulatory framework, all the group can do is try to secure voluntary reductions from those responsible, but “the fact that they are trying to do something about it, even if it is a voluntary effort, is still really good,” said Daniel Orozco, NPCA’s senior clean air and climate manager.

Efforts have focused on the cattle feeding operations, dairy farms and row crops that line the Front Range of the Rockies, and the agencies meet regularly with agriculture industry representatives. One of the novel approaches that has been carried out is an early warning system. The idea is that when the forecast indicates that an upcoming weather event could carry nitrogen emissions from agricultural operations to the park, farmers can minimize the impact by implementing practices such as delaying the spreading of manure on fields or covering compost piles. How widely these strategies are being applied and how effective they are is hard to say. The most recent readings in Loch Vale showed that nitrogen levels were slightly higher than the 2006 baseline (although the state’s population has grown significantly in the interval). What’s more, in a move that Orozco lamented, the coalition recently did away with a provision to consider additional measures in the event that intermediate reductions were not achieved. Baron said there are few options to substantially lower nitrogen pollution from cattle operations short of decreasing the number of cows.

WEINMANN FILTERS water to measure chlorophyll so that the team can estimate the lake’s algae levels.

Meanwhile, Baron has tried to quantify the full impact of anthropogenic nitrogen pollution on Loch Vale and found that part of the problem stems from the very people who seek out the valley’s unadulterated beauty. During her sampling outings, Baron would often come across toilet paper and personal hygiene products, and she wondered if the thousands of humans who set

WEINMANN AND BARON working on the platform built over The Loch's outlet, where water exits the watershed.

foot in Loch Vale during the summer months made any measurable nitrogen contribution to the ecosystem. Using caffeine as a marker of human urine (because marmots don't drink coffee, as Baron wryly noted in her paper's title), Baron and her colleagues analyzed soil collected near visual evidence of human waste and some distance from it. They found caffeine in all the samples and estimated that 2% of the nitrogen in Loch Vale waters comes from people — a relatively small but not insignificant amount. In her discussion of the results, Baron suggested that the nitrogen contributions of visitors and agriculture are not as separate as they may seem. She wrote that the wider use of fertilizers fueled population growth and a better quality of life, which in turn translated into higher numbers of visitors to places like Loch Vale. "I admit I got carried away in this little tiny paper about a national park, but that's the kind of thing we all think about," she said.

None of the Loch Vale research would exist without the sampling trips that take place every Tuesday, rain or shine — or snow — to align with the day on which precipitation chemistry data is collected across a network of sites that are part of the National Atmospheric Deposition Program, a collaborative research effort. Samplers are allowed to collect on Monday or Wednesday in case of inclement weather or other emergencies, but there was no such risk on that late May morning. Before Baron, Tim Weinmann, then her field manager, and Mollie Hendry, one of her graduate students, headed out, Baron urged us to apply sunscreen. "I'm not your mother, but I'm a mother," she said, as we loaded up empty sampling bottles and other equipment into our backpacks. The group decided that Weinmann and Hendry would hike all the way to Sky Pond, while Baron and I would sample The Loch. Baron, who likes to hike, bike and ski, repeatedly told me she wasn't as fast as she used to be, but we moved up the slope at a steady pace.

In winter, no one samples Loch Vale alone for safety reasons. Avalanches are rare, but conditions can be treacherous. "As you cross The Loch to go up higher, the wind is ferocious," Baron said. "It knocks people over." When the lake freezes, they use a hand auger to drill through the ice. It can take up to an hour to reach the water. "Tim is actually the master of this," Baron said. "There's no way I've got the upper body strength to do it." (In October, Weinmann started a new position as air toxics specialist at the Colorado Department of Public Health and Environment.) Through all the seasons and years, Baron has been able to rely on friends and family for extra hands. While Baron's daughter got her first ride to a sampling site when she was 4 months old, by the time she was 11, she was helping collect the samples — and her younger brother would soon follow. "They were both very good field assistants in their day," Baron said. Years later, Baron's son, just back from spending two years in Nepal, fashioned a tumpline to carry weather station batteries — each weighing around 65 pounds — on the last quarter-mile that the mules couldn't cover. "Very Sherpa-like," Baron said. "We were all very impressed."

Lafrancois, who worked at Loch Vale when Baron's kids were young, was struck by how Baron managed to throw herself into her work and spent time with her children while doing it. "I have incorporated that," she said. "I take my daughter with me sampling anytime it's feasible to do that."

In recent years, Baron has reduced the frequency of her Loch Vale trips. She now spends much of her time working on a project to improve the global management of nitrogen emissions and at the John Wesley Powell Center for Analysis and Synthesis, an earth science think tank of sorts that she co-founded. She also plans to examine all the unanalyzed data from the start of the Loch Vale project — once she hires data scientists to help.

Baron brims with ideas for research topics, and her enthusiasm for the work hasn't waned one bit. Still, the time is nearing for her to let go of what she calls her "third child." To that end, she's started the process of transferring the supervision of the Loch Vale project to her former student Oleksy, who just set up her own lab at the University of Colorado, and she's handed over the precipitation sampling to the Park Service.

"I'm just beginning to think about how to pass it on," Baron said. "Because, you know, I am still able to do the fieldwork, but I won't be forever."

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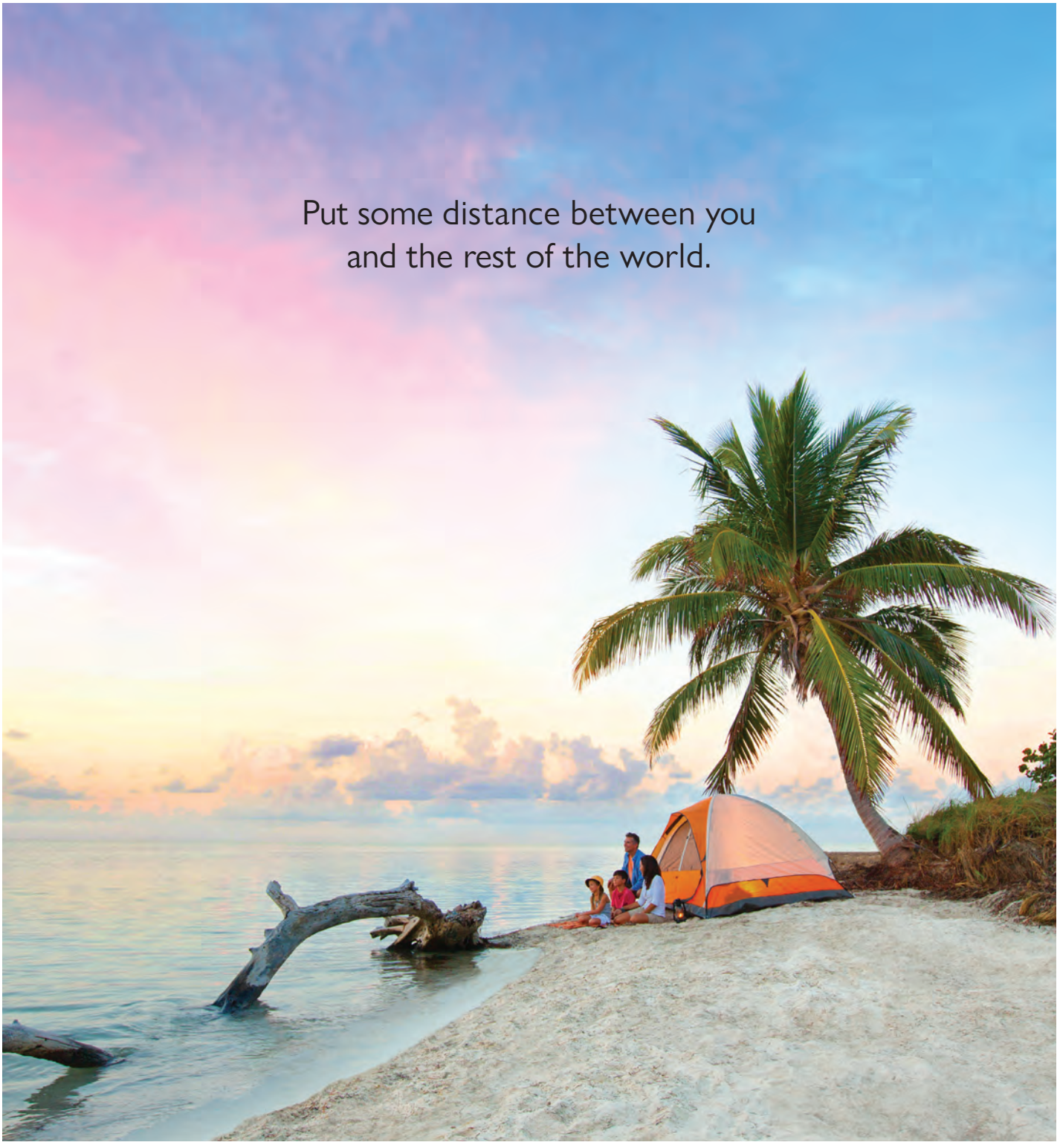

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THE NIGHT SKY reflected in the Gunnison River.

