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COVER:
SUNSET at Mica Island on Namakan Lake in Voyageurs National Park.
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LOOKING OUT over Devil's Golf Course in Death Valley National Park.
CHRIS MIELE/TANDEMSTOCK

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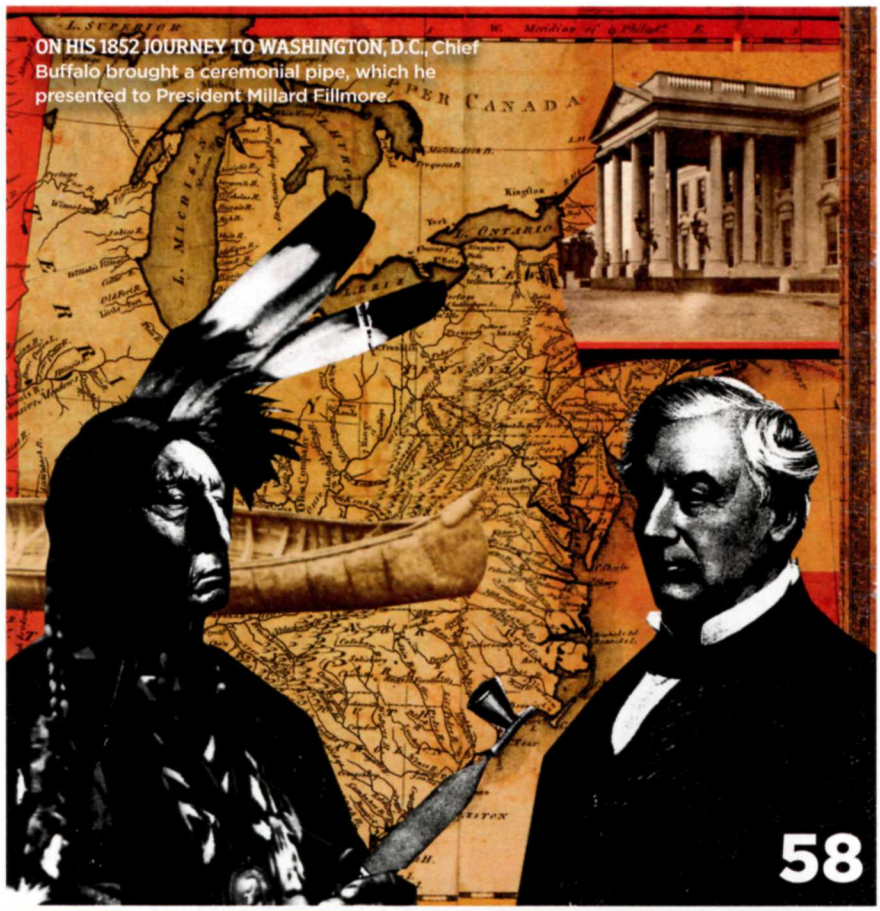
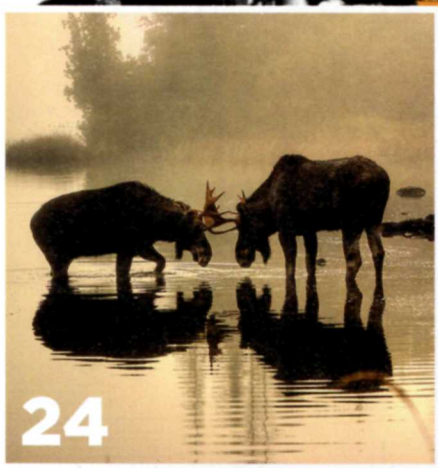


ON HIS 1852 JOURNEY TO WASHINGTON, D.C., Chief Buffalo brought a ceremonial pipe, which he presented to President Millard Fillmore.



CLOCKWISE FROM TOP: © JOHANNA GOODMAN, © JENNIFER PHARR DAVIS, © MARCIA GOMEZ, © CARL TERHAAR.

DEPARTMENTS

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ON THE WEB
Follow NPCA on Facebook, Twitter and Instagram and get park news, travel tips and more on NPCA's blog: **npca.org/blog.**

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Saluting Our Rangers

To simply walk through Gettysburg National Military Park can be a powerful experience. To explore the hallowed grounds with a park ranger, as I discovered on a trip there, is extraordinary. I hung on every word as the ranger described the fighting, the strategy and the soldiers who risked so much in that bloody, three-day Civil War battle. I could begin to picture the horror they must have endured, and it transformed my whole park visit.

You must have your own story about a park ranger: someone who took you back in history, guided you on a hike or handed you a map in a visitor center and told you the perfect spot to catch the sunset that evening.

National park rangers are the heart and soul of America's national park sites. They not only help visitors in an array of obvious ways but handle critical behind-the-scene jobs from conducting dangerous search-and-rescue missions to maintaining buildings.

The government shutdown in January forced the National Park Service to close visitor centers, campgrounds, bathrooms, concession stands and other park facilities — and furlough thousands of rangers. Education programs and other special events were canceled, but many parks were instructed by the administration to remain open. We received reports of graffiti, looting and littering in parks that were operating with virtually no staff.

The shutdown lasted only three days, but it was a stark reminder of the vital work national park rangers do. They are so important, yet last year, the administration proposed cutting more than 1,200 Park Service staff and 13 percent of the agency's budget.

We owe it to our national parks, the rangers who protect them and the people who visit them to speak up and demand that sites from Gettysburg to Yosemite have the resources they need. I know you'll be right alongside us as we fight for these places that mean so much to so many.

Sincerely,

Theresa Pierno

Editor's Note

NPS/EMILY GARDING

IN HIS 37 years, York touched many lives — both wild and human.

Eric's Story

In January of 2017, writer Emily Mount stopped by our office and cautiously pitched an article. Ten years earlier, Eric York, a wildlife biologist who had been her colleague at Grand Canyon National Park, died in a work-related incident, and she was thinking of telling his story. That kernel of an idea eventually grew into "The Lion Catcher" (p. 46).

Reporting the article was nerve-wracking in the beginning, Emily said. She hadn't known Eric well, and she was especially worried about contacting his parents. But once she had secured their permission and began reaching out, one by one, to Eric's friends and colleagues, her fears evaporated. "Everyone was so pleased to share their thoughts and memories, and we could have talked (and in some cases, literally did talk) for hours," she said. "I came to a much better understanding of who Eric was and continues to be, living on in those who love him."

One thing that had stuck with Emily through the years was that Eric had invited her to go with him the day he contracted the animal-borne illness that killed him. She'd always felt a sense of guilt and had wondered: If it weren't for a scheduling conflict, would she have died, too? Somehow, through writing the article, she ended up finding a measure of peace. "The nagging feeling has dissipated," she said. "If there's one thing I learned in writing this, it's that rather than dwelling on the past and the questions of why this or why that, those of us who knew Eric can honor him in the work we do and how we take care of each other. I think that's what he would have wanted."

The article is about parks and wildlife, but it's also about human connection: Emily was able to write this only because Eric made an indelible impression on so many people. The story, she said, is for them.

Rona Marech
NPMAG@NPCA.ORG

NationalParks

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

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

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

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

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

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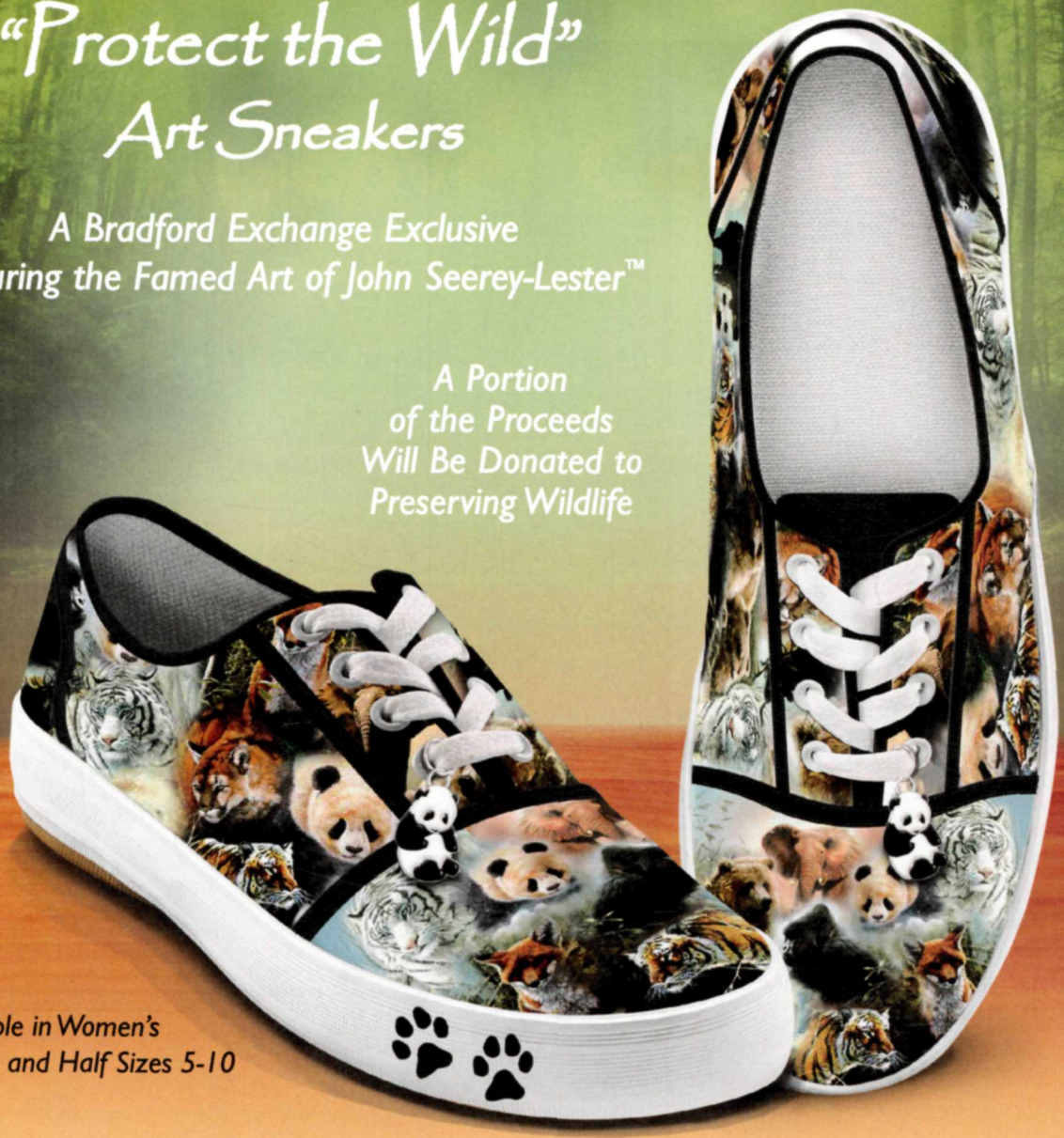

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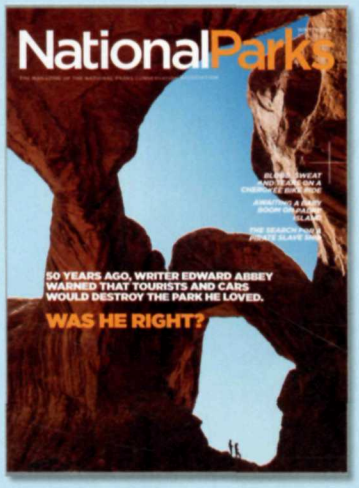
THE SOUND OF SILENCE

I greatly enjoyed reading Todd Christopher's cover story on Edward Abbey and Arches National Park ["In the Balance," Winter 2018].

In September of 2001, my grandfather died, and I got on a plane in Anchorage, heading for Pennsylvania for his funeral. I only got as far as Salt Lake City, where all flights were shut down because of the September 11 attacks. The next day, I rented the last car available at the airport and drove to Moab, where someone told me how to get to Abbey's trailer site. The following morning, I found it — precisely as Abbey had described it in "Desert Solitaire." I had a breakfast beer with Abbey.



I then drove off, parked the SUV and walked into the Eye of the Whale Arch. Thunderstorms rolled in, and I stood in the shelter of the arch. When I walked back out, the desert was suddenly alive with flower blooms and mushrooms. The whole time, I had the desert silence as Abbey never did — no airplanes at all. The silence was poetic. A reach back in time. I'll never forget it.

I doubt such an experience is possible now, and that saddens me, but the idea that so many people are seeing and experiencing Arches these days is also a good thing. I hope that half of them read Abbey. He would, too.

JEFF FAIR
Palmer, AK

AN INSPIRING TALE

I seldom write to editors, but I must tell you that the article, "In Their Footsteps," not only moved me deeply but also educated me. American education tends to whitewash our history, which is often not the pretty picture that people would like it to be. But you helped us learn about the Trail of Tears chapter of our history in a very inspirational way — through the eyes of the descendants of those who experienced such inhumane removal. The bike ride is a wonderful project, and I admire all who make it happen. I also admire NPCA for giving the project such good coverage. Thank you!

ROBERT WEEKLEY
Lancaster, VA

IRREPARABLE LOSS

I was most impressed by the article "The Lost Village." It is a reminder of a small civilization now gone.

I wonder if we could organize an effort to place a granite reminder at Attu that would include pertinent facts so that archaeologists 200 years from now will not have to speculate about who was there and what happened to them.

JAMES E. BRIDGES
Austin, TX

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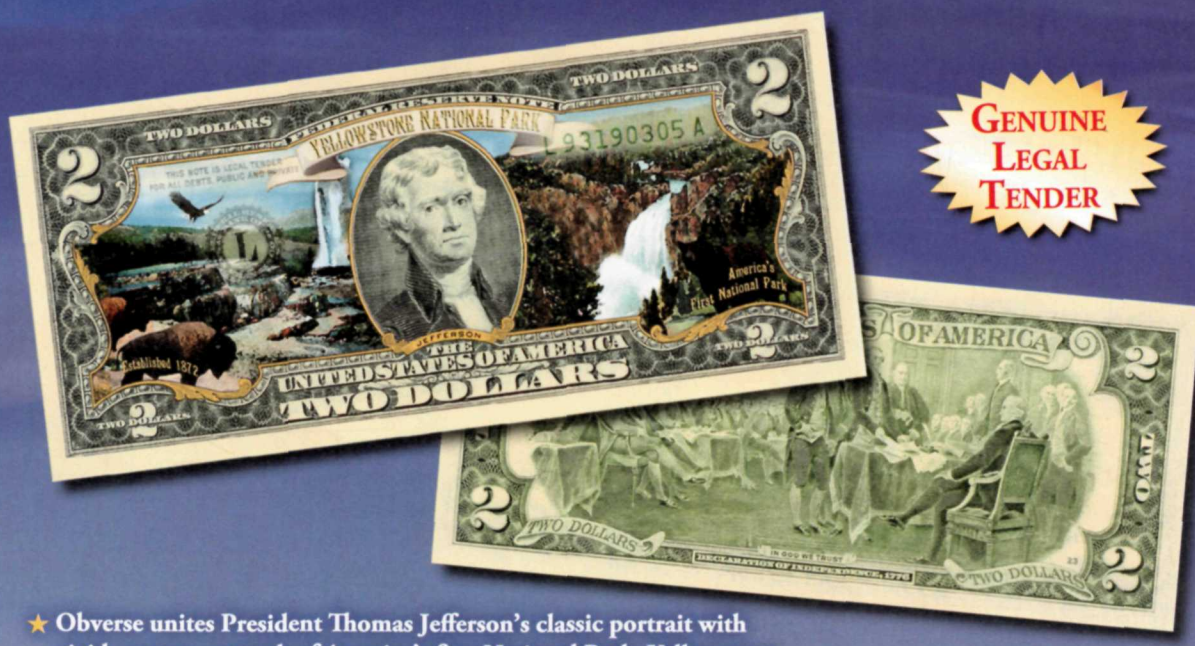

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Echoes

The folks in these areas don't want it, Americans don't want it, park communities don't want it and we need to tell Zinke that.

Nicholas Lund, senior manager for NPCA's Landscape Conservation Program, quoted in Backpacker magazine about the Interior Department's plan to open more than 90 percent of America's offshore waters to drilling. NPCA strongly opposes the sweeping proposal, which could cause serious harm to coastal parks.

This proposal is really an insidious, cynical ploy to undo the protections that we feel are critical.

David Nimkin, senior regional director at NPCA, speaking to the Associated Press at a protest about a legislative proposal by U.S. Rep. Chris Stewart (R-Utah) that would create a small national park within the recently downsized Grand Staircase-Escalante National Monument. Conservationists say the proposal would open more land for mining and grazing.

The administration's legislative outline for infrastructure sacrifices clean air, water, the expertise of career agency staff and bedrock environmental laws.

Theresa Pierno, NPCA president and CEO, quoted in a January Washington Post article about a White House proposal to scale back environmental requirements to speed up construction. The proposal was still in draft form at that time, but conservationists raised the same concerns about the president's infrastructure plan, which was released in February.

ILLUSTRATON BY MATT BRASS

A LAND DIVIDED

How would a border wall affect national parks?

The national debate about border security doesn't often dwell on the natural environment, but hundreds of miles of public lands, including six national parks, sit along the U.S.-Mexico border. What will happen to these lands — and the wildlife and plants they protect — if a wall or additional fences and barriers are built along the frontier?

