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COVER:
SUNSET over Horn
Island, Gulf Islands
National Seashore.

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So Close Yet So Far

8 miles off the coast of Mississippi, Horn Island is a quiet and wild haven — if you can get there.

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WILDFLOWERS, including this Johnny-jump-up, or California golden violet, are a popular spring attraction at Pinnacles National Park.

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Many Happy Returns



Writing these letters each quarter gives me the valuable opportunity to pause and reflect on our work — to consider how far we've come, how far we have to go and the significant moments along the way. As we roll into fall and the change of seasons, I'm thinking of two milestones in particular. Sept. 3 marks the 60th anniversary of the passage of the Wilderness Act, which today protects more than 750 wilderness areas that together are larger than Washington and Oregon combined.

This landmark law put forward the simple but profound idea that some of the nation's greatest natural resources are areas where "the earth and its community of life are untrammeled by man."

Sigurd Olson, who led NPCA from 1953 to 1959, helped to write the bill. The novelist Wallace Stegner famously wrote what became known as the "Wilderness Letter" to galvanize support for the legislation's passage. Today, we stand on their shoulders as we celebrate our recent victory in Alaska, the defeat of the proposed 211-mile Ambler mining road, which would have run through Gates of the Arctic National Preserve and impaired the largest unbroken area of federally designated wilderness in the country, a 13-million-acre expanse. (Unfortunately, some political leaders are trying to revive this project, which threatens Alaska Native communities and the future of the Western Arctic caribou herd.)

Sept. 22 is the other date that sticks with me. It's the birthday of Betty Reid Soskin, who turns 103 this year. Soskin, the subject of a new musical and documentary (see story, p. 10), became a park ranger when she was in her mid-8os. A fixture at Rosie the Riveter/WWII Home Front National Historical Park prior to her 2022 retirement, she captivated visitors with the power of her storytelling, which was informed by her own rich life.

Soskin reminds us how vital rangers are to how visitors understand and experience the parks. Just a few years after I joined NPCA in 2004, we helped secure a record funding increase for the Park Service, but despite our ongoing efforts, soaring visitation and a maintenance backlog have outpaced it ever since. Now, we find ourselves fighting for funding just to ensure adequate staffing levels and adequate housing for the dedicated public servants who care for our parks and help bring them to life.

The parks and their protectors deserve better, and with the strength of your support, we'll always be here to fight the good fight for them.

With gratitude, Theresa Pierno

EDITOR'S NOTE



LAKE GEORGE at Huletts Landing, New York.

Sacred Places

I recently returned from a summer trip to Lake George in the Adirondacks. This is a place my husband's family has been going to for generations; our own kids know the jumping ledges, moss-covered nooks and wind-bent pines so well they see them when they close their eyes. Some say Lake George is the cleanest lake in America, and though hard to prove, that claim certainly feels right when you stare into the crystalline waters and watch fish flit by. Many lakeside residents pump their drinking water directly from the lake.

So the news that the commission overseeing the lake wanted to use an herbicide to kill invasive Eurasian watermilfoil was met with horror by locals and organizations, including the Lake George Association. The conservation group, which I support, proposed increasing the amount it contributes for manual watermilfoil removal, but the commission declined the offer. A lawsuit and resolutions from nearby towns asking for a more careful environmental review also failed. Advocates are continuing to fight, but in June, the chemical was released into two bays as a test.

Most of the lake's 170-plus islands and the nearby public lands are state-owned (not national parkland), but so much of this battle reminds me of the work NPCA does and what the magazine covers. The National Park System is buffeted by monumental human and natural forces, yet every day, individuals are taking steps, no matter how small, to protect parks and their denizens. People are removing weeds in the Grand Canyon (p. 6), placing cameras in redwoods to help marbled murrelets (p. 22), releasing captive-bred condors to prevent the species' extinction (p. 34), and preserving the memory of a single tree (p. 14).

In the conservation world, setbacks are inevitable, and the work can feel overwhelming, but I believe that environmental progress is the result of millions of us working together, and that collectively, these actions lead to large-scale change. We all have our Lake Georges — places that are sacred to us — and each of us must ask: What can I do for the little piece of the world I love? It hurts when that piece is threatened, but the hurt can remind us that every incursion is personal for someone, and it's critical to stand up for everyone's beloved lands, not just our own. The hard days are hard, but they make me even more determined — and grateful for NPCA and all of you. Onward.

Rona Marech NPMAG@NPCA.ORG

National Parks

EDITOR IN CHIEF: Rona Marech
SENIOR EDITOR: Nicolas Brulliard
ART DIRECTOR AND PHOTO EDITOR: Nicole Yin
ASSOCIATE EDITOR: Katherine DeGroff
FEATURES DESIGN: Dana Krissoff
DESIGN CONSULTANT: Selena Robleto

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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 parkprotection 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.



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.

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CANYON COMMUNION

Melissa Sevigny's beautifully written piece, "Weeding the Grand Canyon,"



evoked rich memories of similar experiences I had during a high school river trip in 1974. Our task was to weed the canyon of camelthorn, which was making camping on sandbars impossible at the time. Sevigny reminded me of the shock of the cold water that hit us as we went over rapids, the alternating hot and cold of sun and shade deep in the canyon, and the glow of the moon, which was so bright one night, I was convinced it was daytime and my boat mates had all overslept. The calm of the flowing river paired with the absence of city noise produced a prolonged Zen moment. After we left the water, we packed into pickup trucks for the drive back to Phoenix.

It was a relief to be returning to modern comforts (such as hot showers!), but we felt privileged and forever touched to have had communion with the Grand Canyon.

MARK L. MANOIL Phoenix, AZ

Sevigny's piece was both insightful and entertaining. Who knew that invasive flora posed such a problem along the Colorado River? Once again, dedicated volunteers are working on our behalf to support the Park Service's mission. We've got Sevigny's book coming our way. The story of the two women who ran the river in 1938 should be a doozy.

LIBBY AND PATRICK BINGHAM

Reno. NV

I thoroughly enjoyed reading the article about weeding the Grand Canyon. I did the entire canyon twice on seven-day, 280-mile raft trips, once with a college classmate and then almost 40 years later with my wife and daughter.

The Grand Canyon is something

to see from above, but its true beauty is seen when riding the Colorado River. At one point when the river was calm, our guide played "Grand Canyon Suite" and read to us from John Wesley Powell's book on exploring the river and canyon. An amazing experience.

CORBIN WILKES

Arlington, VA

CORRECTION

The story "Second Take" [Summer 2023] incorrectly suggested that John Chivington became the head of Colorado's Methodist Church after his leading role in the Sand Creek massacre. Chivington served as the presiding elder of the Rocky Mountain district of the Methodist Episcopal Church in the early 1860s, but his tenure ended before the massacre.

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

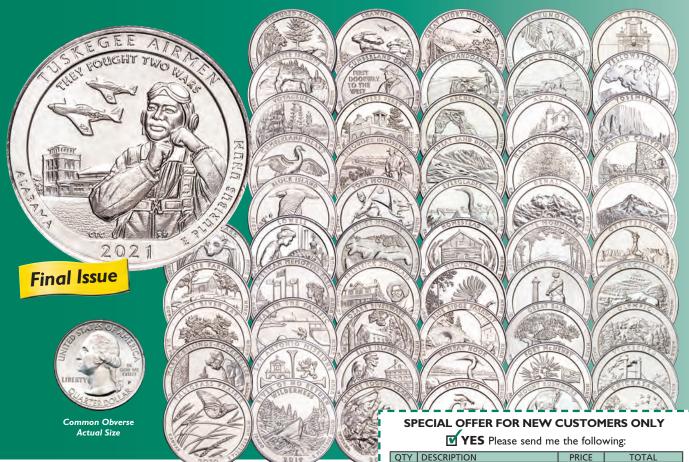
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ECHOES

"We remain grateful for the Blackwell alumni who saved their school so that future generations can learn from this vital piece of Latino history."

NPCA's Texas field representative, Cristóbal López, in The Big Bend Sentinel, celebrating the recent transfer of the Blackwell School building to the federal government. Blackwell School National Historic Site, which was formally established in July after the acquisition, tells the story of Latino segregation in the education system during the Jim Crow era.

"I'm thrilled. I'm overjoyed. This is a long time coming."

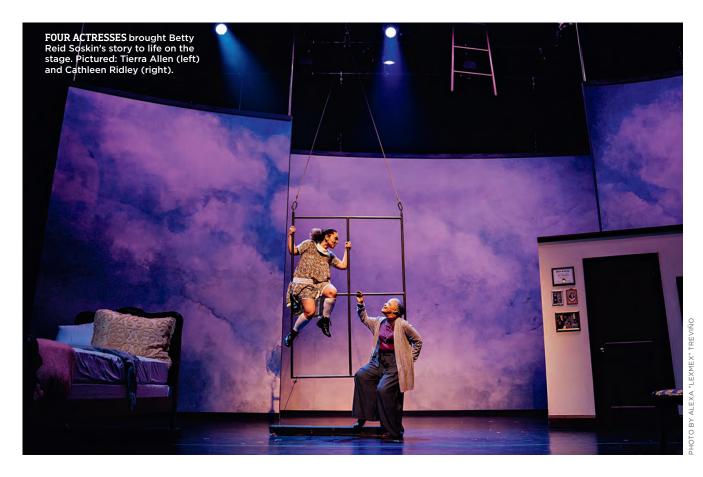
Timothy Leonard, NPCA's Northeast program manager, speaking to E&E News about the new visitor center at Stonewall National Monument, which opened in June. The 2,100-square-foot space memorializes the pivotal night in 1969 when a police raid led to an uprising that changed the course of the LGBTQ civil rights movement - and highlights the subsequent, and ongoing, fight for equality.

"In a very concentrated time, the mountain comes alive, and in order to make sure that's going to happen into the future, you need to make sure we aren't just overcrowding and trampling the ecosystem."

NPCA Northwest Regional Director Rob Smith, telling The Seattle Times why he supports Mount Rainier National Park's trial reservation system, which was rolled out this summer at two popular areas of the park. Mount Rainier is the latest park to experiment with reservations during peak times to minimize resource damage and improve the visitor experience.







Songs of Freedom

An upcoming documentary and a new musical shine light on the life and work of Betty Reid Soskin, an activist, famed ranger — and musician.

In a scene from a forthcoming documentary, Betty Reid Soskin listens pensively to her songs from decades ago as the reel-to-reel tapes spin. Then the iconic national park ranger begins singing along to lyrics inspired by the turbulence of the Civil Rights era. "Your hand in mine," she sings, "this simple sign of love."

Decades after Soskin first started writing these powerful songs, her music is reaching audiences beyond family and longtime friends through the documentary and a new musical, both titled "Sign My Name to Freedom." It's an extraordinary, if not entirely surprising, turn for Soskin, who has led a long and storied life that continues to inspire. She turns 103 on Sept. 22.

"I've outlived my peer group, so I have to make it up as I go along," she says in the documentary. "I'm dealing with an exploding life while I'm dealing with end-of-life issues."

A decade ago, Soskin rose to prominence nationally as the oldest ranger in the National Park Service, drawing crowds to Rosie the Riveter/WWII Home Front National Historical Park with her sharp insights about race and history. But she almost never spoke about her past life as a singer and songwriter in the 1960s and early '70s.

She'd gotten rid of her reel-to-reel machine, and at one point, she dumped recordings of her music on the curb during a move, before changing her mind in the middle of the night and retrieving them. She ended up stashing the tapes in a plastic tub in her closet for decades.

Filmmaker Bryan Gibel entered the picture around 2016. The director

of the documentary short "Sickness in the System" — about COVID at San Quentin Prison — was interested in filming Soskin, but was searching for an original angle.

Then Gibel learned that Reid's Records, the historic music store in Berkeley that Soskin co-founded with her first husband, Mel Reid, in 1945, was still around, run by their daughter Di'ara Reid. As a filmmaker, Gibel said he looks for locations to portray a larger story, and the record shop, which has since closed, seemed like a compelling way to tell the history of South Berkeley, once an epicenter of Black culture.

Di'ara introduced him to her mother. and he embarked on what became a series of interviews with Soskin. "I was asking her about parts of her and her family's stories that other reporters weren't interested in," Gibel said. Months after the two first met, Soskin played a handful of her songs saved onto a CD for Gibel, a jazz aficionado, and he was "completely blown away."

"She's incredibly talented, her voice is beautiful, her writing style is totally unique," he said.

Gibel found a reel-to-reel machine on Craigslist and set it up for Soskin so she could listen to the recordings. The music had been the product of a difficult period of her life when she was contending with racism in the suburb where her family had settled, as well as the disintegration of her marriage. As Soskin recounts in her 2018 memoir also titled "Sign My Name to Freedom" - she suffered a mental breakdown. Among other symptoms, she routinely had panic attacks and blacked out when she was driving through tunnels and across bridges.

It was during those years that she taught herself how to play the guitar.

"She's incredibly talented, her voice is beautiful, her writing style is totally unique."

Music "became my way of processing and making sense of the terrifying history that we were living through at that time," she wrote in the book. A therapist helped her see that "I was not mad, the world was."

She devised a method for crossing the roughly 8-mile-long Bay Bridge without panicking: singing with the windows open. "When I sang, my breathing would be natural, determined by regular phrasing of the lyrics, and even predictable. I could not run out of breath. It worked," she wrote.

In 1964, she composed the song "Sign My Name to Freedom," in honor of Susan Sanford,



SOSKIN performs one of her original songs in the 1960s.

a young white volunteer from the Bay Area who traveled to teach at a Freedom School in Mississippi. Four years later, Soskin wrote the haunting piece, "Ebony the Night." "The world made the rules and established the ante," the lyrics go. "Proclaimed white as sinless and black straight from Dante. Ebony the night, ebony satin bright. Star jewels held in black velvet hands of ebony the night."

After her divorce in the 1970s, she married William Soskin, a research psychologist and professor at University of California, Berkeley. When she shared a new song with him, he praised it but also suggested that she take classes at the university's music department, where she could "learn how the real composers do it," she wrote.