From Rim to River

In the Black Canyon of the Gunnison, night skies and astounding geology enchant visitors.

I awoke in blackness, summoned from sleep by my phone's beeping alarm. A moment of confusion — a sleeping bag against my body rather than sheets, a thin pad beneath me instead of a mattress. Then it came back to me: Right, yes, we were lying in a pinyon copse wedged between rock walls in Black Canyon of the Gunnison National Park. It was 3:30 a.m. And the show was about to begin.

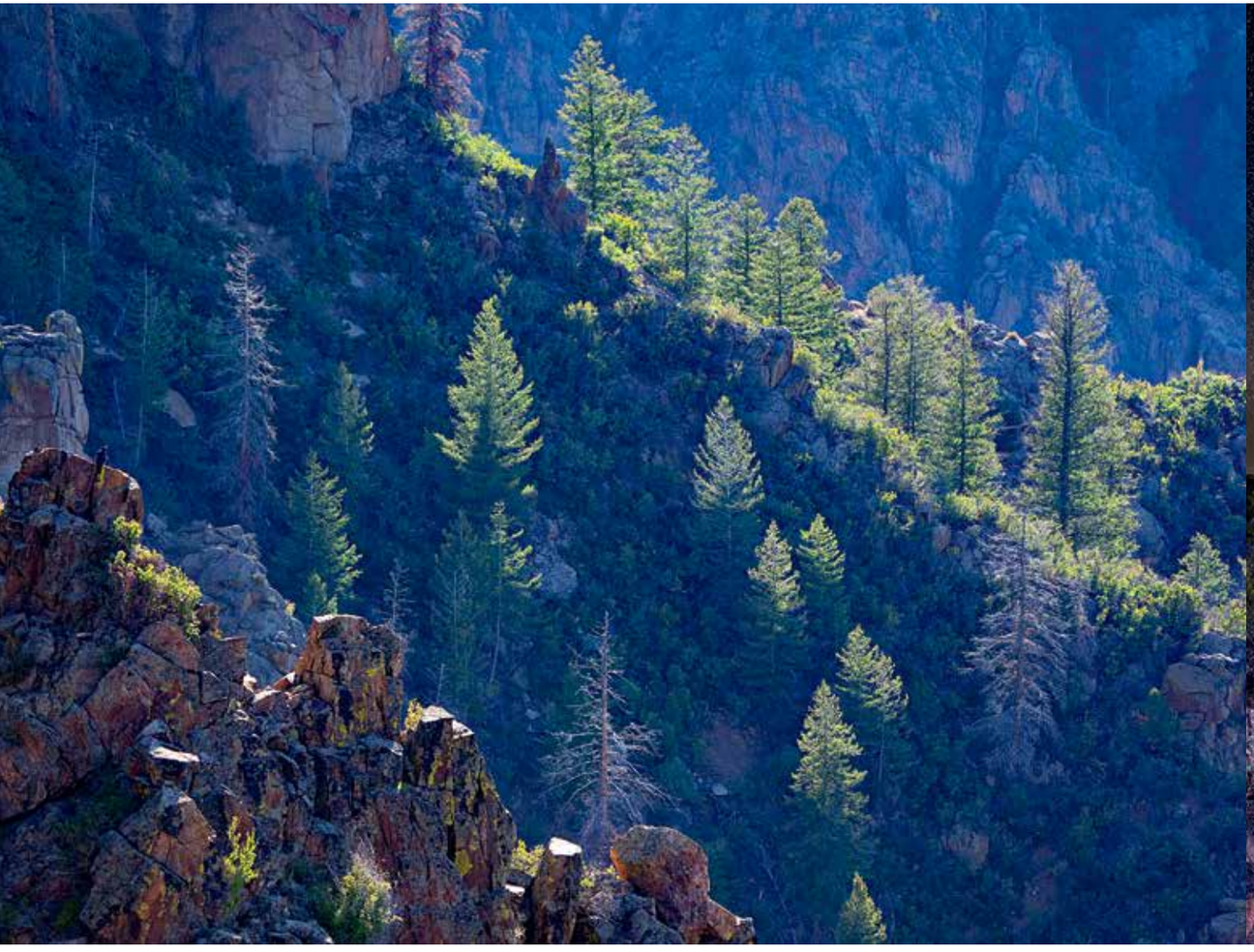
I unzipped the tent and, without sloughing off my sleeping bag, inched out like a massive caterpillar. I lay back on the sandy ground, still warm with the day's radiant heat, and gazed heavenward. A broad sweep of stars wheeled above, broken by the skeletal arms of junipers. The nearby Gunnison River crashed against boulders, the white noise of erosion.

Elise, my wife, emerged from the tent and sat beside me. "Seen any yet?" she whispered.

As if on cue, a meteor blazed across the sky, its trail lingering on our retinas long after the rock itself had burnt to ash.

Full disclosure: We hadn't known about the meteors when we planned our trip to the Black Canyon. Rather, we'd hiked into the canyon the previous day for scenery, wildlife, solitude and fishing — the same elements we usually seek in parks. Earlier that week, though, I'd read that our August trip would coincide with the peak of the Perseids, the annual meteor shower that occurs when Earth passes through the rock and dust trailing off the Swift-Tuttle comet. This was serendipitous given that Black Canyon, which cuts through a remote swath of western Colorado, is an International Dark Sky Park, an official refuge from light pollution. In other words, we'd lucked into

by Ben Goldfarb • photographs by Dave Showalter



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BLACK CANYON OF THE GUNNISON is known for its dark skies (above). The author lucked out and happened to visit the park during the peak of the Perseids, an annual meteor shower. Left: The ridgeline at Sunset View.

a glorious astronomical opportunity — and if that meant setting an alarm for an ungodly hour on a Sunday morning, well, such is the price of beauty.

Over the next 45 minutes, dozens of meteors burned across the sky. Some fell as brief, white-hot bursts of phosphorescence, others as long, gentle arcs, like canyon-spanning tightropes. Eventually the spectacle slowed, and Elise returned to the tent, but I stayed out a while longer, watching the last few ancient chunks of comet rain down upon our atmosphere, feeling grateful for the dark.

Although Black Canyon of the Gunnison is rightly celebrated for its skies, geology is the true star. Some 15 million years ago — an epoch when rhinoceroses and elephants still roamed North America — the Gunnison River poured into a valley between two lines of volcanoes and began to chew through nearly 2 billion years of accumulated rock. The river, fueled by snowmelt and laden with grit, sliced through even the hardest layers at a rate of about an inch per century. The deeper it carved, the more concentrated and powerful it became, eventually attaining 2.75 million horsepower. The result of this relentless blasting: a canyon 48 miles long and, in one spot, more than 2,700 feet deep — deeper, in fact, than it is wide. It's these precipitous dimensions that give the Black Canyon its name: Its walls are bathed in shadow, and some segments of its floor receive less than an hour of daily sunlight.

The Black Canyon's legendary sheerness makes it a forbidding place. The Utes, Native inhabitants in the region, lived along its rim but seldom descended into its depths. John Williams Gunnison, the U.S. Army captain who visited in 1853, deemed the canyon the "the roughest, most hilly and most cut up" country he'd ever seen. Not until 1901 did a pair of explorers fully navigate the canyon's roaring, boulder-strewn bottom — both on foot and, incredibly, an inflatable rubber air mattress.

