

NationalParks

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THE LONELIEST LAND

Writer Mary Hunter Austin penned a love letter to Death Valley, Joshua Tree, and Mojave long before they were parks

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National Parks

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Big Wheels

Hop on a fat-tire bike and enjoy the scenery of Kenai Fjords, Alaska.

By Mollie Foster & Scott Dickerson

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The Loneliest Land

Mary Hunter Austin's writings about the desert still resonate more than 100 years after they were first published.

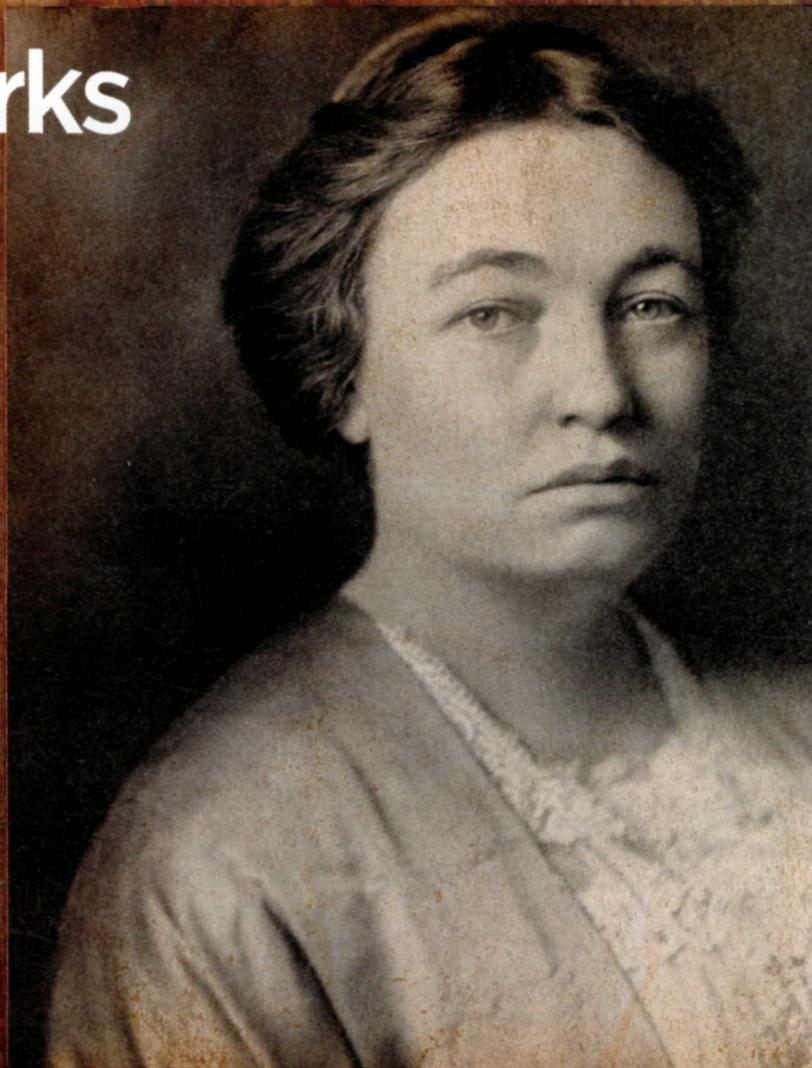
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Generating Controversy

The polluted skies over the parks of the American Southwest can be traced back to one coal-fired powerplant in Page, Arizona. Learn about its controversial past and unsettled future.

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MARY HUNTER AUSTIN focused public attention on desert landscapes in her 1903 book *Land of Little Rain*, which began as a series of vignettes published in *The Atlantic*

NATIONAL WOMEN'S PARTY/LIBRARY OF CONGRESS.

COVER IMAGE:

SALT FORMATIONS.

Badwater Basin, Death Valley National Park

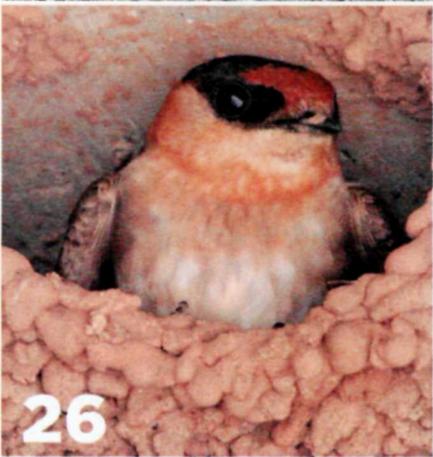
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Giving Back

When I came to NPCA last November, my goal was to give back. After a long career in television programming, I thought I had a lot to offer. I didn't realize what I stood to gain.

I was in Zion when I got the phone call about my daughter, Kate. She had moved to Jackson Hole to teach and work on her master's degree at Teton Science School in Grand Teton National Park. But when she wasn't at the school, she was climbing or skiing or cycling. If it was outside, she was game. If it had an element of danger, so much the better.

Kate had been skiing when she hit a patch of ice and went down hard. Although she was wearing a helmet, the impact to her skull was severe. Also, it was her second recent concussion. She had been in a cycling accident a year earlier, and as I quickly learned, multiple concussions don't follow a simple arithmetic progression. With each injury, the brain damage is more substantial, and the effects last longer. The doctors were not optimistic.

Kate came home to live with us, and spent a year in doctors' offices getting tested, poked, and prodded. For a previously active 26-year-old, it was a nightmare. She became increasingly depressed. Her mother and I weren't doing too well either.

Then over the holidays, a slot opened up on an NPCA donor trip to Yellowstone. I thought if Kate saw the places and wildlife she loved, it might help her, so we headed west to be amid the bison, geysers, and snow. I'll stop short of calling it a miracle, but she improved dramatically. She was engaged and talkative; she laughed again. I was reminded that national parks are so much more than beautiful landscapes—they are also places to heal.

I came to NPCA to help, but the parks helped me. Yellowstone brought my daughter back. Best bargain of my life.

Clark Bunting



Editor's Note



A PHOTOGRAPHER at Zabriskie Point, Death Valley.

Desert Calling

I had always associated the desert with the stereotypes: dead, dry, deserted, empty, wind-blown. That feeling of sand getting in your eyes and your nose. And your ears and your shoes. And every pocket of your pants.

It wasn't until I attended a photo festival in Palm Springs, California, that I made my first excursion to Joshua Tree, Death Valley, and Mojave. I loved the quiet and the stillness, the bizarre shapes of the trees, and the surprising variety in the landscapes that unfolded before me. The hikes aren't nearly as dramatic as those in Glacier or Yosemite, where you can stand on mountaintops and peer down into valleys. But the desert is a more intimate place—a place for people who are comfortable with the idea of being alone.

Writer Mary Hunter Austin was one of those people. As you'll read in the article beginning on page 38, Austin started exploring the desert in 1888, and published her paean to the California desert in 1903—a book called *Land of Little Rain*, which combined travelogue, memoir, and stories of the people who call the desert home. Although she's not as well known as Aldo Leopold, John Muir, or Edward Abbey, her work served as inspiration for Terry Tempest Williams and Gary Snyder, and she helped bring attention to an often overlooked place. Now we're returning the favor by bringing a little attention to an often overlooked writer.

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WHO WE ARE

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

WHAT WE DO

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

EDITORIAL MISSION

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

MAKE A DIFFERENCE

Members can help defend America's natural and cultural heritage. Activists alert Congress and the administration to park threats; comment on park planning and adjacent land-use decisions; assist NPCA in developing partnerships; and educate the public and the media. Please sign up to receive Park Lines, our monthly e-mail newsletter. Go to npca.org to sign up.

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FLASHBACK: 1972

Your article and photos of Mt. Rainier's unique summit ice caves helped me retrace my steps of my 1972 climb with Lou Whittaker's guide service ["Under the Ice, Above the Clouds"]. We summited at 9 a.m. on a perfect day and had time to explore the caves. I remember the very small entrance in the snow, the total darkness, the humid warmth, the large chamber, and exiting on

the other side of the crater into blinding sunlight. I don't think anyone knew of the existence of the lakes yet, and your photos are the first time I've seen them. Most of my climbing friends had not known of the caves, or were told they couldn't enter. I feel fortunate to have been in them. Thanks for the memories!

STEPHEN MUELLER

Colorado Springs, CO

AT REST IN THE WILD

I was deeply moved by Gary Ferguson's article "At Rest in Yellowstone." My husband and I spent the first part of our honeymoon at Yellowstone, vacationed there with our two sons, and returned there for our 25th anniversary. By that time we were two out-of-shape, middle-aged, IT professionals who still loved the wilderness. That's the beauty of our national parks. There are wonders to behold and trails to be hiked for everyone, regardless of age or physical condition. All of our vacations with our sons were taken exploring our beautiful national and state parks.

In 2010, my husband passed away, and my sons and I were able to scatter his ashes in one of the wilderness areas

he loved most. Our excursions to the national parks enriched our lives and nourished our souls.

DEBORAH MACKEY

Santa Clarita, CA

Thank you to Gary Ferguson and NPCA for sharing the touching story "At Rest in Yellowstone." Tears filled my eyes as he described spreading his wife's ashes in the places they loved so much. I was deeply moved, as I also share that desire: Someday, if allowed, I'd like my remains to be scattered in Rocky Mountain National Park. Thank you for giving us something that was so personal and healing.

BONNIE RAVESLOOT

St. John, IN

I read every issue of *National Parks* cover to cover, and the Winter 2015 issue did not disappoint. "Caves in the Clouds" was absolutely mesmerizing, both in content and in photography. "A Goodbye in Yellowstone" was touching; while many people hope to have their remains scattered in our nation's most amazing places, how fitting that the writer was honoring a woman whose life was dedicated to teaching children to appreciate our world. Thanks for your fantastic work.

KATE VANSKIKE

Spokane, WA

FIRE LESSONS

I read the article "Fired Up" with great interest. I'm happy to see the use of

prescribed fire highlighted in National Parks and would like to provide some context about controlled burns in Northeast park units.

Saratoga National Historical Park in Stillwater, New York, has a long history of using prescribed fire as a landscape management tool. In the early 1980s, the park began its efforts to address concerns about the safety of mowing steep slopes and the resulting damage to the landscape. Since then, the program has expanded significantly and the park now burns about 70 acres every year. This program has served as a model for the efforts at Gettysburg National Military Park and other cultural landscape sites throughout the northeast. The prescribed fire program at Saratoga has proven to be environmentally and fiscally effective as a cultural landscape management tool and has provided scores of firefighters with training and live fire experience. We are proud of our contribution to the regional and national fire communities.

JOE FINAN

*Superintendent,
Saratoga National Historical Park
Stillwater, NY*

CONCRETE ADVICE

The article on adobe preservation was an enlightening example of trans-border cooperation in conservation ["Like a Good Neighbor"]. While Superintendent Karl Cordova at Pecos National Historical Park correctly calls the other building

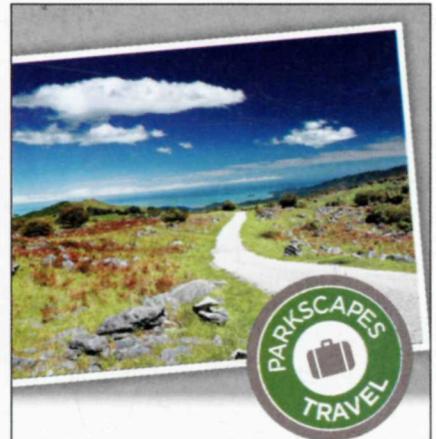
material "concrete," the writer falls into a common error in labeling it "cement." A structural engineer long ago nailed me on this by saying: "Cement is to concrete like baking soda is to biscuits." I now wince, every time I hear the word cement being used inappropriately, hence this letter.

LAWRENCE S. HAMILTON

Charlotte, VT

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PARKS OF THE WORLD: NEW ZEALAND OCTOBER 25-NOVEMBER 1

Get an unforgettable taste of New Zealand as NPCA explores the South Island on this year's park comparison tour. Enjoy the beauty of Abel Tasman National Park with its golden beaches and dramatic cliffs. We then continue down the coast to take in Pancake Rocks formed over 30 million years ago on our way to a wilderness lodge in the heart of Arthur's Pass. Our journey concludes with whale watching, time with a Maori family, and Southern Hemisphere stargazing.



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Echoes

[Acquiring] more land to... increase their habitat is critical to ensuring the survival of the Florida panther.

John Adornato, director of NPCA's Sun Coast regional office, appearing on Miami's Local 10 News. He was responding to Governor Rick Scott's budget proposal of \$100 million to acquire land, with an emphasis on protecting the endangered Florida Panther, and \$150 million for Everglades restoration in partnership with the federal government.

The people who are part of the Pullman legacy helped to shape America as we know it today.

Lynn McClure, senior director for NPCA's Midwest regional office, quoted in the Washington Post, in response to news that President Obama would designate Chicago's Pullman Park district—an iconic site in African American and labor history—as a national monument. (To learn more, see box on page 24.)

It's a tricky issue. A revision of these rules is long overdue.

Nicholas Lund, manager of NPCA's landscape conservation program, quoted in Energy & Environment Daily, regarding the Obama Administration's move to expand oversight of oil and gas wells within national parks; the rules have been in place since 1978. Affected operations, which pre-date the parks' designations, include sites in the Big South Fork, Lake Meredith, and Cuyahoga Valley, among others.



KEEPING IT GREEN

The National Park Service is teaming up with hotels and restaurants within dozens of park units to find more sustainable ways to serve the millions of visitors who come through their front doors. Here are just a few.

BY SCOTT KIRKWOOD

UTAH

Zion banned the sale of plastic water bottles and now sells reusable water bottles to visitors and provides free Zion spring water at filling stations throughout the park, eliminating the sale and disposal of 60,000 plastic water bottles every year.



SOUTH DAKOTA

At **Mount Rushmore**, Xanterra's Carvers Cafe sources food from its own gardens and greenhouses to provide fresh herbs and vegetables, cutting down on fossil fuels needed to ship food from remote locations.



NORTH CAROLINA

The new **Oconaluftee Visitor Center** at **Great Smoky Mountains National Park** received gold-level LEED certification thanks to a design that maximizes natural light, funnels rainwater to restrooms, and contains chestnut flooring from old barns in the region.

CALIFORNIA

Sequoia and Kings Canyon National Parks partnered with the city of Visalia to provide hybrid electric shuttle-bus service to visitors, part of an effort that has decreased greenhouse gases by 65% and removed approximately 770,000 vehicles from the park's roads since 2007.



TEXAS

Through reconfiguring lighting and introducing LEDs in **Big Bend**, the Park Service and Forever Resorts reduced lighting costs by 95% and minimized light pollution to garner the official "Dark Sky" designation from the International Dark-Sky Association.

