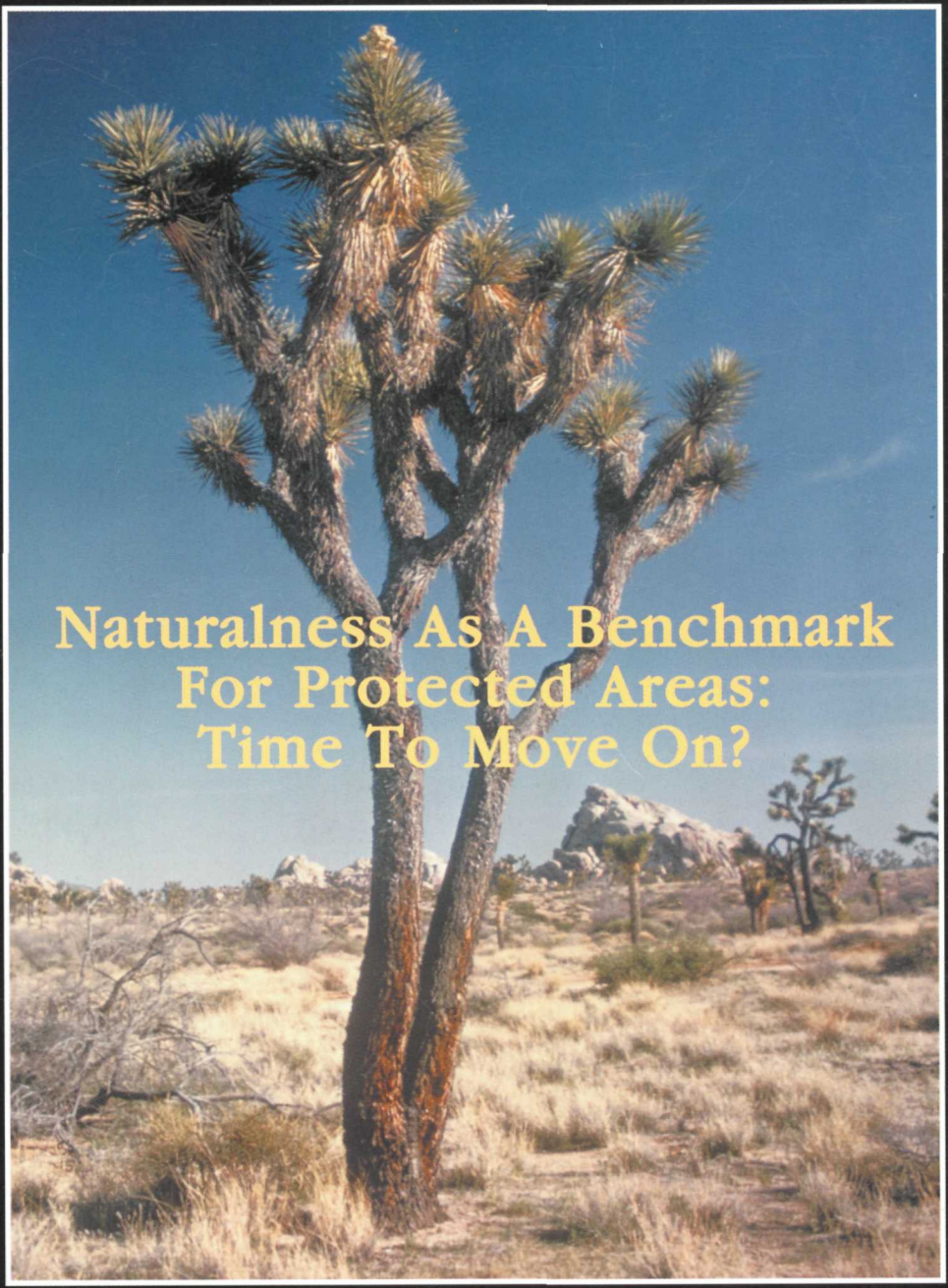

Naturalness As A Benchmark For Protected Areas: Time To Move On?

The George Wright Forum

The GWS Journal of Parks, Protected Areas & Cultural Sites

volume 25 number 1 • 2008

Origins

Founded in 1980, the George Wright Society is organized for the purposes of promoting the application of knowledge, fostering communication, improving resource management, and providing information to improve public understanding and appreciation of the basic purposes of natural and cultural parks and equivalent reserves. The Society is dedicated to the protection, preservation, and management of cultural and natural parks and reserves through research and education.

Mission

The George Wright Society advances the scientific and heritage values of parks and protected areas. The Society promotes professional research and resource stewardship across natural and cultural disciplines, provides avenues of communication, and encourages public policies that embrace these values.

Our Goal

The Society strives to be the premier organization connecting people, places, knowledge, and ideas to foster excellence in natural and cultural resource management, research, protection, and interpretation in parks and equivalent reserves.

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The George Wright Society is a member of US/ICOMOS (International Council on Monuments and Sites—U.S. Committee) and IUCN (International Union for Conservation of Nature).

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On the cover:
Because of climate change, Joshua trees may not be able to survive in Joshua Tree National Park, California. Would the park still be "natural"? And does "natural" even mean anything useful anymore? See the article by Cole and colleagues starting on p. 36. Photo courtesy of National Park Service.

SOCIETY NEWS, NOTES & MAIL

Rebecca E. Stanfield McCown named grad student rep to Board

As reported in the last edition of this column, at its 2007 meeting the Board decided to create a new non-voting Board position for a graduate student. The idea is to nurture a closer relationship between the Board and young people, especially those from minority backgrounds, who are committed to a career in parks and protected areas.

In December the Board selected Rebecca E. Stanfield McCown as its first graduate student representative. Stanfield McCown is a Ph.D. student at the Rubenstein School of Environment and Natural Resources at the University of Vermont. Part of her doctoral work includes collaborating with the National Park Service's Conservation Study Institute on a review of NPS policies designed to increase minority participation. Civic engagement, conservation policy, and environmental justice are some of her areas of interest. During her graduate work, she organized Rubenstein's Conservation Lecture Series, has served as a member of the school's diversity task force, and helped form and advise a MANRRS (Minorities in Agriculture, Natural Resources, and Related Sciences) student chapter.

Stanfield McCown will serve a two-year term during 2008 and 2009. Among other duties, she will assist in carrying out the inaugural Park Break alternative spring break program this year.

Watch your in-box: GWS2009 Call for Proposals coming in May

Keep an eye on your incoming email this May, for that's when you'll receive the Call for Proposals for the 2009 GWS Conference. We will be meeting at the Doubletree Hotel–Lloyd Center in Portland, Oregon, March 2–6, 2009. The CFP will have everything you need to know to begin planning your attendance, including instructions on how to submit an abstract. Planning for the conference is well underway, and we are looking to have another solid line-up of interesting plenary sessions to headline the conference. Mark your calendars and plan to join us in the beautiful Pacific Northwest for a stimulating week that will keep you abreast of the best thinking about park issues of enduring importance.

2008 GWS Board election: Call for nominations

This year, two Board seats are up for election, both of which are held by incumbents eligible for re-election: Rolf Diamant and Stephanie Toothman. Both have indicated that they will run for a second term. We are now accepting nominations from GWS members who would like to join them as candidates in this year's election. The term of office runs from January 1, 2009, through December 31, 2011. Nominations are open through July 1, 2008.

To be eligible, both the nominator and the potential candidate must be GWS members in good standing (it is permissible to nominate one's self). The potential candidates must be willing to travel to in-person Board meetings, which usually occur once a year; take part in Board conference calls, which occur several times per year; help prepare for and carry out the biennial conferences; and serve on Board committees and do other work associated with the Society. Travel costs and per diem for Board meetings are paid for by the Society; otherwise there is no remuneration. Federal government employees who wish to serve on the

Board must be prepared to comply with all applicable ethics requirements and laws; this may include, for example, obtaining permission from one's supervisor, receiving ethics-related training, and/or obtaining a conflict of interest waiver.

The nomination procedure is as follows: members nominate candidates for possible inclusion on the ballot by sending the candidate's name to the Board's nominating committee. The committee then, in its discretion, determines the composition of the ballot from the field of potential candidates. Among the criteria the nominating committee considers when determining which potential candidates to include on the ballot are his/her skills and experience (and how those might complement the skills and experience of current Board members), the goal of adding and/or maintaining diverse viewpoints on the Board, and the goal of maintaining a balance between natural- and cultural-resource perspectives on the Board. (It also is possible for members to place candidates directly on the ballot through petition; for details, contact the GWS office.) To propose someone for possible candidacy, send his or her name and complete contact details to: Nominating Committee, George Wright Society, P.O. Box 65, Hancock, MI 49930-0065 USA, or via email to info@georgewright.org. All potential candidates will be contacted by the nominating committee to get background information before the final ballot is determined. Again, the deadline for nominations is July 1, 2008.

International Journal of Wilderness publishes GWS2007 papers

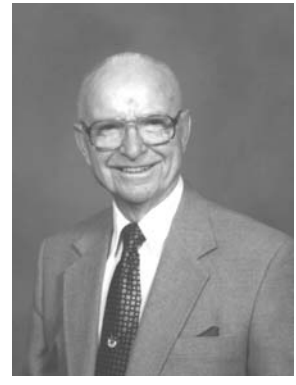
The December 2007 issue of the *International Journal of Wilderness* featured a set of papers that were presented at the 2007 GWS Conference in St. Paul. Papers by Yang He, Rick Potts, Joe Van Horn, Robert Dvorak and William T. Borrie, Harry Zinn and Alan Graefe, and Ingrid Schneider are included. For more information, go to http://ijw.wilderness.net.

Russell E. Dickenson, 1923–2008

Russ Dickenson, the former National Park Service director who had a long association with the George Wright Society, died on February 19, 2008, at the age of 84. A native of Texas, Dickenson began his Park Service career as a ranger at Grand Canyon in 1946, the year before he graduated from Northern Arizona University. After four years in the Marine Corps, he embarked on a permanent career with NPS, serving in a variety of assignments in parks such as Big Bend, Glacier, Grand Teton, Zion, and Chiricahua. In 1980 he became the first person to rise through the agency's ranks and be named its director. Well known for his diplomacy and gentlemanly demeanor, Dickenson led the Park Service during a controversial period within the Department of the Interior. He retired from NPS in 1985, and the appreciation for his performance during his tenure as director deepened as the years went by. Those who attended the GWS conference in San Diego in 2001 may remember an especially warm and touching standing ovation he received when he was introduced as a guest of honor at the Awards Banquet. A life member of the GWS, Dickenson served on the Society's Board of Directors from 1993 through 1998. He is survived by his wife of 60 years, Ollie Maxine Dickenson, and by two brothers, two children, several grandchildren, and a great-grandchild.

Russell K. Grater, 1907–2008

Russell K. Grater, a charter member of the GWS and one of the last remaining colleagues of George Wright, died in January two months after reaching his 100th birthday. A native of Indiana, Grater earned degrees from Wabash College and Yale University before embarking on a career as a naturalist and administrator with the National Park Service. Grater served in numerous positions during his career, including stints at Yosemite, Grand Canyon, Glacier, Zion, Bryce Canyon, Rocky Mountain, Mount Rainier, and Lake Mead. He finished his career at Sequoia/Kings Canyon, one of his favorite parks. He held several other positions, including being the first director of NPS's Stephen T. Mather Training Center. After retirement he worked as a consultant to NPS. A prolific and able writer, Grater authored twelve natural history publications, perhaps the best known of which was *The Interpreter's Handbook.* He was the recipient of numerous awards, including the Nash Conservation Award, the Department of the Interior Meritorious Service Award, and the Charles Richey Memorial Award for outstanding service to Lake Mead National Recreation Area, and was an honorary life member of the National Association for Interpretation.



New edition of Tilden classic published

Freeman Tilden's *Interpreting Our Heritage* has long been considered a seminal guide for anyone involved in interpretation. To mark the fiftieth anniversary of its original publication, the University of North Carolina Press has brought out a revised and expanded edition that includes a new selection of photographs and six additional essays by Tilden. This edition is prefaced by an introduction by R. Bruce Craig and a foreword by the late Russ Dickenson. For more information, go to the press website at http://uncpress.unc.edu/books/T-8506.html.

Erratum

The last issue of *The George Wright Forum* (vol. 24, no. 3) contained an article by William S. Keeton, titled "Role of Managed Forestlands and Models for Sustainable Forest Management: Perspectives from North America," in which several edits from the author were mistakenly omitted from the version that was printed. Of these, the most important is that the reference on page 45 to a "compatibility index" should read "comparability index." This and several other corrections have been incorporated into the PDF version of the paper that is available for free downloading from our website: www.georgewright.org/243keeton.pdf.

THE NATIONAL PARK SERVICE CENTENNIAL

1916 ESSAY SERIES 2016

The National Park Service and Civic Engagement

Edward T. Linenthal

FROM 2002 THROUGH 2005 I HAD THE HONOR OF SERVING AS A VISITING SCHOLAR for the Civic Engagement program of the National Park Service. Speaking at the National Collaborative of Women's History Sites' annual meeting, former NPS Northeast Region Director Marie Rust characterized civic engagement as "a focusing of current efforts at partnering with communities, expanding our education agenda, telling the 'untold stories,' and working with communities and partners to preserve sites that represent the fullness of the American experience."

This vision of civic engagement connects with the public in a number of different ways: it asks employees of NPS to be more inclusive of public voices in their planning, to take more seriously their role in using historic sites—what some have called "America's greatest university without walls"—for civic education, and to balance the voice of "heritage," by definition a voice that venerates and shapes progressive narratives of national experience, with the voice of "history," which integrates into these same national narratives more problematic aspects of our national stories, ones that offer opportunity for somber reflection and an antidote against coarse triumphalism and preening ethnocentrism.[1]

One of my responsibilities has been to direct seminars on public history for NPS managers at various sites around the country. We examine some of the dramatic case studies in public history: among them the evolution of the Little Bighorn Battlefield National Monument from a shrine to George Armstrong Custer to a historic site that represents various Americans who fought on both sides of the famous battle; the "razor's edge" issues that emerged in the location and representation of Holocaust memory in America during the making of the United States Holocaust Memorial Museum; a "cultural autopsy" of the ill-fated *Enola Gay* exhibition at the National Air and Space Museum. From these "spectacle" case studies, the seminars then address various interpretive issues that engage the energies of NPS staff at our host site. This serves to ground our discussions in the ongoing work of a particular site, and often allows our hosts the luxury of having

their peers discuss and offer suggestions on some difficult issues.

Throughout my long association with the National Park Service, which began with a research trip to the Little Bighorn in December 1980, I have been impressed with the dedication NPS colleagues bring to their public stewardship of the nation's cherished sites. Civic engagement has always been a way of "doing business," although it was not always business done with great sensitivity, and some of the most successful case studies in NPS's commitment to civic engagement reveal the tremendous energies expended to repair relationships with local communities that often felt disenfranchised by NPS.

The new emphasis on civic engagement mirrors similar programs in a great number of cultural institutions, reflecting, I think, a growing unease at the shriveling of thoughtful public dialogue and a desire to practice once again the arts of democracy using NPS sites as forums, as well as shrines. Civic engagement for NPS means a focus on an inclusive process: "stakeholder" involvement in park planning, for example, from programming to land acquisition issues, as well as partnerships with educational and professional organizations.

I have been witness to and participant in some interesting civic engagement processes beyond the world of NPS. I observed the "democratization" of exhibition planning at the United States Holocaust Memorial Museum as a content committee helped ensure that survivors would be involved in the creation of the permanent exhibition and, indeed, in much of the other work of museum planning. During the *Enola Gay* debacle, I felt both sadness and disgust when too many members of Congress and the press, presented with an opportunity to model in public and for the public how to disagree responsibly—civilly and thoughtfully—with curators and some historians over one of the nation's sacred and controversial stories, instead resorted to character assassination and political intimidation. During my many visits to Oklahoma City to learn about the aftermath of the bombing of the Alfred P. Murrah Federal Building on April 19, 1995, I learned about the thoughtful memorial process that enabled a 350-person task force, many of them burdened with the recent murder of loved ones, to move beyond attachment to a particular memorial design and think about a wider public meaning of such a memorial project. It was a most profound example of the enfranchisement of a diverse public in the most extreme of circumstances, particularly as some people participated in a public process for the first time as a way to honor a murdered loved one, and from this experience moved on to be active in the community in ways they would never have imagined only months before.

And yet the issue of who is designated as a "stakeholder" in such processes can be tricky. In one sense, of course, any member of the public is a stakeholder who has the right to address NPS, to be heard. But at some point NPS has to say, "These are the scholars, museum professionals, conservation managers, archivists, tribal leaders whom we are going to involve in planning because we value their professional expertise." With such expertise often under fire, however, this is often a bumpy road, and "balance" is rarely the way out. One would not dream—at least in any coherent world I choose to live in—of "balancing" a board of planners at the Holocaust Museum with Holocaust deniers, of "balancing" geolo-

gists with creationists. And yet, at the Grand Canyon bookstore, at least, just this issue of professional expertise has raised its head. This makes it all the more important for NPS to be able to say, "These are the people we have asked to help us develop this site, this exhibition, this interpretive brochure, and here's why," and then be ready and willing to defend their choices aggressively and flexibly.

A more mindful process is serving NPS well. During seminars, NPS managers talk with each other about strategies to bring people into the ongoing lives of their dynamic sites. As the nation grows ever more diverse, how can NPS link varied publics to their sites and stories? How to include newer immigrant groups, for whom participation in such public processes does not necessarily come naturally, but could be one vehicle into full participation in public life? What are stories to be learned from and told about newer Americans? And what are successful strategies in dealing with those for whom civic engagement does not always mean civil dialogue, but an angry expression of ownership of a story or site?

An interest in a more inclusive and expansive process certainly seems a compelling response to historian David Hollinger's call for the formation of a "post-ethnic" society, which "prefers voluntary to prescribed affiliations, appreciates multiple identities, pushes for communities of wide scope, recognizes the constructed character of ethno-racial groups, and accepts the formation of new groups as part of the normal life of a democratic society."[2]

Civic engagement—and the realization of a post-ethnic society—also means the development of a more expansive and complex national historic landscape. How stunningly different would the NPS landscape look, for example, to an anthropologist from Mars who had visited here in 1950 and returned in 2005! Such a visitor would note so many more sites telling American stories beyond those of war and politics, and especially sites of challenge, sites that ask visitors to reflect not only on stories that engender pride, but also on stories that engender humility and an understanding of the complex legacies of our national past.