Soskin lost her confidence and never penned another song again. In time, her creative expression found other formats, she noted in her memoir: in a blog she started in 2003, in her other writing - and in her role as a ranger whose storytelling and social justice work attracted the admiration of President Barack Obama and a new generation of aspiring activists and artists. (In 2018, NPCA gave Soskin the Robin W. Winks Award for enhancing public understanding of national parks.)

The documentary, co-directed by A.K. Sandhu, portrays Soskin's partnership with younger musicians. Gibel helped arrange for her to collaborate with a youth jazz orchestra that performed three of her songs at the Community Music Center in San Francisco. And in 2018,

when she was 97, she sang "Your Hand in Mine" — a tribute to the civil rights activist Fannie Lou Hamer - with the

Oakland Symphony.

Nine months later, Soskin suffered a stroke, which affected her cognitive abilities and her speech. "We're just so lucky that Bryan was able to talk to her before that stroke happened — before memories were lost," said Soskin's granddaughter Alyana Reid, the documentary's associate producer and social media manager. In writing, her grandmother is a little more guarded, Alyana said, whereas in interviews for the film, she goes deeper emotionally.

Soskin spends most days at home now, under the care of her daughter Di'ara, who helped arrange a short conversation on Zoom at my request. When I asked about the ongoing public attention, Soskin slowly said, "It's pretty unbelievable. I have no idea about tomorrow, no idea about yesterday. I'm really caught up in the now."

Soskin retired from the Park Service at the age of 100, but visitors at Rosie the Riveter still ask about her. "Betty showed us the importance of inclusion in revisiting our history," said Armand Johnson, a park spokesman. "Not only have visitors resonated with the importance of inclusion, but it also connects to how the Park Service carries out its mission."

The \$97,000 the filmmaker and producers recently raised in a crowdfunding campaign will go toward editing and other postproduction work; they estimate they will need an additional \$300,000 to complete editing, shoot dramatic recreations and pay for sound mixing, color correction and archival licensing. They hope to release the documentary in 2025 in time for Soskin to see it.

Meanwhile, the musical — which is built around Soskin's music and features the characters of Little Betty, Married

Betty, Revolutionary Betty and Ranger Betty — completed a short run at Z Space in April, with nearly all the shows sold out.

Presented by the San Francisco Bay Area Theatre Company, the show is the brainchild of Jamie Lee Zimmer, who first met Soskin in 2018. Zimmer, a 26-year-old first-generation Chinese American who identifies as nonbinary, was deeply touched by Soskin's personal history. Like Soskin, "I am searching for equality, and I wanted to be regarded as a human being — a simple thing that's somehow extraordinary," Zimmer said. "We have both been othered. She doesn't let the confines of toxic masculinity and patriarchy take her down."

Zimmer created a workshop version of the musical in 2021 and later drew in other collaborators, including a playwright and a director who helped develop the production. After the initial success of the play, the hope is that other regional theaters or venues will produce it, said director Elizabeth Carter.

"Betty's story is really a story for us about how we can show up in the world and be ready, or be willing to speak up," Carter said. "Betty did not plan her life to go this way, but when something happened, she said, 'I think I need to learn this. I think I need to do this,' and then she stepped into a whole new phase each time."

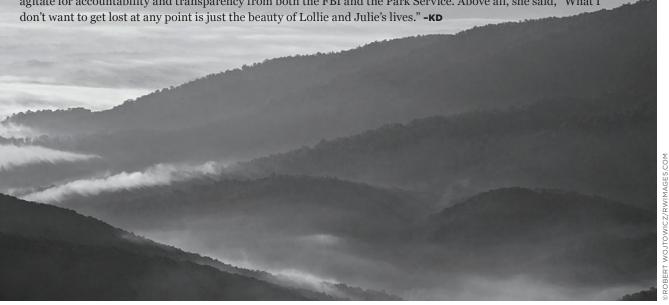
VANESSA HUA is the author of the national bestsellers "A River of Stars" and "Forbidden City." as well as "Deceit and Other Possibilities," a New York Times Editors Pick. A National Endowment for the Arts Literature Fellow, she has also received a Rona Jaffe Award, California Arts Council Fellowship, the Asian/ Pacific American Award for Literature and a Steinbeck Fellowship. Previously, she was an award-winning columnist at the San Francisco Chronicle. She teaches at the Warren Wilson MFA Program and elsewhere.

FILMMAKER BRYAN GIBEL looks on as Betty Reid Soskin listens to old recordings of her songs using a reel-to-reel machine Gibel found on Craigslist.



Justice Served?

Two years ago, National Parks magazine covered journalist Kathryn Miles' yearslong search for truth in the 1996 double murder of Julianne "Julie" Williams and Laura "Lollie" Winans in Shenandoah National Park. This summer, in a surprise announcement, the FBI shared that a positive DNA match had led them to identify the man responsible for the women's deaths: Walter Leo Jackson Sr., who died in prison in 2018. Still, in Miles' view, the case is not quite closed. "We don't know how strong of a case they have against Jackson. We don't know if Jackson acted alone," she said. "There's so many questions, and the FBI has refused to answer them." Miles continues to agitate for accountability and transparency from both the FBI and the Park Service. Above all, she said, "What I don't want to get lost at any point is just the beauty of Lollie and Julie's lives." -KD





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Recording the remains of Earth's ancient witness.

On the summer solstice of 2023, I was standing on a mountain in a remote corner of Nevada and tearing up while I shoveled snow. The alpine air was crisp, the sky blue. All around me stood ancient bristlecone pines, their gnarled branches reaching upward as if electrified. With each shovel of snow, my heart beat hard as I slowly excavated the most beautiful object I had ever seen: a tree stump.

Once I removed compacted snow and ice, I took out a paintbrush and carefully dusted the tree's remains, revealing rings created long ago. These rings were layers of xylem that started forming before the Great Pyramids

were built. They belonged to what was once one of the oldest living things on Earth — or maybe the oldest. I gazed at this stump that had been haunting my dreams, realizing how few people had ever seen the tree, dead or alive.

I'd first learned of the existence of this tree a few months prior on a date. "Have you heard of Prometheus?" asked Caroline, a California-based artist, as we sipped coffee. We had matched on a dating app while she was passing through my hometown of Denver on her way back to the West Coast, and she seemed too interesting not to meet. Caroline has a unique practice of making molds of objects in nature, such

A GLASS SCULPTURE of a piece of Prometheus, an ancient bristlecone pine felled in 1964.

as pieces of ice from the Arctic, and re-creating them in glass form. When Caroline showed me her art, it had a full-body effect on me. She wanted to work on Prometheus next — but the answer to her question was no, I had no idea what she was talking about.

She went on to tell the story of this ancient tree and its demise. In 1964, a University of North Carolina graduate student named Donald Currey went to Nevada in search of Great Basin bristlecone pines. Living high in the mountains of just three Western states, the trees recently had been discovered to be the longest-living individual organisms on the planet. (The specimen currently holding the title of oldest is a bristlecone in California's White Mountains.) Currey, who planned to study the climate of the Little Ice Age using tree rings, knew bristlecones would be the perfect species for his project. He hiked several thousand feet up Wheeler Peak in what is now Great Basin National Park, while bushwhacking through pine scrub and scree fields, and found a tree he described as looking very old. After placing the bit of a coring tool against the trunk, he twisted, but there was a problem. "The normal approach to coring the tree wasn't working," said the late Currey in a 2001 NOVA documentary, one of the rare records (and possibly the only one) of him talking about this expedition. The tree was so large that the tool wasn't effective. So he lumbered back down the mountain and told the district ranger from the U.S. Forest Service about the problem. Their solution? Cut down the tree.

Currey brought a slab from the lower part of the tree back to his lab and started counting the rings. Soon, he'd counted back 1,000 years to the Vikings, then back to the time of the Roman Empire and gladiators. But he was only halfway finished. In the end, the pine's cross section had 4,844 annual rings. At that point, the oldest known organism was several decades younger (a bristlecone pine in California named Methuselah).

Hoping he'd miscounted, Currey began the tedious process again. But no matter how many times he counted the rings, the number never decreased. In other words, he had discovered the oldest tree ever dated. But he had killed it.

Beginning in the 1950s, naturalists had given names to several of the largest or most distinctive bristlecone pines. There were Buddha, Socrates, Methuselah and, of course, Prometheus, which had been named by Great Basin native Darwin Lambert. Unsurprisingly, Lambert raged against Prometheus' ill-fated felling, writing in Audubon magazine: "Earth's oldest living thing was casually killed (yes murdered!) in the name of science." The turmoil surrounding the great tree's death likely also further motivated local advocates and NPCA — Lambert became a board member of the organization in 1958 which had been pushing for a national park protecting the bristlecones. Their efforts finally paid off in 1986 when Congress established Great Basin National Park.

"When I first heard of the story of Prometheus, I was instantly interested — in the story but also how few people knew about it," Caroline said as she wrapped up her retelling. "I'm thinking of going out there this summer and hiking around in hopes of finding it." (Apparently, after the initial outcry died down, the handful of people who knew the stump's location kept it under wraps to help protect it from vandals.)

Date over, we parted ways. But as

the weeks passed, I found I couldn't get Caroline — or that stump — off my mind. Before then, I barely noticed the trees around me. Something about Prometheus, though, piqued my curiosity. And truthfully, I wanted another way to connect with Caroline. So I decided to find the remains of the tree.

I spent months searching the deepest corners of the internet and talking to people across the country to pinpoint its location. As an entomologist, I find comfort in research. The world of trees, however, was utterly new to me. I dug up academic papers and topographic maps; I plotted and triangulated; I lost myself in obscure social media threads. Eventually, I realized that the tree had lived right at the 10,000-foot tree line and had been given an identification number in Currey's records. During those months, Caroline and I continued getting to know each other from afar, discussing all non-stump-related topics

under the moon, but she didn't know I was searching behind the scenes. One day, I asked her, "Are you still trying to find Prometheus this summer? Because I think I know how to get there." I offered to give her the coordinates, but she said we should go together.

We met halfway between our homes in Baker, Nevada. (It turned out to be precisely halfway, with each of our drives taking 9 hours and 33 minutes.) Though it was June, the park road to Wheeler Peak had reopened only days before, owing to a long winter. On the first day of our expedition, we hiked for hours through deep snow as backcountry skiers swished past us. In time, we lost our way, thwarted by an impending storm and a trail that disappeared or petered out in snow and scree fields. But our attempt on the second day went flawlessly. We made our way up to a pine stand on a ridge of the 13,000-foot Wheeler Peak. Caroline



COURTESY OF MADISON SANKOVI



and I split up to slowly walk down the ridge and through the trees in search of Prometheus. Due to the snow, we knew the stump would be covered. So, rather than scouring for Prometheus itself, I was on the hunt for its grove, which I'd seen in historic photos. After about 20 minutes, I found myself in a clearing of untouched snow and spotted a piece of wood sticking out that a chainsaw had clearly sliced. The surrounding trees were recognizable to me, having been burned into my memory. I knew this had to be it.

We dug for hours, only partially excavating the massive, pool table-sized stump. After chiseling away layers of ice, we moved to shifting snow with our hands for fear of damaging the bark, then used a paintbrush to reveal the finer details. Prometheus' smooth

rings and twisted bark were somehow familiar. Caroline and I looked at each other with a sense of wonder. The stump felt like a holy relic. Rather than risk harming it by casting a physical mold, Caroline used her phone to take a three-dimensional scan of a piece of the tree we found next to the stump. The wood of bristlecone pines is dense and can withstand extreme elements over thousands of years, which worked in our favor: This chunk — see a photo of it in the table of contents — looked as if it had been chopped the day before.

When you look at the rings of ancient trees, they give you perspective. You see a world with no borders, only time. Gazing at Prometheus' rings reminded me that everything we have lived through is living in us and that we can constantly grow without losing

who we've been.

We shared a glorious afternoon in that clearing with Prometheus. Caroline spent the time meticulously documenting the stump's features and making sure her scans were sufficiently detailed. Meanwhile, I photographed her process and made a rubbing of the stump's rings. When we convinced ourselves we had had our fill (could we ever?), Caroline and I picked up our backpacks, shovel and ice ax. We started back down the snowy mountainside, looking back just once for a final glimpse of that felled pine. As we returned to the trailhead, park rangers closed the trail behind us due to flooding from snowmelt.

Today, 60 years after the tree's death, a piece of Prometheus lives on in glass form. Caroline, who said she wanted to give the sculpture "the energy it deserves," spent seven months turning those hard-won 3-D scans into an art piece. Imperfect in shape and lined with age, the blocky sculpture immortalizes that ancient tree and serves as a reminder of the shortsightedness of humans.

As for Caroline and me? After a romantic summer chasing adventure in the Sierras, we have settled into a friendship. But our artistic partnership has continued. We are collaborating on other projects to preserve natural archives in glass, including ancient stumps and ice in California and Alaska. These objects have recorded and preserved time on Earth through their layers, and we aim to capture their signatures before they weather and melt forever.

MADISON SANKOVITZ is an entomologist working at the University of Colorado Boulder and an artist seeking to tell stories of overlooked beauty.

Images of Caroline Landau's Prometheus piece can be seen at carolinelandau.com and on Instagram @carolinelandau.

La Bouée de Floride

How a bit of Dry Tortugas National Park ended up 4,500 miles away in Brittany.

Erwan Elliot-Saudrais and some friends were enjoying a leisurely boat ride in late May when they spotted a bright yellow object on the coast of Perros-Guirec, a resort town in northwest France. They couldn't get close because of the waves and sharp rocks, but through phone calls and internet searches, they quickly learned that local authorities had tried, unsuccessfully, to dislodge what looked like an oversized spinning top but was in fact a boundary buoy. The group also discovered the floating device's unlikely provenance: Dry Tortugas National Park in Florida — some 4,500 miles away.

With his partner, Hélène Laclaverie, Elliot-Saudrais runs Perros-Guirec's "miniature harbor," where children can drive 12-foot-long electric boats. He always thought the tidal basin lacked a little flair, so he saw the stranded buoy as an opportunity. "We told ourselves, 'Wow, it would make for a great decoration!" he said. "We had to get it."

