THE MAGAZINE OF THE NATIONAL PARKS CONSERVATION ASSOCIATION SPRING 2010
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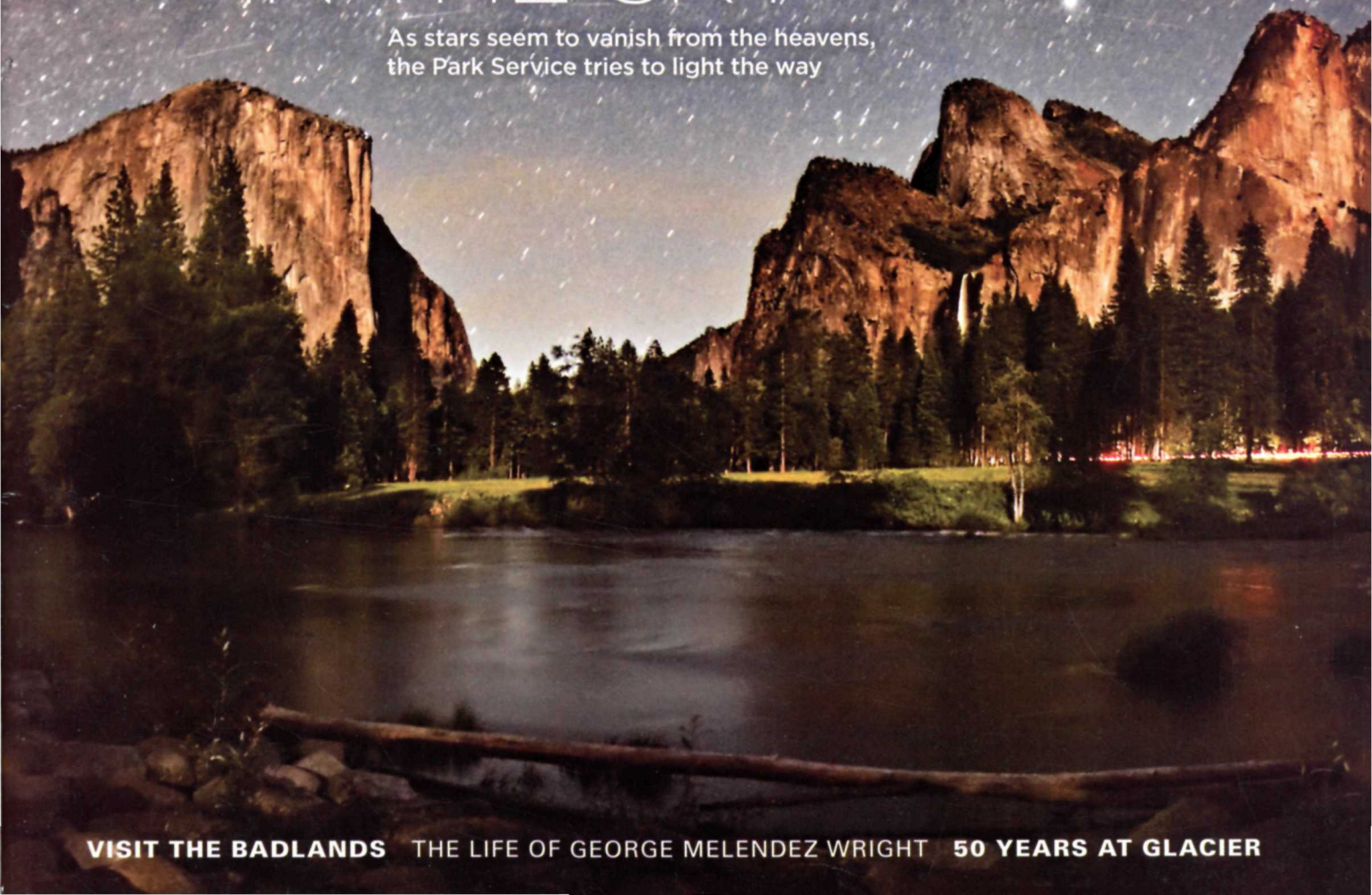
National PARKS

DIAMONDS IN THE SKY

As stars seem to vanish from the heavens, the Park Service tries to light the way



VISIT THE BADLANDS THE LIFE OF GEORGE MELENDEZ WRIGHT **50 YEARS AT GLACIER**

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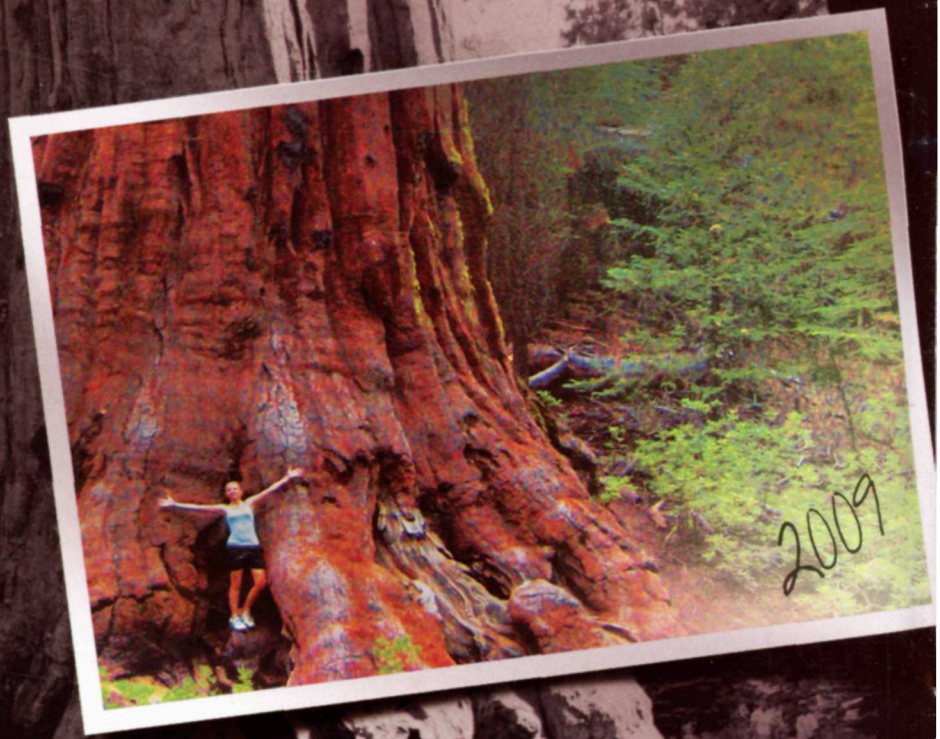

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1950
Sequoia National Park

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NATURAL BRIDGES NATIONAL MONUMENT, Utah.

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COVER PHOTO:
YOSEMITE VALLEY at night.

© TYLER NORDGREN

National Parks
SPRING 2010
Vol. 84 No. 2

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FEATURES

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DEPARTMENTS

SPRING 2010
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CANADA AND THE UNITED STATES have vowed to protect the headwaters that flow into Glacier National Park, Montana.

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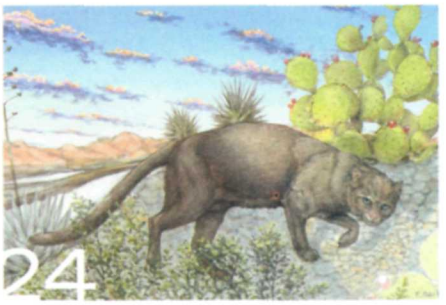

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CLOCKWISE FROM TOP: © IAN SHIVE; © LIBRARY OF CONGRESS; © EVAN BARBOUR; © BILL LEAMAN

ON THE WEB

Turn to page 10 to meet Ranger Doug Follett, then visit www.npca.org/magazine to watch a short video featuring the man and the park he's called home for more than 50 years.

© CHRIS PETERSON

Perseverance Rewarded


© IAN SHIVE

Even though I've visited dozens of national parks, Glacier National Park in northwestern Montana remains one of my favorites. The mountains that soar to dizzying heights, the crystal clear water that offers a temptation for a drink along the trail, and a collection of carnivores that have earned the park the title of North America's Serengeti offer an experience of the wild heart of America that some would argue is unsurpassed in the lower 48.

Yet for years, mineral and energy companies have proposed mining an area right outside the park that lies just north of the the Canadain border.

After 35 years of advocacy by NPCA and our partners, we received the astounding and welcome news in February that Montana Governor Brian Schweitzer and British Columbia Premier Gordon Campbell signed a historic agreement that promises to protect the Transboundary Flathead River Valley from all types of mining and oil and gas extraction, forever.

This great news brings an end to an era of potentially environmentally devastating proposals for strip mining and coal-bed methane drilling in this remarkable area. And to ensure that these threats do not recur on either side of the border, Sens. Max Baucus (D-MT) and Jon Tester (D-MT) plan to introduce legislation in Congress that would end all leasing for oil and gas mining on the American side of the Flathead's North Fork outside Glacier National Park (see story, page 9)

NPCA has worked with conservation advocates, First Nations leaders, business groups and community members on both sides of the border to stop mining in the Flathead Valley. In fact, it was national park supporters who pushed this effort across the finish line by recently sending more than 50,000 letters and e-mails to leaders in Canada and the United States asking for change.

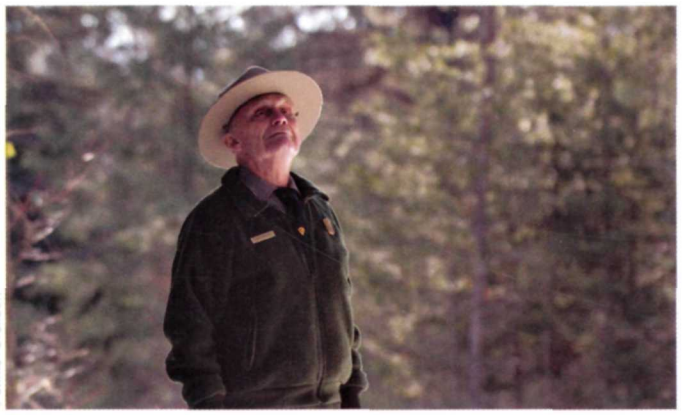
This glorious resolution demonstrates the importance of perseverance in our collective work to protect the parks for future generations. We know from watching the beautiful film produced by Ken Burns and Dayton Duncan that national parks have faced challenges such as these ever since their inception more than 100 years ago. And it is only through the work of organizations like ours and our allies, and with the support of all of our members that continued protection is possible. If we learned nothing else from Burns' film, *The National Parks: America's Best Idea*, it is that protecting our national parks forever takes perseverance.

Our national parks and monuments will outlast all of us as individuals, yet ensuring their protection is one of the greatest gifts we can give our children. This year, NPCA celebrates its 91st anniversary, which means that we've spent nearly a third of our existence working on this one, ongoing issue—one that should finally be put to rest.

For your perseverance and your support, we thank you for this incredible victory. Together, we are making a difference for our national parks.

Thomas C. Kiernan

A True Calling



© CHRIS PETERSON

Ranger Doug Follet has seen a lot in his 50 years as a seasonal ranger at Glacier National Park.

When you work in a field that you truly love, the lines between your job and the rest of your life tend to get blurred. Doug Follett, who you'll meet on page 10, has spent 50 years as a seasonal ranger at Glacier National Park, hiking its peaks and valleys, writing poetry, and sharing those personal moments with a rapt audience in front of a campfire. I'd be willing to bet that he doesn't punch out at five o'clock every evening. This summer, Amy Leinbach Marquis—the magazine's associate editor—interrupted her personal vacation to several western parks to spend a couple of hours interviewing Doug at Glacier, and it turned out to be one of the highlights of her trip.

When the national parks are your subject matter, those kind of detours become occupational hazards. But you won't find us complaining. In my five years at NPCA, I've visited national parks on my own dime and found myself stumbling on article ideas. I've taken plenty of photos with my own pricy camera, and found more than a few of them in reports or brochures. I've subscribed to a dozen conservation and travel magazines, and found many of them making their way to my nightstand or coffee table at home, where I devour them on my own time.

Some people prefer to draw a line between their nine-to-five existence and their evenings and weekends. For the most part, I agree: You certainly won't find me in the office hunched over a keyboard on a Saturday. But if some of us cross that line once in a while, it's a sign that we consider our career more than just a job, and, perhaps, even a calling. And that's something to be proud of.

Scott Kirkwood
NPMAG@NPCA.ORG

National PARKS

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The Audit Bureau

National Parks Conservation Association®
Protecting Our National Parks for Future Generations®

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 national parks by identifying problems and generating support to resolve them.

WHAT WE STAND FOR

The mission of NPCA is to protect and enhance America's National Park System for present and future generations.

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.

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. Please sign up to receive Park Lines, our biweekly e-mail newsletter. Go to www.npca.org to sign up.

HOW TO DONATE

To donate, please visit www.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. *National Parks* magazine is among a member's chief benefits. Of the $25 membership dues, $6 covers a one-year subscription to the magazine.

HOW TO REACH US

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A P.O. BOX FULL OF LETTERS

We knew the article about WWII intelligence efforts at Fort Hunt, Virginia, would get some attention ["P.O. Box 1142," Winter], but we never could have predicted the overwhelming reader response that followed.

One reader, a native German who emigrated to the U.S. in 1994, offered to travel from California to Fort Hunt on his own dime and help record the dialogue of monitored German prisoner conversations as part of the park's future interpretation efforts. Other readers made plans to visit the Virginia park on their next vacation. Another man offered to share papers he'd discovered from his late father's work at Fort Hunt. World War II veterans wrote in to say that they, too, had been part of top-secret missions; one 92-year-old who worked in WWII intelligence was eager to reveal information that contributed to the successful end of the war, but hadn't yet received permission to do so.

Editors from military publications sent requests to reprint the article in hopes of drawing more Fort Hunt veterans out of the woodwork. We received a phone call from Tim Sullivan, who was involved with the capture and transportation of German prisoners of war, and was eager to talk to the Park Service. "He provided a very important piece of the story that we didn't already have," says Vincent Santucci, an interpretive ranger at Fort Hunt.

We're both thrilled and humbled by the stories that this article has helped uncover, and we're thankful to everyone who took the time to write in. Keep reading for a sampling of the letters we received.

—Editors

As a World War II buff I was fascinated by the story on P. O. Box 1142. It was a completely new page of history to me but obviously an important part of our intelligence efforts at the time. I have the privilege of interviewing veterans for the Library of Congress's Veterans History Project, so I am quite aware of how endangered these WWII veterans are and how important it is to get their stories before they are all gone. Thanks very much for this particular story and for helping protect our national parks.

MICHAEL B. NEAL
Loomis, CA

Thank you for publishing this fascinating article. I was born in Washington, D.C., in 1927 and grew up in nearby Virginia. We knew that we were privileged to be raised in the seat of the WWII action and are just now beginning to appreciate what that action was.

I am ex-U.S. Navy. A basic military security tenet is, "If you don't need to know, then you don't know." So the severe compartmenting rings true. Reading about WWII stories like Fort Hunt's is fascinating because so much propaganda was issued, and much of it was false. Now we know. Again, thank you. I will make it a point to visit the site next time I revisit my original home town.

HARRISON T. BRUNDAGE
Houston, TX

As Vice Chairman of the National Counter Intelligence Corps Association (NCICA), I am familiar with the Fort Hunt story. A few of our members went through training there after completing Counter Intelligence Corps training.

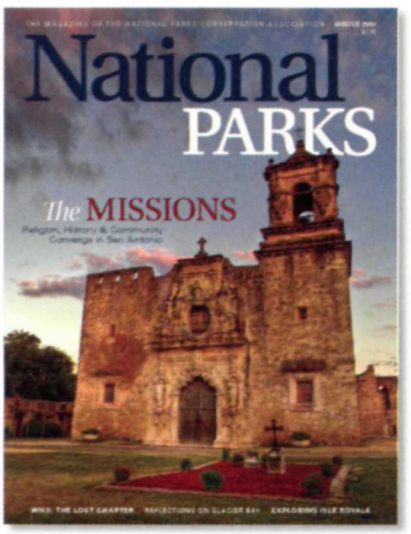
Fort Hunt was known as "Fort Hush Hush" according to one of our NCICA members who trained there. One of the major things accomplished was the preparation of packets to be sent to prisoner-of-war (POW) camps containing American soldiers. The humanitarian packets for POWs appeared to be seemingly harmless materials. Decks of cards were prepared that could be "peeled" off the backs and assembled into a maps to aid their escape. In another instance, a spare part for a secret radio was included.

Your article mentions Werner Von Braun. One of our members of WWII conducted polygraph exams on Von Braun and some of the other German rockets scientists. He is still alive and lives in the Cleveland, Ohio, area.

JIM CATE
Vice Chairman of the National Counter Intelligence Corps Association
Mount Juliet, TN

From the age of six, I grew up about a mile away from Fort Hunt, and used to play in and explore the abandoned fort and its myriad of small rooms and "tunnels." I was born in 1952, and in the late '50s and early '60s an inquisitive child could still explore areas of the fort where locks on the doors had been broken by vandals. I recall even finding artifacts deep inside (using a flashlight to explore), including German articles of clothing! Interestingly, even as a child, I knew about the purpose of the fort during WWII—that it had once housed German prisoners and was used for interrogation. How I knew I don't recall, but as I read the article, much came back to memory. My father worked in the Pentagon at the time, and had top-secret clearance for his entire career, so perhaps he had told me a little about its use after I returned home with tales of my adventures in the fort. I am glad the fort is finally getting the recognition for contributing to the end of WWII.

JOYCE HENRY
Williamsburg, VA



AN ISLAND SUMMER

Several years ago when I was camping alone by Feldtmann Lake in Isle Royale in early May, a male timber wolf visited my campsite. For five minutes, the two of us stared at each other, 12 feet apart, separated only by air. It was one of the most thrilling moments of my life.

MIKE SMITH
Tucson, AZ

The Winter issue arrived in the mail today, and to my delight, it contained an article about Isle Royale! Thank you, Jeff Rennicke, for resurrecting some memories for me. Back in 1969, I spent an entire blessed summer there as the field assistant for one of my biology professors. We stayed in the research camp near Rock Harbor Lodge, and six mornings a week I packed a lunch and hiked the two-and-a-half miles out to Scoville Point, which is right between the "G" and the "H" in Jim Brandenburg's aerial photo.

As a native northwesterner, I found the island's topography to be, well, unimpressive. But the island has a way of sneaking off with your soul when you aren't looking. There are, of course, the loons, everywhere. And yes, the white-throated sparrows, singing their little heads off. And the birch trees, and the beavers, and the black ducks, and the moose. I picked up greenstones and a piece of native copper. I picked blueberries on Mt. Desor. And I saw the seiche in Tobin Creek, when the tide in Lake Superior made the creek run backward.

I never saw a wolf, but on the night of a full moon in July, I heard one—the memory still gives me wonderful chills. And there was a fox who lived around the lodge, who we called "Gus." One magical day he bowed, dog-fashion, and invited me to play. Thank you for bringing all of that—and more—back again.

ELLEN CAMERON
Milwaukie, OR

HISTORY REPEATING

Reading your article "Overkill" [Winter] sadly reminded me that there has been no change in Alaska's policy of shooting wolves from aircraft since Governor Sarah Palin left office. Her successor, Governor Sean Parnell, continues this abhorrent practice. One hopes that Interior Secretary Ken Salazar will see the problems with this, and effect legislation that will protect wolves from this dastardly process.

RAYMOND D. DUNN JR.
Fairhaven, MA

The article, "Overkill," upset me. Haven't we learned anything? Aldo Leopold found years ago that natural predators such as wolves led to more and healthier animals for hunting. They also helped renew vegetation growth that animals eat. I can't believe Alaska's leaders could be so ignorant.

SHIRL BRAINARD
Albuquerque, NM

A LOOK BACK

Retired National Park Service Superintendent Larry Rose alerted me to Kevin Grange's excellent story called "The Art of Mountain Watching" [Fall '09]. A truckload of nostalgia came over me as I read it all; Grange's article could be a recruiting tool—if only there were enough lookouts to fill the response. At 80 years old, I feel honored to be part of the history of Copper Ridge in Washington's North Cascades, having manned the lookout in 1947, 1948, and 1949. The station was then a U.S. Forest Service lookout called Copper Mountain, with Church Mountain and Winchester Mountain lookouts nearby. Thank you, Kevin, for the pleasant recall.

DORAL MARTIN
Sedro Woolley, WA

CORRECTIONS:

Due to an error introduced during the illustration process, "Sizing Them Up" in the Winter issue states that there are 16,461,143 linear feet of trails in the National Park System; the correct number is 76,461,143 linear feet. The estimate of time to hike the trails—1 year and 8 months—was accurate.

An item in "P.O. Box 1142" may have misled some readers: Postwar detainee German general Reinhard Gehlen became chief of the United States Russian counterintelligence effort during the Cold War; he did not work for the Soviets after WWII.

Also, the photo of gray bats on page 9 should have been credited to Littlehales, Bates/Animals Animals-Earth Scenes. We regret the errors.

Send letters to National Parks Magazine, 1300 19th Street, NW #300, Washington, DC 20036
or e-mail npmag@npca.org. Include your name, city, and state.
Published letters may be edited for length and clarity.

LOST AND FOUND

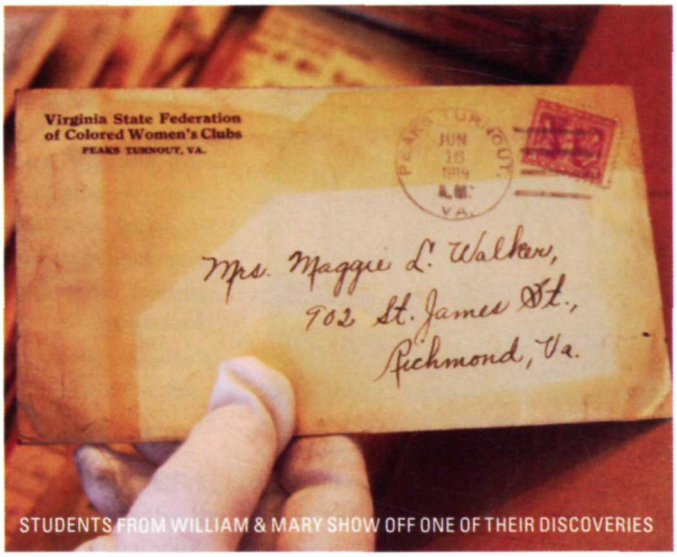
College students make a stunning discovery that benefits Maggie Walker National Historic Site.

