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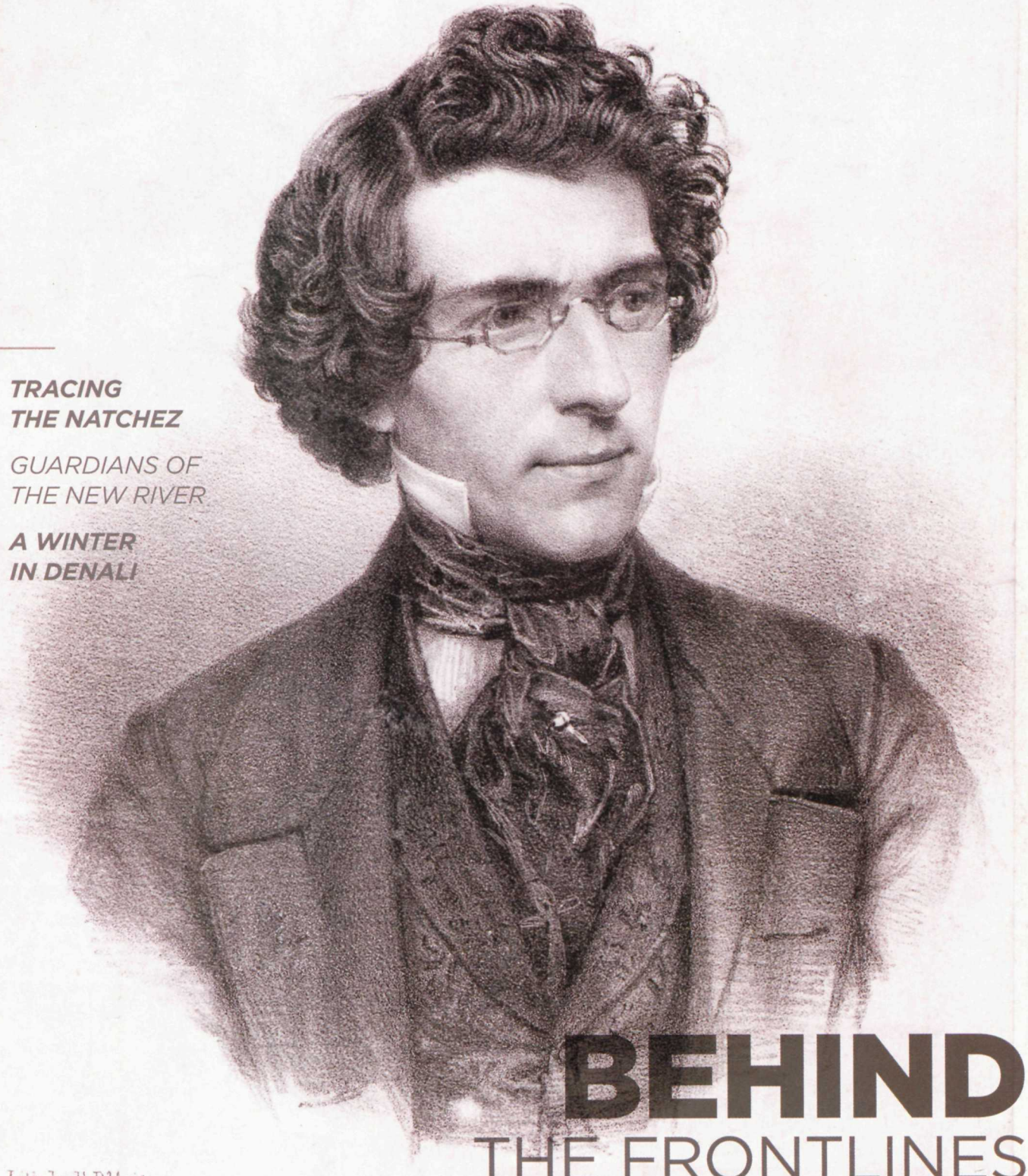

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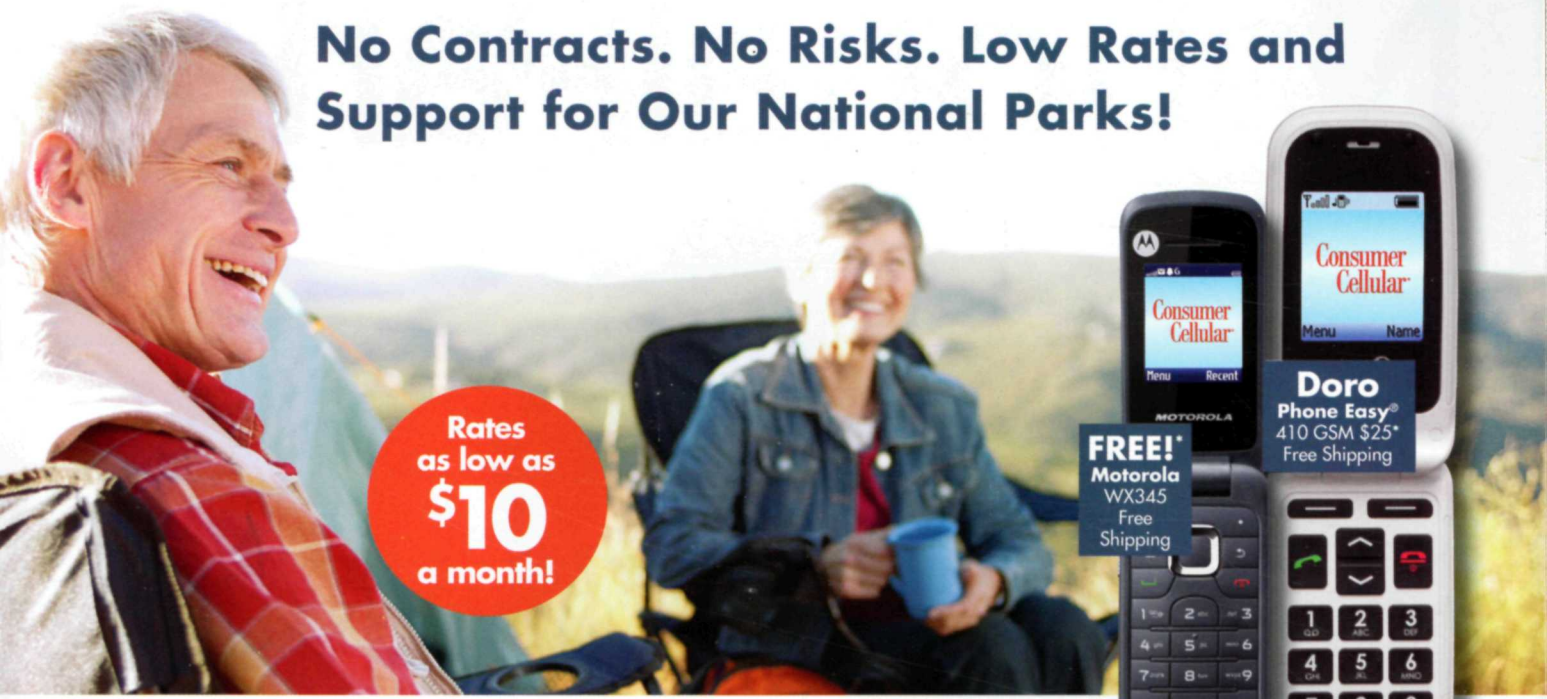

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National Parks

WINTER 2012 / Vol. 86 No. 1

COVER IMAGE:
PORTRAIT OF MATHEW BRADY, one of the most sought-after photographers in the 19th century, by artist Francis D'Avignon, 1851.
© NATIONAL PORTRAIT GALLERY, SMITHSONIAN INSTITUTION / ART RESOURCE, NY

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LIFE IN A CIVIL WAR CAMP, May 1861, by Mathew Brady.
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CLOCKWISE FROM TOP: ILLUSTRATION BY DUNG HOANG; © JAZZ SIGN/LEBRECHT MUSIC & ARTS/CORBIS; LAURA KEENE; ILLUSTRATION BY JOHANNA GOODMAN

DEPARTMENTS

WINTER 2012 / Vol. 86 No. 1

ON THE WEB
Visit NPCA's completely redesigned website and watch a video highlighting the BioBlitz at Saguaro National Park: www.npca.org/bioblitz.

© IAN SHIVE

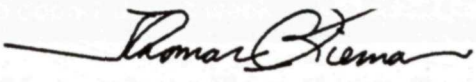
Running Wild

Several summers ago, I took my family to Katmai National Park in Alaska, where we saw brown bears plucking spawning salmon from the park's rivers and streams. Eagles and other wildlife also gathered on the shores to feast on the fish. It's a rhythm that has been present for hundreds of years, with little interruption.

Alaska's unmarred landscape paints a picture of what could happen in the Olympic Peninsula in western Washington State when the Elwha and Glines dams are finally removed, a process that began in September, part of the largest dam-removal project in U.S. history (see page 10 for all the details). More than 100 years ago, hundreds of thousands of salmon swam up the rivers to spawning grounds. Today the Elwha salmon runs are lower than 4,000 per year. Fewer salmon has meant the loss of an important food source for other species such as bears and eagles and an important part of cultural rituals for tribes in the area. Recognizing this and other impacts, Congress passed the Elwha River Ecosystem and Fisheries Restoration Act in 1992, authorizing the dams' removal. For years, NPCA worked closely with our congressional supporters, especially Rep. Norm Dicks (D-WA), to ensure that the project had the funds it needed to move ahead.

The restoration project will reopen more than 70 miles of prime habitat in the Elwha River and its tributaries. Salmon populations are predicted to swell to nearly 400,000 as all five species of Pacific salmon return to one of the Northwest's most productive waterways.

Our work with key partners, backed by your financial support, made this victory possible. In a few short years, the Elwha River will once again flow free. If all goes well in the decades to come, our children and grandchildren will enjoy watching brown bears, eagles, and other creatures feasting on hundreds of salmon once again.



Thomas C. Kiernan

Editor's Note

SHORPY.COM/ NATIONAL PHOTO CO

WASHINGTON, D.C., policeman Bill Norton at the Tidal Basin beach, enforcing a new rule requiring the hem of bathing suits to be no more than six inches above the knee.

Change is Good

It's funny, looking at old photos from decades ago. The clothes seemed so fashionable at the time. The hairstyles seemed just right. The pattern on the couch didn't raise an eyebrow. Then one day you look back, cringe, and ask yourself, "What was I thinking? What were we *all* thinking?"

Design ideals change, perhaps faster now than ever before. My editorial team is proud of the Fall 2011 issue of *National Parks* magazine, and we got plenty of compliments on it, but when we glanced through the magazine racks of a local bookstore a few months back, we had to admit that our own pages looked dated in comparison. Five years had passed since our last redesign, and although we weren't entering wide-tie, plaid sports jacket territory, it was time for a change.

You've already seen the new nameplate that keeps our title on a single line, framing the cover photo much more simply. Our body text has changed from Garamond to Georgia, which has a bigger x-height. (Translation: It's easier on the eyes). New infographics tell stories in more visual ways (see page 10), and flashbacks in future issues will revisit the sites of NPCA victories and reveal the impact of your support over time. We've also added a new back-page department called "That Was Then," which uses historic images to remind us just how long we've been enjoying these special places. Because at some point, those old fashions and long-gone hairstyles go from cringe-worthy to nostalgic, and bring a smile to our faces once again.

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NationalParks

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Protecting Our National Parks for Future Generations®

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

WHAT WE DO
NPCA protects 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 www.npca.org to sign up.

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

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

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UNFORGETTABLE ART

Thank you so much for the article about the art and other creations by Japanese Americans in the internment camps ["The Art of Gaman," Fall]. The page with all of the "shell flower" items is stunning. Each of them looked so real that had I not read the text on the page, I would have believed they were picked from nature. I'm sorry these artists didn't think their creations were of any value and hid them away, though I can understand that it reminded them of a painful time. I'm happy to hear that these works of art are being preserved by museums.

MARGARET MCMILLAN
Waco, TX

I became involved with "The Art of Gaman" when Delphine Hirasuna contacted me regarding my father's birds. In 2009 there was an effort to document artifacts created during the WWII incarceration, to document all phases of that history before first-hand knowledge is lost; my participation in this effort opened a floodgate of memories. The searching, rescuing, and ultimately displaying of the artifacts allowed us to speak publicly of our war experience for the first time in 69 years.

As an artist myself, I believe the artisans completely immersed themselves in the work at hand, and in that sense, lived on another level. The quality of the artifacts reflects this, even though most of their creators were unschooled in art.

Among our family artifacts is my father's carved bird collection, 10 of which were included in "The Art of Gaman" exhibit at the Smithsonian Renwick Gallery. My father, were he alive, would be shocked with disbelief. Now that some of his birds are on the cover of a magazine, we, his children, are wonderstruck. My father was 47 in 1944 and did not carve another bird once he was released from camp in 1945, but he did construct a glass case to house the birds five or six years later.

Several weeks ago, a friend who is an NPCA member sent me "The Art of Gaman" article. It is beautifully designed, and the article is wonderful. Thank you for featuring this in your fall issue.

JANE TEIKO OKA
Mill Valley, CA

I was surprised and delighted by the article "The Art of Gaman." I first heard about these relocation camps while in high school, when the government finally allowed a few Japanese-American teenagers to leave the camps and return to our school. Some of the first came to Westtown, a Quaker school in Pennsylvania; the girls were my classmates and lived on a farm with one of our teachers, Albert Bailey, and his family. After graduation, several went on to Earlham College in Richmond, Indiana.

Their families had lost everything—their homes, their jobs, and their belongings. The girls lived with fear and worry for their families in the internment camps. We other students protected them whenever they went to town. These were strong girls and good friends.

Years later, Rako Yasumra—a survivor of the Hiroshima bombing and a classmate of my wife's at Denison University in Ohio—sang at our wedding. My wife and I also hosted a group of survivors—including a man who spent years searching through the rubble of Hiroshima for his students—while they spoke to groups in Hershey, Pennsylvania. Now I am living in a retirement home in Michigan and have a number of neighbors and friends who are Nisei (the first generation of Japanese-Americans born in the U.S.). I have shared this magazine with them.

HALI H. GIESSLER
Dearborn, MI

This fall, I visited Manzanar National Historic Site as part of an Elderhostel trip. It was quite eye-opening to find out how many of my fellow travelers had little idea of this internment camp, nor any knowledge of the conditions under which the internees had to live.

As a Holocaust survivor I was very moved by the experience. It's a tragic part of American history that has to be

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Include your name, city, and state. Published letters may be edited for length and clarity.

told and exposed to us all. It shows how a government—considered to be the shining light of democracy—can turn against its own citizens without much thought of its actions.

JEANNETTE NADLE
Boynton Beach, FL

THE PERFECT SOUNDTRACK

I just read your superb Fall issue from cover to cover. Loved "Winter in the Tetons"—my favorite of all the national parks—but "A Symphony in the Rockies" really struck a chord! After reading "The Movement" I went straight to Stephen Lias's website and listened to his Timberline Sonata (www.stephenlias.com/timberline.html). Marvelous! In 1970 I climbed Longs Peak with my husband and two friends. To this day I can remember exhaustion falling away to euphoria as we stood on the summit. Stephen's music captures this. I hope one day he will have a CD with all his national park compositions on it. Thank you for bringing us such fascinating articles in every issue.

NAN BROWN BECKMAN
Pinehurst, NC

STILL GLORIOUS

I read with interest the article "Swept Away" [Summer] because Johnstown, Pennsylvania, is my hometown. I was delighted when our Flood Memorial became part of the Park Service to help preserve our historical significance. My concern is the tone at the end of the article: "Johnstown's glory days are long since gone..." What an offensive quote to include, as if all the town has to offer is industry that no longer exists. Johnstown certainly has other exciting and prosperous opportunities, and in a magazine that focuses on celebrating all of the wonderful things our country has to offer, I'm surprised that such a statement made it beyond an editor's eye. Here's hoping more respect is shown to places like Johnstown, and that future articles will broach the topic in a more creative and tactful way.

CARISSA MEIKLEJOHN
Bridgeville, DE

STAR STRUCK

My husband and I just returned from an amazing vacation to Glacier National Park. The park was all I had imagined, thanks to your published articles, pictures, and interviews. We started with the classic Red Bus Tour, then returned to some of the same sites to enjoy, explore, hike, and reflect on our own for several days. Imagine our excitement to see Ranger Doug Follett on the tour boat at McDonald Lake ["The Voice of Glacier," Spring 2010]. His presentation was so informative, interesting, and filled with humor as well as his life-long love of the park. When we spoke to him afterward, he was gracious and witty. I was in awe! He is the rock star of park rangers as well as a walking history book, and meeting him was a highlight of our trip. Articles like yours encouraged us to make the trip to this exceptional park.