2,000
Total number of miles of U.S.-Mexico border

360
Number of miles of U.S.-Mexico border in national parks

650
Miles of U.S.-Mexico border with existing border fencing

6 national parks located on the U.S.-Mexico border

Organ Pipe Cactus National Monument, Arizona
330,689 acres; 30 miles of border

Coronado National Memorial, Arizona
4,830 acres; 3.5 miles of border

Chamizal National Memorial, Texas
54.9 acres; less than 1 mile of border

Big Bend National Park, Texas
801,163 acres;
118 miles of border

Rio Grande Wild & Scenic River, Texas
9,600 acres;
196 miles of border

Amistad National Recreation Area, Texas
58,500 acres; 83 miles of border

Unnatural Separations

Barriers along the U.S.-Mexico frontier can destroy or fragment habitats and disrupt migration routes for a variety of wild species including jaguar, ocelot, collared peccary, pronghorn antelope and black bear. Barriers also can block access to scarce water and food resources and separate animals from mates.

Jaguar Troubles

Coronado National Memorial is ideal habitat for jaguars, which are rarely sighted in the U.S. Manmade barriers already curtail the animals' movement, and additional construction or border activity could impede the population's migration back into the U.S.

Bad Fences

Fences can compound storm damage. During a 2008 storm in Organ Pipe Cactus National Monument, silt and debris built up at a border fence. Flood waters consequently rose to 7 feet, flooding local businesses and damaging wildlife habitat. Numerous environmental laws had been waived to construct the fence, which should have been designed to accommodate much more severe weather than the 2008 storm, but wasn't.

No Review Required

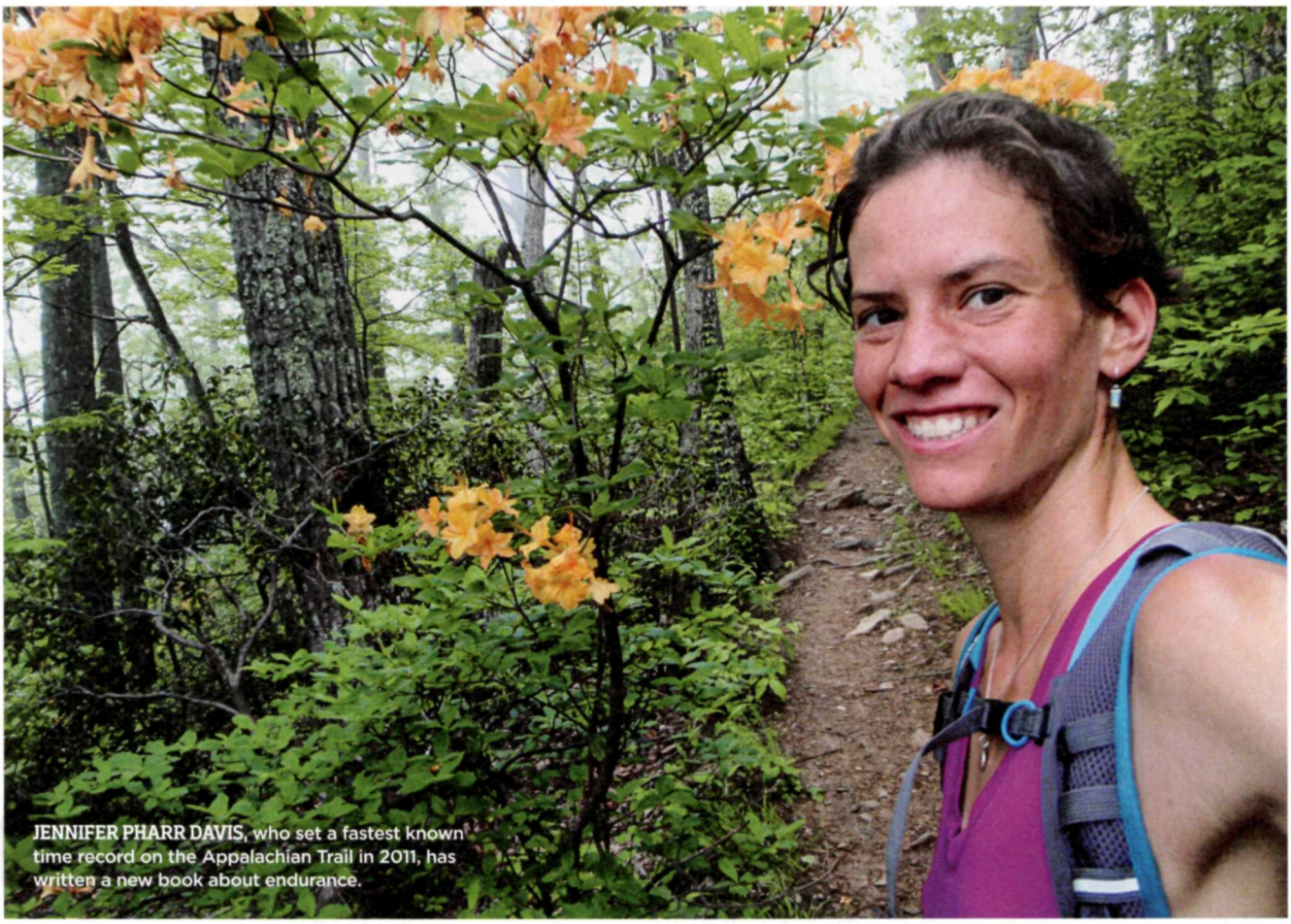
The 2005 Real ID Act gives the Department of Homeland Security the power to waive "all legal requirements" to quickly build border barriers. The agency is permitted to bypass environmental impact assessments and ignore the effect of construction on natural and cultural resources in parks. The Park Service has no authority to stop the waiver of these laws.

The Price of Misinformation

In 2016, visitors to Organ Pipe spent $14 million in gateway communities near the park, and visitors to Big Bend National Park spent $34 million. Border towns near these and other national parks are among the safest in the country, according to the FBI's Uniform Crime Reporting Program, yet the current administration and some in Congress have repeatedly described the border as dangerous, which discourages visitors and hurts local economies.

NPCA recommendations

Congress should...
oppose funding any new wall or fence along the U.S.-Mexico border.
revoke the Department of Homeland Security's legal right to expedite construction at the border by waiving laws that protect federal lands.
require DHS to report on whether border security actions are effective and how they are affecting national parks and other federal lands.
ensure that any technology employed at the border respects the privacy of park visitors and staff.



JENNIFER PHARR DAVIS, who set a fastest known time record on the Appalachian Trail in 2011, has written a new book about endurance.

The Appalachian Trail Blazer

Just how far could long-distance hiker Jennifer Pharr Davis push herself?

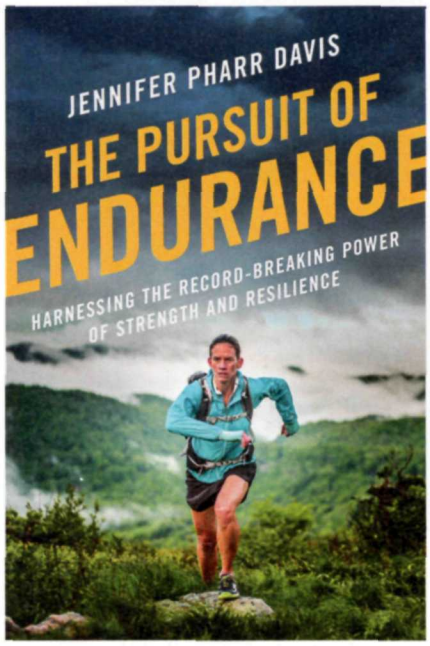
Six months *is a reasonable amount of time to complete the 2,181-mile-long Appalachian Trail, which stretches from Maine to Georgia and is part of the National Park System, but Jennifer Pharr Davis has a different scale for reasonable than most people. On July 31, 2011, she set what was then the fastest known time record on the AT, as hikers refer to it: 46 days, 11 hours, 20 minutes. Her new book, "The Pursuit of Endurance: Harnessing the Record-Breaking Power of Strength and Resilience," chronicles her achievements and delves into the nature of endurance. In this excerpt, she is just setting out on her history-making hike.*

* * *

I repeated my mantra about risk and belonging standing on top of Mount Katahdin next to the weathered brown sign that marked the Appalachian Trail's northern terminus. It was much easier to believe now that I was actually on the trail.

In the beginning, I felt at home and at ease, even as my body adjusted to the back-to-back-to-back 40- and 50-mile days. But I knew enough about the AT and fastest known times to wonder not so much if something would go wrong, but when.

It took five days. Five days before my lower legs felt like someone was scraping muscle away from bone with a knife. I had never had shin splints before, and I haven't had them since, but they left me with a fear of pain that I didn't have before that summer. To stub my toe was



to send daggers into my shins and shock waves through my body. Going uphill was excruciating, but going downhill was unbearable. There were times when I would plant my foot and my leg would involuntarily buckle from the pain.

I howled and yelped aloud as I hiked down the trail. I also wept. My hiking poles became crutches, and I popped ibuprofen pills as if they were breath mints. In the darkness of my tent, as exhausted as I was, I spent precious minutes, even hours, elevating, icing and wrapping my legs, forced into choosing first aid over sleep.

The primary treatment for shin splints is rest, but I knew that David Horton, a mentor who had previously held the fastest known time record on the AT, had exited the Smokies with shin splints and ran through the pain until it finally subsided. His example gave me hope. I convinced myself that if I could make it through New Hampshire, if I could just get past the toughest mountains and the rockiest terrain, then when I crossed into the Green Mountains in Vermont, everything would be OK.

First, however, I had to survive the exposed ridges and extreme weather of the White Mountains. As I left the parking lot at the Pinkham Notch mountain pass, I could see the skies darkening and feel the temperature drop. My chest grew tight and my stomach felt queasy. When I reached tree line, the wind forced me to look down. Even if I had been able to keep my head up, it would not have helped much since the route was obscured by billowing cloud cover that only occasionally offered a glimpse of the next cairn.

The limited visibility caused me to take a wrong turn, and I lost six grueling miles to the mountain and the weather. When I finally reached Crawford Notch on the far side of the Presidential Range, the rain was pouring down. I was cold, wet and trying to do anything I could — including singing out loud — to keep my morale from completely washing away.

I told myself that the weather would change. It always does. I sloshed through puddles to reach Zealand Falls. Then, though my hands felt like frozen lamb shanks, I used them to scramble up the boulders that lined the ascent to Garfield Ridge. On the path along the crest, I couldn't maintain my footing or find much traction on the butter-like clay and slick rocks. I fell again and again. My legs were stiff, swollen pillars covered in red scrapes and blue and black splotches. I came out of the forest to traverse Franconia Ridge. And it was there that the weather finally changed.

On June 24th, I was in the throes of a whipping sleet storm.

I wasn't thinking about the record. All I could do was focus on getting down the mountain to my husband, Brew. My body was rigid, my teeth were clenched and my fingers didn't exist. My waterproof layer was sealing the cold wet fleece and long johns to my skin like plastic wrap. I was starving, but I doubted I could open my pack or an energy bar with my numb, sock-covered hands. I also didn't want to risk stopping to grab a snack from my pack for fear that I might not start moving again.

I finally stumbled to the base of the mountain. Brew assumed there had been bad weather, and he hiked in as far as he could and found a flat spot to set up the tent. When I saw it, I fell inside. He helped me undress, and then put me inside two sleeping bags. I kept shivering in my cocoon for a full 30 minutes until I finally had the dexterity to hold food in my hands and lift it to my lips. In the next 20 minutes, I consumed over 3,000 calories.

When I couldn't eat anymore, I knew I needed to get going. It was now or never. If I didn't want the record attempt to be over, I needed to start hiking again. I changed into the warm, dry, clothes that Brew had packed in, but I couldn't find a dry pair of pants.

I looked at Brew and pointed at his lower half.

Brew looked down at his pants and then back at me.

"Say please," he said.

A few minutes later, I crawled out of the tent and slowly started walking in my husband's rain pants. Brew packed up our gear and walked a half-mile back to the road wearing boxers with the Grinch who stole Christmas on them.

I kept going after the sleet storm, but my body wasn't recovering. Two days later, I didn't think I could take another step. I felt overwhelmed with fatigue and

fever, my body was swollen from water retention and I couldn't sweat or pee. My systems were no longer self-regulating, and my body was shutting down. Then my stomach started to churn.

For a while, I was covering more ground laterally by dodging off the trail into the bushes than I was progressing forward. Finally, I came dragging out of the forest in a wobbly, tearful haze, and I told Brew, "We're done. I'm done. Let's go home."

I told him how sick I was and how much I hurt. My husband is kind and sympathetic. He also does not enjoy spending his summer running my errands and sleeping in a tent by a trailhead. I knew he would comfort me, then take me home.

But that's not what he did. "If you really want to quit," he said, "that's fine."

And I was nodding my head. Then he continued, "*But* ... you can't quit right now."

I looked up at him, stupefied. I was so exhausted that I wasn't sure what he meant.

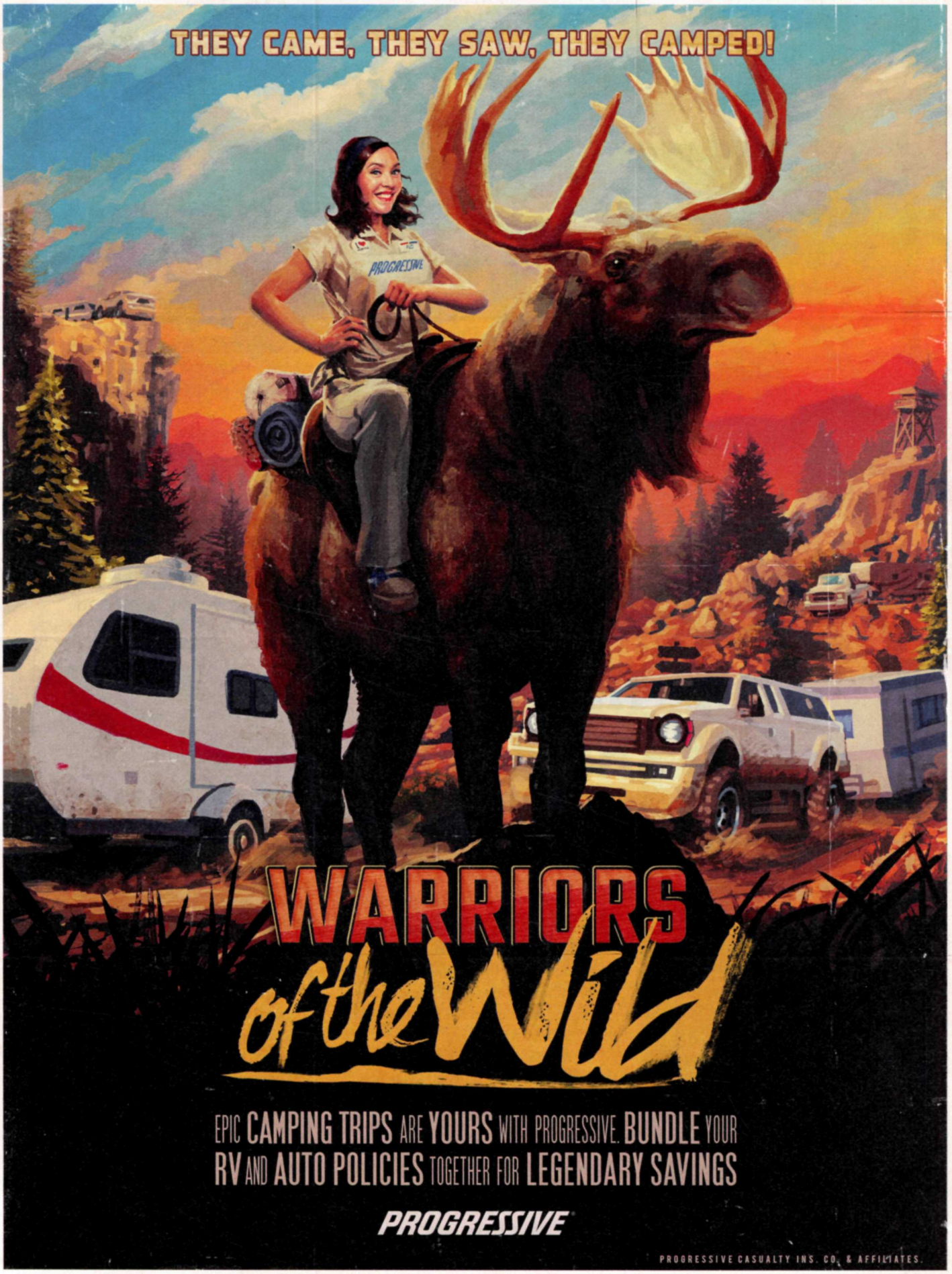
"Right now you feel too bad to make a good decision," he said. "Right now, you need to eat, drink and take medicine then keep going a little farther, at least until tomorrow night. Then, if you still want to quit, I'll take you home."

Brew traded out my gear, loaded me down with Pepto Bismol, then drove off. It's really hard to quit when you don't have a ride.

By the end of the day, I started to feel a little better. Even then, I still felt worse than I had in my entire life. I didn't know if I could set the record, but I realized that if I wanted to, I could at least keep going.