Last spring, a group of freshman involved in local community projects through the College of William & Mary set out to explore an abandoned building in downtown Richmond, Virginia, with hopes of unearthing something significant. They walked through rooms of broken glass, stepped over bird skeletons, and climbed up steep, metal stairs to reach an attic that no one had explored in decades. Students knew the building once acted as the national headquarters of the Independent Order of Saint Luke, an organization dedicated to improving the lives of African Americans in the early 1900s, when the nation was struggling with racial segregation. But they had no idea what treasures it might hold.

So they began digging through boxes. And to their surprise, they discovered a collection of original documents that not only detailed the Independent Order's business operations, but shed light on the woman at the helm: Maggie L. Walker, an African American who went from being a laundress' daughter to a wealthy bank president and empowered the black community in incredible ways. These discoveries add a new dimension to the story being told at Maggie L. Walker National Historic Site nearby.

The students uncovered hundreds of insurance cards from Walker's African-American clients—rare documents, considering many insurance companies refused to provide coverage to African Americans at that time. Students also found Walker's NAACP membership card, advertisements for "colored hotels," and letters from civil-rights activists.

"These documents help us understand how African Americans coped during apartheid," says Heather Huyck, a former Park Service employee and the professor overseeing the project. "They give us a better understanding of a community under siege, but whose people were there for each other."



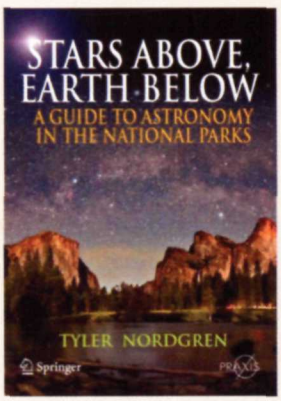
STUDENTS FROM WILLIAM & MARY SHOW OFF ONE OF THEIR DISCOVERIES

© JOE MCCLAIN / COLLEGE OF WILLIAM & MARY

Despite decades of neglect, the building in itself was an incredible historical find. Not only did it house an insurance company and a bank; it also included a department store where black women were allowed to try on clothing—something they were often prohibited from doing in places where white women shopped.

Students are interviewing people who were involved with the Independent Order and helped ensure that Walker's legacy remained strong after her death in 1934. Those oral histories will eventually become part of the interpretation at Maggie Walker National Historic Site. The park will also display a sampling of documents for the public on April 17. And Huyck is working closely with the owner of the historic building to determine a new use for the space; she would love nothing more than to see it incorporated into the National Park System someday. "The building itself is a fascinating historic document," she says. "This was Maggie Walker's battleground." *—Amy Leinbach Marquis*

EYE-OPENER



Anyone who's ever gazed at a night sky blanketed with stars can dive even deeper into the experience with Tyler Nordgren's new book, **STARS ABOVE, EARTH BELOW: A GUIDE TO ASTRONOMY IN THE NATIONAL PARKS**. The author, an astronomer and physics professor, spent a year traveling to 12 parks across the country, where he observed night skies, interviewed park experts, and pondered both ancient and modern connections between humans and the universe. Nordgren's stunning night-sky photographs and star charts help make sense of a complex science, and each chapter ends with stargazing activities for any park visitor. The paperback book dives into the connections between national park landscapes and planets in our solar system: Ocean tides in Maine's Acadia National Park and calderas in Hawaii Volcanoes National Park, for example, actually reflect similar geological processes on Jupiter. In a time when few Americans can see the Milky Way from their homes (read more on page 38), Nordgren's book is a welcome reminder that we're connected to something bigger than our immediate surroundings (Springer Praxis Books, $29.95, 200 pages, Spring 2010).

AT LONG LAST

Permanent protections for Glacier's headwaters

This February, as Vancouver bustled with Olympic athletes chasing the gold, another remarkable victory was shaping up in the quiet, remote Flathead River Valley to the east. It began when British Columbia's government announced a permanent ban on mining and drilling in Canada's Flathead River Valley; one week later, Montana Governor Brian Schweitzer (D) promised the same level of protection south of the border.

HIDDEN LAKE TRAIL, GLACIER NATIONAL PARK

© IAN SHIVE

It's a big win for Waterton-Glacier International Peace Park, designated a World Heritage Site in 1995, and it brings an end to an era of environmentally catastrophic proposals for projects like strip mining and coal-bed methane drilling. To make sure similar threats don't creep back in, U.S. Sens. Max Baucus (D-MT) and Jon Tester (D-MT) are introducing legislation in Congress that would end all leasing for oil and gas mining in the Flathead's North Fork outside Glacier National Park, and begin the process of retiring old leases that are currently suspended and undeveloped. The decision allows the countries to focus on protecting the wildlife corridor that traces the spine of the Rockies from Waterton-Glacier to Canada's Banff, Yoho, and Jasper National Parks. Canadian officials will also discuss the possibility of incorporating the lower third of the Flathead River into the Canadian side of the peace park—a move favored by many British Columbia residents.

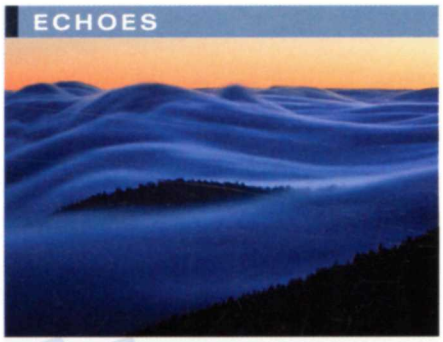
Conservation efforts in the Flathead date back more than 35 years, when NPCA joined with First Nations, business groups, and community leaders on both sides of the border to block a series of proposed open-pit, mountain-removal coal mines in the Flathead Valley (see "Moving Mountains," Summer 2008).

The recent pledge is a great start to Glacier's second century; the park was created 100 years ago this spring. "We can't think of a better birthday present for Glacier National Park," says Will Hammerquist, NPCA's Glacier program manager.

–Amy Leinbach Marquis

8 **COAL PLANTS** that won't be constructed, thanks to the NPCA staff and partners who engaged activists, filed lawsuits, and worked closely with state and federal agencies and political representatives to raise awareness about the risks of introducing new sources of pollution near national parks. Altogether, the plants would have produced 65 million tons of carbon dioxide (equivalent to annual emissions from about 130,000 cars), 38,563 tons of sulfur dioxide, 28,158 tons of nitrogen oxide, and 2,345 pounds of mercury every year for about 50 years. Nine states benefited, as did the icon parks within their borders—from Great Smoky Mountains National Park in Tennessee to Glacier National Park in Montana.

ECHOES



© IAN PLANT

This is a huge event in the history of this park.

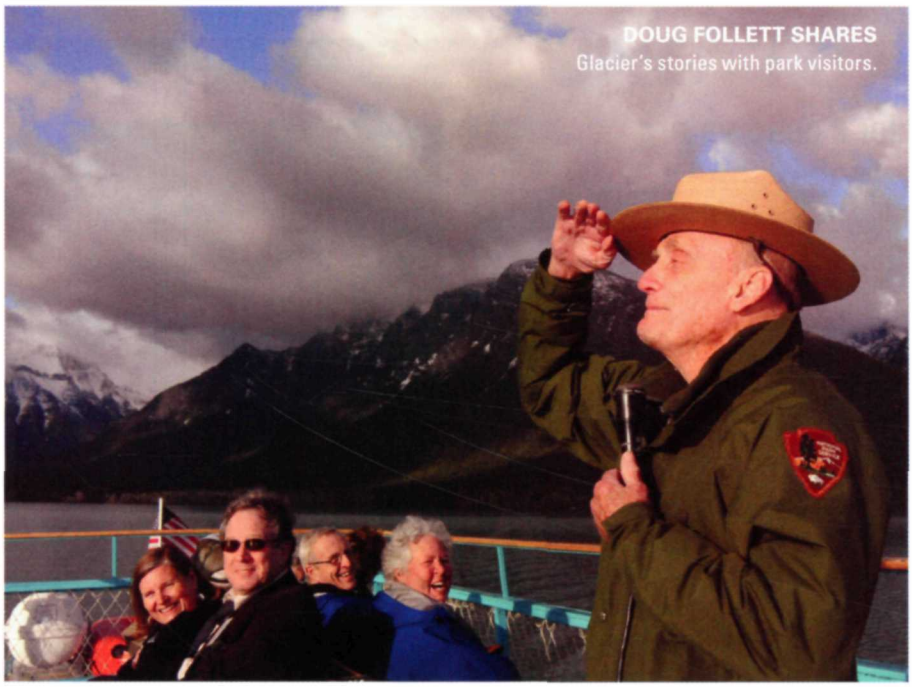
Don Barger, senior director of NPCA's Southeast regional office, quoted in the Knoxville News Sentinel *on a $52-million settlement to be paid to Swain County in lieu of constructing the North Shore Road, which would have cut a 30-mile gash through Great Smoky Mountains National Park (above) at a cost of $600 million. The Park Service had promised to build the road in 1943 after the Tennessee Valley Authority erected a dam that cut off the region, but rising construction costs and environmental concerns made the project untenable.*

There's still work to be done here, but I'm not going to lie to you, I'm a pretty happy guy right now.

Will Hammerquist, program manager in NPCA's Glacier field office, quoted by Greenwire, in response to British Columbia's decision to prohibit mining and energy exploration in the headwaters of the Flathead River, north of the national park. Facing pressure from conservation groups including NPCA as well as the U.S. Congress and the United Nations, the province scuttled plans that would have posed a serious threat to rivers and streams on both sides of U.S-Canadian border (see article, left).

It's a major victory for everyone who cares about Joshua Tree.

Mike Cipra, program manager in NPCA's California Desert field office, quoted by the Los Angeles Times, *regarding a ruling that stalls plans to create the country's biggest landfill adjacent to the national park. Flaws in the appraisal process and environmental impact assessments have put the project on hold.*



DOUG FOLLETT SHARES
Glacier's stories with park visitors.

© CHRIS PETERSON

Q&A

THE VOICE OF GLACIER

Ranger Doug Follett reflects on 50 years at Glacier National Park.

Doug Follett is the kind of guy people like to be around. He's charming. Witty. Funny. Kind. He knows history, loves nature, and writes poetry. His storytelling carries all the excitement of an old Western movie and the warmth of a flickering bonfire. In Glacier National Park—a place notorious for moody weather—Follett is a constant beam of sunshine.

At 84 years old, "Ranger Doug" is one of the oldest and longest-serving employees in the National Park Service: This year marks his 50th anniversary as a seasonal interpretive ranger at Glacier. His career began in the summer of 1942, when he fought blister rust pine infections in the park by removing gooseberry bushes; in 1961, he spent the first of many summers as a seasonal ranger, returning each fall to Columbia Falls High School where he taught history for 35 years.

But his experiences in Glacier began long before he was of working age. In 1927, when Follett was just an infant, his father took a job with the Great Northern Railroad and relocated his family from Fernie, British Columbia, to Whitefish, Montana. Throughout his childhood, Follett immersed himself in the mountains surrounding his home—but it was the people, not the landscapes, that left the biggest impression. Blackfeet Indian culture was alive and strong, and Follett developed an intense respect and fascination for the tribe's history and way of life. Often, he yearned to be one of them—a passion that fueled his teachings at Columbia Falls High School and on ranger-led tours in the park.

In recent years, Follett has become somewhat of a celebrity, gracing the front page of local papers and leading Whitefish's 2010 winter parade as Grand Marshal. He and his wife, parents of four daughters, live at the edge of a lake in Whitefish. Last September, National Parks' *Associate Editor Amy Leinbach Marquis spent a morning with him in Glacier, as he shared some of his fondest memories from a lifetime dedicated to a national park.*

Q: Your connection to Glacier goes back years before you ever started your first job here. Talk about that.

A: When I was a year old [in 1927], we moved to East Glacier where my dad was strapping automobiles onto railroad flatcars to send over Marias Pass, because there was no highway at that time. While he was earning money to put milk in my bottle, my mother and I hob-nobbed with the high society in the big East Glacier hotel, now the Glacier Park Lodge, where just peeking in the door cost more money than we made all summer. Visitors would come up and say, "How long are you staying?" And my mother would respond, "We are here for the entire season"—and then make sure they didn't follow us out behind the Indian tipis to that little cabin we really lived in.

When we weren't doing that, we were down at the Indian powwows at night, where the tipis were pitched and the bonfires blazed, and the Indians whose shadows flickered across those tipis had not long before been on the warpath—the Blackfeet were the last of the plains tribes to be subjugated by the Army. The powwows were held to initiate the important people who came to stay at the Glacier Park Lodge. My mother often spoke about the Indian who got up there with an interpreter and gave a long, interesting speech about the history of the Blackfeet. When it was over and the interpreter left, the Indian said, "I want to thank you, ladies and gentlemen, for your kind attention this evening. As a Harvard graduate, I did want you to know that I speak English." Isn't that neat?

Incidentally, the Glacier Park Lodge is where I learned to walk. My mother said she would aim me down the long hallway, and I'd take off with momentum. When

she heard the crash she would come down and pick me up, turn me, and aim me the other way. She also said that in that hotel, the old timers—the frontier people—were still around. We would all go down to the depot and meet the trains, with the Indians in white buckskin from head to toe and their headdresses dragging on the platform. While we were waiting, they would carry me up and down the platform, moccasins and all, gently bouncing me up and down, until the train whistled. Then they would come back, lay me in the buggy, and go meet the train. Just imagine what it was like for those tourists from the East to get off a train in Glacier Park to see these Blackfeet Indians.

One time two ladies from back East came over and said to my mother, "Little girl, you should not let those people handle your child." And my mother said, "Why?" And they said, "Because they might steal him." And my mother said, "If you look around, you will see that they have plenty of their own kids—and they're all better looking than mine."

She denied having said the last part. But we had no concern about the Indians—we lived with them. They were on the fringe of our lives and we were on the fringe of theirs, and the Indians and the old frontier people like us were just fading into the past. I've always thought how unique it was to have been born into a world where I got to see all of those people. Some of my cousins were the last of the real, old-time trappers who went off into the mountains for days at a time, on snowshoes. It was the end of an era, but I got to tag along, and I feel pretty fortunate for that.

Q: What's changed since then?

A: Interpretation hasn't really changed, and that's a good thing. I'm a believer in people-to-people, and not people-to-machines, if that's at all possible. Dealing with the public hasn't changed. There are more of them, even in relation to 1961, which was no frontier.

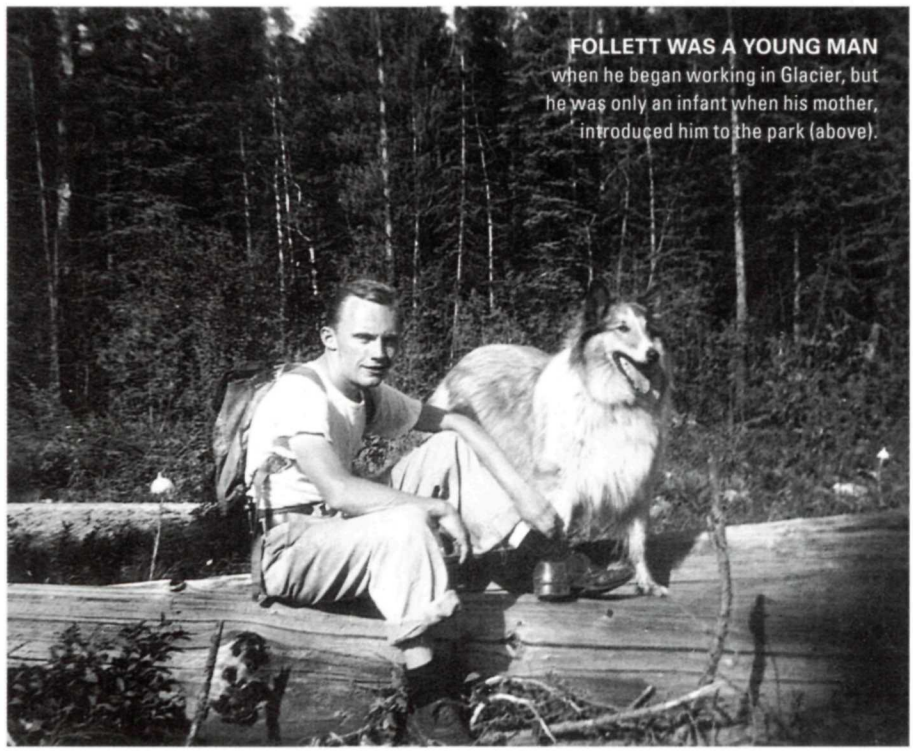
But there have been other changes. I made 100 trips to Sperry Glacier—one of the largest glaciers—in a 20- to 25-year period starting in 1961. The glacier was 300 feet thick and 300 acres large, roughly speaking, and we went out there with ropes and ice axes like a sherpa expedition heading for Everest, and risked our lives to peek into the crevasse, which may be gone now.

Then one spring I noticed six inches of red rock at the end of that Glacier snowfield. And I said to myself, "Next year that will be covered up, because Old Mother Nature knows that if she doesn't put more snow on top, we won't have glaciers, and our sign at the entrance says we're a glacier park."

And I literally expected it to be covered up the next year. But instead of six inches of red rock, there were six feet. And I said, "That will be covered up." Then there were 16 feet the next year. I said, "That will be covered up." Then 60 feet, then 160, then a quarter-mile and a half-mile, and suddenly you had to walk over all this rock just to get to the glacier.

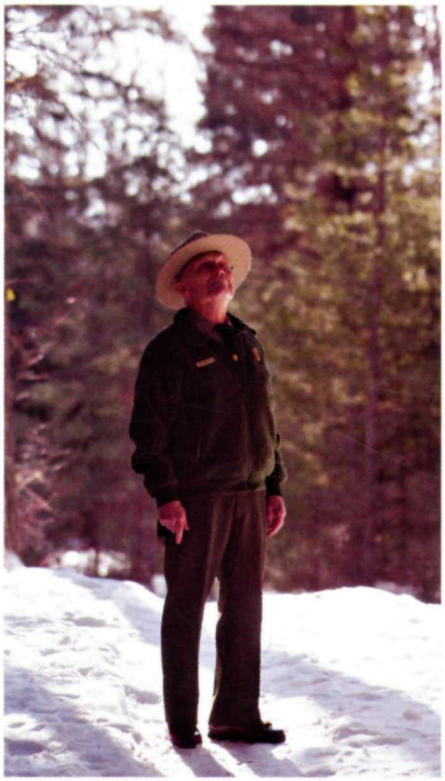
I was in denial of what was happening for 20 years. Al Gore wasn't there to say, "Look dummy, the glacier's not coming back for a while. Climate change really is happening." I know a lot of us men are slow learners—but isn't that something? To be so certain that the world we had always known was going to stay that way, and that the glacier was coming back? I walked with that glacier hand-in-hand for half a mile as it melted back, yet I was in denial every day.

So what do I tell people today? We are in a world that is in constant change. What was yesterday is not today and will not be



FOLLETT WAS A YOUNG MAN when he began working in Glacier, but he was only an infant when his mother, introduced him to the park (above).

PHOTOS COURTESY OF DOUG FOLLETT



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FOLLETT SOAKS IN a winter landscape at Glacier National Park.

tomorrow. When I was walking on Sperry Glacier for 20 years, it was melting the whole time, but it was just getting thinner, and I couldn't tell until it got so thin that the edges came in. It's always been happening, and we are the first generation to be able to see major geological climate changes and not be able to deny it.

Of course, we do get people who argue with us and tell us this is nothing big. I don't deny that global warming and climate change have come and gone over the ages. But it's the extreme rapid acceleration that we're concerned with now.

Q: You've become quite well known for your poems. What inspired you to start writing?

A: The Great Spirit came to me a few years ago, as he often does to us part-time Presbyterians. And he said, "Douglas"—he always calls me Douglas—"a question has arisen concerning your immortality. So get your act together, you bald-headed little guy." And I thought to myself, "Gosh, what do I want to leave behind? What things have I done?" I've hiked the Garden Wall a hundred times. I've done Sperry Glacier a hundred times. I've been to Avalanche Lake 500 times.

So, I started writing poems. (I'm too lazy to write stories. I haven't even gotten last year's Christmas cards done yet.) I thought, "What do I take for granted on my hike on the Garden Wall?" And I recalled a hike I took on a September day. In the summertime, the mountain goats are ragged and dirty and look like they got out of the barber chair before the job was done. But in September when the air has cooled off, the goats are in full coat, with six or eight inches of beautiful white fur, waiting for the winter to start. So on this day I glanced up the hill, and here was a family of goats in their new white coats, standing against 40 feet of red and orange mountain ash bushes. And I thought, wow. The image imprinted itself on my mind like a photograph. A bunch of years have passed, but it's still there. And I thought, if that impressed me, what would it do to the people who aren't used to it?

Walk with me, see the goats, on the mountainside in their new, white coats, standing bright against the sky, looking down on you and I.

I also think of the time I had a party of people out on the Garden Wall, and there were two golden eagles in the sky, way up there at a thousand feet. They plunged past us, down into the valley, then flew up, grabbed onto each other, and tumbled through the sky together.

Walk with me where eagles fly, and tumble wildly through the sky, giving truth to ancient words that sometimes love is for the birds.

And then we have the marmots that stand out there and whistle and warn each other about predators. They are the sentries of the mountains, and their high-pierced, screaming whistles vibrate across the hills. It's those golden eagles they're looking for, because they are deadly. And so my group came around the corner, and there was a marmot on a rock, and nothing but his eyeballs were moving because he didn't want those eagles to see him. All of a sudden, a golden eagle swooped in, looking for a marmot, four feet off the ground, and he flew in our faces and blew our hats off. Seven-foot wingspan at 100 miles an hour and I'll tell you, he literally blew our hats off.