Horace Albright, the National Park Service's future director, stuck to admiring the chasm from above in 1917. "By God, it'd make a magnificent national monument or even a national park," Albright declared. Although Albright's prophecy was partially fulfilled in 1933 when the canyon was named a monument, it would take more than six additional decades for Congress to redesignate it a national park. "It's a burden being taken off," Ben Nighthorse Campbell, the U.S. senator and Northern Cheyenne Tribe chief who pushed for the park, declared when 14 miles of the Black Canyon finally attained park status in 1999. "You're just sort of euphoric."

Perhaps because Black Canyon is among America's newer national parks — and, at less than 31,000 acres, one of the smallest — it's not jammed with tourists. Fewer than 300,000 people swung through in 2022, placing it near the bottom of the 63 national parks in visitorship. Like John Gunnison and Horace Albright before them, most of these gawkers merely peer down from the rim. Only expert kayakers can paddle the canyon's Class V rapids, and the Park Service deems rafting "not possible." With a wilderness permit, however, you can hike to the inner canyon, the park's deep, dark floor, via one of the half-dozen established routes that switchback down near-vertical flanks. Elise and I would do old Horace one better, we decided: We were going in.

A month before our trip, Elise nabbed us an online reservation for Red Rock Canyon, where the Park Service allows only four groups per day. It was an appealing option. The Red Rock section of the canyon floor, on the park's western edge, is wider and shallower than the inner canyon proper, and the access trail, which descends 1,300 vertical feet in 3.5 miles, isn't particularly steep or treacherous. Red Rock thus offered a chance to experience the beauty and serenity of the Black Canyon's interior — all without braving trails better suited to bighorn sheep.

A FLY FISHERMAN casts into the Gunnison River in the East Portal section of the inner canyon, which can be accessed from the south rim (below). Right: The canyon is 48 miles long and, in one spot, more than 2,700 feet deep. This precipitous drop gives the Black Canyon its name: Some segments of its floor receive less than an hour of daily sunlight.

The tiny trailhead parking lot, when we arrived on the appointed afternoon, held just one other car — almost inconceivable in an era when national park visitors get into literal fistfights over parking spaces. We donned our backpacks and followed a dirt two-track through pasture specked with desiccated cow patties. Prairie dogs popped from their burrows to chuckle their alarms; an eastern collared lizard posed for photos, emerald flanks glittering. We were grateful for the cloud cover that made our walk through this stark landscape pleasant. Piece of cake.

Well, no. After a mile, the road passed through a gate, entered tall grass and dwindled to a proper trail along a shallow creek.

The trail stuck to the bank for a few minutes, then vanished in thickets of Gambel oak. We thrashed through grass and water, thoroughly soaking ourselves, before finally locating the trail again, a crumbly goat path cut into a sandstone wall. Then the trail descended back into the creek and faded to a line of matted grass on the other side. If national parks are America's best idea, the Red Rock Canyon trail seemed to be America's vaguest notion.

That impression was repeatedly confirmed over the next three hours. The trail clambered over boulder fields, blundered through oak tunnels and twined with the stream in multiple places. We lost it, found it, lost it; we played Marco Polo as we crashed through pinyon stands; we skidded down muddy waterfalls. (Yes, at one point, the trail was a waterfall.)

"You look like you got in a fight with a cat," Elise said as I emerged, bleeding, from a tangle of sumac. "Like maybe a mountain lion."

However disgruntled I may sound, I promise this is not a litany of complaints — not every trail needs to be the boardwalk around Old Faithful — but rather a descriptive account that may help future adventurers make their own informed decisions. To that end: Did I mention the poison ivy? So much poison ivy. We high-stepped over it and twisted around it like art thieves in a heist movie. "We should've brought a machete," Elise half-joked.

As the afternoon wore on, our morale flagged, and might have collapsed altogether were it not for the scenery. Sandstone spires sprouted overhead as the canyon narrowed, and sparkling metamorphic veins shot through tilted walls. Finally, we entered the Black Canyon and beheld the Gunnison River, a foamy, greenish torrent sliding along rose-tinted cliffs. We dumped our backpacks in a juniper grove alongside a glassy pool, an inviting pause in the river's breakneck course. Then we stripped off our clothes, eased our sweaty bodies into the Gunnison's invigorating chill, and washed our cares and poison ivy away.

And what of the river itself? The Gunnison River originates in the Rocky Mountains and rolls 180 miles west before pouring into the Colorado River at the city of Grand Junction. Like most Western rivers, the "Gunny" is hardworking, diverted by tunnels and canals to irrigate hundreds of thousands of acres of farms and ranches. The 2.5-hour drive to the Black Canyon from our home in central Colorado had followed the Gunnison's course past several dams, including the dramatic Blue Mesa, which widened the slender river into a shimmering 9,000-acre reservoir — one of the largest bodies of water in the state of Colorado.

Although the dams lie above the Black Canyon, they have nevertheless transformed the park's ecosystem. For one, the cold, clear flows that spill from the dams have created superb trout fishing conditions. Today the Gunny is a certified Gold Medal fishery, meaning, basically, that it produces lots of big trout. Granted, these fish are nonnative brown and rainbow

trout historically stocked for anglers, rather than the distinct lineage of cutthroat trout that once inhabited these waters. As an avid fisherman with a strong preference for free-flowing rivers and native trout, I have decidedly mixed feelings about these developments. But I'm powerless to resist the allure of wild trout, no matter their provenance, and no sooner had we made camp than I was marching down to the river, fly rod in hand.

Decision time: What fly to present my quarry? As I approached the white-flecked Gunny, a soft rain of grasshoppers pattered against chest-high grass. Easy enough, then. I tied on a hopper imitation, clambered onto a rock and cast into an eddy. The grasshopper vanished in a swirl of foam, and I quickly captured and released a lovely brown trout bedecked in crimson and obsidian spots: my first Gunnison River fish.

This was an auspicious start, but it wasn't browns I sought. Rainbow trout make up around 20% of the canyon's fish population, some true lunkers among them. And the fish have a compelling backstory: In the mid-1990s, the Gunnison River's young rainbow trout began to die of whirling disease, a parasite-caused malady whose victims spin madly until they perish. The disease hit other rivers, too, and soon Colorado's wild rainbows had virtually vanished. But in 2012, state biologists found a cluster of rainbow trout in the Black Canyon's East Portal section that had evolved resistance to whirling disease. The scientists collected eggs, bred the fish in a hatchery, and poured them back into the Gunnison and other rivers. Today the park's population is thriving, although anglers still have to release all rainbows. (Hungry fishermen can harvest four brown trout per day.) Perhaps this sort of thing only excites fish nerds like me, but the Black Canyon is a landmark location in the annals of Colorado fisheries science, and I longed to hook one of these fascinating chimerical rainbows, amalgams of natural selection and human technology.

For a time, it seemed I wouldn't have the chance: After my first trout, the river turned quiet. Happily, though, as dusk descended, a blizzard of mothlike caddisflies materialized on the water, and soon the trout were leaping like porpoises. I landed three browns in short order, including an 18-incher with the robust proportions of a nuclear submarine.

THE PULPIT ROCK OVERLOOK (above). Left: An ancient, twisted juniper tree graces Dragon Point on the south rim.

BLACK CANYON OF THE GUNNISON is located in western Colorado, some 260 miles southwest of Denver. There are no restaurants or lodges in the park, but visitors can stay at one of three campgrounds, including East Portal, which is technically in Curecanti National Recreation Area.

©KAREN MINOT

Preparing to cast again, I glanced toward a riffle and spotted a tantalizing flash of dark purple: the glinting back of a rainbow trout. I flicked my line toward it, the fish rolled and the fly vanished. The rainbow wheeled downstream, stripping 30 feet of line off my buzzing reel in an instant, as though I'd hooked a powerboat. Once in deep water, the trout refused to budge, and the rod shivered with every shake of its massive head. Finally, it spit the fly and the line went slack. As it turned out, no rainbow would touch my net on this trip, but I wasn't disappointed. Instead, I felt fortunate to have interacted with so powerful a creature, however brief our connection.