After a day and a half, my husband didn't ask if I wanted to quit, and I didn't mention anything more about stopping. We just went about our camp chores as usual, and I kept hiking. I realized I wasn't out here to be the best; I was out here to find *my* best.

Adapted from "THE PURSUIT OF ENDURANCE: Harnessing the Record-Breaking Power of Strength and Resilience" by Jennifer Pharr Davis, to be published April 10, 2018, by Viking, an imprint of Penguin Publishing Group, a division of Penguin Random House, LLC.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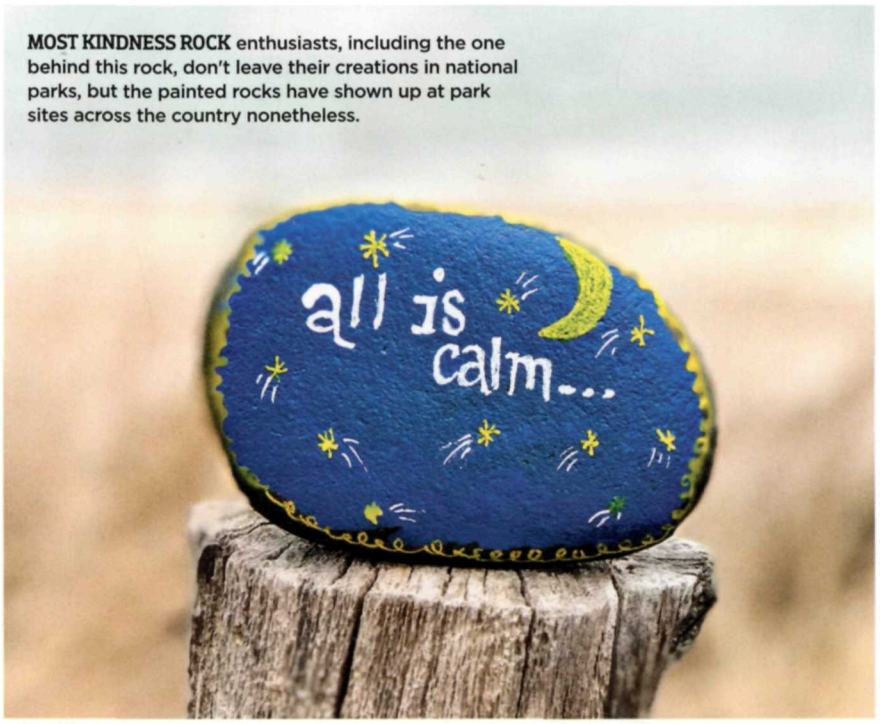


MOST KINDNESS ROCK enthusiasts, including the one behind this rock, don't leave their creations in national parks, but the painted rocks have shown up at park sites across the country nonetheless.

Between a (Kindness) Rock and a Hard Place

People leave behind painted rocks to brighten strangers' days, but in national parks they're fueling controversy and less-than-civil debate.

The squabble started on a weekend afternoon last September with a Facebook post about a rock painted to look like a ladybug. While acknowledging that leaving painted rocks for others to find is a fun activity, staff at Catoctin Mountain Park in Maryland respectfully reminded visitors that doing so violated the national park site's leave-no-trace policy.

Then the floodgates opened.

"You are being ridiculous," wrote one commenter. "Stop being a stick in the mud," wrote another. "Just don't leave painted rocks in the park. What's so hard about that?" a third responded. "Why do people feel entitled to everything?" Many posters were civil, but it wasn't long before others were equating painted rocks with unwanted graffiti and comparing the creators to animals that mark their territory with urine.

By the time the dust had settled, the seemingly innocuous message had elicited more comments than any of the park's other Facebook posts last year, surpassing one about an exciting bear sighting at a campground and another asking visitors about their favorite fungus. "We were a little bit surprised, to be honest," said Peggie Gaul, the park's acting chief of interpretation.

This kind of heated banter is common on social media, but it was remarkable given that the main goal of so-called kindness rocks is to bring a little bit of joy, hope or comfort to the strangers who find them. "Looking at these comments, I'm like 'Wow!'" said Jen Retterer, who joined the online conversation about Catoctin and runs a painted rocks group out of Columbia, Maryland. "This is not exactly what we're trying to do here."

Rock art is an age-old pursuit, but the latest craze can be traced to 2015, when Megan Murphy founded the Kindness Rocks Project. During long walks on Cape Cod beaches, Murphy had a habit of looking for certain kinds of rocks as signs from her late parents. She wondered if others would be receptive to rocks bearing messages, so one day she picked up a marker and wrote short inspirational phrases on five rocks for other beach walkers to find. By coincidence, a friend of Murphy's found one of the rocks among the thousands of others on that beach, and — unaware that Murphy was the creator — texted her to say the discovery had made her day. "That's why I say it was divinely inspired," Murphy said. Convinced she was onto something, she continued painting rocks and leaving them on the beach, later writing #thekindnessrocksproject on the back to encourage people finding them to post pictures on social media.

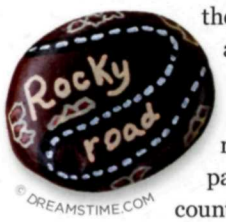
Soon, people all over the country and beyond were painting rocks, and personal stories started pouring in. Murphy said she learned of someone contemplating suicide who changed course after finding a kindness rock. A marine deployed in Japan told her the painted rock he found there was "like a hug from home." Local groups created

Facebook pages, where painted rock devotees can post photos, communicate about get-togethers and comment on each other's artwork.

"It's a social connection," said Cindy Lung Dwyer, whose Hager Rocks Facebook group in Hagerstown, Maryland, counts more than 4,600 members. "People support each other."

As the popularity of kindness rocks grew, the project expanded beyond the founder's vision. Some enthusiasts began emphasizing the art over hopeful messages such as "be kind" or "you are loved"; others organized scavenger hunts — a practice that some traditionalists frown upon. In addition, the rocks started showing up in places where they were not wanted.

The Kindness Rocks Project and most local groups have very clear rules and guidelines about using non-toxic sealants, asking local officials and business owners for permission to leave rocks on their premises, and adopting policies that are respectful of the environment. They also tell members not to leave rocks in national parks. Yet rangers at national park sites all over the country have been finding painted rocks on trails, near visitor centers or on Civil War monuments. The scenario has played out in much the same way at Olympic National Park in Washington, Devils Tower National Monument in Wyoming and Vicksburg National Military Park in Mississippi, among others. In all those cases, park staff issued a gentle admonition on Facebook, but the use of the word "trash" or "litter" was sufficient to set off a torrent of outrage.

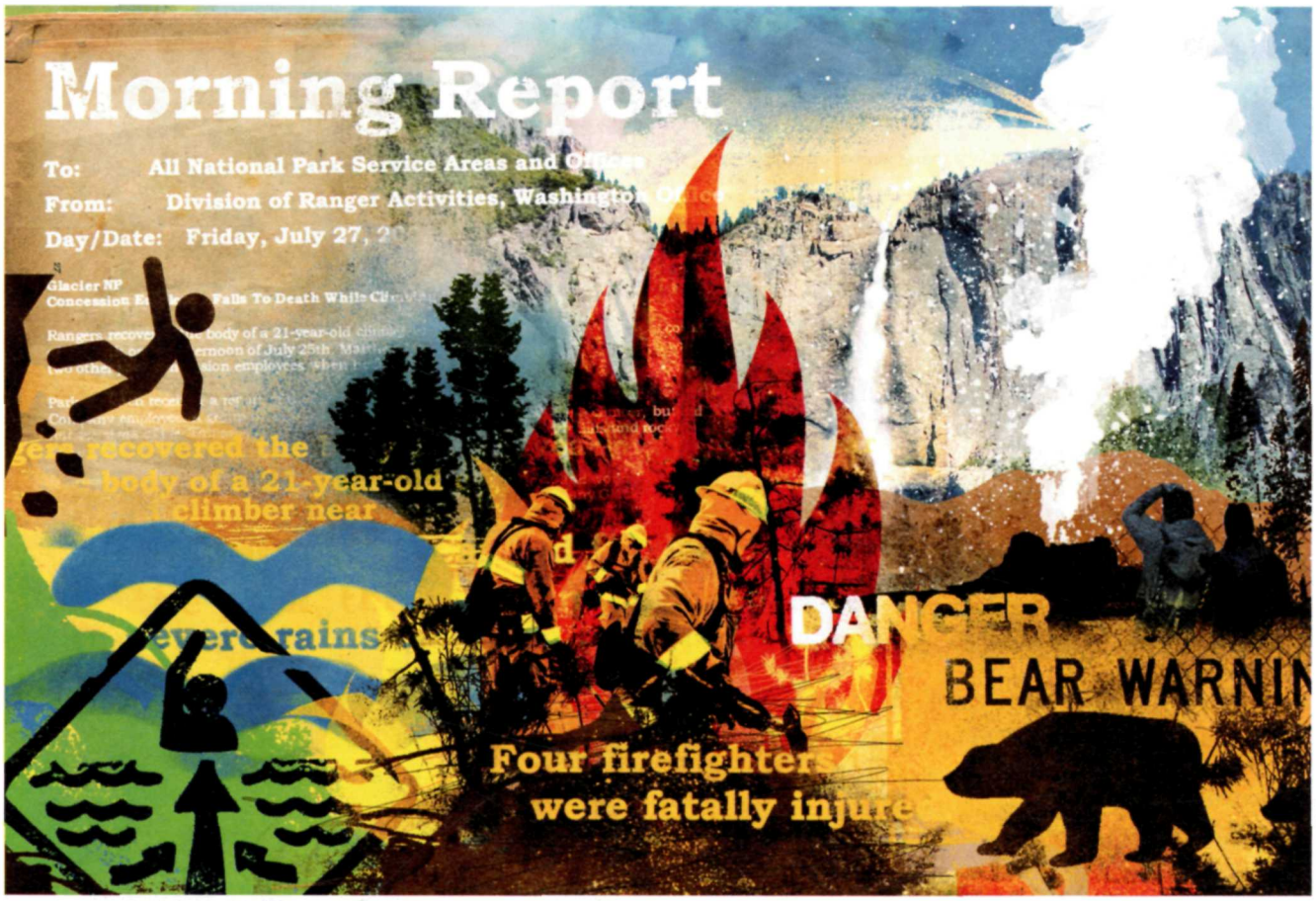


Amid the name-calling and finger-pointing on these forums at least one positive theme has emerged: While not everyone agrees about where to draw the line between recreation and preservation, the participants care deeply about national parks. At Gila Cliff Dwellings National Monument in New Mexico, the conversation swirled around questions of "what parks should and should not be," said Rita Garcia, the chief of interpretation there, "and I'm very pleased because this is what people should be thinking about."

Another bright side: Despite the sometimes acrimonious online debates, some people have found out about kindness rocks on these forums, and others have learned about the importance of minimizing visitors' impact on the environment, which, after all, was the original intent of the national parks' reminders. Murphy admitted she didn't know about leave-no-trace principles until she was attacked on social media early on for posting a picture of a painted rock in a natural setting. Now that she's better informed, every chance Murphy gets she promotes these principles, which include packing out trash, respecting wildlife, and leaving plants, animals, artifacts and (non-painted) rocks in parks. Retterer does her part, too. She reminds members of her group of "Respectful Rockin'" rules, and she works with moderators of other Facebook groups to get the word out.

"The whole point of it is kindness," she said, "so we have to make sure we are also kind to nature."

—NICOLAS BRULLIARD



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Reporting for Duty

The Park Service shuttered its Morning Report in 2015 after a 30-year run, but the longtime editor has a few more things to say.

For 30 years, many national park devotees around the country began their work days the same way: They'd get a cup of coffee and scan the National Park Service Morning Report. An exploding backcountry toilet? A volunteer impersonating a military officer? A bull that escaped from a nearby rodeo? If it happened in a national park site, odds are it would roll into your inbox by 8 a.m. Eastern time one morning soon after.

Mandatory reading for anyone who wanted a snapshot of what was going on in parks around the country, the mini-publication covered searches, rescues, fires, traffic accidents, drownings, law enforcement, legislative actions, trainings, events, awards and employee news. By turns informative, amusing, cautionary and depressing, the Morning Report was beloved among its followers, both inside and outside the Park Service. Employees credit it with fostering a sense of community, helping to establish agency-wide procedures and standards, and serving as a historical record. Some insist it led to better pay for rangers by painting a fuller picture of the demands of the job.

"It's such a broadly spread-out agency with so many different kinds of people. It's hard to keep track of who's doing what and where," said Butch Farabee, a former superintendent, search-and-rescue legend and author who worked for the Park Service for 35 years. "That's where the Morning Report was so valuable."

Even the report's greatest fans weren't all aware that from its inception in 1986 until its demise in 2015, one person served as the editor: Bill Halainen. He frequently rose early, showed up on weekends and worked during vacations, and over those three decades, he churned out nearly 7,000 editions of the report.

"I have enormous regard for the employees of the National Park Service, and, of course, for its mission and truly felt it was an honor and duty to serve

them as best I could. That was the fire that lit the burner," said Halainen, who moved among parks and juggled other responsibilities during those years. "Many readers wrote back — particularly those in small or remote parks — that the Morning Report made them feel like part of the agency, often for the first time in years."

Initially, Halainen said in a recent conversation, he typed out the reports on IBM Selectric typewriters, stuffed envelopes and mailed out the roundup once a month to chief rangers at parks around the country. That changed with the advent of an internal email system, and by 1988, the bulletin was reborn as the Morning Report and sent out every weekday morning.

Gradually, he added employee addresses to the system, and the report's reach spread. Though the numbers are squishy, Halainen believes that during the report's peak years, most of the Park Service staff, currently around 22,000 people, were regular readers. In 2002, he launched InsideNPS, an online version of the report for employees.

What readers tend to remember best are the grisly or outlandish stories — people jokingly referred to it as the Gloom and Doom Report or Morning Mayhem. Halainen, who saw more than 20,000 incident reports go by, said a few still haunt him.

"Every year among all the routine carnage, there would be a couple of dozen that just sucked the air out of you, tragedies or incredibly dumb things people do," he said.

Reporters would call to ask about the most dangerous things you could do in parks, and the answer was always the same: Drive, get in the water and fall off cliffs. He recalled stories about people underestimating currents or ducking past "do not enter" signs to explore powerful waterfalls or walking into geysers. None of those tales ended well.

To be sure, the report also showcased rangers' accomplishments and other inspiring stories. Halainen pointed to an item about a 21-year-old seasonal backcountry ranger in Alaska's Denali National Park & Preserve who was stalked by an aggressive bear. She used an array of tactics, throwing rocks, screaming obscenities, smacking the bear in the head and finally, blasting her radio in the surprised animal's face. That item remains a favorite, Halainen said, "as it shows ranger ingenuity, courage and persistence in the face of adversity."

Somehow, 30 years passed. "As long as those guys were reading it, I wasn't going to give it up," said Halainen, who continued to work on the report as a contractor after semi-retiring in 2007.

But when Halainen finally retired for real, the sun also set on the Morning Report. Superiors told him that funding had dried up, and the agency had better ways of getting out information. The Park Service moved to a "park-generated InsideNPS intranet platform that allows employees to post and read news from other parks in real-time. Regional and program offices have also developed newsletters," Jeremy K. Barnum, the agency's chief spokesperson, said in an email.

People jokingly referred to it as the Gloom and Doom Report or Morning Mayhem.

That explanation didn't sit well with the report's devotees, many of whom are still upset about the decision. "It was a terrible, stupid and arrogant thing to do," Farabee said. "It left a big hole."

But that's not where the story ends. Fortunately for his loyalists, Halainen wasn't quite done. "November 8, 2016 changed the world in a lot of ways," he said. "After the election, there was no question I would do something. I thought it was really necessary to get back in the game."

Last March, he unveiled the Weekly National Park System Report, a scaled-down version of the old newsletter, which is published by the Coalition to Protect America's National Parks. The nonprofit advocacy group sends the weekly chronicle to its 1,450 or so members, all former, current or retired Park Service employees. The format is similar: Halainen still covers incidents, fires, park operations and news about agency staff, and a former colleague contributes a section about goings-on in Congress. Halainen's love for the parks clearly continues to be the guiding principle — and fundamentally, the report's respectful tone is unchanged — but this go-round, he's no longer a Park Service employee, and it shows. He's not shy about linking to articles critical of the Trump administration and has added a closing "observation" — often a quote with an unmistakable point of view. Recently, for example, he shared a High Country News story titled "Interior Department's return to the 'robber baron' years," and after Interior Secretary Ryan Zinke publicly questioned the loyalty of his employees, the report ended with a quote from Sen. Maria Cantwell (D-Wash.): "The public servants at the Department of the Interior deserve respect from the man charged with leading them — not cheap shots in the press."

"My objective there is to get as much information out to people as possible," Halainen said. "I'll keep doing the weekly edition based on demand, the fate of the administration and the state of the Park Service."

So what became of all the old Morning Reports? Halainen gave everything to a colleague stationed at the Federal Law Enforcement Training Center in Georgia, but an easily accessible archive does not exist. That complicates things for park enthusiasts following up on a rumor or trying to dig up a piece of history, but fortunately, if all else fails, help is on hand.