Walk with me where the sentries whistle, warns the world of a deadly missile. Not on two legs nor on four, but from the sky with a sudden roar, that takes a life in a single breath, and is gone again on wings of death.

A couple years ago I was standing with a group of visitors on the boardwalk, and we saw this big grizzly coming down the mountainside about a mile away. He lay in the creek for about ten minutes, cooling off, and then he came right at us on the boardwalk. So I started pushing people back, and this man wanted to take pictures, and I said, "There's a grizzly coming!" And a woman said, "He's not coming, he's right behind you!" And I turned around, and there he was, a great, big grizzly bear, acting like we were not in the world, but still getting closer. Finally he looked off to the side, made a big circle around us, got back on the trail, and went to where he was going in the first place. What a once-in-a-lifetime experience to walk with a grizzly bear.

Come with me where grizzlies roam and see the places they call home. Alpine meadows, flower filled, hanging valleys, glacier chilled. Lords of everything they see—the world around, and you and me.

Not everything is so dramatic and exciting as goats and eagles and grizzlies; some of it is subtle. You can stand right out here in front of the visitor center in October, and the golden leaves will rush up the street chattering like a bunch of busy little people. I haven't learned the language yet. But every year it's the same—they rush up the street chattering, and then pretty soon they rush back down the street chattering.

Walk with me when North Winds blow, and whisper of the coming snow. Tossing golden leaves on high as summer bids a sad goodbye. These and other things you'll see, if you will come and walk with me.

I've shared these poems for the last two years as an evening visitor program, and I've gotten a surprising response.

Of course that's why I stay on the job—it keeps me alive. You've got to get emotionally high for this stuff.

A young woman came to the visitor center one fall, and she was quiet. She had been over on the Indian reservation and took a horseback trip with an Indian at one of those ranches, and she was just so sad that she was leaving. So I started to recite these poems for her, and she started crying, and I thought, "Wow, maybe that's the greatest compliment I could ever receive."

Q: What have you learned from interacting with so many park visitors over the years?

A: I have come to feel, from watching visitors over the last 50 years, that the American people feel that their National Park System is the basis for a kind of religion. And that the national parks are the cathedrals where they come to worship. And the people in the big hats are the high priests who have been given the responsibility to protect these sacred land trusts.

That is one of the big things that I've come to contemplate in just the last year or so. And I think, wait a minute, these are people from all over the world who have no contact with each other. They come by the hundreds of thousands. And yet I see the same intensity, the same fervor, the same awareness of the national parks and their value. Quite obviously, the "National Parks Idea" is a cause people can believe in.

I've always been impressed by the dedication and the professionalism of the managers, the superintendents, and all the people in the parks I have been associated with. As a seasonal, I'm not really part of that—I'm kind of a citizen observer working on the edges, so I can be critical. But I feel good about what I have seen from the park people, especially when it comes to protection, preservation, and wise use. This park is in good hands.

ON THE WEB

To watch a short video featuring segments of this interview paired with images of Doug Follett and Glacier National Park, visit www.npca.org/magazine.

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DESERT BIGHORN SHEEP could benefit from the passage of new legislation introduced this winter.

CALIFORNIA DESERT PROTECTION ACT: THE SEQUEL

Fifteen years after the California Desert Protection Act created Joshua Tree, Mojave, and Death Valley, there may be even more to celebrate.

Look at a map of Mojave National Preserve, deep in the heart of the California desert, and you'll see a huge notch carved out along the border of Nevada—like a slice of birthday cake removed before anyone was able to blow out the candles. That 29,000-acre plot of land was once home to an open-pit gold mine that was still active in 1994, when the preserve was created by the California Desert Protection Act. In fact, the development of the Castle Mountain Mine was one reason that desert activists pushed for that legislation, which set aside Joshua Tree and Death Valley as national parks and created the 1.6 million acre Mojave National Preserve, forming the conservation backbone of the California desert. Fifteen years later, the Castle Mountain mine is closed, the land is healing, and Sen. Dianne Feinstein (D-CA) is looking to add that missing puzzle piece to the preserve, effectively uniting the ecosystem. It's one component of sweeping legislation that Sen. Feinstein has introduced to prepare the desert for the next century of recreation, conservation, and green-energy generation.

The California Desert Protection Act of 2010 was born out of recognition from Sen. Feinstein, NPCA, and other conservation leaders that land management in the desert has evolved dramatically in the last decade, and the future of these ecologically important landscapes must be plotted out consciously. The legislation would designate an additional 344,000 acres of wilderness, add 76 miles of wild and scenic rivers, and expand Joshua Tree and Death Valley. It would also create two new monuments under the Bureau of Land Management (BLM): the 941,000-acre Mojave Trails National Monument along Route 66 and the 134,000-acre Sand to Snow National Monument, which would connect Joshua Tree National Park to the San Bernardino Mountains, allowing wildlife to move across the landscape and gain access to year-round springs in the Big Morongo Preserve. When NPCA took Feinstein's staff to that region and the Castle Mountains, they were quickly persuaded to include both areas in the legislation.

"The Castle Mountains are a beautiful place—think Joshua tree forests, washes filled with willows, and rugged mountains where herds of desert bighorn sheep still roam," says Mike Cipra, manager of NPCA's California Desert program. "There's a huge contrast between pristine land and disturbed land that's been used for industrial purposes, and no place in the California desert shows it more starkly than the Castle Mountains. The area also reflects the history of mining and its impacts in America, and the Park Service is uniquely positioned to tell that story to visitors."

The mine's footprint occupies only 700 acres of the 29,000 acres to be added to the preserve. Although scars of two open-pit mines will remain, along with a mound of rubble left over from the chemical process of leaching gold from rock, the mining company has worked to restore the land, as required by law—removing industrial facilities and planting Joshua trees and cactus. And there may be one more restoration yet to come, if the Park Service has any say.

"This area has unique grasslands that you typically don't find in the desert, so it's an important area for us," says Mojave

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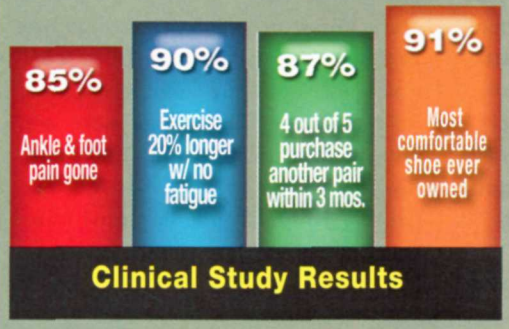
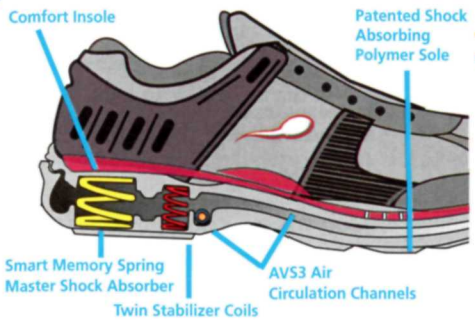


Clinical Study Results



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Superintendent Dennis Schramm. "One of the things we've been focusing on is restoration of pronghorn antelope, which are native to the area. Our records indicate there was small population in Lanfair Valley last seen in the early 1900s. We're talking with the fish and game departments in California, Nevada, and Arizona, and evaluating the habitat, because we think this grassland could be a really important part of bringing back a small herd that would spend nearly all of its time in the preserve."

There's another national park that could see a significant restoration effort come to its completion if the legislation is passed. Surprise Canyon, which straddles Death Valley and BLM land just outside the park, would be designated a national wild and scenic river. In the 1990s, the canyon—part of a trail that leads to the historic mining town of Panamint City—became a playground for extreme off-road vehicle enthusiasts, who winched their vehicles up near-vertical waterfalls, spilling oil, antifreeze, and other toxic substances into the area, chopping down cottonwoods, and endangering wildlife that depend on the year-round stream. In 2000, a coalition of environmental organizations including the Center for Biological Diversity successfully sued to stop the destructive practice, and in 2006 NPCA and the coalition intervened to keep crucial protections in place. Since then, the number of visitors to the area has multiplied five-fold, but now they're all on foot. The watershed is continuing its remarkable recovery: Cottonwoods are sprouting and orchids are blooming once again. If Surprise Canyon becomes a wild and scenic river, those protections would be made permanent.

The legislation also designates specific areas for off-road vehicle use throughout the California Desert. Only one of the areas is anywhere near a national park, and all of them have seen off-road vehicles for many years, but there is some concern that Congress is setting a precedent by designating such areas with the passage of a law rather than using a deliberate process that engages stakeholders at many levels; the risk is even greater in states that have less progressive views toward conservation.

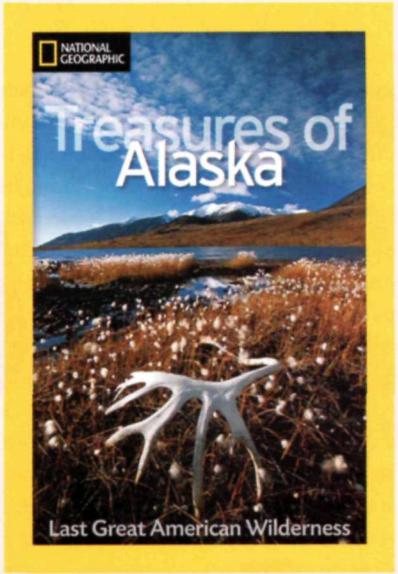
In an age when energy independence and green technology dominate the headlines, some have also expressed concern that the legislation is closing off huge swaths of the desert from solar power development. But the BLM is currently studying 351,000 acres of public land in the California desert for potential solar energy development—more than double what is needed to meet California's renewable energy goals—and none of the lands in Sen. Feinstein's proposal are within these BLM solar study areas. In fact, Sen. Feinstein's bill includes key provisions to encourage renewable energy projects on disturbed private land and unused military land. Building renewable energy projects on disturbed land closer to cities and towns minimizes the need for new transmission lines, protects desert wildlife like bighorn sheep and desert tortoises, and provides jobs for communities that need them. It's clear that there's enough land to go around—it's just a matter of picking the sites wisely.

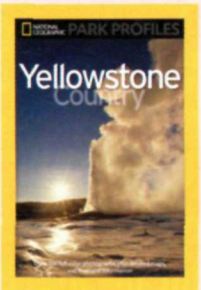
"There are many places in the California desert where development and employment are essential and appropriate," says Sen. Feinstein. "But there are also places that future generations will thank us for setting aside. This bill, if enacted, will have a positive and enduring impact on the landscape of the Southern California desert, and I hope it will stand as a model for how to balance renewable energy development and conservation."

The bill could make its way to President Obama's desk by the end of the year, but with Congress focused on the economy, health care, and war in the Middle East, it's nearly impossible to predict when it will rise to the top of the agenda. If you'd like to voice your support or follow the legislation closely, subscribe to NPCA's action alerts at www.npca.org/cadesert2010. For more information, visit www.californiadesert.org, a coalition including NPCA and other local and national conservation groups working to protect the California Desert.

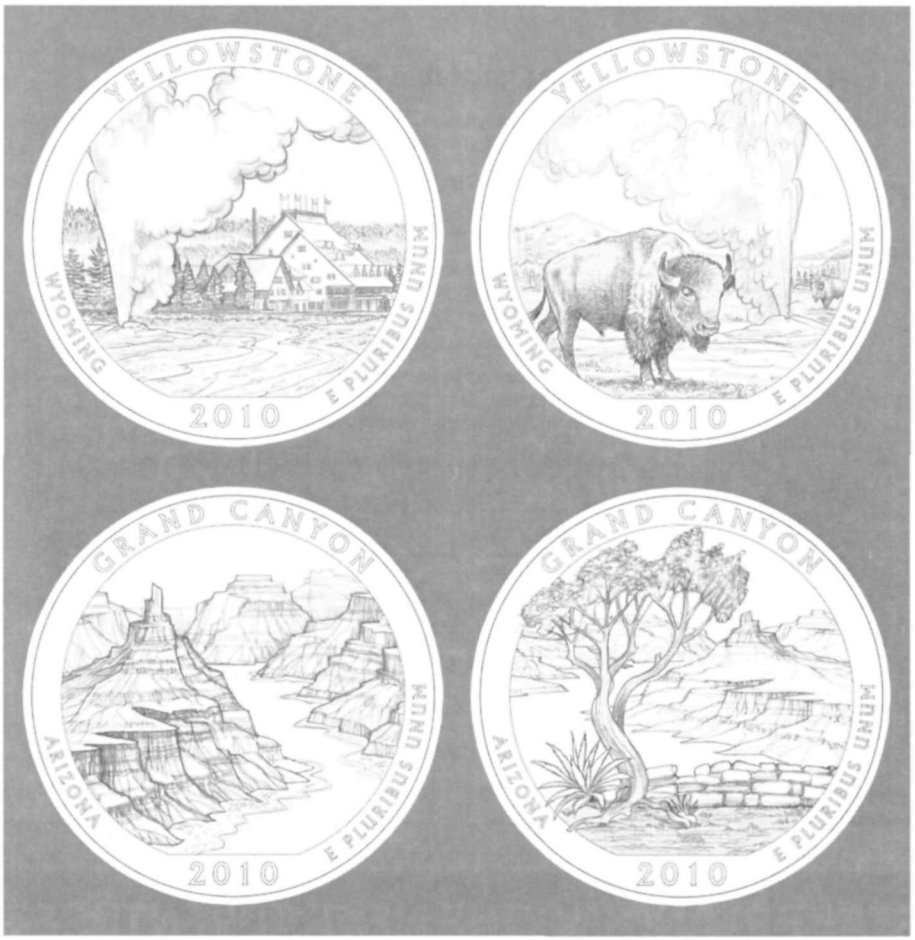
—Scott Kirkwood

EYE-OPENERS





National Geographic has released three more entries in its **PARK PROFILES SERIES**, focusing on the Grand Canyon, Yellowstone and Grand Teton, and the parks and preserves of Alaska—the last of these penned by *National Parks* contributor Jeff Rennicke. Each installment in the series is less like a guide book designed to help you plot your trip, and more like a supersized magazine article that has taken over an entire issue of the "yellow book." With more than 100 photos covering 200 pages, each book turns the park's story into a narrative and brings the region to life with quotes from local residents, outfitters, biologists, and guides. These three paperbacks are sure to help travelers plan their journey beforehand and make sense of the experience afterwards (National Geographic, $15-16 each, 200 pp.).



COURTESY OF THE U.S. MINT

TWO OF THE POTENTIAL DESIGNS for Yellowstone and Grand Canyon's quarters, among the initial releases slated for 2010. The U.S. Mint will announce the final selections ina few weeks, when the Hot Springs coin is released.

MINTY FRESH

U.S. Mint follows up state quarters with "America the Beautiful" program, focusing on national parks and other uniquely American places.

Reach into your pocket right now and there's a good chance you'll find a couple of national park icons floating around—the Lincoln Memorial on the penny and the five-dollar bill, or sites like Crater Lake and the New River Gorge which appear on the 50 state quarters released in the last ten years. And starting this April, you're sure to find a few more of your 392 favorite places coming up "tails."

In 2008, Congress passed legislation authorizing the "America the Beautiful" program to honor 56 natural and historic sites in the United States and its territories. Art work on the back of each coin will highlight one of dozens of national park units along with a handful of national forests and wildlife refuges operated by the U.S. Forest Service and Fish & Wildlife Service, respectively. Each year, five new designs will be released, in the order in which the location was first designated, leading off with Hot Springs National Park in Arkansas (set aside as a federal reservation in 1832), Yellowstone National Park in Wyoming, Yosemite National Park in California, Grand Canyon National Park in Arizona, and Mt. Hood National Forest in Oregon. The program will conclude in 2021 with a coin commemorating Tuskegee Airmen National Historic site in Alabama, but the legislation allows the Treasury secretary the option of extending the program another 12 years to run through the 56 states and territories one more time. As usual, the Mint and third-party manufacturers are sure to generate collector's editions and special mementos as well.

"The idea of setting aside lands and historical places for preservation and historical interpretation and preserving those places for future generations is a uniquely American theme," says Cynthia Meals, a spokesperson with the Mint. "Our primary goal is to meet the demands of commerce, but coin collecting is one of the most popular hobbies in the world—something that people have been doing for hundreds, if not thousands of years. Circulating coins make it into the pockets of everyone in this country and millions of people throughout the world, so it's really a great educational tool to teach people about these places they may have never heard of."

For the last two years, representatives from the Mint have been working with a handful of governors to recognize a site in each of the first few states on the list. Representatives from the Mint have spoken with employees at Yosemite National Park, debating the merits of El Capitan versus Half Dome and determining what aspects of Arkansas' Hot Springs would be the best to carve out the copper and nickel alloy used to create a quarter. The best subjects, obviously, are those that can be rendered in three dimensions with no use of color, which leaves out iconic sites like Yellowstone's Grand Prismatic Spring, for instance. The Park Service has provided the Mint with source materials including historic images and double-checked plant and animals species to make sure they're accurate. A few park rangers have even run out to nearby sites to take snapshots of a mountain's peaks from multiple angles to help out the artists.

The Mint's own artists and occasionally freelance artists will come up with at least a dozen design ideas, which are narrowed down to three to five finalists that illustrate key facets of the site. The Commission of Fine Arts then reviews the designs for aesthetic considerations, and the Citizens Coinage Advisory Committee focuses on elements of interest to collectors, like the selection of subjects and the number of coins to be minted. Meanwhile, the state governors and federal agencies like the Department of Interior also get a chance to offer their input. The director of the U.S. Mint takes these comments into consideration and recommends a design to the Secretary of the Treasury, who makes the ultimate decision.

Once a design has passed through that gauntlet, the artist sets to work producing the final three-dimensional version. Some use computer design tools, but Don Everhart, one of seven sculptors led by the chief engraver, continues to rely on an 8-inch disc of clay to do much of his work. If the design involves sharp lines like architectural details such as rows of windows or columns, he'll use the clay shape to create a plastic mold, carve out the sharp lines in that medium, then create another clay figure using that mold, and so on, until he's satisfied with the end result.

"I've only visited a couple of the parks in the first groupings of coins—Yellowstone and Gettysburg," says Everhart, "but they really made an impression on me, and I tried to incorporate those memories and feelings into the designs I created."

The final designs produced by Everhart and his colleagues will be unveiled this spring, and the Hot Springs National Park coin will be delivered to the Federal Treasury and distributed to banks all over the country days later. For more information about the coin program itself, including the entire list of sites and release dates, visit the U.S. Mint at http://bit.ly/HTizj. To receive each "America the Beautiful" quarter as it's released, contact Coins of America, which is donating a percentage of the proceeds to NPCA: call 866.615.5867 or visit www.nationalparksclub.com.

—Scott Kirkwood

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YELLOW WARBLERS migrate between Latin America and the U. S., which presents serious challenges for park biologists.

ON THE WING

How can national parks help protect bird species that are here only a few months every year?

by Kelly Bastone

They're Bandelier's autumn celebrities. Every year, as August's warm nights give way to the cool evenings of September, two species of showy yellow warblers—the Wilson's warbler and Townsend's warbler—decorate the trees at New Mexico's Bandelier National Monument. During their breeding season up north, the birds' songs are every bit as dazzling as their plumage.

But their Bandelier appearance is a short-lived show. Like the millions of migratory birds that fly south each fall, these warblers are bound for Latin America, so they stop in New Mexico for only a few weeks. Which means that to protect these traveling showbirds, the National Park Service must somehow reach beyond its official boundaries.

The Park Flight Migratory Bird Program does just that. Created in 1998, this partnership among the National Park Service, the National Park Foundation, and other national and international organizations strives to protect migratory species and their habitats throughout the Americas—not just in U.S. national parks.

"We're thinking in terms of the whole hemisphere and sometimes beyond," says Carol Beidleman, coordinator of the Park Flight Migratory Bird Program. That's because the birds' life-cycle spans several enormous regions. After wintering in Mexico, Central America, South America, and the Caribbean, the birds migrate every spring to the U.S. and Canada, where they breed. But as fall approaches, they reverse the journey, following "flyways" that funnel them back to their tropical homes. Even for a jetliner, it would rank as a long flight. But for palm-sized birds—some of which weigh just half an ounce—it's a boggling feat. "If we want to protect these species," says Beidleman, "We have to be thinking in this broader life-cycle context."

Recent data suggest that migratory species do indeed need a boost. Population studies conducted by the Monitoring Avian Productivity and Survivorship (MAPS) Program calculated nearly a 25-percent decline in the 192 landbird species studied; some warbler populations have declined by 40 percent or more. The wood thrush, for example, used to be a fixture in backyards all across the eastern United States, but these days, its haunting song is heard far less frequently.

It's not clear what's causing such declines, but suspected threats include pesticide use (chemicals outlawed in the U.S. are still used in other countries), habitat degradation, and fragmentation. "Habitat within the national parks is obviously protected, but there are places worldwide—and even within the U.S.—where it's threatened," Beidleman says. Some species are also caught and collected for sale as pets. Climate change is a growing concern worldwide. And some areas where birds winter or stop over have no protections at all.

"Ultimately, our national parks alone will not be able to protect many of the species that visitors come to see—species that play such vital roles in maintaining healthy ecosystems in our parks," says Stephen Morris, chief of the National Park Service's Office of International Affairs. "Their long-term survival depends on cooperative activities between the National Park Service and partners in the countries where these species migrate and overwinter."

To stimulate such cooperation, the Park Flight Migratory Bird Program promotes integrated population-monitoring efforts, so that observers in various locations can contribute their data to a collective pool. It also pursues funding for those efforts, and has supported conservation projects and exchange programs in a wide range of U.S. parks and 19 other countries. But just as important, it develops education and out-

reach initiatives that foster cross-cultural appreciation for the birds.

One such initiative is the International Volunteers in Parks program, which brings young biologists from Latin America, Canada, and the Caribbean to U.S. park units so they can learn the latest monitoring techniques and share their perspectives on bird populations. So far, 68 international Park Flight volunteers have served in U.S. parks, where they've assisted in bird-banding projects and led interpretive programs for park visitors.