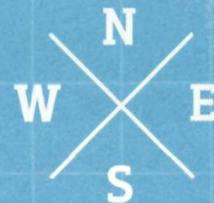
PUERTO RICO

San Juan National Historic Site recently restored 300-year-old water cisterns, which can store up to 250,000 gallons of rainwater for use in restrooms and other facilities.



ARIZONA

The **Grand Canyon Railway** takes used vegetable oil from Xanterra restaurants to power a retrofitted steam locomotive that runs between Williams, Arizona, and the South Rim of the canyon; rainwater and snowmelt are also collected for use in steam operations.





AT ANY GIVEN MOMENT, bearcam viewership can exceed 18,000 people, who tune in to see bears like this one, pictured near Kinak Bay in Katmai National Park.

© PAUL SOUDERS/ALASKASTOCK.COM

Bearing Witness

Bearcams in Katmai National Park and Preserve are capturing impressive scenes from the wild—and changing the nature of park visitation.

In the fast riffles below Brooks Falls in Katmai National Park and Preserve, a large male brown bear named Otis waits patiently. His muscular bulk is very still, and his coat gleams in the summer sunlight. Suddenly, he lunges into the water with a splash and emerges with a huge candy-red salmon flapping wildly in the air. With one swipe of his powerful jaws, he breaks it in half, pulls off the skin, and starts chewing.

It's a magnificent, quintessentially Alaskan scene, and at that moment, as many as 19,000 people from around the country and the world are watching. But

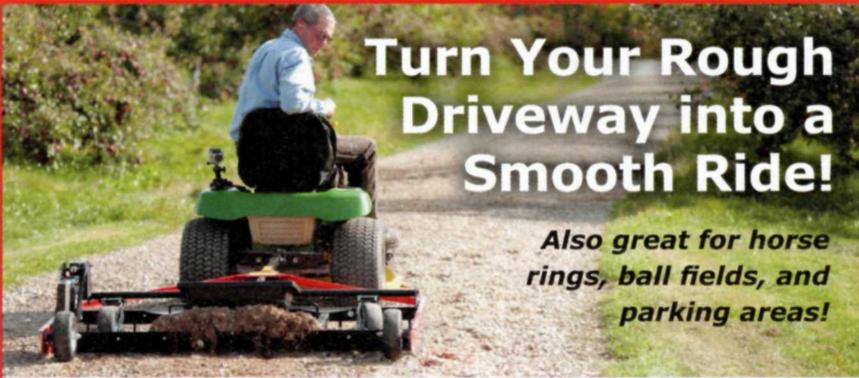
almost none of them are actually there. The vast majority follow via a camera that records the scene and streams the video live over the Internet.

Since they were established in 2012, Katmai's five live-streaming webcams have exploded in popularity, attracting observers from every state and almost every country. Last year, viewers spent nearly 6 million hours watching grizzly bears and other wildlife, and forums racked up as many as 50,000 comments in a week. The technology can be challenging to manage, but it has allowed the park to reach many more people than can physically visit, and

viewers' observations have contributed to rangers' understanding of the bears.

It all started in 2008, when the National Park Service partnered with a local museum, National Geographic, and RealNetworks to establish a small static webcam capable of hosting about 25 simultaneous users. The technology repeatedly crashed, funding dried up in the recession, and by 2009, the Park Service shelved the idea, believing it was ahead of its time. But in 2012, Roy Wood, chief of interpretation for Katmai, received a call from Explore, a nonprofit organization that funds films, photography, and webcams that document charitable work. Explore already hosted several successful live-stream webcam feeds that captured the daily activities of creatures as diverse as kittens, hummingbirds, pandas, and polar bears.

"Filming Katmai has always been a dream of mine," says Charles Annenberg Weingarten, founder of Explore. "My hope
(cont'd)



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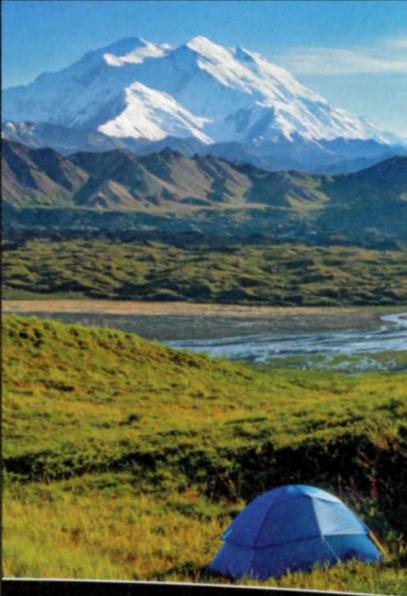


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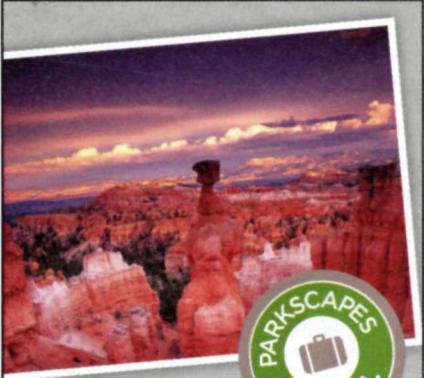
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Photos (from Top):
Thor's Hammer in Bryce Canyon National Park © NPS; Waterfall in Grand Staircase-Escalante National Monument © Ben Sander/NPCA.



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is simply to allow people to get up close and personal with nature and fall in love with the world again.”

The first day Explore’s new webcams went live in Katmai in 2012, so many viewers logged on that even that technology crashed. Explore immediately bought more server space. Now, five webcams record scenes throughout the park, which encompasses about 4 million acres of volcanoes, rolling tundra, lakes, and salmon-clogged streams. On camera, viewers have watched young male bears play-fighting, sows sauntering about the mountains

events (such as a cub stuck in a tree), and they’ll even step in front of the lens to answer questions submitted via Twitter, Facebook, or Skype.

Rangers have been astounded by the bears’ viral following. In June and July, peak months for the salmon run, more than 18,000 viewers might be watching from as far as Iran and the Vatican. “I always wonder if the Pope is on there after hours, watching the bearcams, kicking back with a glass of wine,” says Wood.

At first, staffers worried that the

stacks of letters to the Park Service exalting the bears. Teachers have used the cams to inspire autistic children, and chemotherapy patients have brought the feed into treatment rooms to calm their nerves. One former gang member from Los Angeles, who trained to be a bearcam operator with New Earth, said that watching the bears changed his life.

“Where I think the cams really excel is giving people this surrogate experience that they can’t afford or logistically make happen,” says Roy Wood. “It’s building that constituency and that stewardship that you’re not going to get if you just say, ‘Sorry, you can’t afford \$5,000 for a trip here.’” Wood also says that watching the bears before visiting often deepens the connection park travelers feel to the bears and the landscape when they arrive. They get to know the bears’ personalities, histories, family relationships, and quirks before they encounter them in person.

On occasion, bearcam viewers have conveyed important information about the bears to the park. Last summer, after a sow abandoned her cub in a tree while being courted by a large male bear, rangers prepared viewers for the tiny, helpless cub to die. Tina Crowe, a bearcam viewer from California who was visiting the park for the first time, felt devastated. Later, however,

(cont’d)

Chemotherapy patients have brought the feed into treatment rooms to calm their nerves.

with their cubs, and spectacular fishing displays. Occasionally a wolf, moose, or lynx wanders in front of the frame or a bald eagle flies by. One underwater camera focuses on salmon below the surface—and periodically captures the swipe of a big furry paw.

A team of about 20 volunteers and a crew in Los Angeles—part of a career-development program for at-risk teenagers called New Earth—operate the cameras, which can pan the scene and zoom in and out. The rangers also use mobile video cameras to film particularly interesting

webcams’ popularity would send park visitation skyrocketing, but that hasn’t happened, largely because getting to Anchorage, then taking a seaplane or boat trip to the park, is prohibitively expensive for many would-be adventurers. Interest in learning about the park, however, has mushroomed.

Juergen Lorenzen, a German telephone support technician who lives near Stuttgart, says he watches the bears at work every day and talks to his co-workers about them. “I am totally hooked,” he says.

Loyal bearcam viewers have sent

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at a remote stream, she found and photographed the cub with another sow, which eventually started nursing it. Her photographs became one of the few documented instances in which a grizzly bear adopted an unrelated cub.

On the other hand, the popularity of the webcams has posed new challenges for park employees. Last summer, for example, a bear called Divot wandered in front of the camera with a wolf snare around her neck. (Wolf trapping is legal outside park boundaries.) The snare was slowly decapitating her, and viewers were outraged. Normally the Park Service would have quietly tried to save the bear and released a report later, but instead, staffers launched a dramatic, public rescue mission and documented it for anxious viewers. (The rescue video is now

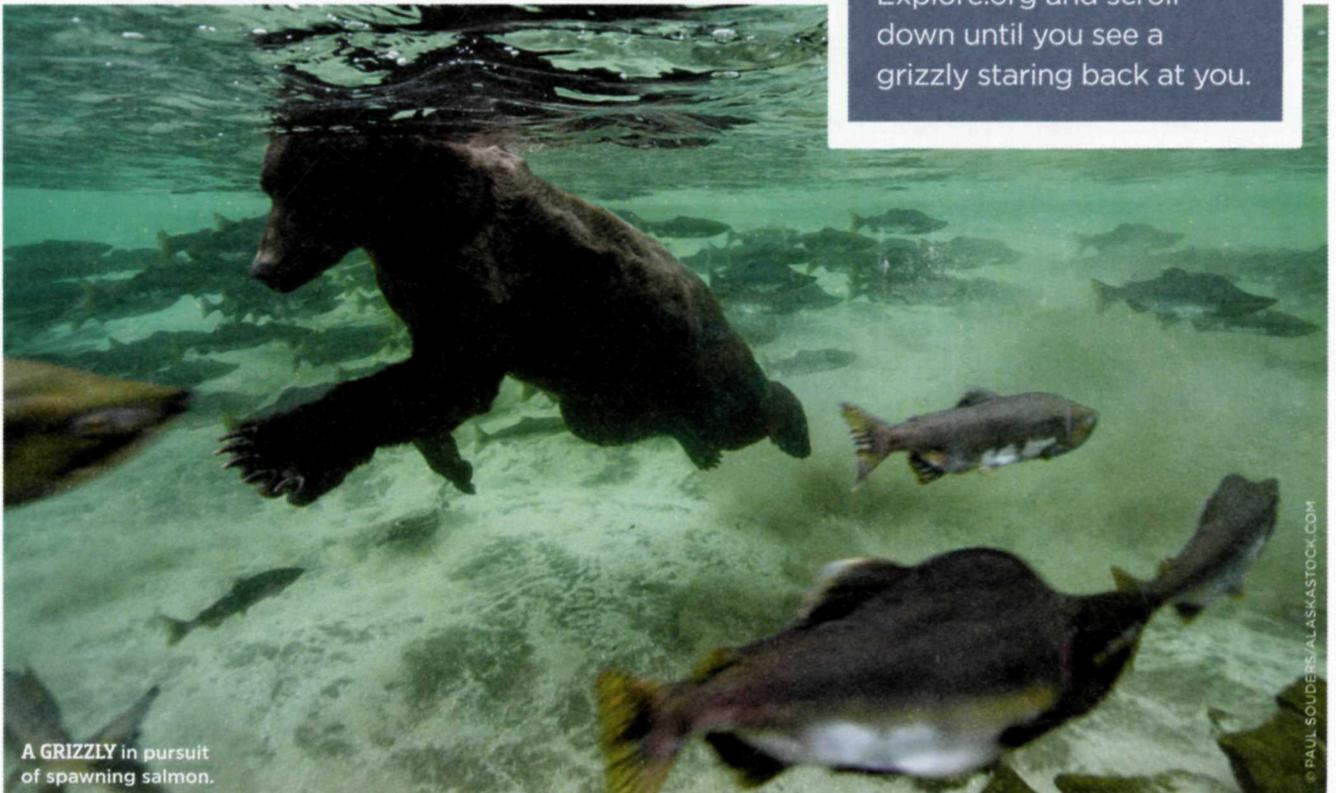
posted on YouTube.) The happy result was a mountain of grateful letters—more than the regional director received in his entire career. The situation demanded extra effort, Wood says, but it also showed the deep attachment viewers have to the bears and demonstrates how the webcams can inspire future national parks supporters.

“Growing up, I was never exposed to anything like this,” says Anna-Marie Gantt, a high school biology teacher from Tucson who uses the webcams in her lessons and visited Katmai last year. “Nowadays, students can bring the webcams up on their phones. They can observe a national park and a wilderness area that is protected. They can know that it’s out there and it’s waiting for them.”

—KATE SIBER

WHEN TO WATCH

Grizzlies patrol Katmai from spring to fall, but late June, July, September, and October—when the salmon are most active—are the best months to watch the bearcams. Because of a technological problem in a remote, snowy location, the bearcams are down for repair until mid-June, much to the consternation of loyal viewer. But to see some greatest hits from the past (and the livestream in June), visit Explore.org and scroll down until you see a grizzly staring back at you.



A GRIZZLY in pursuit of spawning salmon.

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PARK EMPLOYEES HOPE that these chestnut seedlings, planted in 2012, will eventually be a part of a forest at Flight 93 National Memorial.

AT TONY URBAN STUDIOS/NATIONAL PARK FOUNDATION

Cracking the Nut

The American chestnut almost was wiped out in the 20th century. Can scientists and the Park Service bring back this iconic tree?

At the end of the long weekend

last April, the volunteers were cold, muddy, and tired from hard work. They had gathered at Flight 93 National Memorial to lug buckets across the rocky and rutted fields, to dig holes using heavy metal “dibble bars,” and to plant trees. Southwestern Pennsylvania can be a messy place in the spring, but the students, scientists, local community members, and family members of those who died on September 11 were undeterred. “There’s no place these volunteers would rather be,” says Donna Glessner, a participant from nearby Shanksville.

For the last three years, Glessner has joined hundreds of volunteers who have come to help re-create natural

woodlands on the grounds of Flight 93. In the process, they’ve become part of an innovative but long-shot effort to restore one of America’s lost icons: the American chestnut tree. Flight 93 staff have partnered with scientists and foresters from the American Chestnut Foundation to plant seedlings they hope will be the first in more than a century to withstand an invasive fungus known as the chestnut blight.

For millennia, American chestnuts had been the dominant hardwood in Eastern forests, growing in immense stands from Maine to Florida. They were large, up to 100 feet tall, with spreading crowns that blossomed into springtime displays of fragrant, creamy-white flow-

ers. Their soft and rot-resistant wood was used to make homes, furniture, musical instruments, fence posts, and railroad ties. Chestnuts were considered the single most important food source for wildlife in the Eastern forests and were widely eaten by humans as well. Then came the blight—a fungus stowed away on Asian trees imported in the early 1900s, which killed American chestnuts at the rate of 219,000 trees per day, every day, until the species was almost entirely gone. Four billion trees died in less than 50 years.