CAROL & BRUCE HALLA
Charleston, SC

TAKING ACTION

I enjoyed reading "Out of Sync" and "Unusual Suspects" in your fall issue. I've decided to make action to slow global warming my top priority for the next year. We need a tax on greenhouse gas emissions with the revenues dedicated to jobs in environmental restoration and conservation.

DALE L. BARRY
Grants, NM

CORRECTIONS:

The photo of the Upper Rogue River on page 9 ["A Bigger Vision"] does not represent the land that is being considered in the expansion of Oregon Caves National Monument. Western tiger swallowtail butterflies emerge from pupas, not cocoons [p. 14, "Out of Sync"] On page 42 ["A Grand Teton Winter"], the name of photographer Thomas D. Mangelsen was misspelled. We regret these errors.

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If 60 to 70 percent of the Redwoods were dying as a result of human activity, there would be immediate action. That's what's happening under the surface of Biscayne National Park.

John Adornato, director of NPCA's Sun Coast Regional office, quoted in the South Florida Sun Sentinel, *in support of more stringent measures to protect coral reefs and sea grass damaged by wayward boaters, and to safeguard species like snapper and grouper that have suffered from overfishing. The Park Service is reviewing public comments in response to its own proposal, and will make a final decision in 2012.*

It's written in pencil. We'd like to see it written in pen.

Michael Jamison, NPCA Crown of the Continent program manager, quoted in the Montana Missoulian *online, regarding a proposal to bring national park status to Canada's Akamina-Kishinena Provincial Park in British Columbia, just north and west of Waterton-Glacier International Peace Park. The move would be a huge step toward permanently protecting the largest, longest wildlife corridor left in North America.*

It could be one of the last sightings of the Cascades grizzlies, or one of the first of a new generation.

David Graves, program manager in NPCA's Northwest regional office, quoted by Washington Trails *magazine on the first photo identification of a grizzly bear in North Cascades National Park in 50 years, a development that has many in the environmental world optimistic about the species' return.*

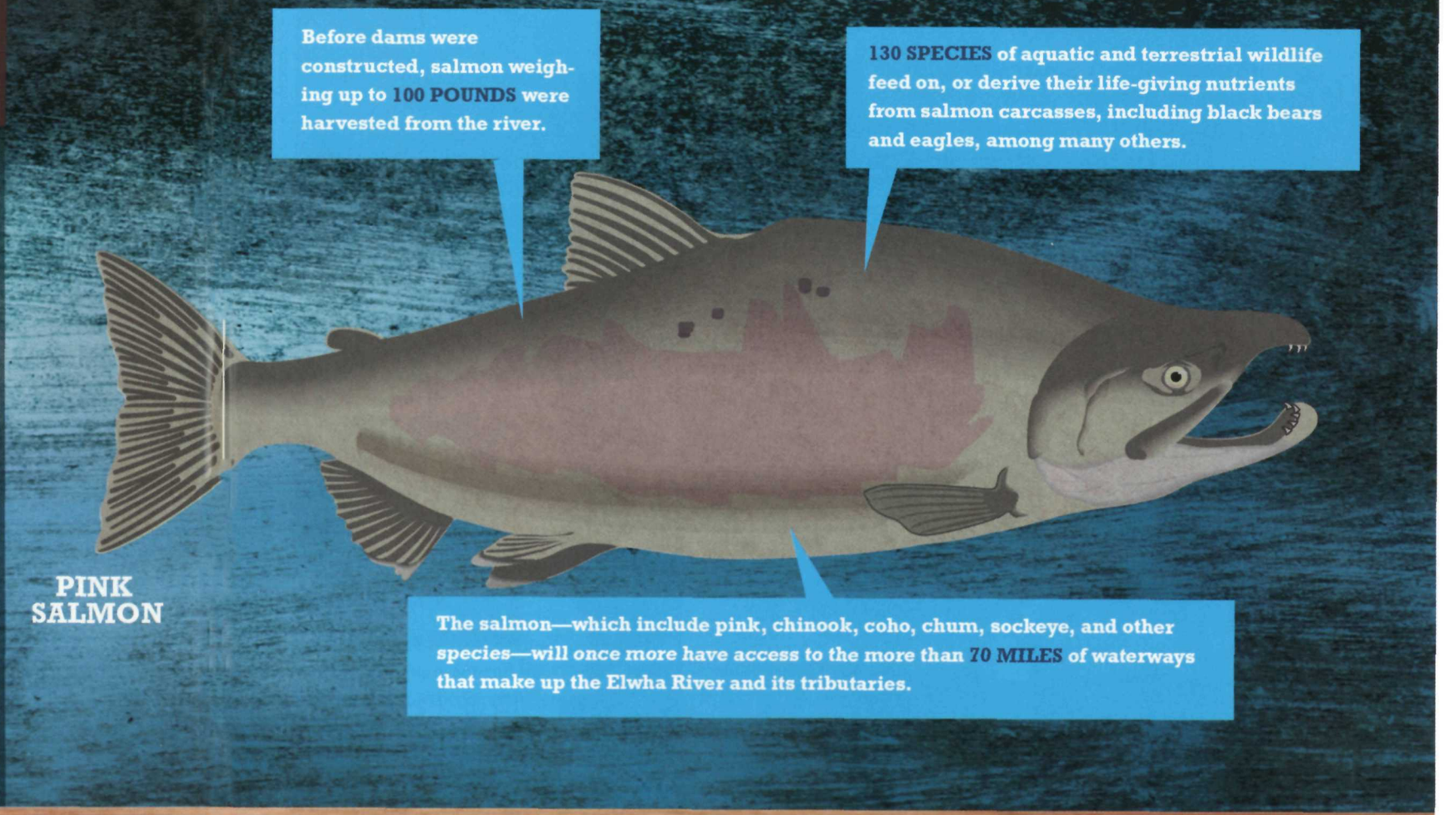
PHOTO: QT LUONG/TERRAGALLERIA.COM

FLOWING AGAIN

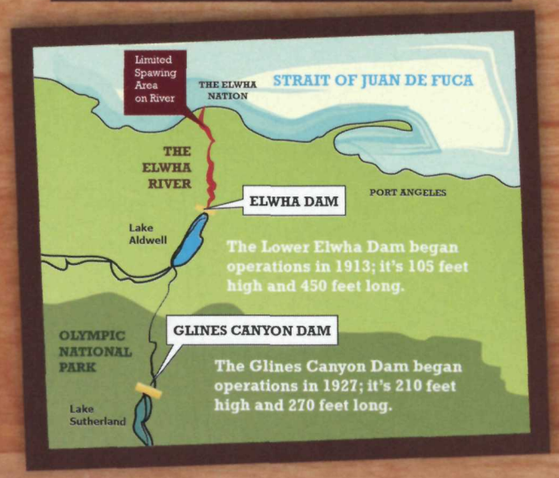
Salmon Return to Olympic National Park

One hundred years ago, elders in the Lower Elwha Klallam Tribe told their grandchildren of a time when they could cross the Elwha River on the backs of salmon swimming upstream to spawn, without even getting their feet wet. But ever since the Elwha Dam and Glines Canyon Dam were constructed to harness the river's energy more than 80 years ago (before the designation of Olympic National Park), the flow of salmon has been reduced to a trickle, and the impact has been felt across the entire ecosystem.

That's about to change. In 1992, President George Bush signed legislation calling for the dams' removal. Since then, NPCA and Rep. Norm Dicks (D-WA) have worked hard to ensure the feds allocate millions of dollars for the undertaking; NPCA volunteers have volunteered for prep work, including the removal of invasive species. Construction crews got to work in September, and the river should be flowing freely by 2014.
Some key numbers in the largest dam-removal in U.S. history.



The Measurements



The Wattage

Both dams, constructed to provide electricity for a paper mill in the city of Port Angeles, were built without fish ladders, which allow salmon to navigate through dams. The dams generated only 19 megawatts of energy, compared with the 500 megawatts of an average coal-fired power plant. *Nationally, dams once provided 40% of U.S. electricity in 1940; now they account for 7-10%.*

The Economics

Cost: $325 million
Time-line: 2 1/2 years
Employment: 760 jobs during construction and restoration; **446 jobs** in recreation and tourism.

Economic benefits over 100 years:
$365 million total
$318 million in recreation and tourism
$37 million in commercial fishing
$10 million in sport fishing

The Biology

The two dams have reduced the Elwha's wild salmon spawning population from 400,000 to about 3,000. Biologists fully expect that number to rebound, although it may take as long as 30 years for the river to return to its natural state.

Sources: National Park Service, National Geographic, NPCA, Washington Post Design by: MikeWirthArt.com

A VOLUNTEER LEADS a group of Tucson 4th graders at the Park Service's fifth BioBlitz, held in Saguaro National Park in October.

© SCOTT KIRKWOOD/NPCA (2)

Let's Take This Outside

Students and scientists team up to document every living thing in Saguaro National Park.

Kim Whitley and a classroom of teenagers are looking for creepy crawly things at Signal Hill, in Saguaro National Park, 20 minutes west of Tucson. It's 8 o'clock on a cool October night, and the entomologist from Northern Arizona University has just spotted a group of red harvester ants under her headlamp. Whitley takes the opportunity to tell us how each member of the colony has a specific role, and shows us how to hold a harvester ant in such a way that it can't possibly bite or sting. She then announces that harvester ants are part of the genus *pogonomyrmex*—her very favorite genus—and she insists we all yell the word out loud. And we do. Kim Whitley loves bugs, and her excitement is infectious.

And that, in a nutshell, is the idea behind this and every BioBlitz: Gather hundreds of scientists, thousands of students, and anyone else who wants to pitch in, and spend 24 hours documenting as much as you can about every species within the park. Graduate students join professors from Arizona universities on overnight camping expeditions to collect data on birds. Elementary school kids head out with Audubon Society volunteers who show them how many ways a wild animal can leave a trace, and to explain that scientists strongly prefer the word "scat" to "poop."

In the process, lots of people get hooked on the park experience. Saguaro National Park hosted the fifth BioBlitz in the series, with the support of National Geographic, the Arizona-

By the Numbers

The 24-hour BioBlitz revealed at least 859 different species, including 3 amphibians, 86 birds, 205 fungi, 190 invertebrates, 22 mammals, and 27 reptiles. Of that total, more than 400 species had never been documented in the park.

© DNY59/ISTOCKPHOTO

Sonora Desert Museum, and Friends of Saguaro. The first BioBlitz took place in Washington D.C.'s Rock Creek Park in 2007 and the next one will unfold in Colorado's Rocky Mountains in 2012.

Home base for many of the activities was a tent city set up in the parking lot of the main visitor center. Here's a scientist wearing a bolo tie featuring a ladybug the size of a tennis ball. There a group of kids dances to a park ranger's song about sea turtles, which is surprisingly catchy. Every hour or two, a mini-expedition is launched from base camp, and when kids yell, "I found something!" a scientist actually comes running with a net in hand and a serious look on his face.

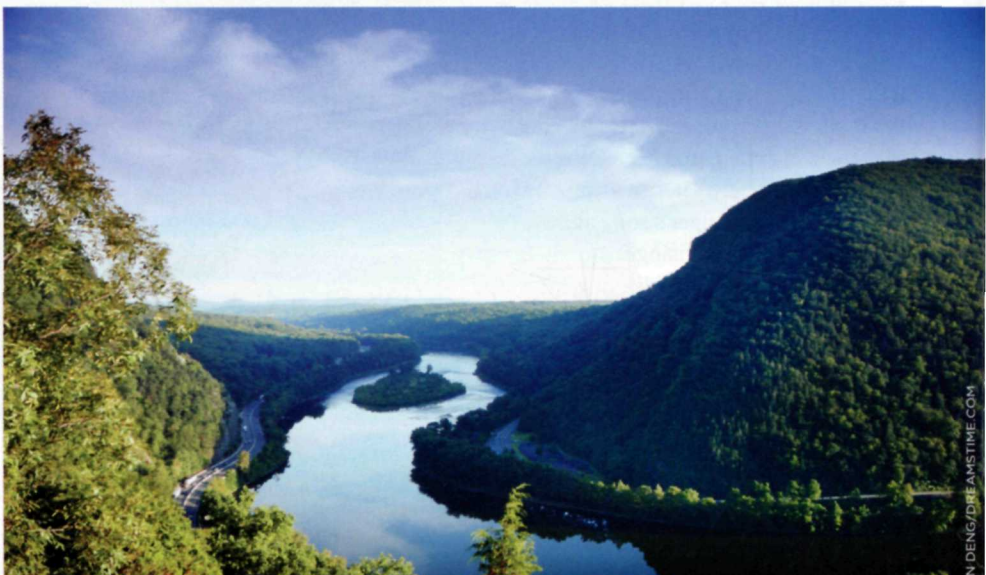
"I met with a group of high schoolers camping overnight at one of our field sites, where they'd been conducting bird inventories and aquatic invertebrate inventories, and the kids were such inspirations," says Darla Sidles, park superintendent. "It was great to think how many of those kids might look back on this event and say, 'That's what made me want to become a scientist.'"

Indeed, in spite of all the fun, this wasn't just a glorified field trip. Real science was done here. At the closing ceremony, organizers reported documenting 859 species, a number that's expected to grow as biologists identify insects and microscopic organisms that weren't immediately recognized.

"When someone handed me a piece of paper that said we'd found 400 species new to the park, I went straight to the science coordinator so I could find out what had gone wrong with the data collection," says Andy Fisher, the park's chief of interpretation. "Five people had to stand there and tell me that no, really, we found 205 species of endophyte fungus that we didn't even know we had. Another group found, at last count, 75 native species of nonvascular plants—a huge taxa, representing knowledge that we just didn't have—but now we do." — **SCOTT KIRKWOOD**

ON THE WEB
Get a close-up look at Saguaro's BioBlitz by watching a short video at www.npca.org/bioblitz.

HYDRAULIC FRACTURING, or "fracking," is prohibited in the region now, but if the process is approved, it could threaten waters flowing through Delaware Water Gap and other park units.



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In Harm's Way

NPCA moves to prevent fracking near Delaware Water Gap until likely impacts are revealed.

Sean McGuinness has experienced fracking in action—but only from a distance. Still, the Superintendent of the Upper Delaware Scenic and Recreational River could clearly see, hear, smell, and taste the impact of chemically treated water being forcefully pumped into underground rock to create fissures that allow the release of natural gases.

"There were huge pits in people's backyards, the countryside was dotted with pipes, the roads were all chewed up," he says, describing the industrialization taking over farmland in Bradford County, far across the state from the park unit under his care. The noise, odor, and dust was persistent, McGuinness recalls. "I was horrified that this might come to our basin."

Thanks to the presence of a 400-million-year old geological formation known as the Marcellus Shale, which spreads some 48,000 square miles under seven states, the possibility is a very real threat. Fracking operations, or hydraulic fracturing, typically involve hundreds of trucks—and often require the construction of new roads. For days, trucks move back and forth between nearby rivers to transport water to the drill site. This water is then mixed with sand and chemical agents to create fracturing fluid. After drillers reach the shale, which can sit more than a mile underground, a charge (similar to a rifle shot) is set to fracture it. The fracking mix is then injected under high pressure to break open the formation, and allow the natural gas to flow to the well head.

"We [could notice impacts] in everything from the water that visitors raft in, to the migration patterns of wildlife like black bear and bald eagles."

Although fracking has been conducted in Pennsylvania for a few years, the Delaware River Basin Commission (DRBC) has imposed a moratorium on fracking in its region since May 2010. The moratorium will remain in place until the commission, made up of the U.S. Army Corps of Engineers and the governors of Delaware, New Jersey, New York, and Pennsylvania, develops and adopts specific regulations governing the extraction of gas. Enter NPCA. Insisting that federal law requires substantial environmental impact studies be completed before such regulations are even introduced, a coalition of groups, including NPCA, filed suit against the commission and the Corps this summer.

At issue is a better understanding of just what havoc fracking can wreak. The technique has been blamed for everything from earthquakes to habitat disruption, and dramatic video from documentaries like "Gasland" has even shown nearby residents lighting their water on fire. After spills occurred in Bradford County, water wells in the area were found to be contaminated.

"All we're saying is that the public is entitled to know what will happen if this project is implemented," says Susan Kraham, senior staff attorney at Columbia University's Environmental Law Clinic,

Thirty-five national park units are directly above or in close proximity to the Marcellus Shale, so the effects of fracking could be especially keen.

the law team for the plaintiffs. Among other things, an environmental impact study would look at the effects of well-pad construction, the likelihood of habitat destruction, and the presence of chemical particulates in potable water.

There's no doubt that fracking makes its presence felt, in one way or another, even as the natural gas industry offers promises of weaning Americans from dependence on foreign oil. But for the region's national parks—some 35 overlie or are in the Marcellus vicinity—the effects could be especially keen. "We're really concerned with the water quality and air quality in the national parks in the region," says Cinda Waldbuesser, senior program manager for NPCA's Pennsylvania field office. "If that's degraded, we'll really notice it in everything from the water that visitors raft in, to the migration patterns of wildlife like black bear and bald eagles, to the quality of our night skies."