So, Elliot-Saudrais, his brother, Laclaverie and two friends came back two days later. One of them, a professional diver, jumped into the water and tied a rope around the buoy, which was stuck between rocks above the waterline. It took the full power of the motorboat and nearly a dozen attempts, but after nearly an hour, the team finally freed the buoy and towed it to its new home. It is now adorned by a Star-Spangled Banner floating above the black-and-white flag of Brittany.

While the last couple of miles of the buoy's journey were well documented in the local press, less is known about the device's transatlantic voyage. For one, park staff don't know for sure when the buoy, one of many that mark the park's perimeter, broke free, though on the

park's Facebook page, the deputy superintendent speculated that it might have happened during Hurricane Ian in 2022, when the park lost several buoys. "It's not uncommon, especially with storms, so we've had buoys end up in other places, more along the Eastern Seaboard," said Allyson Gantt, the park's spokesperson.

The Dry Tortugas buoy did not travel solo. Its lower parts were covered by tiny barnacles that Elliot-Saudrais suspected were erstwhile Florida residents. As far as what carried the floater from Florida to France, there is one likely culprit. "The assumption is that it's the Gulf Stream," Gantt said. "That's the way it goes."

Elliot-Saudrais said he was willing to return the buoy to its owners anytime, but that probably won't be necessary. Transporting it back to Florida would be cost-prohibitive, and Gantt said the park was in the process of transferring ownership of the buoy to Perros-Guirec authorities. Google Maps already

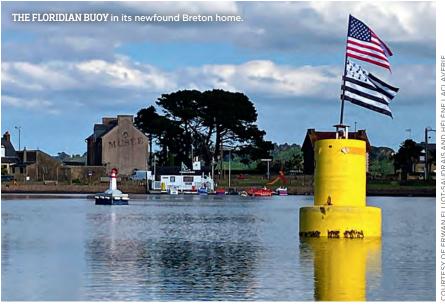
identifies "la Bouée de Floride" as a local landmark.

In any case, the buoy has produced a substantial amount of Franco-American communication and goodwill. A couple of English-speaking residents of Perros-Guirec reached out to Dry Tortugas, and the park's social media posts generated a flurry of positive reactions, including suggestions of sending a bottle of rum or bourbon to the finders for taking good care of the errant buoy. Others inquired about the design of the Breton flag, which was partly inspired by the Stars and Stripes. On their end, Elliot-Saudrais and Laclaverie were curious about Dry Tortugas and were stunned by the photos they found online. They hope to visit one day.

The buoy's wanderings, on the other hand, have seemingly come to an end. Elliot-Saudrais said that while not exempt from storms, Brittany doesn't experience hurricanes. Also, the miniature harbor is completely enclosed by walls of pink granite.

"Even if its moorings were to break, it would stay in the basin," he said. "It can't escape anymore."

-NICOLAS BRULLIARD



RTESY OF



Poetry in Place

With a series of poetic park installations and a new anthology, the U.S. poet laureate hopes to remind visitors and readers of their stake in the natural world.

Around two years ago, Ada Limón started brainstorming possibilities for a signature project to mark her tenure as the 24th poet laureate of the United States. "It began with me having very outlandish ideas," she recently recalled. "At one point, I thought we should rent a plane, and put poetry on little native seed packets that would fly out of the plane and seed forests."

The airdropped seed-poems didn't pan out, but still, Limón knew she wanted her project to entwine poetry and nature. One day, when the world's seemingly intractable problems weighed heavily on her mind, she sought solace on a hike near her home in Kentucky. Seeing the words "You Are Here" on a trail map, she was unexpectedly moved. The phrase was "a reminder that I

was living right now, breathing in the woods," she wrote in the introduction to a new anthology, "that there was life around me ... and I was part of it; I was nature too."

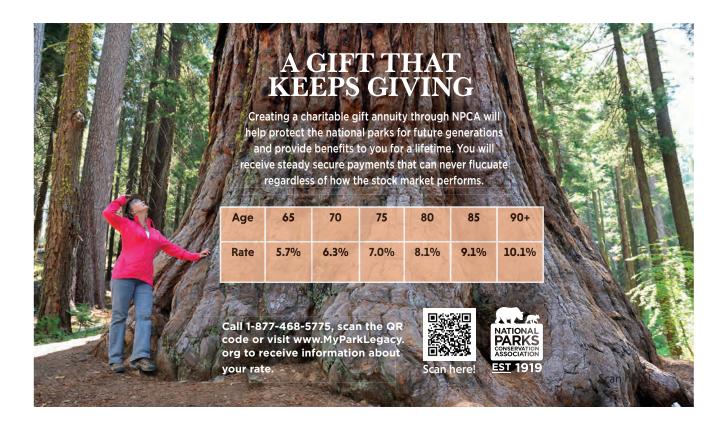
Limón's meditations eventually led to "You Are Here: Poetry in Parks," a collaborative project between the Library of Congress, the National Park Service and the Poetry Society of America that involves the installation of picnic tables — each imprinted with a site-specific poem chosen by Limón — in seven national park sites, from Cape Cod National Seashore to Everglades National Park. The tables will sit near trailheads or scenic areas, where visitors might stumble upon them and pause for a moment of reflection or insight. Beside each poem is a prompt:

PARK SERVICE and Library of Congress staff join poet laureate Ada Limón (far left) in unveiling a poem-inscribed picnic table at Cape Cod National Seashore.

"What would you write in response to the landscape around you?" A hashtag allows people to share their odes and musings online. As part of the project, Limón also invited 52 contemporary poets to contribute to "You Are Here," an anthology of original nature poems (the one she penned the introduction to), which was published in April. Taken as a whole, Limón has said, the project is meant to affirm "the ways reading and writing poetry can situate us in the natural world."

On a mild sunny morning in June, nearly 120 people gathered at Cape Cod National Seashore for the unveiling of the first table, overlaid with a poem by Mary Oliver, the soulful poet and essayist who lived in nearby Provincetown for 50 years and frequented the park's forests and beaches. Oliver died in 2019, but her estate recently donated the poet's personal archive to the Library of Congress, a development that smoothed the way for using her well-loved poem "Can You Imagine?" for the table. In the piece, Oliver playfully wonders if trees "stand there loving every / minute of it; the birds or the emptiness, the dark rings / of the years slowly and without a sound / thickening." As Limón recited the poem, the trees behind her whispered in a breeze.

In person, Limón, 48, is warm and charming. "Step into my office," she said, as I sat down with her at a (different) picnic table just before the event. Her friendly aura might not immediately read as bookish, but of course, she is. She has authored six collections of poems, including "The Hurting Kind" and "The Carrying," which won the



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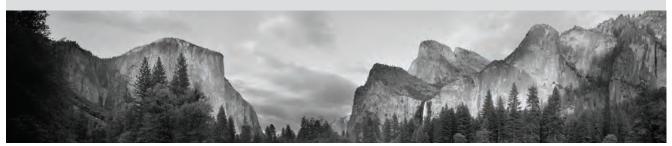
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National Book Critics Circle Award for Poetry in 2018. Born in California, Limón is of Mexican ancestry, and she is the first Latina to hold the U.S. poet laureate title.

She's in esteemed company. Early on, the likes of Elizabeth Bishop and Robert Frost were tapped for the position, which was created in 1937 as the "Consultant in Poetry to the Library of Congress." In 1985, Congress voted to change the name to "U.S. Poet Laureate," and since then, luminaries such as Louise Glück, Robert Hass and Tracy K. Smith have held the role, which has become more public-facing. Robert Pinsky, who served in the late 1990s, launched the "Favorite Poem Project," in which everyday Americans were filmed reading beloved poems and sharing personal stories. Joy Harjo, who served before Limón, helped create a digital map and audio archive showcasing the work of Native American poets. In 2023, Limón was invited to serve a second term (for two years) to continue work on her project.

Limón said it can be tempting to think of nature as "something we go to visit," but her hope is that the park poems will remind visitors of their connection to the world around them, wherever they are. Awareness of place, she suggested, can make people more mindful of how they live and invite change. "If we can write a line or two in response to the natural world, maybe that will help us be better stewards of the planet," she said.

Choosing poems for the tables, she said, was "fun, but really hard." Limón and a few well-read colleagues created a Google folder for each park and shared contenders that might suit each landscape. Practical concerns like subject matter (nothing too heartbreaking) and length (they wanted the whole poem to fit comfortably on the tabletop) helped narrow the field. "A lot of my favorite poets write epically long



ADA LIMÓN, the country's 24th poet laureate, conceived of "You Are Here: Poetry in Parks," a collaborative project she'll continue to work on during her second term. To listen to NPCA's podcast about poetry and parks and to hear Limón read her poem "Notes on the Below," go to npca.org/parkpoetry.

poems," she said.

Although the two-year planning process was a group effort - she said some weekly Zoom meetings could involve dozens of people discussing everything from layout to accessibility - Limón had final say on the park locations, which included several personal picks. Her brother worked for three vears as a ranger at Mount Rainier National Park, where a table displaying A.R. Ammons' poem "Uppermost" now sits. The poem imagines a grain of rock on a mountaintop as "ready to float, / exposed / to summit wind."

Cape Cod National Seashore, too, is a special place for Limón. Two weeks after 9/11, she and a friend drove there from Brooklyn, where she lived at the

time, for a seven-month residency at Provincetown's Fine Arts Work Center. Each day, she took long walks through the dunes to settle her mind before writing. The experience reinforced for her "the healing power of poetry and nature combined, and the way it can bring you back to your most rooted self," she told the crowd in June.

After her remarks, Limón joined most of the attendees on a guided walk along the Beech Forest Trail, where Oliver sometimes hid pencils among the pitch pines and oaks, in case she was without one when an idea struck. Ranger Aleutia Scott said that when she came to the Cape from New Orleans five years ago, she was told to read Oliver's poetry to orient herself. "I was like,

'OK, I know exactly where I am now," she said. "I could hear the echoings of the words I had already read."

Ofelia Zepeda, a renowned writer and linguist whose work will be added to Arizona's Saguaro National Park in December - and who is the only living poet to be featured in the park installations - understands that tie between language and place. Her poem, "Na:nko Ma:s Cewagĭ / Cloud Song," which appears in both the O'odham language and English translation, describes clouds dramatically shifting colors as a storm builds, suggesting the promise of rain in the Sonoran Desert. As a member of the Tohono O'odham Nation, Zepeda has carefully observed the ecosystem since childhood. "You can't find it anywhere else in this country," she said, "so it is very special in that way."

For the companion anthology,

Limón reached out directly to poets whose work she admired, asking them to interpret "nature" as they wished. The resulting collection is wideranging; it includes anxious poems about climate change and illness alongside meditations on the food chain and giraffes, a riff on John Keats' "Ode to a Nightingale," and a joyous paean to sunlight.

In her anthology contribution, Camille Dungy revisits a honeymoon hike she took with her husband in Point Reves National Seashore in California. She describes the foggy pocket of shoreline "like the soft spot / in your self" and "An inlet / kept safe inside a cloud," evoking the safe harbor of a long-term partnership. "One of the things about places we love is that our identities are wrapped up there," Dungy said. She has already begun using the anthology in her "Literature

of the Earth" course at Colorado State University and said her students "really responded to the poems in this collection."

Dorianne Laux also tapped her memories for her poem "Redwoods" - in her case, a childhood road trip along the California Coast, where she encountered the giant trees for the first time. "It was like being transported to another realm," she recalled. She writes of "the great buttery platters of fungus / climbing like stepping stones / up their shaggy trunks." Laux, author of 12 poetry collections, credits Limón with helping her access those long-ago forest reveries: "It was like she gave me a key and said, 'Here, unlock this door.' And it all just kind of flooded out."

On the trail in Provincetown, we caught glimpses of dune ponds, and a lime-green bullfrog stared placidly from the path's edge. Under a stand of old-growth beeches, Scott prepared to read Oliver's "When I Am Among the Trees," but a participant jumped in, volunteering to recite it. She had memorized the poem years ago, she said. "Around me the trees stir in their leaves," she said with a flourish, "and call out, 'Stay awhile.' The light flows from their branches."

Over the summer, Limón made additional stops in Mount Rainier, Redwood, Great Smoky Mountains and Cuyahoga Valley national parks, and she will finish up her tour this fall and winter in Everglades and Saguaro. With all the pieces in place, she hopes the project might offer park-goers "a moment of deep breathing and deep feeling" — some version of what she experienced on that trail in Kentucky. "If people come away feeling like they are paying more attention," she said, "that would be my dream."

Can You Imagine?

by Mary Oliver

For example, what the trees do not only in lightning storms or the watery dark of a summer night or under the white nets of winter but now, and now - whenever we're not looking. Surely you can't imagine they just stand there looking the way they look when we're looking; surely you can't imagine they don't dance, from the root up, wishing to travel a little, not cramped so much as wanting a better view, or more sun, or just as avidly more shade — surely you can't imagine they just stand there loving every minute of it; the birds or the emptiness, the dark rings of the years slowly and without a sound thickening, and nothing different unless the wind, and then only in its own mood, comes to visit, surely you can't imagine patience, and happiness, like that.

> **DORIAN FOX** is a writer, teacher and freelance editor living in the Boston area.



Odd Bird Rescue

The two-decade effort to save an endangered seabird that nests in Redwood National Park's old-growth trees.

N THE EARLY 2000s, Keith Bensen, a wildlife biologist at Redwood National and State Parks, wanted to find out whether the noise produced by chainsaws and other equipment was pushing out marbled murrelets, a rare robin-sized species that nests in the park.

This might sound straightforward enough, but it was anything but, and it turned into one of the park's most expensive wildlife research projects ever conducted.