It didn’t take long for scientists to sense a calamity facing American chestnuts. An alarming 1908 article in *The New York Times* about the blight described the efforts of the assistant director of the New York Botanical Garden, William A. Murrill, to stave off what would be a “vast loss” to Eastern forests. Murrill tried pruning away dead and dying limbs, “heavy and repeated sprayings,” and inoculation with small

(cont’d)

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amounts of the fungus, all to no effect. The blight had been known to science for only a few years, but Murrill had already given up hope, telling the *Times* that the fungus would “ultimately destroy” all the remaining chestnuts and recommending they be harvested.

Though Murrill did not know the origin of the “canker” killing American chestnuts, he deduced from the pattern of its spread that it started in New York City. He was right. The fungus, *Cryphonectria parasitica*, hitchhiked to New York aboard Asian chestnut trees headed for nurseries. Centuries of evolution between the fungus and the Asian chestnuts had resulted in a sort of truce: the fungus lived on the trees, but it did not kill them. Their American cousins, however, had no defense.

The fungus enters chestnuts through a wound in the bark. Creatures like woodpeckers and squirrels are ideal carriers, though wind-blown spores are just as effective. Once inside, the fungus begins to grow underneath the bark, spreading out and producing acids and other compounds, strangling and eventually killing the tree. Some other trees, including certain oaks and maples, host the fungus but do not die, meaning the fungus remains prevalent in Eastern forests despite the almost complete lack of American chestnuts.

Though Murrill’s doomsday predictions for the American chestnut proved true, the tree was never forgotten; efforts to outwit the chestnut blight began immediately and have never stopped. In fact, the trees being planted

at Flight 93 National Memorial are the latest batch from the American Chestnut Foundation (ACF), which is using a “backcross” technique to hybridize American chestnuts with blight-resistant Asian species, producing seedlings that are almost identical to the native species but are blight-resistant. “I’m supposed to be a chestnut expert, and I

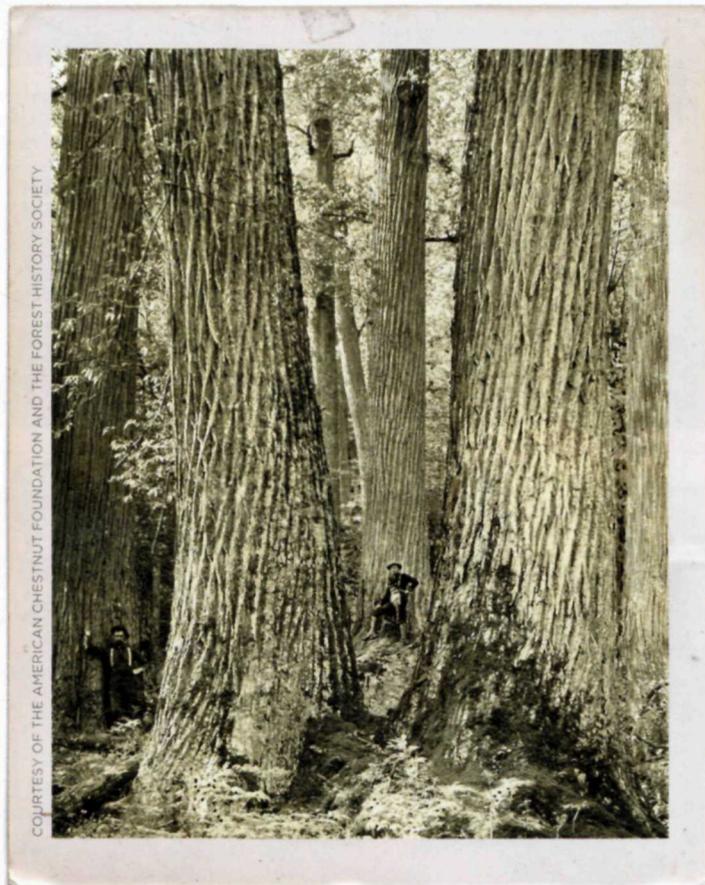
memorial had been strip-mined for coal. As a result, only a thin layer of soil existed on the unit’s 300 acres. American chestnuts, which formerly thrived on slopes and ridgetops (the reason “Chestnut Ridge” is such a popular name), seemed an ideal fit for the site.

The chestnut seedlings planted at Flight 93 National Memorial are about

94 percent American chestnut, the result of generations of backcrossing and intercrossing with other hybrid offspring. Mixed in with other young hardwoods, 75 chestnuts were planted in 2012; 480 in 2013; and 1,383 in 2014. French says they’ve seen no blight yet, though there is no way to know if the planted seedlings are naturally resistant. He’s expecting about 75 percent to survive, but acknowledges that ACF is still about five years away from producing reliably blight-resistant seedlings. If the experiment fails, however, there may be other options.

In upstate New York, scientists William Powell and Chuck Maynard of the SUNY College of Environmental Science and Forestry are taking a different tack to produce blight-resistant Ameri-

can chestnuts: genetics. By inserting blight-resistant genes into pure American chestnuts, the SUNY team could produce trees that are even more pure than the ACF hybrids. Their current work focuses on a gene found in wheat, of all things, which detoxifies the acid produced by the fungus so that it doesn’t



SOON AFTER this photo of American chestnut trees in the Great Smoky Mountains was published in *The American Lumberman*, the iconic tree was virtually wiped out.

can’t tell the difference,” says Michael French, a forester with ACF.

French says that ACF became involved with the Flight 93 project when he got word that the park was looking for trees that grow in thin soil. In the years before the September 11, 2001, crash, the site that is now the national

kill the tree. SUNY's latest trees are as blight resistant as Chinese chestnuts, they say, though the regulatory approval required for genetically modified American chestnuts means that it will also be about five years before these trees are ready for planting.

The arrival of the blight in the early 1900s meant that chestnuts, despite their formerly dominant role in the Eastern woods, never had much of a presence in national parks. A July 1939 article about the opening of Shenandoah National Park's famous Skyline Drive describes the scenery as "groves of pine ... interspersed with gray trunks of giant chestnut trees, killed by the chestnut blight." At Shenandoah and what is now Great Smoky Mountains National Park, so many American chestnuts once blossomed in spring that the hills looked like they were covered in snow. Though chestnut restoration efforts are under way in those parks, the system of national parks designed to conserve our natural treasures largely remains without one of America's most important trees.

As she walked around with her bucket that chilly weekend last spring, Donna Glessner thought about the generations that came before her. "My grandparents used to talk about going into the woods and gathering chestnuts to sell in town to pay for their school clothes," she says.

"They would talk about how beautiful the wood was and how many buildings it made." Glessner, who now also volunteers with an oral history project at the site, says she is always looking into the fields to monitor the progress of the saplings she and others planted. "Many of the volunteers talked about how exciting it would be to return here

with our children and grandchildren and walk through the groves we planted," she says. "I like to think about a better future here." Meanwhile, the chestnut seedlings she helped plant in 2012 continue to inch skyward, their defiant growth a fitting tribute to those memorialized nearby.

—NICK LUND

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Mammoths & Mountains

THE NATIONAL PARK SYSTEM TAKES A GIANT LEAP

In December, Congress authorized the largest expansion of the National Park System since 1978 when it passed the National Defense Authorization Act, which President Obama signed days later. This legislation includes a remarkable public-lands provision that creates or expands 16 parks and green-lights eight formal resource studies—the first step in determining if a site should become a park unit. The bill represents years of work by NPCA staffers, and its passage is a huge victory for parks supporters. Though most of the new and expanded lands are already officially part of the park system, it could take the Park Service several years to establish staff and visitor services at some of the sites.

Here are some of the key details.

BY RONA MARECH

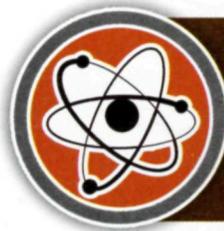
NEW PARK UNITS



BLACKSTONE RIVER VALLEY NATIONAL HISTORICAL PARK

Rhode Island & Massachusetts

Fueled by the Blackstone River, the nation's first water-powered cotton mill started operating in Pawtucket in 1790. Mill villages subsequently sprang up along the river's headwaters, and the area became known as the birthplace of the American Industrial Revolution. Enthusiastic visitors are in luck: The valley was formerly a heritage corridor, so it's already home to seven previously established visitor centers with open doors.



MANHATTAN PROJECT NATIONAL HISTORICAL PARK

New Mexico, Tennessee, and Washington

Under a veil of secrecy, workers in Los Alamos, New Mexico; Oak Ridge, Tennessee; and Hanford, Washington built the world's first production-scale nuclear reactor—and changed the course of history. At the new sites, the Park Service will offer historical context and facilitate discussion surrounding the complex stories of the Manhattan Project and the impact of atomic power and nuclear technology. In Washington, visitors had already been able to tour Hanford's B Reactor, the world's first full-scale plutonium production reactor.



NATIONAL WORLD WAR I MEMORIAL

Washington, D.C.

For years, proponents have been trying to establish a World War I memorial in the nation's capital, and they finally got their wish. Though they'd been angling for a spot on the National Mall, supporters ultimately settled on Pershing Park (near the White House) to appease local officials, who didn't want to undermine an existing memorial honoring World War I veterans from the District of Columbia. (*Establishment of the National World War I Memorial was not in the public-lands provision of the National Defense Authorization Act but was inserted elsewhere in the Defense Bill.*)



TULE SPRINGS FOSSIL BEDS NATIONAL MONUMENT

Nevada

The arid desert here was once a lush wetland that was home to some of the most massive and unusual species ever to walk the continent, including gargantuan mammoths and saber-tooth cats. Now filled with fossils, the new monument will tell a story of survival, adaptation, evolution, and extinction. Visitors can already explore the site on foot but, of course, are prohibited from touching any fossils.



PATERSON GREAT FALLS NATIONAL HISTORICAL PARK

New Jersey

The city of Paterson, one of the nation's earliest industrial centers, pioneered methods for harnessing water power for industrial use. At the park, visitors can learn about the nation's economic history and see waterfalls, ancient geology, and engineering landmarks. The legislation adjusted the park boundaries to include Hinchliffe Stadium, one of only three Negro League ballparks still standing.



VALLES CALDERA NATIONAL PRESERVE

New Mexico

A 90,000-acre geological and recreational gem in the high elevations of the Jemez Mountains, the preserve is replete with streams, grasslands, old-growth timber, and elk herds. It's also home to one of the world's best examples of a resurgent caldera—a circular volcano with an uplifted center floor. Previously owned by the federal government but managed by a special trust, the land is already open to the public for activities including hiking, bicycling, skiing, snowshoeing, and fishing. (To check the schedule and fees, go to www.vallescaldera.gov.)



OREGON CAVES NATIONAL MONUMENT AND PRESERVE

Oregon

In 1909, President William Howard Taft protected 480 acres at this site, known for the astonishing marble caves carved out of the Siskiyou Mountains. The park grew to 2,500 acres a century ago, and now it's expanding again. The additional 4,070 acres will help safeguard water, protect plants, and increase opportunities for outdoor activities.



SAN ANTONIO MISSIONS NATIONAL HISTORICAL PARK

Texas

Famous for its exquisite, 16th-century mission churches and Spanish Colonial buildings, the park tells the story of colonialists and Native Americans of the Southwest. The new boundaries will eventually lead to more walking trails, expanded art and exhibit spaces, and better access to Spanish Colonial farm fields and the original irrigation system, which is still working today.



VICKSBURG NATIONAL MILITARY PARK

Mississippi

More than 100,000 troops waged battle here from March 29 to July 4, 1863, in a campaign that proved crucial to the Union victory. Expansions at Port Gibson, Raymond, and Champion Hill add core battlefield land that will enhance visitors' understanding of the 41-day Union siege.

PARK EXPANSIONS



GETTYSBURG NATIONAL MILITARY PARK

Pennsylvania

The expansion will add the Gettysburg or "Lincoln" train station to the famous park that was the site of a bloody and decisive Civil War battle. In 1864, President Abraham Lincoln stopped at the depot on the way to dedicate the Gettysburg National Cemetery and deliver the Gettysburg Address. The station also served as a field hospital during the Battle of Gettysburg; eventually, more than 15,000 wounded soldiers passed through. The restored station, along with 45 acres of historically significant land, will be donated by the Gettysburg Foundation. The station, which previously had been operated by the local visitors bureau, will re-open its doors to the public in the spring.



NEW PARK AND EXPANSION



HARRIET TUBMAN NATIONAL HISTORICAL PARK AND HARRIET TUBMAN UNDERGROUND RAILROAD NATIONAL HISTORICAL PARK

New York & Maryland

A nurse, spy, and conductor on the Underground Railroad, Tubman freed scores of slaves in 19 rescue missions. The legislation will establish a historical park within the Harriet Tubman National Monument on Maryland's Eastern Shore and add sites in Auburn, New York, where Tubman settled after the Civil War. Visitor services are in the works in Maryland, but in the meantime, tourists can kayak, hike, and bicycle on the land that Tubman knew so intimately; in Auburn, the Harriet Tubman Home welcomes visitors most days.

FORMAL RESOURCE STUDIES



BUFFALO SOLDIERS

Before the National Park Service was formed, African-American troops known as Buffalo Soldiers played a key role in protecting Yosemite, Sequoia, and Kings Canyon National Parks in California. The specific site location has yet to be determined, but one possibility involves creating a trail commemorating the 9th U.S. Cavalry's trek from the Presidio to Sequoia Kings Canyon.



LOWER MISSISSIPPI RIVER AREA

Plaquemines Parish, Louisiana, where the Mississippi River empties into the Gulf of Mexico, contains fascinating stories of culture, commerce, immigration, and the Civil War. It's also home to a dynamic ecosystem for migratory birds, including the Breton National Wildlife Refuge.



AND ONE MORE FOR GOOD MEASURE

On February 19, President Obama traveled to Chicago to designate the newest park site: Pullman National Monument. Few sites preserve the history of American industry, labor, and urban planning as well as the Pullman Historic Pullman District, the factory town that was built by rail-car magnate George Pullman a century ago. The site has deep ties to the nation's first major industry-wide strike—the Pullman Strike of 1894—which helped spur the creation of the Labor Day holiday. In the 1920s, black porters and maids employed by the Pullman Company formed the Brotherhood of the Sleeping Car Porters, becoming the first African-American labor union to win a collective bargaining agreement in 1937. The Park Service has already assigned staff from nearby Indiana Dunes to craft a plan for establishing visitor services at the new monument.