According to McGuinness, the companies involved have promised they will install well pads no larger than seven acres, and do so on areas that are already cleared of trees. But, he adds, 80 percent of land in the Basin is still forest, so there's a good chance more land will come under attack. "Every well pad requires cutting down trees, plowing roads through the forest, and then clearing other corridors so pipelines can connect the pads and transport the gas," he notes.

Despite the suit, DRBC is planning to vote on the regulation soon. "At first, the regulations included some very strong wording around issues of land- and resource-protection," says McGuinness, who reviewed drafts throughout the process. "They addressed the siting of the well pads, they addressed water-quality issues, and where chemicals would be stored and how they would be handled. They even anticipated worst-case scenarios such as spillages." Unfortunately, as the DRBC members reviewed and edited the proposal over the last year, the regulations were significantly weakened, and the agency refused to open the newest version to public comment, even though the public had submitted thousands of comments in response to a previous draft.

It all leads Kraham to predict a protracted fight. "Once some form of the regulations are adapted, the applications to drill will start pouring into the DRBC for approval," she comments, "and we don't know how long all of that will take." Litigation will continue to address whatever regulations are ultimately adapted, Kraham is certain.

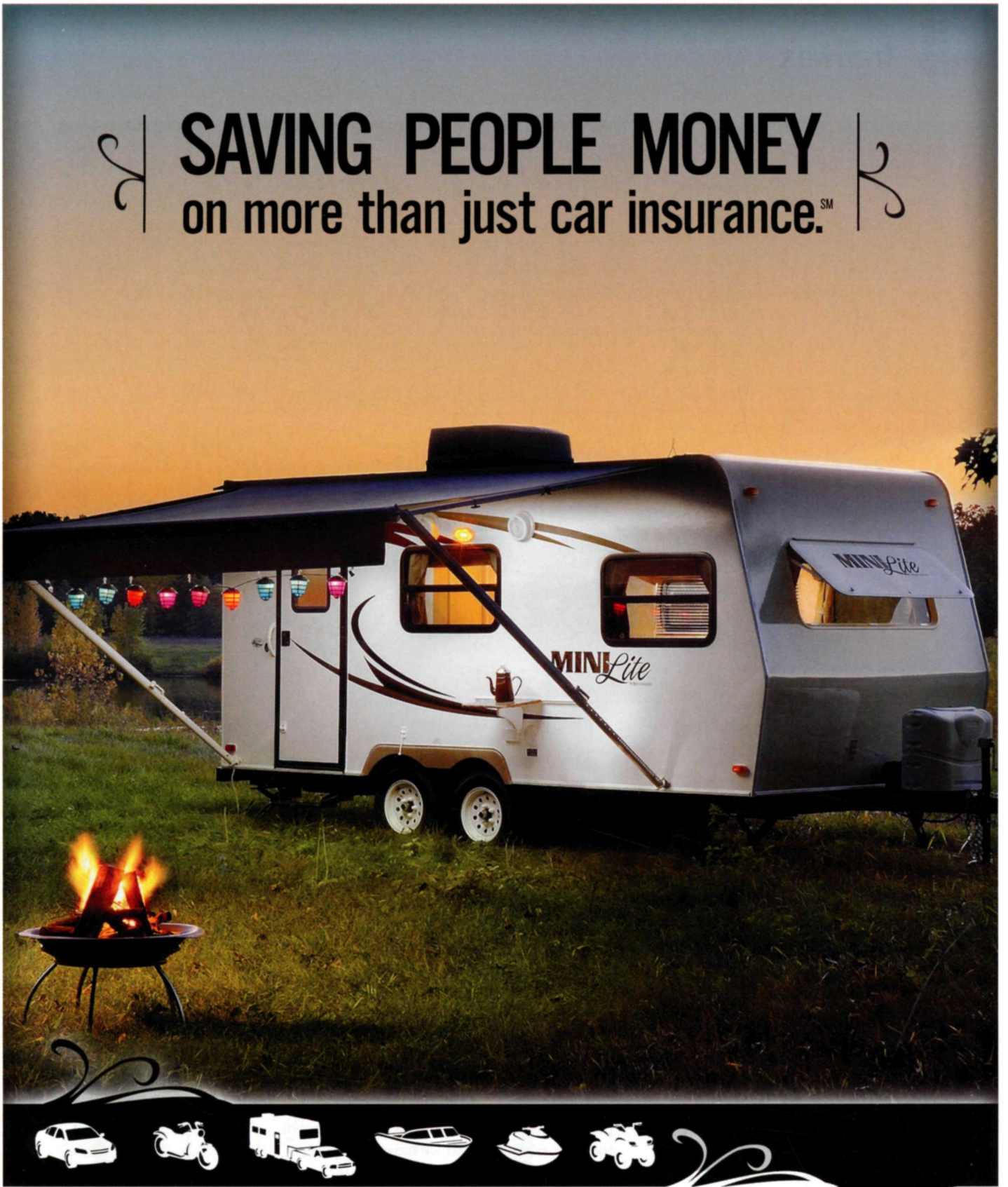
"We want to be clear: NPCA is not against natural-gas development," says Waldbuesser. "We recognize the economic benefits associated with these projects. But they shouldn't compromise those benefits offered by the national parks. These are heavily visited areas that generate tremendous income, too. We simply want to make sure that we understand the impacts before we move forward. At that point, we can take steps to ensure that these natural resources are adequately protected."— JOANN GRECO

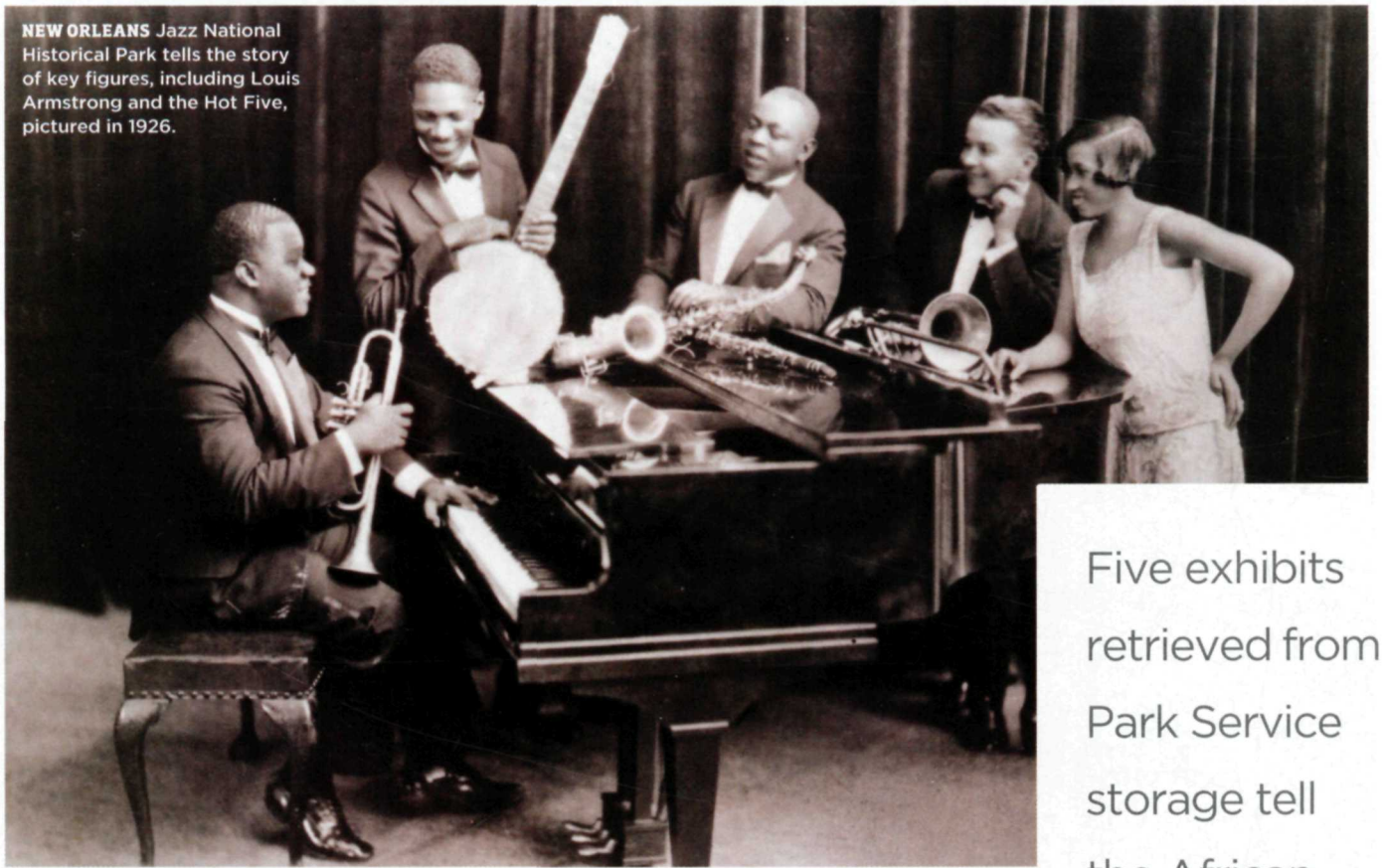
AP PHOTO/RALPH WILSON

What's at Stake

The Park Service manages and protects 110 miles of the Delaware River, including the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area, the two parks that would be the most seriously affected by fracking.

Together, the parks host more than 5 million visitors annually, including many from nearby cities like Philadelphia and New York. If fracking is allowed in the region, experts anticipate at least 15,000 sites will be drilled in the Delaware River Basin.





NEW ORLEANS Jazz National Historical Park tells the story of key figures, including Louis Armstrong and the Hot Five, pictured in 1926.

Jazzed

After some tough times, a national park in the Big Easy is hitting some high notes.

Just like a small, undiscovered jazz band inviting a star trumpeter and virtuoso trombonist to the fold, New Orleans Jazz National Historical Park has recently added two new downtown venues. Finally, it seems, the park now has the chops to deliver on its singular mission—aptly in tune with exorcizing the ghosts of Hurricane Katrina—as the only unit in the National Park Service devoted to a form of music.

That music, of course, is jazz, which originated in the Crescent City soon after the turn of the 20th century from a mélange of musical styles that included gospel, ragtime, and blues. But until recently, it was the fledgling national park that was singing the blues. The backbeat: 1987—Congress designates jazz as a national treasure; 1994—New Orleans Jazz National Historical Park is authorized; 2000—the first notes sound at a French Quarter visitors center during weekly performances by interpretive rangers-slash-musicians and a Music for All Ages instructional program; 2005—Katrina strikes, dousing and delaying the park's expansion efforts, though a pair of self-guided, cell-phone audio walking tours debut in 2009.

"It's always haunted me that so many people have come to New Orleans and not known the park existed or that we have free concerts every Saturday," says guitar-playing interpretive ranger Matthew Hampsey. "We have put on some great programs the last 11 years, but we have been limited by our small staff and the space, which seats about 65 people. Now, with the re-opening of Perseverance Hall and

Five exhibits retrieved from Park Service storage tell the African, Caribbean, European, and American origins of jazz.

The museum possesses the world's largest cache of instruments owned and played by jazz greats.

the U.S. Mint, the national park is really starting to hit its stride."

Perseverance Hall No. 4, a Masonic Lodge built between 1819 and 1820, provides a more historic setting for the Park Service's Saturday morning musical instructional program and popular free afternoon performances by rangers and local musicians. In its heyday, the hall was frequented by "Creoles of Color" and known for the quality of music played in its 800-square-foot space. Five exhibits retrieved from Park Service storage tell the African, Caribbean, European, and American origins of jazz. Moreover, from this spot in Louis Armstrong Park, interpretive rangers can now point to nearby Congo Square, an important landmark in the city's Treme neighborhood.

"The Treme is one of the most significant African-American neighborhoods in the United States, dating to the Colonial period," says assistant superintendent Joseph Llewellyn. "Under French and Spanish law, slave owners were required to give their bonded servants one day off a week; they gathered there on Sundays in Congo Square to maintain their culture and have a trading marketplace and celebrate their music and dance."

New Orleans Jazz National Historical Park also plays a key role at the recently reopened U.S. Mint in the French Quarter. There, a $2 million Park Service centennial grant and $4 million in state funds are restoring and transforming the Katrina-ravaged landmark building, operated by the Louisiana State Museum, into what some are already calling Louisiana's Music Mecca. The inaugural attraction on the second-floor exhibition space, a 50th anniversary tribute to the city's legendary Preservation Hall, opened in November 2011 and is expected to run for at least a year. Alongside this exhibit the museum has begun displaying a preview of its larger jazz holdings, a vast collection of photographs, sheet music, films, and notably, the world's largest cache of instruments owned and played by jazz greats, including Louis Armstrong's first cornet and Sidney Bechet's soprano sax.

One floor up, in a 4,000-square-foot performance space with seating for several hundred and a state-of-the art recording studio, the park has begun live musical offerings, supplementing ranger performances with more gigs by local musicians, hosting free concerts every day but Monday, and providing more of a symbiotic link to the city's unique local music scene in the clubs and on the street corners, even the very streets of New Orleans. Tulane University anthropology professor and folklorist Nick Spitzer calls the Park Service's emphasis on live jazz performances "just the right thing to do."

"In the world of cultural policy, there's an easy tendency to restore a building to an historic period, to [focus on the contents of the site itself]," says Spitzer, who moonlights as host of the radio program American Routes. "Here, we're dealing with intangible culture—not so much the famous home or arrowheads or Civil War artifacts, we're dealing with living musical performances."

"One of the first lessons from Katrina, I think," he continues, "was that in the absence of a strong city or federal direction and with the general focus on infrastructure, intangible cultures were the symbols of hope for people, why people wanted to return to the city and rebuild. I think everybody realized that without the neighborhoods and all the ritual festivals and social and club things that go on in New Orleans, you really don't have the kind of cultural wetlands that encourage the continuity of traditions." — JOHN GROSSMANN

Introducing Fort Monroe National Monument

Few historic structures in the United States symbolize the evolution of our country more than Fort Monroe, dubbed "Freedom's Fortress" for the refuge it provided runaway slaves during the Civil War. This fall, President Barack Obama designated the Virginia site a national monument, closing a lengthy process that involved many key players, including NPCA. Once the military vacates the site, and men and women in Park Service uniforms take the keys, the monument should bring significant economic benefits to the local community, and tell a story that few people have heard until now. Read more about Fort Monroe in *National Parks'* Fall 2010 issue at www.npca.org/magazine/2010/fall.

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ARCHAEOLOGISTS BELIEVE that people settled the Channel Islands 13,000 years ago, based on tools and animal remains found on the coast.

Maiden Voyage

Do archaeological sites in the Channel Islands reveal a coastal migration into the Americas?

MILLENNIA BEFORE AMERICAN PIONEERS charged westward in search of land and fortune, humans pursued a different version of manifest destiny. Driven by changes in the environment or growing populations, and perhaps a basic human urge to explore, they weathered the frigid Siberian Arctic, wending through what is now the Bering Strait into North America. By at least 14,000 years ago, early settlers had spread through the continent and parts of South America.

Just how humans first entered the New World is still actively debated. For decades, the dominant theory described a migration from Siberia through a land-locked, ice-free corridor into Canada. These days, consensus is growing for an alternative "coastal migration theory," where people followed the Pacific Coast from Asia to the Americas when the inland route was still covered by glaciers. The idea gained traction in 1997, after a pivotal find in Monte Verde, Chile, revealed signs of human occupation dating back 14,000 years. Recent discoveries within California's Channel Islands National Park have bolstered the coastal migration theory, revealing that seafaring peoples settled the islands at least 13,000 years ago, hunting seals, fishing, and collecting shellfish and seaweeds.

Located roughly 20 miles off the coast of Santa Barbara, the Channel Islands are an archaeologist's dream. Unlike the mainland, these sites aren't threatened by destructive development or burrowing animals notorious for digging up the past. Instead, the park's remaining archaeological sites are fairly pristine, like "a prehistoric layer cake" packed with information, according to Torben Rick, curator of North American Archaeology at the Smithsonian Institution.

In 1999, news broke that human remains recovered from Santa Rosa Island four decades earlier had been radiocarbon-dated to about 13,000 years ago, some of the oldest human bones in North America. Their presence on Santa Rosa supported a coastal migration, according to John Johnson, the archaeologist who dated them. Yet with the absence of tools and other tell-tale artifacts, it wasn't clear who these people were.