I have participated in two NPS conferences on civic engagement: one held in New York City in December 2001, the other in Atlanta in December 2002. In New York, more than fifty people listened as NPS managers talked about the challenges of their sites, all of them new to our Martian visitor: Manzanar National Historic Site, Cane River Creole National Historical Park, Washita Battlefield National Historic Site, Brown v. Board of Education National Historic Site, and the "Forest for Every Classroom" project at Marsh–Billings–Rockefeller National Historical Park. They listened, for example, to Frank Hays, superintendent of Manzanar National Historic Site, discuss the challenge of providing an "adequate context through which the public can be engaged in a discussion of social issues related to the internment of Japanese Americans," since "only a few remnants of the camp are visible." This dilemma led to intense discussions with Japanese Americans about possible reconstruction of barbed-wire fences and guard towers, for example. Civic engagement at the site helped NPS listen carefully to Japanese American views about "the initial development and management of the site." There are, Hays observed, "disagreements about how to tell the internment story," often focusing on whether these places should be called "concentration camps." After describing an extensive

review process of the park's interpretive programs, Hays stated his belief that such a process would "facilitate, if not ensure, that a truthful, balanced context will be presented to the visiting public."[3]

People listened as John Latschar, superintendent of Gettysburg National Military Park, discussed substantive transformation in the interpretation of Civil War battlefields. Traditionally, Latschar observed, programs "emphasized 'safe' reconciliationist topics. We discussed [the] battle and tactics, the decisions of generals, the moving of regiments and batteries, the engagement of opposing units, and tales of heroism and valor. . . . Internally, we call this type of interpretation 'who shot whom, where.'" However, Latschar said, in 1998 Civil War site superintendents published *Holding the High Ground: Principles and Strategies for Managing and Interpreting Civil War Battlefield Landscapes.* This document led to an NPS symposium at Ford's Theater in Washington, D.C., in May 2000. Robert K. Sutton, at the time the superintendent of Manassas National Battlefield Park, told the audience that visitors to Civil War battlefields should understand not only "who shot whom, how, and where, but why they were shooting at each other in the first place. And, when the story of the shooting is finished, visitors should understand that all of this bloodshed turned the nation in a different direction."[4]

There is no better example of the ignored, compelling stories at Civil War battle sites than those told in historian Margaret S. Creighton's *The Colors of Courage: Gettysburg's Forgotten History.* She writes:

> When we see the battle through the eyes of immigrant soldiers, for example, we come to know the Union army at Gettysburg less as a seamless fighting body engaged with an enemy than as a socially divided set of men beset by internal battles. . . . When we measure Gettysburg by the yardstick of women's work, the battle's geography shifts distinctly. The circumference of battle expands beyond the familiar Cemetery and Seminary Ridges to include both the borough and the civilian farms for miles around. Seen from the vantage point of civilian women, the battle's chronology also changes. The trauma lengthens from three days' worth of killing to at least three months' worth of recovery and ministration. . . . Viewed through the lens of African American experience in Pennsylvania the Battle of Gettysburg expands again . . . both a momentary explosion in 1863 and the climax of decades of threats from below the Mason-Dixon line. . . . It is a battle all about, utterly about, freedom.[5]

Creighton's book is a compelling response to those who claim that battlefields need only to tell stories of the military aspects of "battles." There were, as Creighton illustrates, many battles going on at Gettysburg, and our knowledge of them greatly enriches our understanding of how ordinary and extraordinary Americans struggled with these shattering events and their aftermath. This is not, as some neo-Confederates would have it, capitulation to "political correctness" (a term that has, to be sure, lost whatever distinct meaning it once had in the culture wars); rather it is an attempt at historical correctness and an attempt to resurrect and interpret the lives of many Americans. In truth, the kind of

"history" that has been told at Civil War sites has been minority history for far too long. What could be more important to the integrity of NPS' educational mission, to the "ethics" of history, if you will, than telling such stories, and including, in the manner of Frank Hays, communities with deep connection to site and story? And yes, of course this is revisionism! Recall, please, Avishai Margalit's observation that "revision of our past history asks us to look for that which is absent but not to invent that which did not exist."[6]

The audience in New York listened as well to Ruth Abram, president of the Lower East Side Tenement Museum, talk about the significance of the International Coalition of Historic Site Museums of Conscience, founded in 1999, a coalition that now includes several NPS sites. The goal of the coalition, Abram declared, was to "transform historic sites into places of citizen engagement, where visitors are invited and encouraged to address the contemporary implications of the topic interpreted at [each] site."[7]

The Atlanta conference in December 2002 featured reports from Victor Shmyrov, the director of the Gulag Museum at Perm-36, Russia, with whom NPS is working to develop interpretive materials, a major traveling exhibition, and public programs in the United States to accompany the exhibition. Participants also heard from NPS's Todd Moye, of the Tuskegee Airmen Oral History Project at Tuskegee Airmen National Historic Site, and from colleagues at a variety of non-NPS sites: among them Jeff West of the 6th Floor Museum in Dallas, Beverly Robertson of the National Civil Rights Museum, and Nick Franco, superintendent of Angel Island, California, State Park.

Participants also visited the stunningly powerful exhibition *Without Sanctuary: Lynching Photography in America,* at the Martin Luther King, Jr., National Historic Site. After curators failed to find a home among any of Atlanta's cultural sites, Superintendent Frank Catroppa agreed to host the exhibition. It attracted more than 150,000 visitors, certainly an example of the moral dimension of civil engagement, and offered, perhaps, evidence that both NPS and the American public can engage in a mature manner such "indigestible" sites that convey, in historian Patricia Nelson Limerick's words, "tales from hell."

The evolution of civic engagement sensibilities regarding both process and an ever-richer, more profound NPS landscape will continue. In my opinion, one of the most exciting opportunities for new interpretive forays is in the development of NPS focus on the significance of religion in American history. While NPS does interpret some historic religious sites and occasionally presents some interpretation of American religion, all too often it is as if religion simply was either non-existent in the American story, or epiphenomenal at best. There are many reasons for NPS reticence, and Thomas Bremer's *Blessed With Tourists: The Borderlands of Religion and Tourism in San Antonio* provides a welcome case study in the challenges and promise of NPS interpretation of American religion. As he notes, "National identities, ethnic identities, and religious identities all intersect in these spaces and in the lives of those who inhabit them. These identities sometimes complement one another but at other times conflict. An ambivalence results that generates within the San Antonio Missions National Historical Park a simultaneity of civic spaces, sacramental spaces, aesthetic

spaces, and endless other spaces." Perhaps a model of civic engagement that takes religion seriously as part of the experience of people and their historic spaces will result from NPS's struggle with their stewardship of these sites.[8]

There are, of course, all sorts of cautions to be offered here. Religion is often a "razor's edge" issue, and there could be enormous pressure by various ideological groups to use NPS interpretive programs as cultural capital for their own interests. Further, is the public ready to engage how powerful religion has been in ways both humanizing and dehumanizing, that the resources of religion in America have been mobilized in ways both comforting and horrifying? Even with these serious ideological and interpretive challenges, I cannot think of a more appropriate new direction for an even richer and more exciting NPS plan of engagement with the public.

NPS's civic engagement program is an exciting and promising process that respects diverse, often conflicting voices in American public culture and seeks to honor the voices of past Americans too long forgotten, too long existing at the margins of national stories in which they counted in so many important ways. It is a process that trusts the public as participant, and pays a debt to the forgotten dead of our past through recognition.

Endnotes

1. For the full text of Marie Rust's speech and other materials on the National Park Service's Civic Engagement program, see www.nps.gov/civic/resources/links.html. An NPS Director's Order from Fran P. Mainella on November 17, 2003, charged NPS employees to "embrace civic engagement and public involvement as the essential foundation and framework for creating our plans and managing programs" (*Director's Order #75A: Civic Engagement and Public Involvement*).

2. David Hollinger, *Postethnic America: Beyond Multiculturalism* (New York: Basic Books, 1995), 116.

3. Frank Hays, "The National Park Service: Groveling Sycophant or Social Conscience? Telling the Story of Mountains, Valley, and Barbed Wire at Manzanar National Historic Site," *The George Wright Forum,* vol. 19, no. 4 (2002), 50 and passim.

4. Robert K. Sutton, "Introduction," in *Rally on the High Ground: The National Park Service Symposium on the Civil War,* Robert K. Sutton, ed. (Fort Washington, Pa.: Eastern National, 2001), xvi.

5. Margaret S. Creighton, *The Colors of Courage: Gettysburg's Hidden History* (New York: Basic Books, 2005), ix.

6. Avishai Margalit, *The Ethics of Memory* (Cambridge: Harvard University Press, 2002), 140.

7. Abram's comment in "The National Park Service and Civic Engagement: The Report of a Workshop Held December 6–8, 2001, in New York City," 13.

8. Thomas S. Bremer, *Blessed with Tourists: The Borderlands of Religion and Tourism in San Antonio* (Chapel Hill: The University of North Carolina Press, 2004), 118.

Formerly the Edward M. Penson Professor of Religion and American Culture and Chancellor's Public Scholar at the University of Wisconsin–Oshkosh, **Edward T. Linenthal** is currently professor of history at Indiana University and editor of the *Journal of American History*. His most recent book is *The Unfinished Bombing: Oklahoma City in American Memory*.

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Join the Centennial conversation!

Do you have a comment on the ideas presented in this essay? Ideas of your own to share? Whether it be criticism, praise, or something in between, we want to hear your thoughts on the National Park Service, its centennial, and the future of America's national park system. Write us at nps2016@georgewright.org and we'll post your comments on our Centennial webpage (www.georgewright.org/nps2016.html) and include a selection in the next issue of *The George Wright Forum*.

Centennial Essay Feedback

a selection of comments received in response to the previous Centennial Essay

Comments on "Robin Winks on the Evolution and Meaning of the Organic Act," (volume 24, no. 3, December 2007; online at www.georgewright.org/243winks.pdf)

After reading Winks' remarkable essay, it reminded me of a similar "debate" that started in 1964 with the passage of the Wilderness Act (Public Law 88-577). Some people argued that this act sent a "dual" message to the American people about how these newly created wilderness areas were to be used/enjoyed. Section 2(a) of the act states that these wilderness areas "shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for … the preservation of their wilderness character." Though it should be very apparent that Congress wanted to, above all, protect the "wilderness character" of these protected areas, some cynical people asked, "When does the wilderness character of an area become jeopardized?" Does a fire ring affect wilderness character? Does a group of 40 backpackers jeopardize wilderness character?

Winks' essay appropriately concludes that the "intent" of Congress in passing this legislation was "to conserve the scenery and the natural and historic objects and the wildlife" within the national parks. Providing for the enjoyment of Americans must come second in this instance.

One lasting impression that Winks' essay had on me was for me to question the future of all our protected public lands in America. Will the threats of global warming, Big Oil, and an ever-increasing population lead to the ultimate destruction of all protected areas within the USA? Will even the staunchest environmentalists be able to stand up for pristine lands, clean waterways, and innocent wildlife in the face of overwhelming pressure?

— Paul Markowski

A long time ago, I proposed to dedicate the NPS Southwest Region's Columbus Quincentennial to physical improvements and maintenance of the areas themselves, rather than hoopla events. We would provide the improved stage for events carried out by local people. We would not do the events; our local friends and supporters would. That put the momentum behind hard-core physical upkeep, and much local involvement and participation. It was a direct benefit to the areas rather than a "Special Event" drain on overloaded park staffs. It was therefore a success with many before-and-after showcase projects that didn't cost a lot but cleaned up lots of messes and deferrals. I still think this is a good approach.

— Bill Brown

Wolf Recovery in Yellowstone: Park Visitor Attitudes, Expenditures, and Economic Impacts

John W. Duffield, Chris J. Neher, and David A. Patterson

Introduction

In 1995, the U.S. Fish and Wildlife Service began reintroducing wolves to the Greater Yellowstone ecosystem and to the Central Idaho area in an attempt to restore the endangered gray wolf to the Rocky Mountains. The restoration of wolves to Yellowstone National Park has become one of the most successful wildlife conservation programs in the history of endangered species conservation. Yellowstone is now considered one of the best places in the world to watch wild wolves. Visibility of the wolves within the park, and public interest in wolves and wolf-based education programs, have far exceeded initial expectations.

During the preparation of the environmental impact statement (EIS; US Fish and Wildlife Service 1994) that was completed by the National Park Service (NPS) prior to wolf restoration, more than 170,000 public comments were reviewed to determine the public's key concerns. One of the main issues identified during this process was the concern about the possible economic effects of wolf restoration. Among the concerns of opponents were the expenditure of public federal funds for the restoration effort and the potential for negative economic effects on the regional economy. These assumed negative effects included the costs of wolf depredation on livestock, reduced big-game populations resulting in lower economic returns to agencies and businesses that derive revenue from big-game hunting, and an expected drop in visitation to Yellowstone and the surrounding ecosystem. Proponents, on the other hand, predicted increased visitation and positive regional net economic impacts caused by the presence of wolves.

Prior to reintroduction of wolves into the Yellowstone ecosystem, an EIS analysis presented predictions of a wide spectrum of impacts, including economic impacts, that would result from wolf recovery (U.S. Fish and Wildlife Service 1994). This study provides an *ex post facto* (after the fact) analysis of wolf-related social and economic impacts for comparison with the EIS predictions.

This paper focuses on two primary results from the Yellowstone National Park 2005 visitor survey: preferences for wildlife viewing among Yellowstone visitors, and regional economic impacts attributable to wolf presence in the park.

Data collection

The park's 2005 visitor survey was designed to collect a broad spectrum of information and opinions. The survey instrument was divided into four sections,

each addressing one general aspect of the visitors' trip or their attitudes and characteristics. For purposes of the regional economic analysis, information was collected on visitor attitudes toward wolf recovery and wildlife, and data were collected on expenditures.

Original data were gathered from a random survey of Yellowstone National Park visitors between December 2004 and February 2006. The survey targeted two samples: all park visitors (sampled at park entrances) and Lamar Valley visitors (sampled randomly at parking locations throughout the valley). Throughout the sampling period, a total of 2,992 surveys were distributed and 1,943 were completed and returned, for an overall response rate of 66.4%. Respondents from the Lamar sample had higher response rates (74.2%) than did respondents from the entrance station sample (64.4%).

The survey was designed as a random sample of the entire population of park visitors. Park visitors in spring, summer, and fall were contacted at park entrance stations. Winter visitors traveling by car were also contacted at the North Entrance station. Over-snow visitors were sampled through guide and outfitter lists. The resulting random sample was weighted appropriately to reflect the actual distribution of 2005 park visitation by entrance and season. A separate sample of visitors was contacted in the Lamar Valley to provide additional data on visitor wildlife viewing. The survey procedure followed a standard Dillman (2000) mail survey methodology using initial contact and repeat follow-ups.

Visitor wildlife viewing preferences

Visitors were asked about their preferences for seeing different animals on their trips. Specifically, visitors were asked to choose the three species of animals they would most like to see while in the park from a list of 16 species (Table 1). It is interesting to note that the "charismatic megafauna," including large carnivores and ungulates, rank highest on the lists. Four of the top five species are consistently the large carnivores. The consistency in ranking across years (aside from wolves) is remarkable. A similar consistency is observed between resident and nonresident visitors. Table 1 shows a comparison of preferences for seeing different species across the three independent visitor surveys conducted in 1991, 1999, and 2005. The data presented in Table 1 is for the summer season 2005 results, in order to be comparable with the 1991 and 1999 results, which were estimated from summer visitor samples.

In a 1991 study, 15% of park visitors listed wolves as a species they would most like to see, even though at that time wolves were not present in the park. This percentage ranks the species as number eight. Eight years later in the 1999 survey, and following the introduction of wolves in 1994, the number of visitors who stated they would like to see wolves had increased to 36%, and the species was rated second only to grizzly bears. Based on the 2005 study, 44% of visitors listed wolves as a species they would most like to see on their Yellowstone trip, and wolves are second only to grizzlies as a preferred species to see.

One objective of the 2005 survey was to obtain an estimate of the number of Yellowstone National Park visitors who actually see wolves in the park throughout the year. One survey question asked respondents to indicate which species they actually saw on their trip to the park. As expected, nearly all visitors report seeing bison (93%

Rank	1991 Study		1999 Summer Study		2005 Summer Study	
	Species	Percent	Species	Percent	Species	Percent
1	Grizzly	0.550	Grizzly	0.58	Grizzly	0.55
2	Black Bear	0.332	**Wolf**	**0.36**	**Wolf**	**0.44**
3	Moose	0.332	Moose	0.35	Moose	0.41
4	Elk	0.239	Lion	0.31	Black Bear	0.26
5	Lion	0.229	Black Bear	0.29	Lion	0.25
6	Sheep	0.219	Sheep	0.23	Sheep	0.21
7	Eagle	0.187	Eagle	0.21	Eagle	0.21
8	Bison	0.160	Bison	0.19	Bison	0.21
9	**Wolf**	**0.154**	Elk	0.14	Elk	0.14
10	Wolverine	0.047	Wolverine	0.06	Wolverine	0.06

For the 2005 study, the remaining preferences to see species were Trumpeter swan (3%), Deer (2%), Fox (1.8%), Coyote (0.6%), Antelope (0.3%), and Goose (0.1%).

Table 1. Comparison of Yellowstone National Park visitor ratings of the animals they most would like to see on their trips to Yellowstone.

to 98%), and a large share report seeing elk (85% to 92%). Also, as expected, very few visitors report seeing two rarely viewed species, mountain lions and wolverines (1.8% or less across seasons).

Table 2 shows the percentage of respondents from the entrance-station sample who reported seeing wolves on their trips. The table also reports the percentage who said they saw coyotes and the percentage who reported seeing *both* wolves and coyotes on their trip. For purposes of conservatively estimating the number of Yellowstone National Park visitors who see wolves in a year, we use the percentage of visitors who reported seeing both coyotes and wolves. This conservative estimate is used to reduce the chance of counting visitors who misidentified coyotes as wolves.

Table 3 shows that in the period of spring through fall, between 9% and 19% of visitors reported seeing both wolves and coyotes. In the winter season, about 37% of North Entrance visitors reported seeing wolves and coyotes. Applying these percentages to the actual 2005 recreational visitation levels reported by the NPS yields an estimated 326,000 visitors who saw wolves in 2005. This is conservative, for it excludes winter visitors who enter through the West, East, and South entrances on over-snow vehicles. This is substantially higher than previous estimates of the number of visitors seeing wolves in the park. For example, Smith (2005) reports, based on field counts by Yellowstone National Park personnel, that about 20,000 park visitors per year view wolves. The latter estimate was based on occasions where park field personnel were able to observe visitors observing wolves. Given the size of Yellowstone National Park, the widespread distribution

Statistic	Spring N=495	Summer N=477	Fall N=322	Winter N=221
% seeing wolves	25.4%	15.2%	18.5%	42.4%
% seeing coyotes	45.3%	38.9%	40.4%	71.2%
% seeing both	19.2%	9.1%	12.8%	36.7%
Recreational visitation (2005)	382,598	1,819,798	547,777	43,933
Number of visitors seeing wolves	73,382	166,330	70,335	16,123
Total estimated visitors sighting wolves (spring-fall)	**310,046 (95% C.I. 257,210 to 362,882)**			
Total estimated visitors sighting wolves and coyotes (year-round)	**326,170 (95% C.I. 273,277 to 379,097)**			
Note: winter and year-round estimate includes only North Entrance visitation.				

Table 2. Estimated number of Yellowstone visitors seeing wolves and coyotes in the park in 2005.

Season / residency	Amount spent in GYA	Amount spent in three-states	Total trip spending	Sample size
Spring – nonresident	$220.55	$320.24	$673.21	374
Spring – GYA resident	$72.87	$74.99	$105.66	70
Summer – nonresident	$187.85	$349.58	$709.33	369
Summer – GYA resident	$63.67	—	$117.28	22
Fall – nonresident	$279.56	$387.78	$762.19	241
Fall – GYA resident	$112.99	$150.03	$208.94	47
Note: winter results are only representative of wheeled access and are not presented.				

Table 3. Comparison of visitor spending, by season and residency for the 17-county GYA analysis area.

of wolves (Smith 2005), and the limited presence of park personnel in the field, it is possible that this method may be understating estimates by more than an order of magnitude.

Yellowstone visitor trip expenditures

Recreational travel to Yellowstone National Park includes spending by park visitors. A key measure of the significance of a regional resource such as Yellowstone to the area's economy is the amount of money visitors from outside of the local area spend in the area on their trips. For the sake of measuring local area spending, visitors were asked to list the amount of money they spent on their trips in total, as well as the amount they spent in the three states of Montana, Idaho, and Wyoming, and the amount they spent in the local Greater Yellowstone area (GYA). Table 4 shows reported average trip spending by season and residency for each of the geographic areas. As would be expected, park visitors resident in the GYA spend less on their trips to the park than do nonresident visitors. This pattern is consistent across seasons.

Statistic	Spring	Summer	Fall	Winter
Total recreational visitation to Yellowstone	382,598	1,819,798	547,777	85,478
% of visitors from outside the three-state area	70.5%	83.68%	67.59%	82.2%
(A) Recreational visitors from out of the three states	269,770	1,522,807	370,242	70,289
(B) % of visitors who would not have visited without the presence of wolves	1.93%	4.78%	3.45%	3.66%
(C) Average spending per visitor within the three states by visitors from outside the area	$361.89	$369.12	$425.50	$510.84
(A) * (B) * (C) Total estimated annual three-state visitor spending attributable to wolves	$1,885,178	$26,889,668	$5,431,916	$1,314,167
Total estimated annual visitor spending in the three states attributable to wolves		$35,520,929		
95% Confidence interval		$22,404,274 to $48,637,585		

Table 4. Estimated three-state (Montana, Idaho, and Wyoming) direct expenditure impact associated with wolf presence in Yellowstone National Park.

Net impacts of wolf recovery on the regional economy

The economic analysis associated with the Yellowstone area wolf reintroduction EIS included an estimate of how many new recreational visits per year would result from reintroduction of wolves to the park. The 2005 survey included a series of questions designed to allow the estimation of the percentage of current Yellowstone National Park visitation attributable to wolf presence in the park. Survey respondents were asked the following questions:

> Was the possibility of seeing or hearing **wolves** one of the reasons for your visiting Yellowstone National Park on this trip?
>
> ❑ NO ❑ YES
>
> **IF YES,** would you still have chosen to take this trip even if **wolves** were not present in the Yellowstone National Park? (Please check one)
>
> ❑ DEFINITELY YES
> ❑ DEFINITELY NO
> ❑ NOT SURE

The estimated percentage of Yellowstone visitation attributable to wolves ranges from 1.5% in the spring season to nearly 5% in the fall. Based on the percentage of visitors who would only come if wolves are present, Table 3 shows the derivation of an estimate of impacts to the three-state region for comparison below with the estimate derived by Duffield (1992). In total, it is estimated that visitors coming from outside the three-state region, who are coming specifically to see or hear wolves in the park, spend $35.5 million annually.