"It really helped me," says Angélica Hernández Palma, a biology student at Colombia's Universidad del Valle who interned at Bandelier from July through November 2009. "American parks have all this information about the birds, but we don't. I learned a lot of techniques, and I can apply the things that I learned with birds [in my own country.]"

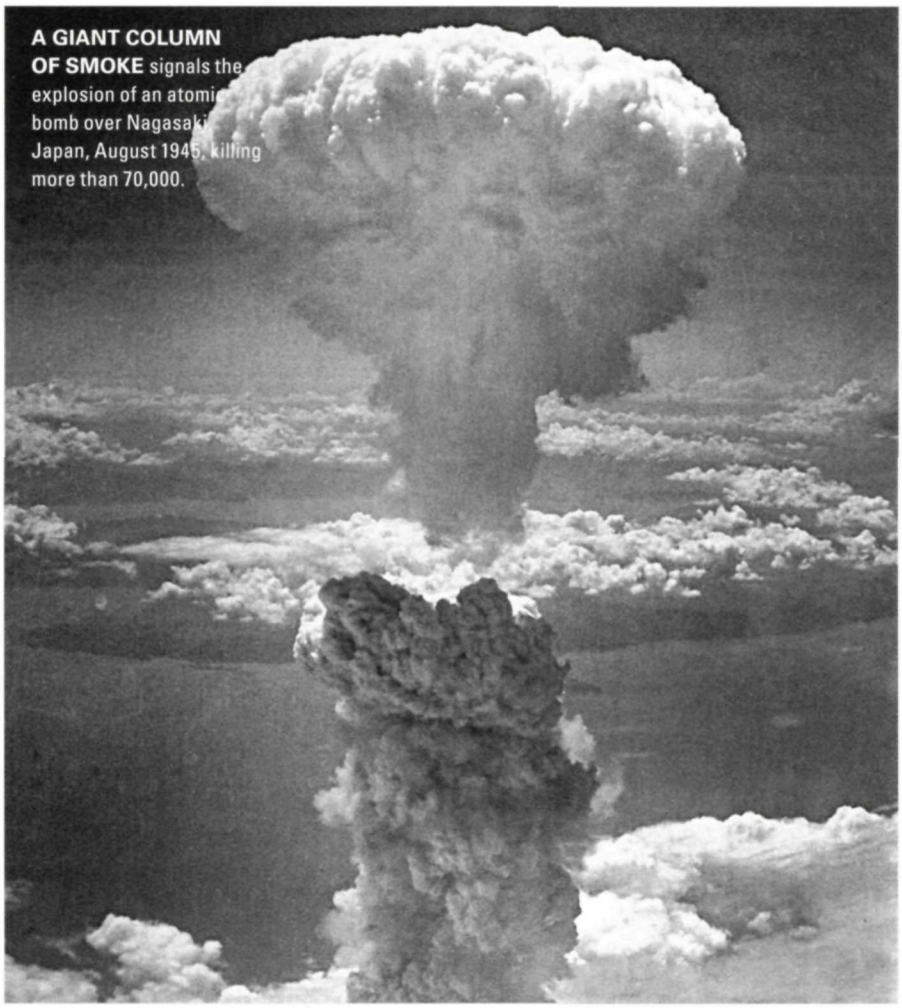
That ripple effect is exactly what the Park Flight program aims to achieve. "The U.S. has a better capacity [than Latin America] for research and species study, but we can't do much for the birds when they're at their wintering grounds," says Stephen Fettig, a wildlife biologist at Bandelier National Monument. That's where U.S.-trained interns can make a difference. "Sixty-eight interns may not seem like a lot," he admits, but the program's first volunteers are already becoming conservation leaders in their countries. "They're building capacity for monitoring, scientific work, and education in the birds' wintering routes," he says. "And ultimately, over the long term, we will see benefits in U.S. parks."

In fact, says Carol Beidleman, our parks have already seen gains by welcoming international volunteers. "We learn a tremendous amount from them, about the issues these birds face when they're not here," she says.

That learning extends to park visitors, who also benefit from the Park Flight program's educational outreach initiatives. Programs inform visitors to New Jersey Coastal Heritage Trail Route about the health and numbers of migrating shorebirds. Latino outreach programs implemented at parks surrounded by Latino communities help make the Park Service—and its conservation goals—relevant to Spanish-speaking populations. And Bandelier National Monument hosts students from nearby Native American communities for banding demonstrations that they will remember for the rest of their lives, says Fettig.

That's because those students don't just learn about species' age, sex, and body fat—they also develop a sense of advocacy for migratory birds. "That is a bigger purpose of the Park Flight program," Fettig says. "Appreciation comes from learning. When people have the birds in front of them, in their hands, it really instills a feeling of connectedness across the continent."

Kelly Bastone is a freelance writer living in Steamboat Springs, Colorado.



A GIANT COLUMN OF SMOKE signals the explosion of an atomic bomb over Nagasaki, Japan, August 1945, killing more than 70,000.

© AP PHOTO / USAF

THE BIG ONE

The Manhattan Project was the biggest covert operation imaginable, and it changed the outcome of the world's biggest war. Now the Park Service is hoping to tell the story.

By Mark Arsenault

In 1942, the United States began an unprecedented research and manufacturing program at the very edge of theoretical science, in a furious effort to create a weapon capable of ending World War II.

At its peak, the Manhattan Project was as big as the auto industry, employing 130,000 people at remote sites across the country. Hidden from the public, the project's scientists, engineers, and machinists built massive industrial plants to refine uranium and create plutonium—a new element—as part of a successful effort to create the first atomic bomb.

The story has been told in films, books, museums, and historic sites for years. Now the National Park Service is wrapping up a study with the U.S. Department of Energy that could lead to the establishment of a Manhattan Project National Historical Park. This new park would preserve critical 1940s-era facilities and tell a more complete story of a decisive event of the 20th century.

"There are many lessons from the Manhattan Project that are relevant today," says U.S. Sen. Jeff Bingaman (D-NM), who introduced legislation to begin the park study, authorized in 2004. "We work to preserve our significant historical sites because they are part of our national heritage and because they tell important parts of our national story."

"Few people understand how special it was," says Cynthia Kelly, founder and president of the nonprofit Atomic Heritage Foundation, which supports creating a new park. "This effort changed the history of the United States and the history of the world." Atomic weapons ended the war without an invasion of Japan, which, she says, would have caused incalculable loss of life and may have brought the Soviet Union into the Pacific theater, redrawing the world map for the rest of the century, as it did in Germany.

The Manhattan Project introduced the atomic age and made America a superpower. It also changed the way the United States valued scientific research and discovery. Before World War II, the United States was in the backwaters of science, especially physics, but J. Robert Oppenheimer—the physicist who led the effort to create the atom bomb—had studied in Europe. The program he oversaw left a vast and often controversial legacy. The Manhattan Project launched a nuclear arms race and the decades-long Cold War, but the research that followed also yielded nuclear energy and new tools in the field of nuclear medicine, such as PET scans and radiation therapy for cancer. Behind this effort were communities of people who were essentially sequestered for years to contribute to the broader manufacturing efforts. The creation of these secret cities displaced former residents and brought about cultural clashes that are still remembered decades later.

As for the location and scope of a possible Manhattan Project Park, details are still fuzzy. Los Alamos, New Mexico, is the most famous location due to the scientific advances made there and its location 270 miles north of the Trinity atomic test site in Alamagordo, New Mexico. But critical

parts of the program were based in other states, including major industrial complexes in Oak Ridge, Tennessee, and Hanford, Washington, where limited public tours are already being offered. Oak Ridge was an enormous atomic research and manufacturing site that refined uranium for the "Little Boy" bomb dropped on Hiroshima, Japan, on August 6, 1945. The X-10 Graphite Reactor at Oak Ridge, built in 1943, produced plutonium samples for the scientists at Los Alamos, and is now a national historic landmark. Hanford is the site of the Manhattan Project's "B-reactor," the first industrial-scale nuclear reactor in history, which was designated a national historic landmark in 2008. The B-reactor produced plutonium for the first atomic bomb test explosion at the Trinity site, and for the "Fat Man" atom bomb dropped on Nagasaki on August 9, 1945. The war ended within days of the Fat Man explosion.

The Department of Energy owns key parcels in all three locations, but the agency recognizes that tourists aren't likely to pull off the highway for a Department of Energy sign. Enter the Park Service.

In a draft report of its study released in December, the Park Service proposed several alternatives for preservation short of a national historical park, and one option for a new park that would tell the story of the Manhattan Project from Los Alamos, New Mexico, where Oppenheimer and other top scientists did most of their work. The agency had considered a multi-site park that would include other locations around the country but decided that option was too costly and unmanageable.

The Department of Energy, however, favors the multi-site approach that would include Los Alamos, Oak Ridge, and Hanford—a proposal that has the backing of leaders in those local communities, as well.

"Both Oak Ridge and Hanford have first-of-a-kind or one-of-a-kind facilities and devices that used some of the century's most innovative and revolutionary technologies, and remain in essentially the same condition as they did during the Manhattan Project," noted F.G. Gosling, federal preservation officer and chief historian for the Department of Energy, in comments included in the study report. These "crown jewels of the Manhattan Project... should be recognized as such and accordingly be brought under the protection of the [national parks] arrowhead."

The Park Service is far better equipped to tell such a vast national story, says Maynard Plahuta, president of the B-Reactor Museum Association in Richland, Washington. A multi-site Manhattan Project National Historical Park would be the bookend, he says, to the USS *Arizona* Memorial, a park unit at Pearl Harbor. The sinking of the *Arizona* in 1941, "started the war, and the Manhattan Project ended it," he says. "We should tell the whole story."

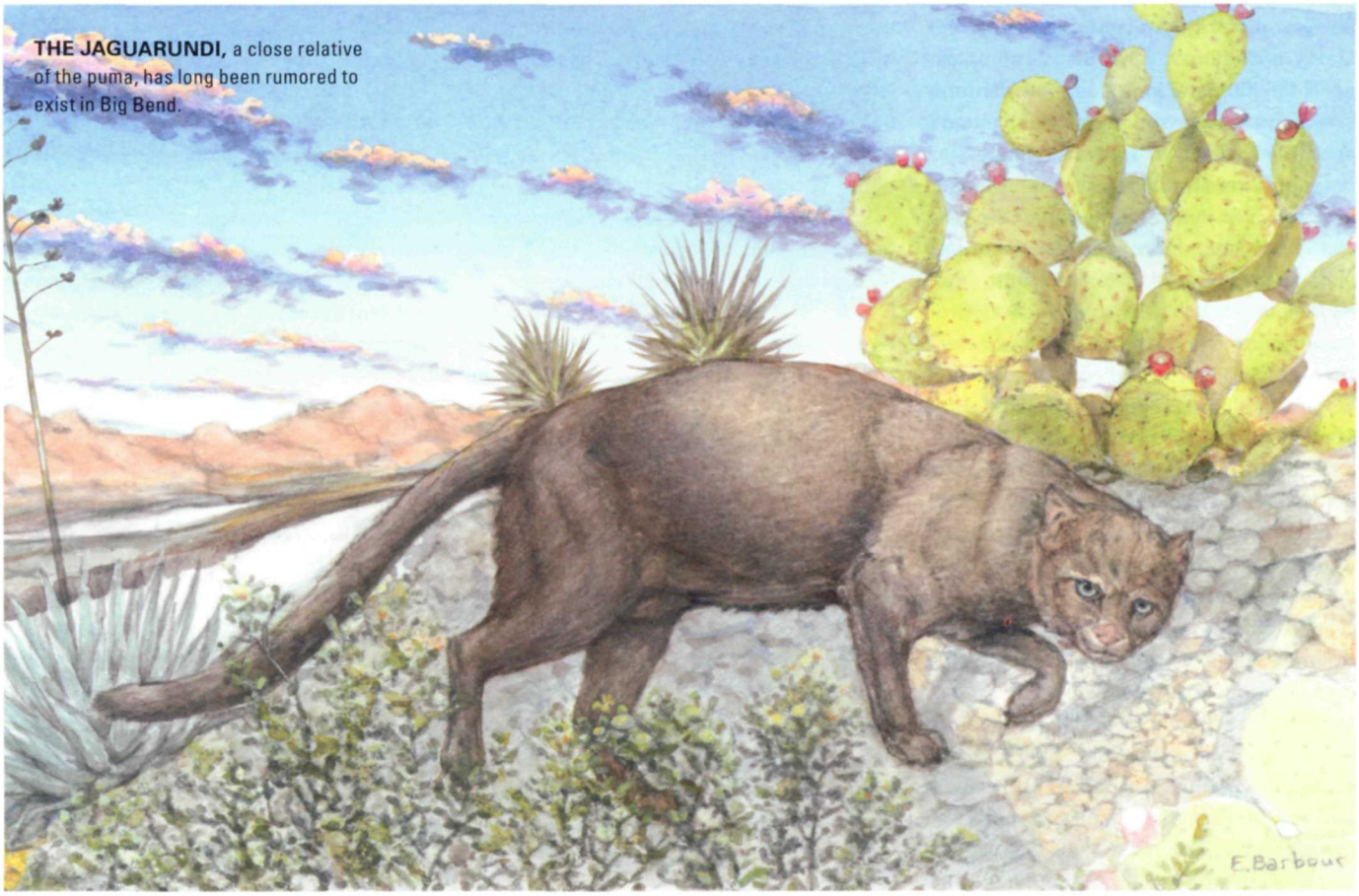
Under the Department of Energy's three-site park proposal, the Park Service would be responsible for exhibits and interpretation, and the Department of Energy would handle maintenance, safety, and security at the locations it owns. Given these divisions of duties, the Park Service's costs would likely be significantly less than those of many traditional large parks, according to Gosling.

Earlier this year, the Park Service collected public comments on its draft report at a series of hearings in the communities near the potential park sites. Local officials around Hanford, Oak Ridge, and Los Alamos took the opportunity to lobby for a multi-site park in their communities. The agency will review the public comments and aim to come up with a final recommendation as early as this fall. In the end, Congress will decide how to tell the story of the Manhattan Project, by passing legislation that will outline the scope and management of any new historical park.

Plahuta urges Congress to embrace a multi-site park that tells the full story of the Manhattan Project. "This was such a great advance in science and technology," he says. "It's like Niagara Falls—I could describe it, but you've really got to experience it for yourself to understand."

Mark Arsenault is a freelance journalist and the author of four mystery novels. He lives in Massachusetts.

By Amy Leinbach Marquis



THE JAGUARUNDI, a close relative of the puma, has long been rumored to exist in Big Bend.

On the Prowl

Are there jaguarundis in Big Bend National Park?

When you live in a place as vast and wild as Big Bend National Park, you learn to read the land. You synchronize your schedule with the rising and setting sun. You predict weather patterns and learn the daily habits of resident wildlife. You steadily cross species off your life list: mountain lion. Bobcat. Badger. Black bear.

And then, as you relax on your front porch under a starry night sky, you see something move in the darkness. It doesn't walk—it bounds. Its head is small, its tail unusually long. And it doesn't look like anything you've seen before.

For decades, stories just like this have been trickling in from both visitors and long-time residents of the West Texas park. Many witnesses believe they're dealing with the rare and endangered jaguarundi, a close relative of the puma that looks kind of like an otter and weighs slightly more than a house cat. But so far, no one has been able to prove it.

Anthony Giordano, a PhD student studying jaguars in South America at Texas Tech University, is bent on solving the mystery. "I've been with people when they see a wild jaguarundi for the first time, and they get this weird expression on their face because they're just not sure what they're looking at," he says. "So if someone claims they saw a cat, I'm suspicious. But if they describe an animal that was running low to the ground, looked like a giant weasel, and had a small head, short round ears, and a tail longer than its body, and they use words like 'kind of'—well, then I'm interested."

Whenever a report is filed with the Park Service, Big Bend residents often debate it after hours, over a beer. "The park rangers, border-patrol agents, and interpretation staff who have made such sightings might not be biologists, but they're pretty savvy about the wildlife that resides here," says park wildlife biologist Raymond Skiles. "When they see something unfamiliar, they'll sometimes report that they've seen a jaguarundi, and include a description consistent with the cat."

Some biologists believe that a century ago, everything from jaguars to Mexican wolves to ocelots lived in or near the park. In more recent years, biologists with the *Comision Nacional de Areas Naturales Protegidas*—Mexico's equivalent of the U.S. National

Park Service—have claimed to see jaguarundis just across the border in the Carmen Mountains.

But not everyone's convinced—especially Mike Tewes, a leading researcher in rare cats from Texas A&M University. "There's a greater chance of me being killed by a falling coconut than finding a jaguarundi in Big Bend," he says.

Strong words from a cat expert, but without clear photographs or DNA samples to prove the species' existence, all claims are mere folklore in the eyes of science. Even when a tracking expert reported jaguarundi footprints along the Rio Grande, Tewes wasn't swayed: "There's no way you can tell a feral cat track from a jaguarundi track," he says. "The only legitimate evidence is a photograph or a dead jaguarundi."

Tewes' work in Mexico has shown that where jaguarundis occur, some inevitably end up as road kill; none have turned up near Big Bend. Other scientists have set up camera traps in the park, but none have produced any evidence of jaguarundis. In addition, says Tewes, the park's high-desert landscape doesn't fit the description of known jaguarundi habitat: brushy lowlands in Mexico, Central America, and South America. Big Bend is also 200 miles away from the closest verified jaguarundi sighting outside Monterrey, Mexico.

"There's obviously some room for mistaken identity," Skiles says. "I'm not suggesting that people didn't see what they saw, but at the same time, solid science requires evidence that can be confirmed over and over, and it's just remarkable that we haven't come up with anything yet."

The fact that scientists know so little about the species only complicates matters. Even Giordano, who has witnessed more than a dozen wild jaguarundis in his career, has only caught fleeting glimpses. In more than two years of camera-trap data from South America, Giordano has reviewed dozens of images of jaguars, ocelots, and the little-known Geoffroy's cat—but only two clear frames of jaguarundis.

Still, the Carmen Mountains sightings are enough to make Giordano want to investigate. His dream? Assembling a team of tracking dogs to scout out jaguarundi scat in Big Bend. "There's a lot of potential for using man's best friend," Giordano says, "especially when camera-trapping and other types of surveys might not cut it."

Like Tewes, Giordano agrees that jaguarundis aren't a highlands species—but he sees too many similarities in the thick, brushy habitat of Big Bend and areas where the cat is known to exist. "I think the most important factors for jaguarundis are dense cover and an abundance of prey, like small mammals and ground-nesting birds," he says. Big Bend satisfies those requirements—but until someone turns up hard evidence, it's unlikely that the jaguarundi's mythical status will change anytime soon. **NP**

Amy Leinbach Marquis is associate editor of *National Parks* magazine.

By Michael Engelhard

A SOUTHWESTERN WILLOW FLYCATCHER rests on bull thistle.

© BILL LEAMAN

Troubled Waters

The fate of the southwestern willow flycatcher is intimately linked to the health of the Grand Canyon.

It's not notable for its plumage or song, not venomous or otherwise "bizarre," not a keystone species or top predator. Few visitors to the Grand Canyon notice its presence, and even fewer would notice its absence. But according to one of its most ardent fans, wildlife biologist Mark Sogge, it's a symbol of what we are doing to our river corridors.

Given the battery of threats it faces, the endangered southwestern willow flycatcher's continued presence could be considered a miracle. This unassuming "snowbird" visits the Southwest in May, June, and July to mate and raise its broods along lush river corridors. The journey from its wintering grounds in Latin America takes an epic toll: Research shows that of all the flycatchers that die every year, 64 percent do so during migration. Snakes and Cooper's hawks further decimate its numbers by preying on hatchlings. Brown-headed cowbirds smuggle eggs into flycatcher nests, where flycatcher chicks have to compete with the hulking, alien offspring. Overgrazing, pollution, urbanization, agricultural stream diversions, and other development here and south of the border have reduced *Empidonax traillii extimus* to fewer than 1,000 breeding pairs.

Now, global warming threatens to push the greenish-gray songster over the brink. "Current habitats may dry up," says Rosa Palarino, a Grand Canyon National Park biologist. As the climate changes, so, too, may the food base and nesting opportunities for flycatchers. The bird's flexibility, however, is a silver lining of hope—it can rebound quickly when conditions improve.

Though not a water bird per se, this finch-sized subspecies is irrevocably bound to the element. It breeds in broad, dense, young willow and tamarisk stands, forages among marsh plants like cattails, and migrates along the lifelines of desert streams. With wildly fluctuating, dam-regulated water levels and a declining flycatcher population, the Colorado River in Grand Canyon National Park is a perfect proving ground for flycatcher conservation.

To establish the number of breeding fly-

catchers, the park is expanding its sound-monitoring program this year. Armed with speakers, sophisticated microphones, and recorders, Palarino and fellow researchers will stalk the reclusive bird in the bushes, broadcasting taped flycatcher vocalizations to elicit a response from any male eager to announce territorial claims. They'll follow up with a visual identification, to detect breeding activity and nest sites.

Not surprisingly, Lake Mead's fickle waters effect dramatic changes in willow flycatcher habitat in the lower reaches of the Colorado River. Between 2000 and 2008, when the reservoir dropped more than 100 feet, vegetation crucial for nesting and foraging was killed off. Lower water levels at many nests thinned the surrounding canopy as drought-resistant plants replaced moisture-loving ones, much to the bird's disadvantage.

The southwestern willow flycatcher's distribution only magnifies conservation challenges. Sites with small populations (five or fewer breeding pairs) are vulnerable to threats like brush fires, which flare up more frequently with prolonged droughts. But exactly how the birds choose their habitat is still poorly understood. Some scientists believe that isolated flycatcher enclaves may serve as "genetic reservoirs" from which new areas are populated, and therefore advise land managers not to abandon smaller flycatcher populations—like the Grand Canyon's—in favor of larger populations in Arizona and New Mexico. Protected pockets of flycatcher habitat also need to be linked by stopover habitats that play a key role during migration and help birds to reach their nesting grounds.