BIGHORN SHEEP are able to climb the canyon's steep slopes thanks to rubberlike hooves that help them grip unstable surfaces.

The next morning, after a riverside pancake breakfast, we hiked out of the canyon. The blessed cloud cover had vanished, and of course now we were going up, but our new familiarity with the trail kept us on track, and we made good time. The only snafu occurred when I took off my shoes to ford the stream and brushed a cactus with my left pinkie toe, injecting it with dozens of near-microscopic spines like shards of fiberglass. ... But let us not speak of such things.

Having spent time within the canyon, we decided next to experience it from above. After reuniting with our car at the trailhead, we drove past the main entrance — gaining many hundreds of feet of elevation as we climbed toward the rim — and along the 7-mile-long main park road, which parallels the sinuous south edge. (Roads follow both the north and south rims, but the south is far more trafficked, owing to ease of access.) The road dead-ended at Warner Point, where we parked and hiked three-quarters of a mile past centuries-old pinyons, artfully sculpted into bonsai by time and the elements. Wind hissed over the Colorado Plateau, and golden eagles rode thermals on silent wings.

The ridge proved the perfect vantage from which to admire western Colorado's geography. To the south sprawled the green hayfields of Montrose, the park's gateway town, vivid proof of the many straws that sip from the Gunnison. Beyond the farms rose the jagged volcanic lip of the San Juan Range, still dotted with snowfields. To the north, the neat isosceles triangles of the West Elk Mountains; west of that, the sawed-off bulk of Grand Mesa, the world's largest flat-topped mountain. Below us yawned the canyon itself, an infinite pastel spectrum of rose, purple, beige and maroon. It seemed incomprehensible that the faint indigo thread of the Gunnison carved this abyss.

After pitching our tent at the South Rim Campground that evening, we embarked on a tour of the rim's many overlooks. We paid visits to Pulpit Rock, a promontory that juts so far into the canyon that it seems you could step off and plunge straight into the Gunnison; Painted Wall, a vertiginous rock face etched with pink pegmatite as though scrawled with alien runes; and Tomichi Point, which we redubbed Grouse Terrace in honor of a female dusky grouse basking atop parked cars. Then it was on to Sunset View to watch our fiery orange orb descend through lilac clouds and turn the Gunny to molten bronze. At the Grand Canyon such a spectacular display would have been a mob scene, but here only a couple dozen tourists had congregated. A septuagenarian serenaded his friends on acoustic guitar. The sky faded, and we dispersed.

Six hours later, I again woke in the dark to stroll our campground loop and watch the Perseids. The meteor shower was less spectacular than it had been during our night by the river, but the Milky Way was more majestic here on the plateau, its pale brushstrokes unobstructed by canyon walls. I heard tent zippers buzz and an RV door snap shut, and realized, with a pleasurable sense of solidarity, that I was enacting this nocturnal ritual with a few other park-goers — a small community of sky-watchers gathered in the dark.

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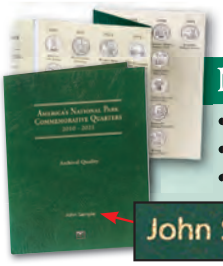

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The Anacostia River and the national park site that flanks it were long mistreated and neglected.

Are the tides finally turning?

The Long and Winding Recovery

photographs by Tyrone Turner
text by Rona Marech

Like many in his generation of Washington, D.C., natives, Alan Spears frequently sped over the Anacostia River in a car as a child, but that was about as close as he got to the waterway, even though it curled by his neighborhood on its way to the Potomac, the city's more famous river. "The Anacostia seemed to be just this *thing* that was there," said Spears, 59, who grew up "east of the river," in local parlance. "I would hear stories from time to time about the dangerous water quality. … It seemed to be almost more of an impediment than a body of water or a resource." His parents never brought him to Anacostia Park, the 1,100-acre national park site that hugs the river as it eases its way through Washington.

"It was a dying river that people couldn't even physically interact with," said Christopher E. Williams, president and CEO of the Anacostia Watershed Society, a nonprofit that has been working to restore the river for more than 30 years. Those who so much as touched the water would immediately scrub with soap, and the park was underutilized and unsafe.

Back then, the woes of the 8.5-mile-long Anacostia seemed almost insurmountable — and downright horrifying. Due to the city's insufficient, old water infrastructure, a huge amount of raw sewage would effectively get dumped into the river after storms. River dredging and the construction of seawalls and dry land along the river banks, a project that began in the 1890s, had stolen wildlife habitat and wiped away thousands of acres of marshland, a natural flood buffer. The trash constantly knocking around in the water was not just bottles but everything from grocery carts to refrigerators. Moreover, industry along the riverbanks — including the Navy Yard, the globe's largest naval arms manufacturer during World War II — had left behind a toxic stew. "You really just have to think of the Anacostia as having been an industrial waste stream," said Doug Siglin, the former head of the Anacostia Waterfront Trust.

It was hardly a coincidence that a river flowing through majority-Black neighborhoods suffered from decades of institutional neglect, activists say. To make matters worse, the nearby coil of highways made it difficult for locals to stroll over, and the river served as Washington's version of the tracks, exacerbating race and class divisions in the city.

It's been a slow upstream battle since those muddy,

FOR DECADES, many locals were afraid to visit Anacostia Park, but these days, the 1,100-acre green space beckons a wide range of people (such as Antarah Crawley, pictured) who go there to bike, run, picnic, fish, play sports — or just lie in the sun along the banks of the Anacostia River. Previous pages: A sunset view of the river and the Frederick Douglass Memorial Bridge. The photo was taken from the 11th Street Bridge, which is about to undergo a major overhaul that will transform it into an elevated park with playgrounds and gardens.

"You really just have to think of the Anacostia as having been an industrial waste stream."

MEMBERS OF the Capital Juniors Rowing team after practice. The program draws middle and high school students from across the city, including from schools in nearby neighborhoods that don't offer rowing programs.

KELLY TINDALL collects trash while kayaking, accompanied by her dog, Anacostia. She began regularly "trash paddling" along the river during the pandemic.

dark days, but the tides are finally turning for the Anacostia River and Anacostia Park, whose health and well-being are inextricably linked. "The stars have aligned, and everything is headed in the right direction, which is amazing to see," said Ed Stierli, Mid-Atlantic senior regional director at NPCA, which has joined other advocacy groups, community members and political leaders to lobby for the waterway and the park, home to the waterlily-strewn Kenilworth Park and Aquatic Gardens and a beloved outdoor roller-skating pavilion.

Among the most significant advances is an update to the region's antiquated sewer system. The construction of four massive tunnels, a multibillion-dollar project slated for completion in 2030, will drastically reduce sewage overflow into the city's three main waterways — Rock Creek, the Potomac and the Anacostia. The Anacostia tunnel system, which opened in 2018 and was completed in September, is already closing in on the goal of capturing 98% of those overflows. The watershed society, which began measuring the health of the river in 1989 by looking at factors such as E. coli levels and submerged aquatic vegetation, gave the waterway a passing grade for water quality for three of the last six years, a monumental shift after handing out F's for decades.

Visitors can see — and smell — the changes for themselves. Vegetation is returning, fish populations

ROLLER SKATERS line dance at the Anacostia Park skating pavilion, a beloved gathering place in Anacostia Park — and the only skating rink in the park system (above). Left: Harmony Buckett, 10, jumps rope at the skating pavilion.

KEITH SPENCE said he sometimes likes to come down to the Anacostia River after work to play his guitar.

“Baby, they better not go in that water.”

JAZMINE THOMAS, left, and Ashley Rodgers at Friday Night Fishing, a free, catch-and-release event hosted by Anacostia Riverkeeper during the summer months (left). When a temperate evening suddenly turned stormy, they were reluctant to leave because they were having such a good time. They were the last pair out on the dock. Above: Great egrets wade in Kingman Lake, part of the Anacostia River system.

are up, and other animals are also coming back, including otters and beavers, whose presence is auspicious because both species are sensitive to water quality. At the same time, trash traps and cleanup efforts have cleared much of the visible pollution from the water, and new docks have improved accessibility. To date, nearly 20 miles of the Anacostia Riverwalk Trail are complete, and the planned 11th Street Bridge Park will eventually include playgrounds, gardens and a community education center. Through the Great American Outdoors Act, a cluster of Washington parks (including Anacostia) recently received $11.8 million. In Anacostia, the money will be used for rehabilitating facilities and recreational amenities, among other projects.