Jon Erlandson, director of the University of Oregon's Museum of Natural and Cultural History, has studied the earliest sites in the area for decades. Erlandson and Rick recently shined light on early Channel

Islands life through discoveries of their own. On Santa Rosa Island, the duo hit a jackpot—by accident. "We were literally on a walk in the park," says Erlandson, when an eroded area caught his eye, and he walked over to get a closer look. "It was full of bird bones and stone tools," he says, "so we knew this site need some serious work." They were right. Further investigation revealed a treasure trove of deeply buried artifacts and animal bones eroding from the sea cliff—items that dated about 11,800 years old.

With logistical support from Channel Islands National Park and funding from the National Science Foundation, they worked with graduate students and other colleagues to excavate thousands of bone fragments from fish, geese, seabirds, and marine mammals. They also found dozens of small barbed points, probably used to spear sea life, crescents to hunt birds, and other tools fashioned mostly from local island cherts, a flint-like rock. Well suited to marine environments, these are more similar to tools recovered in Northeast Asia and the Pacific Northwest than ones found in North America's interior.

Excavations on neighboring San Miguel Island unearthed more clues to the past. In addition to tools, the team found shell mounds, which suggested that early settlers feasted on mussels, red abalone, crabs, and other shellfish. "The sites complement each other nicely," says Erlandson. Collectively, their artifacts date back between about 11,400 and 12,200 years ago and paint a picture of people who were probably more than just passers-by. They likely used Santa Rosa's hunting site during the winter, when migratory birds such as geese would have been abundant. Erlandson says it's not clear when they collected shellfish on San Miguel, but it was probably primarily during the summer and fall.

> The Channel Islands are an archaeologist's dream. Unlike the mainland, these sites aren't threatened by destructive development or burrowing animals notorious for digging up the past.

"These are people who were familiar with their island environment and knew what they were doing," says Rick. More permanent villages may have existed closer to the ancient coastline, which has since been swallowed by rising post-glacial seas (four of the five park islands were once melded as one, until rising ocean waters separated them). These pioneers were probably "living the good life by the sea," says Erlandson. "These may have been glory days, when resources were truly abundant and the islands and adjacent mainland were relatively uncrowded."

Erlandson and Rick's recent finds aren't old enough to confirm a coastal migration, but they do show that early humans occupied the Pacific Coast around the same time that other humans roamed North America's interior. Perhaps the most definitive lesson that these park findings convey, however, is that "the peopling of the Americas is a lot more complex than we thought it was a decade ago," says Erlandson. "The holy grail would be to find a 15,000-year-old site," one that predates older human settlements such as at Monte Verde in Chile. With the park only 40 percent surveyed—and offshore waters still largely unexplored—there may be a lot left to discover. **NP**

JULIE LEIBACH is a senior editor for *Audubon* magazine.

© JON ERLANDSON

ISLAND TREASURES

The Park Service has recorded more than 16,000 archaeological sites on the Channel Islands, many associated with the Native American Chumash tribe, which occupied the islands at least 7,500 years ago. Of those sites, only about 40 percent have been surveyed, says Kelly Minas, the park's archaeologist—so there's plenty left to discover.

© LAURA KEENE

A GREAT LAKES PIPING PLOVER forages near its nesting ground on Lake Superior's shoreline.

A Shoreline Rescue

The National Park Service fights to bring Great Lakes' piping plovers back from the brink.

IN THE MORNING HOURS, when the lake and the sky are the same soft gray, Alice Van Zoeren steps among the small stones marking the high waterline at Sleeping Bear Dunes National Lakeshore in Michigan. Van Zoeren walks this route almost every day from late April to June, scanning the beach for signs of newly arrived piping plovers—but this time, the scene looks different: A late-spring storm has repositioned the lakeshore's cobbles. To most visitors, the disturbance would go unnoticed. But to Van Zoeren, who has been monitoring piping plovers here for the last eight years, it's as if someone came by and rearranged the furniture without asking permission. Once the plovers build their nests and lay their eggs amid the stones, such a seemingly innocuous event can have disastrous consequences for the small, pale shorebird with bright orange legs.

"The nests are really just small indentations among the cobbles where the stones can provide camouflage for the eggs," says Van Zoeren, a researcher with the Great Lakes Piping Plover Conservation Team—a coalition led by the U.S. Fish and Wildlife Service. "It can be a very vulnerable position."

Three distinct populations of piping plovers make their homes in North America, and all were federally listed under the Endangered Species Act in 1986. They are the Atlantic Coast and the Northern Great Plains, listed as threatened, and the Great Lakes, listed as endangered. Birds from all three regions migrate to the Gulf Coast and the southern Atlantic Coast, where they winter together. Researchers and volunteers have focused their efforts largely on breeding grounds where they can intervene to protect the next generation of birds from predators and other disturbances.

The Great Lakes population remains the most fragile. When these birds were declared endangered 25 years ago, only 17 breeding pairs remained. Since then, the population has grown to 54 breeding pairs, but the birds still sit on the edge of extinction because of low fledgling rates—only 75 chicks survived to fly south in 2011—and continued threats from coastal development, habitat loss, predation, and a range of other natural and human factors.

Human-driven growth and the associated impact on natural resources have changed the make-up of the local and regional ecosystems, in some cases

causing population increases in predators like foxes, skunks, and raccoons that raid plover nests, says Sue Jennings, park biologist at Sleeping Bear Dunes.

At Sleeping Bear, park visitors and off-leash dogs also pose large risks to breeding plovers and nests. To combat these threats while allowing visitors to enjoy the dunes and the plovers, park staff created a plover-awareness campaign that encourages visitors to leash their pets and respect signs indicating nesting areas closed to human activities. "We're managing for the birds and also managing for the human visitors," says Jennings.

The measures have resulted in a higher number of successfully fledged birds at Sleeping Bear than in many other regional nesting sites. But the entire Great Lakes population remains incredibly vulnerable to a population-wide event, such as disease, which could devastate the birds. To earn their removal from the endangered species list, the population will have to hold steady with 300 individual birds for five consecutive years, says Jennings; in addition, each nesting pair would need to fledge one or two chicks per year on average.

Only one in four chicks survives to become a breeding adult, according to Francie Cuthbert, a professor at the University of Minnesota and an expert on shorebird populations and management. Recovery occurs very slowly with numbers like these, and the potential for pitfalls is rampant. If the population fails to grow, it may eventually lose genetic diversity, making it even more prone to failure.

> When these birds were declared endangered 25 years ago, only 17 breeding pairs remained.

To keep track of individual birds, mating pairs, and the fledglings that result, Cuthbert works with Van Zoeren, Park Service monitoring crews, and a larger team of volunteers and scientists to capture every plover hatched in the Great Lakes population, place leg bands on them, and release them. The work is delicate and exhausting, but it yields critical data that provide insight into the plover lifecycle; researchers say the hard work has far-reaching impacts.

In fact, three federally listed plant species—Pitcher's thistle, Houghton's goldenrod, and dwarf lake iris—have received increased protection because their habitat overlaps with lands mandated as critical plover habitat. The Lake Huron tansy and the Lake Huron locust, which have been designated as threatened species by Michigan but are not listed federally, have also benefited from plover recovery actions.

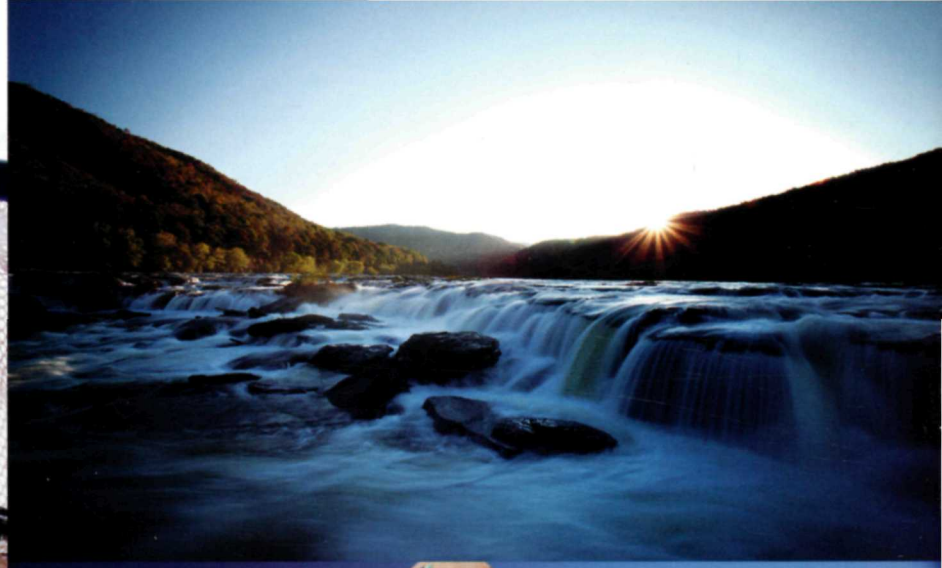
"The plovers are a flagship species for conservation and protection of special places," says Cuthbert—such as shoreline throughout the Great Lakes, including portions of Whitefish Point and Vermillion Point on Lake Superior and habitat near Cross Village, South Fox Island, and Cathead Bay near Lake Michigan. This protection of the Great Lakes Coastal Living System is a core ideal of the plover-restoration team.

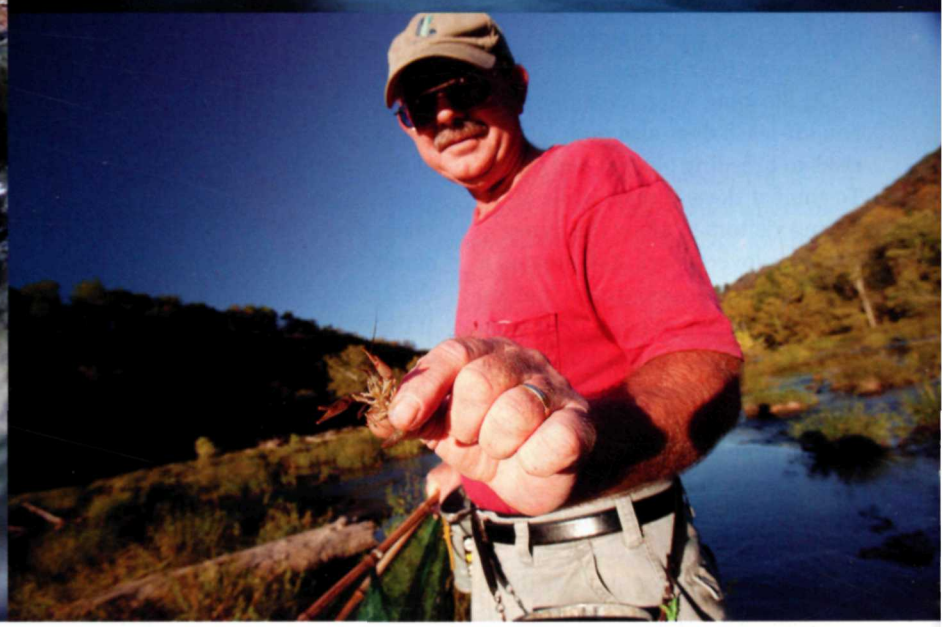
"Imagine walking along a lakeshore and not seeing shorebirds running back and forth in unison as the waves ebb and flow, not hearing the gulls, not seeing the plants and trees waving in the breeze," says Jennings. "Each time we lose a bit of nature, we lose thousands of intricate connections that contribute to our humanity." **NP**

AIMEE LYN BROWN is a freelance writer in the Pacific Northwest.

TAKING WING

The fight to save the Great Lakes plovers received a boost in the last two years, thanks to funding through President Obama's Great Lakes Restoration Initiative. The money enabled Sleeping Bear Dunes to increase public education efforts to address dogs off leash and conduct predator-management activities. NPCA and Great Lakes partners successfully advocated for creation of the Great Lakes Restoration Initiative, which has allocated more than $700 million to projects that improve water quality and wildlife habitat in the region.





SOMETHING IN THE

By Heather Lukacs and Scott Kirkwood / **Photos by** Trevor Clark

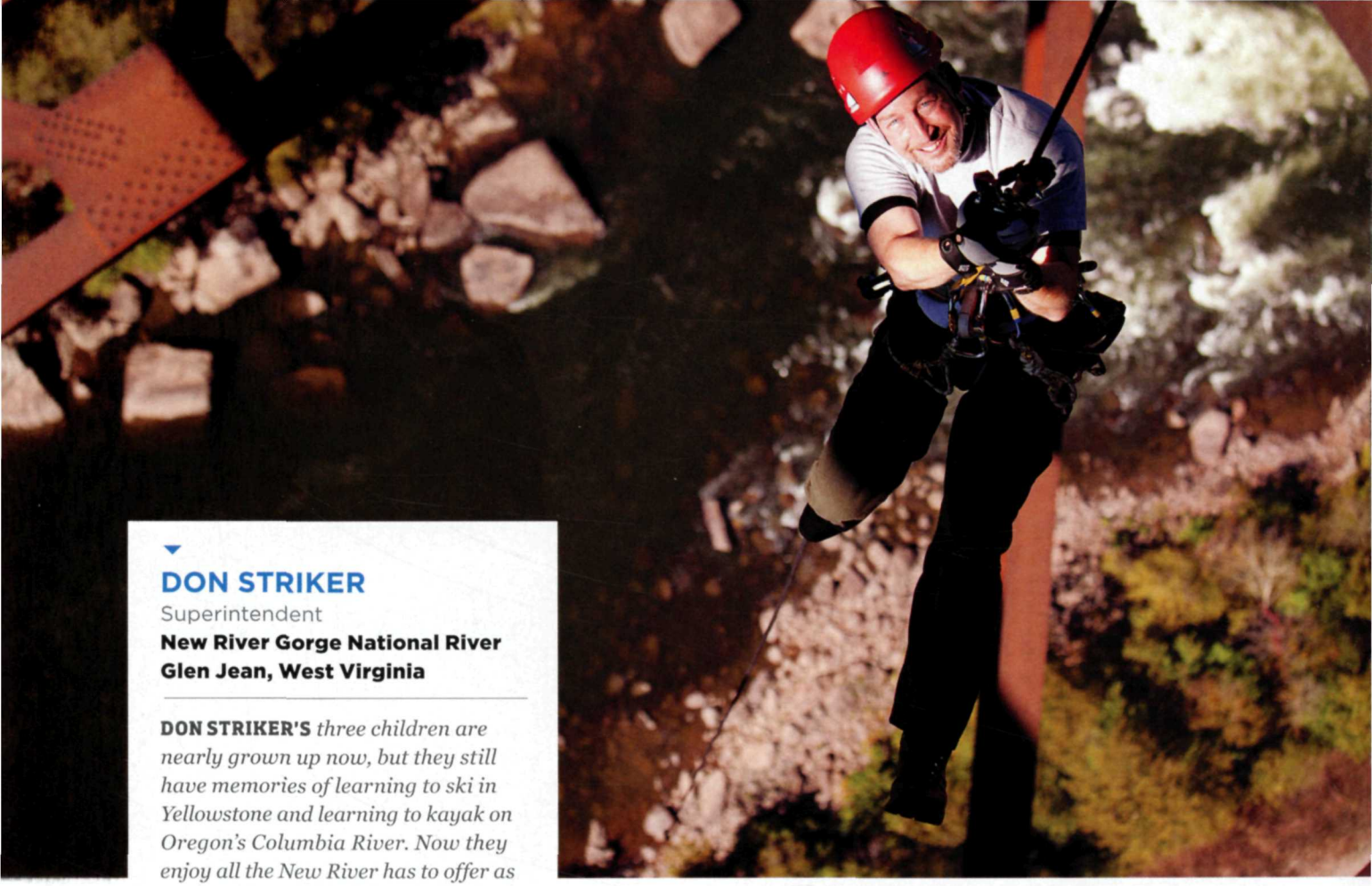
WATER

Every year, the New River Gorge National River in West Virginia draws more than 1 million visitors to experience its exhilarating white-water rapids, top-tier rock climbing, and abundant wildlife ranging from black bears to bald eagles. But the geography of the deep, tree-covered gorge that gave the park its name forced nearby cities and their antiquated wastewater systems to be built up on the plateau—upstream—of the powerful roiling river. This means that there's no guarantee that the water flowing through the New River will be as crystal clear as you might expect. Ensuring clean water in this river park requires the concerted efforts of those who live and work in the surrounding communities. Meet a few of the people who are joining forces to secure the region's lifeblood, and ensure the park's future for the next generation.

In July 2011, the New River Clean Water Alliance released a report assessing the river's current health, drawing a roadmap to improve water quality, and inviting people to get involved in the restoration of this priceless national and community treasure. Read the full report at **www.npca.org/newrivercleanwater**.