Murrelets are seabirds that through some quirk of their evolutionary history decided to nest high up in coastal redwoods and other old-growth trees rather than on the cliffs favored by their puffin cousins. Murrelet nests are completely invisible from the ground, and Bensen had no idea where to find them. So the park collaborated with outside scientists to capture about 80 of the birds at sea, equip them with radio transmitters and eventually canvass the park with handheld receivers, trying to locate

THE NESTS of marbled murrelets, which sit on wide branches high up redwoods or other tall coastal trees, are incredibly difficult to find.

signals in the dense forests. They sent tree-climbing biologists some 200 feet up to follow up on leads, but murrelets use little nesting material, and their brownish summer plumage makes them nearly impossible to spot. Three years of efforts led the team to only a couple of nests.

"They're doing everything they can to hide, which makes them a real pain to try to find and study," Bensen said.

Murrelets are endangered globally, and their worldwide population is in decline. Redwood, which might be home to as much as 90% of the nesting murrelets in California, plays an outsized role in the species' survival, so Bensen feels a heightened sense of responsibility to do all he can to help the birds. "A lot of folks pay attention to us when it comes to marbled murrelets," he said. For the past quarter century, Bensen and others have gone to great lengths to gather "dribs and drabs" of data about this mysterious bird and make management decisions based on what they gleaned. "Sometimes the best available science is almost none, but that's what you've got," he said.

As part of that noise study, the team set up cameras near the nests. It confirmed that noise could bother the birds, so the park started scheduling trail maintenance outside the nesting season. The photos also surfaced another, bigger problem: In some images, Steller's jays were feasting on murrelet eggs. "We were like, 'Oh geez, this might be an issue!" Bensen said.

The location of the murrelet's nesting grounds was one of the last great ornithological mysteries in North America until 1974 when, as the story goes, a maintenance worker trimming a tree in Big Basin Redwoods State Park caught an odd sight - a nesting forest bird with

webbed feet. With the nesting puzzle solved, scientists immediately understood the species' predicament: Only fragments of the Pacific Coast's oldgrowth forests remained after a century of intense logging. The murrelet's odds improved in 1994 with the enactment of the Northwest Forest Plan, which has helped protect old-growth forests from logging on federal lands in California, Oregon and Washington. But the crisis isn't over: Logging goes on elsewhere, and intense wildfires have claimed part of the bird's nesting range, said Jim Rivers, an associate professor of wildlife ecology at Oregon State University.

Murrelets are split-habitat birds, but unlike migrating creatures, they rely on both habitats - the ocean and the coastal forest — at the same time. Adults fly back and forth between the nest and the ocean to catch fish and feed their lone chick. During a marine heat wave a few years ago that reduced the availability of food off the Oregon coast, Rivers and his colleagues found that most murrelets left the area and none of them nested nearby. These were anomalous conditions, but the trend toward warmer ocean temperatures doesn't bode well for the murrelet. In other words, the split-habitat strategy "puts them in double jeopardy," Rivers said.

Warming oceans can only be addressed by a global climate change response, but land managers can act to improve murrelet habitat on the ground. So, when it became clear that Steller's jays posed a major threat to murrelet reproduction, park staff worked to learn more about these common, yet not well-understood, corvids. They set out to count Steller's jays and also ravens (which occasionally prey on murrelet eggs) in various parts of the park and partnered with graduate students who radio-tagged a few of the predator birds. The group found that jays, attracted by food left by visitors, congregated around the park's campgrounds, endangering murrelets in those areas.

You have to use your instincts. It's really detective work in the sky."

FEP /

In talks and on signs, park staff provided abundant context to visitors about why they needed to secure their food, but the messaging wasn't effective. "Most folks, they're here to recreate, enjoy themselves, relax, be in nature and not, you know, get another degree in biology," Bensen said. So, he commissioned a team from a local university to survey, interview and observe park visitors around attitudes toward murrelets, jays and ravens. While most

visitors seemed to agree that it was important to protect murrelets and that feeding jays was bad, the researchers found that few visitors even knew what murrelets were, and the team saw quite a few children feed jays directly. Some of the team's recommendations: pri-

oritize written messages, be direct and keep it short. "If your message is like, five paragraphs long, you can forget it," said Carolyn Widner Ward, who co-led the Redwood study and has conducted similar work at Petrified Forest National Park to discourage visitors there from stealing petrified wood.

As a result, staff came up with their "Keep It Crumb Clean" slogan, which they plastered all over the park. The strategy seemed to work: The density of Steller's jays at campgrounds dropped by half. (Bensen also tested a technique that involved injecting fake murrelet eggshells with a substance that would make Steller's jays throw up — and keep them from preying on the birds' eggs. The experiment worked — and garnered attention from the global media - but Bensen decided that, for now, it's impractical to deploy this approach.)

Meanwhile, Bensen has kept trying to find more nests. He trained staff to look for murrelet eggshells, and he contracted dogs trained to detect fishy aromas in the woods. More often than not, the person tasked with actually locating the nests in the trees' crowns based on these ground-level clues was Jim Campbell-Spickler, a wildlife biologist who's been to the top of Hyperion, considered the tallest tree on Earth, and has ascended countless other giants. He's also climbed

some 1,500 tall trees for murrelet

research and has become an expert at identifying nest sites based on subtle signs such as the shape of the branches or traces of feces. "You have to use your instincts," he said. "It's really detective work in the sky." The latest batch of cameras have vielded some discoveries, such

as images of a Humboldt's flying squirrel chasing a couple of murrelets off their nest. Last year, Bensen and his team were elated when footage showed an egg coming out of a female's cloaca, but their hopes were soon dashed when a large raven came into view, pierced the eggshell with its beak and gulped down the yolk.

The overall picture is more positive, though. Population estimates are conducted at sea regularly, and the most recent one showed that murrelet density in the zone offshore from Redwood was increasing. While there is no way of knowing whether that uptick is due to Redwood's decades-long conservation efforts, Bensen views the data point as a win.

"At least we're not completely blowing it," he said.

NICOLAS BRULLIARD is senior editor of National Parks magazine.



Strange Bedfellows

Coyotes and badgers don't seem like obvious BFFs, but sometimes they join forces to hunt. Ongoing research could shed light on this odd and elusive couple.

AST SUMMER, after an eight-hour drive and a 3-mile hike, Emma Balunek retrieved 11 memory cards from ■the camera traps she had set up in the northern part of Wind Cave National Park in South Dakota. Balunek did a quick review of her images to make sure all the cameras were functioning properly and because she was eager to see if she had captured what she was looking for. And she was in luck: In an image rendered blurry by a recent rainfall, a coyote, standing tall, looks out in the distance, while a badger ambles by.

"It's always so exciting and definitely a relief when I see an image of them together on there," Balunek said. "I'm like, 'Wow, this is actually working.' I'm shocked because you're finding a needle in a haystack."

Coyotes very occasionally snack on badgers (the reverse being even rarer), but in what is surely one of nature's strangest partnerships, the two species are sometimes able to move past their, um, differences and hunt together for prairie dogs or ground squirrels. The association has been known for centuries by Native American Tribes, whose stories refer COYOTES AND BADGERS (pictured here in Badlands National Park) very occasionally prey on each other, but other times, they call a truce and team up to catch more prairie dogs (opposite page) — or just hang out.

to badgers and coyotes as brothers or cousins, and later by settlers and naturalists, but it has been relatively little studied. Balunek is hoping to fill some of the gaps and learn more about why a badger would want to go anywhere near a potential adversary.

One reason the badger-covote relationship is so challenging to observe is that badgers are hard to see and get close to, so Balunek, a wildlife photographer and graduate student at the University of Nebraska-Lincoln, decided to set up cameras at five sites, including Wind Cave and Valles Caldera National Preserve in New Mexico. She's also collecting citizen scientist observations from other places including Grand Teton and Yellowstone national parks. (If you've seen a coyotebadger pair in the wild, consider filling out this form: go.unl.edu/coyote-badger.) This is the largest-scale effort to date to document this uneasy alliance, but even with a network of some 75 cameras strategically placed near prairie dog colonies, Balunek likely won't end up with abundant images of the dynamic duo. For one thing, badgers and covotes might choose to walk behind — rather than in front of — the cameras. "Even if we're not getting detections doesn't mean that they're not there," she said.

The badger-coyote twosome is not the only partnership between species. Birds such as titmice and chickadees often forage together, for example. In the Red Sea, groupers shake their heads in front of giant moray eels to signal their desire to hunt together, with the eels trying to corner fish in holes while groupers wait for them to dart in the open water. But the badger-coyote couple stands out among other interspecies associations, not only because the two mammal

predators are sometimes mortal enemies, but also because badgers are fierce and usually solitary.

"To be honest, I was somewhat skeptical about the whole thing because it seems so odd," said Daniel Thornton, a wildlife ecologist whose array of cameras set up in Washington state to document the movements of Canada lynx happened to detect several badger-coyote pairs.

The most in-depth study of the relationship was conducted in the National Elk Refuge, a protected area just south of Grand Teton National Park, in the 1980s by Steven and Kathryn Minta. The couple implanted radio transmitters into dozens of badgers and collected prodigious amounts of data on the animals' life cycle and behavior over the course of about three years.

Equipped with binoculars, the Mintas would hide behind bushes sometimes for hours on end, often in freezing temperatures, and record coyote-badger interactions that frequently occurred hundreds of feet away. The Mintas observed that more often than not, coyotes hunted alone, but when they teamed up with badgers, they appeared to hunt ground squirrels more effectively. Usually, a badger would start digging with the coyote patrolling nearby, but occasionally the two animals would rush an area simultaneously and scatter their prey, which the coyote would catch above ground and the badger would trap in the ground squirrels' burrows. The Mintas could see that coyotes caught more squirrels with their mustelid acolytes around, but they didn't know what happened underground. They speculated that the extra time badgers spent there meant they too were getting more prey.

"It was just one of those inferences that we made." Steven Minta said.

It's a crucial one because it implies that the association is mutualistic, which would mean that both animals benefit, rather than parasitic, meaning that the coyote is taking advantage of

"To be honest, I was somewhat skeptical about the whole thing because it seems so odd."

the badger. Other anecdotal evidence from the Mintas' research suggests that the badgers do get something out of the partnership and freely choose to associate with their occasional predator. For one thing, coyotes, standing much taller than their badger buddies, could survey the landscape for prey. Also, coyotes and badgers seemed at ease with each other, occasionally rubbing noses or touching while resting. Coyotes, which are social animals, often tried to initiate play. "Their mouth is open, and it looks almost like a smile," Steven Minta said. "It's an open, friendly display."

Balunek would love to learn more about the communication between the two species, but she's set out to answer more manageable questions, such as to what extent the partnership is disrupted by the presence of humans and whether the animals refrain from teaming up while raising offspring to avoid exposing their litter to their partners' predatory instincts.

While Balunek's work does not involve lying in wait for long stretches, as the Mintas did, it is demanding in other ways. Her five sites are spread across four states, and Balunek visits each one of them every couple of months to retrieve the cameras' memory cards. She estimates she has already driven some 15,000 miles on those trips, and reaching individual sites can require snowshoeing through deep snow while carrying batteries, backup cameras and other heavy equipment. Most of the cameras are mounted on T-posts, which bison, elk and cattle like to rub against, so to prevent any damage or interference, Balunek had to build fenced enclosures around the posts. The cameras

have yielded hundreds of thousands of images.

The rewards have been few, but occasionally, gems surface, such as a video captured one December afternoon at her southeast Colorado site, where a coyote watches as a badger appears to be digging for mice, a scene that is both useful and aesthetic. "The light is just really soft and lovely," she said.

Balunek knows that, by the time she finishes her fieldwork next year, her trove of coyote-badger images might not be extensive despite her best efforts, but she has another goal in mind for her work. She first became interested in the prairie when her dog, Coral, began sticking her head down prairie dog burrows in Fort Collins seven years ago, and she grew to love this often-overlooked ecosystem. "There's such a subtle beauty to the prairie," she said. "What I love about it is you have to get to know it. You have to put in the time and learn to appreciate it." The prairie is under threat from urban sprawl, commercial agriculture, invasive species and climate change, and she wants her research into badgers and coyotes to help others realize how vibrant it is.

"There is stuff out here," she said. "There are animals making their lives and thriving."

NICOLAS BRULLIARD is senior editor of National Parks magazine.







A VISITOR fishing. It's a rare sight because Horn Island is so hard to reach, Doyle said. Previous pages: Grasses on the island, which is 10 miles long and no more than a mile across. The island doesn't have any drinking water, shelter, facilities or cell service.





A SLASH PINE (above). Left: On a previous assignment on the island, Doyle spotted an alligator, which appeared to be sunbathing or sleeping. "I got pretty close, and by the time it noticed me, it just took off sprinting right into the water." he said.

hotographer Rory Doyle does not mince words when describing Horn Island. "In my opinion," he said, "it's the most beautiful place in Mississippi."

Part of Gulf Islands National Seashore, a 160-mile-long string of islands, historic forts and coastal areas stretching from Mississippi to Florida, Horn Island sits around 8 miles off the coast. Because it's difficult to reach — visitors must be ambitious kayakers or have access to a private boat — the small barrier island is quiet, unhurried, unspoiled. It's a mesmerizing slurry of turquoise waters and ever-changing light, ospreys and dolphins, marshlands and sand dunes, palmettos and skeleton trees, slash pines and spiny yucca.

"The beauty of Horn Island is that, like, every 200 yards is a totally different ecosystem," Doyle said.

A longtime resident of the Mississippi Delta, Doyle first visited the remote island to shoot a magazine story a couple of years ago. This trip in April was organized by someone he had met on a different assignment, who has been gathering like-minded friends to camp on Horn Island for the better part of a decade. The group this time included two writer-journalists, two photographers and two painters. That is, Doyle said, they all shared an interest in documenting the beauty of their destination. "That was a common thread there — really paying attention to what a special place the island is," he said.