On a weekday afternoon this fall, evidence of these rising fortunes was on full display. Skaters, from wobbly beginners to pros floating through graceful spins, circled in the pavilion. Along the river trail, people skateboarded, ran, biked, walked dogs or just watched the lazy pulse of the river. Flocks of birds swept in and out of the shaggy greenery along the banks. The river is notoriously murky, but the water almost shimmered in the distance under white clouds.

“It ain’t Rock Creek, but we’re getting there,” said longtime resident Tijunna Williams, who was on a walk with a friend, referring to the waterway and eponymous park that run through a higher-income swath of the city and historically have received more attention and care.

For the last decade, the rallying cry of the watershed society has been a swimmable, fishable river by 2025. But now that the deadline is approaching, it’s increasingly clear that it won’t be safe for people to eat their catch without limits by then, CEO Williams said. Legacy chemicals trapped in the riverbed are a hazard for fish, and the fixes, which could include dredging or covering toxic hotspots, are tremendously expensive and slow. A swimmable river, on the other hand, is a goal within reach. This summer, the nonprofit Anacostia Riverkeeper planned an event billed as as the first permitted river swim in 50 years. Unfortunately, “Splash” was canceled because the Anacostia River tunnel was temporarily disconnected for work on another tunnel, causing a marked drop in water quality. Bad weather subsequently scuttled the backup event. Boosters see the near-miss as an encouraging marker, however. “It’s not to be understated how exciting it is that we can even be hosting an event like this,” said Quinn Molner, director of operations at Anacostia Riverkeeper, adding that

VIEW OF THE Robert F. Kennedy Memorial Stadium from an island in the river. Community members and advocates are divided about a proposed stadium development project there, which they see as either a looming disaster for the river or a windfall for nearby neighborhoods.

they are now planning a June makeup date.

Still, convincing locals to take a dip is another matter. "Baby, they better not go in that water," Tijunna Williams said shortly before the second cancellation. She remembers when there were tires everywhere and cars in the mud and who knows what at the bottom. "If there is a bottom!" she added.

That sort of reluctance is understandable, said Christopher Williams, but he believes it can be overcome with education and outreach. He pointed out that making the river "boatable" seemed like a pie-in-the-sky goal when the watershed society was founded, and now people row and paddle there without a second thought.

Meanwhile, the work, the dreaming and the worrying continue. Some true believers picture a day when adjacent neighborhoods have unfettered access to the park. Others are pondering how to maintain hard-won conservation gains in the face of climate change. And the future of the defunct RFK Stadium on the west bank continues to preoccupy community members and activists, who see a proposed new NFL stadium and mega-development as either a looming disaster for the river or a potential boon to nearby neighborhoods. Any new development raises a timeworn question: How do you ensure longtime residents are reaping the benefits as the waterway and park blossom, and rent, property taxes and other costs rise? "I don't want the very people who have lived with the environmental degradation of the river for the past 50 years to be displaced when the river starts to recover," Christopher Williams said.

Spears, NPCA's senior director of cultural resources, no longer resides near Anacostia Park, but his mother still lives in the house he grew up in. Even so, he never had visited the park with her until a sunny day last spring, when his mother turned 97. He wheeled her to the river, where he made a video of her taking a short walk. "She liked being down by the water, and she liked being out among people," Spears said. "At its most basic, that's exactly what we want that kind of resource to do for people."

TYRONE TURNER is a photojournalist based in Arlington, Virginia, whose work orbits around recurring themes: the health and welfare of children and families, and the threat to coastal areas posed by climate change and sea-level rise.

RONA MARECH is editor-in-chief of National Parks magazine.

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If you crave high-elevation powder, Badger Pass Ski Area on Glacier Point Road is a great place to downhill ski, cross-country ski, snowboard, snowshoe and slide down the tubing run! Opened in 1935, Badger Pass is one of only three lift-serviced ski areas operating in a US national park. The area is open mid-December through March based on snow conditions. Known as the best learn-to-ski, family-friendly destination, Badger Pass offers inexpensive lessons, equipment rentals, and snowshoe hikes with rangers.

For a non-snow or après-ski experience, the Gold Rush towns of Mariposa County exemplify the 19th century adage "Above the fog and below the snow." Located in the Southern Sierra foothills, these small towns exude authentic Western charm and gold mining history. The county seat of Mariposa boasts award-winning museums and artisan shops. Visitors can sample locally-produced apple cider, specialty olive oils, hand-roasted coffee and craft beer or savor local cuisine in restaurants that range from homey to elegant.

Whether you choose High Sierra, Gold Country, or some of both, Yosemite Mariposa County has lodging options to fit your tastes and budget: rustic cabins, a four-diamond resort, bed and breakfasts or affordable hotels.

Courtesy Gulf Shores & Orange Beach Tourism

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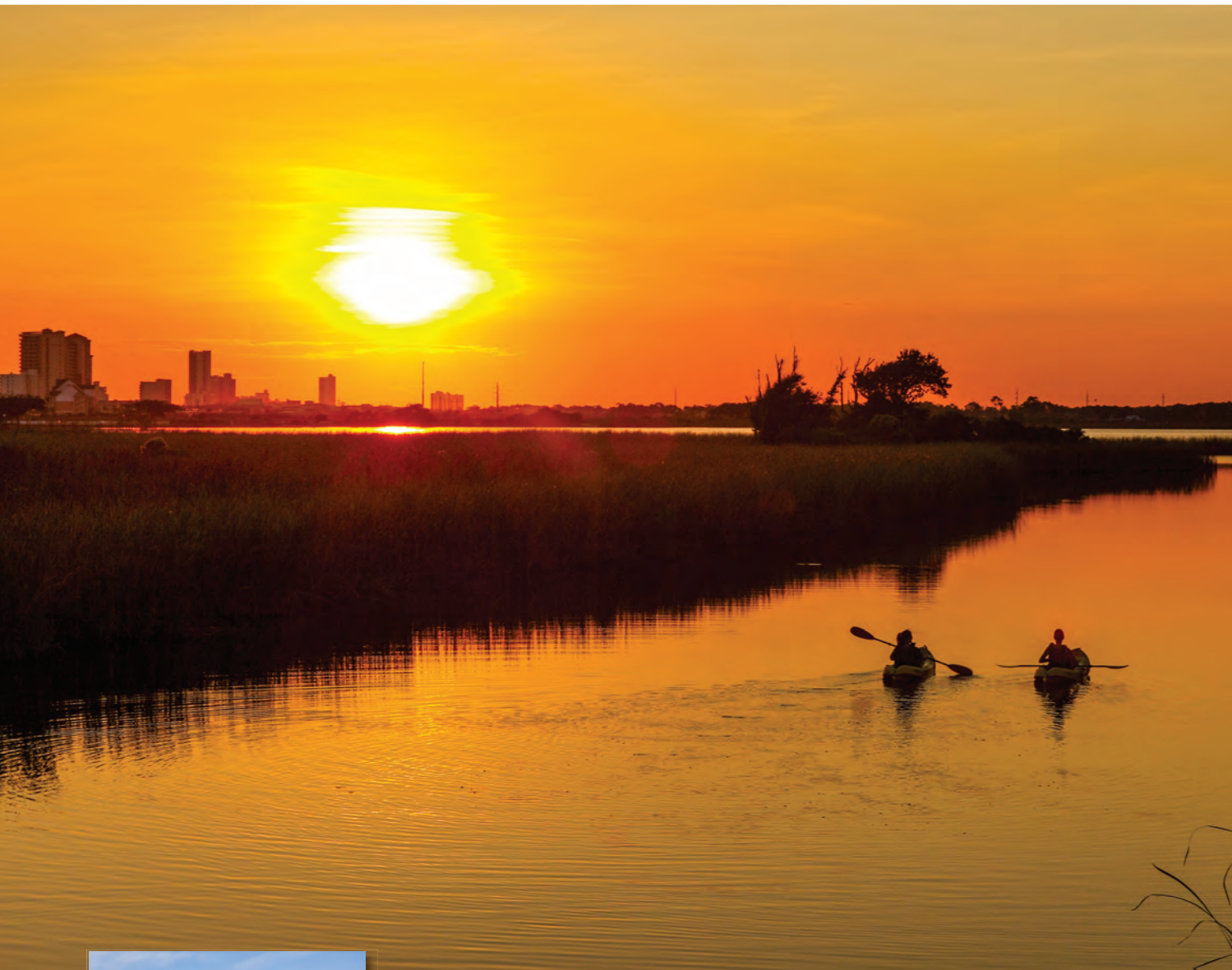

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A DESIGNATED Traditional Cultural District, the Badger Two-Medicine stretches across 130,000 acres in northwest Montana.