It's not something that most people like to think about when they're swimming in the New River Gorge or paddling its world-class white water. But the reality is, this isn't a waterpark or a Disneyland ride with freakishly blue, super-chlorinated water. More than 90,000 people live near streams that drain into the New River Gorge National River. If clean water is to flow through its length, then that clean water must come from the more than 15 sizeable creeks that flow into it. And that requires the efforts of all local residents and the work of hundreds of people who maintain sewage pipes and storm-water systems, who monitor water quality, who design and implement restoration projects, and who educate the next generation of leaders. Without clean water, there are no tourists, there are no bald eagles, no smallmouth bass and no rainbow trout, there are no beautiful photos, there are no whitewater rafting companies, no rock-climbers, and no quaint bed-and-breakfasts. The members and supporters of the New River Clean Water Alliance are fighting to preserve the elements of the place they call home. Although it may not be glamorous work, it's crucial to the health of this national park unit.

Turn the page to learn what a few passionate people are doing to preserve their backyard—one that just happens to be an international destination.



Superintendent of the New River Gorge National River, Don Striker, rappels from below the New River Gorge Bridge.

DON STRIKER

Superintendent

New River Gorge National River
Glen Jean, West Virginia

DON STRIKER'S *three children are nearly grown up now, but they still have memories of learning to ski in Yellowstone and learning to kayak on Oregon's Columbia River. Now they enjoy all the New River has to offer as rock climbers and rappellers; the oldest two are even certified whitewater raft guides. Striker was closely involved in efforts that led the Boy Scouts of America to select the region for their fourth national high adventure camp and permanent jamboree site, and he sees the importance of reaching out to the region's next generation of leaders.*

As a park superintendent, there is no more important goal than to make sure you are relevant to your neighbors. If you're not relevant to your neighbors, you have a long row to hoe. This work is all about community relations—this park isn't an island. We can't close a gate and hope to exist without the 18 different communities that surround us. And that's why paying attention to local economic conditions is important. It's also why it's so important to pay attention to kids and their education.

This region has an unbelievable amount of poverty, so even though it's a rural community, children here have just as few advantages as many of the urban city kids, so I wanted to connect our specific disadvantaged population

I want every child in southern West Virginia to be a steward of their public lands by the time they graduate.

to the amazing things this park has to offer. My goal is simple: I want every child in southern West Virginia to be a steward of their public lands by the time they graduate.

The Rangers in Training program asks: How can I connect kids in my local area to the park in a way that is relevant to them? These kids are out there rock climbing and rappelling, and they're getting their environmental education on the side while they are doing cool things. Last year, my daughter and I paddled along a gentle stretch of the New, and saw a bald eagle with two or three of her young, nesting on Brooks Island, in the middle of the river. I want every kid in this area to experience a moment like that.

We try to increase capacity of these kids to recognize that they do have an ownership stake in their public lands and therefore responsibility, and also to attract them to jobs in the public lands and the Park Service specifically, if they show an interest.

Clean water and clean air are not just important to our health and our children's health—they're driving our recreation industry. We have a huge job in front of us. It's neat to watch things evolve. I've been here four years and even in that brief amount of time, we've seen dramatic, measurable changes. People here are hungry for this sort of thing. •

Jennifer DuPree Liddle sitting on the banks of Keeney's Creek, which flows into some of the New River's finest whitewater rapids.

"Water defines people. That's what people come here for."

© SHARON MCNEILL

JENNIFER DUPREE LIDDLE

Southern Basin Coordinator
West Virginia Department of Environmental Protection
Oak Hill, West Virginia

ONE ELEMENT *of Jennifer DuPree Liddle's job is helping small communities in and around the New River Gorge implement systems to keep human waste out of streams. It's about as glamorous as it sounds, but it's important work. And it's changing the region. DuPree considers it her responsibility to put government funds to good use and to educate others about southern West Virginia's lack of wastewater infrastructure—in plain English, that means a modernized system of pipes and treatment plants. Liddle loves the region because it offers something for every season: cross-country skiing in the winter, birding in the spring, paddle-boarding and other water sports in the summer, and camping anytime. And, of course, she loves the people.*

Eight or nine years ago, my husband and I left the Florida Keys to come to West Virginia, where we essentially got paid to hike through the Gauley River National Recreation Area, including the Meadow River. We brought along a GPS unit to document rare plants that were important in the area. Our neighbor had a raft, and we rafted on day 1. It was an adventure. That season, we made at least 25 trips down the New River.

I feel like it's my mission to let everyone know that in many ways our infrastructure in the coal fields is like that of a third-world country. When Bill Clinton came here to speak [at Fayetteville High School] in 2008, I shook his hand and let him know that 67 percent of the people in a nearby county lack adequate wastewater treatment—that means when they flush their toilet, it goes straight into a nearby stream. Even though there is more economic development near the New River, there are still communities with straight-pipes dumping waste right into the water, and some other difficult issues to deal with.

When the New River Clean Water Alliance had its first meeting, I really got excited that we had a big-picture approach. We all have different roles, but we share the same mission. People care about the New River. You cannot see fecal coliform bacteria, so until you have a significant problem you really don't think about it. But there are enough people who use the resource that we can create partnerships and get results.

The rewarding part of this job is educating volunteers to monitor the streams in their own backyard, speak out, and feel comfortable talking about what's in their water and what people can do to make things better at home. We're not telling them what to do, just showing them how to do it. •

LEVI ROSE

Wolf Creek Watershed Coordinator
Fayetteville, West Virginia

LEVI ROSE *is a strong, soft-spoken 30-year-old environmental leader who was drawn to the area because of its world-class rock-climbing opportunities. Two years ago, Rose became the first watershed coordinator for Wolf Creek, teaming up with numerous agencies and local citizens for stream restoration, and putting his background in geology and biology to work for clean water. Much of his work focuses on finding ways to filter water that flows through abandoned mine lands, a problem created decades before environmental regulations made it illegal to leave mining waste behind. Levi's position is made possible by a highly engaged group of concerned citizens who formed the Plateau Action Network 14 years ago.*

In today's economic climate, rather than look for a job, it is almost easier to make your own niche. For me, that's been the greatest thing about coming here: recognizing a need, getting to know the right people, and having the opportunity to [make a special place even better]. I've gotten such great feedback from the community—people want clean water; that's what's keeping me here.

One of the great things about cleaning up Wolf Creek has been finding others that are just as passionate. For example, while working on the Summerlee Project, an adjoining landowner, Bill Fedukovich, won the construction bid and became an instrumental part of the project. Because he owns property here, he really wants to see the contaminated water cleaned up. Some days, Bill is more excited than I am—he'll say 'Check this out, this is working!' There have been a lot of challenges with this project, but by combining our experience in this unique setting we have created something we're both proud of.

Levi Rose samples water from Wolf Creek, which flows into the New River.

One of the great things about cleaning up Wolf Creek has been finding others that are just as passionate.

In addition to securing grant funding to clean Wolf Creek, I have also partnered with Penn State University. The school was awarded a grant to study advances in purifying water polluted by mining waste, so their PhD and masters students have been coming down to help us collect water-quality data and study our efforts to remove iron from the system. And we're already seeing some reductions. We predicted 40- to 60-percent reduction in iron for this particular system, and we're already finding a 36-percent reduction, and we're not even finished. When you can implement something and see that your desired outcomes can be achieved, that's really rewarding. •

Mary Lou Haley stands by the New River near Hinton. Haley organizes the West Virginia State Water Festival, "where friends and rivers meet."

MARY LOU HALEY

Board President

Summers County Chamber of Commerce
Hinton, West Virginia

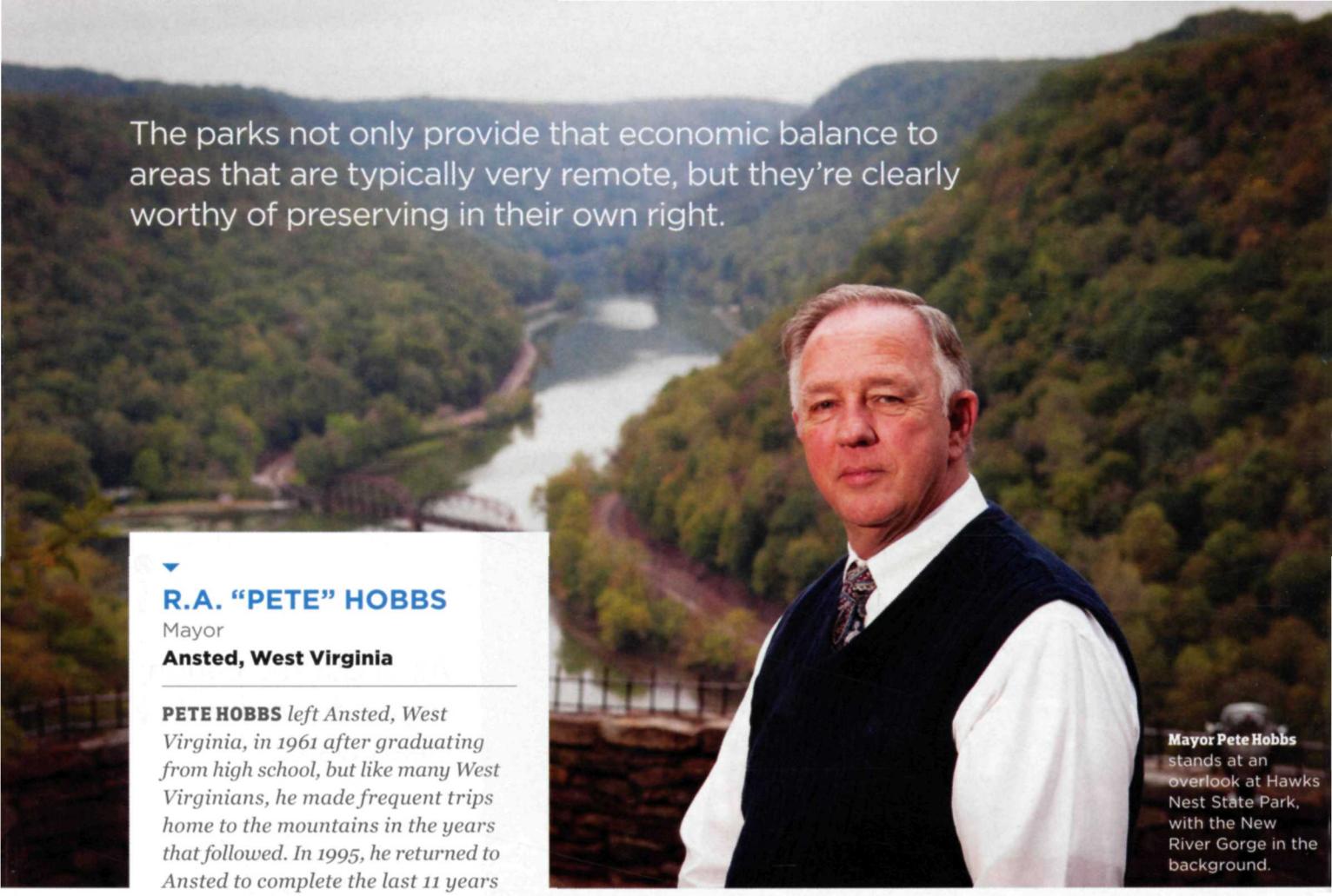
MARY LOU HALEY'S *office is a restored log cabin in Hinton, West Virginia, just upstream of the New River Gorge National River. A retiree who is deeply dedicated to the Hinton area, Haley wears many hats in the community, serving on the Summer's County Chamber of Commerce, New River Community Partners, and the Hinton Area Foundation, to name just a few. Mary Lou Haley loves the river and has spent time along the New and Greenbrier Rivers her whole life. In 1991, Haley moved closer to the river, so she could experience it all the time. She still lives there today.*

At the chamber of commerce, people call every day wanting to know where they can stay, what they can eat, what sights are in the area, and what we have to offer in terms of recreation. "How far are we are from this destination? Are there facilities on down the river? How far down the river? And, what's down there?" (Most people don't even realize that the New River flows north, which means "down" is really up.) "Is it fit for swimming? Is it fit for boating? Can we fish in the river? Are there places to rent boats?" All these questions. I kid and tell people that I'm the telephone directory for southern West Virginia.

> All of our recreation depends on good clean water.

For our health and the health of everybody who visits here, it's so important that our water is clean. That's a number-one priority; it truly is. If our river's polluted, people don't want to be in it. If it's polluted, then we won't see the fish and wildlife that are a draw for the area. All of our recreation depends on good clean water.

People who come here from other places can't believe what it's like here. And it truly is—it's a special place. •



Mayor Pete Hobbs stands at an overlook at Hawks Nest State Park, with the New River Gorge in the background.

R.A. "PETE" HOBBS

Mayor

Ansted, West Virginia

PETE HOBBS *left Ansted, West Virginia, in 1961 after graduating from high school, but like many West Virginians, he made frequent trips home to the mountains in the years that followed. In 1995, he returned to Ansted to complete the last 11 years of a 37-year career with AT&T, an opportunity that allowed him to telecommute. It was a decision driven by family connections, the vast beauty of the mountains, and a quality of life he hadn't seen anywhere else in his extensive travels. In 2003, he became mayor of Ansted, and now he's leading a push to invite more workers to the region's amenities, in an age when millions of employees are no longer tied to an office building. Hobbs is also balancing the community's history of relying on industries like mining and logging with a future that's likely to generate more income from tourism and home-based internet enterprise. And it all requires one thing: clean water.*

When I was growing up, I don't think I would have found a botanist in residence in Oak Hill or Fayetteville. I don't think I would have found a geologist here other than those interested in extracting coal. The introduction of a national park to an area, like the New River in 1978, brings a new level of highly educated workers.

And now, the beautiful underpinning of national park resources and state park resources will become key to the attraction of modern workers who want to work at home but demand a pristine living arrangement. They want more than just basic services—they want recreational opportunities, they want clean water, they want all of those things that are fundamental to a real high quality of life. We have all those pieces in place here and, of course, we still have our extraction industries around us that bring a great deal of revenue. We find ourselves in conflict from time to time because of either the perceived or actual damage to those elements of quality of life that are essential to move the tourism industry and recreational industries forward. The tourism-based element of our economic engine now is approaching the point where it is matching or exceeding the actual economic impact of the other traditional businesses that we have always relied on. Somehow, we here have to find those innovative ways to make all of that work together.

Federal dollars allocated to the parks can bring economic stability to an area as they have done here in central West Virginia. I will continue to advocate for the parks because I think the parks not only provide that economic balance to areas that are typically very remote, but they're clearly worthy of preserving in their own right. It all tugs at a lot of emotional elements for me—these are the things that make me want to get out of bed every morning. **NP**

HEATHER LUKACS is a program manager for NPCA's West Virginia Field Office, and a founding member of the New River Clean Water Alliance; Lukacs has led white-water rafting excursions through the gorge since she was a high school senior. **SCOTT KIRKWOOD** is the editor in chief of *National Parks* magazine; his first white-water rafting trip was on the New River 20 years ago.

h. by F. D'Avignon,

MATHEW BRADY PORTRAIT BY FRANCIS D'AVIGNON
NATIONAL PORTRAIT GALLERY, SMITHSONIAN INSTITUTION

MATHEW BRADY

THE WAR CORRESPONDENT

By Mike Thomas

If you've ever seen a portrait of a Civil War soldier or the landscape of a battlefield just after the cannon-fire has been silenced, then you're familiar with the work of Mathew Brady. Now meet the man behind the images.

Cannonballs obliterated trees, bullets and mortar shells whizzed every which way, and bodies fell again and again. In the midst of all the smoke and carnage, at the First Battle of Bull Run in 1861 stood (and, presumably, ran) the distinguished photographer Mathew B. Brady. Out to capture scenes from the Civil War's first major clash, Brady and his assistants found themselves in tumultuous and nerve-racking circumstances as the formerly dominant Union forces they'd set out to celebrate in pictures were pushed back toward Washington, D.C. Brady and company followed. And even though some claimed or implied otherwise, no images of that day survived. Brady, fortunately, did, and thereafter his cameras recorded history in the making.

MATHEW BRADY

THE WAR CORRESPONDENT

Although Mathew Brady is strongly associated with the hundreds of Civil War photos that bear his name, the man was actually quite famous before the first cannon was fired. A couple of stair flights above the eternal bustle of Broadway in 1850s New York was a sumptuous oasis filled with famous faces: business tycoons, powerful politicians, military men, and beloved entertainers. Many of them stared back, motionless, from between rosewood and gilt frames that lined and leaned up against nearly every satin-and-gold-papered wall. A number of more animated visages belonged to visitors, notable and not, who milled about on velvet tapestry carpets beneath a frescoed ceiling from which hung ornate chandeliers. Lots of these visitors—including decked-out denizens of the middle class—came to see and be seen and, very often, to have their own likenesses captured by the establishment's oddly bearded and bespectacled owner. "Brady of Broadway," as he was popularly known, would soon migrate farther north to even more expansive and luxurious digs (dubbed the "National Portrait Gallery"). He'd also open a successful branch office in Washington, D.C.