An additional twist comes in the guise of the tamarisk, an invasive, water-guzzling shrub that crowds out native vegetation. Most parks manage tamarisk aggressively; on state lands, biologists have released beetles that feed on and kill the green invaders. But as the larvae munch their way toward the Grand Canyon, they create a temporary vacuum in the flycatcher's nesting canopy. And that recent progression is a pressing concern, according to R.V. Ward, Grand Canyon wildlife program manager. To sustain nesting habitat for flycatchers, native plants need a chance to re-colonize riverbanks. In the future, the Park Service may have to reseed and replant willows, cattails, and bulrushes in the absence of tamarisk to prevent soils from washing away.

Archaeologists believe that early inhabitants of the Grand Canyon were forced to leave when climate change and deforestation led to barren springs, barren soils, and erosion. Now, hundreds of years later, some of those same factors could contribute to the demise of the southwestern willow flycatcher. But with concerted efforts to preserve habitats and tackle greenhouse-gas emissions, its birdsong might echo through the canyon for years to come. **NP**

Michael Engelhard's latest book is *Wild Moments: Encounters with Animals of the North.*

At first glance, South Dakota's Badlands National Park might seem as still as stone, but look closely, wait patiently, and watch it dance.

THE *RUNNING* COUNTRY

For days I had been hiking alone through the wild heart of the Sage Creek Wilderness, following buffalo trails pounded deep into the prairie soil by years of passing hooves and side-stepping plops of buffalo droppings as big as garbage-can lids. I had seen plenty of buffalo as I sat for long stretches, watching small herds in the distance drifting as easily as cloud shadows across the long horizons, glimpsing a lone bull that disappeared as if into stone before I could look again. But I hadn't seen a single one of the park's largest and most famous residents up close, until now.

It had all the earmarks of a good old-fashioned stand-off.
No one, it seemed, was going anywhere any time soon.

Moments earlier, I had stepped too quickly into a blind draw, nearly stumbling straight into a 2,000-pound mound of fur and horn—a lone bull buffalo bedded down for a respite from the wind. I saw it flinch, a rippling of muscle and hide. I saw its head, the size of a wagon wheel, swing slowly toward me, fixing me in its slow stare. I backed away quickly and headed up the trail, hoping it wouldn't charge. It didn't. Instead, it began to chew.

As far upstream and down as I could see with my binoculars there were only steep banks and high water. Heavy rains had Sage Creek singing full-throated and wild, eliminating most of the easy places to ford its waters. With the bull settled in, there was nothing I could do but wait it out. A meadowlark sang. The wind blew. The bull patiently chewed its cud as still as the landscape around it. I sat down to wait. Let the stand-off begin.

A BUFFALO WANDERS **THROUGH** the Sage Creek Area in Badlands National Park.

BY JEFF RENNICKE

PHOTOGRAPHS BY MATTHEW TURLEY

PRAIRIE-DOG TOWNS (above) are a part of the Badlands landscape, but when their numbers declined, so did the black-footed ferret's. Thankfully, the Sage Creek area (left) has offered an ideal location for ferret reintroduction efforts.

TRAVEL ESSENTIALS:
Badlands National Park

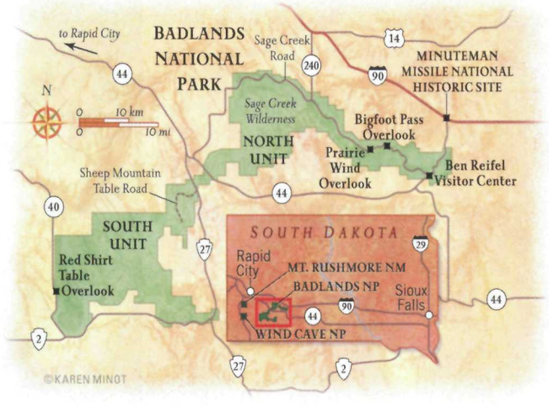
Considering how far away Badlands National Park is from just about anywhere (110 miles from Sturgis, 280 from Sioux Falls, 30 from Wall), the daytime temperatures (a 92-degree average high in July), and the long travel times between gas stations and medical help, this is a good place to come prepared. Most people fly into Rapid City Regional Airport and head east on Interstate 90, or the more scenic State Highway 44. Be sure you have plenty of gas, water, and food. A dining room and limited supplies are available at the Cedar Pass Lodge, which also serves as the only lodging in Badlands National Park. There are two campgrounds—Cedar Pass, which has flush toilets, and the more primitive Sage Creek. Keep a safe distance from all wildlife, including bison, which can be surprisingly fast, and be prepared to be self-sufficient in the backcountry.

FOR MORE INFORMATION, CONTACT BADLANDS NATIONAL PARK AT 605.433.5361; WWW.NPS.GOV/BADL.

AT 64,144 ACRES, THE SAGE CREEK WILDERNESS IS the largest protected prairie wilderness in the country, part of the park's North unit—the wild heart of South Dakota's 244,000-acre Badlands National Park. Few landscapes in the National Park System are as iconic as the Badlands—the deep, silent canyons, the rock spires, the color-banded cliffs. It is a landscape of stone and light. At first glance, it can seem a land frozen in time, a postcard in stone and silence. But slowly the motions of the living land come into focus. "[T]here was so much motion in it," Willa Cather wrote about the prairie in *My Antonia*, "the whole country seemed, somehow, to be running." But to truly see that "running" country, we must slow down and look.

Stepping down the trail from the Sage Creek Campground, I enter a seemingly silent world. Yet over the first rise, a series of sharp whistles split the air: prairie dogs. With a maze of underground tunnels spread out over dozens of acres, prairie-dog towns are a focal point of prairie life. "Watch for rattlesnakes," the ranger at the visitor center had told me. "The prairie rattler loves the prairie-dog towns. They would just as soon leave you alone as bite you. We've had people step on them and not get bitten. But they will bite if they are provoked." I keep my eyes out, but what I am looking for is a ghost.

Black-footed ferrets once seemed locked in the eternal predator-prey dance with prairie dogs. But as prairie dog populations, once numbering in the hundreds of millions, were deeply reduced through poisoning and farming practices, ferret numbers too began losing ground. By the late 1970s, they were thought extinct, only a few ghost-like reported sightings making them the most endangered land mammal in North America. Then, in 1981 about 100 were discovered in Wyoming, raising a small spark of hope. A few ferrets, captured, reared in captivity, and bred, slowly nursed that hope back to life and in 1994, the Sage Creek Wilderness and Badlands National Park became the focal points of reintroduction efforts.



THE BADLANDS CONTAIN fossil beds dating from 23 to 33 million years ago. Below, Ranger Aaron Kaye explains the orientation of a partially exposed fossil skull.

The clatter of stones slipping loose...
ticking down the canyon walls.

SIDETRIP: Minuteman Missile National Historic Site

"THREE... TWO... ONE..."

After the quiet wilderness of the Badlands, thoughts of the end of the world and ballistic missiles can seem like something out of science fiction. But just off Interstate 90 (exit 131), only miles from Badlands National Park, science fiction meets reality at Minuteman Missile National Historic Site.

Established in 1999, the site consists of two units—Delta 09 (a missile silo site) and Delta 01 (the launch facility). During the height of the Cold War, nearly 500 Minuteman missile silos bristled the Great Plains, a quiver of ballistic deterrents, each capable of delivering a 1.2-megaton nuclear warhead (120 times more powerful than the bomb dropped on Hiroshima during World War II) to a target 6,300 miles away in just 30 minutes.

The Cold War is over and tensions have eased, but at Minuteman, you can tour the once-top secret facilities where the end of the world awaited only the touch of a button and the turn of a key. The visitor contact station, which features exhibits and an orientation video, is open from 8:00 a.m. to 4:30 p.m., Monday through Saturday during the summer and Monday through Friday the rest of the year.

FOR MORE INFORMATION, VISIT WWW.NPS.GOV/MIMI.

© BRUCE ECKER

BELOW GROUND SITS the former communications control console at Minuteman Missile National Historic Site, only a few miles from the Northeast entrance to Badlands National Park.

For the most part, the reintroduction has been successful—one of four species brought back since the creation of Badlands National Monument in 1939 including the bighorn sheep, the bison, and the swift fox. However, in 2008, researchers confirmed the presence of sylvatic plague in prairie-dog towns within the park, yet another threat to the prairie dogs and so to the thin strand that ties the black-footed ferret to survival.

Skirting the edge of the prairie dog town, I had stopped beneath a gnarled cottonwood at the bottom of the creek bed to savor the thin slivers of shade. Lounging in the grasses, I let my eyes slowly focus on the furrows of the gray bark, following its patterns up the trunk until the gray suddenly took on a more feathered look. I looked harder. My eyes slowly made out a trio of great-horned owls peering down from the branches, silent as the stars.

Later, I topped a rise just in time to see a dust cloud and a small herd of pronghorn on the move at its base, wild animals moving as easily as a dust devil across the prairie with undeniable grace, 60 or 70 miles an hour, heads held high, making it look effortless. "I beheld the rapidity of their flight," wrote Meriwether Lewis while watching a similar scene in 1804, "which appeared rather the rapid flight of birds than the motion of quadrupeds." It was a moment of pure movement, raw, flat-out, undiluted speed, their gait eating up the miles, the whole country zooming along with them.

I watched through my binoculars until long after the herd had been swallowed by the horizon and imagined them, out there, still running, running.

EVEN THE ROCKS, THE BARE BONES OF THE badlands, are not completely still. Camped in a small canyon on the edge of the Sage Creek basin, I listened all night to the clatter of stones slipping loose in the rain, ticking down the canyon walls. "The badlands are, in essence, melting away," a park volunteer told me on a geology walk. With temperatures that swing from -40°F in the winter to 116°F in summer, windstorms that scour the land like wind-blown sandpaper, and occasional flash floods capable of stripping soil down to the bedrock bones, the Badlands on average erode as much as an inch a year, one of the fastest eroding landscapes on Earth. "In 500,000 years, this could all be gone," the park volunteer said, waving his arm out at the distant buttes.

But that melting of buttes and cliff walls does have one advantage: Every raindrop, every flash flood, has the potential to unearth a treasure. "Because of the speed of erosion, new fossils emerge from the rocks every year," says park ranger Larry Smith, "making the park one of the world's most important sites for paleontology." The White River Badlands contain the world's richest Oligocene fossil beds, dating from 23 to 33 million years ago.

"Some people are disappointed when they find out we don't have dinosaur fossils in the park," Smith says. "This area was under a shallow sea during the age of dinosaurs."

There may not be dinosaur bones, but there are certainly surprises. In a wet spring, reports pour in of newly exposed fossils—things with names like *Archaeotherium* and *Subhyracodon*—all out there and often found first by visitors. "It is such a big park," Smith says. "We couldn't possibly find every bone ourselves. This is a place where park

HERDS OF BUFFALO and pronghorn move easily across the prairie.

Badlands National Park might be a little different the next time you visit. Park officials are in the midst of reshaping a management plan for the Badlands' South Unit, to provide a vision for the coming decades. That new vision will provide an increased profile and important leadership role for the Oglala Sioux, the tribe that calls the Badlands home. More on this significant change in a future issue of the magazine.

visitors can play a really important role in paleontology. They can be our eyes in the field."

Sometimes, those eyes spot something amazing. In June 1993, two park visitors from Los Angeles were looking for scenic spots to photograph near the Conata Picnic Area in the eastern end of the park when they noticed a bone sticking out of the ground. Because it was thought to be the fossilized backbone of an *Archaeotherium*, a pig-like creature that stood nearly six feet at the shoulder, the site was nicknamed the "Big Pig Dig." Although it was later confirmed to be the bone of a hornless rhinoceros known as a *Subhyracodon*, the Big Pig Dig would eventually unearth more than 15,000 bones from a menagerie of wild creatures—three-toed horses, turtles, saber-toothed cats, and more—before the dig was completed during the 2008 field season.

AS I SLIP INTO MY SLEEPING BAG THE LAST NIGHT of the hike, it seems I can feel the motions of this land beneath me. I glance up at the first clear night sky of my trip, a symphony of stars so close it seems I could stir them with an outstretched finger.

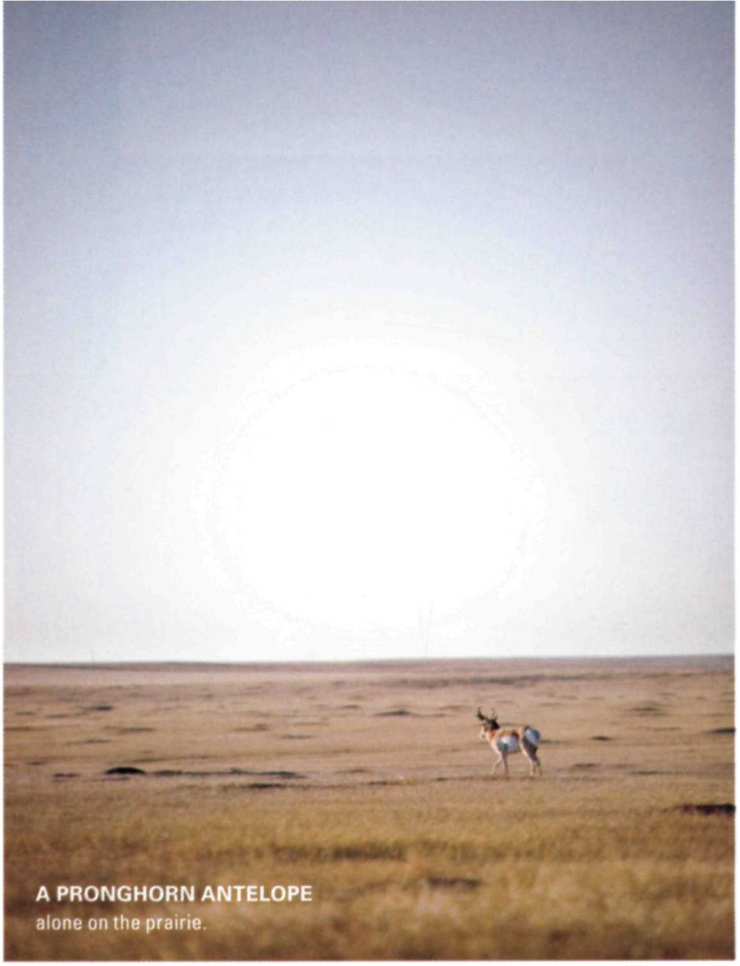
Set far from any major city, Badlands National Park, with its predominance of cloudless skies, dry air, and low light pollution, is domed by night skies that seem to shimmer with stars. "Our national parks are some of the last places in the country to still have dark night skies," volunteer astronomer Ron Kramer said at his nightly astronomy program at the Cedar Pass Campground Amphitheater a few days earlier. "Even with the naked eye, you can see galaxies 2.2 million light years distant on a good night in Badlands National Park." This was a "good night" in the Badlands. (For more on preserving the parks' wondrous night skies, see page 38.)

Like the park itself, that night sky at first seemed still. Then a meteor slashed across the field of stars, and another, and another. I thought of Ron Kramer at his interpretive talk describing the speed of the spinning Earth, the rush of our orbit around the sun, the hurtling of our galaxy through the universe, and suddenly even the sky did not seem still. It, like the landscape around me, was dancing.

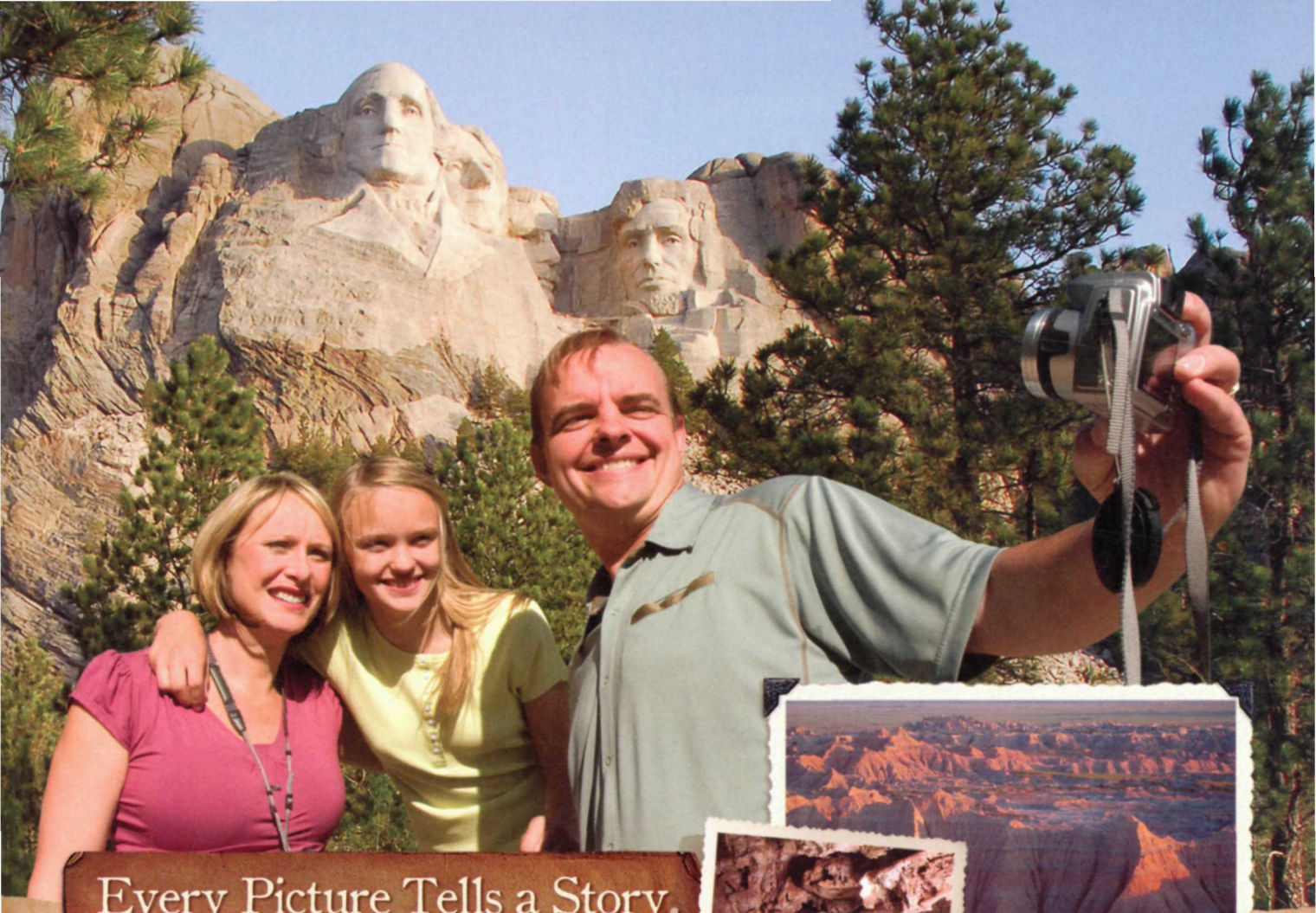
We too often think of our national parks as postcards, still shots of beautiful scenery, unchanged and unchangeable. But that can be a narrow view. We don't really preserve anything when we create a national park, not in the way we preserve something by floating it in a jar of formaldehyde on a museum shelf. We preserve only the opportunity for the processes of nature to continue. And nature, however silent, never stops. Slow down enough, look closely enough, and the smallest movement of the Badlands becomes apparent. Everything, that is, but one bull bison.

Hours pass in our stand-off. The bull shakes off the flies, even stands once, but then lies back down, set in the middle of the trail blocking my crossing of Sage Creek and the hot shower that awaits at the end of the trip just beyond. I consider shouting to get him to move or tossing a stone nearby to startle him, but I don't. Instead, I sit, waiting, content in the knowledge that even in this land of stone and stillness, if you look closely enough, wait patiently enough, everything moves, even the one lone bull buffalo blocking the way home. **NP**

Jeff Rennicke teaches literature and writing at Conserve School in Wisconsin's North Woods. His last piece for *National Parks* focused on Isle Royale.

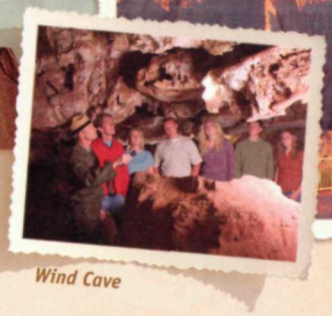


A PRONGHORN ANTELOPE
alone on the prairie.



Every Picture Tells a Story.

Badlands National Park



Wind Cave

A picture of Mount Rushmore National Memorial might be worth 1,000 words, but seeing it in person will leave you speechless. The first time you see the 60-foot granite faces, you'll be awe-struck. And every time you come back, you'll be just as inspired. Plan to see Mount Rushmore National Memorial with a vacation to South Dakota.