A Land Liberated

For four decades, people who care about a wild corner of Montana called the Badger-Two Medicine fought to keep the land free of oil and gas leases. This autumn, the final holding fell.

THE GOOD NEWS arrived just as our Montana summer was folding itself into fall, just as the aspen flickered to gold and the dogwood began painting riverbanks with brushes of burgundy. It landed in my inbox with not just one, but two exclamation marks. The message was concise but very clear: The last of the federal oil and gas leases had been retired in the Badger–Two Medicine area, up along Glacier National Park's southeastern border.

That sentence looks almost trivial here on the page; it's so short it might easily be mistaken for a footnote. But for those of us who had waded hip-deep through the struggle for so very long, it was more sea change than seasonal change. Whiskers had grayed while we had worked and waited for this news — this justice. Old friends had passed. Four full decades of life had unspooled, and so it seems worth taking a moment to tell the tale, or at least my version of it.

Up in northwest Montana, where prairie grassland crashes headlong into Rocky Mountain heights, there's a remarkable 130,000-acre sprawl of wildland tucked tight between Glacier Park, the Bob Marshall Wilderness and the Blackfeet Indian Reservation. Named for the two rivers that stream from its summits — Badger Creek and the Two Medicine River — the Badger-Two Medicine is a wonder of wild rolling foothills and pothole lakes ringed by dark pine forests and shadowed by alpine peaks. It's the finest habitat I've known, with mountain lions, bears, wolves and wolverines tracking seasonally, following prey since time immemorial from lowland winter range to the cool of high summer meadows.

The adjacent wilderness and park boundaries safeguard mostly high-altitude rock and ice; the Badger-Two Medicine embraces the rich habitat in between, the soft green that always has connected the stretches of hard mountain scenery we've protected. It's also a landscape held sacred by the Blackfeet Nation — a source of Blackfeet origin stories and a crucible for Blackfeet culture. Managed by the U.S. Forest Service, the Badger-Two Medicine is part of a larger region

known by the Blackfeet as Mo'kakiikin Miistakiiks, the Backbone of the World. Mountain summits here carry names grown straight from the roots of Blackfeet cosmology: Morning Star, Poia, Little Plume and Scarface. This is not history. This is today's cultural practice, still very much alive.

I guess what I'm saying is that for me, the Badger-Two Medicine is the last refuge of much that matters most in this world. It is also where my heart lives, where my head goes when it needs a rest, where I hunt elk and gather summer berries.

In the early 1980s, the Reagan administration determined that the highest and best use of this wild cultural treasure would be to lease it to oilmen for $1 an acre.

Many people, Tribal and non-Tribal together, fought for decades to keep those leases undeveloped. We also fought to pass federal legislation prohibiting any new leases, to negotiate the voluntary retirement of as many leases as possible, to ban all motorized vehicles, to ban all commercial timber harvest and, eventually, to make the entire Badger-Two Medicine a Traditional Cultural District, a designation that requires federal agencies to consult with Tribes about potential development.

That's a whole lot of fighting for folks who never wanted this battle. "The Blackfeet Nation did not create this controversy," the Tribe wrote in a recent statement. "We had no hand in the dealings between the American government and private industry that established these leases in the first place. Our Tribal leadership was not consulted, and our community welfare was not considered. And yet it fell to us to defend our sovereign treaty rights, our traditional lands and waters, and our cultural survival. This has long been the case, as governments and private interests have repeatedly sought to profit at the expense of our traditional territories and cultural practices."

The most recent installment of the battle was sparked in 2013 when a Louisiana oilman, head of Solenex, filed suit demanding access to his Badger-Two Medicine leasehold. His argument was, perhaps, not entirely unreasonable — it had been more than 30 years since he'd bought his lease, after all, and he'd never been able to develop it. Thirty years, he said, was too long a delay.

But how long should a company have to wait before industrializing this last refuge? Twenty years? Thirty? Forty? What's the "right" amount of time to pause and consider before cutting off these ancient flows of wildlife migration? Before stamping out Blackfeet cultural practices that reach back, uninterrupted, through so many millennia? Honestly, 30 years didn't really feel that long.

This story, as I lived it, goes back 36 years, to when I was a fresh-faced sophomore at the University of Montana. I had enrolled in a program called "wilderness and civilization," which combined economics, forestry, literature, art, biology, public policy and a whole lot more into an integrated curriculum exploring that complicated intersection where human nature meets wild nature. We spent the first two weeks of the program backpacking across the Bob Marshall Wilderness Complex, straight through the Badger-Two Medicine.

© CHRISTIAN HEEB

MANY BLACKFEET ELDERS, including the late George Kicking Woman (pictured), spent decades tirelessly advocating for the protection of the Badger Two-Medicine landscape.

It was 1987, and the ink on those Reagan-era leases was still fresh, as were the wounds the leases had inflicted. Guest lecturers met us occasionally along the trail, including Blackfeet elders who were (yet again) fighting both the government and industry.

Buster Yellow Kidney. George Kicking Woman. Earl Old Person. Curly Bear Wagner. I learned the stories of their struggles when I was a student, reported on those stories during a career as a journalist, and helped write new chapters after hiring on at NPCA in 2010. And so it surprised no one when NPCA and I formally joined the lawsuit in 2013 to defend the Badger-Two Medicine from Solenex (with legal representation by Earthjustice). Concurrent with that, we worked in partnership with a tight team of conservation friends to convince the White House and Interior Department to cancel all remaining leases, including the Solenex lease. We figured if Solenex — or any other company — didn't have a lease, then there would no longer be a case for the court to decide.

Over countless trips to Washington, D.C., we pushed this new idea up the political rungs. At that time, the government had never canceled federal leases over the objection of leaseholders.

My friend Harry Barnes, then chairman of the Blackfeet Tribal council, started calling Washington "The Promised Land," because every time we'd go back there, we'd "come home

with another armload of promises." But in 2016 and 2017, the Obama administration and Interior Secretary Sally Jewell shocked Harry and rattled the oil and gas industry by wiping every remaining Badger-Two Medicine lease off the map.

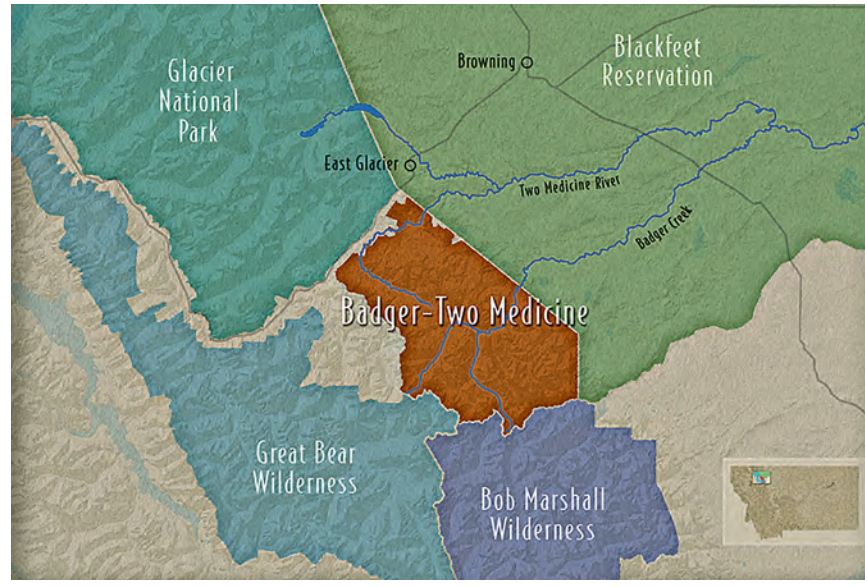
We, not surprisingly, threw a party. Solenex, not surprisingly, filed a lawsuit, revising its existing litigation to challenge Interior's right to rescind leases — and the wrangling in the courts began. It continued until that early fall day when we reached a settlement with Solenex to retire the last lease, once and for all. Once. And. For. All.