One of the country's most sought-after photographers, Brady was by now something of a celebrity himself. Having established his first gallery on a less fashionable strip of Broadway in 1844, the Warren County, New York-born entrepreneur had quickly ingratiated himself with the era's movers and shakers. "Mr. Brady has the happy faculty of being attentive without being officious, of possessing suavity without obtrusiveness, and is altogether the right man for the right place," declared a typically flattering story from the 1850s in Frank Leslie's *Weekly*. But it was more than Brady's solicitous manner that lured patrons in droves. Wrote Mary Panzer, author of the book *Mathew Brady and the Image of History*, "His portraits revealed his sitters to themselves, and to the world, as they most wanted to appear."

Brady often charged no fee to stars of a certain stature to impress other prospective patrons.

Schooled in part by Samuel F. B. Morse, an artist and future inventor of the telegraph, Brady first made his mark as a "daguerreotypist." Tedious and time-consuming, the daguerreotype process went thusly: silver-plated copper sheets were bathed in nitric acid and exposed in a darkroom to iodine vapor before being inserted into a boxy wooden camera on a tripod and introduced to light. Afterward, when warm

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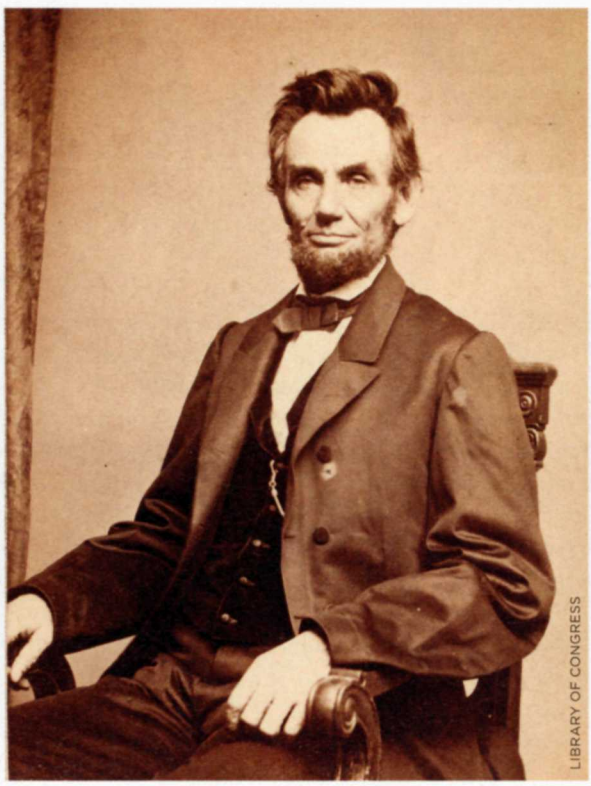

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NATIONAL PORTRAIT GALLERY, SMITHSONIAN INSTITUTION/ART RESOURCE, NY

BRADY SPENT LESS TIME behind the camera and instead focused his energy on posing his subjects and setting the scenes. Clients included New York residents like the unidentified woman (opposite left), President Lincoln (opposite middle), abolitionist Sojourner Truth (opposite right), and high-society types like "Miss Ogden" (bottom right). Brady displayed the results in his own New York studio (below).

LIBRARY OF CONGRESS

mercury vapors hit the silver, images appeared. Subjects sat or stood statue-still, frequently while secured in place with an iron head clamp, for up to one minute (a vast improvement from the early days, though still long enough to elicit the mirthless expressions so common to photographic subjects of that era). Before long, a more efficient technique called "wet-plate collodion" photography yielded enlargeable albumen silver prints that could be reproduced in limitless quantities. Brady swiftly mastered that method as well.

And though it would spark critical debate decades later, no one thought twice of the fact that Brady not only appropriated—sans permission—the work of others and slapped his moniker on it but took virtually none of his own shots. (The U.S. Congress didn't establish copyright laws until 1865.) Employees did much of the work, with Brady serving as a sort of artistic director and executive producer. "The person who was manipulating the camera was really just seen as a technician," says Ann Shumard, curator of photographs at the National Portrait Gallery in Washington, D.C. "What made it a Brady was the fact that he was there to pose the subject and to really set up the shot. It didn't matter who was behind the camera or who was in the back room developing the plate. There was a Brady look and a Brady standard and he set that through his own artistic vision."

In late February of 1860, a lanky and beardless lawyer and legislator from Illinois named Abraham Lincoln dropped by Brady's latest New York establishment at 10th and Broadway while in town to give

It didn't matter who was behind the camera or who was in the back room developing the plate. There was a Brady look and a Brady standard and he set that through his own artistic vision.

U.S. NATIONAL ARCHIVES

a speech at Cooper Union. He'd return thereafter for another sitting, bearded and considerably more burdened. And when the 19-year-old Prince of Wales made a tour of the States that same year, a portrait session at Brady's reportedly topped his list of priorities. In March of 1861, Brady set up shop at the Capitol building in Washington, D.C., to record Lincoln's inauguration. After the Great Emancipator died from an assassin's bullet, just as the Civil War was winding down in mid-April of 1865, Brady's cameras were present at his crowded funeral procession in New York.

In the four years leading up to that moment, Brady's portrait-centric work took a back seat to something he suddenly considered far more important. The country was deeply divided, Southern states had begun seceding from the Union, and by July of 1861 Bull Run signaled the start in earnest of a vicious and protracted civil war. Thus began the most significant phase of Brady's career. Snapping presidents and judges, congressmen and industry magnates was fulfilling to an extent, but the war offered Brady an opportunity to document history as no one else had—as, in effect, the progenitor of photojournalists. Of course, he hoped doing so would also enhance his already stellar reputation and fill his coffers. It was just a matter of how to proceed. Aside from some previous fieldwork done by such respected photographers as Roger Fenton during the Crimean War in Russia, few had transplanted the period's unwieldy gear from a controlled studio environment to an unpredictable and often-hostile outdoor one with successful results. And there was no guidebook from which to glean advice. Brady, however, felt compelled. "My wife and my most conservative friends had looked unfavorably upon this departure from commercial business to pictorial war correspondence," he told the New York World. "And I can only describe the destiny that overruled me by saying that, like Euphorion, I felt that I had to go. A spirit in my feet said 'Go' and I went."

Still, as *The American Scholar* editor Robert Wilson recently noted in an article for *The Atlantic*, Brady—a dandified fellow who swaddled himself in the finest frocks and wore expensive cologne—was infinitely more comfortable out of the fray than in it. "At the very beginning of the war Brady


LIBRARY OF CONGRESS

Mathew Brady, circa 1875

went out there on the field of battle and it ended very badly," says Wilson, who is working on a Brady biography. "My suspicion is that he was badly spooked." Bull Run, as Wilson writes in his Atlantic piece, marked the first and last time Brady would put himself "in harm's way."

Throughout the war, acting like a small newspaper operation, Brady dispatched more than 20 staffers to various key locations, including battlefields—but only after fighting had ceased. The federal government, too, employed hundreds of photographers for, among other things, mapmaking and reconnaissance purposes, but Brady functioned independently and as a for-profit entity. "Certainly he was not the best, nor the most prolific, nor the most important," Dorothy Meserve Kunhardt and Philip B. Kunhardt, Jr. wrote in their book, *Mathew Brady and His World*. "Nevertheless, he was by far the most famous." Scotsman Alexander Gardner, a skilled craftsman in the wet-plate tradition who'd been on Brady's payroll since 1856 and ran Brady's D.C. studio for a few years, was one of his boss's top technicians. Timothy O'Sullivan was another. But neither man received individual credit for his work. None of Brady's bunch did. The only name that appeared on Brady-bankrolled photos was Brady's, which caused no small amount of grumbling. Shortly after the Civil War commenced, in fact, Gardner quit Brady's employ and earned acclaim on his own. Differences in what could be termed creative vision were common as well. Whereas charges like Gardner and O'Sullivan recorded images of the newly dead, Brady's approach was softer.

When in Washington he sometimes ventured out to nearby battlefields with his double-lensed "stereo" camera and his horse-drawn darkroom (one of several retrofitted delivery wagons in his fleet). Because burial parties were in the midst of doing, or had already done, their grim duty, he moved about and set up shots with an ease that was unthinkable at Bull Run. On occasion, as he did following the battle of Gettysburg, Brady appeared (distantly and never facing the camera) in his own photos. And while concern for his own safety almost surely played a role in the timing of his field excursions, the circumstances under which Brady and his men toiled even post-battle were often less than idyllic. Weather was ever changing and temperatures ran the gamut from blazing hot to freezing cold. Flies and dust stuck to negatives. Clean water was in short supply. Corpses of men and horses lay bloated and festering

THE BATTLE OF ANTIETAM (middle) marked a turning point in Civil War photography, when one of Brady's photographers, Alexander Gardner, focused his lens on the dead. It was a drastic change from previous images, like Brady's photo of soldiers in the trenches before Petersburg (above) and a portrait of soldiers in the Engineer Battalion, also from Petersburg (below).

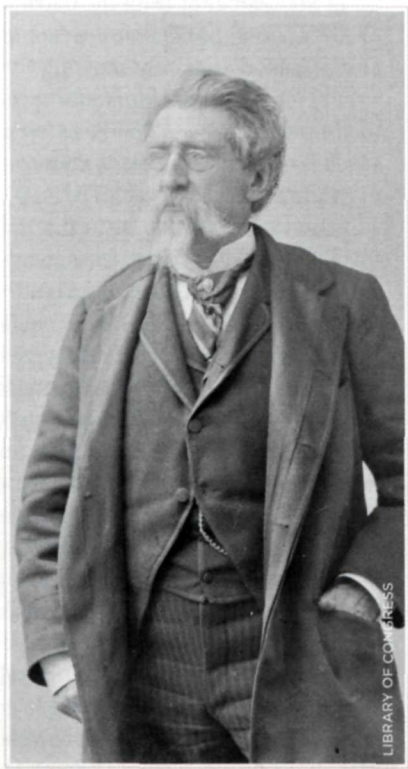
in the searing sun, the odor of death almost overwhelming. "It was a very, very foul place to work, but yet they did it," says Todd Harrington, a professional photographer and modern-day practitioner of the wet-plate collodion process used by Brady. "They knew what they were capturing was so revolutionary and so earth shattering because no one had ever done it."

In September of 1862 the battle of Antietam marked a photographic shift. Instead of merely showing soldiers in their encampments or torn-up fields where blood had been spilled days or weeks prior, some of Brady's charges began to reveal a darker version of events in the form of twisted corpses. (Because shooting battles in progress would have resulted in profoundly blurred images, such action scenarios were avoided.) The public reacted to these depictions with a mix of horror and intrigue. As *The New York Times* put it, Brady and his team did "something to bring home to us the terrible reality and earnestness of war. If he has not brought bodies and laid them in our door-yards and along the streets, he has done something very like it." The writer went on: "You will see hushed, reverend (sic) groups standing around these weird copies of carnage, bending down to look in the pale faces of the dead, chained by the strange spell that dwells in dead men's eyes." *Harper's Weekly*, which filled its pages with engravings of Brady's photos (another effective Brady publicity tactic) and was among his most ardent champions, lauded an especially poetic view of a bridge and creek at Antietam as "one of the most beautiful and perfect photograph landscapes that we have seen." The same publication avowed that "if any man deserves credit for accumulating material for history, that man is M.B. Brady."

They knew what they were capturing was so revolutionary and so earth shattering because no one had ever done it.

But for all the time invested and money spent—by his own estimate, around $100,000—Brady's Civil War foray proved financially ruinous. With some goading, the U.S. government eventually agreed to purchase thousands of negatives for $25,000. It was enough to pay down the by-then bankrupt Brady's debts, at a fraction of his massive collection's assessed worth of $150,000. Historically precious though his images were, they were also too-potent reminders of an event most people wanted to forget.

Although Brady continued to photograph dignitaries of the day for decades after the war's end in a succession of studios, his enthusiasm flagged along with his popularity, his perpetually poor eyesight, and his overall health. Toward the end of his life, widowed and increasingly marginalized, Brady drank too much and embellished tales of his exploits and encounters. Civil War anniversaries briefly brought him a sliver of spotlight, but soon he receded back into shadows. On January 15, 1896, less than a year after being struck by a carriage that shattered a leg, Brady died in the indigent ward of New York's Presbyterian Hospital. An obituary in *The New York Times* reported "Bright's disease" (a kidney affliction) was listed in hospital records as the cause, "but his death was really due to the misfortunes which have befallen him in recent years." He was 72. In that same obit, the Times thrice misspelled Brady's first name—further evidence, perhaps, of the pioneering photographer's diminished profile. Brady's attempts to reverse his fortunes—to sell more of his war images, to burnish his legacy—had had little effect. "No one will ever know what I went through to secure those negatives," Brady supposedly said of his prized war photographs. "The world can never appreciate it. It changed the whole course of my life."



MATHEW BRADY IN 1889, several years before his death.

The eye of Brady's camera caught for all time the sweep of the war, the violence and destruction, the terrible quiet and the terrible beauty.

As would become apparent after Brady's death, it also changed his medium forever, and for the better. "I don't think there's any question that Brady is the most important figure in 19th-century American photography," says Wilson. "He helped establish it as a business and encouraged other people to go into the business." Shannon Perich, associate curator of the Photographic History Collection at the National Museum of American History, notes that Brady was also among the first in his fledgling profession to establish himself as a formidable "brand," along the lines of modern photo factories like Olan Mills.

When it comes to our understanding of the Civil War, experts say, Brady's contributions to the historical record—the stark realism of those people and places immortalized by his deftly aimed lenses—are legion. Eloquently addressing that point in a 1946 review for *The New York Times*, the late American historian Arthur M. Schlesinger, Jr. asserted that Brady's war scenes were "even more important" than his portraits in that they revealed "the resources of photography. The eye of Brady's camera, serene, comprehensive, pitiless, caught for all time the sweep of the war, the violence and destruction, the terrible quiet and the terrible beauty." **NP**

MIKE THOMAS is a Chicago based journalist and author whose work has appeared in magazines including *Smithsonian* and *Esquire*.

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Admiral Farragut presides over the Navy Memorial at Vicksburg National Military Park

Sketching the Natchez Trace

The first thing you should know is that the Natchez Trace was not created by men. It was created by buffalo. And because buffalo were much more interested in foraging than keeping records, it's hard to pinpoint exactly how old it is. What we do know is that the buffalo were followed by Native Americans, and then by Kaintucks, settlers from the Ohio Valley who floated rafts down the Mississippi, sold their goods in New Orleans, and then, being astute businessmen, broke up the rafts and sold the lumber, too. They then trekked back home on the Natchez Trace. And what a trek it was! They were beset by bad weather, swamps and mud bogs, and all sorts of scoundrels, thieves, and brigands, and even American Indians who took issue with the Kaintucks traipsing through their backyard. But they persevered, and now you can travel the length of the Trace without once getting stuck in a mud bog, unless, of course, you try really, really hard.

Today's Natchez Trace is a gentle ribbon of well-tended asphalt running northeast from Natchez to Nashville, punctuated with points of interest that include scenic overlooks, hiking trails, exhibits, campgrounds, and even a ghost town. Equally interesting are the numerous little forays you can make into the surrounding countryside, investigating battlefields, small towns, natural features, and much more. The following pages document some of my adventures, both on and off the Trace.

WORDS & PICTURES by Walt Taylor

Stanton Hall, one of several antebellum mansions in Natchez, covers an entire city block.

Some have found the Trace to be a nicer way to get where they're going. This couple regularly take it between Tupelo and Cherokee, Alabama. For bikers of all types, it's the only way to travel.

Jerry has operated Jerry's café in Kosciusko for 40 years. It's not really a café, it's a barber shop, but after a movie company repainted his sign to appear to be a restaurant, he liked it so much he kept it.

This lady inherited her cluttered little general store from her family.