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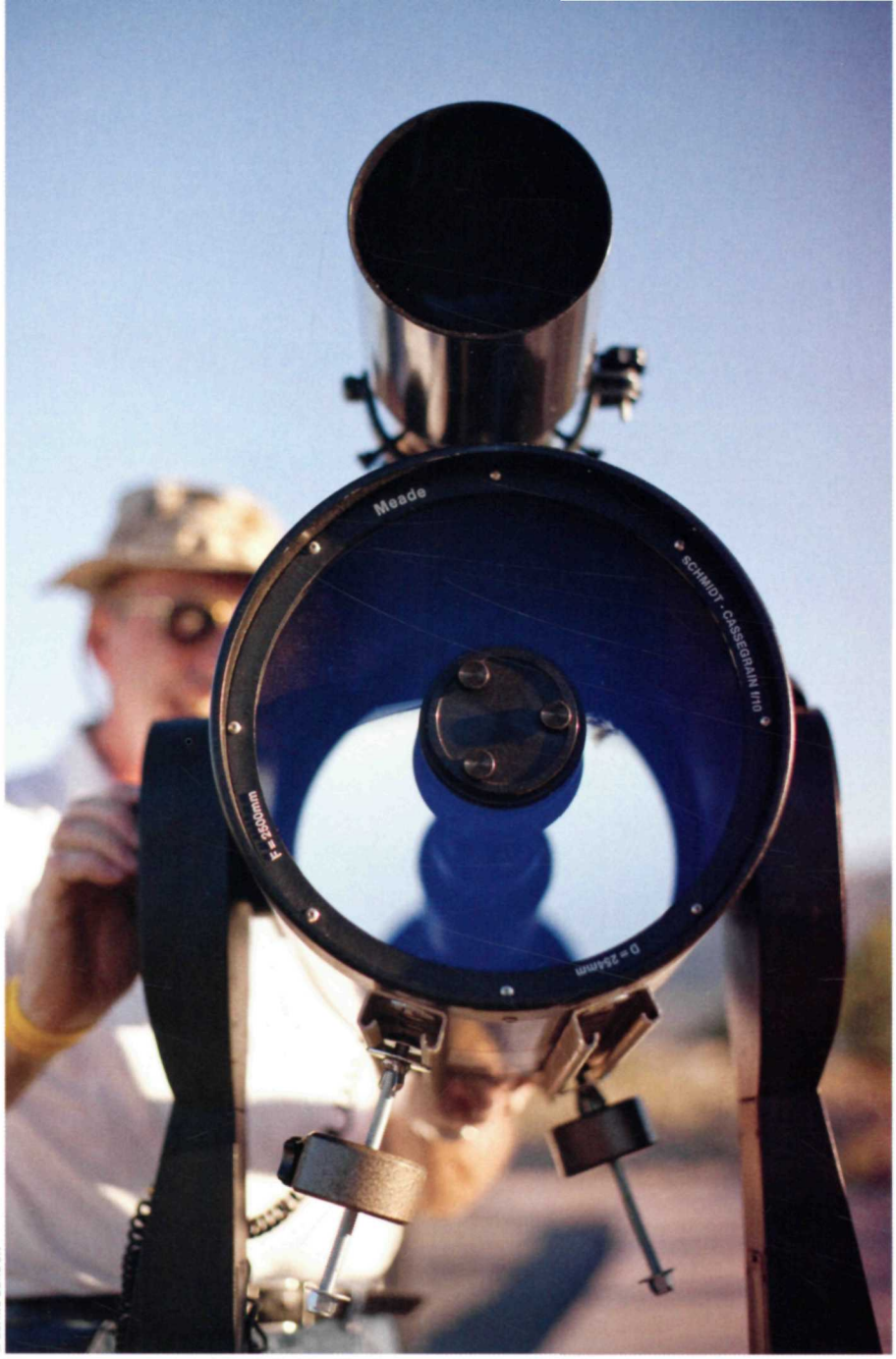
HUMANS HAVE GAZED AT starry skies, in awe, for thousands of years, but as man-made light spills into the darkest hours of the night, it's getting harder to catch a glimpse of our galaxy. Can national parks preserve the experience?

fading *fast*

BY ANNE MINARD

PARK VISITORS STARGAZE in Great Basin National Park, Nevada.



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ADJUSTING A TELESCOPE for a star-watching party in Great Basin National Park.

For most of his life, Gordon Gower has been aiming telescopes at the night sky and has watched light pollution steadily obscure his clear view of the stars.

"I grew up in a city of 100,000 people in south Texas, and I could pick out constellations in my backyard," he says. "But these days, fewer than 20 percent of Americans can see the Milky Way from their own homes."

That's a travesty, he says—but we can do something about it.

Gower, a visitor-use specialist at Natural Bridges National Monument in Utah—which boasts one of the darkest night skies in the country—is also the park's unofficial "dark sky ranger," pointing out planets and constellations to eager nighttime crowds.

Natural Bridges isn't the only park encouraging people to stargaze. From night-sky festivals in Acadia National Park to Star Wars-themed programs in Bryce Canyon National Monument, parks across the country are reintroducing visitors to the wonders of the universe. But dark skies offer more than the chance to connect with something bigger than ourselves. They're a precious resource that affects some very Earthly matters, too, like the natural rhythms of wildlife and the health and well-being of humans.

STARRY REFUGES

National parks have emerged as celestial oases—the last places in America where people can experience a truly dark sky. And there's a growing sense that protecting these nighttime vistas is every bit as important as protecting Yellowstone's bison or Everglades' wetlands.

"It's our job," says Chad Moore, who has been heading up the Park Service's Night Sky Team for the past decade. "We want people to know the Park Service really cares about this stuff, and we guard night skies the same way we would elk in Rocky Mountain National Park or wolves in Yellowstone."

But the reality outside park boundaries is different. Satellite maps of the United States show an eastern seaboard lit up like a Christmas tree every night. The West shows darker areas, but skies over even remote places have been getting brighter as the U.S. population grows.

Cities like Phoenix and Las Vegas cast domes of light as far as several hundred miles away; anyone within that range is forced to peer through a glow that obscures the heavens beyond. These days, they're lucky to spot the Big Dipper.

Astronomers were the first to sound the alarm on light pollution, but the issue goes deeper than stargazing alone. On a basic level, Gower says, people lose something when they're cut off from views into the universe.

"We are the first generation in the recorded history of the human race that's lost our

connection with the night sky," he says. "Dark skies are our heritage. When we cut ourselves off from our heritage, we lose our roots—and to some degree, our healthiness. I think there's a peacefulness that comes from being tied to nature and keeping a perspective that's bigger than who's on 'American Idol.'"

Recent studies by Richard Stevens, a University of Connecticut epidemiologist, show a possible correlation between increased prostate and breast cancers and areas with high levels of artificial light. For the same reasons, the American Medical Association is advocating for light-pollution control and glare-reduction efforts around the country.

Wildlife suffers, too. Insects are lured to their deaths when artificial lights make them more visible to predators and easier to hunt. Owls and songbirds that migrate in the night collide with buildings, attracted by the man-made glare. Reptiles shy away from artificial lighting, which limits where they can forage for food. Sea turtle mothers and their hatchlings become disoriented by the glow of lights from beach communities, setting off on the wrong course as a result. If national parks are to remain refuges for wild species, Moore says, they must address the effects of light pollution on those residents.

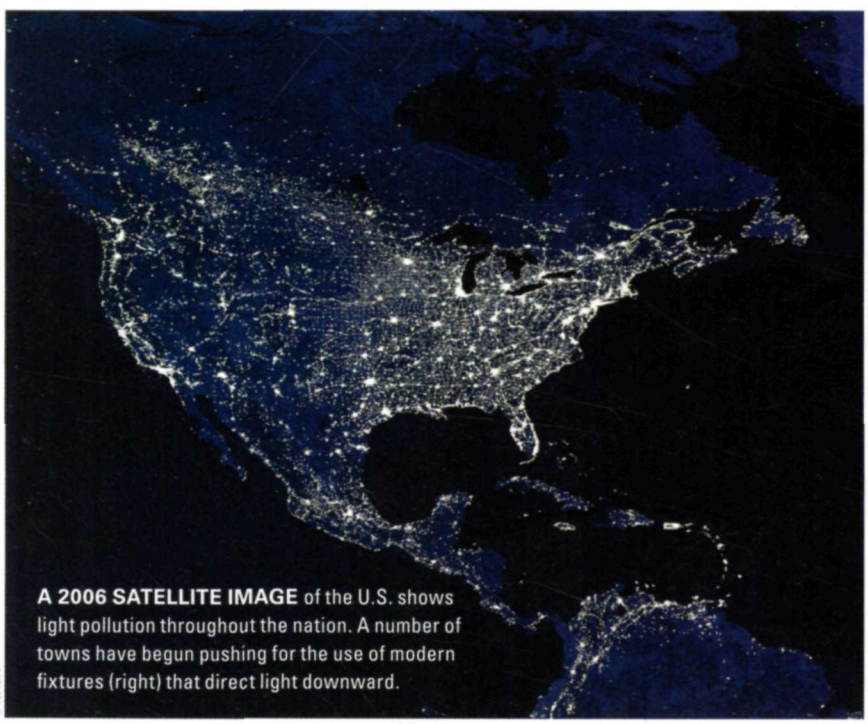
SHEDDING LIGHT

In 1999, Moore and the Night Sky Team began tracking night skies over America's parks. Since then, they've logged data from 64 parks, using specialized digital cameras that capture 360-degree views. Custom software measures grayness levels that set a baseline for the quality of the night skies. Meanwhile, they've begun posting the inventory data on a website—www.nature.nps.gov/air/lightscapes—to increase public awareness.

Eventually, Moore and his team hope to track the glow of park skies over a period of time, so they can begin to understand the changes. So far, there are no plans to track the change in light pollution over the parks; the efforts are still in the inventory phase. Moore says the program has subsisted on grants for 10 years, but funding is running out.

Thankfully, the Tucson, Arizona-based International Dark-Sky Association (IDA) is aiming to pick up where the Park Service survey left off. IDA secured a National Science Foundation grant in 2009 to set up 10 solar-powered dark-sky cameras in environmentally sensitive areas around the world. Five of those

"Dark skies offer more than the chance to connect with something bigger than ourselves. They're a precious resource that affects... the natural rhythms of wildlife and the health and well-being of humans."



A 2006 SATELLITE IMAGE of the U.S. shows light pollution throughout the nation. A number of towns have begun pushing for the use of modern fixtures (right) that direct light downward.

NASA

© JOHN FRANCIS ILLUSTRATION

cameras have been built and are being tested, and IDA hopes to have up to 25 cameras recording data by the fall of 2011 in locations that range from Canada to Britain to national parks in the United States. The resulting data will provide the first continuous measurements of the world's light pollution.

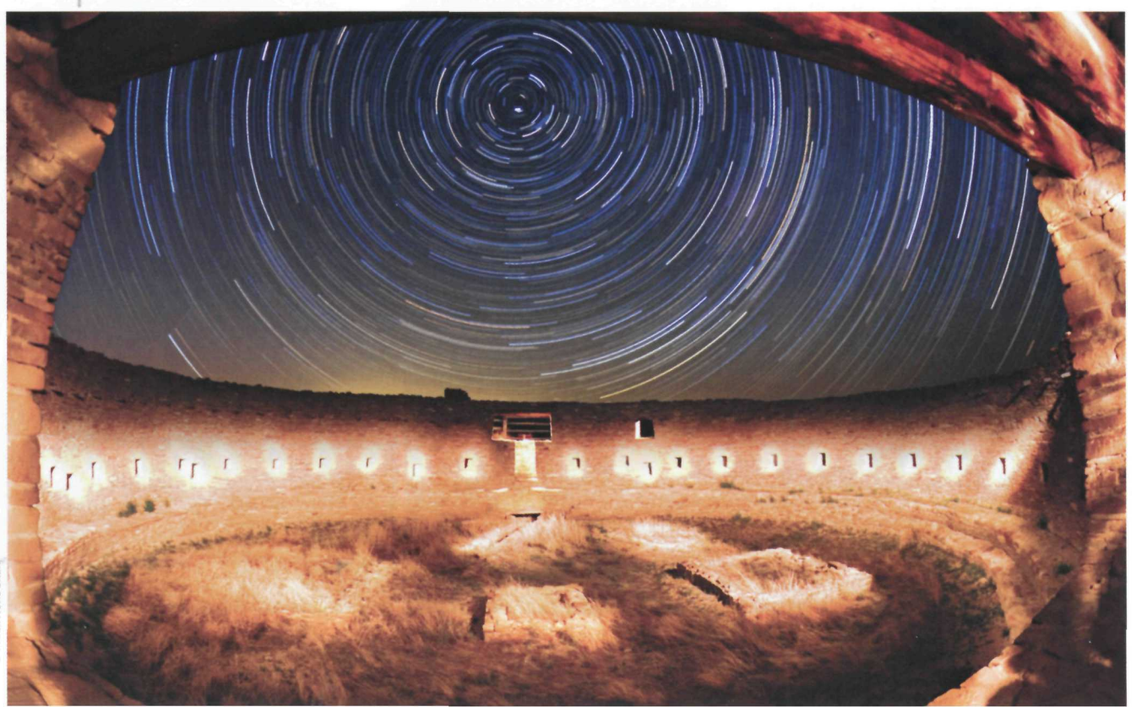
STAR PARTIES

Since 2005, roughly 60 interpreters have participated in the Park Service's Night Sky Program in locations like Bryce Canyon, Death Valley, and Badlands National Park. Rangers learn how to use telescopes, teach basic astronomy, lead effective constellation tours that weave in cultural and historic perspectives, and "communicate the message of light pollution without bumming people out," Moore says. As a result, visitors are going on bat walks at Pinnacles National Monument in California and Carlsbad Caverns National Park in New Mexico, attending night-skies talks by the "dark rangers" at Bryce Canyon National Park in Utah, and witnessing an annual night-sky festival at Acadia National Park in Maine—an event so popular last year that visitors had to wait in hour-long lines at the telescopes.

"In numerous parks, especially in the Southwest, stargazing is the most popular ranger-led activity," Moore says. "Visitors will ask about the best places to stargaze, but they aren't amateur astronomers. They're just parents who want their kids to be inspired by the cosmos just like they were."

Even NASA employees are getting involved. Take Jane Houston Jones: By day, she's a spokesperson for NASA's Cassini Program, which operates a spacecraft orbiting Saturn and its moons. By night, she's an "urban guerilla astronomer," enticing random passersby on city streets and inside national parks to peer through her telescope. She's spent countless weekends in parks like Yosemite, Death Valley, Crater Lake, Bryce Canyon, and the Grand Canyon.

"Even the astronomers get lumps in their throats when they look up and see bunches and bunches of stars."



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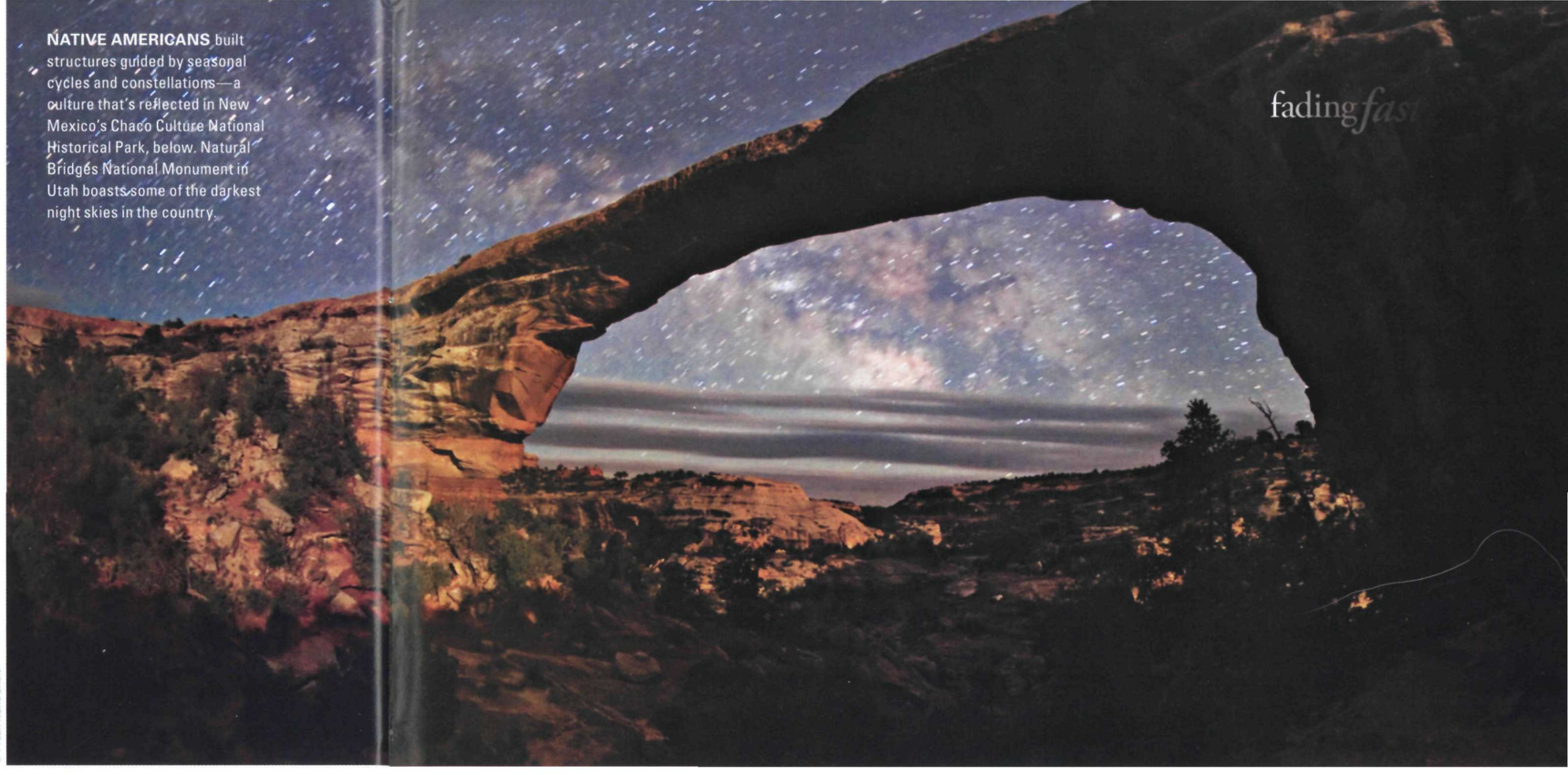

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NATIVE AMERICANS built structures guided by seasonal cycles and constellations—a culture that's reflected in New Mexico's Chaco Culture National Historical Park, below. Natural Bridges National Monument in Utah boasts some of the darkest night skies in the country.

To Jones, it's like a religion. "People will look up and say, 'Oh no, there are clouds! Does that mean it's a bad night for viewing?'" she says. "And we say, 'Actually, those clouds are our galaxy, the Milky Way.' And then there's just this shock, this amazement. Even the astronomers get lumps in their throats when they look up and see bunches and bunches of stars."

A CALL TO ACTION

Outside the parks, Americans can help preserve night skies, starting with their homes. "There are a lot of big environmental issues that I can't control," Gower says. "But with light pollution, I can make a difference at my own house, tonight."

Moore says Americans could cut roughly 2 percent of their power use by aiming and shielding outdoor lights so they point down instead of up, using slightly dimmer outdoor lamps, and turning lights off when they're not needed or installing motion sensors. Two percent might not sound like much, but in the end, it amounts to about 44 million metric tons of carbon dioxide.

Despite its small size, Natural Bridges has made some big impacts of its own. The park was designated the world's first International Dark-Sky Park in 2007, thanks to a complete overhaul of its lighting system, which included improving the aim of exterior lighting and putting other lights on timers that switch off after bedtime. The impact on the night sky wasn't dramatic, because the park's lights were relatively insignificant in relation to the wide, dark sky above them, but there's no mistaking that those efforts have made a difference for park staff who live in and around Natural Bridges.

"If somebody accidentally leaves on their porch light all night long," says Park Superintendent Corky Hays, "chances are that somebody will come by and mention it to them. The level of awareness has increased among us."

In Big Bend National Park in western Texas, where the Milky Way shimmers over the park in intricate detail, people notice when something's interfering with the view. In fact, early efforts to revamp inefficient lighting at Big Bend have been so popular that visitors are pressuring park staff to finish the job: Once the lights around park headquarters and the visitor center were replaced with high-efficiency LED fixtures, park visitors started complaining about bright lights around the park's lodge and dining area that hadn't been updated or replaced.

Grand Canyon National Park, Lava Beds National Monument, and Great Basin National Park are also seeking dark-sky designations—a distinction that serves to draw stargazing tourists and enhance awareness about night skies—awarded by the International Dark-Sky Association. Some of these have launched lighting inventories as a starting point.

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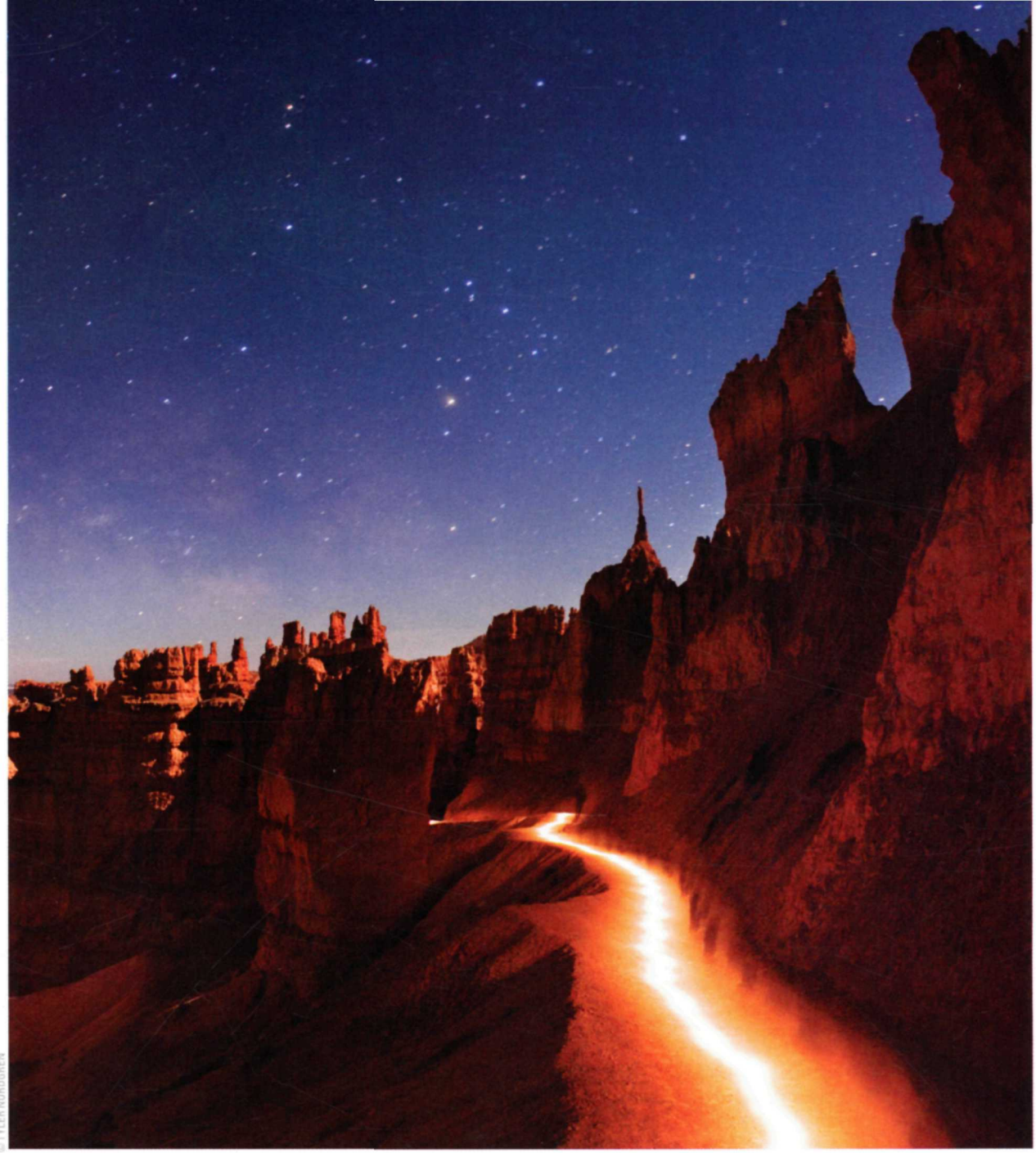

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"If somebody accidentally leaves on their porch light all night long [at Natural Bridges], chances are that somebody will come by and mention it to them."