For me, this isn't only a story about NPCA protecting a park — this is my life. Thirty-six years ago, I started learning a new way of knowing my place in a place from those elders — an education that continues today with Blackfeet friends and mentors such as John Murray and Tyson Running Wolf, for whom the land is so much more than land. This is my family. My "nomohpapiiyihpiksi."

Over these decades, we've brought back wild buffalo, built a community food bank, created new Tribal college curricula, delivered health care, repatriated sacred objects, and restored Blackfoot language, Blackfeet culture and wild nature. We've laughed a lot, and we've taken care of each other when care was needed.

In some ways, then, I'm deeply grateful for these leases and for that Louisiana oilman. They changed me and my world profoundly. It wasn't just the land, but also the fight for the land that shaped all of us — much the way the wolf's tooth shaped the antelope's speed. I suspect that's the case for many of my NPCA colleagues, who are busy working on their own Badger-Two Medicines elsewhere across America.

A few weeks ago, in the clear of a bluebird September day, a group of us gathered under Glacier National Park's soaring peaks, put a match to that last lease, and danced and sang while it burned. We'll gather again before the snows whiten the willows to celebrate — and to plan for what comes next.



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THE BADGER–TWO MEDICINE lies within a matrix of public and reservation lands.

Not everyone will be there. Buster and George and Earl and Curly Bear and so many others didn't live to see a world where, for the first time in 40 years, there are no leases in the Badger-Two Medicine. Their absence is an important reminder, though, that ours is generational work. The baton gets passed. The things we start — the big things that are truly worth doing — aren't always finished in our lifetimes. And that means this isn't so much a job as a way of being, a constant and patient and personal commitment to people and to place.

We're in the forever business, and sometimes forever takes a while.

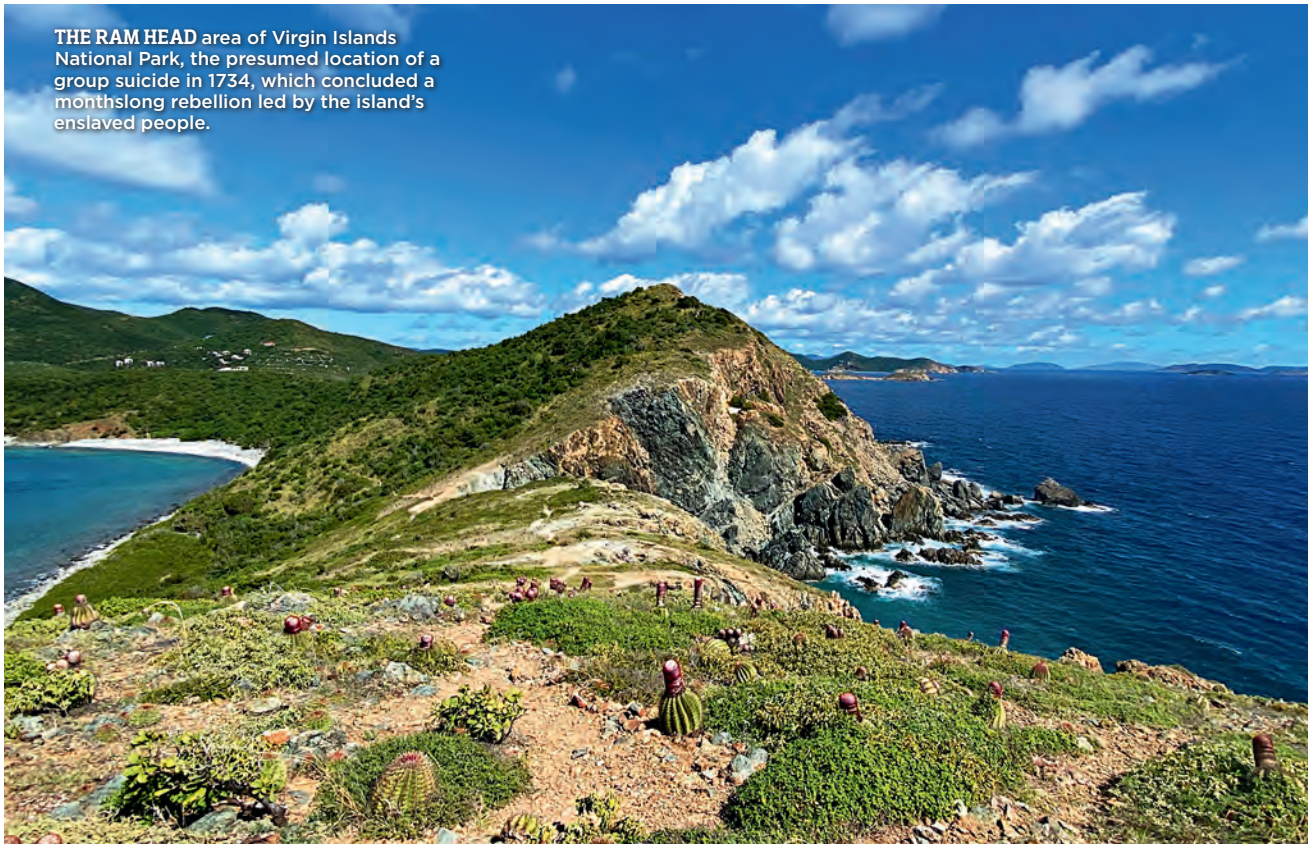
This Badger-Two Medicine story is proof that our work, at its very best, is a leap of faith and an expression of hope. It is a belief that things can be different. Should be different. Will be different. It's an absolute trust that a new path will open, every time, when old roads are blocked.

Hope seems in short supply these days, what with the world on fire and all. And in our line of work, we surely lose more than we win. But if the goals are big enough, and the timelines long enough, then those losses, perhaps, turn out simply to be detours along the trail, taking us to important places we might not have walked through otherwise. We can take them in stride, then, and find a new route, so long as we stick together and find the joy in the living of it.

Sometimes, the work just chooses us. And that's when life gets genuinely interesting. So my hope for all of us who care deeply about defending a place is that the work we start today wakes both our heads and our hearts and is as interesting as it gets. And whatever that work may be — for you, for us together — I hope it doesn't take 40 years. But if it does, well, that's not necessarily a bad thing, eh? Because the seasons will continue to turn like so many aspen leaves, and new hands will be there to pick up where we've left off.

Onward.

MICHAEL JAMISON is a writer and conservationist living in Whitefish, Montana. He serves as campaign director for the Northern Rockies Region of NPCA.



THE RAM HEAD area of Virgin Islands National Park, the presumed location of a group suicide in 1734, which concluded a monthslong rebellion led by the island's enslaved people.

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A Rebellion Reappraised

A new plaque at Virgin Islands National Park will commemorate a revolt that nearly succeeded in upending St. John's slaveholding establishment.

SOMETIME IN THE SPRING OF 1734, according to some accounts, a few dozen men and women, perhaps Akwamu people from present-day Ghana, fled to a cliff at the southern tip of St. John, which is now part of the U.S. Virgin Islands. Exhausted and starving, the rebels took their own lives — possibly jumping to their death on the rocks below — rather than face certain torture from the European forces closing in on them. Their gruesome deaths ended a monthslong effort that shook the island's slave-holding establishment to its core.