"Just call me up," Halainen said.

—RONA MARECH

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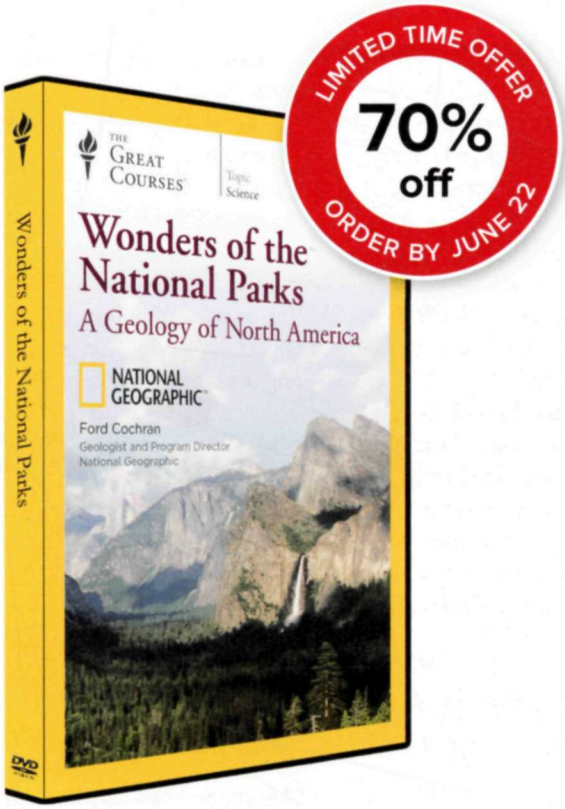

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TWO YOUNG MOOSE spar in Tobin Harbor *in Isle Royale National Park. Scientists have* found that over the past four decades, the size of the animals' skulls has shrunk by about 16 percent.

© CARL TERHAAR

The Case of the Shrinking Moose

A new study reveals the surprising effects of climate change on this iconic species in Isle Royale National Park.

IT'S NOT THAT EASY TO FIND A DEAD MOOSE. Jason Duetsch would know. A game warden from Colorado, he has volunteered his vacation time every summer since 2014 to find moose skeletons in Isle Royale National Park, a 45-mile-long chunk of boreal forests, swamps and rocky shores in northern Lake Superior.

For the past three decades, teams of five or six volunteers have paid for the privilege of thwacking through the brush, wading through swamps, plunging down ravines and balancing along muddy beaver dams. They brave frigid cold, sweltering heat and, at times, great clouds of mosquitoes. Sometimes they smell a carcass long before they see it or literally trip over bones. Other times volunteers absent-mindedly picking thimbleberries notice the bleached tip of a femur sticking out of the duff.

"It can be dirty. It can be smelly," Duetsch said. "But the way you get the data is through a lot of hard work and sweat."

The work is part of a renowned research program that has tracked wolf and moose interactions on the island since 1958, the longest-running predator-prey study in the world. Over the decades, volunteers and researchers from Michigan Technological University have collected the carcasses of more than 4,600 moose and recorded observations on vegetation and other species. Recently, this hard-won trove has allowed researchers to start answering

an intriguing question: Is climate change affecting the park's moose?

Moose in many parts of the country are not faring well. In Minnesota alone, the population of moose has nosedived by 50 percent over the last 12 years. Moose die from a range of causes, including tick infestations, wolf predation, hunting and parasites transmitted by deer, but scientists are not sure what is bringing about such drastic declines. Climate change is an obvious suspect — not only do moose struggle physically in warmer temperatures, but their parasites thrive. The problem is that it's difficult to separate the influence of climate change from other factors.

And on Isle Royale, the plot thickens. Unlike their counterparts on the mainland, the park's moose are protected from hunting and deer parasites because hunting is prohibited and there are no deer on the island. Their habitat has also been spared from logging for the past 100 years. And as wolves — their only predators on the island — have declined, moose populations have skyrocketed. Based on numbers alone, it seemed that the park's moose were doing just fine, but the Michigan Tech researchers wanted to know if a changing climate was affecting them in less obvious ways.

They thought their warehouse full of skulls might hold some clues. The research team enlisted graduate students to help measure the volumes of the skulls. Head size is a good indicator of the overall size of a moose — and overall size is a good indication of moose fitness. In general, the bigger the better, especially for bull moose, which fight for the opportunity to mate.

Researcher Sarah Hoy then compared trends in skull size to other data like life span and winter temperature. She found that over four decades, moose skulls on Isle Royale have shrunk by about 16 percent — 19 percent among males and 13 percent among females — while average winter temperatures have increased by 6 degrees Fahrenheit. "The shrinkage in size was really quite unexpected," said Rolf Peterson, who has studied wolves and moose on Isle Royale since 1970 and is one of the paper's co-authors.

They thought their warehouse full of skulls might hold some clues.

Hoy also determined that moose that experience warm winters in their first year of life typically end up with smaller skulls. In theory, smaller moose could simply reflect successful adaptation — moose get too hot at about 23 degrees in winter, and a smaller size makes it easier for an animal to regulate its body temperature. But the scientists also found that moose with smaller skulls typically had shorter lives. Overall, moose life spans have decreased over four decades, according to the study, which was published in the journal Global Change Biology. In other words, while researchers are not seeing the effects of climate change in the moose's numbers, they are seeing them in the animal's fitness.

"Before the study, it looked like things were bad in Minnesota, but they were quite rosy in Isle Royale," said John Vucetich, a co-author of the paper and professor of wildlife biology. "What we can say now is that's not quite right. We can see adverse impacts of these warming winters in Isle Royale; we just don't see it in moose population dynamics. We see it in their bodies, their life histories."

A warmer climate is not the only cause of moose shrinkage. Hoy's analysis showed that high moose population density also contributed to smaller moose sizes. More moose means there's less food for each moose, which translates to poorer health for many individuals. This matters because the National Park Service has proposed a plan to introduce more wolves to the island. Since the first wolves walked over the frozen lake to Isle Royale in the late 1940s, they have struggled with a contagious virus, inbreeding and, at times, low moose numbers. Now, only two wolves roam the island, down from an all-time high of about 50. The agency anticipates releasing a final decision this year. If it chooses to proceed — a position NPCA supports — biologists would release between 20 and 30 wolves over the next three years.

"Without wolves, the moose population is going to continue to rise, and they're going to eat themselves out of house and home," said Christine Goepfert, senior program manager for NPCA's Midwest office. "Bringing in wolves is the best way to help balance the ecosystem there."

Many questions remain. What is it about climate change that is causing stunted growth? Is it primarily heat stress, too many winter ticks or something else? What factors other than climate change are at play? Will the shorter life spans eventually translate into fewer moose on Isle Royale? If wolves are reintroduced, what effect will that actually have on the moose?

Peterson, Vucetich, Hoy and others will have plenty of reasons to continue the 60-year endeavor — which has passed through three generations of researchers — and keep adding to their collection of moose parts. Each winter, small crews of researchers and volunteers will keep flying over the island to look for fresh moose carcasses against the paper-white snow. And come summer, as the forest turns lush and the moose eat their weight in greenery many times over, volunteers like Duetsch will return and start the dirty, smelly, fruitful process of bone collecting all over again. **NP**

KATE SIBER is a freelance writer based in Durango, Colorado.

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DINOFLAGELLATES are not the only sea creatures that bioluminesce. Sea stars, bony fish, crustaceans, squid, and even some whales and sharks glow to warn, stun, distract, illuminate and attract other creatures.

Nature's Night Lights

After the sun sets, the bioluminescent show on Tomales Bay begins.

"IS IT HAPPENING?" I ASKED. I looked over my shoulder at my friend and kayak co-pilot, Liz, who had stopped paddling and was leaning over the edge of the boat, looking intently at the water. She dipped her hand in, swirled her fingers experimentally, then looked up at me. It was a pitch-dark night, but I could still make out a smile lighting up her face. "It's definitely happening," she concluded.

Liz and I were drifting in a double kayak on Tomales Bay, the long, skinny slice of seawater on the northeastern side of California's Point Reyes National Seashore. We'd come in search of dinoflagellates — single-celled organisms found in all the world's oceans. Dinoflagellate populations respond quickly to variations in water temperatures, weather conditions and nutrients, so scientists learn a lot about ocean chemistry and biology from studying them. The organisms also play a foundational role in the marine food web: They photosynthesize, turning energy from the sun into food for all the ocean's animals. The tiniest zooplankton eat them, and in turn feed a web of life all the way up to the mightiest whales.

But Liz and I aren't scientists, and we were definitely not there to eat. We were there because some species of dinoflagellates actually glow from within — a phenomenon known as bioluminescence. And when conditions are right, the ocean's surface lights up at the slightest touch, giving off an alien glow that rivals a sci-fi movie's special effects.

If the amazement on Liz's face was any indication, conditions were right. So I took a big paddle stroke, and I watched closely. As the blade pulled through the water, I saw its wake glimmer below the surface. At first the effect was faint and fleeting, a cool, pale glow that flickered out after a second or two. I submerged my hand, and each finger left its own trail of sparkles as the kayak glided ahead.

Scientists think that dinoflagellates glow — or bioluminesce — primarily for self-defense (the flash they emit when their cell walls detect pressure is the result of a chemical reaction and seems to deter some predators). Bioluminescence is actually a fairly common trait in ocean life. Sea stars, bony fish, crustaceans, squid, and even some whales and sharks glow to warn, stun, distract, illuminate and attract other creatures.

But on Tomales Bay, dinoflagellates steal the show. We'd set out at sunset on a still October night with a group led by a local outfitter, dozens of people hoping to witness the phenomenon before

We paddled aimlessly for hours, drawing shimmering shapes on the surface and tossing sparkling handfuls of seawater.

winter weather ended bioluminescent viewing season and made nighttime trips too dangerous. We paddled across the bay, subject to scrutiny by passing pelicans and seals groaning from shore. Big waves boomed at the mouth of the bay a mile or so north, but in the bay, the water was perfectly flat. The Milky Way splashed across the sky, and every few minutes, a shooting star blazed overhead, thanks to the Orionid meteor shower.

It takes only an hour to get from downtown San Francisco to this part of Marin County, a wildly popular playground for millions of Bay Area residents. The western shore of Tomales Bay is part of Point Reyes National Seashore, and much of the eastern shore is state parks or private ranchlands. That's one reason this spot is frequented by stargazers and bioluminescence hunters like us: Though it's close to a big urban center, there are no city lights to mask the glow from above or below.

After paddling the mile or so across the bay, we were bobbing up against hulking, uninhabited cliffs on the national seashore. As our eyes adjusted to the darkness, the bioluminescence seemed to glow brighter by the paddle-stroke. The other folks in our group were noticing it by then, too, and we could hear gasps and cries — and lots of splashing — from the other kayakers. A pair ahead of us paddled furiously for a few strokes, and once they got up to speed, their boat carved a shimmering blue bow wave through the black, glassy surface of the bay.

Autumn on Tomales Bay, when it's typically tranquil and sunny, is high time for bioluminescence. "Dinoflagellates prefer calmer conditions, when the water column is more stratified. You'll find a stable warm layer at the surface and a colder layer at depth," said John Largier, a coastal oceanographer at the University of California Davis Bodega Marine Laboratory. Dinoflagellates' delicate tails — or flagella —enable them to migrate through these layers from the shallows, where they can catch the sun's rays, to the colder depths, which are richer in nutrients. Along the Northern California coast, the population blooms during periods of calm weather in autumn, then stops growing when winter weather returns and churns up the seas.

The keyword is "typically," a term that climate scientists say is increasingly difficult to define. The winter of 2017 was off to an unusually dry and sunny start in California. "Our good bioluminescent viewing season, which has usually ended in early October, has gone on well into December," said John Granatir, who has been guiding nighttime kayak tours on Tomales Bay for seven years. "That's giving more people a chance to get out and give it a look, and there's definitely a lot of interest as the word is getting out. The nighttime tours book up months in advance."

In recent years, researchers at the Monterey Bay Aquarium Research Institute have also observed an increase in dinoflagellate populations off some parts of the California Coast. This population growth coincided with "the Blob," the mysterious mass of unusually warm ocean water that plagued the West Coast from late 2013 to early 2017. Scientists say the Blob caused die-offs in marine wildlife and persistent toxic algal blooms, and it correlated with weird weather from Mexico to Alaska. "Here in Northern California, the Blob meant that autumn-like conditions reigned from June through the end of the year for some years in a row," Largier said. "We had warmer, calmer water for longer than usual." The Blob seems to have dissipated for now, but scientists wonder if we've just seen a preview of how a warming climate will affect the world's oceans.

Blob or no Blob, Liz and I encountered the perfect evening for appreciating bioluminescence on Tomales Bay. Even in October, calm conditions are not guaranteed, and moonlight can dim the underwater show. But the moon had sunk below the horizon, and we made the most of the clear, still night. We paddled aimlessly for hours, drawing shimmering shapes on the surface and tossing sparkling handfuls of seawater that splashed down in a cool blue burst of bioluminescent fireworks.

Finally, we headed back to shore, hauled out our kayak, peeled off wet layers and split a thermos of hot tea we'd stashed in the car. Then we drove home, reluctant to return to the bright lights of the city. **NP**

JULIA BUSIEK is a writer based in Oakland, California. She has previously encountered bioluminescent plankton on the Gulf Coast of Florida and on a remote beach along Northern California's Lost Coast Trail.

SUNSET over Mica Bay in Voyageurs National Park.

500 ISLANDS, 2 PADDLERS, 1 SCRABBLE BOARD

The writer and his wife's aunt pack up their gear and grub, hop into a canoe, and venture into Minnesota's Voyageurs National Park.

By Nicolas Brulliard • Photos by Alex Messenger

s "vinings" a word?

Jane and I pondered the question as she considered placing her tiles on the Scrabble board. If the word stood, Jane, who is my wife's aunt, would play all seven letters on her rack, and she would collect an extra 50 points that would all but ensure her victory.

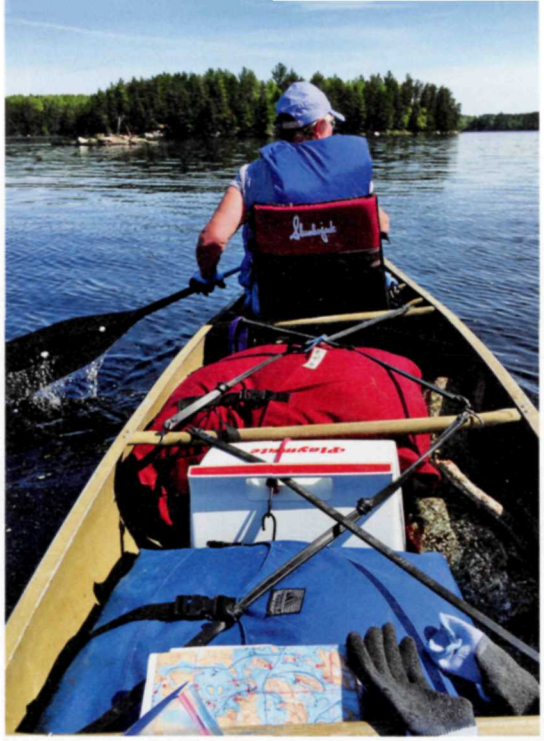
Playing words that don't exist is a perfectly acceptable tactic in Scrabble, and the onus was on me to challenge her move. The problem: Who would play the role of arbiter? We hadn't packed a dictionary in our canoe, and in all likelihood, we were alone on this heavily forested island, one of the largest in northern Minnesota's Voyageurs National Park. With no cell service, we couldn't call anyone or check the word online. But we weren't exactly complaining: After all, experiencing this complete isolation was one of the reasons we had been drawn to this place. A Scrabble impasse seemed a very small price to pay.

As the wind shook pollen-laden white pine branches and deposited golden dust on the calm waters of Namakan Lake, Jane mused playfully: "The vinings on the wall ... The wonderful vinings of the leaves ... The vinings throughout their home were exquisite." Amused by her deliberations, I looked on as Jane placed the word on the board. She went on to win the game — one of many we played over the course of our four-day trip — by nearly 100 points.

Voyageurs appealed to me the moment I saw it on a map years ago. The name itself sounded like a personal invitation to this native French speaker, and the park's patchwork of islands and lakes and near-total absence of roads offered a promise of rare wilderness. When I later learned of Voyageurs' wolves, northern lights and rocks that are half as old as the Earth, I was sold. I knew my chances of spotting wolves and northern lights would be slim, but I figured the ancient rocks wouldn't get away.

My first inclination was to visit by myself. The park's vast expanses of water and boreal forests seemed to lend themselves to solitude and introspection. But then I started picturing what it would be like to paddle solo across a large body of frigid water. What if I capsized? Did I actually want to be alone with my thoughts for four days?

I realized that I didn't, and I had a particular travel companion in mind. Jane, a retired teacher, lives within driving distance of the park, and for years, we had talked about paddling Minnesota's lakes together. I also really enjoy spending



VOYAGEURS NATIONAL PARK includes four major lakes, 26 minor lakes and more than 500 islands (far left). Top left: Jane paddles the calm waters of Namakan Lake. Above: Jane, a retired teacher and adventurous traveler, lives just a few hours from the park but had never visited it before. Bottom left: Some of our backcountry "essentials": a map, a bottle of wine and a Scrabble board.

time with Jane. I have always found it easy to talk to her about important matters and trivial ones, and many of these conversations have taken place over late-night Scrabble games. When my wife and I lived in Jerusalem several years ago, Jane and I traveled together in nearby Jordan (she won the Scrabble game we played in front of Petra's ruins). She kept her sense of humor as we drove around barricades of smoldering tires that had been erected during nationwide protests the previous day. And she stayed calm when our rental car's clutch started to give out and it looked as if we might get stuck in the countryside.