Prior to reintroduction, Duffield (1992) estimated, based on park visitor survey responses, that a recovered wolf population in the park would lead to increased visitation from outside the three-state region

resulting in an additional $19.35 million in direct visitor spending within the three states. Between 1991 and 2005 the standard measure of consumer prices, the CPI-U (Consumer Price Index–All Urban Consumers, compiled monthly by the Bureau of Labor Statistics), has increased 43.4% (from 136.2 to 195.3). Adjusting the 1991 estimate for increases in prices leads to an inflation-adjusted 1991 estimate of $27.74 million per year. This estimate is below the 2005 estimate of $35.5 million, but well within the 95% confidence interval for the estimate of $22.4 to $48.6 million. It appears that the 1991 methodology and estimate correspond well to current estimates of wolf impacts on visitor spending.

Conclusions

Overall, it appears that the economic predictions made in the original EIS analysis were relatively accurate. Based on the 2005 study, 44% of visitors to Yellowstone listed wolves as a species they would most like to see on their trip, and wolves are second only to grizzlies as a preferred species to see. In terms of projections of changes in park visitation, the current estimated percentage increase due to wolf presence is somewhat lower than predicted (+3.7% estimated versus +4.93% predicted). However, the 1994 predictions were based on a survey of summer visitors to the park and the current estimate of the percentage of summer visitation due to wolf presence is +4.78%—very similar to the EIS predictions. Regarding changes in visitor spending in the local economy due to wolf presence, the current estimate of +$35.5 million (confidence interval of $22.4 to $48.6 million) is consistent with the 1994 EIS estimate of +$27.7 million (2005 dollars).

The 1994 EIS economic analysis also provided estimates of the impacts of a recovered wolf population on predation of livestock in the Yellowstone area, and on big-game populations in the area. For the issue of wolf depredation of livestock, the EIS's estimated losses, mostly for cattle and sheep, of $1,900 to $30,500 per year were based on assumptions of a recovered population of 100 wolves. Depredation loss levels during the period when wolf numbers were near predicted levels were consistently within the range of predicted losses, and averaged $11,300 during the period 1997–2000. In 2004 and 2005, when wolves numbered over 300, losses were twice the high-end estimate of losses predicted in the EIS, at $63,818 per year (Defenders of Wildlife Compensation Fund data; www.defenders.org).

Regarding the issue of impacts to big-game populations, a review of the wildlife biology literature associated with wolf impacts on the northern Yellowstone elk herd shows a divergence of views on the impact wolf predation has had depending on whether wolf predation is viewed as largely additive or largely compensatory. Two peer-reviewed papers examining impacts of wolves on northern herd elk populations (Vucetich et al. 2005; Varley and Boyce 2006), however, have shown the impact of wolves on elk numbers to be either consistent with or below the impact predicted in the EIS, which was for a long-range hunter harvest reduction of elk of between 5% and 30%.

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Out of Africa: Lessons from Park Management in South Africa

Daniel S. Licht, Rob Slotow, and Joshua Millspaugh

Introduction

THE UNITED STATES TAKES GREAT PRIDE IN ITS NATIONAL PARKS. As Phillips (2003) wrote, the U.S. was a pioneer in establishing "protected areas in their classic form, as government-owned, government-run areas set aside for the protection and enjoyment" of the public. Yet it would be presumptuous to assume that the U.S., and specifically, the National Park Service (NPS), has the only successful model for establishing and managing protected areas. The past several decades have seen a proliferation of protected areas outside of the U.S. Many of these new sites have not had the level of government funding or support that U.S. parks typically get; therefore, park proponents and managers at these sites have had to be creative in order to succeed. These new approaches have created what Phillips (2003) calls a "new paradigm" for protected areas. Under this new paradigm, park goals, operations, and policies contrast markedly with past approaches, and with what is currently practiced, in U.S. parks.

In this paper we discuss the goals, operations, and policies of park management in South Africa—specifically in regard to wildlife management—and how they contrast with park management in the U.S. Our discussion is especially relevant to protected areas in grassland, savanna, and shrubland biomes because both countries contain those habitat types (Licht et al. 2008). We focus on seven issues that may stimulate thought among U.S. managers. It is our hope that an understanding and appreciation of the approaches used in South Africa leads to better wildlife conservation in protected areas in the U.S.

Lessons from Africa

Capitalism can help establish protected areas and conserve wildlife. Protected areas in the U.S. have typically been developed from lands that contain grand and inspiring scenery, are sparsely populated, and/or have little commercial value (Sellars 1997). Establishing these protected areas was often justified with intangibles such as therapeutic, spiritual, or existence values (Harmon 2004). All of these non-economic attributes are meritorious, but sometimes they are insufficient to establish or protect a site, especially when such justifications must compete against conventional economic uses of the land.

In contrast, many protected natural areas in South Africa were justified and established in large part on economics. Some of the recently established natural areas were formerly occupied farmland and ranchland. It was determined that the economic benefits of natural areas—which center on wildlife and ecotourism—were great

enough to justify converting these sites to parks and reserves. Wildlife continues to be a primary economic driver in these parks. The irony is that in the U.S., economic development is often seen as impeding the establishment of protected areas and the conservation of wildlife (Czech 2000).

The Madikwe Game Reserve, about 150 miles northwest of Johannesburg, provides a case study of how capitalism and wildlife conservation can work together. Prior to establishment of the reserve in 1991, the site was mostly white-owned ranchland in a degraded condition. When apartheid ended, it was proposed that the shrublands be turned over to black ranchers and farmers. However, a feasibility study found that the best use of the land, from an economic standpoint, was not conventional farming or ranching, but rather wildlife conservation and ecotourism. A partnership of the state, local communities, and the private sector was established to develop and manage the reserve using a "people-based" approach to conservation (see www.madikwe-game-reserve.co.za/management/). From 1991 to 1997, more than 8,000 animals were reintroduced to the site as part of an ambitious restoration project known as Operation Phoenix. The 150,000-acre site now attracts international visitors from throughout the world to view wildlife. Just as importantly, the protected area now employs hundreds of local people as managers, rangers, guides, lodge employees, and in other capacities.

The Madikwe example is not a singular event in South Africa. Ecotourism, driven primarily by wildlife, is so successful that many private landowners have converted their livestock operations to private game preserves for economic purposes (Cloete et al. 2007). In some cases the government sites were a catalyst for regional change. Once neighboring landowners saw the economic success of the wildlife parks, they converted to ecotourism operations. Thus, small public sites that were originally islands in a sea of agriculture became part of larger conservancies with enhanced biodiversity value. In some cases the fences have been dropped between the adjoining sites, allowing for more natural processes. Throughout South Africa there are protected areas of varying sizes that support the complete assemblage of native species, including large and dangerous predators, and many were established for economic development. In some cases hunting is a component of the revenue generation, but in many others it is not.

To be fair, economics and ecotourism are usually analyzed as part of the planning process in the development, management, and protection of parks in the U.S. However, such benefits are typically viewed as indirect and are not the primary motivation for establishment or protection of a site. As a result, revenue that could be generated from a site is often not collected (e.g., entrance fees) or is deposited in government treasuries where it does not directly benefit local communities (Miller 1998).

The wildlife-conservation-for-economic-development model has not been tried in the U.S. to any significant degree. However, there may be opportunities for employing such a model in certain regions, such as the Great Plains (Licht 1997). This region has a dearth of protected natural areas due in part to the absence of majestic scenery, the fact that most land is in private ownership, and the perception that agriculture is the best economic use for the land. However, the past century has shown that most of the rural parts of the region are

becoming depopulated and that the land is only marginally profitable for agriculture, especially in the absence of government succor (Popper and Popper 1987; Licht 1997). In that respect the region is similar to parts of South Africa, such as the site of the Madikwe Game Reserve. Numerous scholars, conservation organizations, and rural development organizations have proposed a wildlife-based model for enhancing the rural economy of the Great Plains (see Popper 1987; Licht 1997; Forrest et al. 2004; Glasshein and Nagel 2006). A nonprofit organization known as the American Prairie Foundation has made significant progress pursuing such a model in central Montana (see www.americanprairie.org) and other groups are pursuing similar models (e.g., Great Plains Restoration Council). However, it is important to recognize that the most successful models in South Africa include the conservation of large charismatic species.

People like big furry things with teeth. In South Africa, "wildlife must pay its way." In other words, wildlife must generate revenue in order for it to be conserved. This is especially true for species that can cause conflicts with conventional commercial uses and human welfare. Five species that are especially effective at generating revenue are collectively known as the "big five." They are the African lion (*Panthera leo*), leopard (*Panthera pardus*), elephant (*Loxodonta africana*), buffalo (*Syncerus caffer*), and rhinoceros (actually two species, *Ceratotherium simum* and *Diceros bicornis*). The group was originally labeled the "big five" by hunters because of the danger involved in hunting them. Although hunting these and other species is still a revenue option, especially on private sites, most protected areas in South Africa have found that the "big five" and other wildlife can generate more revenue through nonconsumptive means such as ecotourism. Large predators such as lions and the African wild dog (*Lycaon pictus*) are often at the top of must-see lists for tourists.

The parallels between the wild dog in South Africa and the gray wolf (*Canis lupus*) in the U.S. warrants further discussion. Both predators were historically considered vermin and exterminated wherever possible. While wolves have been reintroduced only to wilderness-type areas in the U.S. (i.e., far away from people), in South Africa wild dogs have been reintroduced to many smaller parks and preserves where they have become flagship attractants for ecotourism. Besides enhancing the economic success of such protected areas, and contributing to the conservation of the species (they are endangered), the presence of wild dogs within small fenced preserves has changed the perspectives and attitudes of lay people. Whereas the species used to be reviled, it is now appreciated and valued. This cultural shift likely enhances conservation in general.

Lindsey et al. (2007) found that management for charismatic species, such as large predators, often aligns with biodiversity objectives, and therefore the charismatic megafauna of South Africa serve as flagship species. Lindsey et al. (2007) also found that visitors returning to parks subsequently became more interested in biological diversity and focused more on the less high-profile species, suggesting that large charismatic species can foster a deeper appreciation and understanding of nature. Kruger (2005) evaluated case studies from the scientific literature and concluded that ecotourism associated with flagship species was typically sustainable whereas those

sites that did not have charismatic species were less likely to be sustainable.

Wolves, bears (*Ursus* spp.), mountain lions (*Felis concolor*) and a few other North American carnivores fit the definition of charismatic megafauna. Of these, wolves are most similar to the African carnivores in that their presence can generate ecotourism and economic development (Duffield et al. 2006). However, no one has tried restoring wolves to small fenced sites for purposes of revenue generation (or for any purpose) similar to what is done with lions, wild dogs, and other large carnivores in South Africa.

Fences can conserve wildlife. Fences are occasionally used to contain wildlife within protected areas in the U.S. For example, all of the protected areas in the northern Great Plains with bison (*Bison bison*) are fenced. Likewise, fences have been constructed in Hawaiian parks to keep exotic species out. However, there is still a great reluctance in the U.S. to construct fences for purposes of conserving wildlife in protected areas. We acknowledge that there are ecological, ethical, aesthetic, and monetary issues associated with fences, yet the use of fences is one reason why South African protected areas are more successful in conserving the full assemblage of native species and biological diversity. Fences contain and conserve species (e.g., lion, elephant) that would not otherwise be tolerated by neighbors (they also preserve wildlife by keeping poachers out of protected areas). Arguably, the larger the fenced area the less significant the ecological, ethical, and aesthetic issues become. The cost to establish and maintain fences can be considerable, yet in South Africa the benefits still outweigh those costs. For example, all of Kruger National Park (nearly 6 million acres) has been fenced since 1976. Madikwe Game Reserve has 90 miles of fence around its boundary to prevent elephants and large predators from impacting neighbors (Figure 1). These fences are remarkably successful in

Figure 1. Boundary fence at Madikwe Game Reserve in South Africa. Photo courtesy of Daniel Licht.

their ability to manage conflicts. Without them, too many conflicts would develop, and therefore conservation opportunities would be lost. We believe that fences, including fences to contain predators, should be given due consideration in the establishment and management of protected areas in the U.S.

Small populations are okay. In small protected areas, managers must often choose between supporting a small (and perhaps unviable) population or no population at all. In the U.S., managers generally choose the latter. Reintroduction and management of small populations of wildlife in NPS units is currently discouraged by agency policies (National Park Service 2006). Specifically, the policies state that the National Park Service

> will strive to restore extirpated native plant and animal species to parks whenever … adequate habitat to support the species either exists or can reasonably be restored in the park and … once a natural population level is achieved, the population can be self perpetuating.

The requirement that a population be "self perpetuating" in order for it to be reintroduced profoundly limits the ability of NPS units to restore the full suite of native species and natural processes. Of the 270+ parks in the United States with significant natural resources, probably less than 10 can claim to support all of the indigenous large fauna, and all of those are extremely large (e.g., Yellowstone National Park) or situated within or adjacent to large natural areas. This self-imposed policy of reintroducing species only when they can be "self perpetuating" means that many important native species are absent from parks in North America (see Landry et al. 2001).

In contrast, protected areas in South Africa have no such policies or paradigms requiring a wildlife population to be self perpetuating. Many of the protected areas in South Africa contain predator and prey populations that number fewer than 50 individuals, and in some cases, fewer than 10 individuals (Licht et al. 2008). Some public and private reserves are so small that they can support only one pride of lions. The Makalali Conservancy provides a good case study. In 1994, a single lioness and 4 cubs were introduced into the fenced 34,580-acre site (Druce et al. 2004). Since then, more than 30 lions have been produced, with many surplus individuals being translocated elsewhere because the carrying capacity in the park had been reached. Obviously, small populations require a hands-on approach and there are additional fiscal and management challenges. Yet as a general statement, South Africa protected areas have decided that those costs are outweighed by the economic, ecological, and recreational benefits.

Active management and intervention is generally counter to current NPS policies and attitudes. Yet a hands-off approach for purposes of "naturalness," as promoted by NPS, sometimes necessitates more intervention than the South Africa approach. For example, several NPS units support populations of bison and elk (*Cervus elaphus*). In the absence of large predators the agency must cull the herds to keep them within park objectives. This intervention can include lethal control, live-trapping and translocation, and/or the use of contraceptives for hundreds of animals. In contrast, the South Africa approach is to manage a small population of top-level predators.

We believe that small-but-important-populations deserve greater consideration in U.S. parks. The Wildlife Society (1991:8) recognized the need and potential for reintroducing small populations of wildlife such as wolves: "if national parks and other protected areas cannot provide large enough areas for self-perpetuating populations of wolves, systematic and periodic reintroduction of wolves from outside may ensure population survival." The same paper stated that populations which are "ecologically functional" may be a more suitable goal in some cases than those that are "minimally viable." Even small populations of wolves may, in addition to having economic benefits, provide ecosystem services such as limiting the spread of disease, providing carrion, and fostering genetic fitness of prey species (Licht, in prep.).

Multiple parks can be used like a functional metapopulation. The downside to conserving small-but-important-populations in closed systems (e.g., a fenced park) is that managers must replenish populations when they are extirpated, manipulate animals to preserve genetic fitness, maintain desired sex and age ratios, manage for disease, and intervene for other needs. Yet a hands-on approach is the norm in South Africa and the monetary costs of such actions are outweighed by the economic and ecological benefits of having the species present, even in small numbers. To help conserve these small populations, the numerous noncontiguous natural areas in South Africa essentially manage some of their wildlife as subpopulations of multi-park metapopulations. If a park needs new animals due to local extirpation, genetic concerns, sex ratio imbalances, or other needs, they translocate animals between units. With the exception of imperiled species (e.g., wild dog; see Gusset et al. 2006) this multi-park approach is implemented with minimal government oversight.

In contrast, National Park Service units in the United States have a high level of central planning and authority, yet virtually no between-park exchanges of animals or metapopulation approach to conservation, even for species such as bison that could benefit from translocations (Halbert et al. 2006). This reluctance to use a metapopulation approach is likely due in part to the hands-off culture of the NPS. We acknowledge that non-intervention is preferable, and is especially warranted in larger areas such as Yellowstone National Park. However, on smaller sites a hands-off approach means that some species simply will not exist, that inbreeding will occur, and that natural processes such as predation and natural selection will not occur.

Animal demographics are important. Wildlife culling strategies in natural areas typically focus on population abundance. This is understandable since the primary objective of culling is usually to reduce overabundant populations (see McShea et al. 1997). Consideration of other demographic variables, i.e., sex and age composition, are usually considered only within the context of their effects on population recruitment, genetics, and future population trends. Only rarely do managers give strong consideration to the importance of herd age and sex structure as it relates to behavior and ecological processes. Lessons from South Africa show why herd composition is important.

Between 1981 and 1993, 82 elephants were relocated to Pilanesberg National Park (as part of a massive restocking program for the recently established park similar to that

described above for Madikwe Game Reserve). The elephant restocking did not include mature bulls due in part to the difficulty of transporting them. Young bull elephants, once sexually mature, became unruly and subsequently killed more than 40 white rhinoceros (Slotow et al. 2000). In this case, the absence of mature bulls and the social hierarchy they maintain was the reason that the young elephants exhibited abnormal behaviors. The killing of rhinoceros ceased after six older male elephants were introduced into the park (Slotow et al. 2000). This sequence of events repeated itself at Hluhluwe-Umfolozi Park in eastern South Africa.

There is evidence that the behavioral patterns of some North American game populations are changing due to unnatural demographics (e.g., hunters disproportionately selecting mature males; Noyes et al. 1996). The Pilanesburg example and our knowledge of animal behavior suggest that the conservation of biological diversity and functioning of natural systems requires that natural area managers follow National Park Service policies that call for the conservation of natural demographics (National Park Service 2006). Some progress is being made. For example, Millspaugh et al. (2005) recently completed a study on natural bison and elk demographics in the northern Great Plains and developed tools to assess the demographic responses of various culling strategies. Their results demonstrated that some culling strategies adopted by NPS can significantly alter the age structure of bison and elk populations. We believe that natural age and sex structures be given full consideration in wildlife management in U.S. parks.

Artificial water can be bad. Kruger National Park has approximately 36 species of large animals. This suite of megafauna richness likely results in narrow habitat niches and specialized adaptations for some species. Mills and Funston (2003) describe a case where establishment of artificial water—intended to promote wildlife—led to a dramatic decline in an ungulate species. Following the introduction of artificial water points, zebra (*Equus burchelli*) and wildebeest (*Connochaetes taurinus*, a water-dependent species) moved into areas occupied by roan antelope (*Hippotragus equinus*, a more water-independent species), which resulted in increased competition for forage. However, increased competition may not have been the primary factor in the subsequent decline of the roan since there was little change in calf natality; however, there was an increase in adult mortality. Researchers studying the decline of the roan suggested that the anthropogenic water, which enticed zebra and wildebeest to the area, also increased lion numbers. Lion predation was the proximate cause of the roan's decline; however, the provision of the artificial water was the ultimate cause.

Some NPS units historically developed water sources for wildlife purposes, perhaps to the detriment of biological diversity. For example, some units developed artificial water to distribute grazing pressure, thereby creating a more uniform use of forage. However, such practices reduce the natural spatial heterogeneity of grazing which is important for conserving the full suite of grassland species (Fuhlendorf and Engle 2001). In some cases the establishment and maintenance of artificial water within National Park Service units is driven by other agencies' missions, the imperiled status of some species, personal philosophies, and politics (Broyles 1995). But based on incidents from South Africa (see also Owen-

Smith et al. 2006), and from biodiversity principles and concepts, it seems prudent to avoid artificial water sources unless: (1) it is absolutely necessary, (2) there is a good understanding of potential advantages and disadvantages, (3) there is acceptance of those potential impacts, and, (4) a monitoring program is undertaken to study the potential impacts.

Summary

According to Phillips (2003), protected area management is entering a new paradigm. It appears that countries such as South Africa are a part of this new paradigm, whereas the U.S. still operates under the old paradigm. For example, Phillips (2003) stated that in the old paradigm one of the objectives for protected areas was to have land "set aside for conservation," whereas in the new paradigm an alternative objective is to have the protected area run "with social and economic objectives." Likewise, under the old paradigm protected areas were "run by a central government," whereas in the new paradigm a protected area may be "run by many partners." Lastly, under the old paradigm parks were managed as "islands," whereas under the new paradigm they are part of a network or system (Phillips 2003). Assigning the U.S. to the old paradigm does not denigrate or belittle past and current efforts. And as Phillips observed, the new paradigm is not without its challenges and criticisms.