Though most of the 90,000-some residents of the U.S. Virgin Islands — 70% of whom are Black — likely know the broad brushes of the uprising and apparent suicide, many of the people visiting have never heard of it. It's not an accident that this kind of story has long been overlooked, but rather an intentional effort to reshape history, said Ahmad Touré, the chief of interpretation at Virgin Islands National Park, which covers most of St. John and includes Ram Head, the presumed location of the rebels' suicide.

For centuries, plantation owners in the United States and the Caribbean perpetuated the myth of docile and content servants so they could keep the slavery-based economy going. Strategic warriors killing their captors and seizing the means of production, as the rebels did in St. John, didn't fit

that narrative. In addition, many of the remaining documents pertaining to the uprising reside in Denmark or the National Archives and the Library of Congress, where island scholars cannot easily access them. What's more, those documents mostly feature the planters' perspectives, and the Akwamu's version of the story is difficult to piece together.

"It completely conflicts with the narrative that many Western countries and European powers are trying to tell people about slavery," said Touré, whose mother is from the West Indies. "The Akwamu … knew their own strength. They were determined not to be kept in this undignified state."

The events that unfolded on St. John nearly 300 years ago have never been commemorated with a monument or physical marker — but that's about to change. In April 2022, Stacey Plaskett, who represents the U.S. Virgin Islands in Congress, introduced legislation directing the Department of the Interior to install a plaque memorializing the uprising at the peak of Ram Head. The resolution was included in a large appropriation bill that became law in December 2022, and the Interior Department is required to put up the plaque before Dec. 29.

Plaskett did not respond to requests for comment, but the plaque, her legislation reads, should "include information regarding important facts about the slave rebellion that began on St. John in 1733; the collective suicide that occurred during the slave rebellion in the vicinity of Ram Head on St. John in 1734; and the significance of the slave rebellion to the history of St. John, the United States Virgin Islands, and the United States."

The seeds of the St. John revolt were planted more than 70 years before the rebellion, when the Danes entered the slave trade by attacking Sweden and eventually taking over their operations in Accra, the area where Ghana's current capital is located. The Akwamu ruled for several decades and traded with the Danes, selling their fellow Africans into slavery, until the conquered Tribal nations rose up and defeated them. The Akwamu, whose ranks were thick with warriors, were then sold into slavery themselves. Europeans bought them, bound them in chains and shipped them to the Caribbean throughout the early 1700s.

THE REMAINS OF A WINDMILL at Annaberg Plantation. At points during the enslaved community's revolt, the rebels controlled much of the island, including many of the 100-plus plantations.

Between 1728 and 1733, records show that the number of enslaved men and women brought to St. John doubled, from 673 to 1,435, although the enslaved population was likely much bigger, according to historian Holly Kathryn Norton's doctoral dissertation. St. John was an inhospitable environment for the settlers, as it was lacking fresh water, and its volcanic soil, which had allowed the island's Indigenous people to grow staple crops such as cassava and potatoes, proved incompatible with the large-scale sugar operations the Danes hoped to establish. Most of the plantation owners preferred to live on nearby St. Thomas or in Copenhagen, according to Norton's work published in the International Journal of Historical Archaeology, and enslaved people who escaped, known as maroons, lived off the land in a parallel universe to the plantation economy.

It is not clear if one event in particular spurred the revolt, but numerous accounts suggest the chaos on St. John may have convinced the Akwamu they could prevail. Droughts, hurricanes, disease and understaffed plantations made everyday life unstable. The fort built to protect the island from invaders sat mostly unmanned. Riches never came, in part because sugar didn't grow well in those years, and as time went on, the Danes reported a dearth of food and medicine, as well as general misery.

The enslaved community plotted over furtive meetings and established a communication network. On Nov. 23, 1733, they entered the fort at Coral Bay carrying bales of wood, ostensibly a regular delivery. But once inside, they brandished their hidden cane knives and killed the soldiers. They went from plantation to plantation, killing colonists until they held much of the island.

The hapless Danes sent for European allies to vanquish the rebels and put the island back under European control. But those early calls went unheeded, and word of the rebels' success spread through letters as English, French and Dutch visitors passed on the information. An English official who visited wrote: "On St. John the Danes at

present hardly have possession. Their Negroes rose upon them about six months ago. At my first arrival I heard they had quelled their slaves, but it was not so. They have in a manner drove the Danes off, at least they dare not now attempt any more to reduce these Negroes, who have always beaten them, and in a manner are masters of that Island."

The words "slave rebellion" and "slave revolt" may conjure haphazard plans made in haste, but the 1733 takeover was the work of brilliant tacticians and strategic planners, Norton said. One of their leaders was the legendary Breffu, who reportedly killed her master and his wife and then went on to kill other slave owners. Today's islanders often call her the Queen of St. John.

Norton, who is now the state archaeologist for Colorado, called the St. John uprising "an impressive effort that was very nearly successful in gaining long-term freedom for a group of enslaved people."

Though one of the most effective uprisings, it did not ultimately succeed. Eventually, the Danes struck a deal with the French that resulted in forces from Martinique arriving and locating the rebels. They fought but could not hold off the French forces. The holdouts were left with few options. Those who did not commit suicide were killed in battle, tortured or recaptured.

That final stand and the events that led to it will be memorialized in the upcoming plaque, but before Touré finalized the plaque's language, he researched the topic and sought feedback from local historians and others. After so long, he said, getting the story right is crucial.

Touré said park staff will likely do more to tell the story. Ram Head is a jagged, tough climb that many park visitors skip, so Touré is working with his colleagues to include additional signage in other parts of the park so that tourists and locals can learn more about the uprising.

"In many ways, they paved the way for future generations of Black activists and revolutionaries."

This reckoning with history is welcome for many islanders who have had a conflicted relationship with the park.

"Virgin Islanders have long been critical of what we would call the whitewashing of our history," said Hadiya Sewer, director of the Virgin Islands Caribbean Cultural Center at the University of the Virgin Islands. "One of the main critiques that we see often is that the park does not do enough to give credit to Black and Indigenous people."

Touré's involvement, she said, gives her hope that the uprising will be presented from a Caribbean perspective. She has participated in a yearly pilgrimage and celebration to honor what many elder islanders call a "revolution." Sewer, who grew up in the Virgin Islands and returned after several years of teaching at Brown and Stanford universities, said honoring that perspective is important. "They did indeed overthrow the government of their time, if only for nine months," she said. "They were willing to be revolutionary. And in many ways, they paved the way for future generations of Black activists and revolutionaries."

The insurrection, Sewer said, also elucidated what enslaved people brought with them when yanked from their former lives — experience with tools, maps and strategic thinking.

It's not clear that the rebellion on St. John influenced uprisings in what would become the United States, said University of Maryland history professor Richard Bell, who has studied slavery extensively. But details would have reached Haiti, the location, some 60 years later, of the most successful slave revolution in history, and in turn the Haitian revolution inspired many of the mainland American revolts.

These Caribbean insurrections certainly frightened plantation owners in the American colonies. They would talk about these threats over dinner, Bell said, without realizing that those serving the soup were listening and grasping for any hopeful tidbit.

With regard to slavery and race, new interpretive sites such as the one at Ram Head can counter whitewashing, said Bell, who is the author of "Stolen: Five Free Boys Kidnapped into Slavery and Their Astonishing Odyssey Home."

"All of us, from the general public to academic historians, can benefit from being presented with the incontrovertible evidence that enslaved people dreamed of freedom every day of their lives," Bell said. "Almost all slave revolts failed, and yet, by one count, more than 250 attempts were made. That is a very useful counterpoint to the lingering notion spread by proslavery forces over the last 500 years that Black people were content to be enslaved. That was a toxic fantasy, and every evidence of a slave revolt is proof of its malicious delusion."

After he climbed Ram Head this spring, Touré threw a piece of coral off the cliff to see if it would land in the blue water below. It hit the rocks.

National park managers must be hyper-conscious about how they are sharing history, he said. "We need to be much more intentional about what we are doing and seek to break away from what has conventionally been taught and look to fill the gaps," Touré said, "because we are the keepers of American history, and we are working in those places where history happened."

RONA KOBELL is a longtime environmental journalist and frequent contributor to National Parks magazine.

A fox hunts for prey in Hayden Valley, Yellowstone National Park.

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