We have grown even closer in the years since. My two young daughters no longer have maternal grandparents, and "Auntie Jane" has become a de facto grandmother to them, sending letters and traveling to Washington, D.C., for birthdays and holidays. Once, when she was visiting, she spent hours helping me assemble a 400-screw playhouse.

I knew Jane was adventurous — and I figured her snow-shoveling skills would translate well to paddling — but I wasn't sure what she'd make of my offer. So I was excited when she accepted seemingly without a hint of hesitation. Jane had paddled in northern Minnesota's Boundary Waters Canoe Area Wilderness long ago but had never been to the state's only national park, so it would be a discovery for both of us. I booked a canoe from a local outfitter and reserved our campsites online.

As our trip approached, I began to get nervous. International Falls, the gateway town to Voyageurs, calls itself the "Icebox of the Nation," and Voyageurs' lakes are often frozen until May. By picking an early June departure date, I thought I had ensured we'd be able to paddle rather than skate, but would we be miserably cold? I also started to second-guess the route I had devised. The distances between campsites looked small enough on the map, but would they still look that way when winds and currents conspired against us? Was I overestimating the paddling abilities of a 44- and 70-year-old duo? My wife half-jokingly said that I should review CPR procedures ahead of the trip. I shrugged off her suggestion at first, but after she went to bed, I looked for our first-aid handbook.

Bringing the Scrabble board was always a given, but it turned out that Jane and I have different philosophies when it comes to preparing for a camping trip. I considered my work done once I had gathered two backpacks, pads, sleeping bags and a couple of small tents. I figured we would stop by a grocery store in International Falls and load up on food and water there. Jane had

MANY OF the 154 campsites in Voyageurs include docks where visitors can moor their canoes and motorboats.

other ideas. She bought four days' worth of breakfasts, lunches and dinners ("We're going to have some interesting ones," she said) and stopped by a friend's house to collect what she considered backcountry essentials, including a portable water filtration system, waterproof canoe packs, tethers to keep bags from moving around and inflatable canoe seats.

Jane picked me up at the Minneapolis airport, and the next morning we loaded everything into her car for the four-and-a-half-hour drive to Voyageurs. It was a sunny, warm spring morning, and my fears about the weather started to evaporate.

When we filled up on gas and coffee outside Duluth, the gas station attendant told me that despite living two hours away from Voyageurs, he had never been there. A pattern started emerging: On a previous trip to Minneapolis, I had found just one book about Voyageurs in one of the city's largest bookstores and none at the local library. My Minnesota guidebook didn't even include Voyageurs as one of the highlights of the state's northeastern region. I began to wonder why this national park seemed like an afterthought to the people who live here.

When I met Mary Graves, Voyageurs' chief of cultural and natural resources, later that day, I asked her why the park is not more popular. One reason is the appeal of Boundary Waters, which is nearby but larger; another is the context surrounding the birth of the park, Graves explained. The idea of creating Voyageurs first emerged in the late 19th century, and the proposal later gained some big-name supporters such as conservationist Aldo Leopold and aviator Charles Lindbergh. Still, Graves told me, many locals opposed the creation of a park that would restrict hunting and force some people to sell and eventually leave cabins that had been built within park boundaries. At one point, when tensions were running high, someone left a wolf carcass outside a park office. "There was a lot of anger in the early years, but that has changed a lot," said Graves, whose late husband's family had owned one of the cabins in the park.

While the hordes of tourists the park's creators promised have failed to materialize (only a little more than 215,000 visit each year on average), people who do venture here often get hooked. "It has something that really takes you," said Graves, who has worked in the park for nearly four decades.

That night, we stayed at the Arrowhead Lodge on the shore of Lake Kabetogama. As Jane and I played a game of Scrabble on the screened porch of one of the lodge's cabins, a pod of white pelicans alighted in a quiet cove. The discovery of a tick on Jane's leg was not enough to dampen her spirits. A lopsided defeat did not make a dent in mine. We both felt ready to take in Voyageurs' wildness.

The next morning, our canoe was waiting for us when we arrived at the Ash River Visitor Center parking lot, and I carried it to a small bay under the gaze of a bald eagle perched high on a pine. Graves had told me how the park had worked hard to boost the eagle's population, and we took the bird's presence as a good omen for the trip. We loaded up our packs and cooler, donned our lifejackets, and at 10:42 a.m. we were off, gliding on smooth water scintillating in the morning sun. "I think we make an early-on pact that we won't tip over," Jane said.

TRAVEL ESSENTIALS

A camping trip in Voyageurs National Park leaves little room for improvisation. Reservations are required for the park's 154 tent sites and 94 houseboat sites, and the prime spots are snatched up quickly during the summer months. Campers should either bring in all their water or use a combination of treatment options, because simply boiling or filtering lake water will not eliminate all algal toxins. Besides stunning views, campsites include picnic tables, bear-proof food lockers and fire rings with metal grates.

Kettle Falls Hotel on the Canadian border is the only lodging available inside the park. The hotel, which is accessible by boat or float plane, offers a boat shuttle service from Ash River Visitor Center. Several outfitters and lodges near the park rent canoes, motorboats and houseboats; visitors also can join a guided boat tour during the summer season. Anglers are welcome to fish in the park's waters, which are teeming with walleye, smallmouth bass and crappie, but they must pick up a Minnesota fishing license first.

In the winter, Voyageurs turns into a snow and ice wonderland. Visitors can pick up snowshoes and cross-country skis, boots and poles for free at the Rainy Lake Visitor Center. Park staff maintain snowmobile trails and — depending on conditions — two ice roads for access to ski trails, ice fishing and a sledding hill on Sphunge Island.

Few books about the park exist, but prospective visitors will find lots of useful information at voyageurs.org, the website of Voyageurs National Park Association.

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THE ASH RIVER VISITOR CENTER is housed in a historic lodge (top). Above left: A young visitor plays with his toy dump truck on the shore of Lake Kabetogama. Above right: The area's beaver population declined sharply as a result of the fur trade in the 18th and 19th centuries, but now beavers are a common sight in the park.

Voyageurs' 218,000 acres include four major lakes, 26 smaller ones, 655 miles of coastline and more than 500 islands. A few trails are accessible from the three visitor centers, but most of the park can be reached only by boat once the lakes thaw (in the winter, park staff maintain ice roads for cars on two of the lakes, as well as more than 100 miles of snowmobile trails). I was nervous about paddling across a large, open lake, so after some research, I had settled on exploring the western part of Namakan Lake, where the maze of islands between Ash River Visitor Center and Kettle Falls would shelter us from winds and waves.

Navigating Voyageurs' lakes is not exactly difficult — numbered buoys ensure that paddlers don't get lost — but it can be unnerving at first. From a distance, forested islands and coastline blend together into a wall of green, and time and again, we thought we were headed for a dead end, when suddenly a small passageway materialized before us. Every now and then a motorboat passed us by, and our canoe keeled sideways in the boat's wake. After a while, though, I got the hang of paddling and was able to lift my gaze to the scenery unfurling on either side. The brand-new leaves of isolated birch and aspens created patches of vivid light green amid large stands of darker spruce and pine. In sheltered coves, the water surface was so smooth that the reflection was as crisp as the original. As we found our rhythm, we spoke less and less, and stretches of comfortable, contemplative silence grew longer.

After a couple of hours of steady paddling, we arrived at our campsite on Williams Island. I had originally thought the canoe pads were an unnecessary luxury, but my back begged to differ, and I had to admit Jane's foresight was already paying dividends.

The voyageurs who gave the park its name were French Canadians who came to the region in the 18th century in search of beaver skins and other pelts to satisfy Europe's appetite for fur coats and hats. The local Ojibwe people traded furs of the animals they trapped for the voyageurs' manufactured goods, including knives, blankets, guns, kettles and glass beads. The trading partners had a mutually respectful relationship, by and large: Intermarriage was common, and the voyageurs adopted the Indians' birch bark canoes and accepted that the Ojibwe controlled the price of pelts. "They were very strong business folks," Graves said. "They very much knew what they were doing." The fur trade fizzled out as beavers became scarce and European fashion tastes moved on to silk. The voyageurs left no structures behind, but Graves said glass beads have been found at Native American archaeological sites throughout the park, including locations that are now campsites or picnic sites. I spotted plenty of pistachio shells and a total of $1.78 in change at our campsite, but not a single bead.

After a lunch of hummus, radishes, snap peas, salami, brie and baguette, we got back in the canoe to head for Ingvald Walter Stevens' "resort." Stevens, a Norwegian immigrant who lived on the island that bears his name from 1932 until he left in 1979 at the age of 94, spent the vast majority of his time alone, but occasionally rented out a couple of cabins to visitors. (See Stevens' photo on page 60.)

For the 47 years of his stay on the island, Stevens kept a meticulous record of his days, which displayed his dry humor and creative use of capitalization. Among his favorite subjects were insects ("The poet tells us that, IN THE SPRING A YOUNG MAN'S FANCY TURNS TO THE THOUGHT OF LOVE. Mine turned to the thoughts of mosquitoes."), animals he considered pests ("The hunting season opened with a great big BANG! In fact, two bangs. Shot two squirrels before breakfast.") and the weather ("THE TIME HAS COME TO SAY GOODBY TO YOU, MISS MAY. YOU MAY THINK OF YOURSELF AS A SVELTE LADY, BUT MY OPINION OF YOU, WEATHERWISE, IS THAT YOU WERE A GREAT BIG LOUSE."). Our June afternoon was no louse, and I was sweating in my T-shirt and shorts as we reached Stevens' dock. We were alone, and the doors of the buildings were unlocked, so the visit felt voyeuristic and vaguely illicit. As a gentle breeze blew through the cattails lining the shore, I pictured Stevens facing west and enjoying the same warm late afternoon sun after a hard day's work tending his vegetable garden.

Later that night, a descendant of one of the few beavers that evaded capture a couple of centuries ago swam right by our campsite. After Jane retired to her tent, I sat on a 2-billion-year-old slab of granite facing the water. Stars lit up one by one, and wood frogs began their serenade. The wings of a large moth vibrated near my ear, and a loon called in the distance. The night was both quiet and full of sounds, serene and exhilarating. I stayed a little while longer, hoping to catch sight of the northern lights. Seeing none and yawning, I walked over to my tent.

The next day, our destination was the Kettle Falls Hotel, which held the promise of a proper hot meal and a beverage tastier than filtered lake water. Our route there followed an invisible line separating the United States on our left from Canada on our right. At times, the pathway was so narrow that we might have ventured inadvertently into foreign waters. "That way it's an international trip!" Jane said.

The Kettle Falls Hotel is the only lodging in the park, and from the hotel's docks, people have the rare opportunity to look south into Canada. The interior decor of the century-old hotel, which features mounted walleye and bass trophies, reflects the tastes of the clientele and staff, many of whom are fishing enthusiasts. We grabbed a drink at the bar whose sloping floor earned the hotel the nickname "Tiltin' Hilton" and learned from the owner that he doubles up as a safety patrol, having rescued people whose boats had capsized or who suffered heart attacks on the water.

Both reassured and alarmed by this bit of knowledge, we walked back to our canoe under a scorching late afternoon

NPCA AT WORK

Fishing is one of the most popular activities at Voyageurs, so it makes sense for fishermen and park advocates to work together to protect the park's natural resources. Over the past five years, the Rainy Lake Sportfishing Club and NPCA — with the help of youth crews from the Conservation Corps — have planted more than 1,000 hardwood trees just outside the park on the banks of the Rat Root River, a tributary of Rainy Lake, one of the park's major lakes. In the process, the crew stabilized nearly 80,000 square feet of shoreline. Walleye prefer spawning along rocky or gravelly river banks; preventing erosion ensures that freshly deposited eggs are not covered with silt. Christine Goepfert, NPCA's senior program manager for the Midwest, said the collaboration has been a great success. "It benefits the river, the walleye and the water quality of the park," she said, "but it also benefits the landowners who don't end up losing land to erosion."

WHITE PELICANS fly over a cove in Lake Kabetogama.

sun and cirrus clouds gathering in the west. The hotel was hardly crowded, but I felt myself looking forward to the calm of our campsite.

I woke up in the middle of the night to the faint sound of distant thunder. Jane had also heard the rumbling and was already wearing her pink rain poncho when I emerged from my tent the next morning. The horizon was lined with dark, gray clouds apparently coming our way. I favored leaving before the weather deteriorated further, but Jane, who had been caught in a storm on a large lake once before, preferred to wait. Ultimately, we compromised: After two hours without rain or thunder, we decided to give it a go.

By the time we got to our last campsite of the trip on Namakan Island, skies had cleared. A hummingbird zoomed by, and a swallowtail fluttered around the picnic table. The breeze picked up and whisked away mosquitoes and black flies, and we both tried to take it all in. "The scenery doesn't vary much," Jane said. "You go around one bend, and another bend, and it continues. But I'm going to miss looking at what I'm looking at."

We left the next morning under cloudy skies and were soon facing headwinds and waves. Paddling was harder and the going slower. We hugged the coast to find calmer waters, and we picked short-distance goals to feel as if we were making progress. "So I'm heading for that pine that looks like a toilet brush?" Jane asked.

Finally, after two and a half hours of paddling, we arrived at the cove near Ash River. We stepped on the shore, muscles aching, and, still sporting our lifejackets, we embraced. "We did it!" we exclaimed in unison. We checked for ticks one last time and were back in the car just before raindrops the size of silver dollars splashed on the windshield.

We hadn't seen any moose, bears, wolves or northern lights, but Voyageurs' landscape of water, trees and sky had "taken" us, as Graves would say, and I started to understand why Stevens had endured harsh weather and bugs for so long. I was sad to leave, but I also felt relieved and triumphant. I had worried that the weather would spoil our trip and that Voyageurs' lakes were just too big for our paddling abilities, but we had canoed confidently under sunny skies for the better part of four days. We hadn't capsized even once.

I learned the next day over lunch in Minneapolis that I wasn't the only one who had had doubts. Jane told me that about 20 minutes before she picked me up at the airport, she briefly considered backing out, and that in the car, she was asking herself: "Can I do this?" After paddling for more than 30 miles, she had found the answer.

"I'm proud of what we accomplished," she said. "It feels good for where I am in my life right now."

As for "vinings": Once we had cell service, Jane looked it up on her phone. "Oops," she said, as we sped along the highway back to civilization. "Not a word!"

SIDE TRIP

On our way back from Voyageurs, Jane and I stopped at the North West Company Fur Post, a reconstructed trading post located a couple of hours north of Minneapolis. We were still beaming with pride over our paddling accomplishments when we learned that the voyageurs could cover up to *100 miles in a single day — more* than three times the distance we had paddled over a four-day trip. "They were at Olympic level," a costumed re-enactor told us when he stepped out of character. Voyageurs frequently carried two 90-pound packs on their backs, and hernias were a common occupational hazard. And they did it all on a meager diet of wild rice, corn and grease, with smoking breaks every few hours.

NICOLAS BRULLIARD is associate editor of National Parks magazine.

ALEX MESSENGER is a Minnesota-based photographer and writer. He's currently writing a survival memoir chronicling a grizzly bear attack in the Canadian tundra.