The U.S. National Park Service and the conservation community would benefit from an understanding and awareness of lessons from other countries and by using these lessons to reassess policies and operations. The question for the NPS becomes: should hands-off "naturalness" come at the expense of biological diversity and natural processes? We don't believe so. Based on lessons from South Africa we recommend that the NPS and conservation agencies and organizations in the U.S.:

- More strongly consider and use the ecotourism and economic potential of wildlife to develop and protect natural areas;
- Recognize that large animals, including large predators, have high ecotourism and conservation value even when abundance might be low;
- More strongly consider the use of fences as a tool in conserving the full suite of native species, including large predators;
- Revise policies so that small-but-important-populations of wildlife can be reintroduced and conserved when conditions and objectives warrant;
- Strongly consider managing parks in a metapopulation context and translocate individuals between closed populations to improve genetic vigor and achieve other desirable attributes;
- Manage for natural demographics, including sex and age ratios whenever possible; and
- Refrain from the establishment and maintenance of artificial water sources unless absolutely necessary.

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The Economic Importance of Extending Habitat Protection Beyond Park Boundaries: A Case Study from Costa Rica

Barry Allen, Lee Lines, and Debra Hamilton

> Where the northeast trade winds meet the continental divide in Costa Rica's Cordillera de Tilaran there grows a luxuriant forest, often cloaked in clouds and blowing mist. Here, moss covered trunks strain against the weight of epiphytes in profusion, as bromeliads, ferns and orchids festoon from a vine tangled canopy. This is the Monteverde Cloud Forest Preserve (Ross 1992).

So begins the Cornell Lab of Ornithology's testament to the biodiversity of Monteverde, *Voices of the Cloud Forest*, thirty-three minutes of bird calls, frog tinks, monkey howls, and rain—lots of rain. Monteverde is deservedly well known and admired as a model for conservation. Its extensive network of public and private protected areas cover more than 70,000 acres, or 28,000 ha (Harvey et al. 2000), supporting more than 650 species of butterflies (Stevenson and Haber 2000), over 100 species of mammals, and approximately 426 species of birds (Young and McDonald 2000). The diversity of flora is equally impressive, with over 3,000 plant species, including 500 species of orchids and 870 species of epiphytes (Haber 2000).

Costa Rica is well known as one of the world's most important centers of biological diversity; and Monteverde is one of the most diverse and important environments in the country. A key to this diversity is that the Monteverde zone encompasses seven different life zones (Holdridge 1967) found on both the Atlantic and Pacific slopes of the continental divide. Species turnover is high (Harvey et al. 2000) because each life zone has a fairly distinct composition of flora and fauna.

It is common knowledge that simply delineating and protecting a conservation area, be it a national park, wildlife refuge, or sanctuary, is normally not enough to ensure the survival of the numerous species of flora and fauna that utilize the habitat. Such is the case in Monteverde, an area renowned for its contributions to the study of tropical ecology. Even in Monteverde, conservation efforts have not succeeded in providing enough critical protection for many organisms.

While the Atlantic slope habitats are well protected, with over 26,000 ha (or >90% of the total conserved area in Monteverde), the Pacific side has little protection (Powell and Bjork 1995). Many biologists in the region realize that the conservation

work in Monteverde is not complete and many Pacific slope species are in jeopardy.

Of particular concern are two threatened bird species, the resplendent quetzal *(Pharomacrus mocinno)* and three-wattled bellbird *(Procnias tricarunculata)*, both of which play an important role in the ecotourism economy of the Monteverde region. These species, among others, migrate up and down the mountain slopes following seasonal food sources in the various life zones (Powell and Bjork 1995). This makes the fundamental conservation of these species challenging. There has been a noted decline in population sizes of these birds due to the lack of protected Pacific slope habitat where they migrate during their post-reproductive season (Powell and Bjork 1985; Hamilton et al. 2000).

It is no exaggeration to say that people come from all over the world for the opportunity to see these particular species in the wild. If these birds did not exist, or were lost due to a lack of Pacific slope habitat, the economic consequences for the Monteverde area would be significant. Many studies document the ecological importance of buffering protected areas with additional habitat to ensure the well-being of organisms. In this study, we present an economic argument for the extension of habitat protection beyond the protected area boundaries in Monteverde.

Monteverde's economy is indeed based on ecotourism, but this is a relatively recent development (Baez 1996). In 1951, a group of American Quakers looking for a peaceful place to farm moved to a mountaintop in north-central Costa Rica. Shortly thereafter they set aside approximately one-third of the original tract as the Bosqueterno (Eternal Forest) to protect the water supply for their new cheese factory and dairying operation. These Quakers also brought along with them Monteverde's first chainsaw. It was in this community that George Powell, a biologist, and Wolf Guindon, one of the original Quaker settlers in Monteverde, spearheaded efforts that led to the creation of the Monteverde Cloud Forest Preserve.

Over the next few decades, visitation to the area transformed the primary focus of the economy from dairy farming to tourism (Echeverria et al. 1994). Local residents soon realized that it was much easier to work in ecotourism than to milk cows. As the numbers of visitors grew, so too did the number and diversity of "natural" attractions. Visitation to the Monteverde Cloud Forest Preserve alone has grown to 77,000 annual visitors (Friends of Monteverde Cloud Forest 2005). The resulting demand for hotels, restaurants, natural history guides, and other services has resulted in a standard of living for Monteverde's residents that is much higher than most other regions of Costa Rica.

In recent years, the prosperity of the Monteverde community has become increasingly threatened by a number of environmental problems, including water pollution, solid waste disposal, deforestation, and climate change. Of particular concern is the accelerated loss of Pacific slope habitat with the encroaching development and growth in worker housing for the ecotourism businesses. The Pacific slope habitat is essential to the survival of altitudinal migrants, especially quetzals and bellbirds, two of the major attractions for ecotourists visiting the region.

The altitudinal migration of both species involves seasons on both the

Atlantic and Pacific slopes of the continental divide, up to six months of the year on each side for the three-wattled bellbird (Powell and Bjork 1985; Hamilton et al. 2003). In the dry season, these birds follow Lauraceous fruiting trees upslope to the Monteverde area where more than 26,000 hectares of forest are protected within the privately run Monteverde Reserve Complex (Powell and Bjork 1995). It's here that these species nest and fledge their young.

It is along the Pacific slope and Guanacaste lowlands that these birds encounter an increasingly degraded and disturbed habitat. Guanacaste Province begins just below the boundary of the Monteverde Cloud Forest Preserve. Much of the province lies in the rain shadow of the Tilaran Mountains and is the principal locale for both the coffee and cattle industries in the region. These industries were well established long before conservation joined the list of national priorities in Costa Rica. Further downslope, the rain shadow forest gives way to tropical dry forest. Here, major government-sponsored agricultural development has created a landscape of cattle pasture, sugarcane, rice, and cotton (Edelman 1992). Today, the once-exuberant forests of Guanacaste, from the Pacific coastline to the cloud forest, are almost completely eliminated. As a result, the migrating quetzals and bellbirds are forced to crowd into a small number of remnant forest fragments (Hamilton et al. 2003). While this extreme localization is a boon to birdwatchers, it places the birds in an increasingly precarious situation. In this context, even the loss of a single large tree is significant.

Over the past decade, a number of conservation organizations have engaged in a campaign to restore these Pacific slope habitats through public and private efforts. These efforts include improved forest management, habitat acquisition, reforestation projects, and increased environmental service payments.

One of the major conservation challenges in Costa Rica (and elsewhere) is convincing policy-makers, as well as citizens, of the economic importance of biodiversity protection. The effort to place an economic value on individual species is myopic in many ways. Aldo Leopold (1949) may have said it best when stating that "by making conservation easy, we have made it trivial." That is, the economic arguments for conservation are trivial when compared to our moral obligations to the rest of creation. And yet—in the development context of Costa Rica—the legitimate desire for a better standard of living demands that conservation provide short-run economic benefits. Resolving this dilemma, in many ways, is what sustainable development is all about.

Our paper examines the direct economic benefit of habitat conservation to the Monteverde community by measuring the local economic importance of two bird species: the resplendent quetzal and three-wattled bellbird. To better understand the contribution of these two species to the Monteverde economy, we conducted a personal-intercept survey (in either Spanish or English) of 515 visitors to the Monteverde region under the auspices of the Monteverde Camera de Turismo (the local tourism Chamber of Commerce). The survey was conducted at three "conservation-neutral" locations between October 2004 and June 2005.

Surveys were conducted at various times of the year to account for the seasonal nature of tourism in Monteverde. Budowski (1992) has identified two separate tourist

markets in Costa Rica. The dry-season market (November–May) attracts older, more affluent visitors. These tourists tend to stay for short periods of time, spending significant amounts of money each day. The wet- or "green-"season (June–October) visitors tend to be younger and less affluent, staying for a longer period of time but spending less money each day. Data for each market were collected and analyzed both separately and collectively.

Respondents were asked a series of questions to establish their reasons for visiting Monteverde, length of stay, daily economic expenditures in the area, and interest in the threatened birds. These data were combined with the estimate of yearly visitation to the Monteverde area provided by the Monteverde Camera de Turismo to arrive at the total economic value of tourism in the Monteverde area. Finally, this figure was multiplied by the percentage of visitors stating in the survey that they would not visit Monteverde if the bellbird and quetzal became extinct.

It is important to point out that our project measures only the direct tourism benefits associated with the two birds and does not attempt to measure the indirect and non-market ecosystem services that the species and their habitats may provide. It does not capture other non-consumptive values, such as option values and existence values, that accrue to Monteverde area residents and others as well.

Responses to the survey indicate that the average length of stay for visitors to Monteverde is 2.54 days and the average total visit expenditure per person is $464. The Monteverde Camera de Turismo estimates the total number of yearly visitors to the Monteverde area at 135,000 (Molina, personal communication). Therefore, the total annual economic value of tourism to the Monteverde area is estimated at $62,640,000.

To determine the economic importance of the resplendent quetzal and three-wattled bellbird, we asked visitors whether they would still visit Monteverde if the bellbird and quetzal became extinct. At least 28% of our survey respondents indicated that they would not visit Monteverde in the absence of the birds. This cohort of dedicated birders is the key link between the protection of Pacific slope habitats and the Monteverde economy. Applying this figure of 28% to the total annual value of tourism in the Monteverde area ($62,640,000) yields a figure of $17,539,200. This number represents the direct annual economic contribution of the quetzal and bellbird to the Monteverde economy.

Demonstrating the value of these birds and their Pacific slope habitat should play an important role in furthering conservation efforts in the region. The intended audience for this study includes environmental activists, policy-makers, and local citizens (especially farmers, with land still in forest cover). A number of groups, most notably the Fundación Conservacionista Costarricense (the Costa Rican Conservation Foundation) are actively working to establish a biological corridor on the Pacific slope to connect the Monteverde Reserve Complex to other protected areas downslope. Clarifying the links between habitat conservation and economic development provides a strong foundation for these efforts.

Conclusions

There are clear links between the economy and the integrity of the natural environment; however, for many people, these

links remain an abstraction. This paper seeks to make these links tangible to people; in particular, the to decision-makers of Monteverde. The conclusions of this study are as follows:

- Despite the growth of other "attractions" in the Monteverde area, the resplendent quetzal and three-wattled bellbird still play an important role in attracting visitors to Monteverde.
- Efforts to expand the Monteverde Reserve Complex are clearly justifiable, both in ecological and economic terms. This expansion should be focused on protecting habitat on the Pacific slope.
- In all likelihood, there is a "tipping point" at which the population of a given species becomes so small, and the possibility of seeing an individual of that species so remote, that the species (despite its nominal presence) is no longer a significant factor in visitor decision-making.
- Given the visibility and prominence of conservation efforts in Monteverde, a major decline in the presence of quetzals and bellbirds could undermine efforts to find a balance between conservation and economic development in other tropical environments.

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Naturalness and Beyond: Protected Area Stewardship in an Era of Global Environmental Change

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Introduction

FOR MOST LARGE U.S. PARKS AND WILDERNESS AREAS, enabling legislation and management policy call for preservation of these protected areas unimpaired in perpetuity. Central to the notions of protection, preservation, and unimpairment has been the concept of maintaining "naturalness," a condition imagined by many to persist over time in the absence of human intervention. As will be discussed below in more detail, the goal of naturalness has been codified in legislation and protected area policy and built into agency culture. For much of the 20th century, the adequacy of naturalness as the guiding concept for stewardship of protected areas remained largely unchallenged. Scientists, managers, and conservationists assumed that natural conditions could be preserved and that doing so would assure long-term conservation of biodiversity and ecosystems within protected area boundaries.

In recent decades, however, people have begun to question the feasibility of maintaining natural conditions in protected areas. Growing awareness of Native American influence and recognition of the dynamics of natural systems raise questions about what naturalness even is. And with increasing recognition of the potential effects of climate change, there is a dawning awareness that it may not even be desirable to maintain naturalness. Is the concept of naturalness still sufficient to guide protected area stewardship? Should it be reinterpreted or more precisely defined? Are there other concepts that should complement it or take its place (Box 1)?

In April 2007 we convened a small workshop to explore this question. In this paper, we share some of what was discussed in that workshop. We examine the various meanings of naturalness and why it is increasingly problematic (as commonly defined) as a central goal for protected area management. We detail the case for and against human intervention in ecosystem processes. We explore how naturalness might be redefined or reinterpreted, and how concepts such as ecological integrity

and resilience might supplement or replace it. We suggest the need for a pluralistic, adaptive, and flexible approach to protected area management. We conclude by describing some of the ways protected area managers might move forward given current conditions and uncertainties about the future.

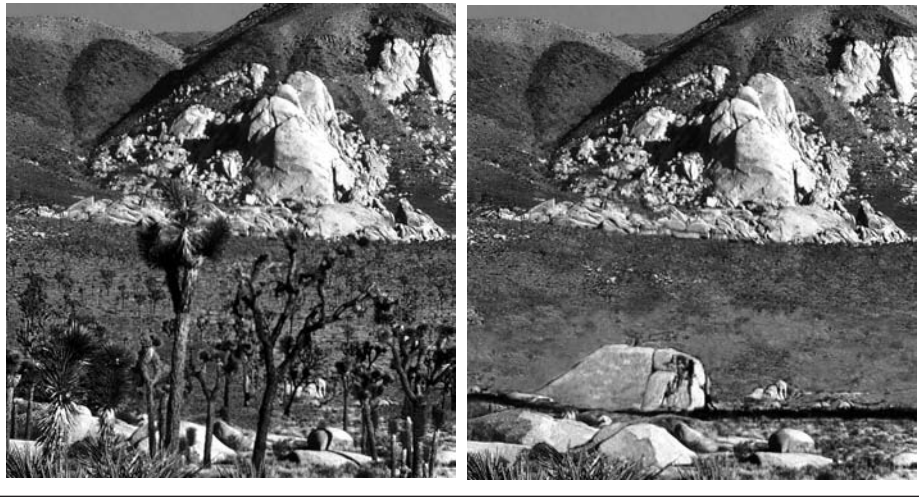
In a world changing as rapidly as ours, clear articulation of goals and objectives is

Box 1. Would a Joshua Tree National Park without Joshua trees be natural?

In a recent attempt to predict vegetation response to future climate change, Cole et al. (2005) reported that Joshua trees may no longer be able to persist within Joshua Tree National Park. While such a prediction is based on numerous untestable assumptions, there is a real chance that Joshua Tree National Park will lose its icon and signature botanical element. This provides a dramatic example of the issues we are raising in this paper. How should the National Park Service respond to this? How does this influence their ecosystem stewardship goals and objectives within park boundaries? And does the National Park Service have an obligation to help secure the future persistence of Joshua trees on lands outside park boundaries?

The primary premise of our article is that the concept of naturalness—which traditionally has guided ecosystem stewardship in parks—is not very helpful in answering such questions. Which of the available stewardship options is more natural: (1) maintaining Joshua trees in the park through artificial means, (2) allowing Joshua trees to disappear from the park, despite the likelihood that this loss reflects modern technological human influence, or (3) actively assisting the migration of Joshua trees to more northerly locations where they are more likely to persist? Decisions will reflect descriptors of park purpose other than naturalness—biodiversity preservation or nostalgia (maintaining park icons) perhaps—descriptors that currently are not clearly articulated in park policy.

Joshua Tree National Park landscapes would look very different without any Joshua trees. Photo courtesy of Richard Frear; Joshua trees "removed" by Suzanne Schwartz.



vital to preservation of park values. The typical response to rapid change is to take action, but action without a clear notion of desired outcomes can be more harmful than inaction. We hope that this paper will catalyze healthy debate about the purposes of parks and wilderness areas now that we recognize how rapidly everything is changing—debate that will lead to clarity sufficient to guide action.

Managing for naturalness

The centrality of naturalness as the guiding principle behind management is clear in the management policies developed to implement the National Park Service Act (1916). The Organic Act declared that the fundamental purpose of the parks is "to conserve the scenery and the natural and historic objects and the wild life therein … unimpaired for the enjoyment of future generations." The policies developed to meet this purpose, from Secretary of Interior Franklin Lane's letter to Director Stephen T. Mather (Sellars 1997), stated that "every activity of the Service is subordinate to duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state." More recent policies state that national parks will preserve "components and processes in their natural condition," defining "natural condition" as "the condition of resources that would occur in the absence of human dominance over the landscape" (National Park Service 2006). The Wilderness Act (1964) similarly defines wilderness (among other things) as an area "protected and managed so as to preserve its natural conditions." But what does it mean to preserve natural conditions and manage for naturalness?

One sense of the word "natural" refers to everything other than the supernatural (Rolston 2001), so we need a more restricted definition when thinking about park and wilderness stewardship. Most commonly the natural world has been contrasted with the human-dominated world. In this sense, two related characteristics of naturalness are a lack of human effect on ecosystems and a lack of human control of ecosystems (Table 1). Interwoven with this has been the notion that natural ecosystems are stable, self-regulating, and equilibrial. Another commonly perceived characteristic of naturalness, then, has been a high degree of historical fidelity (Higgs 2003): natural ecosystems should appear and function much as they did in the past. This has led protected area managers to use past conditions as benchmarks for the future.

These meanings reflect scientific and societal assumptions about ecosystems that persisted for much of the twentieth century. The idea that North American ecosystems had been stable for long periods of time prior to European settlement dominated conservation discourse. Native Americans were believed to have had little, if any, role in shaping these ecosystems. Protected areas were assumed to be large enough to sustain themselves over time, so it seemed possible to preserve the ecosystems and species currently occupying protected areas simply by avoiding commercial exploitation and development. Little intervention in the biological and physical processes of protected area ecosystems should be necessary. Maintaining naturalness would simultane-

Table 1. Common traditional meanings of naturalness.

- Not affected by humans
- Not controlled by humans
- Stable, self-regulating, and equilibrial
- High degree of historical fidelity

ously meet such diverse goals as conserving biodiversity, maintaining vignettes of primitive America (Leopold et al. 1963) by keeping ecosystems relatively unchanged over time, and respecting nature's autonomy (Ridder 2007) by avoiding intervention.

Naturalness challenged

The adequacy of naturalness as the guiding concept for park and wilderness stewardship has been challenged as protected area goals have evolved, scientific knowledge has improved, and the sphere of human influence has gone global. Initially, national parks were largely about scenery and spectacle (Graber 1983). Management emphasis revolved around nostalgia—keeping things the way they were—and aesthetics. Managers were not reluctant to actively manage for this purpose—from feeding bears to shooting coyotes and wolves. Scenery, spectacle, and aesthetics remain worthwhile park pursuits. But over the past century the list of park values and purposes has grown.

The Leopold Report (Leopold et al. 1963) called for active management (restoring or maintaining disturbance and successional processes) so that "the maintenance of naturalness shall prevail." Management policies also emphasize intervening as little as possible in biological and physical processes (National Park Service 2006), reflecting new appreciation for a value that Ridder (2007) calls respecting nature's autonomy. More profoundly, the conservation of biological diversity has become a core goal for parks and wilderness, with the definition of biological diversity expanding to include preservation of genetic diversity, species, plant and animal communities, the fundamental physical and biological processes which organisms depend on and which structure communities, as well as rates of natural change (National Park Service 2006).