THE NEW LEGISLATION ALSO CALLS for the creation of Coltsville National Historical Park, Connecticut, and the expansion of Apostle Islands National Lakeshore, Wisconsin; First State National Historical Park, Delaware and Pennsylvania; and Lower East Side Tenement Museum National Historic Site, New York. In addition, it authorizes formal resource studies of Mill Springs Battlefield, Kentucky; Rota, Commonwealth of the Northern Mariana Islands; Prison Ship Martyrs' Monument, New York; the Flushing Remonstrance, New York; West Hunter Street Baptist Church, Georgia; and New Philadelphia, Illinois.

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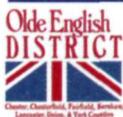
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VOLUNTEERS BEGAN BANDING cave swallows at Carlsbad Caverns in 1980 to determine where the birds spend their winter months.

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A Swallow's Tale

A 35-year study of cave swallows at Carlsbad Caverns has solved some abiding mysteries about the songbird.

ON A SUNNY AFTERNOON LAST JULY, Steve West, a fit man in his 60s with a mustache, white hair, glasses, and a quick smile, loitered about the visitor center at Carlsbad Caverns National Park in New Mexico. Looking like an absent-minded professor, he carried two long, skinny aluminum poles and appeared to be searching for something. But West wasn't lost. He was looking for volunteers to help band cave swallows inside the park's namesake cavern for a special research project.

By the time he gathered about ten people, the cave entrance had closed

to visitors for the evening. With special permission from the Park Service, the group descended from rocky desert studded with sotol, yucca, and prickly pear into the cool serenity of the cave's massive, gaping maw, stopping at the narrowest part of the entrance chamber about 100 feet down.

With the fine net strung between the poles, the volunteers sat in silence as birds flew in and out of the cave, tangling themselves in the mesh. Then came the fun part: After lowering the net, West and longtime volunteer David Culp demonstrated how to pluck a swallow from the nylon web. West held it gently in the palm of his hand, affixed a band to its ankle, and called out the sex, salient characteristics, and measurements of the quivering one-ounce bird to volunteers waiting with clipboards.

"The little ones tend to be feistier, and sometimes they'll try to peck you, which is incredible because they're such tiny little birds and they're so brave!" says Georgina Jacquez, a park guide who regularly helps band birds. "Sometimes they'll just lie there and look at you, and you can feel their breathing and their hearts racing. For visitors, it's a really neat opportunity to have a bird in hand, and to contribute to the science that's going on in the park."

When West, a high-school science teacher and avid birdwatcher from nearby Loving, New Mexico, began banding cave swallows in 1980, they were one of only three migrating American bird species whose wintering grounds remained unknown. Since then, every year, volunteers have helped West capture and release swallows in one of the longest-running bird-banding studies in the country. To date, more than 5,000

volunteers from 42 states and 20 countries have participated, helping to band nearly 23,000 birds. Along the way, they've helped West—also a volunteer—to compile research that has profoundly improved scientists' understanding of this charismatic songbird, known for its lively calls and dramatic dives.

Among his findings, West has discovered that most cave swallows live between three and five years but in rare cases can live as long as 13. He has learned details about their range in size, food habits, sex ratios, common parasites, and responses to a host of environmental conditions, such as rainfall and temperature. He even solved the alluring mystery of where they go in the wintertime.

The first clue came one morning in 1992, when West received a letter from the U.S. Fish and Wildlife Service informing him that a retired postal

LUCK OF THE SWALLOW

Unlike other species, cave swallows benefit from human settlements, which offer new roosting spots, such as bridges, buildings, silos, and culverts. Agricultural fields also attract insects and create feeding grounds for the birds, which is why cave swallow populations in the United States have increased over the past 30 years.



Visitors love to watch the birds swoop and dive into Carlsbad Cavern in the evenings.

worker in Jalisco, Mexico, had reported finding a dead bird on his front porch, with a mysterious silver band on one leg. Thanks to West's own trips to Panama and El Salvador as well as observations from other researchers in unexpected habitats like mangrove swamps and sugarcane fields, it's now clear that the cave swallows winter as far as the Pacific Coast between Mexico and Costa Rica.

"In a scientific study, you have to develop patience, because if we had gone down to Carlsbad Cavern and banded birds for three years and left, we wouldn't have learned very much," says West, who used the swallow research to earn a master's degree in science education at New Mexico Tech.

Sometimes the work is harrowing. In 2011, a rare ten-day freeze and the effects of a drought and a forest fire decimated the population of baby birds. West banded a measly 23 fledglings in comparison with the 250 to 350 he normally bands in a year. "I'm getting into some anthropomorphic territory here, but that was really sad," he says. The next year, however, he was surprised to learn that the birds were remarkably resilient, bouncing back to produce normal broods of hatchlings.

The information not only reveals characteristics of individual birds and whether the hatchlings had access to enough food, says park guide

Georgina Jacquez, but also unearths trends that might crop up because of environmental factors. And information on where the birds travel in winter can help park managers respond more effectively if the population declines, says the park's supervising biologist, Renée West. Park guides like Jacquez have also shared details of West's research with park visitors, who love to watch the birds swoop and dive into Carlsbad Cavern in the evenings, just before the bats emerge.

West plans to continue banding cave swallows because so many questions about the species remain unanswered. For example: Why do the adults lose and regenerate all their feathers before the fall migration? And why do some females spread the scent of a local beetle on their bottoms? The continuing banding excursions, typically run on Fridays between March and October, also offer an opportunity to ignite volunteers' interest in parks by experiencing the wildlife in an intimate way.

"When you actually pick up a bird from the net and hold this little feathered guy in your hand that can fly forever, across countries and continents, it's pretty amazing," says local volunteer Leonel Pando. "Doesn't everybody want to get up in the sky and fly like a bird?" **NP**

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



AMERICA'S MANATEE POPULATION has grown to around 5,000, but advocates worry about threats to the species including boats, development, and climate change.

© PAUL NICKLEN/NATIONAL GEOGRAPHIC CREATIVE

Resurfacing

The U.S. Fish and Wildlife Service is considering taking manatees off the endangered species list. But is it too soon?

WHAT IS IT ABOUT THE LUMBERING, MASSIVE MANATEE that stirs such fervor among its admirers? For some, it begins with the so-called sea cows' fascinating biology—the creatures seem “jerry-rigged,” as one scientist put it. They share features with a bizarrely broad range of animals from elephants to koalas. They have lungs as long as fishing poles, pass gas to efficiently sink into the water, regenerate teeth throughout their lives, and look like a cross between a sofa and a hippo with flippers.

The largest manatees can grow to be 12 feet long and 3,500 pounds, yet—and this also tends to impress people—they are utterly harmless and even defenseless. One of only two herbivorous marine mammals, they are

often referred to as gentle giants for a very good reason.

“They want to look in your eyes like a puppy and occasionally, they’ll even roll over to get their belly rubbed,” says Brandie Wooten, the operations manager of River Ventures, a manatee tour company in Florida. “When you meet one face to face, that feeling you get is phenomenal. It can be transformative... They are loveable, sentient beasts.”

They are also considered endangered—for now. Manatees, once hunted to near extinction, have been on the endangered species list since 1967, but the U.S. Fish and Wildlife Service is considering downlisting the creatures to “threatened.” Nudged by a lawsuit brought by Pacific Legal Foundation, the agency is sifting through the scientific evidence. A decision isn’t expected until later this year, but the mere possibility of a status change troubles manatee advocates.

“It’s biologically and legally premature,” says Patrick Rose, executive director of Save the Manatee Club. “This is just not the time.”

The manatee population has grown to around 5,000, thanks to decades of protection, he says, but the problem is the increasing number of threats in Florida, which is home to most of the country’s manatees. The slow-moving creatures wander as far up the coast as Cape Cod, but they return to the Sunshine State in the winter in search of the warm water. (They can be found in national parks including Biscayne and Everglades, but the largest numbers congregate on Florida’s central eastern and southwest coasts.) Advocates are worried about the deterioration of essential manatee habitats due to climate change and development. They say human population

growth is affecting the natural springs the manatees depend on, and the ever-rising number of boats concerns them, too. Watercraft collisions kill manatees every year and are responsible for an untold number of injuries. At some point, most manatees have been hit and scarred, and sometimes, boats leave them horribly mangled. John Reynolds, a scientist at Mote Marine Laboratory and the former chair of the Marine Mammal Commission, once saw a manatee swimming along and eating, though its lungs were hanging out of its back.

Then there's the matter of algae blooms, which snuff out essential aquatic vegetation and can be fatally toxic. Some blooms are naturally occurring and others have been linked

“Manatees are vulnerable to habitat changes and disease in ways we don't completely understand.”

to human activity, but in a couple of cases, there is no clear explanation for the disastrous outbreaks.

In most years, manatee fatalities—caused by anything from cold shock to boats and illness—hover around 400, but in 2013, 830 manatees died, many from either the toxic “red tide” or a mysterious algae bloom in the Indian River Lagoon. In 2010, 766 manatees died in a similar mortality spike.

“They are vulnerable to habitat changes and disease in ways we don't completely understand,” says Reynolds. “There's no doubt there are more manatees now than there were 20, 30, 40 years ago, but there are not so many that we can relax.”

Downlisting manatees should not affect existing regulations, which dictate everything from boat speed to dock construction. “You can't reclassify and take away protections,” says Chuck Underwood, a spokesman at the U.S. Fish and Wildlife Service. “It doesn't work that way.”

But some manatee supporters aren't so sure. “People will say, ‘They're no longer endangered—why do we need these rules?’” says Jaelyn Lopez, Florida director of the Center for Biological Diversity. “It signals that manatees don't need our help.”

Some Florida residents are already fed up with manatees because of restrictions on boat speed, dock construction, and development, she says. And even under current conditions, she has concerns about the animals' treatment. In Florida's

Crystal River, where manatee tourism is a huge part of the economy, she objects to sanctioned manatee petting and unchecked crowds. She pointed to a time-lapse video showing crowds crammed into a small area. “The water is cloudy and people are kicking and stepping on the manatees,” she says. “They are clearly distressed because of the volume of people.”

Though many advocates agree that manatee hot spots should be regulated and monitored—in fact, officials are considering tightening the rules in Crystal River National Wildlife Refuge—some are torn about how much to stem the flow of eager visitors whom they see as environmentalists in the making. “There are few things that can help define conservation ethics and values that are more effective than seeing animals in the wild,” says Reynolds.

For this reason, Rose calls manatees the “tugboat species.” He has always felt that the beloved animal could be the slow and steady species that helps lead the way to a cleaner, healthier ecosystem. When sea grass dies, or when natural springs slow to a trickle or become polluted, it affects a host of creatures, including humans, who use the same springs for everything from agriculture to drinking water.

“People have to understand their own quality of life is at risk,” he says. “It's not just about manatees.” **NP**

RONA MARECH is associate editor of *National Parks* magazine.

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A Case of Mistaken Identity

As the story goes, Christopher Columbus mistook a group of three manatees for mermaids on his first journey to the Americas. “They are not so beautiful as they are said to be,” he wrote in his journal, “for their faces had some masculine traits.”

BIG TOURING THE RUGGED COASTLINE WHEELS

OF ALASKA'S KENAI FJORDS.

BY MOLLIE FOSTER • PHOTOGRAPHS BY SCOTT DICKERSON



Covered head-to-toe in rain gear, I stand on a beach in Alaska's Kenai Fjords region, and the rain is pouring down.

It's mid-August, and our first full day of a trip aboard the *Milo*, a 58-foot fishing vessel, specializing in boat-supported Alaskan adventures. We're moving across a remote beach managed by the State of Alaska, riding along on fat-tire bikes, an innovation that evolved from clever riders joining two mountain bike tires side-by-side to gain additional surface area, creating a smoother ride over sand and rocks, which are plentiful out here.

Joining up with Mike McCune, owner

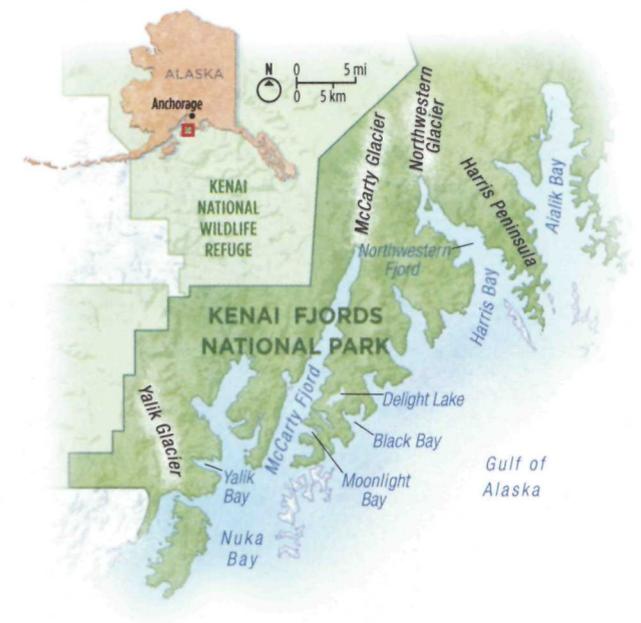
and captain of the *Milo*, photographer Scott Dickerson, and Peter Ehrhardt—a friend that Mike had invited a few days earlier—we set out to surf, stand-up paddleboard, and ride fat-tire bikes during a four-day trip that covered 160 nautical miles from Homer to Seward.

During our trip, we were careful to keep our bikes free of soil and debris to prevent the spread of invasive weeds, and we stayed on hard surfaces whenever possible to minimize our impacts. Thankfully, keeping to the beach ensured that our tire tracks were washed away by the tide hours after we had come and gone.



In the distance beyond our boat, bikes, and boards, we were treated to views of Kenai Fjords National Park. Pristine, wild, raw, untouched, diverse, and humbling, the park encompasses nearly 670,000 acres of wild lands, filled with tidewater glaciers. The land was originally set aside to conserve jewels like the Harding Icefield, the largest ice field entirely within the United States. Nearly 40 glaciers flow from it. But with the rain making for low visibility, we didn't see a single one until our final day.

Captain Mike and the *Milo* have helped many people experience the jagged Alaska coastline. This trip, fat-tire bikes were on board so that we could explore state beaches along the way. Approaching Nuka Bay, we anchored in a narrow cove with views of fjords clouded by mist in every direction. Carved into the landscape, these narrow inlets between the ocean and steep slopes are created by glaciers that melt into valleys near the coast. After a week of rain across the forested landscape, the region was exploding with water.