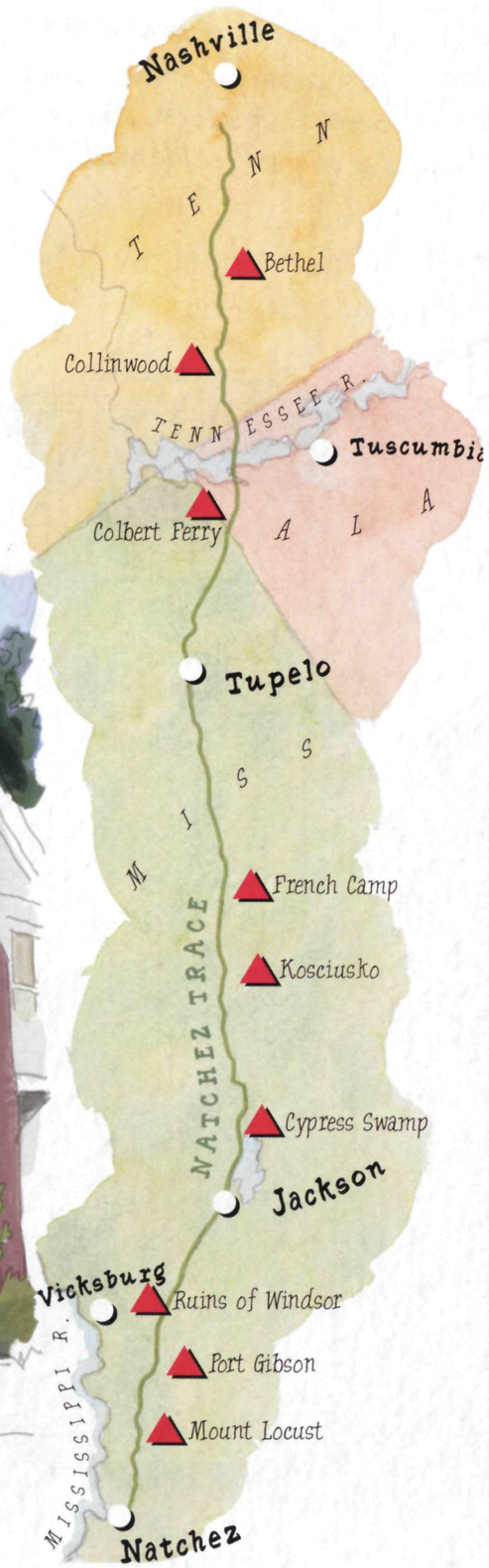
"But you came to love it, right?" we prompted. "Nope," she answered. "Make me an offer."

As you begin to approach Nashville, every little restaurant and grocery store seems to have a stage in the back for live music.

The "stand" (inn) at Mount Locust contains many artifacts left behind by early travelers. Ranger Mike will be happy to show you.

All along the Trace are remnants of the bustling life it once fostered.

A little farther up the line is French Camp, a recreated settlement with, among other things, this unusual farm implement.



TRAVEL ESSENTIALS

If this is your first visit to the Deep South, I highly recommend starting at the southern end of the Trace, in the lovely city of Natchez, Mississippi, and working your way north. The Natchez Grand Hotel (www.natchezgrandhotel.com) is right on the bluff overlooking the Mississippi River, and many of the beautiful mansions are within a short walk. Best of all, right across the street is Cock of the Walk (www.cockofthewalk.biz), a restaurant which provides a fine introduction to Southern cuisine, including, I kid you not, fried dill pickles (they're crisp, sour, salty, and addictive!).

Before you get on the Trace, pick up a map of the Parkway at the Natchez Visitors Center. It describes every point of interest along the way (if you forget, it's also available at a few roadside stops.) There are several information centers along the way. At Mount Locust, which doubles as a ranger station, a helpful and informative ranger took us on a fascinating tour of the inn. Park Headquarters are just north of Tupelo on the Trace.

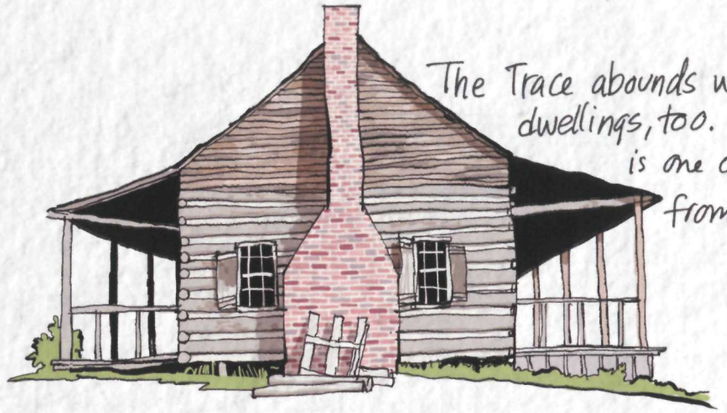
Tupelo has many must-see stops for Elvis pilgrims, and one of the most important is Johnnie's Drive In (908 East Main Street, Tupelo), where the young Elvis consumed cheeseburgers and fries. It's still going strong, and the pulled-pork barbecue special was a real treat when we visited. Also worth a visit is Tupelo Hardware (www.tupelohardware.com), where Elvis bought his first guitar, and, of course, the Elvis Presley Birthplace (www.elvispresleybirthplace.com), although be prepared to pay for the privilege of peeking into the two-room house.

If you're traveling the entire length of the Trace, you'll have to plan your stops. And watch your fuel gauge—there are no gas stations on the Trace itself. Natchez, Vicksburg, Jackson, and Tupelo all have a full complement of chain hotels and restaurants, and many of the smaller towns along the trace feature bed and breakfasts. But there's a stretch between Tupelo and Nashville with no large towns, and therefore no hotels. If you don't mind going a few miles out of your way, Tuscumbia, Alabama (the birthplace of Helen Keller), and Florence, Alabama (on the other side of the Tennessee River), make for charming stopovers. If you choose Florence, try Rosie's Mexican Cantina (www.rosiesmexicancantina.com), a college hangout (University of North Alabama) that has a great atmosphere. If you're bringing your hotel with you, then finding a place to sleep is no problem. There are several nice campgrounds along the Trace, and the campground at Colbert Ferry on the Tennessee River is as pretty as it gets.

If you're a plugged-in type—and who isn't these days?—traveling the Trace can be a bit of a challenge. Wi-fi can be found in the larger towns and cities, but not in some of the more out-of-the-way places. And cell-phone coverage can be spotty in rural areas. But this can be a blessing in disguise.

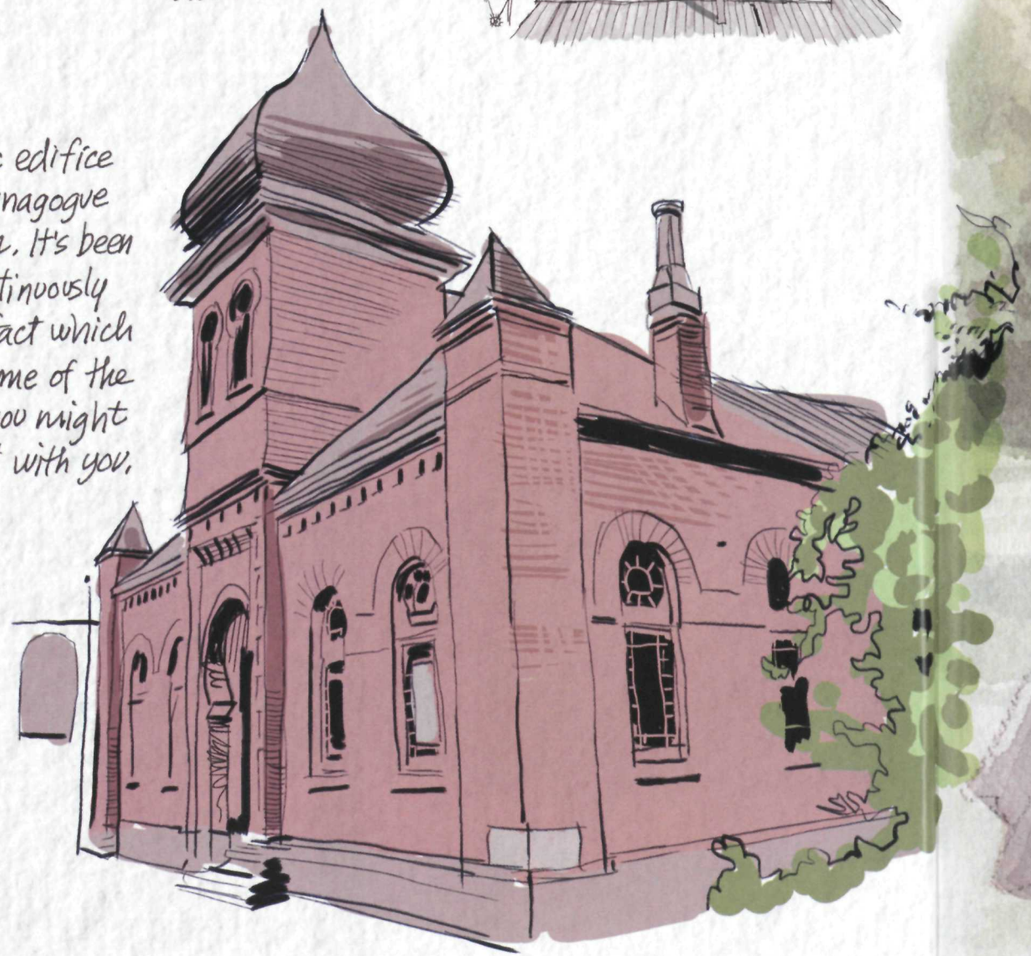
Two books I relied on while researching my trip are *Mississippi Off The Beaten Path,* by Marlo Carter Kirkpatrick and *Traveling The Trace,* by Cathy and Vernon Summerlin, available for the Kindle.

A final note: if you're visiting in Summer, as I did, make sure your car's air conditioner is fully-functioning!



The Trace abounds with examples of more modest dwellings, too. This cabin, at French Camp, is one of several structures remaining from the original settlement.

This neglected little cottage in Natchez is every bit as picturesque as the mansions around the corner.



And this exotic edifice is a Jewish synagogue in Port Gibson. It's been operating continuously since 1892, a fact which confounds some of the stereotypes you might have brought with you.

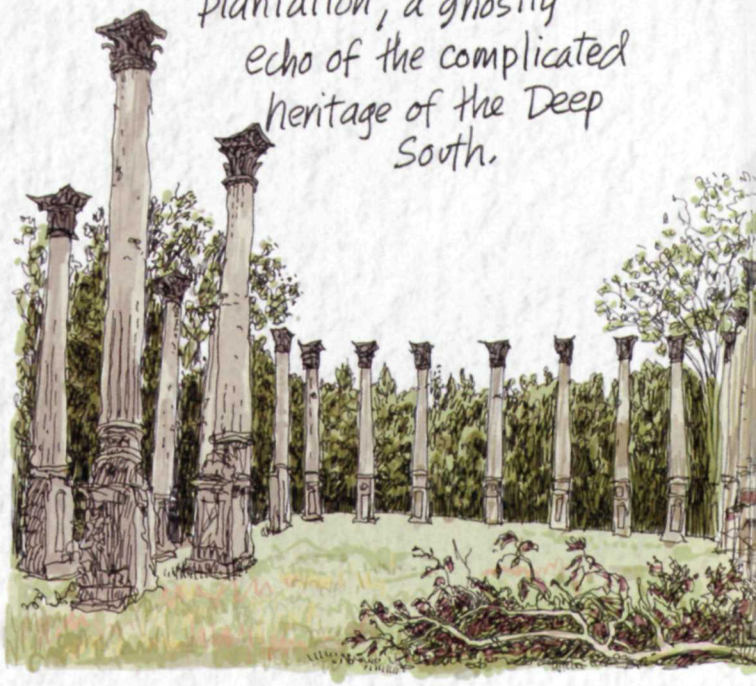
At the north end of the Ross Barnett Reservoir is this cypress swamp. My watercolor brush was too slow to catch a gator slipping off a log.

At Johnnie's Drive-in in Tupelo, Treva and Mikey will serve you up a cheeseburger and fries as you sit in Elvis's old booth and dream of stardom.

And in Collinwood, Tennessee, Justin will give you a fine haircut and challenge you to a game of checkers.

If you're a fan of little white churches, the Natchez Trace is the motherlode. Every little town seems to have one, and there are several out in the country too. This one's in Bethel, Tennessee.

Deep in the forest near Port Gibson are the "Ruins of Windsor," all that remains from an antebellum plantation, a ghostly echo of the complicated heritage of the Deep South.



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Hunkered at the Gateway

A seasonal employee in Denali National Park decides to stick around, and sees a completely different side of Alaska.

THEY CALL US SEASONALS. People who move to a park for a temporary job—me, fifteen years ago to Glacier National Park, as a laborer on a trail crew. In northern parks like Glacier, the shoulders of summer (May, October) stretch a six-month work season between them, but after the ground freezes and tourists leave, most seasonals do too. Travel and ski bumming, winter jobs, a stint at the South Pole. The reasons vary, but the outcome is the same: seasonals leave.

Until, sometimes, we stay. Laborers become crew leaders, returning to a job for years. A permanent job comes along, health care and retirement: a career, that weighty word. Or, we fall in love with the place and can't see leaving once the season's over. We rent or build houses nearby, buy a horse or have kids or get a dog team, hitching ourselves to a post that's anchored deeper than just "park" or "job."

By the time we stayed put, my husband Gabe and I had worked trails for ten seasons in three different places, moving every six months. Seven seasons in Glacier, one for the Forest Service in

Cordova, Alaska, and then to Denali National Park, where despite our years of trails experience, we started from scratch: seasonals, somewhere new. Our first two seasons in the park were broken up by winters in Anchorage, where I was in graduate school. But after our second summer in Denali, we had no reason to leave when the trails season finished. October came. Summer people left. We stayed.

On paper I was still seasonal, to the park a temporary employee, a trail crew leader laid off when gloves wore out and the snow flew. But for the first time in our twelve-year history together, six months passed with no move. No biannual novelty shot, no sorted possessions, protracted goodbyes. No identity based on being about-to-leave. Six years past that first choice to stay, I know all four seasons here, back to back, year to year. Permanent. For now.

My first summer in Denali, Gabe and I lived in C-Camp, the NPS seasonal housing compound just inside the park entrance. Brown cabins lined the road to the maintenance lot where out-of-state Subarus plastered with bumper stickers sat parked next to 10-yard dump trucks with Peterbilt mudflaps. We walked to the trails shop from our one-room log A-frame, the rent deducted from our paychecks. We showered in the public washhouse, planned trips into the backcountry. My reality was defined by the park, the job, the parameters of a transplant, up for the summer. I knew few locals from the nearby town of Healy—the trails foreman, in Denali ten years; a fellow trail crew leader born in Alaska; a handful of permanents from other divisions.

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Returning the second summer, we left C-Camp in search of privacy, a place we could have a dog, neighbors, a life beyond the park's rhythms. We moved north, outside Healy, population 984. Healy's year-round employers are the coal mine visible across the Nenana River, the power plant (coal-fired), and the park, "protected" from both of them, twelve miles to the south. The two-lane Parks Highway passes through the middle of Healy and its face to the world is the quintessential small town one—two gas stations, a ratty bar, a truck-stop diner with the usual gut-bomb breakfasts served all day. Off the road, a K-12 school whose small library is open to the public four afternoons a week, a Community Center with a tiny clinic, a VFD. Healy booms when summer tourists flock to Denali, but people pass through quickly. Despite its scenic backdrop, Healy is as invisible to travelers as the apartment buildings outside a New York City subway car, or the neat ranch houses off I-90. Residents cluster in town on gravel streets or up creeks and on ridges in dry cabins, yards full of sled dogs and tarp-covered lumber piles.

Healy is in some ways a town all its own, unlike anywhere I've been, where the Post Office bulletin board boasts lynx hides for sale (from a local 4th-grader with a trap line) and the air smells like coal dust and tundra plants mixed by a muscular wind. In other ways, it's Interior Alaska's version of the same town you pass through on the way to any park, both entry and buffer. However common, or however special, Healy is the odd little place I've called home. It's a place made up, in part, of seasons. And despite June's famous midnight sun, half of the year, it's winter.

By September, Healy hunkers down. Tourism done, restaurants and gift shops board up their windows, and the only stoplight for 200 miles blinks yellow, then goes dark. Life gets stripped down. Fairbanks is two hours north by snow-packed, two-lane highway, and we go on bi-weekly, day-long binges: groceries dog food building materials bookstore doctor visits Thai food a movie (if there's time). Other than that, we're on our own. Healy has a little store where you can get a rock-hard avocado, chips at $6.50 a bag, or a gallon of milk for the same. There's no "stocking up" in Healy. In winter, you get what you get.

Don't come here looking for chai. This is not *Outside* magazine's Best Town In America. No ski resort, no health food store. And though I've used—and often miss—that cultural tackle, Healy has the charm that comes from its lack of artifice, the

old kind of dorkiness—uncalculated. An informal tai chi group meets weekly in the school gym. No yoga studio with fancy workout clothes; we bend and bow in baggy long underwear to the tinny commands of a Chinese woman on a warped VHS tape. Here, chi smells more like sweaty socks than incense.

Like any small town, Healy has entrenched divisions—pro-road, anti-mine, more wilderness, no zoning. Yet, nothing's simple. Park employees have trap lines and coal miners have dog teams. We all complain about the price of gas and the weeks at 40 below. Healy is a tiny and pragmatic place, invisible to anyone who doesn't live here, and that's what bonds those of us who do. There are ideological divisions and old grudges, to be sure. But animosities have to sit alongside what we have in common: remoteness, self-reliance, weather that matters. Undiluted by a larger population, we're really neighbors. During a deep freeze, everyone clumps around in the same insulated bibs and bunny boots, politics bundled beneath the veneer of the practical.