With increased complexity in park values and purposes comes increased conflict between those values and purposes. Managing for some of the meanings of naturalness negate other meanings. In contrast to mid-20th-century beliefs, we know that natural ecosystems are highly dynamic (Wu and Loucks 1995). Therefore, if we are to allow for the free play of natural processes, including evolutionary change, we cannot expect future park landscapes to look like they did in the past (White and Bratton 1980). To some degree we must choose between aesthetic, nostalgic park values and certain ecological values. We have learned that many so-called natural park and wilderness ecosystems in North America have been profoundly affected by indigenous peoples, particularly through burning and hunting (Kay 1995; Mann 2005; Pyne 1997). Past human influence has not been profound everywhere (Vale 2002). However, in many parks and wildernesses, if we are to conserve native biodiversity, it will be important to maintain some past human influences. We must give up the notion of natural park ecosystems as being unaffected by humans.

We have also learned that even the most remote park and wilderness ecosystems already have been and will continue to be affected substantially by modern human activities (Cole and Landres 1996). Again, the magnitude of influence—past and future—has been variable. But in many places, conservation of native biodiversity will compel us to actively manage ecosystems, compromising our interest in respecting nature's autonomy by avoiding intervention.

In short, it is increasingly clear that naturalness is no longer the umbrella under which all protected area values comfortably sit. We must choose among protected area values and among the traditional meanings of naturalness. In particular, we must confront the dilemma of intervention. Then we must articulate desired future conditions for park ecosystems in terms that carry greater clarity and specificity than traditional notions of naturalness (Figure 1).

The dilemma of intervention

Given that human activities are altering park and wilderness ecosystems, the first decision protected area managers face is whether or not (or under what circumstances) to intervene through active management. Much of what we call intervention and active management involves ecological restoration—"the process of assisting the recovery of ecosystems that have been damaged, degraded or destroyed" (SERI 2006). We use the more generic term "intervention" to include any prescribed course of action that intentionally alters ecosystem trajectories and to avoid the connotation of a return to past conditions. In many cases, redirection might be a better term than restoration. Interventions range from lighting fires to culling ungulate populations, from thinning forests to assisted migration of individuals or species better-adapted to changing conditions. Some are one-time actions, such as introducing a species and stepping back to see if it can thrive in a new

Figure 1. Landscapes dominated by open-grown, old-growth pines, like these in Kings Canyon National Park, have been characterized as aesthetic, nostalgic, anthropogenically structured, and high in ecological integrity. Are such landscapes natural? Do we increase or decrease naturalness by actively restoring forest structure using management ignitions and/or mechanical thinning? Is a forest thinned by wildfire more natural than one that is thinned mechanically? Photo courtesy of David Parsons.

site. Others are ongoing, such as liming water bodies to mitigate the effects of acid deposition (Figure 2). Some interventions are small in scale (e.g., actively maintaining a ten-acre sequoia or Joshua tree forest at a location no longer ideal for the species) while others might be large in scale (e.g., burning tens of thousands of acres each year).

In making decisions about whether or not to intervene, the concept of naturalness offers little guidance. Since naturalness implies both a lack of human effect and a lack of human control, one of the meanings of naturalness will be violated whatever is done—or not done (Sydoriak et al. 2001). Decisions must be made using some other guidance, most often a choice between the values of preserving biodiversity and respecting nature's autonomy—to use Ridder's (2007) terminology. Protected area managers can deliberately intervene in ecosystems to restore them, to maintain current systems (resist change), to conserve specific aspects of biodiversity, or assist in their transformation to perhaps better-adapted systems (for example, in response to climate change). Box 2 provides an example of intervention for the primary purpose of conserving regional biodiversity (and recreational opportunities) at the expense of pre-European conditions.

Figure 2. In the Saint Mary's Wilderness, Virginia, atmospheric pollution has lowered pH so much that native invertebrate and fish populations are substantially reduced. In response, a helicopter has been used to dump limestone sand adjacent to creeks. This treatment, projected to be repeated every 5–8 years, raised pH levels as well as taxa richness and the population of native invertebrates and fishes. Photo courtesy of Steven Brown.

Box 2. Assisted migration into designated wilderness: Biodiversity conservation trumps naturalness

Recently, in the Bob Marshall Wilderness, Montana, stewardship decisions have been made that some might consider inconsistent with wilderness. These decisions condone assisted migration—helping species relocate to places where they are more likely to persist—and they place more importance on species conservation than on naturalness. The decisions pertain to management of fish populations in about 20 lakes in the Bob Marshall Wilderness that historically were fishless but that have been stocked with non-native trout for many decades. The plan—approved but not yet implemented—is to remove all non-native trout from these lakes. Then, rather than leave the lakes fishless as they originally were, they will be stocked with genetically pure westslope cutthroat trout. These lakes, which fish are unable to migrate to themselves, offer a refuge from other fish that hybridize with westslope cutthroat and pollute them genetically. Wilderness provides the most inviolate refuge and, therefore, is considered necessary to the preservation of this species, even though the requisite action compromises naturalness.

Historically fishless lakes in the Bob Marshall Wilderness, Montana, will be used as refuges to preserve genetically pure westslope cutthroat trout. Photo courtesy of David Cole.

This situation is complicated by states' rights issues. This intervention, pushed by the Montana Fish, Wildlife and Parks Department, would almost certainly not have been proposed if the species at risk were not a game species. Nevertheless, it illustrates the potential to give precedence to a conservation goal other than preserving natural conditions, even in wilderness. It also illustrates the potential to use techniques like assisted migration, despite the degree to which they seem like "playing God."

Or managers can choose not to intervene and allow ecosystems to adapt and change as they will, absent human intention. This, of course, is also a deliberate and intentional management decision, with very different outcomes than active management. Some of the language in the Wilderness Act—where wilderness is defined as a place "where the earth and its community of life are untrammeled by man"—argues against intervention. To be untrammeled, a place should not be intentionally controlled or manipulated for any purpose, even the conservation of biodiversity (Cole 2000). National Park Service policy is more amenable to intervention, stating that intervention in natural biological or physical processes will be the exception not the rule, but that it is appropriate "to restore ecosystem functioning that has been disrupted by

past or ongoing human activities" (National Park Service 2006).

Workshop participants agreed that protected area managers will need to operate across this entire spectrum from non-intervention to active transformation. There was general agreement that it was best to intervene only when necessary and that the threshold for intervention should be particularly high in wilderness. Wilderness lands should be managed with a light touch—with restraint and humility. They have particular importance as "controls" within a landscape of more actively managed landscapes. But there were divergent opinions about how widespread non-intervention strategies should be and the criteria for deciding whether or not to intervene. The concept of naturalness does not provide clarity regarding criteria and thresholds for intervention, so better guidance must be developed. We agreed that the need for intervention increases:

- As protected area size decreases (small protected areas are less buffered from human influence);
- Where pre-settlement influence was substantial and as current human influence increases (adverse effects are pronounced);
- As the social value of attributes increases (more valued entities are at risk); and
- As the scale of stressors increases (impacts are widespread, as in fire suppression or climate change).

However, we also noted that although interventions may be particularly beneficial where stressors are operating at large scales and affecting highly valued attributes, interventions in such situations are also particularly risky. The costs of failure (like the benefits of success) are high because the values at risk are so large and the effects are so widespread.

Desired outcomes of interventions

Decisions to intervene in park and wilderness ecosystems should be based on goals (White and Bratton 1980) and the desired outcomes of interventions should be made specific in the form of operational objectives and targets that identify "what should be preserved" (which elements and processes) and "in what state" (Christensen 1988). NPS *Management Policies* (2006) state that decisions to intervene must "be based on clearly articulated, well-supported management objectives." This is where the ambiguities and divergent definitions of naturalness are most problematic—where the guidance it provides is particularly insufficient. Objectives and outcomes need to be knowable, attainable, and desirable. By most definitions, naturalness has few to none of these attributes.

What is natural is not knowable because ecosystems are dynamic (White and Bratton 1980). To set intervention targets, change must be parsed into natural change and unnatural change. The concept of historical or natural variability has become a popular means of accounting for temporal variability when developing target conditions for managed lands (Landres et al. 1999). For parks and wilderness, the implication is that restoration is likely to be required if current conditions lie far outside the range of natural variability (Franklin and Aplet 2002). But how far is too far?

Paleoecologists have simultaneously advocated that historical data inform management but cautioned that such data should not be used as targets for the future. Ecosystems are unique in time and space,

so it is seldom possible or desirable to return them very precisely to a former state (Gillson and Willis 2004). Millar and Brubaker (2006:331) argue that:

> Predisturbance or pre-Euro-American impact conditions are used routinely as reference models or desired targets for ecological restoration. This assumes, however, that climate hasn't changed between the historic target time and the present and that human influence hasn't confounded historic conditions. These assumptions are tenuous, and the likelihood of their validity decreases with time between the historic target and present.... Long-term confounding of human with nonhuman influences challenges use of historic conditions as models for pristine or natural conditions in restoration.

Long-term historical data may be more useful in determining where thresholds have been exceeded than in defining the desired outcome of a management intervention (Willis and Birks 2006).

Natural conditions are not attainable given the ubiquity of human impact. Climate change provides the best example, but the prevalence of invasive species provides another. Future climates that have no analogue will be reflected in no-analogue ecosystems (Fox 2007). We can reinterpret or redefine naturalness to accept substantial ongoing human impact, but what guidance is there for decisions about which types to accept and how much is too much? NPS *Management Policies* (2006) direct managers to "maintain the closest approximation of the natural condition when a truly natural system is no longer attainable." But this traditional approach is problematic because past and even current systems may be unstable under future climatic conditions (Harris et al. 2006). Near-natural conditions may be undesirable and attempting to restore them may be counterproductive. In light of the pervasive global changes that are occurring, Stephenson (2005) suggests that "the NPS and similar wilderness management agencies need to reexamine their missions"—perhaps focusing on "maintaining native biodiversity, even if community structure and composition are no longer natural."

Beyond naturalness

Workshop participants generally agreed about these concerns with the meanings of naturalness and that varied interpretations of the concept can lead to inconsistent and, possibly, inappropriate management. However, opinions about how to respond varied. Some participants advocated reinterpretation of the term "naturalness" to reflect new ecological understanding and the realities of global change. While they recognized a need for more precise and consistent definition (Landres et al. 1998), they felt that naturalness continues to provide a useful goal for park and wilderness management—an ideal to strive for—a constraint to the range of interventions that might be attempted in the absence of a foundation in historical fidelity. They valued the emphasis that naturalness places on conservation of native, indigenous elements and processes and on systems that are dominated by nature as opposed to humans. Other participants felt the concept was fatally flawed and should be replaced. Whether a supplement to or a replacement for naturalness, there was widespread agreement about a need for conceptual guidance beyond the notions of historical

fidelity and a nature-dominated world that are inherent to the concept of naturalness. Two concepts explored during the workshop were ecological integrity and resilience.

Ecological integrity

The concept of ecological integrity has been advocated as a goal for ecosystem stewardship for decades (e.g., Frey 1975). Ecological integrity implies wholeness, completeness—the presence of all appropriate elements and processes operating at appropriate rates (Angermeier and Karr 1994). Ecological integrity appears to be a desirable attribute for park and wilderness ecosystems and seems largely consistent with the implications of natural ecosystems. Indeed, some have defined integrity as the ability to support a community of organisms "comparable to that of natural habitat of the region" (Karr and Dudley 1981). Others reject such a simple definition, suggesting that integrity is context-dependent, varying with scale, with hierarchy, and particularly with societal values (Kay 1993).

In 1988, the Canada National Parks Act replaced the notion of "natural" as a management endpoint with the concept of ecological integrity, legally defined as "a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes." With ecological integrity as the goal, Parks Canada emphasizes retention of native ecosystem components. Biodiversity, ecosystem function, and stressors are carefully monitored. One of the key implications is that active management will often be required to maintain or restore ecological integrity and to keep park ecosystems within threshold conditions. Thresholds are set through consideration of reference ecosystems, standards and guidelines, historical reconstructions, biological patterns, trends, and expert opinion (Woodley 1993; Parks Canada 2005).

Under the guidance of ecological integrity, Canadian park managers do not attempt to eliminate every form of human disturbance. Rather, park managers work to mimic some of the effects of aboriginal populations where ecosystems coevolved with aboriginal management. Moreover, since specific landscapes can support many alternative ecosystem states while retaining ecological integrity, Parks Canada must determine preferred states to provide clear guidance and direction for interventions. Every five years, Parks Canada requires the preparation of state of park reports for each national park, complete with detailed indicators, measures, thresholds, and targets for management. These feed into park management plans, which set an ecological vision and the required management actions for the park (Parks Canada 2005).

Conserving biodiversity is a key feature of ecological integrity. Protected areas that adopt ecological integrity as a goal might maintain native biodiversity, even if community structure and composition is no longer natural. Species distributions and abundances might fall outside the range of historic variability. Management interventions might be ongoing and large in scale to preserve particular ecosystem components.

Resilience

Resilience has also emerged as a concept that is useful when dealing with dramatic but uncertain and unpredictable change. Holling (1973) defines "resilience" as the capacity of a system to absorb change

and still persist without undergoing a state shift or fundamental loss of character. Holling and others distinguish ecological (or socioecological) resilience from engineering resilience (the rate at which a perturbed system returns to its initial state), which emphasizes efficiency rather than adaptive capacity. More critically, resilience is a meaningful goal only if one specifies what is to be resilient, and to what it should be resilient. Resilience is a means to an end, so protected area managers must still decide on specific goals and objectives.

The growing literature about resilience conceptualizes social and ecological systems as interlinked (e.g., Folke et al. 2002; Gunderson and Holling 2002; Walker and Salt 2006) arguing for management across scales, with an understanding that protected areas must be managed in the context of larger landscapes and regional social, cultural, political, and ecological systems. According to resilience theory, attempting to prevent or resist change is likely to increase the risk of larger future change—the past should not be preserved if it comes at the cost of reduced resilience. Several broad strategies for promoting resilience, along with specific ways to promote each strategy, have been articulated (Table 2).

Managing protected areas for ecological resilience, rather than naturalness, might emphasize retaining ecosystem function over preserving specific species *in situ*. It might require letting go of the way landscapes look today as conditions change and identifying key processes to retain in the face of change, such that although many other variables shift around, core functions and processes maintain their resilience. Recommended tools for building resilience include experimentation, active adaptive management, and structured scenario planning—"envisioning alternative futures in

Table 2. Strategies for promoting the resilience of desired systems.

Reduce vulnerability by:

- sustaining the slow variables (e.g., soil resources and the species pool)—the reserves in the system that accumulate slowly and provide buffers
- mitigating the stresses that drive change

Enhance adaptability by:

- fostering ecological, economic, and cultural diversity, including diversity in space and diversity in management strategy—protecting the building blocks for change that will maximize future options
- creating capacity for learning and innovation at multiple scales

Enhance resilience by:

- strengthening stabilizing feedbacks, particularly negative feedbacks and tight feedback loops between actions and their consequences
- sustaining ecological and cultural legacies, including cultural connections to the land, thereby retaining system memory
- building linkages across multiple scales, including adaptive governance and connectivity between parks and the surrounding matrix

Foster transformability (the ability to actively move to a desired novel system, as an alternative to passive degradation) by:

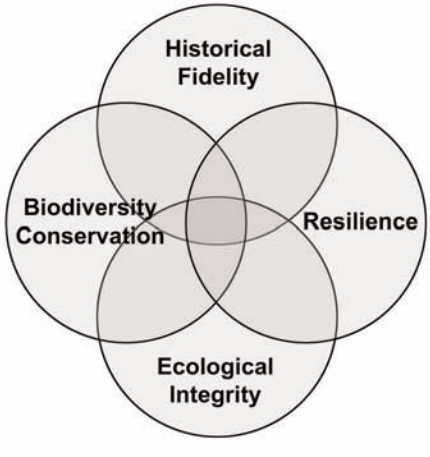
- thinking outside the box
- treating crisis as an opportunity for constructive change

ways that expose fundamental variables and branch points that may be collectively manipulated to evoke change" (Folke et al. 2002:52).

Adopting a pluralistic and adaptive approach: Complementary but diverse goals and strategies

Although there was concern about some of the meanings of naturalness, there was general support among workshop participants for the notion of historical fidelity—the importance of continuity between future ecosystems and those of the past. The group felt that there was substantial overlap between the concepts of historical fidelity, ecological integrity, and resilience, as well as with the goal of conserving biodiversity. We might look to the nexus of these four concepts for guidance regarding the specifications of desired future conditions for protected area ecosystems (Figure 3). At the nexus, park and wilderness ecosystems would be characterized by a relatively low level of human influence (compared with the developed world), managing with as light a "touch" as possible, substantial similarity to past landscapes (including expertly mimicking aboriginal influence), persistence of most native elements and processes, and a high capacity to adapt to an unpredictable future (through collaborative goal-setting, experimentation and adaptive management, and managing across landscapes). Advocates of the naturalness concept might argue that naturalness implies all four of these elements; so might advocates of the ecological integrity concept.

Figure 3. Historical fidelity, biodiversity conservation, ecological integrity, and resilience fit together.



Despite their overlap, however, each concept also has unique meanings. The value of parks and wildernesses can be optimized by providing for a diversity of management objectives, particularly given uncertainty about the impacts of climate change and other stressors. While a core goal of protected areas is biodiversity conservation, more specific goals might include preserving historic communities and landscapes (vignettes of primitive America, as proposed by Leopold et al. 1963), conserving specific endangered or endemic species, maintaining forest structure and function, allowing ecosystems to respond to change without human intervention (a hands-off approach), sustaining subsistence activities (as in some Alaska protected areas), or enhancing the resilience of a particular grassland. Managing to preserve historic landscapes will likely be more the exception than the rule, since in many cases such efforts are the equivalent of swimming upstream (i.e., maintenance of such landscapes will often require ongoing intervention and investment of resources). At the opposite end of the spectrum, managers may need to anticipate and guide change, to actively transform systems rather than let them passively degrade—to create novel

ecosystems in new places, for the purpose of protecting something of value and enhancing system resilience.

A single protected area might adopt different goals in different areas. Protected areas should also employ a diversity of management strategies to achieve a particular goal, since there is substantial uncertainty about the effectiveness of different strategies. However, redundancy is also important; similar strategies should be employed in multiple locations to ensure replicated experiments and buffering. Currently, goals and management strategies are diverse, but for the wrong reasons. Diversity is often the result of personal preference, available resources, lack of coordination, even neglect. It should reflect a large-scale planned and deliberate effort that considers the appropriateness of interventions, scale, boundary effects, and how any particular area fits within a larger system of protected areas and the regional landscape.

Putting pluralism in a landscape context

Although much has already been written about the need to conduct conservation planning at large scales (e.g., Margules and Pressey 2000; Liu and Taylor 2002; Hansen and DeFries 2007), there are few successful examples in park and wilderness stewardship. Even without climate change, our existing parks and wilderness are not large enough to sustain our natural heritage by themselves. Conservation planning must extend beyond the boundaries of protected areas, and climate change makes this scale of planning even more imperative. With climate change, political boundaries are fixed but the biological landscape is not (Lovejoy 2006). When combined with habitat fragmentation, species are less able to migrate to new sites as conditions change, making corridors and connectivity between protected areas and between protected areas and adjacent lands even more important than in the past.

Since a pluralistic approach to protected area conservation requires both diversity and redundancy to maximize future options, protected area managers must work with each other and with other types of landowners to ensure that particular ecosystems are managed in both similar and dissimilar ways. Scale needs to be carefully considered as managers make decisions about conservation strategies and interventions. Planning must occur at multiple scales, so that protected area managers understand how conditions are changing across the landscape and recognize key opportunities.

We must become better at understanding the consequences of localized, short-term change at large spatial and temporal scales (White and Jentsch 2005). Localized changes are likely to occur rapidly. Approaches to managing specific protected ecosystems need to be situated within an overall strategy for protected areas within particular ecoregions. Creating and maintaining connectivity and conserving biodiversity across landscapes is challenging institutionally, politically, and ecologically, but it is absolutely necessary in the context of global change and diverse and novel stressors.

Toward more flexible and adaptive planning

Traditionally, protected area managers have translated goals into operational objectives and specific targets—statements of desired future conditions. The concept of desired future conditions implies an understanding of alternative future states to

choose among, the costs and benefits of different alternatives, the resources required to achieve each state, and the likelihood of success. But the specter of climate change suggests a future where change is rapid and directional and the thing we can be most certain about is uncertainty (Saunders et al. 2007). As change and uncertainty increase, managers are less likely to possess the requisite knowledge to specify desired future conditions. Attempts to achieve long-term objectives, as conditions change, could lead to loss of biodiversity, decreased resilience, and ecosystem degradation.