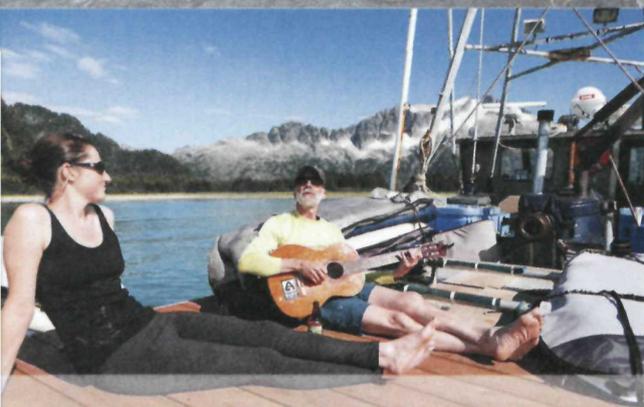
©KAREN MINOT



Stunning landscapes of Kenai Fjords National Park appear in the background of these photos, but no bike riding occurred in the park. On this unique adventure, the bikes remained on state land—beaches accessible only by small plane or boat. Bike use in national parks is a management challenge that is addressed on a park-by-park basis to prevent any harm to natural and cultural resources. Before you visit a national park or any other public lands with your bike, make sure you know where bicycling is and is not allowed.



We pedaled across small, smooth rocks that covered the narrow beach, leading to stretches of hard-packed black sand. The beach rocks were diverse: boulders the size of my shoes next to boulders the size of sports cars. Navigating along the coast, the loose sand presented the most challenging terrain, so Peter and I played with the waves, getting as close to them as we could, then pedaling away quickly as they crashed at our feet.



The next morning, we pulled into a U-shaped bay surrounded by mountains. Minutes after we anchored, Captain Mike, Peter, and I put paddle boards in the water and played in the surf. Partly cloudy skies opened to bright blue and blinding sun by the afternoon, revealing the coastline, with mountains and glaciers in every direction.

Back on the *Milo*, we tapped cold beers and grilled salmon from the bottomless supply onboard. As we ate,

sunlight lit up the low clouds, creating a golden reflection on calm waters, and our boat gently swayed in the bay, where glaciers, mountains, and ocean all converge. Exhausted from a long day of activity, our conversation was reduced to head nods and smiles, and that feeling of satisfaction that comes at the end of another epic adventure.

Author **MOLLIE FOSTER** lives in Anchorage and Denali, where she enjoys writing, photography, and exploring the landscape by human power (bike, skis, pack raft, or on foot).

Photographer **SCOTT DICKERSON** lives in Homer, Alaska. His images have been published by *The New York Times*, *National Geographic*, *Outside*, and *Men's Journal*, among others.

'the loneliest land'

In 1888, writer Mary Hunter Austin began exploring the desert. Her love of the blunt, burned land of little rain led to a book, a career, and an environmental legacy. BY LISA SELIN DAVIS

MORE THAN 100 YEARS BEFORE

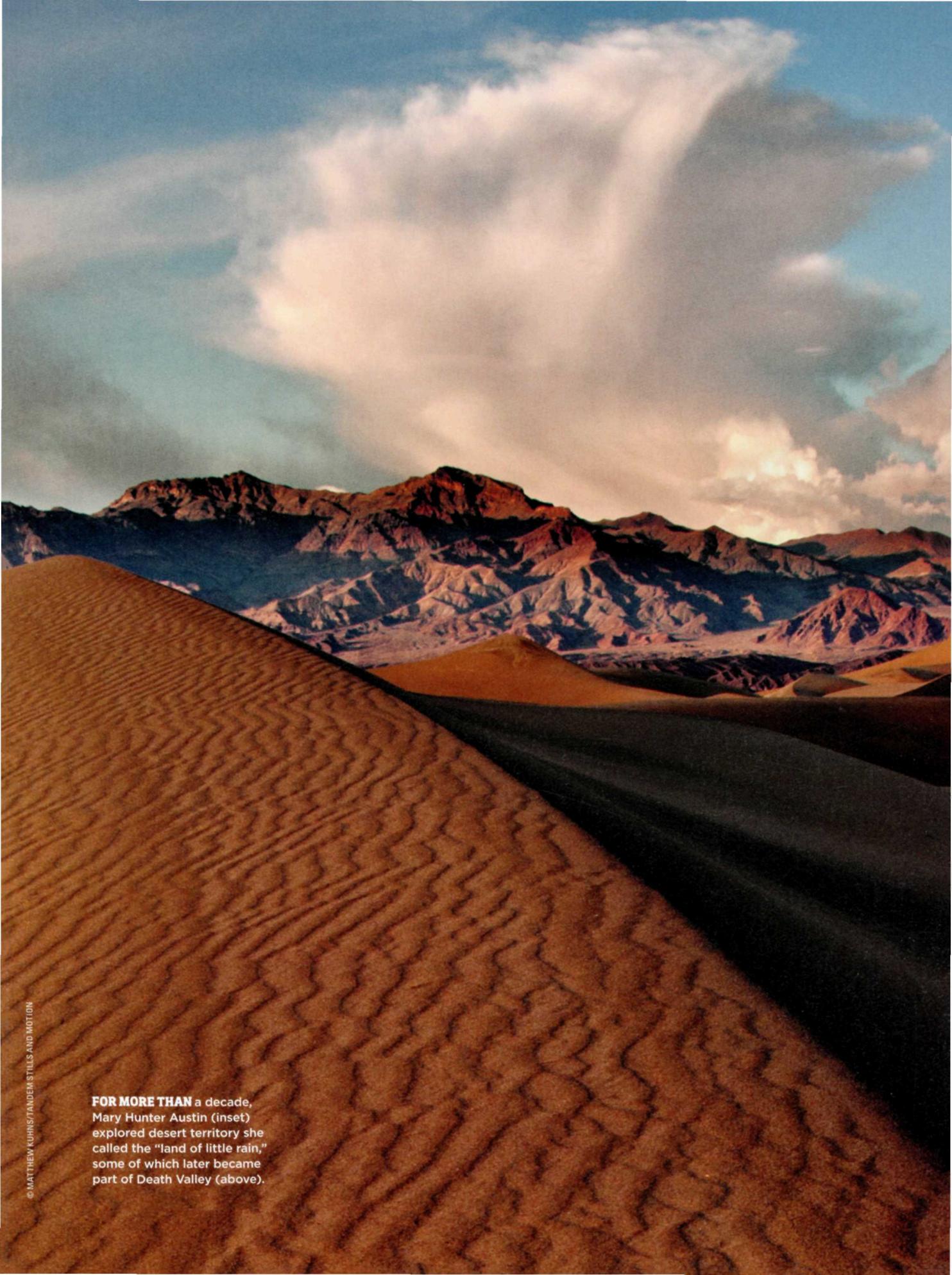
Cheryl Strayed chronicled her solo adventures on the Pacific Crest Trail in her best-selling memoir, *Wild*, another young woman ventured into the arid lands of California alone. She had come with her family across the Tehachapi Mountains and into the San Joaquin Valley, north of Bakersfield, in 1888. As she explored, she was mesmerized by the landscape's unsung beauty, its inhospitableness, and its people, who managed to prosper there. "There are hills, rounded, blunt, burned, squeezed up out of chaos, chrome and vermilion painted, aspiring to the snowline," she later wrote. "Between the hills lie high level-looking plains



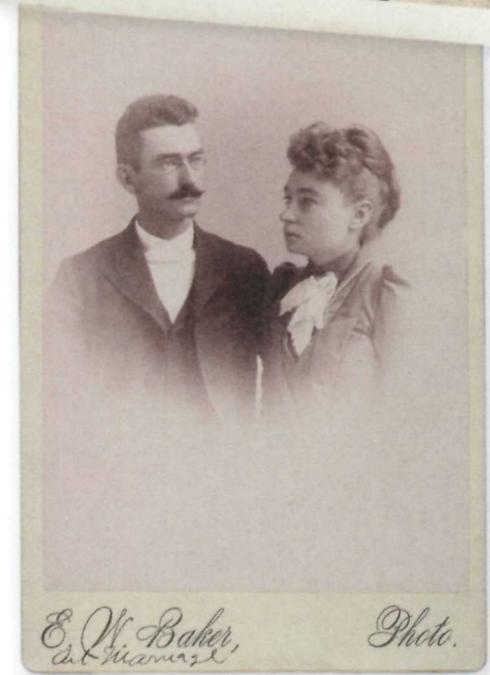
full of intolerable sun glare, or narrow valleys drowned in a blue haze."

For more than a decade, Mary Hunter Austin wandered the desert territory that she referred to as "land of little rain," its Native American name. She made careful studies of the area's flora and fauna and its people, both the native population and those, like her, who had come to live on the frontier.

Then, in 1903, she published a love letter to the lands that today include Death Valley National Park and the Mojave National Preserve. It took her 12 years to research, she said, but only a month to craft. Part travelogue, part memoir, part ethnography, the book, too, was called *Land of Little Rain*. Though the bulk of Austin's writing has



FOR MORE THAN a decade, Mary Hunter Austin (inset) explored desert territory she called the "land of little rain," some of which later became part of Death Valley (above).



never entered the public consciousness like the work of conservationists John Muir and Aldo Leopold, *Land of Little Rain* is considered a seminal work of environmental writing, influencing authors from Terry Tempest Williams to Gary Snyder. While she became a prolific author, none of her subsequent books was so beloved and widely reprinted.

The book also made a deep impression on William Randolph Hearst III, grandson of the newspaper tycoon. “Within two or three sentences you’re transported to that world,” he says. “Long before Charlie Bowden and Edward Abbey became the men of letters of the desert Southwest, she created a kind of literary and poetic understanding of that country.”

Hearst was sufficiently enthralled that he decided to reissue the book with Counterpoint Press this fall. He wanted to include images that evoked the tone and lyricism of Austin’s text, so he engaged photographer Walter Feller, who had also been riveted by Austin’s book. What Hearst and Feller

learned in researching the book was that Austin wasn’t just a pioneer in terms of where she ventured and how she wrote; she was a pioneer in how she lived her life.

AUSTIN WAS BORN MARY HUNTER IN 1868 IN Carlinville, Illinois, the fourth of six children. She was the daughter of a book-loving former Union Army captain in the Civil War and a mother of Scotch-Irish descent, fiercely concerned with temperance, religion, and book learning. Her father died when she was nine or ten years old. Later, Austin and her mother, with whom she had a tumultuous relationship, followed her brother out West, joining settlers taking advantage of the 1862 Homestead Act. The law encouraged western migration by way of cheap and easily attainable land. The family settled in the San Joaquin Valley in Central California. Austin was 20 and already defining herself as a writer.

She took long walks in the desert, which was both “the lone-

liest land that ever came out of God’s hands” and one that “lays such a hold on the affections.” There she encountered and befriended all sorts of characters her mother would have considered distasteful: stagecoach drivers and miners and Paiute and Shoshone Indians. She noted the “unhappy growth of the tree yuccas” and the “bayonet-pointed leaves, dull green, growing shaggy with age, tipped with panicles of fetid, greenish bloom” of the Joshua tree. She wrote of the “hot sink of Death Valley” and “the long heavy winds and breathless calms on the tilted mesas where dust devils dance.” She was literate in reading the landscape, says Melody Graulich, a professor of English at Utah State University and an expert on Austin’s life and work.

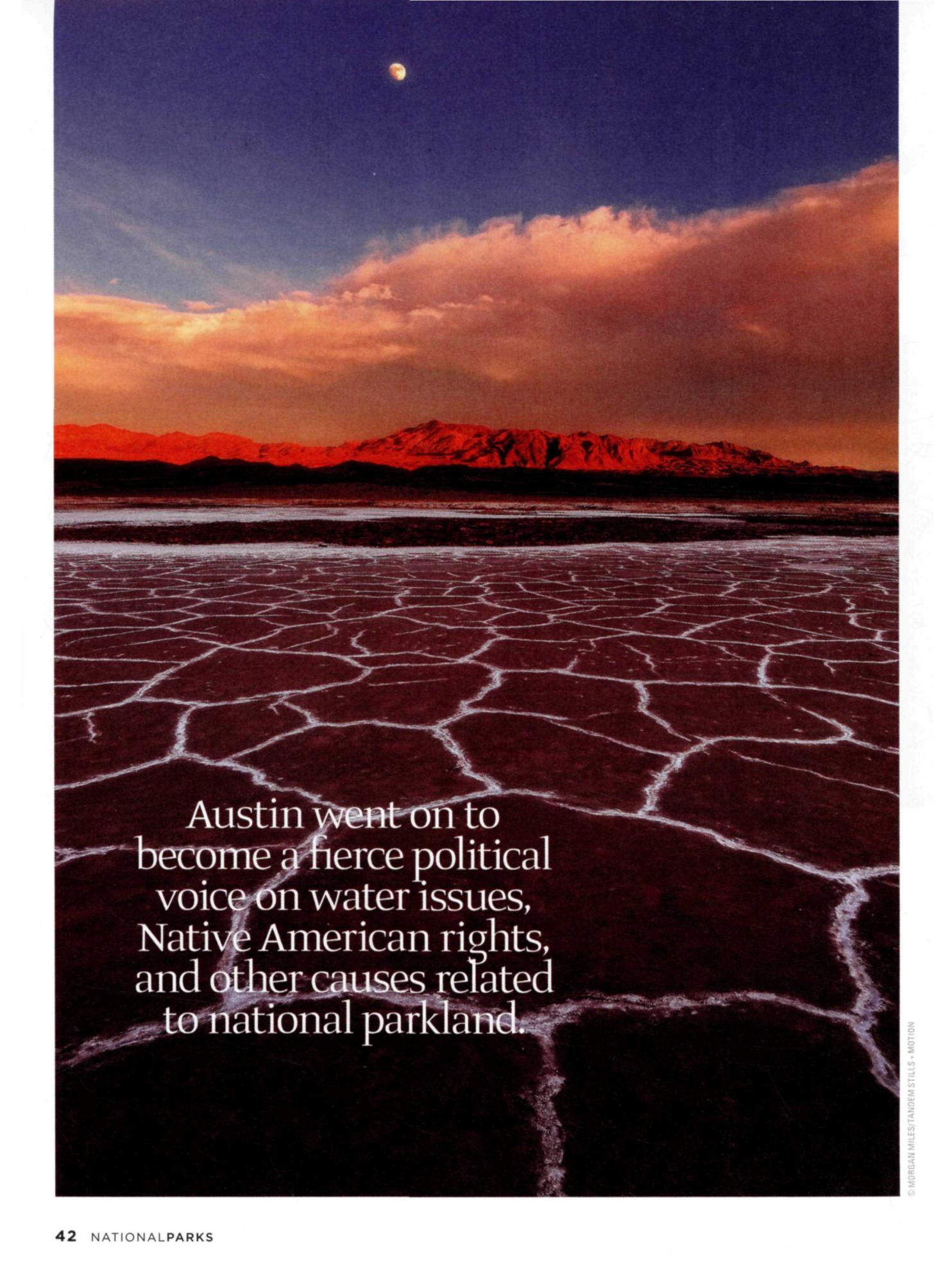
The unusual path that Austin eventually followed—teacher,

JOSHUA TREE NATIONAL PARK

(left) had not yet been designated when Mary Hunter Austin began exploring the region a century ago. TOP RIGHT: Austin with (from left to right) George Sterling, Jack London, and James Hopper in Carmel, California. BOTTOM RIGHT: Mary Hunter and Stafford Wallace Austin’s wedding portrait, 1891.

itinerant writer, single mother, divorcée—was greatly influenced by the landscape to which she was transplanted. “She wrote that in the desert each plant has its own face and its own social relationship to the plants around it,” says Graulich. “I see that as metaphoric space that the West gave for growth.” Austin had left behind the pretensions of the tamed landscape “and moved west where society was much more fluid. There was much more room for unconventionality.”