The journey there didn't go exactly as planned. Matthew Mayfield, a friend and the co-owner of Eagle Point Oyster Company, had agreed to drop them off, but the ocean swells were too big to battle — even in his 26-foot boat. The party ended up spending the first night on Deer Island. Included in the Mississippi Gulf Coast National Heritage

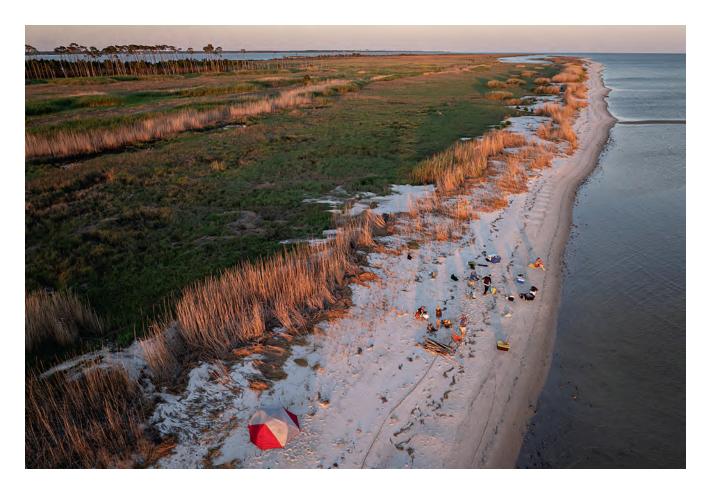
Area (and owned almost entirely by the state), Deer Island is also stunning, but it's so close to Biloxi that campers can see the lights of the casinos that dot the shoreline and hear the hum of traffic. Finally, the next morning, Mayfield took Doyle and his cohort the rest of the way to Horn Island.

The friends set up camp on the Mississippi Sound side of the island. They swam and fished and hiked. The painters painted; Doyle wandered off with his camera, hiking across sand dunes, through stands of pines and past ghost forests of dead and dying trees. After dinner around a bonfire, Doyle went back out searching for sunset shots, which netted him some quintessential images of melting skies and frothy waters — including the one that graces the cover of this issue.

"You have to pinch yourself. You know, nobody can reach this place. You're out here, pretty much having the island to yourself," he said. "It's just a great way to disconnect from technology and all the distractions of modern life, and then feel a sense of connection with the natural world and Mother Nature."

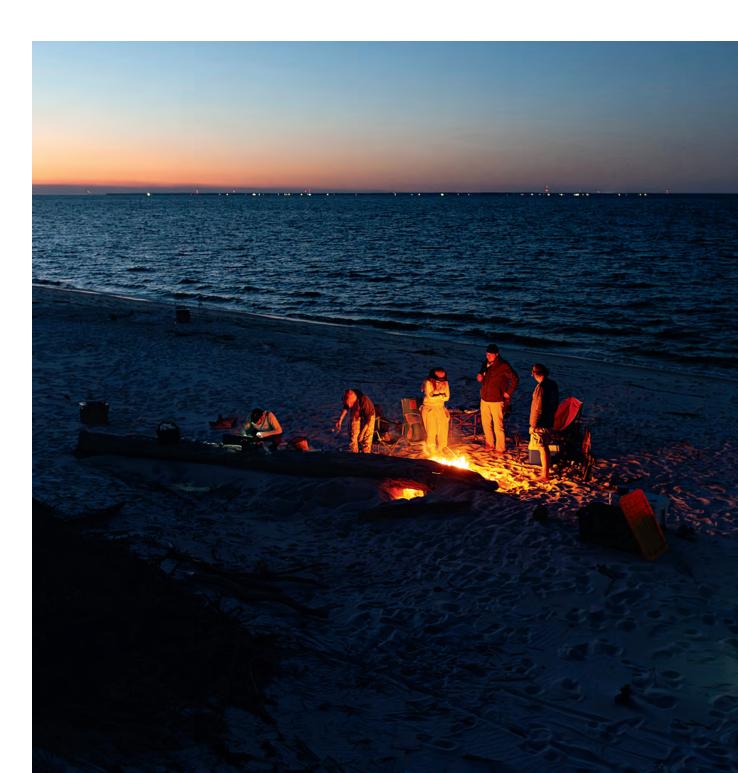
-RONA MARECH

RORY DOYLE is a freelance photographer based in Cleveland, Mississippi. Born and raised in Maine, Doyle studied journalism at St. Michael's College in Colchester, Vermont. In 2009, he moved to Mississippi to pursue a master's degree at Delta State University. He was a 2018 and 2023 Visual Artist Fellow through the Mississippi Arts Commission and National Endowment for the Arts. He has exhibited in New York, London, Atlanta, Mississippi and beyond. Doyle's work has been published in The New York Times, The Washington Post, Smithsonian Magazine, The Wall Street Journal, Reuters, ProPublica, ESPN, The Guardian, Politico, CNN and numerous other outlets.





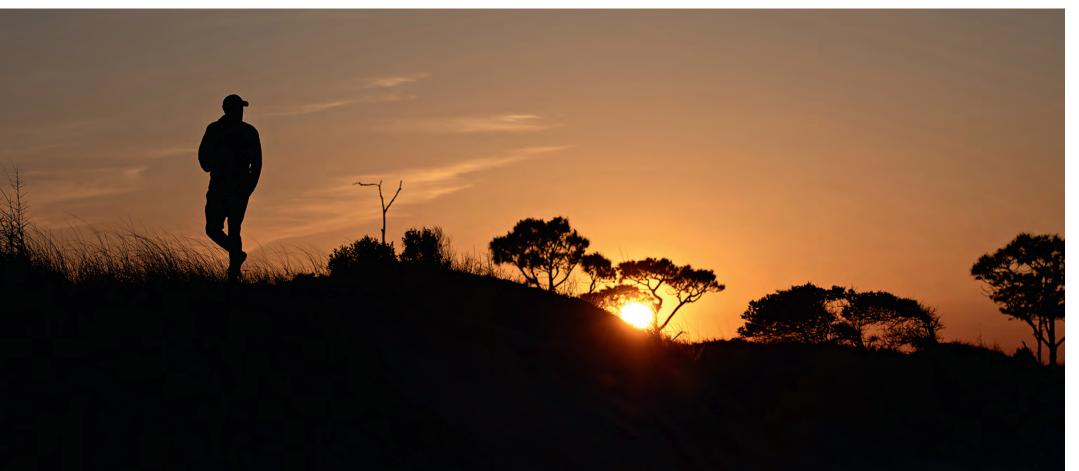
THE GROUP spent the first night on Deer Island after turbulent waters kept them from reaching their destination. Because Deer Island is not part of the park, the rules for aerial photography there are different than on Horn Island, where drones are prohibited (left top and bottom). Below right: Campers can build fires on the beach at Horn Island provided they avoid vegetation, set up below the mean high tide line, bring their own firewood and take unused firewood with them. The campers were all responsible for their own food, but they feasted together on oysters they found in the Gulf, eating them raw with lemon, hot sauce and some boxed white wine.







DOYLE SET OUT on his own to capture his sunset shots, including a great blue heron in flight (right) and a friend hiking along a dune (below).



THE TRIP was organized to coincide with a full moon (above). "It was just perfect weather," Doyle said.



he storm and I met each other at the trailhead at noon, as if keeping a date. While I drove three hours south from Oakland that morning, the storm gathered offshore from Big Sur and blew 40 miles inland, over the Santa Lucia Mountains and the Salinas Valley, arriving just in time to unleash its first fat raindrops as I stepped out of the car.

I looked askance at the sky, hoping it wouldn't throw too big of a wrench into my plans. I'd managed to wrangle a long weekend in Pinnacles National Park, and I aimed to see just about all of it. An abrupt patch of unruly wilderness stitched into the hills southeast of San Jose, the park encompasses only 26,600 acres with 30 miles of trails. Checking off every mile was doable in three days, I reckoned, if I kept up a brisk pace.

In a life not so long past, driving three hours to hike alone into a storm would have been a routine weekend itinerary. But my daughter's birth 10 months earlier did a number on my routines. This is not a complaint; Louisa is a truly great baby, and my husband, Marc, and I are duly obsessed. (After we put Louisa to bed each night, we sit around and show each other pictures of her on our phones.)

And yet, sometimes I get to thinking about the carefree autonomy that Marc and I traded for parenthood. Perhaps I was in such a wistful mood when I found out I had a Friday off work in late March. Marc couldn't skip his meetings, and Louisa is in full-time childcare. For the first time since the kid appeared on the scene, I was free to throw some gear in the trunk and get the heck out of Dodge all by myself. For one night, anyway. Not wanting to miss out on all the fun or solo parent for a three-day weekend, Marc suggested that he and Louisa join me on Saturday.

Since I'd be spending part of the trip with a squishy baby in tow, it seemed prudent to aim for an approachable adventure. Pinnacles fit the bill. We'd have a hard time getting hopelessly lost, but the park still seemed to have plenty of thrills on offer. Its eponymous pinnacles, spires of rusty orange rock, jut hundreds of feet up from the surrounding hills. These strange formations are one of the biggest draws for visitors, but the place is full of small wonders, too, if you know where and when to look: Biologists have logged nearly 500 species of bees within the park,

making it one of the densest hubs of bee biodiversity on Earth. And especially since Pinnacles became a national park in 2013, its reputation as a primo wildflower destination has boomed among Bay Area day-trippers.

On my drive, the meteorologist on the radio qualified his weather warning in a way I chose to hear as reassuring, saying the system was "shaping up to be pretty strong — for spring." Still, when I arrived at the trailhead, I felt glad I'd remembered to pack extra wool socks. I put one pair on my feet and another in my backpack, laced up my shoes and hiked off into the storm.

I was following a route tip from Alacia Welch, a wildlife biologist who's worked with California condors at Pinnacles since 2008. Condors are North America's largest land bird, boasting a LeBron-dwarfing 10-foot wingspan. They're also one of the rarest birds in the world, a species with fewer than 600 individuals. The park is one of a handful of places where biologists release captive-bred condors in the wild, part of an effort to save the species after it came within 22 birds of extinction in the 1980s.

The week before my trip, I had asked Welch for con-

The week before my trip, I had asked Welch for condor-spotting intel. She'd told me my best bet was to head up the Condor Gulch Trail to the High Peaks and hang out for an hour at the highest point. So up the trail I went, hiking fast to beat the chill.

My destination rose straight ahead, a rampart of spires looming around 1,000 feet above the valley floor. From below, the pinnacles had the melty, slouchy look of dripped sandcastles. I could just make

out a half dozen dark shapes
circling above them, but with
raindrops smearing the view
through my binoculars, I
couldn't tell whether these
were the famous condors or
regular old turkey vultures.

After 40 minutes, I gained a ridgeline and paused to catch my breath. I was futzing around in my backpack when something confusingly large moved in the corner of my eye. I looked up to see an enormous creature soar directly overhead, affording me an extended, up-close view. Welch had told me what to look for: feathers splayed out at its wingtips, a gray or pink head, and a triangular white patch under each wing. I did not need binoculars to determine that this was definitely not a turkey vulture.

The condor flew past me and settled into a lazy, descending spiral over the pinnacles. I was still gaping at it a minute later when another condor flew over, following the same path. Then three more, and another one after those. I stood alone on the In a life not so long past, driving three hours to hike alone into a storm would have been a routine weekend itinerary. But my daughter's birth 10 months earlier did a number on my routines.

wind-blasted ridge and watched as seven enormous birds — just over 1% of the world's California condors, at last count — flapped down to land among the ledges and crevasses in the High Peaks.

I hiked on and up, following the trail as it led into the jumble of pinnacles. Right away everything got quiet: I'd rounded a corner and, like the condors, come in out of the wind. The path now meandered among the sheltered, grassy toes of the formations, which towered three, four and five stories above the trail. Up close, the rock proved crumbly and knobby, pitted with cat-sized caves. In the sudden tranquility, I slowed my steps to study the scene.

The formation that sheltered me from the storm has a fascinating geologic backstory. The pinnacles of Pinnacles National Park were once part of an ancient volcanic field that straddled two massive tectonic plates. These plates have been slowly sliding past each other for at least 23 million years, splitting the volcano in two and dragging the two halves ever farther apart. Today they're separated by 200 miles, as Vincent Matthews, who discovered and documented this when he was a Ph.D. student in the 1960s, recently told me on the phone.

The park also is a hot spot for climbers. David Brower, who would go on to lead the Sierra Club, put up the first roped climb at Pinnacles in 1933. In the 1940s, '50s and '60s, it was a local haunt for Bay Area climbers.

A CALIFORNIA CONDOR (left) soaring above High Peaks Trail (below). Previous pages: The view from Condor Gulch Trail.



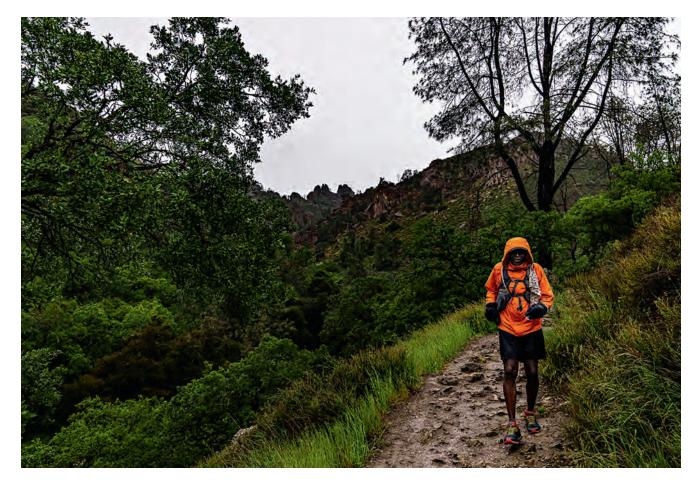
I stood alone on the wind-blasted ridge and watched as seven enormous birds — just over 1% of the world's California condors, at last count — flapped down to land among the ledges and crevasses in the High Peaks.

"It used to be that we went climbing at Pinnacles when it was too cold or wet in Yosemite," said Bruce Hildenbrand, who leads a local climbing group and figures he's spent more than 500 days climbing in the park. Over time, however, the park's second-class status changed. "Pinnacles really has come into its own as a climbing destination," he said.

Thankfully, everyday hikers can experience a bit of the highangle terrain that tempts rock climbers. A half-mile section of the High Peaks Trail routed me up, around and down a cluster of pinnacles. It was hairy enough to be interesting, especially while I was alone and getting plastered by wind and rain. But with plenty of sturdy iron handrails and steps carved into the rock, plus boardwalks spanning the larger gaps, the hike felt secure enough to be fun.