Climate change and other novel stressors call for a very different type of planning model—one built around objectives that are frequently assessed and renegotiated. Goals may be enduring, but objectives may need to be more flexible. The time frame for objectives may need to be shortened. What appear to be realistic future options may prove unrealistic, while new options may appear. Managers will need to be more adaptive, regularly revisiting objectives and management decisions and changing them as knowledge advances and uncertainty retreats (Folke et al. 2002). Managers need the flexibility to respond to deliberate experimentation and effectiveness monitoring.

What can we do now?

The primary conclusion of our workshop was that new attention needs to be given to the purposes and values of parks and wilderness areas. Philosophical issues need to be raised and resolved so that more clarity can be provided regarding the stewardship of ecosystems in parks and wilderness. That is the first order of business. Scientists might contribute to this process by (1) raising questions about naturalness (as we do in this paper) and continuing to explore new definitions and concepts and (2) predicting the likely outcomes of alternative policy goals.

At the workshop, we also spent some time articulating management options for dealing with rapid and unexpected change in protected areas. To some degree, the appropriateness of these strategies can only be evaluated after basic philosophical issues have been resolved. Therefore, these options are listed in an Appendix rather than the main body of our paper.

Summary

The key challenge to stewardship of park and wilderness ecosystems is to decide where, when, and how to intervene in physical and biological processes to conserve what we value in these places. To make such decisions, planners and managers must more clearly articulate park purposes: what is valued and what needs to be sustained. These values likely include biodiversity conservation, ecological integrity, historical fidelity, aesthetics, and nostalgia, as well as ensuring that some of the lands in the United States are managed with restraint and humility, where nature is allowed to take its own course. Where interventions are needed, planners and managers need to more precisely define what outcomes are desired.

The concept of naturalness provides insufficient guidance to make such decisions, as does the admonition to intervene as little as possible. Perhaps it is unfortunate that people are so familiar with the word "natural." This familiarity leads both lay people and scientists to assume they know what it means. But the varied notions of naturalness are often tangled and they have evolved over time. Although there have

been efforts to disentangle meanings (e.g., Landres et al. 1998), naturalness continues to mean different things to different people—depending on their knowledge, their experience, and their values. Inconsistent and imprecise definitions ultimately are manifested in poor stewardship.

Although workshop participants disagreed about the desirability of retaining naturalness as the core concept in protected area stewardship, there was general agreement that the concept has both desirable and undesirable implications. Some of the valued notions implicit within the concept of naturalness are intervening as little as possible, valuing past landscapes and systems, and avoiding human dominance of ecosystems. Notions to reject include attempting to make landscapes of the future replicates of the past and not acknowledging the major effects that humans have had on park landscapes for millennia and will have in the future. Beyond naturalness, park and wilderness stewardship needs to be guided by concepts such as ecological integrity and resilience.

Given the unprecedented rate of change that we face, it is time for a re-examination of the goals and purposes of parks and wilderness areas. What seems possible now is very different from what seemed possible 50 or 100 years ago. Priorities have changed as well. What attributes of these places are we most concerned about protecting—or most concerned about losing—in the face of rapid change? Beyond new guidance and policy, there is also a need for institutional change. For ecosystems to be resilient, institutions need to be resilient. In particular, planning processes will need to be more adaptive and more learning-focused, and be capable of operating at large spatial scales and across diverse land ownerships.

Appendix: Recommended strategies and things to consider in responding to rapid and unexpected change

This is a toolbox of options to be used on a case-by-case basis, not as a one-size-fits-all prescription.

Planning and prioritizing

- Work to clearly define the goals and objectives for each protected area. In some cases, current goals may need to be redefined (e.g., from "maintain giant sequoias at this site" to "maintain soil, forest cover, and species diversity"). Goals will need to be revisited as conditions change and knowledge evolves.
- Prioritize current and future threats and changes. Focus on actions that have the most potential to make a difference. Practice triage when necessary.
- Decide which changes are acceptable and to what degree they are acceptable (e.g., some invasive species, like cheatgrass, are impossible to control in large areas).
- Define undesired future conditions. Determine what to avoid (e.g., extinctions, sudden loss of vegetation and soil).
- Be prepared for surprises, as change might not always be directional and may occur in spurts.
- Carefully consider the philosophical and practical implications of proposed interven-

tions. If possible, base decisions on established criteria and thresholds, as well as a plan for implementing different levels of intervention in different places.

- Consider the appropriate scale for management actions. In some cases, starting at a small scale might be desirable. However, in others—where the threat is widespread, the effectiveness of the intervention has been established, and the resources are available—consider larger-scale interventions.
- Implement different strategies in different sections of each protected area (provide buffering in case one or more strategies fail). At the same time, pursue redundancy (implement similar approaches in several areas).
- Experiment to determine the effects of different management actions. Where possible, try out management interventions at small scales and more than one site, then monitor interventions along with control (untreated) areas to maximize learning. Experiment with new tools at an appropriate scale (small pilot projects) before utilizing in large areas.
- Be cautious about models that predict the responses of particular communities to changing conditions. Biological models are much less certain than climate models, which still cannot determine the precise amount of temperature change or future precipitation. Seek information about the responses of particular species, but view the information as general guidance rather than specific predictions. Use models to explore a range of scenarios in planning processes, not to predict specific future conditions.
- Monitor for change and early detection of changes to populations and ranges. Monitor to understand the effects of management actions. Monitor smart, not hard; simple information collected consistently and with a plan is more valuable than complex, detailed data collection with no particular strategy for learning from it.
- Of particular importance, determine how you will know when a system is undergoing a state change to which resistance is futile. So far as possible, know beforehand whether you will passively accept the change or actively assist in transformation to a new system.
- Plan at multiple temporal and spatial scales. Identify short-term and long-term goals and actions. Manage both short-term processes (such as disturbance events) and long-term processes (such as the accumulation of soil fertility). Consider individual protected areas within a larger landscape context.
- Inform the public of the impacts of climate change, pollution, and other stressors on protected areas. Ensure that policy-makers understand the implications of climate change and other environmental changes on protected areas.
- Promote policies that encourage connectivity and conservation across the larger landscape. Develop incentives for private landowners to provide habitat for migrating species.
- Maintain and enhance a variety of human relationships with protected areas. Cultural, social, and material connections with protected areas will ensure that the public understands, supports, and participates in management actions.
- Consider socially important and symbolic species and landscapes in planning. Values such as wildness, nostalgia, and humility will influence the public debate about protected area conservation.

- Engage the public in the planning process in a meaningful and ongoing manner. Collaborative approaches that emphasize dialogue can build public support for management actions and policy change.
- Conduct scenario planning (with public involvement). Consider multiple possible futures and multiple possible outcomes for proposed management actions. Develop portraits that detail desirable and undesirable futures for protected area ecosystems. Use these portraits to determine which management actions are most likely to lead to desired future options.

Mitigation and conservation

- Restore disturbance regimes, such as fire and flooding, where they favor native species and maintain important ecological processes. Consider using disturbance to reset ecosystem trajectories. For example, after a wind event consider replanting species better adapted to warmer temperatures.
- Restore extirpated species (consider whether the species are likely to survive at that site in the future or will be able to migrate to new sites).
- Prevent and mitigate threats, such as non-native invasive species, using a variety of tools. Often, prevention greatly reduces the need for later, more costly interventions, as when exotic species are prohibited from establishing in a protected area rather than having to be controlled or extirpated after they have been established.
- Sustain "slow variables," such as soil characteristics and regional species pools, that may require managers to consider longer time scales and larger spatial scales, to maintain ecosystem capacity to recover on its own from shocks and to boost adaptive capacity.
- Conserve dominant and seemingly minor species. Species or plant communities that are not currently abundant, such as pockets of desert vegetation in California grasslands, may become more important as conditions change.
- Create conditions resistant and resilient to climate change and other stressors. For example, consider overthinning some forests, seeding restoration sites with a wider range of species or ecotypes, or seeding with native species known to resist problem invaders. Resistance implies the ability to stay the same despite changing conditions; remain alert to the distinction between the need for resisting versus adapting to change.
- Consider and, if necessary, prepare for assisted migration of species in response to climate change.
- Although controversial, consider functional substitutes for species that cannot survive under current conditions. Consider realigning systems to current conditions, especially where the system is already well beyond the range of natural variability. And consider active transformation to a new system if building resilience of the current system to change seems impossible. Weigh the possibility that passive degradation will occur if active transformation is not pursued.

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Transportation Research Needs in National Parks: A Summary and Exploration of Future Trends

John J. Daigle

THIS PAPER BRIEFLY EXPLORES PERTINENT FEDERAL LEGISLATION that has propelled efforts to study and address transportation issues in national parks. Interdisciplinary research involving fields ranging from engineering to social science is needed as transportation issues become more prevalent, both within park boundaries and surrounding communities. Two entities are discussed as being important to help guide managers as well as researchers given the complexity and interdisciplinary nature of transportation issues. The first is the Alternative Transportation Program within the National Park Service, and second is a newly formed committee entitled "Transportation Needs in National Parks and Public Lands" that is part of the Transportation Research Board (TRB), a unit of the National Research Council (NRC), a private, nonprofit institution that is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering. Under a congressional charter granted to the National Academy of Sciences, the NRC provides expertise in science and technology to the government, the public, and the scientific and engineering communities. The focus of current research and the likely future direction of research, particularly in the social science field, is explored with respect to transportation issues in national parks.

Transportation legislation and national parks

There are currently over 8,055 miles of roads and parkways, 1,252 bridges, 60 tunnels, and extensive parking facilities within units of the national park system. To solve the growing congestion problem throughout the national park system, there are 63 visitor transit systems in 50 parks that vary in size ranging from single vehicles to bus fleets. The following federal transportation bills, dating from the early 1990s, have been a source of funds for the National Park Service to actively explore a variety of transportation modes to accommodate visitors:

- Intermodal Surface Transportation Efficiency Act (ISTEA; 1991);
- Transportation Equity Act for the 21st Century (TEA-21; 1998); and
- Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU; 2005).

These bills have brought increasing responsibilities (and resources) for transportation planning in the National Park Service, include the transportation enhancement, park roads and parkways, recreational trails, and scenic byways programs.

ISTEA and subsequent acts have encouraged the adoption of a transportation planning framework within the National Park Service that must integrate local, regional, and statewide transportation decision-making. There are increased opportu-

nities for national parks to work with states and local governments on transportation projects, with matching grants for a number of federally funded transportation programs. Since the department of transportation in each state is responsible for setting transportation policy with regard to future projects and funding decisions, it is critically important that the National Park Service be a partner in the transportation planning process.

Notable within the TEA-21 legislation was the directive for the secretary of transportation, in coordination with the secretary of interior, to "undertake a comprehensive assessment of transportation needs in national parks and related federal lands." This included the formation of a distinct program within the National Park Service called the Alternative Transportation Program. Also, a number of studies to examine transit needs, transit strategies, and feasibility studies were conducted and guided in part by this new program.

Alternative Transportation Program

The Alternative Transportation Program was launched in 1998. It is responsible for coordinating policies, projects, and activities related to planning and implementing alternative transportation systems within and to national park system units. The program also develops strategies and recommendations for servicewide application on issues crossing agency and state–federal jurisdictions. The mission statement of the program is: "Preserve and protect resources while providing safe and enjoyable access to and within the national parks by using sustainable, appropriate and integrated transportation solutions."

The program's website (www.nps.gov/transportation/alt) provides information on transportation issues, legislation, and planning documents. A principal document available at the site is the *National Park Service Transportation Planning Guidebook* (1999) that covers, among other items, National Park Service transportation planning policy, federal transportation legislation in relation to the National Park Service, principles of success through partnerships, and the ABCs of transportation planning. As the director of the Park Service noted on the occasion of the guidebook's initial publication: "I believe that as we move forward into the next century, some of our greatest threats to national parks will come from encroaching development and activities outside the park boundaries. For that reason, our ability to understand transportation planning and laws is vital to our success as managers."

To help cooperatively develop and integrate transportation planning into normal NPS activities, the Department of Interior signed a memorandum of understanding (MOU) with the Department of Transportation in November 1997. Several demonstration parks were identified in the MOU because of their complex transportation issues. All of the demonstration parks highlight one important principle that has become increasingly significant servicewide: to solve transportation and congestion problems, the NPS must look at these issues holistically, in a regional context, involving all partners. Working with various partners, especially federal transportation entities, the National Park Service has also been more successful at understanding and utilizing various surface transportation programs (Figures 1 and 2) and linking into a broader transportation research entity, such as the Transportation Research Board.

Figure 1. The National Park Service (NPS) has long relied on partnerships with outside organizations to enhance resource protection and the visitor experience. Chapter 3 of *The National Park Service Transportation Planning Guidebook* outlines steps in identifying potential partners; tools and approaches that can be used to successfully organize and formalize the role of partners; and how to build a "win–win" partnership. Ford Motor Company supports a partnership between the NPS, the National Park Foundation, and the Eno Transportation Foundation to place Masters- and Ph.D.-level scholars in national parks to assist in the development of transportation planning and analysis, coordination with local communities, and environmental and traffic studies. Transportation interpreter Brandy Brooks presents information to park visitors on the Fort Sumter National Monument ferry. Photo courtesy of NPS.

Figure 2. Through the coordinated efforts of NPS, the National Park Foundation, Ford Motor Company, the concessionaire Glacier Park, Inc., and other groups, 33 historic White Motor Company red buses have been restored. Operating on the Going-to-the-Sun Road in Glacier National Park, the red buses provide a great experience for visitors. Photo courtesy of the Transportation Research Board.

Transportation Research Board

One of the important outcomes of a closer working relation between the National Park Service and federal transportation programs is the committee on Transportation Needs in National Parks and Public Lands, which, as already noted, is part of the Transportation Research Board (TRB), a unit of the NRC. The committee was established by the TRB "to

serve as a national forum for transportation issues and public use as they relate to the management and conservation of the natural, cultural and scenic values of the national parks and other federal public lands. . . ."

The committee maintains a website (http://refugedata.fws.gov/trb) with information on members, past meetings (with minutes as well as links to presented research papers), and links to future meetings and other related transportation programs. There is a diversity of research findings presented at these meetings, ranging from various social science and engineering perspectives, including intelligent transportation technologies (ITS), economic impacts, and integration of alternative transportation, including motorized and nonmotorized forms. Some of the goals of the committee are to:

- Strengthen the organization and operation of the committee;
- Identify constituencies and audiences;
- Coordinate with other groups;
- Promote research on federal lands transportation issues; and
- Promote the dissemination of information on transportation on federal lands.

The committee is made up of representatives of diverse groups, including members from federal land management agencies (National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service), federal transportation agencies (Federal Highway Administration, Department of Transportation), universities (Maine, Texas A&M, West Virginia), transportation research centers (Volpe, Western Transportation Institute, Texas Transportation Institute), private consultants, and nonprofit organizations such as the National Parks Conservation Association. One of the important functions of this group in the future will be to help define and develop research initiatives that will improve transportation planning within national parks and other public lands.

Current and future research

There is a growing body of research related to transportation issues in national parks. Some of the early studies that coordinated with the National Park Service Alternative Transportation Program included the Island Explorer bus transit system in Acadia National Park (Daigle and Lee 2000), which was supplemented with studies associated with ITS such as real-time arrival, parking conditions, automated next stops, etc. (Zimmerman, Coleman, and Daigle 2003; Daigle and Zimmerman 2004a; see Figure 3). Other studies have been important to evaluating transportation and perspectives of local communities (Daigle and Zimmerman 2004b; Dunning 2005). Research also continues to build on identifying potential indicators that are important to the visitor experience (Dilworth 2003; Turnbull 2003; Davenport and Borrie 2005; White 2007). Some of these studies have used multiple qualitative methods to refine elements of the visitor experience. Finally, research on the feasibility of alternative transit in national parks needs to continue (CSI/BRWGI 2001).

Some of the key issues identified by the Alternative Transportation Program are the following:

- Resource impacts must be managed;
- The automobile cannot always be the primary mode of transportation;
- Visitor transit systems are not simply utilitarian in nature;
- Baseline data generally needed to make

Figure 3. Acadia National Park was selected by the U.S. Departments of Transportation and Interior to test the effectiveness of intelligent transportation systems (ITS) in dealing with transportation problems within a national park setting. Real-time travel information was collected and disseminated to visitors on Island Explorer buses via an automated annunciator that transmitted an audio message and displayed the next bus stop on an electric sign within the bus. In addition, electric signs displayed real-time departure times of the next Island Explorer bus at bus stops. Pictured here is an electric bus departure sign at Village Green, Bar Harbor, Maine.

informed decisions are often not readily available;
- Transportation systems regularly transcend park boundaries;
- The park's resources are the attraction, not the mode of transportation;
- Existing infrastructure is often at or beyond capacity;
- Growing visitation requires complex, integrated transportation solutions;
- Visitors expect a consistent design standard within national parks; and
- New transportations systems are not always the solution.

Research suggests that more work needs to be completed to better understand community impacts, and to gauge partnerships that might include the local community, other natural resource agencies such as the Forest Service, state and federal transportation agencies, tourism entities, friends' groups, etc. Also, better monitoring programs based upon management objectives are needed. For example, at Acadia work was completed to assess differences in parking lot conditions (Figure 4) resulting from use of alternative transportation technologies (Daigle and Zimmerman 2004a), but

additional monitoring was suggested to assess the relationship of the alternative technologies to conditions of trails and other environmental factors. In fact, it was monitoring of these baseline conditions before and after the implementation of the alternatives that received the most discussion among participants at the 2007 George Wright Society conference session on examining transportation issues in national parks.

Conclusions

It is important to keep building a critical mass of information through research on transportation issues in national parks. Findings suggest that transportation issues in national parks are complex and challenging especially given the seasonal nature and rural location of many parks. In many cases, the visitor experience associated with using alternative transportation is much more than getting from point A to point B. While variables traditionally associated with transit use, such as efficiency and reliability, are important, there is evidence that suggests other variables, such as the transit providing information about the area, and environmental considerations in terms of reducing traffic congestion and pollution, play an equally important if not more important role for some visitors in terms of their motivation for using alternative transportation (Figures 5 and 6). Research will continue to play a vital role in the development of specific, measurable management objectives related to transportation issues in national parks. Baseline information and monitoring are important as indicators are identified for transportation-related management objectives, and standards for measuring progress towards those objectives are developed.

Figure 4. The parking conditions at two popular destinations in Acadia is important information to convey to visitors.

Finally, there are diverse research fields within social science, engineering, etc., through which scientific information related to transportation planning in national parks is scattered. It is important that entities such the TRB committee be utilized to help build a strong and cohesive research program and be a communication source between federal agencies, universities, the private sector, and nonprofit entities. The Alternative Transportation Program provides managers in national parks a vital link to useful planning documents and research that can help guide interactions with local communities and visitors. Updates and refinements of the relevant websites are important, as these will be utilized more frequently as national parks face more transportation-related issues.

Figure 5 (top). A free shuttle bus system was introduced in Zion National Park in Utah in 2000. The shuttle buses operate on the six-mile dead-end scenic roadway in the main canyon. The shuttle buses, which are the only way visitors can access the canyon during the peak summer months, connect to buses serving the gateway community of Springdale.

Figure 6 (bottom). Interpretive signage explains to visitors the need for a Zion shuttle.

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A Very Large Array: Early Federal Historic Preservation—The Antiquities Act, Mesa Verde, and the National Park Service Act

Richard West Sellars

> But at the same time, those places are now occupied by a higher form of life, if you will, the spirits of our ancestors.... So these places for us are sacred, living places.... that's one of the vital connections that we have that's really not captured in any way by archaeologists, in any shape or form.
>
> — Joseph H. Suina, descendant of the ancient Puebloan people who lived on Northern New Mexico's Pajarito Plateau

> I saw it, on that first morning, through a veil of lightly falling snow. Far up above me, a thousand feet or so, set in a great cavern in the face of the cliff, I saw a little city of stone, asleep. It was as still as sculpture—and something like that.
>
> — Willa Cather, "Tom Outland's Story," in *The Professor's House*

> The immensity of man's power to destroy imposes a responsibility to preserve.
>
> — U.S. Congressman John F. Lacey, 1901

CENTURIES AGO, BEGINNING ABOUT THE LATTER HALF OF THE FIRST MILLENNIUM AD, people living in what is now the southwestern United States developed techniques for constructing large, often multi-storied, communal dwellings made of stone or adobe. They located these pueblo structures, which included open plazas for work and socializing and kivas for religious and civic ceremonies, close to water sources and tillable lands. The village-like pueblos provided shelter from the elements and defense against enemies. There, over many generations, these different Indian tribes lived and worked, tended their young and old, buried their dead, and altered their buildings and villages according to need. Mainly during the first half of the second millennium AD, and under such pressures as drought, resource depletion, and warfare, many of the tribes left their pueblos, seeking more favorable locations in which to settle. They left behind buried remains of their forebears, as well as scattered objects—tools, household utensils, and other items of daily life. Yet they carried away a reverence for their past, their ancestors and their homelands, and the structures set in vast, unbounded landscapes.