The designation fosters a sense of pride not just inside park boundaries but in surrounding communities, often prompting them to join forces. Four towns near Acadia collaborate regularly with the Park Service on lighting ordinances that protect the night sky. Tucson, Arizona, has enforced strict lighting codes largely for the benefit of astronomers at several professional observatories there, and nearby Saguaro National Park is darker because of it. Flagstaff, Arizona—a hot spot for astronomy in its own right—was crowned the world's first International Dark-Sky City in 2001. The Grand Canyon, just 75 miles north of Flagstaff, boasts a beautiful night sky, though it's not as pristine as the one at Natural Bridges because of a glow from Las Vegas, 200 miles away.

"We don't go a day without hearing about a community that has passed a new lighting ordinance," says Kim Patten, programs director for IDA. "We've

tried to keep up with statewide lighting ordinances, but we cannot keep up with the lighting ordinances in every small community." She estimates that cities and townships have established 2,500 local ordinances since dark-skies efforts began.

As for Chad Moore, his quest for dark skies is partly personal, but his hopes of preserving them extend much farther.

"I find perspective in my life when I wander out and look at the night sky and realize that the things I'm fretting about aren't that important," he says. "As a civilization, we learn more about ourselves when we look beyond our horizons." **NP**

Anne Minard is a freelance writer and Ted Scripps Fellow in Environmental Journalism at the University of Colorado in Boulder.

VISITORS CAN PARTICIPATE in organized stargazing events in Bryce Canyon National Park (left) and Canyonlands National Park in Utah.

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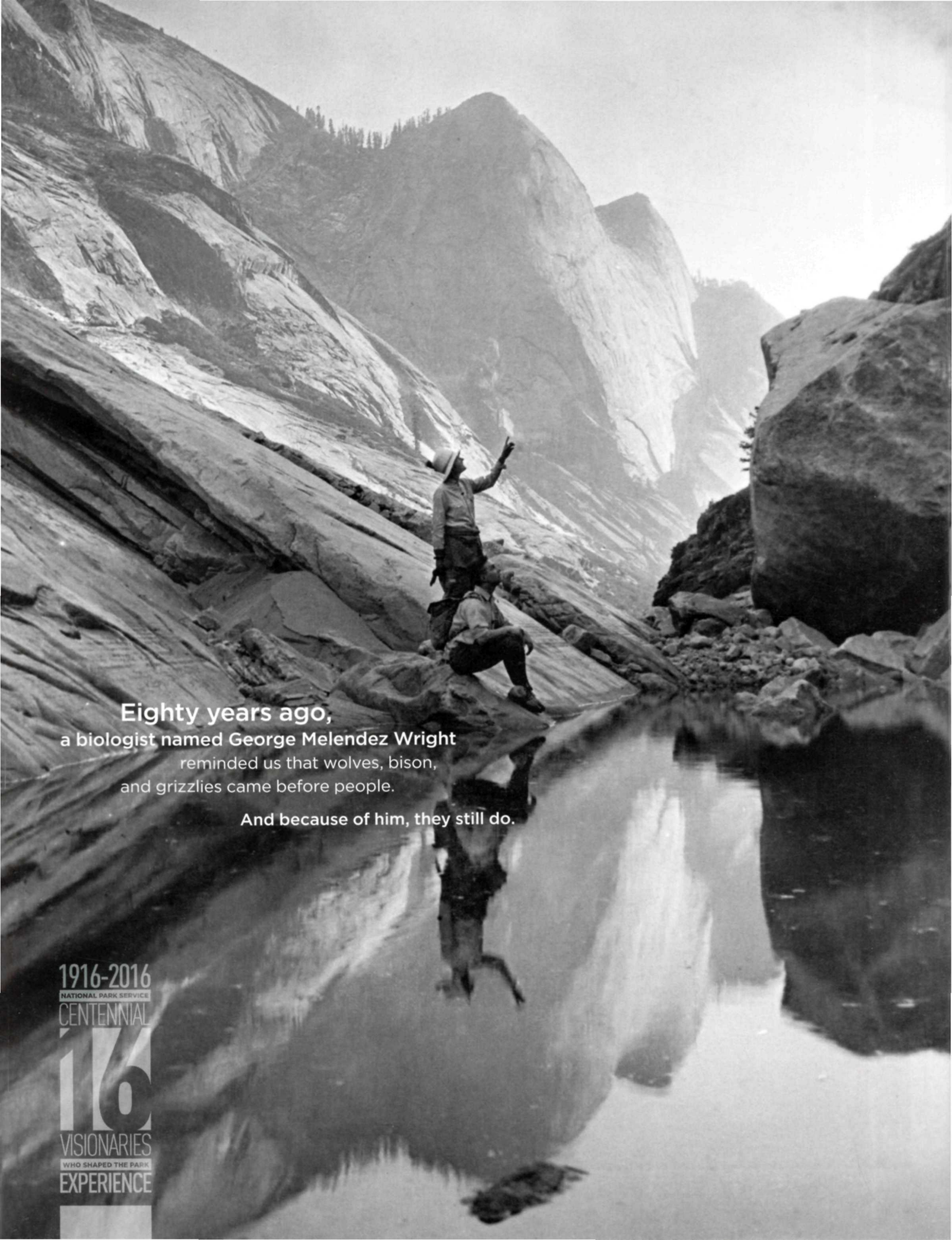

Eighty years ago,
a biologist named George Melendez Wright
reminded us that wolves, bison,
and grizzlies came before people.
And because of him, they still do.
1916-2016
NATIONAL PARK SERVICE
CENTENNIAL
16
VISIONARIES
WHO SHAPED THE PARK
EXPERIENCE

CALL OF THE WILD

BY MIKE THOMAS **"Last summer for the first time** two grizzly cubs became tame and were fed by hand around Old Faithful," wildlife biologist George Melendez Wright wrote in mid-May of 1932. "This will not do and must be stopped before it is well started or the bear problem will be worse than ever."

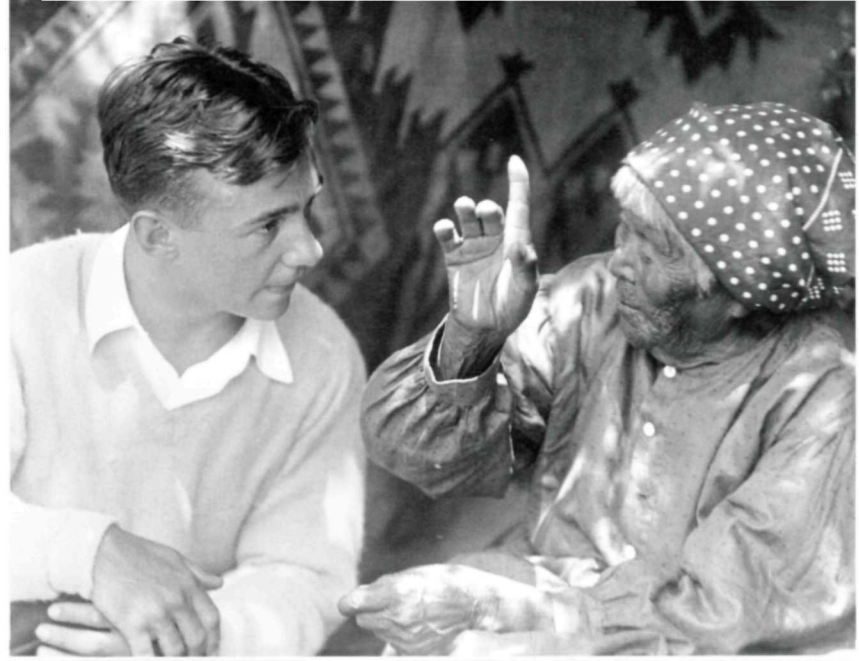
GEORGE WRIGHT AND HIS WIFE, Bee, in Yosemite Valley in the early 1930s.

A PAGE TORN FROM Wright's field notes (above) taken in Yosemite, and a grizzly—one of many species viewed in a different light when Wright began working for the Park Service.

OPPOSITE: COURTESY OF PAMELA WRIGHT LLOYD. THIS PAGE: GRIZZLY: © MICHIO HOSHINO/MINDEN PICTURES; JOURNAL: COURTESY OF THE MUSEUM OF VERTEBRATE ZOOLOGY, UNIVERSITY OF CALIFORNIA, BERKELEY

Year after year, bears—black and grizzly—were treated like pets and circus attractions in America's national parks. They ate from the hands of camera-toting tourists, snared fish from artificially stocked streams, and were allowed to rummage through trash dumps while spectators gawked. "It takes time to teach the visitors to our national parks that they are the ones who are short-sighted in feeding candy to a bear," Wright went on. "After all, the average citizen expects more intelligence from a bear than he, as an educated person, has any right to expect. He goes on the assumption that if he feeds a bear two sticks of candy and does not want to give it a third, he is the one to say, 'No, no.' And he believes that the bear is to be accused of an unforgivable breach of etiquette and lack of appreciation… if it takes all the candy out of his hand and takes the hand with it, perhaps."

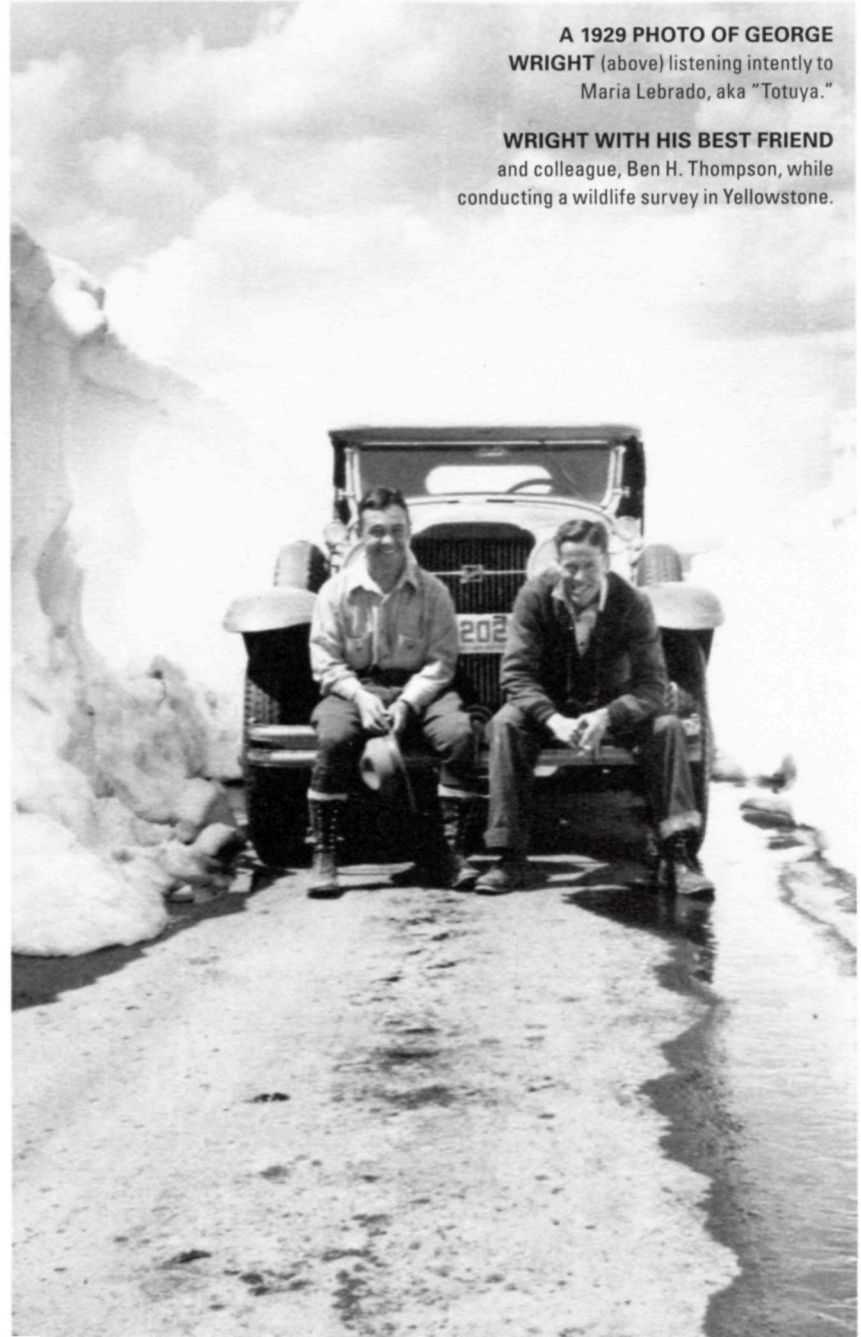
Besides the bear-coddling, elk, deer, and bison were provided winter forage in some national parks, and the animals that preyed upon them—including wolves and cougars—were routinely shot to preserve grazing herds for the sightseeing masses. Wright, though, knew it was wrong. The feeding, the shooting—all of it. The parks, he emphasized throughout his decade-long career with the Park Service, should be allowed to exist "unimpaired." For "the unique charm of the animals in a national park lies in their wildness, not their tameness," he believed, "in their primitive struggle to survive rather than the fat certainty of an easy living."



COURTESY OF PAMELA WRIGHT LLOYD

A 1929 PHOTO OF GEORGE WRIGHT (above) listening intently to Maria Lebrado, aka "Totuya."

WRIGHT WITH HIS BEST FRIEND and colleague, Ben H. Thompson, while conducting a wildlife survey in Yellowstone.



COURTESY OF PAMELA WRIGHT LLOYD

"THE UNIQUE CHARM OF THE ANIMALS IN A NATIONAL PARK LIES IN THEIR WILDNESS, NOT THEIR TAMENESS."

The well-born son of a prosperous American sea captain father and a politically connected El Salvadoran mother, both of whom had died by the time he turned eight, Wright was taken early on with things natural and, in particular, ornithological. As a young boy living with his adoptive aunt, Cordelia Ward Wright (whom he called "Auntie"), in San Francisco, he was transfixed by all manner of bird species that visited his backyard on Laguna Street and soared overhead and nested in surrounding wilderness. Song sparrows and green-backed goldfinches, yellow warblers and red-breasted nuthatches. "He was given a lot of free rein to cruise around and explore parts of San Francisco that were still fairly wild back then," says Wright's daughter, Pamela Wright Lloyd, a respected environmentalist in the Bay area.

As a boy scout, Wright taught natural history at summer camp. As a senior at Lowell High School, he helmed the Audubon Club. And so his love of the natural world expanded. In college at the University of California, Berkeley, Wright studied with famed wildlife biologist Joseph Grinnell, who was then director of the university's Museum of Vertebrate Zoology. Even summer breaks were spent exploring and learning, with treks into the West Coast backcountry and a stint as a natural history instructor with the Sierra Club. When he graduated in 1925, Wright became Grinnell's field assistant at Mt. McKinley National Park (later renamed Denali); his Park Service employment began with a two-year assignment at Yosemite in 1927. He was one of the first Latinos ever employed by the Park Service.

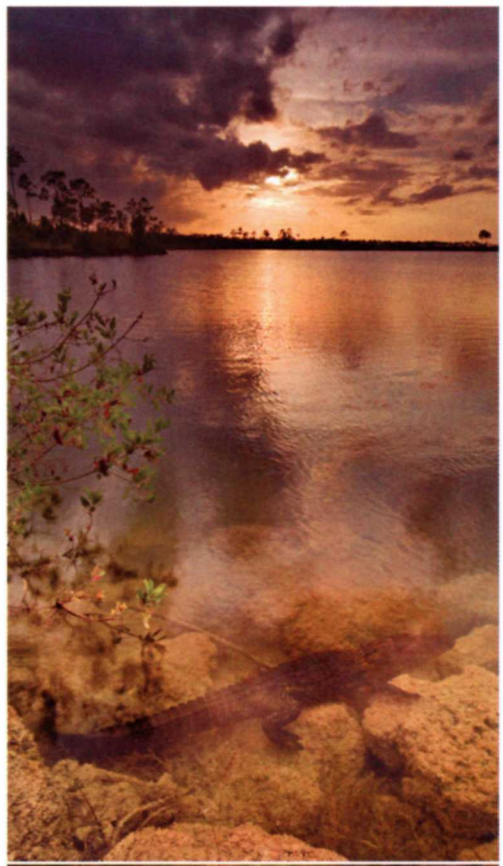
AHEAD OF HIS TIME

Considering the generally unenlightened conservation mindset of the day, which valued showmanship over science, Wright was a bright light in the darkness. "He had an ecological world view at a time when the science of ecology was just getting off the ground in the 1920s in the United States," says David Harmon, executive director of the George Wright Society. "What he was learning in the field in places like Mt. McKinley and the big Western parks of Yosemite and Yellowstone, he was trying to get the Park Service to apply on a system-wide basis. He was the kind of person who could look at a very broad picture and see things the way they ought to be rather than the way they were."

Handsome and dark-haired, the highly personable Wright had a great presence that eclipsed his small stature (five feet, four inches). "He was not one of those overbearing guys with a Napoleon syndrome," Harmon says, "but he usually got what he wanted." That doggedness was matched by his devotion to rock-solid ideals and the work at hand. "His observations were intense, but always [made] with pleasure," Ben Thompson, Wright's research partner and close friend, recalled in 1987. "At night, he was very self-disciplined about writing his notes. When you're by a campfire, and maybe you're tired, and it's cold and damp, it takes self-discipline to make yourself write those notes. He was very conscientious about that."

Despite his seriousness of purpose, the crusading biologist's sense of humor was a constant in work and play. Just before his Park Service employment, when he was

THE EVERGLADES WAS ONE of the first parks to be created primarily for the sake of wildlife species, an idea that Wright championed early on. He also fought for the survival of trumpeter swans (bottom) in Western parks and wildlife preserves.



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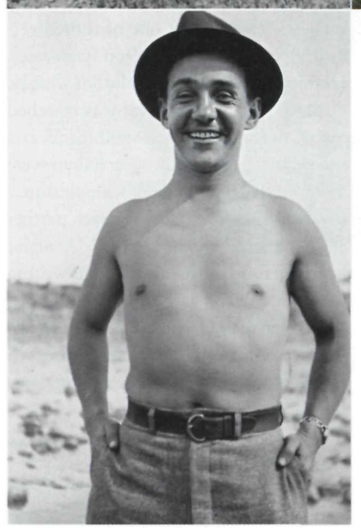
"HE WAS SERIOUS AND COMMITTED, BUT HE ENJOYED LIFE."

toiling at Yellowstone in the mid-1920s, he recorded more than scientific observations in a journal. "While cooking supper in the dark I made the grave mistake of warming the peas in a pot containing our dish rag and washing soap. We could not make a go of the soapy peas—quite impossible to keep them on the knife."

"He was serious and committed, but he enjoyed life," says Pamela Wright Lloyd. "You can almost see it in the pictures of [him] smiling."

Almost a year after his beloved Auntie died, in 1929, Wright gained approval from the newly installed Park Service director, Horace M. Albright, to establish a wildlife survey office and a wildlife biology division. The chief goal: to collect a wealth of scientific data about park lands and the flora and fauna that called them home. It helped immensely that the well-off but not wealthy Wright offered to absorb all costs. (He had inherited a significant sum of money when his mother and father died, though it is unclear how much.) In addition to covering research materials and the wages of his colleagues, fellow Berkeley grads Ben Thompson and Joseph Dixon, Wright's largesse paid for a customized Buick Roadster. The vehicle had a truck bed in back for camping gear and a watertight compartment for camera equipment, books, and other weather-sensitive essentials. Wright funded his own work for two years, after which the Park Service began covering some, and then all, of his expenses.

Although Wright's efforts were championed by director Albright, Harmon doubts the survey work would have been greenlighted if not for Wright's willingness to provide start-up capital. Writer and documentary filmmaker Dayton Duncan, who



PHOTOS COURTESY PAMELA WRIGHT LLOYD

collaborated with Ken Burns on the recent PBS documentary *The National Parks: America's Best Idea*, agrees. "Other people had been suggesting this kind of [survey] off and on," Duncan says. "It wasn't a totally new idea that scientists ought to study what's going on with wildlife and plant life in the national parks. But it wasn't a very big priority for the Park Service at the time. [Wright] brought two very important, essential ingredients to the proposal. One was his enthusiasm; the second was his wealth."

While roaming the West, Southwest, and along the California coast near his home in Berkeley, Wright also met and married Bernice Ray (a.k.a. "Bee"). From 1931 to 1933, she often accompanied him on outings—to the riverbanks of Yellowstone, the valleys

WRIGHT HOPED THAT grizzlies could flourish in the wild landscapes of every national park, even if it meant reducing access to visitors.

© THOMAS D. MANGELSEN

of Yosemite, and elsewhere—before settling into motherhood with one daughter and then another. Shortly after they wed, Wright penned this journal passage in Carlsbad, New Mexico: "I fight strongly against the natural inclination to interpret the actions of other animal species in terms of human emotions. But I could not watch the two mated pairs of Mearns Quail… for very long without being convinced that here were the perfect lovers. They were constantly together."