Still, by the time I emerged from the tricky stretch, I was ready to be out of the elements. I changed into dry socks before descending out of the High Peaks to Bear Gulch, where I'd parked. A few minutes later, I was pulling into the Pinnacles Campground, the park's only overnight facility. When the forecast deteriorated earlier that week, I'd upgraded my camping reservation to a tent cabin. I'd been a bit salty about spending \$154 a night for an unheated room with canvas walls, vinyl mattresses and two plastic Adirondack chairs. But not having to set up a tent alone in the rain or blow up my meager air mattress before changing into dry clothes was priceless.

Once I stopped shivering, I realized how hungry I was. For



CONDOR GULCH TRAIL (pictured) winds past a rampart of spires looming around 1,000 feet above the valley floor. A wildlife biologist suggested the author hike the trail to the High Peaks to find condors. The advice was spot-on.

dinner, I'd packed a tub of four-day-old leftovers. The thought of them now made me sad, so I ambled over to the camp store to ask about the nearest place to get a decent burrito. The woman behind the register pointed back up the highway toward Hollister.

Driving dozens of miles for a burrito would constitute a major violation of the code of camping conduct. I've day-dreamed about instilling these values in my children since before I even thought I wanted to have kids. The point of camping, I imagine myself explaining, is to deprive yourself of basic comforts, consume substandard nutrition and avoid phones at all costs. No takeout allowed.

The light was fading. The rain picked up. The wind in the old oaks outside the camp store seemed to whisper "MAR-GARITA." It occurred to me that I was alone, far from my kid, and therefore didn't need to be modeling any values for anyone. So I drove to Hollister and ordered the burrito. It tasted great.

Over coffee the next morning, I studied the map, wondering whether my decision to head for the High Peaks first meant everything else would feel anticlimactic. But if the High Peaks are the scenic heart of the park, they're not its literal high point. That distinction belongs to North Chalone Peak, an isolated summit at the end of a 4-mile trail near the park's western border.

I had a few hours to get a good hike in before the baby and the husband arrived, so I made my way to Chalone Peak Trail. Weak sunlight filtered through an oak and madrone canopy. On either side, chunky red walls rose a good 80 feet, their faces softened by dense mats of moss in shades of chartreuse, olive, bronze and acid green. At a junction, I picked the trail heading toward Bear Gulch Cave.

The canyon floor soon narrowed into a maze of boulders ranging in size from refrigerator to starter home. I passed a sign announcing "CAUTION/ FLASH-LIGHTS REQUIRED/ LOW CEILINGS/ SLIPPERY WHEN WET" just before the path disappeared into a cleft between two boulders. The trail devolved into a series of slimy stepping stones that were mostly

submerged in Bear Gulch Creek, which was pouring out from the mouth of the cave. I switched on my headlamp, and the cave seemed to rise up to swallow me as I tottered along.

Geologists call Bear Gulch a talus cave. Unlike those carved out of solid rock by water, talus caves form when large boulders fall into a narrow canyon and pile up in a way that creates a passageway. The boulders wedged against each other in Bear Gulch are big enough that the angles and pockets form a dim, damp and occasionally cramped corridor. With every step, the sound of the creek seemed to rise,



PINNACLES IS roughly 2.5 hours from the San Francisco Bay Area by car. The park doesn't have any hotels, but visitors can find tent sites, RV sites and canvas-sided tent cabins for rent in the sole campground. Rangers advise visitors who are planning to hike the High Peaks, Condor Gulch, Balconies or Moses Spring trails to arrive early in the morning because parking lots fill up.

Everything was growing and nothing was dying: Green grass, red paintbrush, purple lupine, orange poppies and yellow buttercups jostled for space under thickets of manzanita and chamise.

from a trickle to a rush to a roar.

The trail climbed a carved stone staircase beside a three-story waterfall, all but invisible in the gloom. In the upper reaches of the cave, the hiking became a bit more gymnastic: I crouched and wiggled through a few tight spaces and hopped back and forth across the stream, taking princess-like care to keep my socks dry. Then I reached a section that seemed to necessitate crawling up the middle of the creek itself. My map showed that the trail eventually popped out above ground and met up with the route to the summit, but I decided to turn around and head back out the way I'd come.

Five miles later, I was in a different world, alone atop North Chalone Peak. The slope I'd traipsed up to get there was having a full-on spring freak-out. Everything was growing and nothing was dying: Green grass, red paintbrush, purple lupine, orange poppies and yellow buttercups jostled for space under thickets of manzanita and chamise. The wet wind smelled like sage, and in the gray light, the flowers seemed to glow from within. On the bare summit, the storm swirled on all sides, engulfing me and the mountain and unleashing a stinging, horizontal rain. But periodically, the clouds parted enough to reveal the ridges of the Central Coast mountains marching away to the horizon.

I lingered a while, so I had to hustle back to the campground, where I was scheduled to meet up with Marc and Louisa. We pulled up to the cabin at the same time. I rocketed out of my car in an endorphin- and scenery-fueled outburst, raving about all the cool stuff I'd seen so far and all the hikes we had to hurry up and do.

Marc waited for me to run out of things to tell him about as we unpacked and let the baby loose on the cabin floor. He had just wrangled her and the unbelievable quantity of gear she requires into the car, then driven 120 miles down from Oakland literally single-handedly, his right hand mostly devoted to reaching back to keep Louisa fed and calm. He looked at the dry, cheerful baby. He looked out at the rain. "Doesn't the baby need a nap?" he asked.

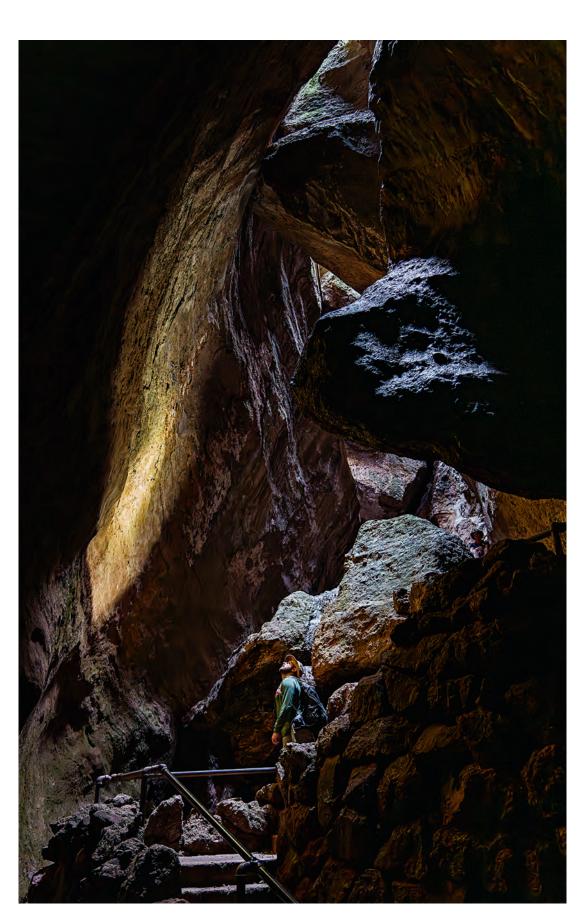
A pulse of antsiness shot through me at the thought of spending precious daylight hours in the tent, but I knew he was right. Resigned, I set up the travel crib in the corner of the tent.

Marc and I waited a long time to expand our family. That was in large part because I was afraid that adding kids to the mix would make it too hard to pursue our other ambitions, even those as quixotic as trying to hike every mile in Pinnacles. My fears were about half accurate: Having Louisa does make it harder to do what I want. But I'm constantly surprised at how much fun I have doing whatever we do instead.

Louisa is an indifferent napper in normal life, but she was no match for the cool air in







BEAR GULCH CAVE

TRAIL, one of the park's most popular attractions, travels through a talus cave and along a waterfall. The author turned around when she reached a section of the trail that seemed to necessitate crawling up the middle of the creek itself. Opposite: Bitterroot (top) and common goldfields (bottom) along High Peaks Trail.



MOSES SPRING TRAIL (above) and a Western fence lizard warming itself atop a rock near Bear Gulch Reservoir.

the tent or the sound of rain on the canvas roof. We hucked her into her crib, and she went out like a light. Marc picked out an aimless melody on the guitar, and I read my trashy vacation novel while the baby slept. The wind gusted mightily, and the rain turned intermittently to hail. We had no chores to do in the tent, and without cell service, we couldn't stream anything, text anyone or read any wretched headlines.

We stayed in this little cocoon until late in the day, when Marc remembered his Wordle streak. In the morning's scurry he'd forgotten to do the New York Times puzzle, and I watched him wrestle with the choice between breaking his streak and staying dry in the tent, or gearing up and going in search of cell service. I saw my opportunity.

"You know," I said, unfolding the map. "I'm pretty sure you'll get service up on this ridge," pointing out the Blue Oak Trail, which climbs to the High Peaks from the east. Marc looked at the rain again and then at Louisa, who was starting to stir.

"All right, baby," Marc said, suddenly alert. "It's time to get your raincoat on!"

We were soon loading the baby into the backpack carrier and hitting the trail. Marc shouldered Louisa as we hiked 2 miles in a companionable drizzle up a caterpillar-green hillside. It was early evening by the time we got up on the ridge and our phones buzzed to life with a backlog of alerts. This was also about the time the kid realized it was closing in on her bedtime, but she

was still strapped into a backpack in the gathering dusk in a chill rain, with nothing on her tiny red hands. She started to squirm.

We quickly realized that neither of us had brought mittens. Her nervous noises escalated into whines, and I thought apprehensively about the steep, wet miles that stood between us and her crib. Things were turning dire when Marc remembered the crappy umbrella at the bottom of his backpack. While he did Wordle, I rigged up the umbrella over the baby. Then I slipped out of my shoes, shucked off my socks and slipped one over each of her hands. That did the trick. Louisa chattered happily, and I squelched down the trail, sockless but inordinately proud of our parental problem-solving skills.

That night, the storm died. People came out of their tents and pitched folding chairs around campfires, and kids ran around shouting into the darkness. Marc and I stayed up late, playing a few hands of cribbage by lantern light, alternating sips of cheap beer and ginger tea. Before turning in, we made a plan for the next day to hike a big loop through another cave, past formations labeled with appealing names such as Machete Ridge and Balconies and up over the High Peaks.

Continuing her heroic performance, the baby slept until 8 the next morning. The completionist in me knew we needed to get moving to snag a parking spot at our trailhead: the internet, my friends who'd visited Pinnacles recently and the lady in the entrance booth had all warned me that parking can fill up

The baby and I chitchatted as we bounced along in the sunshine. We stopped to peek into a few oak tree hollows and study the poppies. The trail crossed the creek at a shin-deep ford, and I waded across barefoot.



early on weekends. But it was one of those frosty camp mornings where your brain doesn't really work until the sun hits you straight on and warms you up.

We got moving by 10 a.m., but it was already too late: A ranger had closed the road up to the trailhead and was waving all comers into the overflow parking lot behind the campground store. Sticking to our plan would mean hiking 6 miles on a trail next to the highway to get to the start of the 12-mile loop. It was probably too much time to keep the baby in the backpack, to say nothing of the toll an 18-mile day would take on our knees.

I consulted the map and spotted the South Wilderness Trail, which squiggled away from the highway to follow Chalone Creek toward the park boundary. Maybe it would turn out to be a hidden gem?

I'll say here that Marc has adjusted adroitly to parenthood, though it has meant surrendering much of the alone time he needs. To that end, he was plainly struggling to summon enthusiasm for Plan B. I could tell by his faraway look that he was dreaming of driving home alone, both hands on the wheel (deluxe!), and having the house to himself for a few hours.

"Would you mind if I ...?" he started.

"Please go," I said. I understood: It is a joy to spend a sunny spring Sunday exploring a national park with one's spouse and baby, but it is also a joy to spend it alone, loafing on the couch with no obligations on the near horizon.

There ensued a 10-minute scramble to reapportion the car seat, bottles, tiny jackets, snacks, toys and diapers between our two cars. Then Marc drove away, and it was just the two of us. I hoisted Louisa onto my back, and we set off. As I'd suspected, the first mile of our hike was a bit charmless, but the vibe improved when we turned away from the highway and headed up the Chalone Creek valley, a sandy flood plain studded with ancient, occupation only.

The baby and I chitchatted as we bounced along in the sunshine. We stopped to peek into a few oak tree hollows and study the poppies. The trail crossed the creek at a shin-deep ford, and I waded across barefoot. On the far side, I parked Louisa at the water's edge, hoping she'd splash cutely in the creek while I got my shoes back on. Instead, she promptly scooped up a handful of sand and crammed it into her mouth.

We moved on. After a while, the path grew faint, crowded by brush on both sides. We soon came to a thicket where poison oak shoots crossed the trail, like the staves of two imperial guards.

If I hadn't been carrying the baby, I probably could have found a way to limbo under the barricade and keep hiking. I might have been tempted to hustle along with my head down, anxious to get to wherever the trail was taking me, even though I could see on the map that it hit a dead end at the park boundary a mile beyond.

I don't know at what age a person develops a discerning eye for scenery or an expectation of scoring a parking spot, but Louisa evidently cared not a whit that our plans had gone sideways, and we'd ended up on a dusty path to no place in particular, nary a pinnacle in sight. She thumped the back of my head enthusiastically and tugged my ponytail with her grubby fists while directing a fluent string of gibberish to the crows up in the trees. The sun warmed her arms, and the breeze ruffled what little hair she had. Altogether there seemed to be very little I could teach this kid about the point of being outside that she didn't already know. If anything, it was the other way around.

I reached awkwardly over my shoulder to disentangle her hands from my hair, and she grasped my finger and clung to it as we turned around and headed for home.

JULIA BUSIEK is a writer living in Oakland. She's worked in national parks in Washington, Hawaii, Colorado and California.