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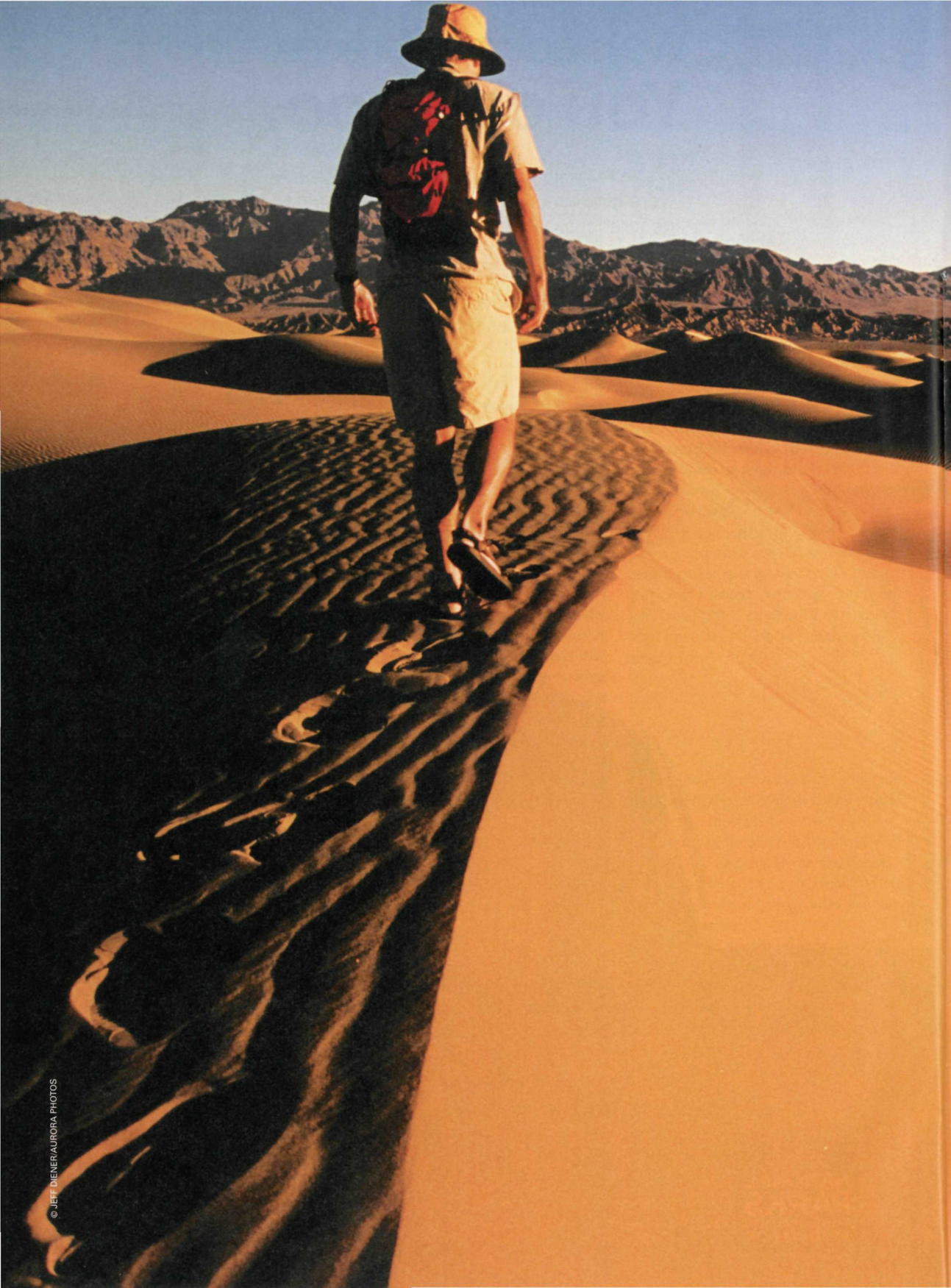

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some like it very

HOT

A growing number of extreme tourists are heading to Death Valley to experience one of the hottest places on Earth at the hottest time of year.

BY KATE SIBER

The road into Death Valley National Park from the south snakes down more than 2,000 vertical feet through a barren landscape of geometric hills. As I descended on a late August afternoon, the reading on my car thermometer rose with alarming steadiness. 98 degrees. 105 degrees. 109 degrees. 114 degrees. When I arrived at Furnace Creek, the park's headquarters, it was 122 degrees.

I parked in the shade, emerged from the air-conditioned sanctity of my vehicle and staggered under the press of heat. The air parched my throat, and even a slight breeze instantly dried out my eyeballs. Exposed skin felt like it was burning within minutes. I had arrived in one of the hottest places in the world during a late-summer heat wave.

For some, the hellish weather was an opportunity. Visitors snapped photographs of each other next to a digital thermometer announcing the outrageous temperature. In the staff parking lot, Isabelle Woodward, a ranger in the commercial use and permit office, pulled on leather gloves to retrieve two pans of cookies she had baked inside her sweltering car.

"Everyone looks forward to dashboard cookie day," Woodward said cheerily as a passing ranger munched on a chewy, melty treat. The temperature was so high in her sedan that her thermometer had broken that morning. "When you move to an extreme place, you have to learn to make your own fun," she said. "Attitude is really, really important."

Throughout Death Valley in summer, the heat imposes itself like a fearsome deity. It's one of the park's great claims to renown, among its most grave dangers, and a source of awe for both visitors and residents. Ubiquitous signs warn of the hazards of overexposure at trailheads, on roadsides, next to hot playground equipment and even inside restrooms, where a diagram of urine colors identifies suitable levels of hydration. In the visitor center, a gruesome photograph of a skeleton face down in the sand illustrates the perils of dehydration.

At one time, most sane human beings avoided Death Valley in summer. The original inhabitants, the Timbisha Shoshone, migrated to higher elevations in the hot months, and in the early days of the park, founded as a national monument in 1933, visitors came only in winter. But over the last decade, August has become one of the busiest months of the year. (It was *the* busiest in 2014 and 2017.) Rangers say that more visitors, largely from Asia and Europe, are now coming expressly to experience one of the most extreme climates on the planet.

"If they come during a heat wave, they'll often say, 'I'm so lucky to be here when it's so hot!'" said Linda Slater, who retired from her position as chief of interpretation in November. She has noticed lines of people waiting to have their pictures taken next to the visitor center's thermometer. Without hard data, park staff can't say exactly why there's been an increase in extreme heat seekers but theorize that it could be the growing number of bucket-list travelers or an overall spike in tourism that's been linked to a ballooning middle class in some Asian countries.

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KEVIN MARTIN of Corona, California, posed for a snapshot at Furnace Creek Visitor Center during a 2013 heat wave; it's not unusual to see lines of people waiting to have their photos taken there (above). Top right: Hot air shimmers near a heat danger warning sign in July, which has become a popular month for visiting Death Valley. Bottom right: Salt formations in Badwater Basin, the lowest point in North America at 282 feet below sea level. Previous pages: Hiking along sand dunes near Stovepipe Wells.

In July 1913, a ranch caretaker in Death Valley registered a temperature of 134 degrees and reported seeing swallows fall dead out of the sky in midflight. The accuracy of the reading has come under question in recent years but is still recognized as the hottest atmospheric temperature ever recorded. What's certain is that Death Valley is a fiery and poignant reminder of the edges of this planet's habitability. I came motivated by curiosity, which

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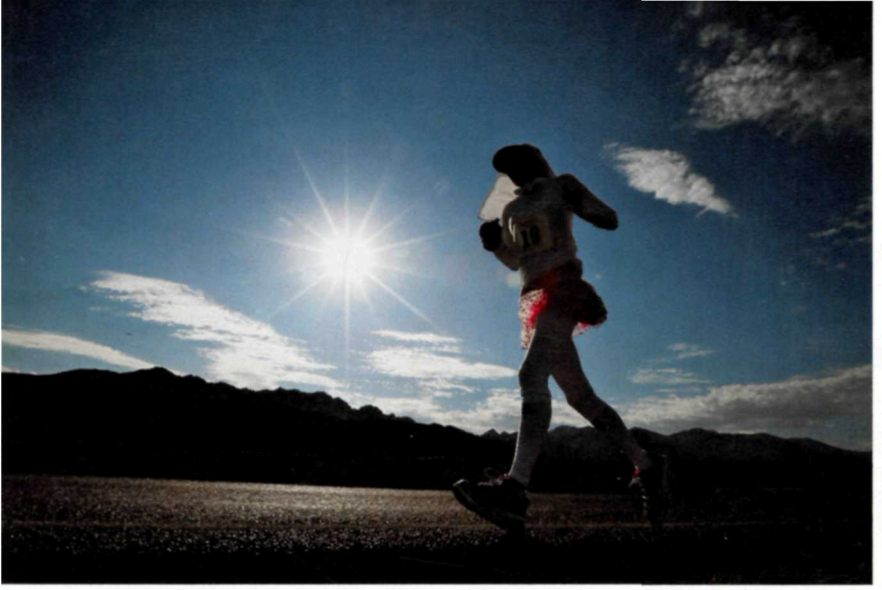

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LORIE ALEXANDER of Canada competes in the Badwater Ultramarathon, an annual 135-mile summer race that starts in Death Valley and goes to Mount Whitney (top left). Bottom left: Shannon Farar-Griefer (lying down) stops to drink water during the Badwater Ultramarathon.

has led me into trouble plenty of times before. I wanted to better understand why people are drawn to such extremes and how they successfully manage to withstand — both physically and mentally —some of the most severe conditions on Earth.

"You're going to love it!" a friend told me before I left. She has visited Death Valley many times. "But don't face the sun or the wind, they'll shear your face off." She paused for effect. "And watch out for the metal on your sunglasses. It'll burn you." What had I gotten myself into?

One afternoon during my three-day visit, I drove out to Badwater Basin, the lowest point in North America at 282 feet below sea level. This wide, flat, shimmering valley heats up so much because a belt of peaks cycles rising hot air down to the valley floor to be cooked again. It also lies in the rain shadow of four mountain ranges. As I drove, the landscape appeared to undulate from the heat. The few plants that live here are so parched they turn beige like the sand. Creosote bushes, with their tiny leaves and desperately deep roots, are one of the only plants that can survive on the edges of the stark white salt flats.

Park rangers recommend staying outside for a maximum of 15 minutes during the hot season. "This time of day, I'd say 70 to 80 percent of visitors at the park are dehydrated," Woodward had told me the day before. It was 113 degrees when I exited my car, and I was surprised to find that, despite the inhospitable conditions, I was far from alone. Travelers, lined up in a tidy row as if they'd been choreographed, posed for selfies. Some carried umbrellas for shade, while others ventured into the sunshine bare-shouldered. I was sweating profusely but felt dry because every drop of moisture evaporated instantly.

In the distance, the warmth bent the light so much that the white salt appeared like a roiling whitewater river, and I realized with a shiver what it's like to be deceived by a mirage. Within about 10 minutes of walking, my heartbeat quickened, my head felt tight and woozy, and I started to feel the dark bloom of panic. At the same time, the landscape captivated me with its unique austerity. The tonal simplicity felt almost surreal, as if I were suspended in a world drawn by a primitive hand.

Later, at Devil's Golf Course, a field of knee-high salt formations, I lasted only about three minutes before diving into my car, soggy and tomato-faced. Meanwhile, I watched a man I met from the Florida Keys pad about for what seemed an interminably long time as I held my face a few inches from the air-conditioning vent. It seems some people actually love and appreciate the heat — or at least tolerate it. Every year in July, a hardy — or one might say insane — group of runners trot from Badwater Basin to Mount Whitney, the tallest peak in the continental U.S. They often run on the white line of the road because it's a smidge cooler than the blacktop. In October, cyclists gather in the park for a 100-mile bike ride despite temperatures that often hover in the 90s.

I was surprised to find that many people I met hadn't actually given the heat much thought. They came because they had vacation time or they were headed to cooler climes, such as Yosemite, Sequoia and Kings Canyon National Parks, and decided to stop by Death Valley on their way. Their cavalier attitudes might explain why, despite the signs, visitors regularly get into heat-related trouble.

"Most people know that heat is a danger, but they don't know how fast it can be a danger," said Kevin Ross, emergency services coordinator for the park. Each year, the search and rescue team responds to about 180 medical calls, mostly related to dehydration and heat exhaustion, and performs about a dozen rescue missions. Many visitors, particularly motorcyclists, run into difficulty on the park's 800-plus miles of backcountry roads. But it's not uncommon for car-driving visitors who are simply sightseeing to underestimate the need for water and get dangerously dehydrated. In 2014, a French man on a bus tour wandered a bit too far out into the dunes on a short break and became lost. Park staff immediately launched a search and found him within four hours, but he had already died. It was 117 degrees in the parking lot.

For the nearly 300 people who live here in the park — largely National Park Service and concessioner staff — the intensity of the living conditions breeds the sense of camaraderie people develop when undertaking great challenges. Often groups of staffers play board games on summer weeknights when it's too hot to venture outside (some nights, it never drops below 100 degrees) and head to the mountains en masse for a brief respite of cool on weekends. Some brave souls defy the elements and play a standing volleyball game once a week in the evening.

Jan VanderLey, who works at one of the Death Valley hotels and volunteers at the park during his free time, thought he was "going to die" when he moved here two years ago during an October heat wave. "Now, I actually love it," he said.

He's used to the quirks of living in the valley: Tap water flows hot no matter which faucet you use, and many people keep gloves with them at all times to avoid burns from car-door handles and black gas pumps. The clothes I pulled from my suitcase, fresh out of the trunk of my car, felt like they just came from a hot dryer, and even in the hotel pool at the Ranch at Death Valley — where many visitors find refuge during broiling afternoons — my uncovered head roasted.

But staying in the valley, I also began to understand that people had come for more than the heat. One morning, I struck up a conversation with a visitor from Berlin and asked him what brought him here.

THE SUN RISES over the Badwater salt pan and the Panamint Range in Death Valley.

TRAVEL ESSENTIALS

Las Vegas has the closest international airport to Death Valley. From there, it is a two-hour, 120-mile drive to the center of the park. Most of the park's nine campgrounds are first come, first served, and several are open year-round, though staff members do not recommend camping at low elevations during the summer months. Hotels in the park all feature swimming pools and include the casual, family-friendly Ranch at Death Valley in the Furnace Creek area; the Inn at Death Valley, a historic, upscale resort; Death Valley Lodging in Stovepipe Wells Village; and Panamint Springs Resort.

© INTERSECTION PHOTOS/ALAMY STOCK PHOTO

SEEKING REFUGE from the heat in the pool at the Inn at Death Valley.

"The heat, yes, but the second time, we came for the landscape," he said. "It's really simple. There's heat, stone and silence. In a world with so much built up, this is hard to find."

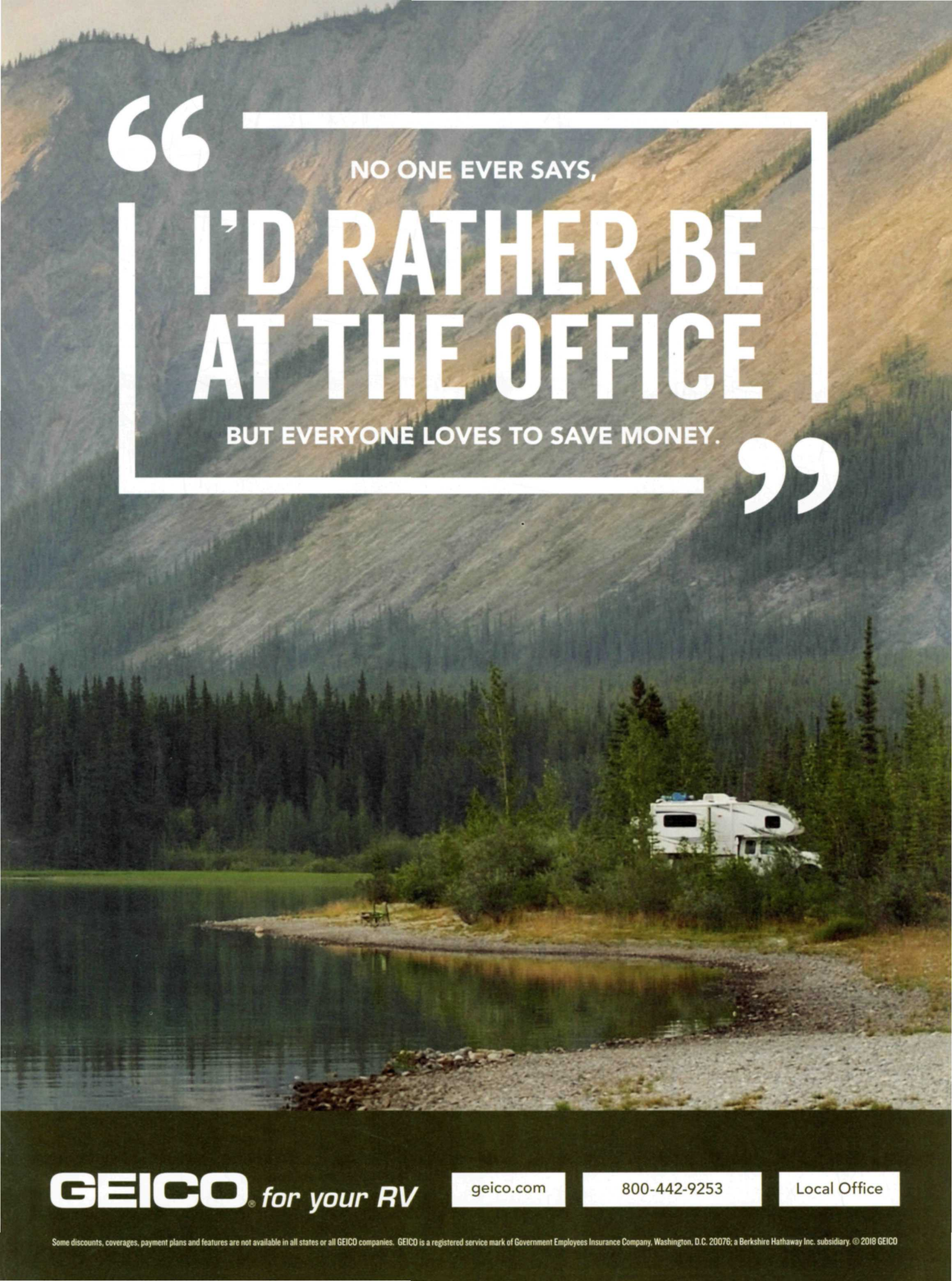
Those who live here happily maintain a healthy fear of the heat and find ways to adapt. (Woodward claims that despite growing up in New England, after living in Death Valley for nearly a decade, she now dons a sweater when it's below 80 degrees.) A key part of their success lies in appreciating this place for what it is: a Mars-like hinterland marked by beautiful extremes. I decided to follow their examples and set about enjoying Death Valley's singular character. I watched sunrise at Zabriskie Point, a lookout point over crenellated hills striped crimson and beige. I drove through the great expanses of desert, stayed up late watching the stars and lolled in the pool, taking in the giant sky along with other visitors escaping the heat. Before dawn, I hiked up Golden Canyon and sat in the 92-degree stillness as the barest traces of life started to reveal themselves. An elegant dragonfly. A wispy moth.