But Austin’s mother, ever concerned with respectability, was keen for her to marry. With the slim pickings in the frontier, Mary Hunter reluctantly wed Stafford Wallace Austin in 1891. Stafford, a Stanford-educated engineer, was not much of a provider and even less of a companion. Their daughter Ruth, born in 1892, was severely mentally challenged; for the most part, Austin cared for her on her own. She left her husband several



Austin went on to become a fierce political voice on water issues, Native American rights, and other causes related to national parkland.

times; they finally divorced in 1914. Unlike most women of her time, says Graulich, “Austin was not defined by marriage but by the natural world that gave these spiritual powers and independence.”

Throughout the hardship and turmoil, Austin was writing, not just to express herself and give voice to the causes so dear to her heart but to earn a living and pay for her daughter’s care. Although some would condemn her choice, Austin eventually put her daughter in an institution, a financial cost she would shoulder alone.

Land of Little Rain began as a series of sketches—it includes 17 vignettes in all—published serially in *The Atlantic*, the most important literary magazine of the day. Much of her territory is in the Owens Valley, where she made her home, between the Inyo National Forest and Death Valley. The chapter “Jimville” describes a town of “300 people and four bars,” and “The Basket Maker” focuses on a Native American woman who “sits by the unlit hearths of her tribe and digests her life, nourishing her spirit against the time of the spirit’s need.” The book, says Graulich, is “the beginning of gaining her footing, both in the physical landscape and the literary landscape.”

Eventually Austin left the Owens Valley and headed to an artists’ colony in Carmel, where she befriended writers like Jack



AUSTIN WROTE 34 BOOKS,

including the seminal *Land of Little Rain*, before her death in 1934.

London and Ambrose Bierce. She went on to become a fierce political voice on water issues, Native American rights, and other causes related to national parkland, and an important figure in the dawn of the Southwestern arts scene. “She had no qualms about putting herself out there,” says Graulich. “She had her finger in every pot.”

Austin was particularly passionate about women’s rights and birth control. Many of her later works recount the struggles of independent-minded women in a repressive society. As Austin wrote in a fictional piece called *The Walking Woman*: “She had walked off all sense of society.”

“Her books are about the women she encountered in her wanderings—mystical, independent, farseeing women who had a deep, abiding connection to the natural world,” says Graulich.

Later, in New Mexico, Austin collaborated on a project with Ansel Adams, who said of her, “Seldom have I met and known anyone of such intellectual and spiritual power and discipline. She is a ‘future’ person—one who will a century from now appear as a writer of major stature in the complex matrix of American culture.”

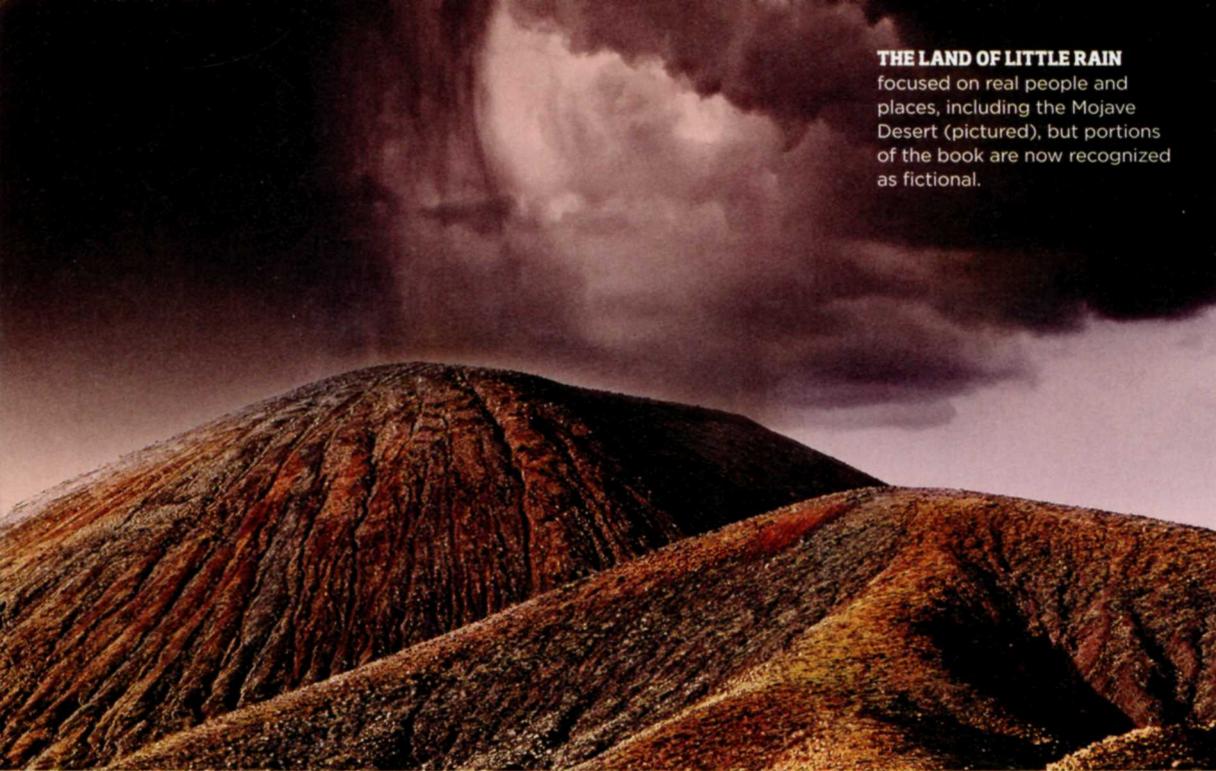
Although Adams’ prediction never materialized, Austin’s best-known book continues to influence writers and artists today.

“It was this great description of the unique landscape of the Owens Valley, but also a larger land of the desert and the people who might be drawn there,” says Dayton Duncan, a writer and filmmaker who co-produced the PBS series, *The National Parks: America’s Best Idea*. Duncan discovered the text while researching his book about modern frontier towns, *Miles from Nowhere*. “It’s as evocative a benchmark as reading Lewis and Clark’s journals.”

To some of her fans, this book’s popularity is something of an irony, or a sad commentary on the publishing industry. *Land of Little Rain*, her least controversial and confrontational work, has quietly lived on while many of her more overtly feminist and political works fell out of print. Some believe that its political neutrality is part of what has kept *Land of Little Rain* from fading away.

Austin went on to write 33 other books. She moved to New York in the early 1910s to champion women’s causes, and there

Many of Mary Hunter Austin’s favorite places became national parks 20 years ago with the passage of the California Desert Protection Act of 1994. The law, which President Bill Clinton signed, established Death Valley (left) and Joshua Tree National Parks and the Mojave National Preserve. In all, the legislation ensured greater protection for more than 8.6 million acres of the California desert, which amounts to 23 percent of the national park lands in the lower 48 states.



THE LAND OF LITTLE RAIN

focused on real people and places, including the Mojave Desert (pictured), but portions of the book are now recognized as fictional.

© BOBKILLEN 2014

she wrote the autobiographical novel, *A Woman of Genius*, about an actress whose artistic aspirations conflict with the expectations of society. In 1918, she began visiting Santa Fe, where she studied the poetry of Native Americans and engaged in reform on their behalf. She collaborated with Ansel Adams on *Taos Pueblo*, about an intact Native American village, in 1930.

Just after the release of her book, *Experiences Facing Death*, a meditation on spiritualism, philosophy and war, she began to suffer from a recurrence of serious health problems. In 1932, she was diagnosed with coronary disease and had a heart attack the following year. She died in Santa Fe in 1934. Many of her books died with her.

LAND OF LITTLE RAIN, OF COURSE, ENDURED. IT has been reissued many times, but Hearst contends that his iteration does something the others do not: It paints a more complete picture of Austin and her work, thanks in part to a comprehensive afterword by Graulich that notes the breadth of Austin's passion and causes, her complexity of character. "The book we've produced is a very modern interpretation of Mary Austin's work and life," he says.

It's also one of the first to acknowledge the often overlooked truth of *Land of Little Rain*: It's not really a work of nonfiction.

Hearst found this out the hard way. For years, he had been interested in finding the places Austin mentioned in her book. "If you like Mary Austin," he says, "you want to make a map between the chapters of her work and the physical geography."

Somehow, in his fervent research of Mary Austin's haunts, Hearst came across Walter Feller, a former water-district engineering technician who moved to Hesperia, California, just north of the San Bernardino National Forest in 1986. When

Feller found Austin's book in a welcome center, he was hooked. "She wrote with such loving familiarity of her area," he says. "Her book has been a major part of my life."

The two of them set out on what Hearst called a "voyage of discovery" but quickly found that many of her locations could not be pinpointed. "There were places that just didn't exist," Hearst says. "They were just not on the map." Her whole chapter on Jimville, for instance, wasn't about one real place but perhaps was a composite, a painting in words of her collective experience in desert towns. In the end, says Hearst, they came to the inevitable conclusion that large portions of her work relied on imagination.

This didn't bother Hearst. He'd come to Austin as a fan of Western literature, which included fiction. "I don't think it subtracts anything that it was fiction," he says. "In fact, it separates the inspiration part of the landscape from the Google Earth part of the land." Many scholars of her work, including Graulich, had long known that parts of the book were fictional—the writer Bob Hass called Austin a "mythographer"—but most of the general public did not.

Hearst found a professional cartographer to make maps of the places they actually could identify, spots like Little Antelope and Butter Lake, and Feller picked the photographs that he felt most matched her words, even if the images weren't of the specific lands in her book.

Hearst hopes that the fictional places in the book won't deter a new generation of fans of Austin and the land she loved but will inspire them. His wish, he says, is that readers will "put a sleeping bag in the back of their cars and drive out there to see the country."

LISA SELIN DAVIS is a freelance writer in Brooklyn, New York.



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The Navajo Generating Station was supposed to improve the lives of the native people living in its shadow, but its only real legacy is the polluted skies over the American Southwest.

GENERATING CONTROVERSY

BY PETER FRIEDERICI

BETTY THOMPSON stands on her porch in Page, Arizona, near the Navajo Generating Station.



© WILL WILSON (3)

CAROL BIGHTHUMB and her mother Pearl Begay next to their sheep corral, near the Navajo Generating Station (opposite).

Betty Thompson still tears up when she recalls what her mother said every time they drove past the Navajo Generating Station.

“I put that there,” she said. “With my thumbprint, I put that thing there.”

It might seem unlikely that a frail Navajo grandmother would have had anything to do with the behemoth power plant that has dominated the skyline of Page, Arizona, since the 1970s, sending its coal-fired electricity to the distant cities of Phoenix, Las Vegas, and Los Angeles and its hazy emissions to the canyon country that forms a much-loved centerpiece of Southwestern tourism. But the environmental legacy of fossil fuels is long—and so are the bitter memories of people who live next door to where those fuels are consumed.

Four times, representatives of the Navajo Nation and the Salt River Project—the utility that runs the plant—came by, recalls Thompson, herself a grandmother in her 50s now, with long black hair streaked with gray. She spends her



days driving tribal residents to their doctor’s appointments in Tuba City or Flagstaff or Phoenix.

Three times her mother, known in the Anglo world as Sally Young, resisted the proposal. Although they were poor, she saw little wrong with her family’s traditional lifestyle of grazing sheep and cattle amidst the arid brush that grew above the Colorado River’s deeply incised canyon.

Give up just some of your land, and we will provide you and your family with a better life, they said. Electricity, running water. Financial stability. Maybe better

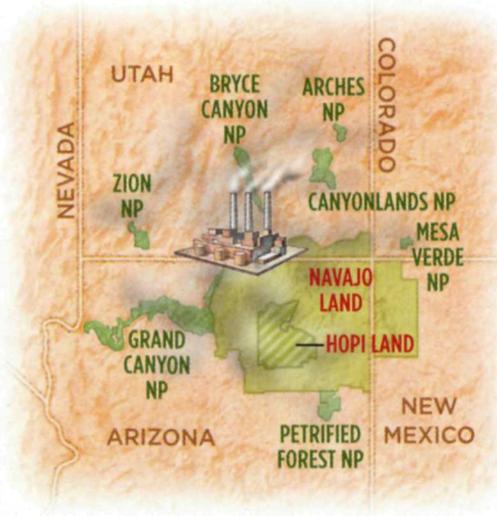
houses for you and your children, and jobs at the plant.

The few residents of this arid far corner of the Navajo Nation had already traded off regular rainfall and arable land for clear skies and massive vistas—a fair bargain, in their minds. But still, life was pretty hardscrabble. And so when the men in suits came by the fourth time, Sally Young decided she was ready to put her thumbprint down in ink, the signature of the illiterate.

The rest is history written on the area’s coral-pink sand dunes and azure sky: a new

blacktopped state highway, the fenced-off railroad tracks cutting through the family's old grazing lands—over which a train delivers coal mined from Black Mesa, 80 miles away. Rising above it all are the plant's three smokestacks; at 775 feet high, they are taller than any building in the entire American Southwest.

Amid the wide-open backdrop of sand, rock, and sky, it's hard to get a sense of the plant's scale. But by any measure, its impact is substantial. Each year it burns some 8 million tons of coal, producing 2,250 megawatts of electricity distributed to an array of users in the Southwest. It's the primary power source for the Central Arizona Project, the huge water-distribution system that siphons the Colorado River to the sprawling cities of Phoenix and Tucson. Though the plant is operated by the Salt River Project, a major utility that serves



the Phoenix area, it is co-owned by several utilities and also sends electricity to users in Nevada and California. As a side effect, each year it sends 34,000 tons of nitrogen oxides into the Four Corners sky, plus more than 500 pounds of mercury—and more than 15 million tons of climate-altering carbon dioxide.