Solitary tasks make up the winter days of many residents—hauling water, running the dogs, caring for the baby, dry-walling the basement. To ward off too much loneliness, locals gather for any reason we can muster: book club, knitting group, poker and hockey games, school pageants, a periodic slide show by someone back from afar. At the community center, a chili feed, a Borough hearing, and midwinter, the holiday extravaganza—Healy on Ice, where Santa rides a Zamboni at the outdoor rink behind the school. Don't let this list fool you. Healy is quiet. Some days the cabin feels dark and small, there's no way to stay warm outside for longer than an hour, and I wish for a clean, well-lighted space, a hot drink amidst the bustle of the public sphere, the haven of anonymity. Not here. There's no hot, no bustle, no public. No anonymous.

Up here, winter makes you local. Denali as workplace means summer months on the trails, tools in hand, always on the move, crowds of seasonals gathered at bars and parties and river-access pullouts. It's clear why anyone's here—the job is full-time, the world hospitable. But while summer is an easier place to live, winter makes this home. When we chose to stay past the usual cusp, the reason wasn't the weather or the job or the potlucks. We stayed because right now, it's where our life is. With the exodus of summer's ease, we settle in with canned goods and Netflix and our ski loop behind the cabin, where the snow blows into drifts as hard as tarmac and we never see anyone.

How do you stand the dark, Outsiders ask. Simple: it balances out the mania of constant day. In blaring summer, I crave dark, cold, snow. Dark is less expectant than light. It shuts out all stimuli but what you choose for yourself. Dark gives permission for mulling, for hours of reading, late breakfasts and the free-of-sensory-overload unconscious time that rebuilds me. Summer is friendly, but dark is an ally.

Everyone has a tip for thriving in the dark months—buy a SAD light, dump that needy boyfriend, take up knitting. The way I learned to love the Interior winter was simple: move vigorously outside for at least an hour, and expand my sense of day. In June we sleep when it's light out, and in winter, dark needn't mean quit. A full moon lights a night ski-jor, reflected starlight on snow a rural street lamp. January evenings mean lit candles in the windows, a dim log cabin the excuse to let Christmas lights glow for months. Winter tells me, push past the limits the body's

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Pairs of shorts I own	3
Pairs of boots I own (including ski boots)	20
Friends with 1 to 20 sled dogs	13
Lowest temperature I've felt in the Interior	-68F
Highest temperature I've felt in the Interior	91F
Minimum time to plug in engine block before starting truck at 20 below	2 hours
Gallons of wild berries harvested in an average summer	8
Miles per hour you can ski at -20° Fahrenheit	3
Miles per hour you can ski-jor at -20° Fahrenheit	6
Maximum price for a gallon of unleaded gas in 2008	$5.11
Closest proximity of a moose to our cabin wall	2 inches
Most caribou seen on an afternoon ski	30
Months in the year with wolf scat on the back trail	12
Number of friends with a heated garage	2

clock sets for itself. Expect darkness. Watch for light.

Dark can be inconvenient. I hate quitting a task because of a forgotten headlamp or a waning moon, hate banging my shin on the porch step on the way to the outhouse because it's too black to see. There's pressure in winter daylight, time slipped through fingers: at two o'clock you think about dinner, at seven, bed. If you're sad or overwhelmed, dark seems bottomless, a soul-plummet in the worst kind of free-fall.

But dark is also magical. Winter feeds a primordial hunger, an urge to curl up and lick your paws, to pause on the questions that light rushes us past. I take my cues from our two old sled dogs, who sleep soundest in winter, curled up in a pocket they've melted in the snow, or so near the woodstove their coats are hot to the touch. Deep winter is the cave of the year.

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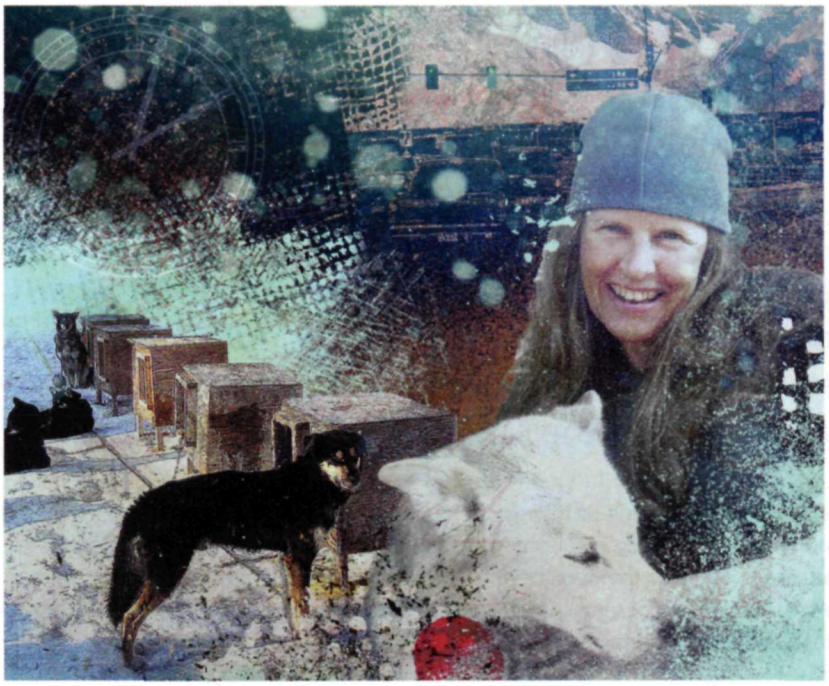
Sanity hangs in the balance of light and dark. A year in the Interior is like a day anywhere else; the spectrum makes sense. Together, the seasons have symmetry, the calendar folded on itself like a paper snowflake. Now that I am home here, it's hard to imagine anything less extreme. My body has been calibrated toward the twelve-month cycle, and I sleep with sun on my face in June and wake at 6 am in December (groggily), to begin a day in a day that has not yet begun.

Many winters since we moved to the Denali region, Gabe and I don't work for the park anymore. Despite its reputation as America's Best Idea, the Park Service has a dark side, and it was high time for us to shake off the petty management dramas, the grueling bureaucracy, the taking for granted. Often, especially for seasonals, leaving a job means leaving a place. But Denali doesn't belong to me via the NPS anymore. I belong to the place, via the claim made by time spent and things learned. Over the past few years, figuring out a way to stay, we've put up a yurt on our small chunk of land and started our own trails business. We travel a lot for work, and between the busy field season and wintertime forays, I feel less nested than when we worked for the NPS. We don't spend every month here, and my cadence feels syncopated, my weight shifting. Still, Healy remains my mental home, the place I think of when I'm anywhere else. The park, that old ground zero, feels like a different world.

We still end up in C-Camp once in a while, to bring the recycling, or

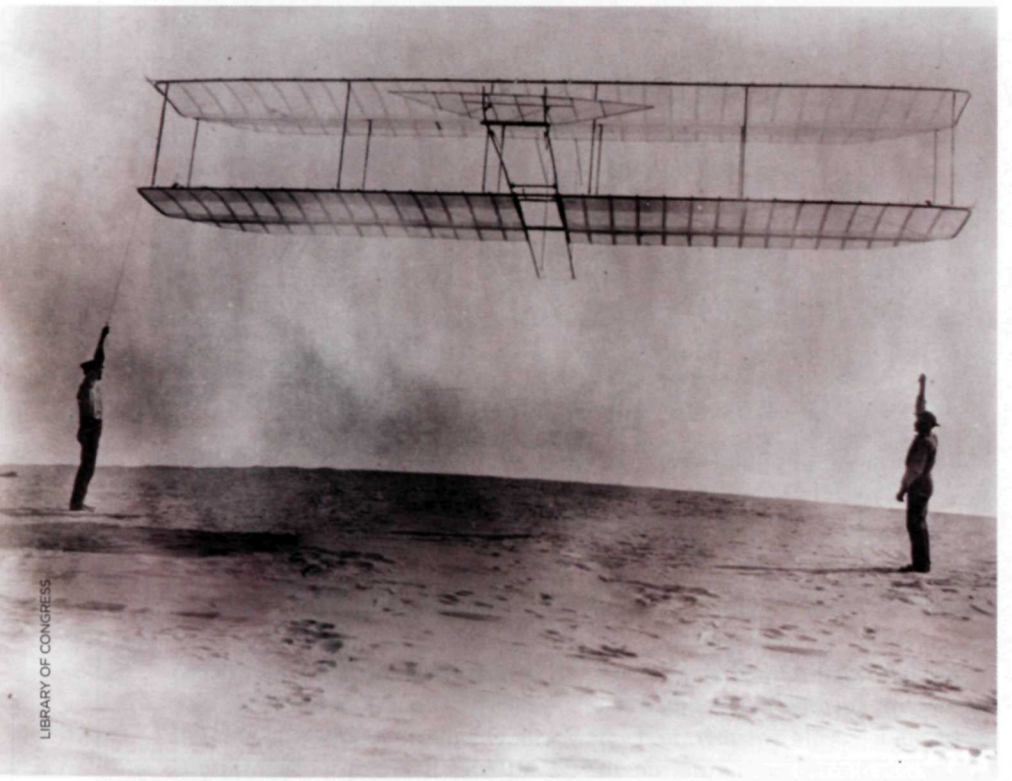


poach a shower after a backcountry trip. When I drive past our old cabin, I remember that first summer fondly, our introduction to a landscape, the edge of community, by way of a park entrance. If I've learned anything during my time as a seasonal, it's this: to know a place is a tough and complicated goal. It means more than knowing all the hiking trails or where to get a cheap beer, what transplants learn first. In part, knowing a place means knowing its seasons, and what indicates them: when the Sandhill cranes pass over on their way from Arctic to Equator, when the cranberries ripen, which two weeks the wood frogs sing loud. Knowing when to put out the rainwater barrel because a hard freeze is unlikely, and when to harvest carrots because a hard freeze could come any time.

Knowing a place means investing in it like you aren't going anywhere, even if you might. For me that's meant volunteering at the library, going to community meetings, searching for the owner of a lost dog. Knowing a place means knowing what I love (the smell of tundra plants in rain), what I hate (small town gossip), and what has nothing to do with me (when the bears den up). Mostly, it means tuning into a place beyond just what it can offer. This takes daily effort, daily noticing. Annie Dillard says that "how we spend our days is, of course, how we spend our lives," and that's exactly why a seasonal life can also be a permanent one.

Looking back the fifteen years since I first showed up in a trails shop with new Carhartts and soft hands, I can see all those days stacked up like cordwood, built into months, and then years, and now, here it is, this hunch growing in me all along, Glacier, Cordova, Denali, and on: living somewhere doesn't mean you know it, and a job alone doesn't make a place a home. It takes work to do that. **NP**

CHRISTINE BYL still lives in Healy, Alaska, where she's probably shoveling snow in the dark as you read this. Her memoir about trail work, *Dirt Work: An Education on the Ground,* will be released in early 2013 by Beacon Press. This essay was adapted from *Permanent Vacation: Twenty Writers on Work and Life in our National Parks,* published by Bona Fide Press.



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WILBUR WRIGHT and Dan Tate flying a glider in 1902.

The Wright Stuff

The origins of flight are revealed at Wright Brothers National Memorial.

ON THE MORNING OF DECEMBER 17, 1903 the sky dawned a pallid gray, temperatures hovered below freezing, and fierce winds battered North Carolina's Outer Banks—conditions that might send many back to bed. Not Wilbur and Orville Wright. The brothers rose and dressed in suits, stiff collared shirts, ties, and caps. They rolled their flying machine—a homemade apparatus of spruce, ash, and muslin—to a track. They shook hands, and Orville climbed aboard.

"Wilbur tried to pump up the witnesses to get them to jump up and down and hoot and holler to encourage Orville," says Darrell Collins, the historian at Wright Brothers National Memorial. "But once the flight took place, they were stunned and were silenced." Five witnesses watched as the plane clattered 40 feet down the track, rose, dipped, then soared for 12 seconds—120 feet in all.

It was the first time humans had flown under their own power, without losing speed or altitude. That day, the brothers' stoicism belied the fact that they'd accomplished what humans had been dreaming of for millennia. The telegram Orville sent home to their father said little more than this: "Success four flights... inform press home Christmas."

Wilbur and Orville Wright may not have seemed obvious candidates to accomplish the first human flight. The brothers grew from humble beginnings in Dayton, Ohio, where they ran a bicycle shop on West Third Street. (The Dayton Aviation Heritage National Historical Park preserves this and other Wright landmarks.) Neither ever married, graduated from high school, or left the family home, but together they managed to solve the enigmas of lift, propulsion, and control that had eluded more famous and moneyed inventors like the Smithsonian's Samuel Langley and German Otto Lilienthal. The Wrights' story is the stuff of legend: An underdog triumphs with the simple American values of hard work, ingenuity, and perseverance.

The notion of flight first captivated Wilbur and Orville Wright through an unlikely prop: a spinning toy that could fly up to 50 feet in the air, which their father brought home as a gift in 1878 when they were about 11 and 7 years old. After founding the Wright Cycle Company in 1892, they set their practical minds to the problem of flight and their extra cash to financing it.

"From childhood they were inquisitive and interested in mechanical equipment and tools," says Collins. "They were very humble but they were also very self-confident, very determined show their invention to the world." Both men were small

in stature—no more than 5'7" and 140 pounds—with gray-blue eyes. Wilbur was the visionary and an eloquent speaker; Orville was a reserved man of great practicality. Perhaps one of their best assets, however, was their ability to collaborate.

One of the Wrights' major conundrums, which no other inventors had come close to solving, was lateral control. After studying birds in flight and, one day, idly twisting a bicycle-tube box, Wilbur had a eureka moment: By allowing one wing to flex in the opposite direction of the other, the aircraft would be stabilized. After testing the design with success on a five-foot biplane kite, the brothers realized they were on to something and needed to find a better place to test their contraptions.

Enter Kitty Hawk, the site that is now home to the Wright Brothers National Memorial. This series of sand dunes, free of obstructions and blessed with reliable winds, made the perfect proving grounds, even softening anticipated crash landings. After a few promising glider flights off the Kill Devil Hills in October 1900, the Wrights returned to test their designs every year until they knew they had a vehicle they could control. After their first flight on that day in December 1903, the Wrights flew three more times until Wilbur covered an astounding 852 feet in 59 seconds. With a mere $1,200, they had beaten out inventors like Langley, who had squandered some $75,000 of government and private money.

The control system the Wright brothers developed has been used in every man-made flying machine since 1902.

"We were astonished to learn what an immense amount of time and money had been expended in futile attempts to solve the problem of human flight," Wilbur wrote years later. "Contrary to our previous impression, we found that men of the very highest standing in the professions of science and invention had attempted the problem."

Back then, the Outer Banks might have seemed bleak to an outsider oblivious of newfangled flying machines. Now, it is a favorite vacation destination. Windsurfers harness the breezes, sun seekers build sand castles and swim in the sea, and aviation buffs, families, and school groups make the pilgrimage to the Wright Brothers National Memorial, where they can see full-scale reproductions of the 1902 glider and 1903 machine and the engine crankcase from the original 1903 Flyer. Visitors can also explore reconstructions of the Wrights' living quarters and hangar, see the spots where they first took flight, and climb Big Kill Devil Hill for a view across the now-famed dunes.

Though the Wrights didn't immediately capture American imaginations, and the few newspaper stories of their feats were comically riddled with errors, the magnitude of their achievement soon became clear. "The control system the Wright brothers developed here in 1902 has withstood the test of time and has been used in every man-made flying machine since the Wright brothers' 1902 glider," says historian Collins. "That doesn't include only airplanes and gliders—that includes rockets, missiles, satellites, helicopters, and even the space shuttles on take-off and re-entry."

By 1908, the Wrights had flown their planes for European royalty, secured patents in Europe and America, started an airplane company, and become millionaires. In 1912, Wilbur died of typhoid, but Orville lived until 1948, long enough to attend the dedication of his own memorial, to watch as the propeller plane gave way to the jet engine, and even learn that Chuck Yeager had broken the sound barrier. **NP**

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ON THE WEB:
Learn the simple principles behind wing-warping and other discoveries made by the Wrights at http://wright.nasa.gov/airplane/warp.

KATE SIBER lives in Durango, Colorado, and is a contributor to *Outside* magazine. Her work has also appeared in the *New York Times* and *National Geographic Traveler.*

That Was Then

Boy Scouts in Gettysburg, Pennsylvania, enjoying a lighter moment on July 3, 1913, the 50th anniversary of the battle. Scouts helped escort aging Civil War veterans who attended special ceremonies at Gettysburg National Military Park.


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