Naturally, as the planet warms, Death Valley is growing hotter, too. The area hasn't topped the 1913 record, but since the early 1900s, when recordkeeping began, the average maximum and minimum temperatures have trended upward. Last June, temperatures in the park hit record highs for the date five times. In July, the average temperature in the park was 107.4 degrees. That meant it was the hottest month ever recorded on Earth, according to the Washington Post. As climate change comes to Death Valley, precipitation patterns may change, increasing the possibility of flash floods, and animals may start moving into higher elevations as their habitats become too warm. Staff have little information on the likely effects, but University of California Berkeley scientists are overseeing a multiyear study comparing findings on current wildlife population distribution and animal body size to similar research conducted between the 1910s and 1940s.

Surprisingly, experiencing firsthand some of Earth's hottest weather didn't make me hopeless about our steamy future, but rather, I felt motivated to protect the delicate habitability of this planet. I also felt grateful for the opportunity to witness these extraordinary conditions. One evening at sunset, I walked out into the Mesquite Dunes with some water and a journal. I sat down on the hot, hot sand in a breeze that felt like the exhaust from a dryer vent. My head ached from my perpetually losing battle with dehydration, but the land was so boldly gorgeous, minutes passed when I actually forgot about the heat.

The mountains glowed in the sunset light, and storms bruised the sky. A porcelain half-moon rose behind me. It was so quiet I could hear only the wind rushing over my ears. As night turned the sky, peaks and dunes into hundreds of shades of blue, smoldering pink veins of lightning illuminated everything for just a moment.

KATE SIBER is a freelance journalist based in Durango, Colorado.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THE LION CATCHER

Biologist Eric York lived to help wild carnivores, but he didn't get a chance to finish his life's work.

BY EMILY MOUNT

NPS (2)

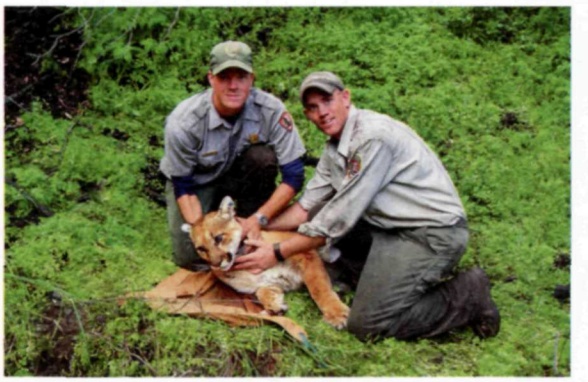
It was 4 a.m. on a frosty fall morning in 2007.

Darkness and crisp ice blanketed the Grand Canyon National Park road as I headed out of the park toward Flagstaff. A large tan animal stepped onto the pavement, and I skidded to a halt. My eyes slid from its small head down the lithe body to the tail, which seemed to go on forever as it ambled across the road. It didn't trouble to give me a glance.

ERIC YORK in 2002. Opposite: A mountain lion in Santa Monica Mountains National Recreation Area.

This was my first – and only – mountain lion sighting at the Grand Canyon, where I worked as an interpretive park ranger. I was surprised the cat wasn't wearing a radio collar, because wildlife biologist Eric York had been fitting South Rim lions with tracking collars for the past four years.

He'd pop into my office early in the morning after checking his lion traps, shirt tucked into a dusty pair of Carhartts and a ball cap perpetually locked to his head.



ERIC YORK (on right in photo) with Jeff Sikich, a biologist at Santa Monica Mountains National Recreation Area. Staff there recruited York when they were looking for a skilled trapper (top, near left). Bottom, near left: A coyote captured by a motion-triggered camera in Griffith Park in the Santa Monica Mountains. Far left: York measures the canines of the first mountain lion captured by the Santa Monica Mountains park staff.

NPS (ALL PHOTOS)

For a long time, many doubted the existence of mountain lions at the Grand Canyon. Elaine Leslie, a park wildlife biologist, was determined not only to prove their presence, but to track their movements. She wanted to learn more about the role lions play in the canyon's ecosystem and how these predators affect deer and elk herds. To study the whereabouts of mountain lions, biologists first need to capture them and place tracking collars on them, though capturing lions is no simple task. Trappers usually capture the animals (also known as pumas, cougars or panthers) by chasing them with hounds until they are cornered in trees, but Leslie wanted to find a biologist who could capture mountain lions without having to hunt them down. "I knew some hunters and trappers, but I was looking for somebody a little different who respected what a park as a protected area was all about," she said. One of her colleagues recommended York, who was working as a wildlife biologist at Santa Monica Mountains National Recreation Area. In his career, York had trapped carnivores of all sizes — including mountain lions.

York began his field work in Grand Canyon in 2003, and before long he had captured several South Rim cats and fitted them with radio collars. The collars produced unexpected information: From the data York and his colleagues collected, they learned, for example, that lions swam the Colorado River and that they journeyed 150 miles to Flagstaff and back again. One by one, data points created a picture of the species' abundance, distribution and role in the Colorado Plateau ecosystem.

By the time I arrived at Grand Canyon in 2005, York's project had gained some fame within the park. Inspired by his findings, I put together a program for visitors on Grand Canyon mountain lions during the summer of 2007. York was eager to help, providing photos and hair snares used to snag lion fur for DNA testing. He'd pop into my office early in the morning after checking his lion traps, shirt tucked into a dusty pair of Carhartts and a ball cap perpetually locked to his head. Our interactions were brief because he was always on the move, restless in the office and anxious to get back into the field as quickly as possible.

Shortly after my puma sighting in October, a collar indicated that one of the mountain lions was no longer moving, suggesting the animal had died. Always happy to share hands-on experiences, York invited me to retrieve the dead cat with him. I was

busy at the visitor center, so I declined the invitation, and he went alone. York carried the lion's 90-pound body to his vehicle and drove home to conduct a necropsy and determine the cause of death. "He had this innate curiosity. He wanted to discover how things worked," Leslie said. "It wasn't good enough to find a dead lion; he had to find out why it died." York had performed many post-mortem examinations during his career, and this lion seemed no different from the other dead animals he had examined.

Grand Canyon did not have a suitable laboratory, so York took the mountain lion to his garage. Shortly after working on the open carcass, he started to experience flu-like symptoms. He visited the Grand Canyon clinic and was sent home to rest and recover. A few days later, his co-workers found him at his home, dead from respiratory failure. York had unknowingly inhaled airborne Yersinia pestis, bacteria relatively uncommon in lions and even more so in humans. The bacteria had proliferated in his body, and he had died of the pneumonic plague. He was 37 years old.

For weeks, the park was in a state of shock. Everyone who had had contact with York was examined at the clinic and treated with antibiotics. The Centers for Disease Control and Prevention held trainings on the plague for staff. Like many, I felt the aching loss of a colleague, but I also struggled with the knowledge that I could have helped carry the cat, sat beside York during the necropsy, inhaled the same bacteria and shared his fate. Ten years later, I'm still trying to make sense of it all.

York grew up on his family's farm in rural Massachusetts, caring for livestock and gardens, harvesting hay, and riding horses. "He loved to spend time in the woods building forts with his friends or just walking for hours," his older sister, Andrea York Stoltzfus, wrote to me. "He liked to hunt and hike and watch for tracks and signs of wildlife." His childhood rambles and experience with domestic animals ignited an interest in studying wildlife at the University of Maine, where he learned how to trap and track elusive species such as martens. Later, he pursued a graduate degree in wildlife conservation at the University of Massachusetts, where he collared and

A SWEEPING view of the Grand Canyon, where York began capturing and tracking mountain lions in 2003.

"We'd be slogging along saying, 'FTP: for the pumas.' It means we're doing it for them, so we gotta keep going."

tracked scores of fishers and developed skills that set him apart in a competitive field.

Ray Sauvajot, then the chief of resource management at California's Santa Monica Mountains National Recreation Area, was developing a project to study how urbanization affected carnivores, and he needed a skilled trapper. After he heard about York from the young biologist's graduate school advisor, Sauvajot flew to the University of Massachusetts to recruit him. York, who had never been west of the Mississippi, soon found himself chasing carnivores around Los Angeles.

Dashing up and down the area's steep terrain, York set traps to capture bobcats, coyotes, badgers and gray foxes. "Eric was like a mountain man brought forward in time, where the skills that he acquired on the frontier were applied to 21st-century wildlife conservation," Sauvajot said.

Over several years, York helped catch almost 200 animals and fit most of them with radio collars. He and his colleagues followed their movements through the hills, gathered data on their genetic diversity and their response to encroaching human development, and learned how obstacles such as Highway 101 isolated vulnerable populations. After his hundredth coyote capture, York got a coyote track tattoo, a sort of tradition he had started with fishers in New England.

York's work obsession and fierce independence did not prevent him from making meaningful connections with his friends and colleagues. He was a cheerful companion in the field, and he liked to celebrate difficult carnivore captures by joining his colleagues for beers or tequila shots. He fashioned lamps and bottle-openers out of deer antlers for his co-workers in his spare time and returned from trips back home with boxes of lobsters for his California colleagues. Sometimes he'd drive hundreds of miles to attend Red Sox games and hang out with friends. One of his last tattoos was a compass, with the needle pointing northeast. Even though he loved his work out West, he never stopped missing his family and his beloved New England.

Six years into the urban carnivore study, Sauvajot kicked off research on mountain lions. Just like pumas in the Grand Canyon, mountain lions in the Santa Monica Mountains were so elusive that many locals thought they didn't exist.

Biologists trapping mountain lions must first search for tracks, scat and other signs of the cat's presence in order to place their trap in the path of the animal. After he settled on his location, York used padded cable restraints — loops that require the animal to step into an area the size of a softball. Once a puma activated the trap, the cable would tighten to a circumference slightly larger than the lion's wrist and hold the animal safely until York arrived. He would then dart the captured cat with a tranquilizer, take blood samples, weigh the animal and determine its sex and approximate age. Before releasing a mountain lion, York equipped it with a collar whose radio and GPS signals would allow him to follow the animal's movements in the wild.

YORK HOLDS a mountain lion kitten in the Grand Canyon. For a long time, many had doubted the existence of mountain lions there, but that changed after York's arrival in the park (right). Below: A mountain lion kitten from the Grand Canyon with a red ear tag attached for future identification.

I asked Leslie why York was so good at what he did. "Patience. That's the key," she said. "He didn't need to run dogs. He knew the science. To be honest, he thought like a lion." York knew how and where the lions moved, giving him exceptional insight into where to place his traps.

That knowledge didn't come easily to York. He had to earn it. His field days were grueling, starting well before sunrise. "He would fight swarms of biting insects, belly crawl through the brush or scale a waterfall to lay out his traps. He was a workhorse in the field," said Bert Frost, who collaborated with York at the University of Maine and is now the Alaska regional director for the National Park Service. "He was a frickin' animal. He'd go plowing through the forest like a bull moose in heat and good luck trying to keep up with him!" York was a workaholic, putting in long days and working on weekends and holidays. "At the end of

NPS (2)

a long hard day, he'd come back and be tinkering with equipment until it was time to go to bed, taking apart radio collars or rigging up transmitters with different batteries," said wildlife biologist Jeff Sikich, who worked alongside York in several of his jobs.

Things did not always go as planned. One day, York was setting cable restraints in the Santa Monica Mountains by himself, a task he had performed thousands of times before. Somehow he failed to set the safety, and the trap triggered, cutting him from his lip through his nose. A bloody York hiked out and headed to a clinic for stitches. Sikich, who was York's housemate at the time, still uses this story to train new biologists on how to set a trap safely.

Eventually, York's dedication paid off. In 2002, one of his remote cameras snapped his first lion photo. Later that year, York trapped and collared his first mountain lion.

York thrived on the excitement of tracking and catching lions, but he never lost sight of the point of his work and how it helped park managers understand and ultimately protect these magnificent creatures. "York had a love for the animals, not just the catching," Seth Riley, Santa Monica Mountains' chief wildlife ecologist, told me. "We'd be slogging along saying, 'FTP: for the pumas.' It means we're doing it for them, so we gotta keep going." York would be out at dawn and dusk, checking his traps to ensure an animal did not stay in a trap longer than necessary. Having unintentionally secured minor celebrity status as the guy who tracked mountain lions in Malibu, he sometimes mingled with the Hollywood elites and hunting groups to make the case for lion conservation. "That wasn't necessarily supposed to be a big part of his job, but he made it that way," Sauvajot said. "He wanted that."

Years later, Sauvajot still vividly remembers getting the phone call about York's death. "I was just shocked," Sauvajot said quietly. "It was the cruelest irony that a tiny microorganism would be the ultimate fatal blow to somebody who worked with some of the biggest and fiercest creatures in the world."

A memorial service for York was held at a Grand Canyon viewpoint at sunset. I remember Mary Bomar, then the director of the Park Service, speaking, but I was too numb to take in what she said.

Almost immediately, agencies and organizations

across the nation created new protocols and policies to ensure other biologists wouldn't suffer York's fate. In York's memory, Grand Canyon staff raised funds to support park wildlife programs and teach visitors about local wildlife and endangered species. A scholarship in his name now helps biology graduate students pursue careers in wild cat conservation.

York's work continues to benefit the animals he dedicated his life to protecting. One study co-authored by York found that a major source of urban carnivore mortality was rodenticide poisoning. Regulations for rodenticide changed at local and federal levels as a result of those findings. Today, the lion study York launched is helping the Park Service and conservation partners justify a wildlife overpass above Highway 101. This overpass would not only help prevent lions from being hit by cars — 18 cats have been killed in collisions since York began the lion project — but connect isolated populations and strengthen their genetic health. (Mountain

NPS

© PHOTO COURTESY OF ANDREA YORK STOLTZFUS

YORK CARRYING a cat in the Grand Canyon. "Even now, when it's been a long day, I've been hiking hours on end and there's one more thing I can do, I'll think, 'What would Eric do?'" one of York's park colleagues said (left). Right: York's ashes were spread around the country in places he loved, including the Grand Canyon, and some were buried in a country cemetery visible from his family's Massachusetts farm.

lions living in the Santa Monica Mountains and those in the nearby Santa Ana Mountains are so isolated that they have the least genetic diversity of any puma populations except for the Florida panther.)

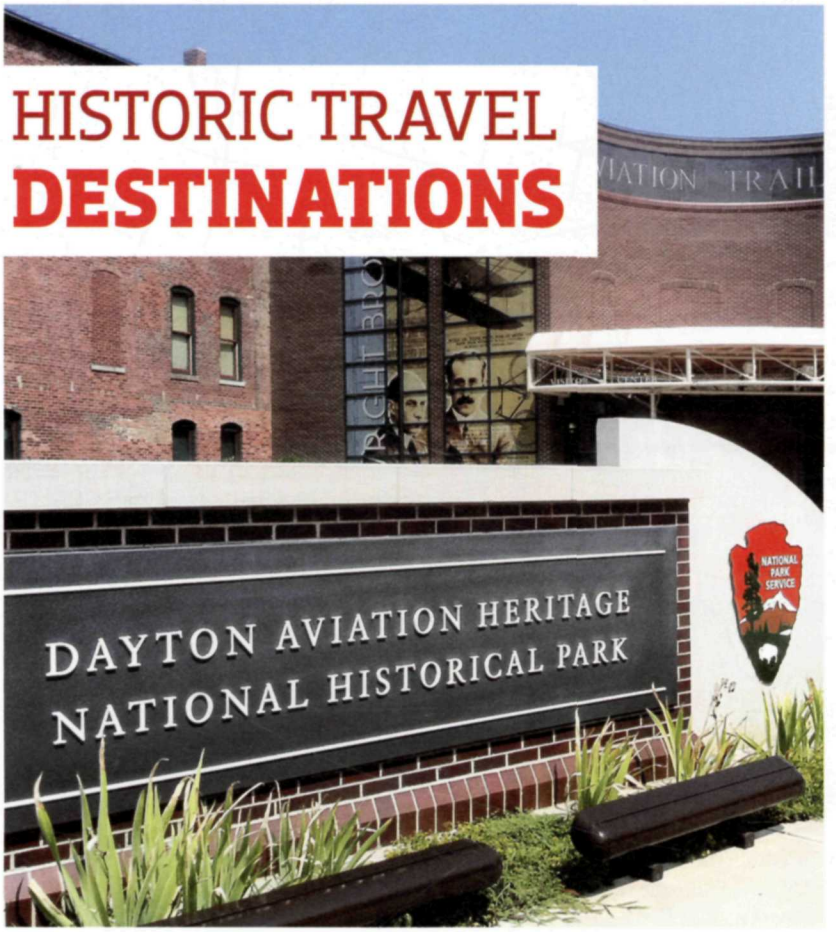
The data points York collected at Grand Canyon help park managers understand when and where lions cross busy roads, which allows them to regulate traffic to protect the cats. Shortly after York's death, the park hired wildlife biologist Brandon Holton to carry on the lion program. Holton expanded the study and continued trapping and collaring lions. He is currently working on publishing the research that York began.