During protracted stints in the outdoors and long days hiking up to 20 miles in the field, Wright and his cohorts observed an array of park species and learned how wildlife was adversely affected by Park Service practices. Although in many cases it must have been difficult to stand idly by, they never intervened. Wright also met with many people who lived on and made use of park lands, including Native Americans, ranchers, and hunters. The first-hand accounts were crucial in deepening his understanding of how humans and animals interacted. In one especially evocative photograph, taken the summer before his Roadster tour began, Wright is shown conversing with Maria Lebrado (a.k.a. Totuya). Said to be the last Indian to live in Yosemite before Europeans arrived, she is gesturing, perhaps explaining or elaborating on something. Wright, meanwhile, is still and focused. His one hand curled over the other, he is looking her square in the eyes, rapt. Her words, like those of all the other people he encountered, carried considerable weight.

Not long after his illuminating wanderings, in May of 1932, some of Wright's notes and raw data from three seasons in the field were published in the first of two detailed overviews dubbed *Fauna of the National Parks of the United States: A Preliminary Survey of Faunal Relations in National Parks.* Volume two was published in 1935.

"The park faunas face immediate danger of losing their original character and composition unless the tide can be turned," Wright remarked in the first volume. "The vital significance of wildlife to the whole national park idea emphasizes the necessity for prompt action. The logical course is a program of complete investigation, to be followed by appropriate administrative action."

WRIGHT WOULD HAVE BEEN THRILLED to see wolves return to Yellowstone in 1995.

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LEAVING A LEGACY

Having proved his mettle in the field, Wright rose rapidly within Park Service ranks. Some believe he was on track to become director. Indeed, in 1935, Wright and his young family moved to Washington, D.C., where he was farther from the wilds but closer to policy-making power brokers. He would not become one of them. The following February, Wright was returning home after several days of field exploration with Mexican park officials at what would become Big Bend National Park when his vehicle was struck head-on by another car that had blown a tire. His fellow passenger, Yellowstone Superintendent Roger Toll, was killed instantly, as was the driver of the other car. Wright died in the hospital; he was 31.

With his passing, the Park Service reverted to its old ways—to valuing style over substance, scenery over science. Perhaps most tellingly, the staff of 27 that Wright had supervised was reduced to nine and eventually dwindled to six. His "charisma," Harmon says, "was probably also the glue that held the whole program together. He had some very able guys who were working with him, but they were really scientists and not charismatic leaders. And so once he was gone, without that kind of figure in the Park Service, there just wasn't enough traction with the wildlife program and the science program—they needed a champion within the agency, somebody whose personality was as big as Albright's, to get in the same room with him and argue for the continuance of the science program. And there just wasn't anybody like that."

"OUR GREATEST NATIONAL HERITAGE IS NATURE ITSELF."

The first volume of *Fauna of the National Parks* remained an inspirational guide for the handful of biologists who stayed, but a quarter-century passed before Wright's pioneering views were again reflected in the parks' ecological practices.

An influential 1963 report, titled *Wildlife Management in the National Parks*, was spearheaded by conservationist A. Starker Leopold (oldest son of Aldo Leopold) and submitted to Secretary of the Interior Stewart Udall. Its Wrightian overtones were clear and numerous. Management of the parks, it argued, should be science-based. And this: "A reasonable illusion of primitive America could be recreated, using the utmost in skill, judgment, and ecologic sensitivity. This, in our opinion, should be the objective of every national park and monument." Wright's viewpoints also were reflected in the work of Robert M. Linn, former Park Service chief scientist, who would later found the George Wright Society. During his tenure in the '60s and '70s, he pushed for scientific management of the parks. Moreover, starting in the late '60s, he brought aboard a team of young researchers to bolster his efforts. And in 1970, after years of providing all-hours noshing for bears, Yellowstone's garbage dumps were shut down for good.

Not quite four decades after Wright's philosophy crept back into vogue, on the 20th anniversary of the George Wright Society, in the year 2000, Harmon summarized Wright's sweeping impact in a celebratory essay. "Wright not only set in [motion] the entire scientific and natural resource management program of the National Park Service," Harmon wrote, "he shone a beacon in the direction park management must go if it is to be up to the task of truly preserving the parks 'unimpaired' for the future."

Duncan regards Wright as a heroic figure on par with civil rights leader Dr. Martin Luther King, Jr. Just as King's teachings broadened our understanding of the words "all men are created equal," he says, Wright did something "equal to that" with the national parks notion by reminding us "what the national parks are supposed to be and what they're supposed to protect."

As Wright himself once put it, "Our national heritage is richer than just scenic features. The realization is coming that perhaps our greatest national heritage is nature itself, with all its complexity and its abundance of life, which, when combined with great scenic beauty as it is in the national parks, becomes of unlimited value." **NP**

Mike Thomas is a staff writer for the *Chicago Sun-Times*. His last piece for *National Parks* detailed the history of San Antonio's missions.

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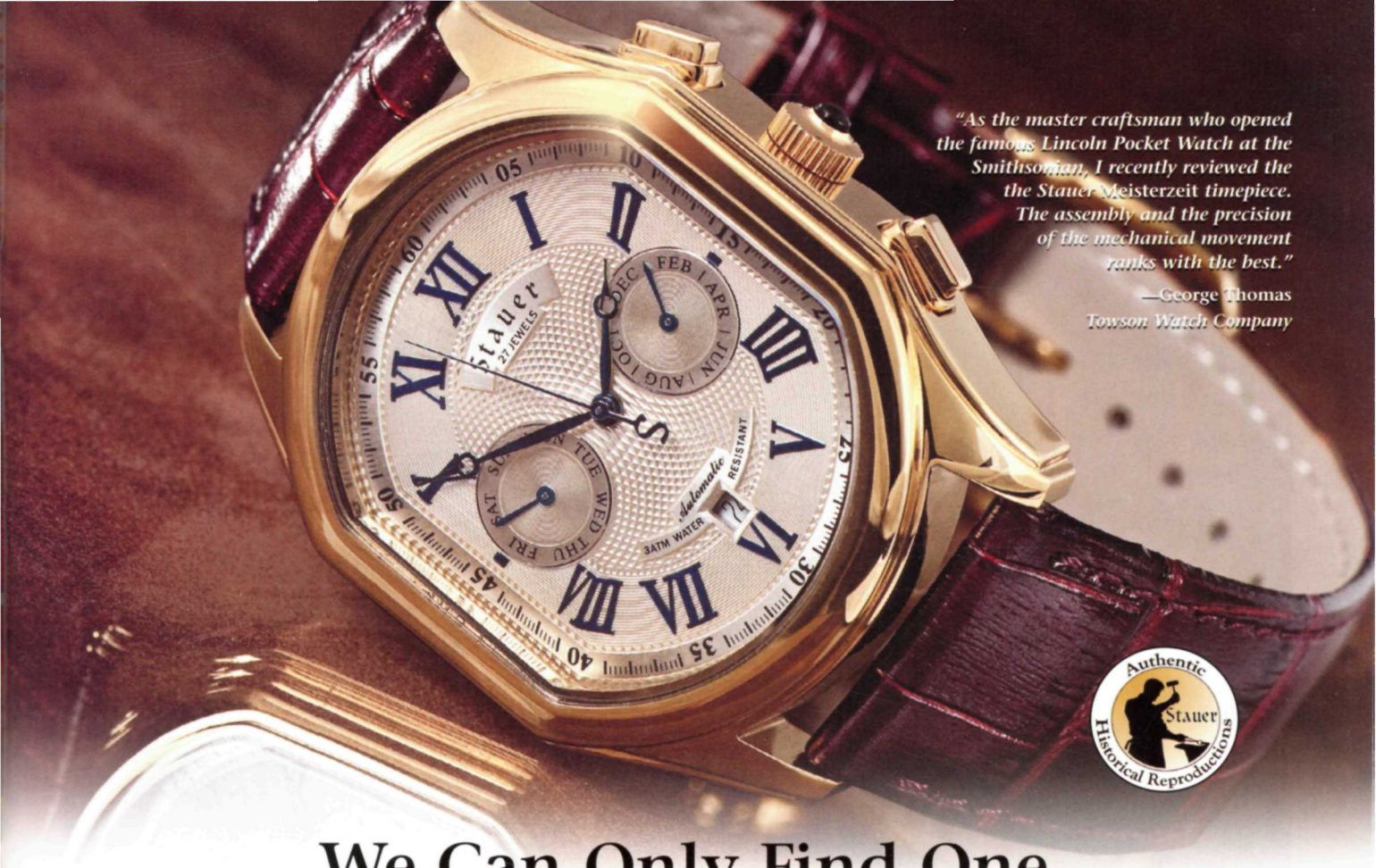

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THE LIBRARY at James A. Garfield National Historic Site contains books from Garfield's college days.

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An Early Exit

President James Garfield was in office only 6 months, but his home outside Cleveland, Ohio, tells the story of man with great promise.

If you were placed before a police line-up that included Rutherford B. Hayes, Chester A. Arthur, Benjamin Harrison, and James Garfield, odds are you'd struggle to pick out our 20th president from the lot. But then, you wouldn't be alone. Todd Arrington, chief of Interpretation and Education at James A. Garfield National Historic Site in Mentor, Ohio, admits that before he started working at the home, he lumped Garfield into that parade of "white guys with beards" who followed Abraham Lincoln into office at the end of the 19th century. Garfield's presidency lasted only 200 days, which is a big reason for his lack of notoriety, but he came to office at a crucial time in our nation's history.

Garfield was the last president to be born in a log cabin and the fifth child born to Eliza Ballou Garfield; his father died when he was only 17 months old. "Growing up poor, with a single mother trying to raise him and his siblings, Garfield had a hard-scrabble childhood," says Arrington. "He had little education, worked hard, and dreamed of escaping his circumstances and becoming a sailor, which is unusual in a state like Ohio." At 16, Garfield left home and worked on the canals connecting Lake Erie to cities along its coast, guiding boats pulled by draft animals—one of the preferred methods of transporting goods from town to town. But Garfield, who had never learned to swim, often found himself flailing about in the dirty and disease-ridden waterways. He almost drowned several times, and eventually contracted a serious illness (likely malaria), which forced him to return home. His mother nursed him back to health and encouraged him to give up the waterways and pursue an education. So Garfield studied history, law, mathematics, geology, geography, and several languages; many of the books he read are still at the Mentor home today. He went on to teach at the Western Reserve Eclectic Institute (now Hiram College), and became its president at

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PRESIDENT GARFIELD was shot twice by an assassin, but his doctors ulimately did even more harm.

the age of 27. His political career began in 1859, when he was elected to serve as a state senator.

Then came the Civil War. Thanks to his education, political connections, and position at the Eclectic, Garfield was able to raise a regiment of soldiers (roughly 1,000 men) to serve in the Union army, and thus earn an appointment as a commanding officer. He led forces at the Battle of Middle Creek in Kentucky and fought at Chickamauga in Georgia—also a national park unit.

When one of Ohio's seats in the U.S. House of Representatives became vacant, legend has it that President Lincoln singled out Garfield, insisting that he had enough generals in the field, but needed more support in the halls of Congress. In December, 1863, Garfield resigned his commission, and headed to Capitol Hill, where he remained until he became an unlikely presidential candidate.

More than a hundred years ago, presidential candidates weren't selected with a series of highly contested primaries throughout the nation—they were chosen by a few dozen delegates who gathered in a room for an evening. But in June 1880, when the Republicans convened in Chicago to make their selection, a stalemate between two wings of the party (the more radical "Stalwarts" and the moderates or "Half-Breeds") brought 35 votes and no winner. Finally, on the 36th ballot, a compromise was hatched, and the moderate Garfield was chosen to represent his party, although he had never considered himself a serious contender.

"By the time Garfield returned home from the Republican convention, reporters were already camped out on his lawn, and citizens were coming from everywhere to find out about this man who was suddenly a nominee for president," says Arrington. "For the next several months, between 17,000 and 20,000 people came to Mentor, Ohio, to hear him speak. Today, if you want to learn more about a candidate, you go online or you watch a cable news network, but back then, you either read partisan newspapers or found out for yourself." For weeks, Garfield stood on his porch and gave speeches to iron and steel workers, German Republicans, African-American Civil War veterans, young voters, and women's groups, fashioning the first-ever "front-porch" campaign in a time before whistle-stop train tours were popularized. One day, the Fisk University Jubilee Singers from the African-American college performed for Garfield, and he was so moved by their singing that he famously said, "I would rather be with you in defeat than against you and victorious."

But he *was* victorious. Garfield was elected by a healthy margin of electoral votes, but won the popular vote of 9 million by fewer than 10,000 votes; he took office on March 4, 1881. Four months later, he was shot by Charles J. Guiteau, a Stalwart who had originally opposed Garfield's selection, but eventually sought a position in the new administration—and was turned away. Guiteau decided that the only way to save the Republican Party from a moderate like Garfield was to kill him and open the way for Vice President Chester A. Arthur, another Stalwart. Guiteau was so sure that he'd be hailed as a hero, he bought the most expensive revolver he could afford, so it would look good in a museum. On July 2nd, 1881, he approached Garfield at a Washington, D.C., train station and shot him twice from behind—one bullet lodged in his back, the other grazed his arm. The first wound was serious, but not life-threatening; unfortunately, doctors did more harm than good, probing for the bullet with unsterilized fingers and contributing to an infection that would kill him weeks later. (Guiteau's defense attorneys blamed the doctors for Garfield's death, but the jury convicted him anyway.)

The Garfield home was on a sprawling estate of 160 acres, but is now at the center of an eight-acre site. Eighty percent of the items in the home are originals, thanks to the generosity of the Garfield family, who gave the house and its contents to the Western Reserve Historical Society in 1936. That organization owned and operated the site until 1980, when an act of Congress created James A. Garfield National Historic Site. The Park Service restored the site and operated it in partnership with the Historical Society until January 2008, when the federal government assumed full operational responsibility. (Many park visitors travel 20 miles to Chagrin Falls to see a replica of the log cabin where he was born, then head to Lakeview Cemetery in Cleveland to see the monument that marks his final resting place.)

"Now that the Park Service is responsible for interpretation of the site, we're less focused on the architectural details of the home and the history of its furnishings, and more focused on Garfield's life in the context of the times—where he stood on the issues of the day, and what he was doing while major world events were unfolding," says Arrington. "Garfield lived during some of our nation's most trying times—during the Civil War, Reconstruction, a time when U.S. currency wasn't sound—so there are parallels with some of the struggles our country is facing right now. Our goal is to excite people about the history of a man they may not have thought was very interesting, and teach them more than they thought possible." **NP**

Scott Kirkwood is editor-in-chief of *National Parks* magazine.

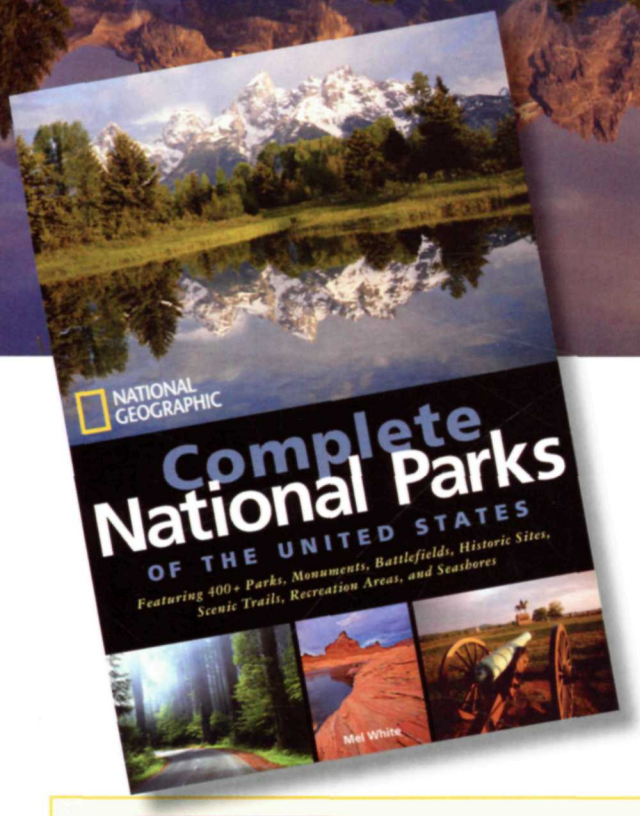
By Chris Peterson

GLACIER NATIONAL PARK

Montana

In Glacier National Park, the ecosystems are so compressed and the variety of life is so immense that you never get bored. Sit still just one hour, and something cool is bound to happen. I was hiking on the Garden Wall—a gigantic cliff face that follows the Continental Divide—on a very foggy morning when this hoary marmot came out of his burrow to check me out. I slowly reached around with a wide-angle lens and snapped off some frames before the marmot high-tailed it back into the hole.

This was the 100th and final day of a photo-a-day project I'd created to document Glacier's centennial with cameras from different time periods—from a 1909 Kodak Pocket Vest camera to a digital Nikon D300. All told, I hiked roughly 400 miles, including a five-day, 44-mile hike through the heart of Glacier's wilderness, where I never saw another human. I've never met a problem that couldn't be solved in an hour-long hike in a national park—especially Glacier. (For more photos from "100 Days in Glacier National Park," visit www.glacierparkmagazine.com.)



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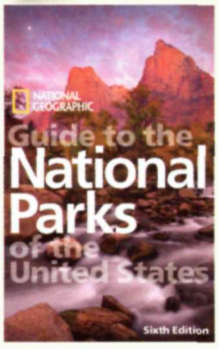

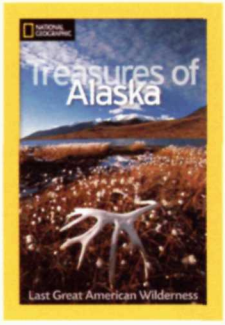

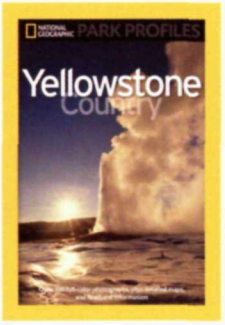

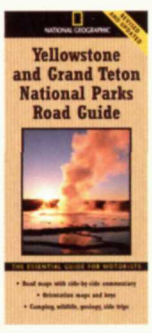

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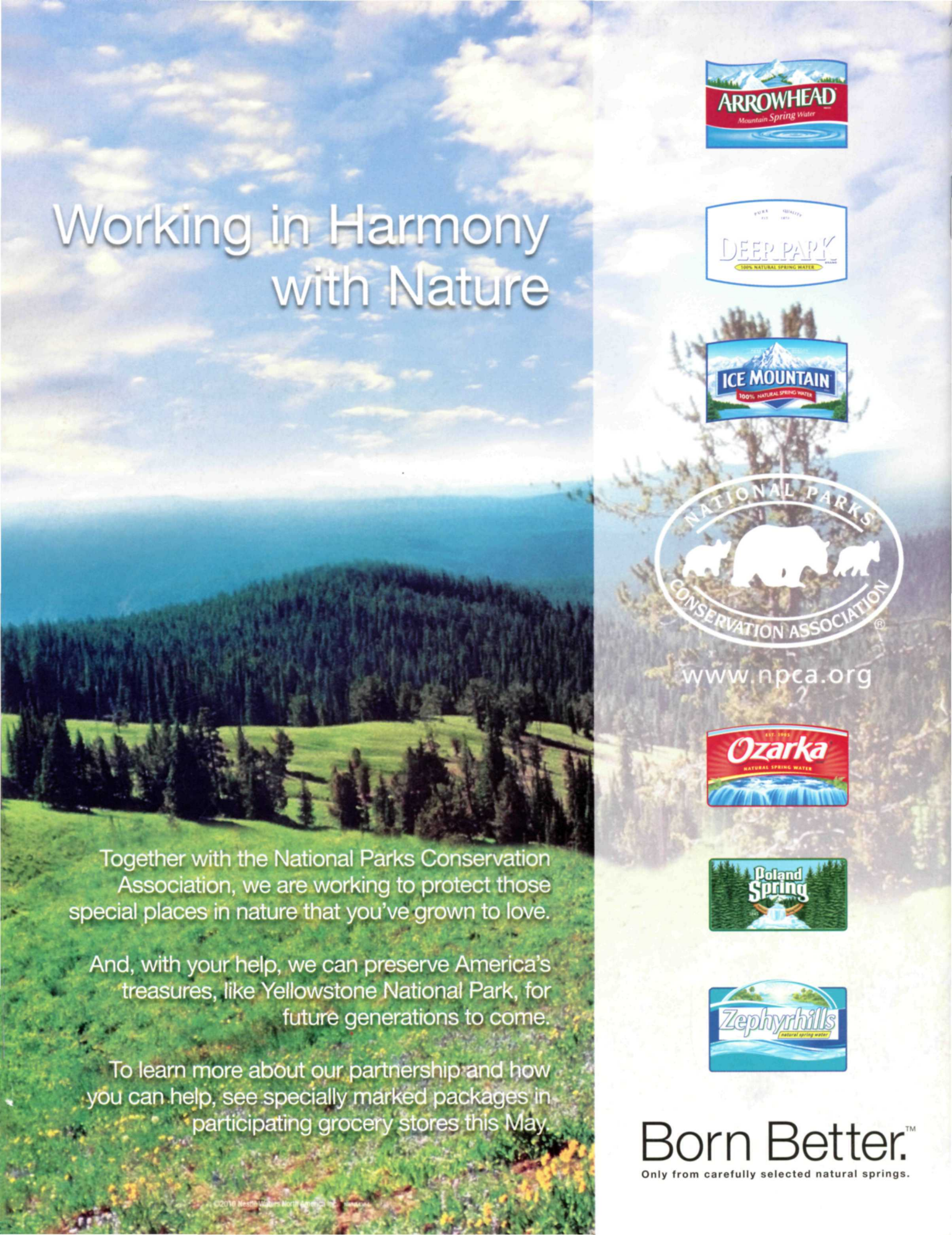
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