It's that air pollution that has long

troubled environmentalists, federal pollution regulators, and the National Park Service, an agency charged with protecting the nearby Grand Canyon and other signature parklands that are characterized by their clear vistas as much as their dramatic geology.

Questions around the plant's future emissions are nothing new. In 1977, Congress amended the Clean Air Act to restore visibility at national parks and wilderness areas around the country. The Environmental Protection Agency (EPA) dragged its heels for years but in 1999 finally developed the Regional Haze Rule to transfer the law into concrete actions. The agency designated "Class I Areas" in which the experience of clear skies is of particular importance, and it required state and federal agencies to develop plans for improving visibility there. Eleven of those areas lie within about 200 miles of the Navajo Generating Station, including

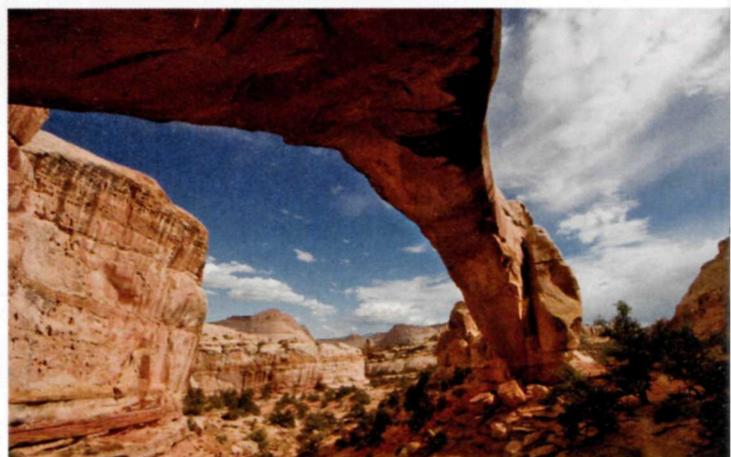
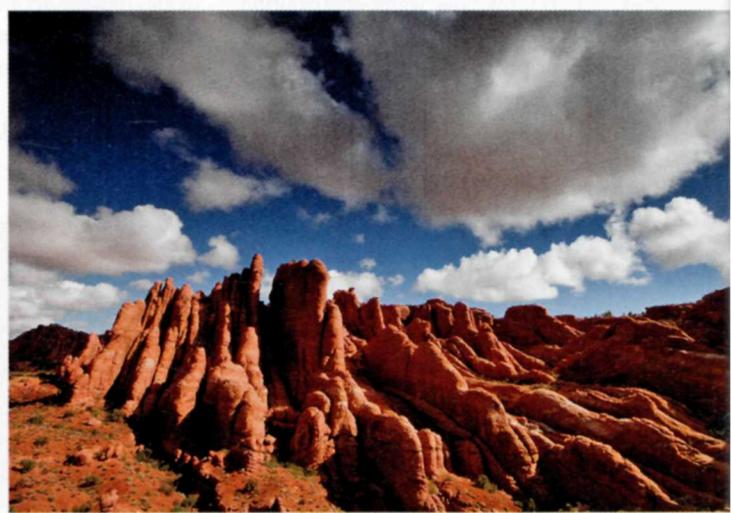




© SCOTT KIRKWOOD (3)



© LAURIN RINDER/DREAMSTIME



THE IMPACT of the Navajo Generating Station can be felt throughout the parks of the Southwest, including (clockwise from top) Canyonlands, Arches, Capitol Reef, and Grand Canyon.

postcard landscapes such as Grand Canyon in Arizona and Capitol Reef, Arches, and Canyonlands National Parks in southern Utah.

According to a 2013 EPA analysis, emissions from the Navajo Generating Station continue to have a noticeable impact on visibility in the region's Class I areas. EPA and the Salt River Project have been exploring options for reducing the plant's emissions in an effort to conform to the rule. EPA drew up a plan requiring the installation of new equipment that would capture the bulk of the plant's nitrogen oxide emissions by 2018. But it would come with a price tag of at least \$560 million, according to Salt River Project officials, and possibly twice as much, depending on the extent of the technology needed.

So the Salt River Project developed a counterproposal to reduce overall emissions over the life of the plant, with the help of a so-called Technical Working Group made up of electricity interests, tribes, and a few environmental groups. In late July, EPA agreed to the Working Group's plan, which makes long-term promises but requires no immediate changes to the plant's operation—a decision that led NPCA and other organizations to file a lawsuit last October (see sidebar).

Some Navajo and Hopi activists have been pressing for the installation of a large-scale wind and solar facilities that could replace some of the plant's generating capacity with cleaner energy. It's an idea that would take advantage of the region's abundant wind and sun, but that has so far gained little traction with regulators, utilities, or the Navajo tribe. To those activists, EPA's decision amounts to a new rubber-stamp for coal and a swipe against cleaner alternatives that would create new jobs.

"Delaying coal cleanup for another 30 years inhibits progress on renewable energy development that will become an economic engine long past coal," says Jihan Gearon of the Black Mesa Water Coalition, a local group dedicated to building sustainable and healthy communities while preserving indigenous cultures.

For their part, Navajo tribal officials have so far cast their lot with coal. In 2013, Navajo Nation officials signed a new lease with the plant operators, extending the original 50-year lease from 2019 to 2044. The new agreement represents an enormous economic boost to the tribe, whose annual payments from plant operators will increase from just over \$600,000 a year to \$42 million a year. And plant jobs are important on a reservation where unemployment hovers stubbornly around 50 percent.

"It's about the only job in this area," says Wally Brown, a Navajo entrepreneur who runs a Navajo-themed tourist attraction outside Page. "People around here need the jobs, and they will continue to do so."

A FLAWED COMPROMISE

The Technical Working Group formed to assess alternatives to the EPA's emissions clean-up for the Navajo Generating Station included representatives from industry, government, tribes, and environmental groups. But as significant is the list of groups excluded from the process, including NPCA, the Hopi tribe, and indigenous environmental organizations.

The plan hammered out by the Working Group as an alternative to retrofitting all three of the plant's boilers maps out a slow patchwork of alternative steps. The plant could shut down one boiler by 2019, and install nitrogen oxide-reduction technology on the remaining two boilers at some point in the future. Working Group members say that would reduce nitrogen oxide emissions at least as much as the Environmental Protection Agency (EPA) plan, and also cut down on releases of climate-altering carbon dioxide. (Last June, the Obama administration released new regulations requiring cuts in carbon-dioxide emissions from coal-fired power plants, but the Navajo Generating Station is exempt from these because it sits on tribal land.)

In late July 2014, the EPA agreed to pursue the Work-

ing Group's plan. But the outcome of the plan is contingent on the completion of a complex environmental impact statement, and on administrative changes to the plant's ownership which could result in keeping all boilers running well beyond 2019.

Many environmentalists are upset about the adoption of the plan because its requirements are unclear and its timeline is vague. In October, NPCA gave notice that it plans to sue the EPA for violating the Clean Air Act by failing to adequately regulate the plant's emissions in a timely manner.

"The plant's air pollution will continue to rain down physically on the people who live nearby and also obscure the view at Grand Canyon," says Kevin Dahl, NPCA's Arizona program director. "The current plan has too many off-ramps that would allow the plant to evade the Clean Air Act. It's a blueprint for environmental injustice. Why not require the immediate short-term reduction of air pollution that is mandated at most other coal-burning plants in the nation? These utilities should be held to a plan that transitions to cleaner energy. Instead, we have a weak compromise."

But for some local residents the plant has been more blight than boon. Betty Thompson and a number of her relatives live virtually in its shadow. On a hot July day she's sitting in the home of Pearl Begay, Thompson's oldest sister and one of Sally Young's nieces. It's a tiny yellow one-bedroom house. Nearby, high-voltage transmission lines radiate outward from the plant like the strands of a spider web.

Begay is wearing a green velveteen blouse and traditional turquoise-and-silver jewelry. She is 89 and stooped, but adeptly swats flies at the kitchen table as she speaks slowly and clearly in the chewy syllables of Navajo.

"It used to rain a lot; it was really beautiful in the scenery before the power plant was put here," she says as her daughter Laverne Etsitty, also in her 50s, translates. "The scenery was very beautiful, and after the plant was built here it became hazy. Before, it was perfect. Before the plant was here you could see the canyon full of snow and water coming down the rocks, and there used to be some spring water down here in the canyon, but now they're all dried up—no more springs. And a long time ago before the plant a mist used to come all through this whole canyon in spring, eight days and then on top here too."

She pauses.

"In our traditional way, when the mist is like that, they're planting," Etsitty explains. "The holy people, they're planting. My mother misses all that. She wonders whether the smokestacks... [are] the reason there's not much rain anymore."

It's hard to verify Begay's suspicion that the plant's emissions have cut down on rainfall in the area; the science about how point pollution sources affect local weather patterns is unclear, and precipitation records for Page show no clear pattern of change since measurements began in the late 1950s. But for her family the plant's impact is nonetheless a litany of loss. Early on, their cattle and sheep wandered into a water pit dug out during the plant's con-



BETTY THOMPSON, pictured with a photograph of her late mother, Sally Young.

struction; they died there, of unknown causes. On windy days white dust settled on plants and houses.

"Even the vegetation that our livestock were eating, from the roots to the tops it was all white," says Thompson.

Pollution emitted by the plant has declined since the 1970s. The plant's emissions are in compliance with federal regulations, and the Coconino County (Arizona) Department of Public Health has not documented any spike in respiratory illnesses or other ailments in communities near the plant. But the nonprofit group Clean Air Task Force estimates that emissions on the order of those emitted by the Navajo Generating Station are likely to result in more than \$128 million in dispersed health-care costs annually as ozone and fine particulates contribute to heart problems, asthma, and an array of other health problems and hospital visits.

And nearby residents say they do feel the impacts of the plant's emissions.

"There's a lot of health issues around the chapter," says Carol Bighthumb, Begay's

daughter, "especially with respiratory problems. Most of our kids have asthma or something like that. But nobody really cares about the health problems."

Like many residents of the jobs-poor Navajo Nation, Betty Thompson has moved around a lot to different states in pursuit of work. Not long ago she moved back, feeling that it was time: Most Navajos have a strong tie to their place of birth. She recently received chapter permission to build a new house in sight of the power plant, and plans to live there no matter what. She takes the long view: The plant is only supposed to operate until 2044.

Maybe she has that perspective because many Navajo people have lived in impoverished, arid circumstances for a long time, or because of her own mother's

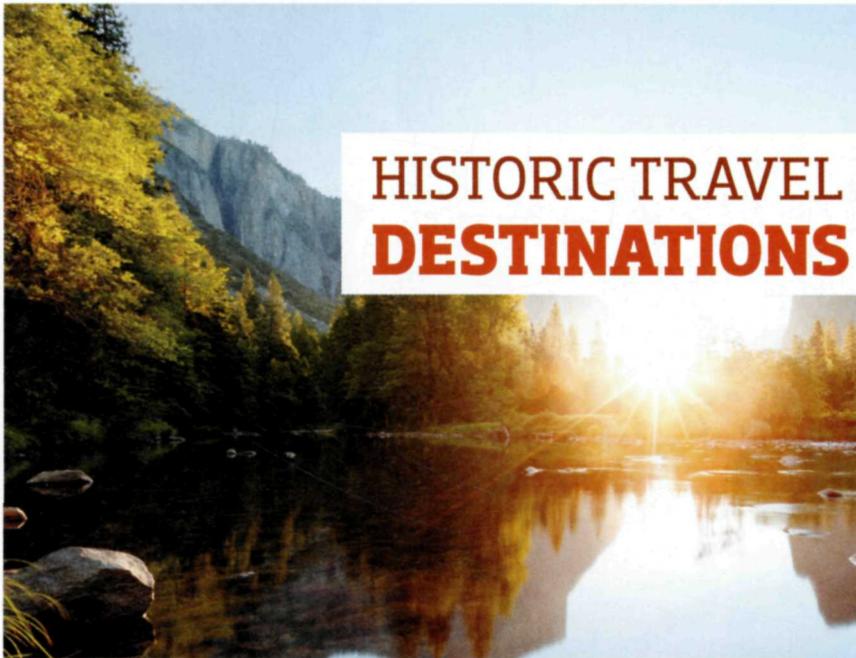
experience. She remembers Sally Young telling of the verbal promises that were never kept after she gave her thumbprint permission for the plant to be built: new houses for her family, jobs, water, electricity. When the amenities failed to arrive, year after year, it made driving past the plant a more and more bitter experience.

But one of those elements of modern life finally did arrive. On April 7, 2014—44 years, six months, and eight days after the Navajo president signed the lease allowing the plant to be built—the electric line to Sally Young's house was finally completed.

Unfortunately the old woman had died nine months earlier.

"All these years my mom always wanted to see her house lit up," Thompson says. "She never did."

PETER FRIEDERICI writes about science, people, and the environment from Flagstaff, Arizona, where he teaches journalism at Northern Arizona University and writes for periodicals such as *Audubon*, *High Country News*, and *Orion*.



HISTORIC TRAVEL DESTINATIONS

Shake off those winter blues and explore a world filled with the magnificent splendor that can only be found in spring. Whether you're in need of a romantic getaway or in the mood for a memory-making family jaunt, grab your loved ones, load up the car, and head on out to one—if not all—of these exquisite, historical American destinations.



Chateau at the Oregon Caves
Courtesy of Christopher Willis, OCNM Media Specialist

NORTH DAKOTA

Cool Cave, Warm Hearth!

In the late 1800s, Theodore Roosevelt trekked the unsettled Badlands of North Dakota, leaving the early spring comforts of his Elkhorn Ranch cabin to find the thieves who stole his boat. He found them and walked them to jail, and, well, the rest is Legendary. (Did you know Roosevelt served as Sheriff of Morton County, ND?)

Your own Legendary adventure to what is now Theodore Roosevelt National Park probably won't include boat thieves, but you can hike, bike, or ride horses through the same rugged land that forever changed Roosevelt's life, inspiring him to become President.

Start your adventure at Maltese Cross Ranch, where Roosevelt worked cattle and hunted on the open frontier. Then, venture into the park for a memorable photo safari.

The park is full of wildlife—majestic bald eagles, bighorn sheep, bison, fleet-footed deer, pronghorn, and elk. You can do more than just view them from afar—you can get up close and personal on the paved 36-mile loop that winds its way into the south unit's backcountry, or on the 14-mile drive into the north unit near Watford City.

The two units are connected by the renowned Maah Daah Hey Trail that caters to adventure-seekers, and via U.S. Highway 85 that appeals to the more traditional traveller. Distinctly different in their appearance, the units are both breathtakingly beautiful and motivated Roosevelt to become one of the greatest conservationists in history.