PHILIP PACHECO is a photojournalist and photo editor specializing in reportage, documentary and editorial photography. He is a regular contributor to news outlets, including The Associated Press, Bloomberg News, Getty Images, Agence France-Presse, among others, and he also worked on staff at The San Francisco Chronicle. He currently works at The New York Times and is based in the San Francisco Bay Area.



To research his book "Grizzly Confidential," author **KEVIN GRANGE** headed to Katmai National Park in Alaska to watch the famous bears fish, face off and fatten up for winter.

riter Kevin Grange has nurtured a passion for watching wildlife since he was 12 and his parents gave him a copy of Olaus J. Murie's 1954 book "A Field Guide to Animal Tracks." As Grange writes in "Grizzly Confidential: An Astounding Journey into the Secret Life of North America's Most Fearsome Predator," his father inscribed the title page with a note reading, "To Kevin, our family's great pathfinder, fisherman, and outdoorsman on his birthday."

Grange went on to work six seasons as a paramedic and park ranger at Yellowstone, Grand Teton and Yosemite national parks, an experience he mined for his previous book "Wild Rescues." In his latest work, which comes out on Sept. 17, he delves into the world of the mighty ursid, participating in a bear defense class, joining a mission to recover GPS collars dropped by bears on Afognak Island in the Kodiak Archipelago, and watching a grizzly test (and eventually break into) a commercial cooler. He counts whitebark pine cones — containers of the nutritious pine nuts bears love — in Yellowstone, travels to Alaska's Emerald Isle to learn about the relationship between brown bears and the Alutiiq people, and interviews a bear attack survivor and celebrity bear trainers.

In this excerpt from a chapter titled "The Chonkiest of the Chonky," Grange heads to Katmai National Park and Preserve in Alaska shortly before Fat Bear Week, a wildly popular contest created in 2014. Every summer and fall, thanks to a plethora of well-placed solar-powered video cameras, thousands of bruin lovers tune in to watch bears feast on salmon at Brooks Falls, where fish famously hurl themselves upstream to spawn, and along the Brooks River. Grange likens the drama — the parrying, partying, stealing, snorkeling — to reality television: "The Real Housewives of Brooks River," he writes. Then shortly before the bears trot off to their dens for a long winter's nap, observers from around the world vote for the heftiest grizzly in a March Madness-style contest.

As Grange recounts, he and his wife, Meaghan Wheeler-Grange, take a floatplane to the park for a late September trip run by Willy Fulton, the pilot, and his wife, Jennifer Culbertson, a longtime guide who previously served as a National Park Service law enforcement ranger. After the flight from Kodiak Island to Brooks Falls, Grange and his group, including one woman who gushes about the fat bears as if they are human celebrities, attend mandatory bear school at the visitor center before heading to a viewing platform.

-Editors



I could **barely contain my excitement**. I was about to
witness **one of the greatest wildlife spectacles on Earth**and maybe glimpse some of the
bears I'd fallen in love with on the
bear cam — Otis, Chunk, Grazer
and Holly.

"Honey," Meaghan said, gesturing down to my hand on her knee. "You're cutting off the circulation."

"Sorry," I replied, releasing my enthusiastic grip. "Just excited." $\,$

At Brooks Camp, visitors coexist alongside the great gather-

ing of bruins due to several strictly enforced rules: All food (and even scented items such as lip balm and gum) has to be left in a highly secure food cache. Food can be eaten only in Brooks Lodge or in one of the picnic areas, which are framed with bear-deterring electric wire. Visitors are also advised to keep gear such as backpacks with them always.

"Don't set anything down and walk away," warned Jasa Woods, a park ranger with red hair, freckles and a friendly smile. "A curious bear might tear these items apart in search of food or fun things to play with."

As for human cubs — children — they should never be allowed to wander away. Toddlers must be carried in backpacks.

Woods reminded us to stay calm, step aside and speak softly if we encountered a bear on the trail. "Whatever you do, don't run!" she said, suddenly serious. "That will trigger a predatory response, and you can't outrun a bear."

Before we were dismissed, Woods told us the platform eti-

quette: no smoking, no flash photography, no tripods (monopods only), and most importantly, no loud noises or cheering.

"What type of idiot would cheer?" I said to Meaghan as Woods dismissed our group.

"That's it?" I asked, standing. "We can just go wander around now?" I felt as if we'd just been given the keys to Jurassic Park.

"We can," Meaghan replied. "At least we have Jennifer and Willy to lead us."

It was a cool, overcast autumn day, and the trees lining the river were a sorbet swirl of orange, maroon and yellow. Both Brooks Lodge and the Katmai Trading Post had closed the day prior, and an end-of-the-season feel was in the air. The number of bears and tourists usually peaks in July, when sockeye leap up the falls by the hundreds. It wasn't uncommon to have over 500 people a day visit Brooks Camp around then. At times there could be a two-hour wait to get onto a viewing platform and only a 30-minute time slot allotted.

in Katmai National Park and Preserve. The bears might appear to be randomly situated along the river, but experts say that a chess game of hierarchy and dominance is constantly taking place to determine who gets the best places. Author Kevin Grange traveled to Katmai in September of 2022 to see the behemoths he'd come to know online as they played (previous pages) and competed for food.

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DURING FAT BEAR WEEK, thousands of bruin lovers vote for the heftiest grizzly in a March Madness-style contest. Bear 909 on June 22, 2022 (top) and Sept. 18, 2022 (bottom). Far right: The bears employ a range of techniques to capture their prey. "I could see their different personalities based on how they fished," Grange writes.





According to Leslie Skora, a Park Service biologist at Katmai, grizzly viewing at Brooks River is far different than it is in the Lower 48 or even a place such as Kodiak, where the bears are hunted during the spring and fall. (Historically, the term "brown bear" referred to bears that had access to the ocean and marine life, and "grizzly bear" was reserved for bruins found in the interior of North America. I use the terms interchangeably, however, since the genetic differences between these bears are negligible.)

"The bears here have a much smaller space bubble than you'll find at Yellowstone, the Tetons or even Denali," she told me prior to my trip. "Because of the abundant salmon resources, they're willing to tolerate each other and people in a lot closer proximity. It's kind of like the New York City of bears, and we're able to have these viewing opportunities that don't happen much else anywhere in the world."

But they're still dangerous and wild. From the moment the bears leave the den, they live under a ticking clock. "They have to eat a year's worth of food in six months," Culbertson explained, "and compete with other bears for those food resources."

During our 1.2-mile hike down a dirt road to the viewing platform at the falls, Culbertson told us how grizzly bears are ecosystem engineers, tilling the soil with their long, excavator-like claws, dispersing seeds via their scat, and scattering salmon carcasses throughout the forest.

"They've found salmon DNA in all the trees around there," Culbertson said, exaggerating — though not by much. "The salmon carcasses discarded by bears replenish the forest and surrounding ecosystem with nitrogen, carbon, phosphorous and other minerals."

Bears can eat up to 40 fish per day, especially when they are in hyperphagia, a state of hunger that can never be satisfied, no matter how much they eat. "They may not eat the whole fish," Culbertson explained. "When there's an abundance of salmon, the bears 'high grade' by only eating the fattiest part of the fish: the brains, skin and eggs."

After a mile, we reached the elevated walkway leading to the

viewing platform at the falls. As we hiked, we saw hulking bruins in various shades of cinnamon wandering underneath us on their way to and from the river, or napping on their stomachs, with their forepaws forward and hind legs stretched back, a posture known as splooting.

Once we reached the viewing platform, Brooks Falls came into view. Sure enough, a behemoth brown bear stood on the lip of the falls, staring intently down at the water and waiting to catch a leaping fish.

"Do you know who it is?" Meaghan asked.

The large bear had a light brown coat with dark patches around her eyes. "I think it's Grazer," I replied. "Bear 128."

A few grizzlies wandered below the falls, while others patrolled the shore, searching for fish scraps. I spotted one of the Fat Bears, Otis, in his "office" on the left side of the river.

At first, the bears appeared to be randomly situated along the river, but Culbertson informed us that in actuality, a chess game of hierarchy and dominance was taking place. The biggest, most

dominant bears got the best fishing spots at the top of the falls (or just below in the jacuzzi), and the less dominant bears were spread out downriver. Dominance was a dynamic based on the bears' age, size, health and attitude, and it could change yearly, seasonally or weekly. Typically, the big adult males were most dominant, followed by sows with cubs, then other adult males and females, on down to the hungry and hormonal teenagers. These so-called subadults were the curious, scrawny underdogs, struggling to stay alive in a harsh world, and I loved them more for it.

The bears had the same objective — Operation Binge on Fish! — and I could see their different personalities based on how they fished. The bear at the falls practiced the stand-and-wait method. Over in his office, Otis would wait patiently — as if in a seated, silent meditation — and then suddenly he'd pin a fish with his mighty paws before grabbing it in his mouth and waddling up the steep riverbank to devour it in the woods. Another bruin searched for fish with his head darting back and forth

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NPCA AT WORK

Alaska's "Bear Coast," a sweep of wild shore stretching from Katmai to Lake Clark National Park and Preserve, seems remote, its brown bears and wolves, salmon and beluga whales beholden only to the changing of seasons and tides. But the area isn't as untouchable as it may appear.

For decades, NPCA has defended the region from dirty extractive operations, primarily Pebble Mine, a proposed gold and copper enterprise that would carve a mile-wide hole in this glaciercapped landscape, disrupting migration corridors, destroying streams and threatening the subsistence way of life of Alaska Natives. In 2023, the Environmental Protection Agency vetoed a key permit for this mine, a move NPCA and its allies celebrated. Unfortunately, that decision has since been challenged in court, and the fate of the mine remains in question.

This spring, another threat to this pristine landscape and its diverse web of life rocketed to the forefront: the Johnson Tract Mine. "It's gone from zero to 60 within two weeks." said Jen Woolworth. NPCA's Alaska program manager. Located on an Alaska Native corporation inholding within Lake Clark National Park. the 21,000-acre tract sits at the foot of the picturesque Iliamna Volcano and upslope from Tuxedni Bay, home to the endangered Cook Inlet population of beluga whales.



Recently, the company leasing the land embarked on exploratory gold mining, spurring the Park Service to make good on an agreement that predates the park's designation: allowing for the construction of a deepwater port and road across what is now park land to get the ore to market. As the agency continues to evaluate alternative routes and locations. NPCA and a host of partners have weighed in, outlining collective concerns, from noise and light pollution to destruction of wetlands and harm to wildlife. "We are going to do everything we can to prevent damage to the ecosystem and uplift voices of those who live and work there." Woolworth said.

-KATHERINE DEGROFF

underwater — a technique known as snorkeling — while another went diving, submerging his whole grizzled body.

As for those sweet subadults, they weren't above begging for scraps from more dominant bears or pirating (aka stealing) fish, then darting off into the woods with their treasure. A few bears tried the dash-and-grab method: leaping into the river, displacing a lot of water in the shallow section and hoping to pin a fish with their paws. This tactic burns a lot of energy but, sadly, isn't very effective.

Suddenly, the bear named Grazer, standing at the lip of the falls, caught a leaping fish.

"Yes!" I exclaimed loudly, clapping.

Meaghan was more than embarrassed. "You're that guy," she said. "The cheerer."

I was ashamed to have broken viewingplatform etiquette, but it was suspenseful watching the grizzlies fish, and knowing the stakes and the effort they put in did make you want to cheer.

After spending an hour on the platform — during which I happily also spotted Bear 132, Bear 909 and Holly — we wandered over and

sat in the tall grass beside Lake Brooks. A few bears snorkeled and dove around for fish in the distance, and one blond subadult looked like he was just floating on his back, enjoying a moment of rest and the warm sunshine on his face.

Every now and then, we'd hear a noise in the woods behind us and spot an 800-pound grizzly ambling down the trail, mere feet from us. And on our hike back to Brooks Lodge later that afternoon, we passed within a few feet of a half-ton, silver-tipped grizzly sleeping in the shade. We always tried to keep a hundred yards or so between us and the bears, but there were so many of them — and they were often so quiet — sometimes we just happened upon them, or they upon us. They are apex predators, and I made no pretenses about their friendliness, but they are far from bloodthirsty killers intent on eating humans. Despite the proximity of thousands of people to the bears at Brooks, there have been few inju-

ries and no deaths at camp. Having never been hunted or given access to human food, these bears simply didn't care about us.

Following a picnic lunch — eaten safely behind an electric fence — we returned to the main viewing platform to discover the falls empty. My heart sank, and I recalled the famed conservationist Aldo Leopold describing Escudilla in his classic book, "A Sand County Almanac."

Escudilla is a 10,912-foot mountain in Apache County, Arizona, in the eastern part of the state. Leopold started his Forest Service career in the Escudilla Wilderness, the site where the last brown bear in Arizona was shot in 1933 by a predator control agent who had been given orders to kill bears to prioritize ranching in the area.

"Time built three things in the old mountain," Leopold wrote. "A venerable aspect, a community of minor animals and plants, and a grizzly. ... The bureau chief who sent in the trapper was a biologist versed in the architecture of evolution, but he didn't know that spires might be as important as cows. He did not foresee that within two decades, the cow country would become tourist country and, as such, have a greater need of bears than beefsteaks."

Leopold discussed the harmful effect Manifest Destiny had on nature, Native Americans, and animals such as wolves, bison and grizzlies. "It did not occur to us that we, too, were the captains of an invasion too sure of its own righteousness." With the last bear gone, Leopold wrote, "Escudilla still hangs on the horizon but, when you see it, you no longer think of bears. It's only a mountain now."

When I gazed out at Brooks Falls without bears, the area lost its magic. I contemplated a bear-free future and recalled something conservationist Lynne Seus had said to me: "Without wildlife, it's just scenery."

Taken from "Grizzly Confidential: An Astounding Journey into the Secret Life of North America's Most Fearsome Predator" by Kevin Grange.