By the early twentieth century, the ancient Indian pueblos in the southwestern United States, with their dramatic settings, imposing structures, and carefully crafted objects, had become the most renowned archeological sites in the country and were of increasing interest to scholars studying past cultures.[1] Although across the Southwest vast numbers of smaller and earlier sites had existed for thousands of years, for the most part it was the architecturally outstanding structures that first drew attention from modern-day European Americans. Early in the European exploration of the Southwest, a legend arose that linked these architectural wonders to another civilization of great builders, the Aztec Indians. It was believed that the Aztecs had built the large southwestern structures and in time abandoned them, moving south to the Valley of Mexico. By the latter part of the nineteenth century, however, explorers and others who studied the Southwest had become aware that these and similar sites were not built by the Aztecs. Instead, these structures had been built by ancestors of the Pueblo Indians, who themselves had never forgotten their connections to the ancient sites.[2]

Genesis of the national park system

The southwestern archeological sites had also by the beginning of the twentieth century become tied to the modern market economy, with pot hunters, wealthy collectors, and others acutely aware of the profits, prestige, and personal satisfaction that acquisition of ancient artifacts could bestow. A kind of "archeological frontier" had reached the American Southwest, with unrestrained destructive extraction of thousands of valuable objects from age-old Indian sites that paralleled the rampant extraction of natural resources, such as timber and minerals, taking place throughout the West. The uncontrolled digging and relic hunting in ancient sites set up increasing conflict with another faction of European Americans, mainly anthropologists and educators, who sought to preserve sites for what they could reveal about the past. Seeking to put a halt to the extensive relic hunting, this competing faction turned to the federal government, since most of the outstanding archeological sites were on public lands—the vast national domain administered by the national government, mostly by the Department of the Interior. Meanwhile, the tribes of the Southwest, many of whom had cultural and historical ties to the ancient sites, lacked any substantial influence in federal policy. The Indians were generally relegated to the sidelines, while non-Indians determined the fate of the ancient ancestral places. The choices to be made—continued rampant extraction or some form of protection and preservation for the archeological sites—remained fundamentally a struggle between competing European-American factions.

The federal government, having very limited experience in protecting historic places, only slowly roused itself to action. Its response to the worsening situation in the Southwest was cautious and erratic, coming in the form of laws intended to preserve and protect ancient sites located on public lands that were, of course, public property. Indeed, the government would ultimately set aside many of these areas for preservation and research. Most of these preserved sites would be designated "national monuments," as distinct from national parks.

The early preservation of a number of national monuments and other archeologi-

cal sites in the Southwest served, in effect, as a western counterpart to the preservation of the Civil War battlefields in the East and South. There, during the 1890s, the federal government had authorized establishment of five national battlefield parks: Chickamauga and Chattanooga battlefields (administratively combined) in Georgia and Tennessee, 1890; Antietam in Maryland, 1890; Shiloh in Tennessee, 1894; Gettysburg in Pennsylvania, 1895; and Vicksburg in Mississippi and Louisiana, 1899. All of the battlefield parks were associated with national cemeteries (Union Army burial grounds) and were administered by the U.S. War Department. Except for Antietam, all of them were sizeable. For example, Congress authorized up to 7,600 acres for Chickamauga, 6,000 acres for Shiloh, and provided that Gettysburg acquire acreage on essentially an "as necessary" basis. The large majority of the acreage that would be included in the new parks was not public land, but private farmlands and woodlands. This made federal acquisition of these battlefields for historic preservation purposes, and with considerable use of eminent domain procedures, even more remarkable than had the battlefields been on public lands.

The early battlefield parks constituted by far the federal government's greatest effort in historic preservation through the nineteenth century. Most of these parks were much larger than any other protected historic sites, private or public, in the country. Steadily improving transportation in the East and South and the proximity of several of the battlefields to growing population centers meant that the military parks were accessible to increasing numbers of people. In contrast, for the vast majority of Americans the southwestern archeological sites were remote and difficult to reach. By 1906, at a time when few tourists had visited the ancient southwestern Indian sites, it was claimed that approximately 250,000 people had visited Chickamauga and Chattanooga National Military Park.[3] Surely, visits to the battlefield parks provided many Americans with their first exposure to formally preserved and developed historic places.

Together, the archeological areas in the Southwest and the early Civil War military parks in the East and South comprised the true genesis of the United States' federal historic preservation programs. They represented highly significant aspects of American history and culture, places that the national government first deemed worthy of its special care and attention. They were also vastly different kinds of sites: The battlefield parks commemorated history of a very brief duration, when opposing factions of a modern nation sought to annihilate one another through technologically advanced military engagements lasting from one day to a number of weeks. By contrast, the archeological sites represented the culture and lifeways of ancient communities in periods of peace or war extending over centuries of time.

The federally preserved battlefield parks and southwestern archeological areas would eventually join their larger siblings, the national parks, which protected huge tracts of magnificent natural scenery, to comprise the three early major components of America's national park system, altogether a diverse array of preserved areas deemed of special importance to the American public. At the beginning of the twentieth century, soon after the five battlefield parks were created under the War Department and when the legislative campaign for comprehensive archeological site protection was

just getting started, the scenic national parks still represented a relatively novel idea. After Yellowstone's establishment in 1872, Congress created no more truly sizeable national parks until the 1890s, when it established Sequoia, Yosemite, and Mount Rainier. Thus by 1900 there were only four large national parks. They marked an early attempt to save especially majestic landscapes from the onslaught of European-American settlement in the West and exploitation of resources on public lands.[4]

The General Land Office, the public land management arm of the Department of the Interior, had long pursued a policy of disposing of public lands to private, state, or other non-federal ownership. Such measures as grants to states for education and other purposes, vast land grants to railroad companies, transfer of lands to timber companies, and the Homestead Act of 1862 were viewed as part of the nation-building process through extracting resources, improving public education, and increasing national wealth.

However, by the latter decades of the nineteenth century, second thoughts had arisen. Certain parts of the public lands, mainly those that were scenically spectacular, came to be perceived as possessing special qualities and values beyond purely economic factors and therefore worthy of being retained by the federal government as a public trust, not to be disposed of and treated in the customary ways. Direct federal intervention that set aside these select places for preservation, and then actively managed them for the general public good, arrived most emphatically on March 1, 1872, with the creation of Yellowstone National Park—more than two million acres reserved from sale or other disposition and dedicated to the "benefit and enjoyment of the people."[5]

The rush to dispose of the public lands was checked to some degree by the rising concern for preservation and conservation, which became a significant priority in the Progressive Era. During this period of political, social, and economic reform, which extended from about the late 1890s through the World War I era, the federal government asserted greater control over the national domain. In 1916, as part of this effort, Congress created the National Park Service as a bureau within the Department of the Interior, assigned to administer the gradually expanding national park system.

The archeological frontier in the Southwest

As the United States expanded westward in the nineteenth century, the federal government, as well as many private groups, repeatedly probed the trans-Mississippi West seeking more information about the country and its potential—assessing lands that the nation was acquiring in huge increments through conquest, purchase, and treaty. These expeditions amassed data on the natural and human history of the Great Plains, Rocky Mountains, and beyond to the Pacific Coast, informing the government and the public on topics including climate, topography, soils, minerals, geology, forests, rivers, wildlife, railroad routes to the Pacific, and the native people who inhabited western lands.

A resurgence of exploration in the post-Civil War years brought more intensive research on Native Americans in the West than ever before. At a time when westward expansion was forcing Indians into ever-smaller reservations, the federal gov-

ernment and newly formed anthropological organizations sought to learn more about Indian lifeways that were in upheaval, being greatly impacted by disease, warfare, and removal of tribes from their homelands. Anthropologists pursued answers to questions such as the origins of people who had no European cultural roots, the characteristics of different tribes—including social systems, religion, language, and food acquisition, plus complex intertribal relationships. Of more practical and immediate concern, information about Indians could provide clues as to how different tribal ways might be influenced, changed, and regulated by the government and its representatives.[6]

American Indians living in the pueblos of the Southwest attracted particular intellectual interest among non-Indian scholars. The sedentary Puebloans had deep roots in their long-established villages and surrounding lands, making them and their traditional ways accessible for close study. Moreover, by the latter decades of the nineteenth century it had become clear to most informed Americans that the Puebloans were the descendants of the people who built the great ancient structures made of stone or adobe and found in the Southwest. Within the United States, only Native Americans (and particularly the Pueblo groups) had the special continuity of living in age-old villages while also having direct ancestral ties to even more ancient home sites that included structures built in architectural styles somewhat akin to modern European-American construction and aesthetics. The Puebloans provided an especially enticing prospect for anthropological research, including comparative studies of the continuity and change between ancient and contemporary cultures.

In the late 1870s, two important organizations were launched to pursue American Indian studies: the Smithsonian Institution's Bureau of Ethnology (later the Bureau of American Ethnology) and the privately established Archaeological Institute of America. The Bureau of Ethnology was founded with the intention of advancing ethnographical and archeological knowledge of Indian tribes. The Archaeological Institute included among its goals increased understanding of American archeology, although most of its leaders were intently focused on classical archeology and related studies of the ancient Mediterranean world. Still, both organizations included the American Southwest in their agendas. The ethnographers were to study and compare the cultures of contemporary Indians, focusing on social systems, religion, language, and related cultural phenomena. Their studies would connect with the work of those who employed archeological techniques seeking to comprehend ancient Indian cultures. These endeavors became part of a succession of numerous government and non-government expeditions that made their way to southwestern Indian sites in the 1880s and 1890s in pursuit of various combinations of knowledge, adventure, and personal or institutional status. The reports and activities coming from the ethnographic and archeological expeditions would raise public alarm about the increasing destruction of ancient sites and the marketing of artifacts, alarm that would reach into the halls of Congress and highlight the need for federal action to halt the vandalism and looting and to protect the sites in the interest of the American public.[7]

In Congress, the first show of concern about the ongoing destruction of ancient

southwestern sites came soon after the Archaeological Institute of America sent Adolph Bandelier, a Swiss-born student of American archeology and ethnography, to undertake research on the pueblos of the Southwest. Bandelier initiated his fieldwork in the summer of 1880 at the Pecos Pueblo, located near Santa Fe, the territorial capital of New Mexico, beginning what became a long and distinguished professional career in southwestern studies. He prepared numerous detailed measurements and descriptions of the remains of the pueblo structures and the adjoining Spanish missionary church. Bandelier found Pecos badly vandalized by relic hunters, and in his 1881 report he vividly described the extensive damage, noting that the site had been "thoroughly ransacked," and "recklessly and ruthlessly" pillaged by relic hunters.

Bandelier's account of the antiquities destruction at Pecos appalled members of the Archaeological Institute and its supporters in the Northeast—one of whom, U.S. Senator George F. Hoar of Massachusetts, introduced a petition in the Senate in May 1882 condemning those who "plundered and destroyed" ancient sites. The petition did not specify preservation of the Pecos Pueblo, but instead made a broad recommendation that "at least some" of the ancient sites "be withheld from public sale and their antiquities and ruins be preserved" for scholarly studies of the past. Hoar's 1882 petition, the first formal recommendation in Congress for federal preservation of southwestern archeological remains, went nowhere. A reluctant Senate, inexperienced in such matters and apprehensive about the prospect of protecting an undetermined number of sites on the vast public lands, took no action on the petition.[8]

The next congressional move toward antiquities protection did not come until 1889. Again, it had the backing of Senator Hoar and his colleagues in the Northeast. This time the focus was on preserving the Casa Grande site, a huge, multi-storied, earthen structure located in south-central Arizona Territory. Unlike Hoar's 1882 petition, this effort received a positive response, due in large part to reports of vandalism and of erosion resulting from nearby irrigation that was weakening Casa Grande. A small group centered in Boston and including such prominent figures as jurist Oliver Wendell Holmes, historian Francis Parkman, and poet John Greenleaf Whittier reacted by petitioning Congress to preserve Casa Grande.

With Senator Hoar's backing, the petition succeeded. On March 2, 1889, an act was signed to "repair and protect" Casa Grande. To this end, the law (a rider on a Sundry Civil Appropriations Act) authorized the president to "reserve [the site] from settlement and sale" and to include in the reserve as much of the adjacent public lands "as in his judgment may be necessary" for protecting the major structure and its associated village. The legislation also authorized $2,000 for stabilizing the structure, which began before President Benjamin Harrison signed the executive order in June 1892, officially creating the Casa Grande Ruin Reservation (later Ruins Reservation). Harrison's order established a 480-acre protected reserve, including Casa Grande's main structure and remnants of the surrounding village. This reserve, to be managed by the Interior Department's General Land Office, marked the beginning of federal historic preservation in the Southwest.[9]

However, Congress did not grant any broad, general proclamation power for

presidents to set aside other historic or archeological remains located on public lands. This one-at-a-time approach suggested that the preservation community, which included Interior Department officials, especially in the General Land Office, could well face lengthy legislative struggles in seeking to set aside permanently other important sites. Still, despite Harrison's long delay in executing the Casa Grande authority, the utility of using presidential proclamations as a means of creating archeological reserves had been demonstrated.

Yet even before Harrison's Casa Grande proclamation, the use of presidential proclamation authority was on its way to becoming a major factor in the disposition of huge areas of forested public lands, thus providing a clear example of the means by which any number of archeological sites might someday be set aside. In March of 1891, President Harrison signed into law the Forest Reserve Act, which allowed presidents to establish "forest reserves" on public lands by proclamation. The Interior Department's General Land Office would manage them. Significantly, the law placed no limits on the number or size of such reserves. Congress would later declare that these areas were to "furnish a continuous supply of timber for the use and necessities of citizens of the United States," thus confirming that, unlike the national parks and historic areas, the forest reserves were open to extractive economic uses such as timber harvesting. The forest reserve proclamation authority was aggressively used, with a total of about 151 million acres set aside by 1907 (Theodore Roosevelt having proclaimed far more acres than any other president). In that year, Congress rescinded this authority with respect to a number of the public land states. Members of Congress, especially many from the West, opposed the creation of forest reserves that were to be permanently held by the national government; and after the rescission, use of the proclamation was curtailed.[10] The reserves became known as national forests, and collectively they dwarfed the combined acreage of national parks, national monuments, Civil War battlefield parks, and other federal historic sites.

By the time President Harrison signed the Casa Grande proclamation in 1892, destructive digging in the ancient Indian sites on Mesa Verde in southwestern Colorado had begun to attract attention, provoking more demands for federal intervention. A few exploring parties from the East had come upon Mesa Verde sites in the years after the Civil War. But the encounter with Mesa Verde that ultimately brought national recognition to the area came when two ranchers saw one of its largest cliff dwellings, Cliff Palace, from a distance on a cold December day in 1888. By nightfall the next day they found two more of the area's most spectacular sites: Spruce Tree House and Square Tower House. Nestled in protective, overhanging alcoves eroded into the sides of steep cliffs, these ancient stone villages, which are still known by the names the ranchers gave them, would greatly inspire archeologists and the American public and gain international renown.

This encounter, legendary in the annals of southwestern archeology, was made by members of the Wetherill family, who ranched along the Mancos River and often pastured their cattle on the high mesa cut by streams and deep canyons. Soon after their initial encounter, the Wetherills began a determined pursuit of Mesa Verde's

antiquities, a potential bonanza and a means of augmenting the income from their struggling ranch operations. Of the family's six siblings, Richard Wetherill became the most enterprising and the most widely known. Working with family and friends, Wetherill collected and sold pottery and other artifacts and guided tourists from the ranch headquarters to some of the most awe-inspiring sites. Although Wetherill's buyers included tourists and other private individuals, he became interested in the practice of archeology and sold various artifacts to, and cooperated with, professional archeologists and their institutions. Yet, overall, his collecting and selling of artifacts earned him a reputation as a threat to the integrity of ancient southwestern sites.[11]

The Wetherills soon became peripherally involved in a highly publicized conflict over shipping Mesa Verde artifacts out of the United States. In July 1891, the family hosted Gustav Nordenskiold, a young, tubercular, Swedish-Finnish nobleman who had studied archeology and arrived at the ranch to learn about Mesa Verde. Assisted by the Wetherills, Nordenskiold began research that involved excavation of sites on the mesa that were not already badly impacted by relic hunters, including the Wetherills. Nordenskiold's detailed investigating, mapping, and photographing provided valuable data, while serving to instruct Richard Wetherill in archeological methods and theory. However, when artifacts from the excavations were sent to Durango, Colorado, to be shipped to Sweden, the railroad, responding to local and statewide outrage, refused to handle them. An angry confrontation broke out, centering directly on the issues of removing archeological materials from public lands and disposing of them at will—in this case out of the country. After a brief legal skirmish, Nordenskiold won the right to ship the Mesa Verde materials on the solid grounds that there was no state or federal statute prohibiting the removal of archeological properties from public land. Ancient remains located on the national domain were subject to unfettered access and disposition. Legally, these artifacts could be shipped anywhere, and they were eventually placed in the Finnish National Museum in Helsinki.

The Nordenskiold dispute increased calls for legal solutions, as Colorado newspapers demanded laws to halt the indiscriminate removal of Mesa Verde artifacts. Public rancor about taking the collection abroad seems to have been much stronger than concerns about shipping artifacts *within* the United States. Still, the confrontation raised public apprehension about archeological looting on public lands, whatever the ultimate disposition of the collections. And the affair increased concern about the Wetherills' commercial collecting. Even considering their ties with professional archeologists and the 1893 World's Columbian Exposition in Chicago, the family set an example of artifact collecting and marketing in the Southwest that still remains under question.[12]

Richard Wetherill went from Mesa Verde to excavate Indian sites in Arizona Territory and Utah before relocating in the mid-1890s to Chaco Canyon in northwestern New Mexico Territory, where his activities again drew criticism. At Chaco, he and members of his family established operations near the massive stone structure known as Pueblo Bonito, one of the Southwest's largest and most majestic ancient buildings. Funded by wealthy philanthropists and affiliated with the American

Museum of Natural History in New York City, the Wetherills began extensive collecting, predominantly at Pueblo Bonito. Working at this site intermittently over several years, they excavated almost 200 rooms and shipped huge collections of artifacts to the American Museum, including complete contents from a number of rooms.

Richard Wetherill played a pivotal role in early southwestern archeology and remains an enigmatic figure. Although having learned from, as well as advised, experts in the archeological profession, he continually needed money and made a portion of his living by selling ancient Indian artifacts. Even though excavating under the supervision of the American Museum, Wetherill came under criticism from archeologists concerned about alleged slipshod artifact hunting and probable profit-making from selling ancient objects taken from public lands. His critics included the Santa Fe Archeological Society, spurred on by Edgar Lee Hewett—then president of the New Mexico Normal School in Las Vegas—who had a deep interest in Southwest archeology, to which he would soon turn full time. The Interior Department's General Land Office responded to the criticism by conducting several investigations into the complex situation, and it eventually stopped Wetherill's excavations altogether.[13]

In the meantime, aware of the extensive use of the presidential proclamation authority for creating forest reserves, yet stuck with the Casa Grande model of piecemeal, one-site-at-a-time archeological site protection by Congress, frustrated General Land Office officials resorted to land "withdrawals" to protect against vandalism. Beginning in the 1890s, they declared selected archeological and natural sites threatened by vandalism and looting and located on public lands to be temporarily set aside from sale or other disposition. Prior to passage of the Antiquities Act in June 1906, the Office had withdrawn a number of archeological areas, including Chaco (partly in response to the Wetherill's activities there) and El Morro in New Mexico Territory, Montezuma Castle in Arizona Territory, and portions of Mesa Verde, in addition to natural areas such as Devils Tower in Wyoming and Petrified Forest in Arizona Territory.