Theodore Roosevelt National Park's unique landscape is a true reflection of North Dakota—rugged, peaceful and unyielding. Visit www.legendaryND.com to learn more.

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HILTON HEAD ISLAND
South Carolina



Historic Mitchelville Freedom Park
Courtesy of Historic Mitchelville Freedom Park

HILTON HEAD ISLAND, SOUTH CAROLINA

Kumbaya!

The African-American freedom experience is deeply rooted in the history of Hilton Head Island, site of Mitchelville, one of the first self-governed Freedman's towns in America. Welcoming of all who want to learn more about their traditions and history, the "living, breathing" Gullah people invite you to "Kumbaya!" (Come by here!) Visit www.hiltonheadgullah.org.

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HOT SPRINGS NATIONAL PARK, ARKANSAS

**Historic Becomes Trendy
at the New Brewery in Hot
Springs National Park**

Superior Bathhouse Brewery and Distillery is making history as the first and only craft microbrewery to set up shop inside a national park.

The brewery is located in downtown Hot Springs at the heart of its classic Bathhouse Row.

Superior occupies a bathhouse that has been historically preserved, while making it a functioning brewery and distillery. The historical elements have guided the design choices for Superior's renovation, adding to the business charm and overall functionality.

Hot Springs is known for just that—its hot springs—and Superior uses the naturally hot thermal spring water in its process. The water enters the Superior at close to 150 degrees and provides energy efficiency for the business and the national park. Superior is the only brewery or distillery to use hot thermal spring water in this way.

Superior also boasts a full kitchen, and its menu comprises eclectic pub fare including vegetarian and gluten-free options, as well as food grown and produced by local farmers and artisans. Not to be overshadowed, its Gelato di Superior counter offers a bit of Italian dessert heaven to add to the historic experience. Learn more at www.arkansas.com.



Inside historical Superior Bathhouse Brewery and Distillery
Courtesy Arkansas Department of Parks and Tourism



The American Civil War Museum's friendly staff makes your visit memorable
Courtesy of Penelope M. Carrington

RICHMOND, VIRGINIA

150th Anniversary of the Civil War

In April 1865, the fall of Richmond and surrender at Appomattox brought freedom, reunification, and great uncertainty for all: soldier and civilian, free and enslaved. In April 2015, The American Civil War Museum's locations in Richmond and Appomattox will commemorate those world-changing events with special exhibits, tours, and demonstrations. Additional lectures and programs will continue throughout the remainder of the year. It is the perfect time to visit the Museum as the 150th anniversary of the Civil War's end gives us the opportunity to not only remember the stories of the people who made history, but to also look at the legacies of that history that still shape our world today. Learn more at www.acwm.org.

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Visit our sites in Richmond and at Appomattox to explore this epic struggle, and to experience the stories of the people who fought in – and were affected by – the American Civil War.

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Canoeing at Lake Sakakawea in Lewis and Clark State Park
Courtesy of Williston Convention & Visitors Bureau

WILLISTON, NORTH DAKOTA

Booming with Living History

Imagine watching a blacksmith or a fur trader preparing a beaver hide—when suddenly, BOOM! A musket fires nearby. This kind of experience is just one of many reasons Williston, North Dakota, is “Boomtown, USA.”

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

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

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

While staying in Williston, visitors also enjoy North Dakota's largest indoor recreation center. The Williston Area Recreation Center features swimming pools, exercise facilities, indoor turf, basketball courts, and more. Learn more at www.visitwilliston.com.



Frank Lloyd Wright's Taliesin
Courtesy of Taliesin Preservation, Inc.

FRANK LLOYD WRIGHT'S TALIESIN

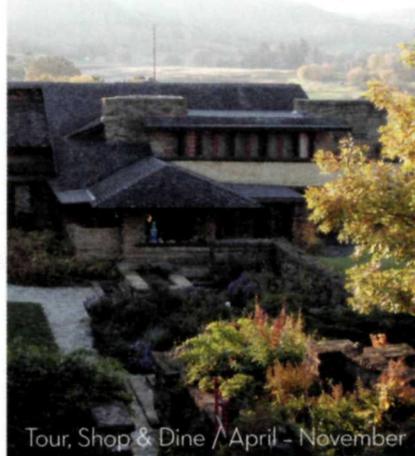
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Front porch of the Sebastopol House Historic Site
Courtesy City of Seguin

SEBASTOPOL HOUSE HISTORIC SITE

A Concrete Paradigm of American Craftsmanship

Listed on the National Register of Historic Places, Sebastopol House, now a museum open to the public, is one of the best-preserved “limecrete” structures in America and rests in one of the oldest towns in Texas founded by Texas Rangers. Built in Greek Revival style by highly skilled slaves, it boasts a mystery dungeon and a secret water-cooling system. Also on exhibit is Wilson Pottery, rare artifacts from one of the first businesses in Texas owned by freed slaves. Open Thursday through Sunday, 9 a.m. to 4 p.m. To learn more, go to www.visitseguin.com.



Seguin, TX, was founded by Texas Rangers in 1838. It boasts one of the finest and best-preserved “limecrete” structures in America, **Sebastopol House Historic Site**, a restored Greek Revival mansion turned museum filled with mystery and history.

Wilson Pottery is on exhibit at Sebastopol. See these historic and rare pieces from one of the first post-Civil War businesses owned by freed slaves in Texas.



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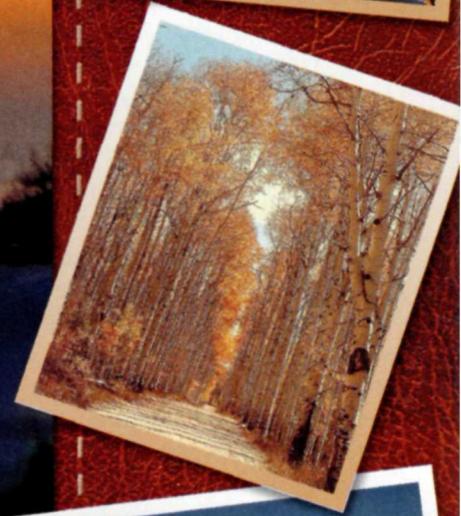
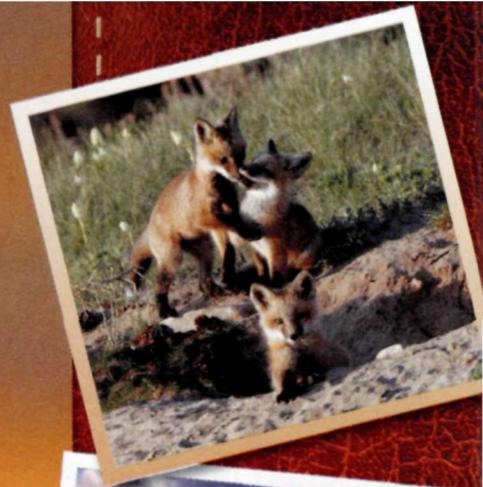


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SUTRO BATHS' enormous, heated salt-water pools were covered in two acres of glass.

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A Pool for the People

The ruins of Sutro Baths recall life in turn-of-the-century San Francisco.

IN A COVE TUCKED BEHIND SAN FRANCISCO'S WESTERNMOST POINT, waves break over a long, crumbling wall. Terraces and trails scar the surrounding bluffs. Tunnels cut into the rock, and a graceful, curving staircase descends through piles of broken concrete and twisted rebar to a swampy lagoon at the ocean's edge.

These traces are all that remain of Sutro Baths, a complex of public swimming pools completed in 1894. Now protected as part of Golden Gate National Recreation Area, these modern ruins were once a glass wonder that reflected the progressive character of their creator and the evolution of working-class life in turn-of-the-century San Francisco.

After the Gold Rush, San Francisco's wealthy could take a toll road

out to the city's wild western edge, where they would relax at the beach and visit upscale coastal resorts. The working class, meanwhile, had few good options for recreation. Landscape architect and park pioneer Frederick Law Olmsted lamented of San Francisco in 1866, "The most popular place of resort is a burial ground on a high elevation scourged by the wind with no trees or turf. I have more than once seen working men resort with their families to enjoy a picnic in the shelter of the tombstones."

In 1879, German immigrant Adolph Sutro stepped into this scene with a fresh fortune and a charitable streak. Sutro was an entrepreneur, engineer, and politician who made his money in Nevada silver mines during the mid-1800s. He sold his mining interests and moved back to San Francisco, where he'd launched his merchant career nearly 30 years earlier.

According to historian John Martini, a retired park ranger who's just written a book about the baths, Sutro was a populist in the vein of Leland Stanford and Andrew Carnegie—men who made fortunes in America's Industrial Revolution, then worked to establish good names through philanthropy.

Sutro began buying up property, mostly in the undeveloped "outside lands" approaching the Pacific shore. He built an estate in an area called Lands End and welcomed the public to enjoy its grounds. In 1884, Sutro began construction on a tidal aquarium in a nearby cove. The aquarium opened in 1887, but by then Sutro had dreamt up an even grander vision for the sheltered beach: a massive indoor swimming pool, accessed from the city by a railroad in which Sutro himself was an early investor.

Through seven years of construction,

Sutro's designs for the site kept changing, but his vision remained constant: a beautiful, affordable place where regular San Franciscans could exercise and play. The beach and its tumbling bluffs were walled in, terraced, and smoothed with concrete. A forest of iron columns grew up to support the baths' arched glass roof. To cover six heated salt-water pools, workers installed two acres of glass. "A small place would not satisfy me," Sutro said. "I must have it large, pretentious, in keeping with the Heights and the great ocean itself, so I filled the whole cove and gave my building a frontage of 350 feet, which, if I'm not mistaken, is the largest extent ever given to a similar structure."

Ostentatious as he was, Sutro was undeniably concerned with opportunities and education for the working class. Above the pools, a gallery displayed treasures from Egyptian mummies to taxidermied animals, including a sea lion named Ben Butler that had washed up on a nearby beach. Live shows, dancing, and races were a few of the diversions that visitors could expect from a trip to the baths.

Though well-loved and admired as

A gallery displayed treasures from Egyptian mummies to taxidermied animals.

a marvel of modern engineering, the baths were never very profitable. The glass behemoth sat exposed to wind, waves, salt, and fog, which posed costly challenges for its upkeep. After Sutro's death, his family operated the facility for decades, eventually converting half of the building to an ice-skating rink. They sold it in 1952, and in the mid-1960s, the new owners sold the property to a developer. It closed to the public forever in 1966.

On a sunny Sunday in June of that same year, 15-year-old John Martini decided to head out to the condemned baths with a buddy to have a look around. But as they turned onto the highway that goes up the coast, they saw a cloud of black smoke rising on the horizon over Lands End. An arsonist had struck the partly dismantled structure, and Sutro Baths burned to the ground.

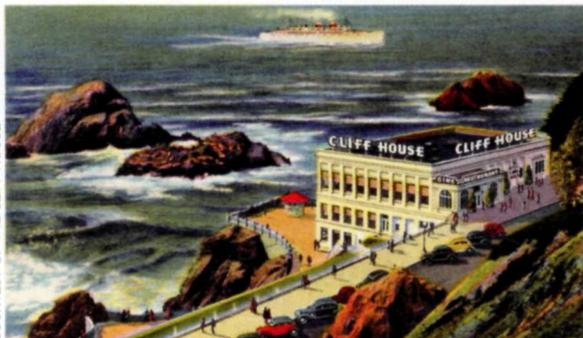
"It was sad," says Martini, recalling the fire. "As a kid, I loved to go skating there. But at the time it burned, nobody thought you could stop someone from

tearing down a beloved landmark and putting up new development."

But as the shell of Sutro's temple crumbled, a new conservationist ethic rose in the Bay Area, leading San Franciscans to reject plans for high-rise condos in the cove. Instead, the ruins were drawn into the boundaries of the Golden Gate National Recreation Area in 1972, saving a key spot in a protected stretch of shoreline spanning three counties.

These days, Martini leads tours at the site of the destruction he witnessed decades ago. Strolling among the ruins with visitors, he paints a vivid picture of the soaring structure and the generations of San Franciscans that streamed through its grand doors. "These aren't stories of famous people or dead generals," says Martini. "It's just a look at the life of common people." **NP**

JULIA BUSIEK has worked in national parks in California, Colorado, Hawaii, and Washington state. She lives in Fairfax, California.



COURTESY OF THE CLIFF HOUSE

DINNER ON THE EDGE

Perched on a high bank overlooking Sutro Baths and the Pacific coast of San Francisco is the Cliff House Restaurant. The first Cliff House was built in the late 1850s with wood salvaged from a shipwreck at Lands End. Over the years, the building has burned down and been rebuilt many times. The Cliff House continues to draw out-of-towners and locals alike, who come for its expansive views and freshly baked popovers.



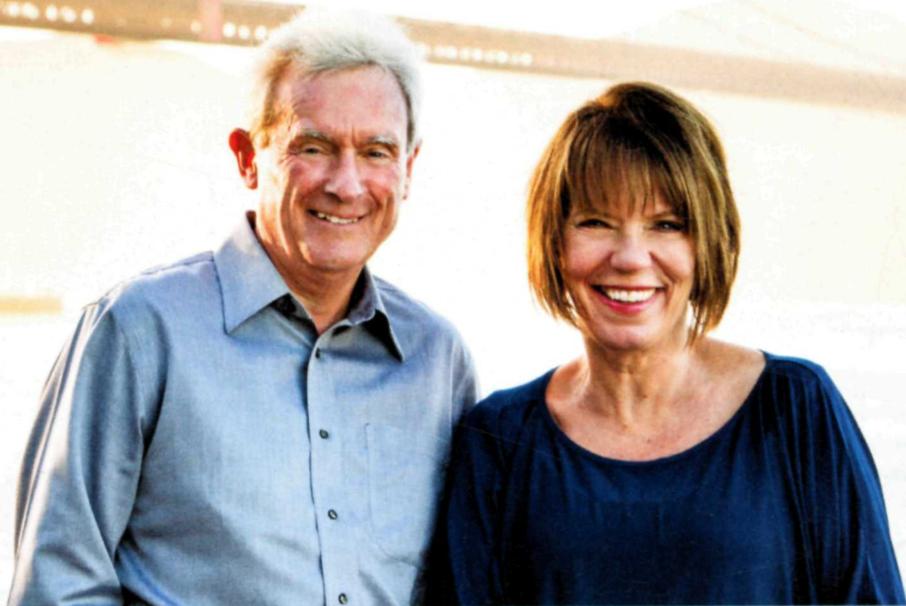
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A U.S. CAVALRY CAPTAIN WITH PARK RANGERS, Sequoia and Kings Canyon National Parks, California, circa 1912.

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Crissy Field, The Presidio, Golden Gate National Recreation Area, San Francisco, CA.
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