Ten years later, York's dedication is still rubbing off on his colleagues. "Even now, when it's been a long day, I've been hiking hours on end and there's one more thing I can do, I'll think, 'What would Eric do?' And yup, he'd go do it," Sikich said.

"Eric's ashes were spread around the country in places he truly loved," his sister wrote. Several friends and co-workers spread some of his ashes in the Grand Canyon, and some were buried in a country cemetery visible from his family's Massachusetts farm. His tombstone is carved with the head of a mountain lion keeping watch. Below it are the words of John Muir: "In every walk with nature, one receives far more than he seeks."

EMILY MOUNT is a naturalist and photography instructor for Lindblad Expeditions/National Geographic and former park ranger at 10 national parks, including Grand Canyon. When she is not at sea, Emily is a freelance writer and photographer focused on environmental and social issues.

HISTORIC TRAVEL DESTINATIONS



Dayton Aviation Heritage National Historic Park
Courtesy Bev Rose

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Pennsylvania Memorial, Gettysburg National Military Park
Courtesy Destination Gettysburg

EXPLORE GETTYSBURG:
Beyond The Battlefield

A visit to Gettysburg, Pennsylvania, offers an array of experiences. The history alone can fill a long weekend; and enjoying the destination adds an experience for your own history books.

The Gettysburg National Military Park provides a lesson in the battle while giving a glimpse at Adams County's natural beauty. Preserved by the National Park Service and the Gettysburg Foundation, the rolling hills, barns, farmhouses, orchards and fence lines mirrors much of the northern part of the county where the fruit-belt provides a picturesque drive to antiques, wineries, farm markets and country inns.

A variety of tour options provide engagement for all visitors. Recreation enthusiasts will enjoy horseback or bicycle tours, while traditionalists can opt for a self-guided audio or iPad tour, bus tours or a Licensed Battlefield Guide who provides a personal tour in your vehicle. Unique experiences include carriage, Segway, scooter and coupe scoot tours. Include daily Ranger Programs starting April 7 for spring programs and June 9 for summer programs. Discover Living History weekends April through November, National Junior Ranger Day on April 21 and Doors Open Gettysburg on May 5.

Be sure to include time in town. From walking tours to museums, house tours to galleries, there are dozens of experiences that share the story of the soldiers, civilians and the President. Include the story President Dwight D. Eisenhower, interpreted at his home and farm on the edge of the battlefield which is now a National Historic Site open daily.

A visit to Gettysburg offers a step back in time while still providing for all of today's travelers' needs. We invite you to immerse yourself in our history and get acquainted with our culture. You will be sure to return.

A Wild Horse in Theodore Roosevelt National Park
Courtesy Chuck Haney

CELEBRATE THEODORE ROOSEVELT NATIONAL PARK'S 40TH ANNIVERSARY IN 2018
There's Never Been a Better Time For an Adventure

Theodore Roosevelt's time in North Dakota inspired many things, including the National Park Service and the park in the Badlands that bears his name. Today, you can follow in his footsteps and find Legendary adventures in Theodore Roosevelt National Park.

Roosevelt's journey included boat thieves, cattle drives and big game, and outdoor enthusiasts can still find adventures that await them within the park today.

Families can explore the visitor centers at Painted Canyon on I-94 or the South Unit park entrance adjacent to the Maltese Cross Cabin in Medora. The park offers up a 36-mile loop drive winding its way through wind-carved buttes, past herds of bison and wild horses, prairie dog towns and scenic vistas.

Adventure seekers can explore the epic Maah Daah Hey Trail which weaves a 144-mile, single-track trail connecting the North and South units of the park. This nationally recognized mountain biking and hiking trail passes by the remote Elkhorn Ranch, the former site of Roosevelt's working ranch. Outdoor enthusiasts can marvel in the scenic wonders on the trail and relax by a campfire under a canopy of flickering stars.

Head up to the North Unit located south of Watford City and enjoy a scenic 14-mile drive through deep canyons and onto the grasslands for a panoramic view of the Little Missouri River.

The park's beauty and magic can't be beat, and the time to visit has never been better as it celebrates its 40th anniversary in 2018.

Fort Union Trading Post National Historic Site
Courtesy Williston CVB/Jesse Nelson

WILLISTON, NORTH DAKOTA
Rich With Legendary Vistas and Living History

Imagine the 19th Century springing to life as you and your family watch a blacksmith molding metal or a fur trader preparing a beaver hide. This kind of experience is just one of many reasons Williston, North Dakota is a great place for a vacation.

The Williston area is rich with legendary vistas and living history, like the annual Rendezvous at Fort Union Trading Post National Historic Site, built near the Confluence of the Missouri and Yellowstone rivers in 1828. This fort was the center of trade with the Assiniboine, Cree, Crow, Blackfeet, Ojibwa, Hidatsa, Mandan and Arikara Indians.

Near Fort Union, visitors enjoy re-enactments at Fort Buford State Historic Site, remembered as the place where Sitting Bull surrendered his rifle in 1881. A mile away, the Missouri-Yellowstone Confluence Interpretive Center offers the same magnificent views enjoyed by the Corps of Discovery. East of Williston at Lewis and Clark State Park, visitors walk interpretive trails showing what the famous explorers saw.

Theodore Roosevelt National Park, south of Williston, is one of the area's top attractions. In 1883, Theodore Roosevelt came to live the life of a cowboy. Today, the colorful North Dakota Badlands provide the scenic backdrop to the park honoring our 26th President. It is home to bison, mule deer, white-tailed deer, bighorn sheep, prairie dogs and over 180 species of songbirds.

The Williston area also offers new and affordable hotels, restaurants and shops, plus North Dakota's largest indoor rec center and world-class golf on the hills overlooking Lake Sakakawea.

HAVING FUN IS SERIOUS BUSINESS.
AND BUSINESS IS BOOMING.

The Williston area is the place to discover the blend of our National Park Service and North Dakota's western heritage. Set your imagination free at Fort Union Trading Post National Historic Site, where the American Fur Trading company established decades of peaceful trading with northern plains tribes. Hike, bike, camp or simply take a scenic drive in the north unit of Theodore Roosevelt National Park, where our 26th president for whom it is named fell in love with the stark and beautiful badlands of North Dakota.

Visit in comfort! Williston offers new hotels, restaurants, shopping, top-ranked golf and one of the largest indoor recreation centers in the nation.

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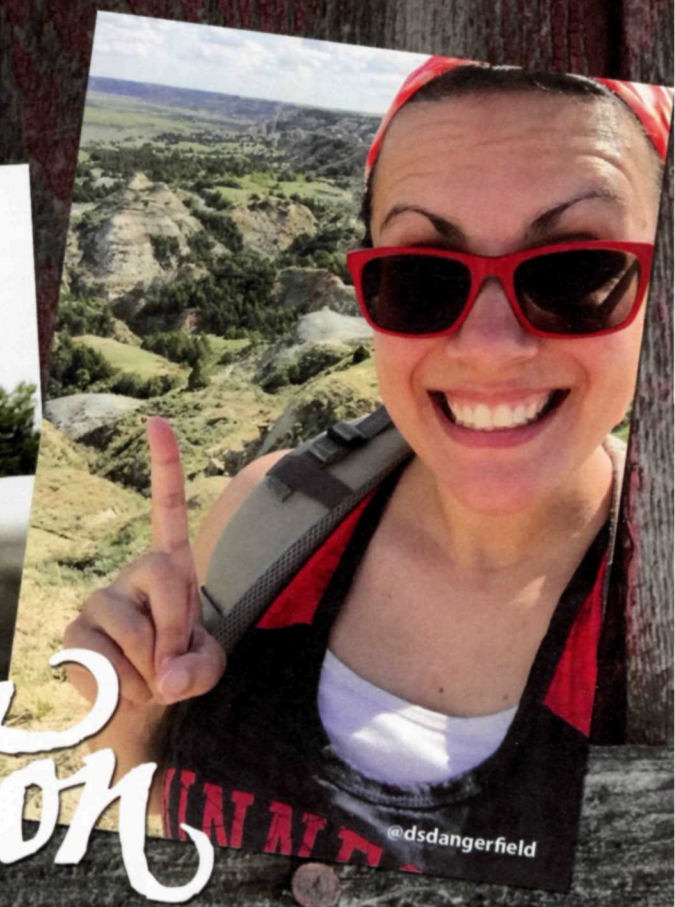

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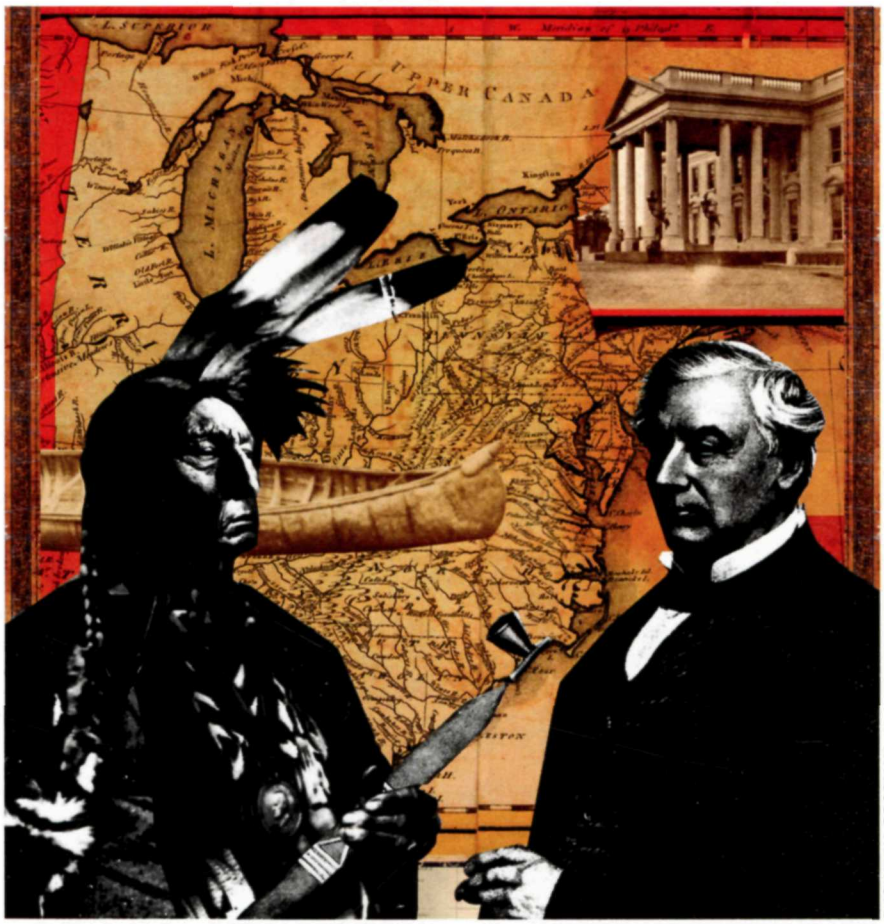
Josh Duhamel

FROM THE TOP

North Dakota native Josh Duhamel has something in common with President Theodore Roosevelt: a love for the North Dakota Badlands. This stunning place inspired Roosevelt to establish many of our first national parks, national monuments and protected lands. This year, come celebrate the 40th anniversary of beautiful Theodore Roosevelt National Park — and visit us online to find more of Josh's favorite places.

LegendaryND.com



© JOHANNA GOODMAN

AN ARTISTIC rendering of Chief Buffalo presenting U.S. President Millard Fillmore with a ceremonial pipe made especially for the occasion. (Few reliable images of the Ojibwe chief exist today.)

The Indian Chief and the President

In 1852, a 93-year-old Ojibwe chief traveled to Washington to stop the president from forcing his people off their ancestral lands.

THE MORNING WAS FRAUGHT WITH ANTICIPATION. Chief Buffalo waited in his Washington, D.C., hotel, while his trusted adviser and translator, Benjamin Armstrong, walked along several downtown blocks with a heavy mind. Armstrong's plan was to secure an interview with the commissioner of Indian affairs.

A couple of years earlier, in 1850, the U.S. president had issued an order to relocate the Ojibwe from the Lake Superior region. So Chief Buffalo, his deputy, Oshoga, four other Ojibwe men and Armstrong, a native Alabaman who had learned their language and married into Buffalo's family, had traveled to the nation's capital to make their case. Along the way, federal agents had attempted to stop them, and Armstrong was nervous when he showed up at the Interior Department.

It wasn't long before his fears materialized. "I want you to take your Indians away on the next train west, as they have come here without permission," the commissioner said, according to the account Armstrong published decades later, "and I do not want to see or hear of your Indians again."

"I walked out more discouraged than ever and could not imagine what next I could do," Armstrong wrote. The Ojibwe had never gone to war with the United States, but it was likely that they would if Buffalo's diplomatic effort failed.

When the Ojibwe — also known by the anglicized name "Chippewa" — signed treaties with the U.S. in 1837 and 1842, they believed they had agreed only to let white settlers mine copper and cut timber for their houses. They thought they would be able to stay on their lands and continue their way of life as long as they were peaceful neighbors. So it came as a shock to them when President Zachary Taylor issued an order revoking their hunting and gathering rights and requiring them to move to "unceded" lands. "That was truly their home," said Damon Panek, who is Ojibwe and works as a ranger at Apostle Islands National Lakeshore in Wisconsin, which was once

part of the Ojibwe's territory. "That's where their ancestors had been and where they expected their future to be."

"We were able to survive. That's a victory."

The event later known as the Sandy Lake Tragedy reinforced the Ojibwe's will to stake their ground. Under the terms of the treaties, the U.S. had agreed to make small annual payments to the Ojibwe, but late in 1850, the government moved the payment location from Madeline Island, one of the Apostle Islands and a spiritual and commercial center for the Ojibwe, to Sandy Lake in Minnesota. Thousands of Ojibwe made the trip, but when they arrived, the cash and goods were not there. They waited for weeks but only received a small portion of their due. By the time the Ojibwe returned home, some 400 people had died from the cold, starvation or dysentery. Many survivors called for revenge, but Buffalo, by then around 93, convinced his people to hold off until he made one last attempt to secure a peaceful solution.

On April 5, 1852, Buffalo and his six companions loaded their 24-foot birch canoe with provisions of sugar, crackers and coffee. They also packed a ceremonial pipe made specifically for the occasion. "The reason they took that pipe was for spiritual guidance," said Marvin DeFoe, a tribal historic preservation officer with the Red Cliff Band of Lake Superior Chippewa. "Our environment went on that trip through that pipe."

Along the south shore of Lake Superior, the group stopped to collect signatures for a petition they planned to present to Millard Fillmore, who had become president after Taylor's sudden death. The support was overwhelming, and several local notables, who claimed to know the president personally, signed the petition.

After taking two steamboats and one train, Buffalo and his entourage arrived in New York with a single 10-cent silver coin left. To pay their hotel bill and continue their trip, they had to turn to New Yorkers eager to see Native Americans in the flesh. "They kind of exhibited themselves," said Travis Armstrong, a descendant of Buffalo's translator and a member of the Leech Lake Band of Ojibwe.

Finally, two and a half months after setting out, the group arrived in Washington. The next day, Armstrong made his unsuccessful appeal at the Interior Department. Dejected, he returned to his hotel to find a surprising scene in the lobby. A crowd had formed around Buffalo, and by chance, a New York senator and several members of the president's Cabinet were among the curious onlookers. Upon hearing of the group's predicament, the politicians promised to secure an interview with the president for them. Within 24 hours, Buffalo was offering his lit pipe to President Fillmore. The president took a few draws before listening to Buffalo and Oshoga explain the reason for their visit. Fillmore did, in fact, recognize some of the names on the petition that Armstrong handed to him.

Two days later, Fillmore summoned the Ojibwe delegation back to the White House and told them he would rescind the removal order and move the payment of annuities back to Madeline Island.

"When they went back, they traveled through a number of Ojibwe villages, and there was so much joy," said Patty Loew, the author of several books about Wisconsin's native people and a member of the Bad River Band of Lake Superior Ojibwe.

The Ojibwe subsequently ceded much of their land in yet another treaty in 1854. But thanks in part to Buffalo, one of the main negotiators, the agreement established several reservations in their homeland, including Bad River and Red Cliff on the shores of Lake Superior, and they retained their rights to fish and hunt throughout the region. DeFoe said his ancestors made the best deal they could. "We were able to survive," he said. "That's a victory."

Buffalo died the following year at the age of 96 and is buried on Madeline Island. Armstrong built a cabin on Oak Island, now part of Apostle Islands National Lakeshore, and he continued to act as a translator for the Ojibwe, including on an 1862 trip to meet Abraham Lincoln.

After the meeting with Fillmore, Buffalo entrusted Armstrong with the pipe, but as time passed, the Ojibwe lost track of the artifact. Then a few years ago, a descendant of Armstrong contacted people at Red Cliff and handed over the pipe, DeFoe said. Nowadays, it comes out only for special ceremonies.

"We hold that pipe very sacred," DeFoe said. "It's kept in a safe place." **NP**

NICOLAS BRULLIARD is associate editor of National Parks magazine.

INGVALD WALTER STEVENS in what is now Voyageurs National Park, circa 1930. He lived on an island there for 47 years.

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