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KEVIN GRANGE is the award-winning author of "Wild Rescues: A Paramedic's Extreme Adventures in Yosemite, Yellowstone, and Grand Teton," "Lights and Sirens: The Education of a Paramedic," and "Beneath Blossom Rain: Discovering Bhutan on the Toughest Trek in the World." He has written for National Parks, Backpacker and the Orange County Register. He has worked as a park ranger and paramedic at Yellowstone, Yosemite and Grand Teton national parks and currently resides in Jackson Hole. Visit him at www.kevingrange.com.

TO LISTEN TO an interview with Grange about his new book on NPCA's podcast, "The Secret Lives of Parks," go to thesecretlivesofparks.org. Fat Bear Week, organized by partners including the Katmai Conservancy, Explore.org and the Park Service, will take place this year from Oct. 2-8. You can find more information at explore.org/fat-bear-week and check out the live bear cams at explore.org/livecams.



THE AUTHOR and his wife, Meaghan Wheeler-Grange, at the Brooks Falls Platform (above). Left: Bears sometimes lie spread eagle, a posture known as splooting, to stretch, relax or cool down.

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HISTORIC TRAVEL **DESTINATIONS**

THE TRAIL STARTS HERE

Allegany County, the Mountain Side of Maryland, beckons outdoor recreation enthusiasts, with Rocky Gap State Park, Green Ridge State Forest, the majestic Potomac River, and the C&O Canal and Towpath National Historical Park and Great Allegheny Passage trail systems. The mountainside has gained a well-deserved reputation as a regional arts destination with flourishing Arts and Entertainment districts, a rich theater community, vibrant public art murals and displays, and DelFest, an annual music festival which calls Allegany County home. Enjoy three centuries of American history from George Washington's Trail to the start of the country's first federally funded road, the National Road, and no trip is complete without a scenic excursion on the Western Maryland Scenic Railroad. A true getaway, this region tucked in the Appalachian Mountains boasts a handful of charming bed and breakfasts, a large selection of chain hotels, beautifully set campgrounds, and a casino resort. No matter your interest, passion, or idea of fun, you'll find a trail for just about any type of adventure here.



Courtesy MDMountainside.com



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HISTORIC TRAVEL **DESTINATIONS**



Courtesy Gulf State Park Backcountry Trail

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Gulf Shores and Orange Beach are the ideal destinations to experience the natural wonders of the Alabama Gulf Coast. The area features 32-miles of beautiful beaches and scenic trails, all waiting to be explored. Choose from outdoor activities like biking, hiking, paddleboarding and kayaking to traverse through the area. Whether you love being out on the water, lost in the trails or just soaking up the sun, this is the spot for you. Discover the beauty of Alabama's beaches and escape into a world of wonder. Alabama's beaches are unmatched. The area's sugar-white beaches offer you the chance to relax and explore. You can lounge in the sand, snorkel through the turquoise waters or hop on a boat and go diving out in the Gulf. The possibilities for reconnecting with nature are endless on the Alabama Gulf Coast. At the center of Gulf Shores and Orange Beach lies Gulf State Park. A destination in itself, this exceptional park offers 6,150 acres spanning across both beach towns and boasts nine unique ecosystems. You'll love feeling the rush of the coastal breeze as you bike through its captivating trails or glide across the calm waters of Lake Shelby in your kayak. With so many activities to do inside Gulf State Park, it's the perfect spot to discover the irresistible charm of the native wildlife and picturesque landscape of the area.



Courtesy Visit Springfield

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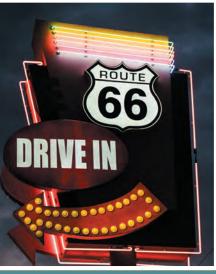
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The Charisma **Premium**

How much would you pay to see a celebrity critter?

FF, IN THE EARLY 1990s, you visited Rocky Mountain National Park, you may have crossed paths with an lelk named Samson. So nicknamed for his colossal size and strength, Samson was a 1,000-pound behemoth with a rack like a cottonwood's crown. He seemed to delight in humans — he loitered in backyards, playfully bluffcharged passersby, posed for countless photos. Although hundreds of elk migrate from Rocky Mountain each fall through the gateway town of Estes Park, Samson was no faceless member of his herd — he was a bona fide star. Tourists sought him out; shops slapped his visage on Tshirts. You might say he had charisma.

THE MOUNTAIN LION P-22, who had his own unofficial publicist before he died in 2022, inspired a campaign to fund a wildlife overpass.

At first blush, the notion that Samson was charismatic seems somehow unscientific. Many wildlife biologists think in species and populations, not individual animals; what determines whether an elk herd persists in the long run isn't the fate of any single creature, but the health of the collective. Yet laypeople inevitably harbor biases: We pick favorites, succumb to anthropomorphism, love whom we love. Scientists aren't immune to the formation of attachments, either. "I felt I had lost a good friend, although it was a one-way relationship," wrote one researcher after Spot, a female humpback whale who frequented the waters of Glacier Bay National Park and Preserve, died in 2022.

When animals are particularly beloved, their killing can raise hackles — and damage economies. Take the infamous slaying of Cecil the Lion, the main attraction in Zimbabwe's Hwange National Park, who was killed by an American dentist in 2015. While Cecil's ecotourism value may have run over \$1 million, the dentist paid about \$54,000 for the privilege to shoot him. That imbalance piqued the attention of a group of researchers, including Christopher Costello, a resource economist at the University of California, Santa Barbara. "We put it together and thought, OK - individual animals have different levels of charisma, and that's got to return economic value," Costello said. "How do we estimate that?"

The result is the "charisma premium," a concept that Costello and his colleagues described in a 2023 paper in the Journal of Environmental Economics and Management. Their

REFLECTIONS

study essentially creates a framework for placing a value on revered animals. The idea of valuing individual animals isn't new: For instance, one 2010 report, which surveyed dive tourists on their expenditures, found that each individual reef shark in Palau generates nearly \$2 million over its lifetime. But the sagas of Cecil and Samson prove that not all animals are created equal to wildlife aficionados. To account for the discrepancies between critters of varied prominence, the researchers developed a complex mathematical model that expresses a simple concept: People long to see the famous animals they love, are willing to spend time and money to seek them out, and experience a sense of joy and fulfillment when they do encounter them. As Costello put it, "If you're a wildlife viewer and you see one of these iconic individuals, you get a really big spike in value."

The idea of a charisma premium might be most potent in national parks, whose gaggles of visitors often crave an encounter with local VIAs - Very Important Animals. In Grand Teton National Park, the leading celebrity is Grizzly 399, a matriarch with more than 20 cubs and grandcubs whose every move seems to be attended by a passel of photographers. In Yellowstone National Park, a succession of named and numbered wolves and packs -Limpy, 302, the Druids and many others — have long enthralled watchers. Most legendary of all, perhaps, was O-Six, a skilled huntress with a knack for lingering near park roads - until she wandered beyond Yellowstone's borders in 2012 and was legally shot. "She was like a hero in the wolf world," one grieving wolf-watcher told Outside magazine after O-Six's death. "They called her the 'Rock Star."

These examples suggest a few attributes that make for charismatic animals. Being large or otherwise distinctive helps, as do close family ties, a willingness to live near humans and a proclivity for media appearances. The most charismatic critters possess all of those traits. These days, the charisma king might be Otis, one of Katmai National Park and Preserve's Fat Bears, who grow to gargantuan proportions by gorging on salmon in full view of gawking humans and webcams. (See story on p. 44.) Otis is one of the population's oldest members and a four-time winner of Fat Bear Week, an annual competition to crown the ... well, you can probably guess. According to the organizers of the contest, which draws more than a million voters each year, he can be identified by his floppy right ear and a patch of blondish fur on his left shoulder - not to mention the "knowledge, skill and patience" with which he hunts his piscine prey.

The fame of Otis and his fellow corpulent ursids, and the ease of visibly differentiating them from one another, made them excellent test subjects for the charisma model. Happily, a dataset already existed, in the form of surveys that asked webcam viewers to rank their favorite bears.

When Costello and his colleagues applied the survey data to their model which takes into account the amount of time people choose to spend watching animals and the amount of satisfaction they derive from seeing especially famous ones - they found that

Otis was

indeed one

valuable bruin. The average webcam watcher, they calculated, was willing to pay \$2.99 for the chance to see Otis during a viewing session — six times more than they'd pay to see the 10thmost valuable bear, Princess. "Online bear viewers derive higher value from seeing their favorite bear once than from seeing lots of bears they do not recognize," the scientists wrote.

Crucially, though, some of Otis's celebrity did rub off on other bears: According to the study, when some animals stand out, the whole population becomes more valuable. People adore Katmai's Fat Bears in part because their ranks include Otis — just as O-Six's fame brought more attention to Yellowstone's wolves as a whole. A rising tide of notoriety lifts all animal boats.

Granted, the notion of assigning different economic values to animals' lives can feel arbitrary or even unfair. As the researchers point out, an animal's charisma is "independent of the biological or reproductive role" that it plays within an ecosystem. For example, Otis' comrade Popeye is only Katmai's 20th-

most charismatic Fat Bear, but given

that both ursids are large adult

males, their contribution to the park's population is likely similar. (Popeye might be subordinate in human popularity contests, but in real life he has a knack for stealing Otis' fish.)

And what of the bats, the songbirds, the pollinating insects: the animals that generally can't be differentiated as individuals.

> but are nonetheless integral to park ecosystems? Conservation is

already biased toward charismatic megafauna: the big, the beautiful, the mammalian.

Might the valuation of charisma perpetuate our innate preference for bears over beetles and moose over mice? Perhaps the runaway success of Katmai's Fat Bears will inspire a park to promote its Chunky Caterpillars.

Still, there's no denying that telling the stories of individual animals can produce profound conservation benefits. Such is the case in the Santa Monica Mountains National Recreation Area, where a small population of mountain lions has long been isolated by the massive freeways that spiderweb Southern California. Most famous among these embattled cats was P-22. who successfully crossed the highways and lived in Griffith Park, a small patch of urban chaparral in Los Angeles. Angelenos fell in love with the feline bachelor, and conservationists organized a campaign to build a wildlife overpass in his honor. The crossing, which is under construction now, will span the 101 freeway and allow the Santa Monicas' cougars to mate with unrelated cats, thus refreshing their stagnant gene pool.

"He reminded us that we haven't lost that connection to wildlife and wildness," said Beth Pratt, the National Wildlife Federation's California regional executive director, who served as P-22's unofficial publicist until the cat was euthanized after likely being injured by a car in 2022. The overpass will ultimately run almost \$100 million, most of it raised through private donations — a testament to the immense value that we humans place on wildlife, and the ability of intrepid individuals to spark our affection and pry open our wallets.

So how might agencies such as the National Park Service apply the concept of animal charisma? For one thing, the idea suggests that the Park Service might do well to cultivate other animal celebs in order to foster appreciation for animals usually viewed from afar.



A STATUE of Samson the elk in Estes Park and Grizzly 399 (opposite) in Grand Teton.

In some cases, the infrastructure already exists: Pinnacles National Park has its CondorCam, a motion-activated camera near a feeding station where the majestic vultures regularly dine; all that's missing are some cutesy names and a social media account. (To be sure, the condor's naked head and necrophagous diet might make it a slightly more challenging sell than a bear, but North America's largest terrestrial bird deserves an affectionate public.) Webcams could also help to dramatize the lives of animals, like fish, that aren't easily viewed in person. "Seeing less-charismatic species up close on a screen could have a bigger impact than trying to see them in the wild," said Leslie Richardson, a Park Service economist and one of the study's authors.

What's more, according to Richardson, quantifying the charisma premium could allow authorities to demand proper compensation when beloved animals are killed illegally. This, alas, is the fate that befell Samson, Rocky Mountain's emblematic elk. After a poacher shot Samson with a crossbow in 1995, the town erupted in grief and fury; one local recalled that townsfolk "wanted to take the poacher and string him up a flagpole." In the end, the scofflaw was sentenced to 90 days in jail and a \$6,000 fine — a figure that didn't account for Samson's outsized economic and emotional importance.

But Samson's story didn't end there. In 1998, Colorado's legislature passed "Samson's Law," which tacked an additional \$10,000 penalty on poachers who kill big bull elk and other trophy animals. Estes Park also unveiled a huge bronze statue of their iconic ungulate, funded by donations from Samson's fans, on the corner of two main thoroughfares — a tribute that has itself become a minor tourist attraction. Not even death, it seems, can quench some creatures' charisma.

BEN GOLDFARB is the author of "Crossings: How Road Ecology Is Shaping the Future of Our Planet" and "Eager: The Surprising, Secret Life of Beavers and Why They Matter."

PHOTO FINISH



NORTHERN LIGHTS over Joshua Tree National Park, May 2024. ©ERIK JEPSEN



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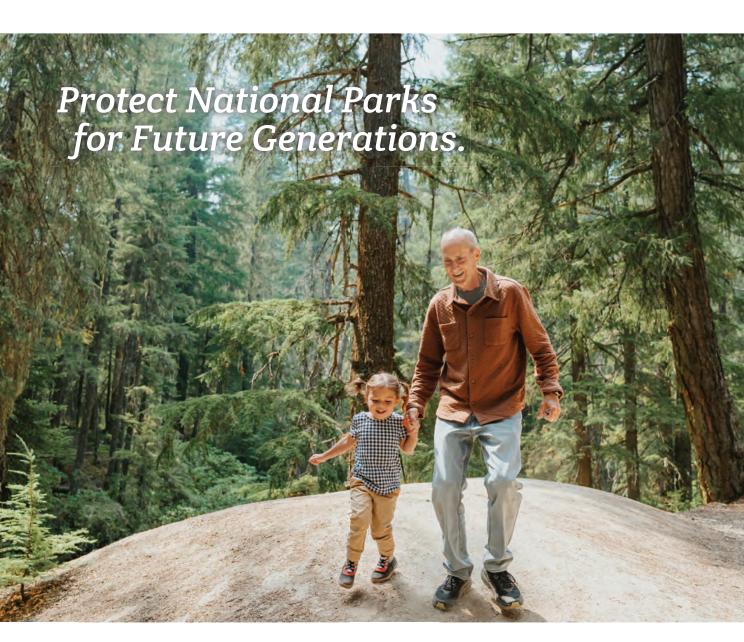
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