The General Land Office commissioners, with support from the Department of the Interior secretaries, proved potent allies in the antiquities protection efforts, making withdrawals in urgent situations, and repeatedly expressing concern for ancient Indian sites on public lands. In 1905, however, the Land Office lost its authority over the forest reserves—including their archeological sites—when Congress transferred administrative control over the reserves from the Department of the Interior to the Department of Agriculture. Thus, Agriculture's U.S. Forest Service would administer the reserves (soon designated as national forests) and oversee the withdrawn archeological sites within the national forests. This transfer of authority did not affect the General Land Office's administration of the Department of the Interior's remaining lands, which still constituted far and away the most extensive part of the national domain.[14]

The 1906 Antiquities Act and Congressman John F. Lacey

Near the very end of the nineteenth century, President William McKinley signed two important preservation bills into law within a few days of each other. The first, signed in late February 1899, estab-

lished at Vicksburg the last of the early national battlefield parks. Nine days later another law created Mount Rainier National Park, the last of the large, scenic national parks established before the century closed. Then, in the early months of 1900, four separate bills for the protection of American antiquities on federally controlled lands were introduced in the House of Representatives. These four bills reflected a far greater governmental concern than ever before for confronting the exploitation and vandalism of ancient southwestern Indian sites. Also, this surge of preservation laws and pending bills evidenced a broad and growing interest in direct federal action to protect especially important places, from historic and archeological areas to the scenic national parks.

On April 26, Congressman John F. Lacey of Iowa put forward the last of the four antiquities bills, a version recommended by Department of the Interior officials. A prolonged legislative campaign to protect ancient sites had begun. It would conclude in June 1906 with the passage of the Antiquities Act, one of the true cornerstones of American preservation and conservation law. This statute became informally known as the "Lacey Act" (not to be confused with an earlier wildlife act given the same designation) as a tribute to the conservative Iowa Republican who, as the influential chair of the House Committee on Public Lands, had steered the antiquities bill safely through Congress in the spring of 1906.[15] Named in honor of Congressman Lacey, this act would provide authority for the initial setting aside of more than half of the total acreage in the national park system as it exists in the early twenty-first century.

Lacey was not acting alone when he introduced this comprehensive bill. Rather, he had allies and was the bill's sponsor, not its author. In 1899, responding to a deepening concern over desecration of archeological sites in the Southwest, two leading scientific professional organizations, the American Association for the Advancement of Science (AAAS) and the Archaeological Institute of America, had created special committees to seek statutory protection for antiquities. Their efforts, which included drafting an antiquities bill that also contained strong nature conservation components, provided the primary impetus for the legislative campaign that followed. Before introducing his bill, Lacey had requested comments from the Department of the Interior on the three earlier antiquities bills of 1900. Top Interior officials, who were steadfast advocates for antiquities preservation, provided Lacey with a new draft proposal, and Lacey introduced his bill on April 26, 1900. It had much in common with the proposals of the AAAS and the Archaeological Institute, as well as with the very first one of the antiquities bills that had been introduced earlier in the year.[16]

Lacey's April 1900 antiquities bill bears special notice because of its farsighted, visionary scope, endorsing preservation of places significant in both human and natural history. Remarkably, it included not only early versions of all of the major elements that would appear in the 1906 Antiquities Act, but also most of the principal elements of the 1916 National Park Service Act. Studies of these two important acts have generally focused on one or the other of them, not both.[17] Yet when viewed in tandem, the legislative histories of these acts, together extending (with some interludes) from 1899 to 1916, reflect common goals regarding preservation of historic and natural resources, as do the language and the

intent of both acts. The extended efforts to pass these legislative proposals reveal the political and intellectual connections that existed among a very large array of preservation and conservation issues in the late nineteenth and early twentieth centuries.

Among those who have deeply influenced preservation and conservation on a truly national scale, John F. Lacey remains one of the least appreciated in American history. Not only do lands that were initially set aside as "national monuments" under the Antiquities Act comprise more than 50 percent of the total acreage in today's national park system, but also, of the 20 areas in the United States having the special prestige of being designated World Heritage sites (places deemed to have outstanding international significance), seven were initially preserved by authority of the act. Moreover, the act has provided decades of greatly enhanced protection for archeological and paleontological sites on federally controlled lands.[18]

Lacey usually carried on his congressional work without fanfare, and he received no great public exposure or acclaim through his speeches or writings. (He also did not keep copies of much of his outgoing conservation correspondence, making it difficult for scholars to document his accomplishments.) Yet Lacey was the first member of Congress to make preservation and conservation truly central to his political agenda, an agenda that advocated federal intervention to curb what he saw as waste and misuse of both natural and historical aspects of the American scene.[19] His dedication to these causes during his congressional career was extraordinary and highly consequential. The scope of Lacey's efforts, of which the national park system was one of the chief beneficiaries, makes him an archetype through which to view historic and natural resource preservation at the turn of the nineteenth and twentieth centuries.

The breadth of Lacey's April 1900 antiquities bill, prepared at his request by his Interior Department allies and based on earlier bills and proposals, is evident in its opening paragraph, which authorizes the president to reserve by proclamation certain significant public lands. The lands were to be chosen "for their scenic beauty, natural wonders or curiosities, ancient ruins or relics, or other objects of scientific or historic interest, or springs of medicinal or other properties" that were considered desirable to protect in the public interest. These varied types of reserves were to be administered by the secretary of the interior. Lacey's bill went far beyond the limited, single-site Casa Grande statute and, unlike the Forest Reserve Act, focused on resource preservation rather than harvesting and extraction.

Moreover, the bill authorized the secretary of the interior to establish a "service" to manage and care for the protected areas. This service was to make certain that the reserves remain essentially unimpaired: It would ensure the "preservation from injury or spoliation of any and all objects therein of interest or value to science or history." And, recognizing the tourism potential of the reserves, the bill authorized the service to provide for the "accommodation of visitors," one of the few specific references to tourism in the Antiquities Act legislative campaign.

To protect the reserves' scientific knowledge base, Lacey's bill called for a research permitting process, plus penalties for vandals and looters. First, the permits would limit the "examination, excavation,

and gathering" of artifacts and other objects of interest to those who were "properly qualified," as determined by the secretary of the interior. Conversely, those who would "appropriate, injure, or destroy any game, fish, timber, or other public property therein, or injure or destroy any caves, ruins, or other works or relics" were to be subject to possible fines or imprisonment. Overall, the Lacey bill of 1900 included much of what anthropologists, national park proponents, and other preservationists would seek to legislate over the next 16 years for federal preservation of selected public lands.[20]

In addition to support from the Department of the Interior and other sources, Lacey had his own personal interests in natural and human history to draw from; and, given the broad impact of his preservation and conservation efforts, his career is worth examining. Having served in the United States Army during the Civil War, and afterwards practiced law (he became a specialist in railroad law), Lacey won a seat in the U.S. House of Representatives in 1888, entering office the following year. Except for one term when he was not re-elected (1891–1893), he remained in Congress until early 1907, chairing the House Committee on Public Lands for 12 years beginning in 1895 and using this influential position to further his conservation agendas.[21]

Regarding the out-of-doors, Lacey had none of the rough-and-ready ways of the conservationist Theodore Roosevelt. Instead, he seems to have possessed a kind of low-keyed, yet decided, interest in nature. Lacey's essays and speeches often reveal strong aesthetic feelings about landscapes, plants, animals, and other aspects of the natural world. Many such statements typified the sentimental, romantic nature rhetoric of the times, while also connecting directly to his patriotic sentiments and conservation concerns. A hunter and a lover of birds, for two decades Lacey also corresponded occasionally with Louis H. Pammel, one of Iowa's most distinguished biologists and a leading figure in the state's conservation movement. Such factors likely helped nurture Lacey's long-time commitment to protecting aspects of the natural world, which, with his legal knowledge and political acumen, he was able to help transform into statutory law.[22] Also, as a patriotic Union veteran, Lacey favored preserving and memorializing the Civil War battlefields and cemeteries. And, in line with his conservation interests, he sought to preserve other remnants of the human past, especially southwestern archeological sites.

Although Lacey's Progressivism was pretty much limited to conservation and public land issues, his efforts covered a range of natural and historic resource concerns that gained widespread support during the Progressive Era. The conservative congressman from a small town in Iowa influenced congressional policy on such important matters as national forests, national wildlife refuges, national parks, nationwide bird and game protection, and preservation of significant historic, archeological, and paleontological sites. At the time that he introduced his 1900 antiquities bill, however, Lacey's growing reputation as a conservationist rested almost entirely upon his repeated advocacy for laws protecting the country's natural resources.

Even in his freshman congressional term, Lacey had helped draft the Forest Reserve Act, an indication of his willingness to set aside certain public lands and place

restrictions on the disposition and use of those lands. His work on this act also involved him with two precedents that would bear directly on his later efforts to enact an antiquities protection law: first, using presidential proclamations as a means of determining the use of certain public lands; and second, placing no specific limits on the size of individual reserves.

Lacey intensified his conservation efforts upon returning to Congress in 1893. He supported the setting aside of areas for protection of bird and game populations that would ultimately bring about the national wildlife refuge system. As part of this effort, Lacey aggressively backed an 1894 law that strengthened wildlife protection in Yellowstone National Park, where the declining bison population was of special concern. The following year, he gained the chairmanship of the House Committee on the Public Lands.[23] Then, in 1900, after years of persistent politicking by Lacey, Congress passed his bird and game protection act, which remains today a major cornerstone of wildlife protection in the United States. President William McKinley signed it into law on May 25, about a month after Lacey introduced his first antiquities bill.

As with the Antiquities Act that would come later, this highly significant bird and game law became commonly known as the "Lacey Act" in recognition of the congressman's determined efforts to gain its passage. It is still widely referred to by that designation. Knowledgeable about interstate commerce through his extensive work in railroad law, Lacey made use of the federal government's constitutional authority over interstate commerce. The statute outlawed the almost unbelievably massive slaughter of birds and game for commercial shipment (mainly for the restaurant and millinery markets) across state boundaries whenever the animals were killed illegally under state law. Congressman Lacey considered the bird and game law to be one of his most important accomplishments.[24]

The act came in response to the dramatic population decline of several American species, most prominently the bison and the passenger pigeon. The bison survived, perhaps partly through Lacey's efforts, but the passenger pigeon did not. The renown of this bird species and the scientific and historical significance of its extinction make it especially illustrative of the bird and game concerns that Lacey shared with many Americans, including President McKinley and a majority of the Congress. The passenger pigeon population is estimated by modern-day experts to have been two to three *billion* during the early nineteenth century. This attractive, varicolored species amounted to perhaps as much as 25 to 40 percent of all birds in what is now the United States, and may have been the most populous bird species ever to have existed. As Lacey feared, his bird and game law came too late for the passenger pigeon, and the last known member of this species died in 1914—a stunning symbol of the squandering of America's natural bounty. In a speech to the League of American Sportsmen in 1901, Lacey revealed the depth of his concerns about such waste and misuse of natural resources—about, as he put it, mankind's "omnidestructive" ways. If such destruction continues, he warned, the world would become "as worthless as a sucked orange."[25]

In the 1890s, Lacey supported the establishment of the only large national parks created during that decade. In 1890, the House passed the Sequoia and Yosemite bills without objection; and, in 1899, it

passed the Washington National Park bill with Lacey's clear support, including his amendment to change the park's name to Mount Rainier. It was, however, the following year, 1900, that marked a turning point for the congressman regarding national parks. Backed by Interior Department officials, Lacey promoted his own national park proposals, beginning with the Petrified Forest in eastern Arizona Territory, with its extensive aggregation of fossilized prehistoric trees. The park was intended to cover 41,600 acres, more or less. In statements made both early and late in his Petrified Forest efforts, Lacey denounced "reckless tourists" who had used dynamite to blast out souvenirs of petrified wood, and condemned the "genius of greed" that would destroy the ancient forest whenever "some use can be found that will transform it into money." He believed that "[n]othing short of permanent reservation by law will preserve [the forest] from destruction."[26]

Late in 1900, Lacey introduced another national park bill, this time seeking to preserve about 153,000 acres of the Pajarito Plateau, located west of Santa Fe, just beyond the Rio Grande. In this effort, he was again heavily influenced by Interior officials, but also by the New Mexico-based archeologist Edgar Lee Hewett, whom he met in Washington sometime in 1900. Hewett had an intense interest in preserving the vast array of archeological sites on the Pajarito, and he had begun building alliances with educators, anthropologists, and Washington bureaucrats and politicians, among them Lacey. Still a college president and teacher, Hewett was soon to become a full-time archeologist and would prove a crucial ally in Lacey's antiquities legislation efforts, which helped make the New Mexican a major figure in the fermenting southwestern archeological world. When introducing his Pajarito bill, Lacey quoted a statement of Hewett's that urged protection of the plateau's archeological sites and asserted that the "wanton vandalism" that had occurred there in recent months surpassed any previous such destruction in the region. Although neither the Pajarito Plateau nor the Petrified Forest proposals made any headway in Congress, officials in the Interior Department used their land withdrawal strategy to provide temporary protection for both areas.[27]

Already by the end of the nineteenth century the federal government had made its first truly substantial commitments to historic preservation through legislation on Casa Grande and the Civil War battlefield parks. Lacey had no chance to vote on the 1889 act that granted the president proclamation authority over Casa Grande, as his first session in Congress came after the act had been signed into law. Yet Lacey, an ardent supporter of veterans' causes, was in Congress when each of the first five national battlefield park proposals came to a vote during the 1890s. Having risen during the Civil War to the rank of brevet-major in the army (for the rest of his life he was known as "Major Lacey," a rank also noted on his gravestone), he later became a charter member of the local Iowa chapter of the Grand Army of the Republic, the largest and most powerful Union veterans' organization. The Grand Army's membership reached more than 400,000 by 1890 and greatly influenced the agenda of the Republican Party. Republican presidents from Ulysses S. Grant through William McKinley were members of the Grand Army, as were many older members of Congress from the north-

ern states, Lacey included. The organization promoted pensions and other concerns of Union army veterans that Lacey supported. In 1880, the Grand Army gained dominance within the Gettysburg Battlefield Memorial Association, which oversaw the battlefield before it became a federally administered national military park. Under the leadership of the Grand Army of the Republic, Gettysburg Battlefield became extensively developed and monumented, thereby setting the standard for treatment of the early national battlefield parks.[28]

Records are inadequate to state definitively that Lacey actually voted for all of the five Civil War military parks created in the 1890s. However, his support is clear regarding Vicksburg, and nearly so with Chickamauga-Chattanooga. And it is strongly inferred from his ties to the Grand Army, his conservation and preservation efforts during that decade, and his interest in the battlefields as expressed in his speeches. Almost all of the battlefield legislation was passed with no record of votes made by individual members of the House of Representatives. Even in the one instance when an actual count was recorded—for the 1890 House vote on the Chickamauga and Chattanooga battlefield park—the final tally was "ayes 120, noes 8," but no list of each congressman's vote was provided. (The fact that Chickamauga was a Confederate victory and Chattanooga a Union victory meant that the bill gained strong support in Congress from both Southerners and Northerners.) It is difficult to conceive that Congressman Lacey, a conservationist and Civil War veteran dedicated to supporting his fellow veterans, would have been among the eight individuals who voted against preserving the battlefield. For the 1899 House vote on Vicksburg National Military Park, the record states only that "in the opinion of the Chair, two-thirds having voted in the affirmative, the rules were suspended and the bill was passed." Records of votes on other battlefield parks provide even less detail. However, Lacey's support for legislation establishing the Vicksburg battlefield park is strongly suggested by at least four resolutions he presented to the House Military Affairs Committee on behalf of his constituents for passage of the Vicksburg bill. And, on at least one occasion before the House, in 1898, he petitioned the same committee for Iowa troop positions to be marked at Gettysburg Battlefield.[29]

Lacey's dedication to the battlefield parks was evident in an 1895 address to Iowa veterans (given a few months after Gettysburg National Military Park had been established), when he stated that the battlefield parks "will teach while time lasts," with each generation passing this legacy down to the next generation. In a comment that resonates with early twenty-first century preservation rhetoric, Lacey added that in "commemorating the past, we are guarding safely the heritage of the future." Speaking in 1906, the congressman asserted that the same "public sentiment" and "spirit" that preserved the country's national parks had brought about the preservation and memorialization of the battlefields. And in an address given at Shiloh National Military Park in April 1912, on the fiftieth anniversary of the battle, and entitled "Why Do We Create Battlefield Parks and Erect Monuments Thereon?", the former congressman proudly claimed that, as at Shiloh (by then encompassing well more than 3,000 acres), it took *Americans* to make "a memorial or monument of [a] battlefield itself." Having visited famous historic sites during his extensive travels in America and

abroad, Lacey stated his conviction that "places where great issues have been fought out are worthy of special commemoration."[30] Lacey's support for the military parks and the Antiquities Act (as well as the support given by many of his congressional colleagues and other allies) reflects the political and intellectual connections between federal preservation of the Civil War battlefields in the East and South and antiquities in the Southwest.

Building on his experiences with an array of conservation and preservation causes, Lacey entered the struggle for antiquities preservation. Although his April 1900 antiquities bill died in Congress, he expressed his continuing interest in antiquities by accepting Edgar Lee Hewett's invitation in the summer of 1902 to visit the archeological sites on northern New Mexico's Pajarito Plateau. Lacey recalled that Hewett urged him to "see for myself the necessity and propriety of the enactment of a law to protect and preserve the ancient aboriginal ruins of the Southwest." An inveterate tourist, Lacey especially valued the educational aspects of travel, and he wrote home detailed accounts of his visit to the Pajarito, including line drawings of particular features that interested him. In an account of his trip to the Pajarito written much later, Lacey recalled how his experiences, in effect, strengthened his resolve to gain statutory protection for ancient sites and for "scenic and scientific" places such as Petrified Forest and Mount Olympus (the latter in the state of Washington). Certainly, his growing friendship with Hewett greatly benefited their common cause of antiquities protection. Meanwhile, Lacey backed two other national park proposals, Crater Lake and Wind Cave, which were established in 1902 and 1903 respectively.[31]

Then, early in 1904, Lacey reintroduced his broad antiquities bill from 1900, again with backing from the Interior Department. His was one of several antiquities proposals made in the early part of that year. As before, Lacey's bill was comprehensive, calling for presidential proclamations to create protected areas related to human and natural history, and for the accommodation of tourism and a "service" to administer these reserves. It gained little support compared with that given to a similar, but less expansive bill sponsored by Senator Henry Cabot Lodge of Massachusetts and Congressman William Rodenberg of Illinois. Well-organized supporters, including nationally known anthropologists and educators, pushed the Lodge-Rodenberg proposal further toward passage than any previous antiquities bill.[32]

Edgar Hewett's role in promoting antiquities legislation increased significantly during the politicking over the Lodge-Rodenburg proposal. In September 1904, responding to a request from the Department of the Interior, the New Mexico archeologist prepared a study of "all the districts of the Southwest that are rich in prehistoric remains"—the most informative overview of southwestern archeological areas to reach Interior officials and Congress during the entire antiquities legislative drive. These places, Hewett wrote in his study, could become "a perpetual source of education and enjoyment" for American and foreign travelers. In a statement accompanying the overview, Hewett urged not just archeological preservation, but also general legislation providing for the creation and administration of reserves in areas that had abundant "historic and scientific interest and scenic beauty." The inclusion of the phrase "scenic beauty" (wording not unlike that in Lacey's

1900 and 1904 bills) suggests that Hewett may have been willing to accept a broader focus beyond antiquities preservation, and was perhaps open to accommodating tourism, as Lacey had twice officially proposed. In early 1905, support for the Lodge-Rodenburg proposal diminished partly because of the bill's potential to intensify bureaucratic rivalries over control of antiquities. With Hewett emerging as one of its most effective critics, the bill failed in Congress.[33]

Frustrated by the lack of progress, the American Anthropological Association and the Archaeological Institute of America jointly appointed Hewett to chair a new committee created to promote antiquities legislation. Hewett responded with a revised and less complex antiquities bill, intended to reduce opposition from various interests. Lacey introduced it in early January 1906. Hewett's awareness of the concerns of the archeological profession for a law that would provide more effective bureaucratic control of archeological sites and research, combined with Lacey's adept congressional skills, helped assure the two professional associations and Congress that the bill properly addressed the protection and preservation issues at hand, and it was passed.

The wording of the bill was Hewett's, except for a few modifications, perhaps at least one by Lacey. There is some indication that the congressman may have insisted on including "scientific" interest as one of the characteristics for which public lands could be preserved under the act in order to boost the chances that the Petrified Forest would be proclaimed a national monument, given that Lacey's quest to make that area a national park had failed. On June 8, 1906, President Theodore Roosevelt signed the antiquities bill into law, and it soon bore the honorary designation of the "Lacey Act." Shortly after passage of the act, Lacey wrote to W.H. Holmes, then head of the Bureau of American Ethnology: "I appreciate your friendly statement in regard to my work for the Archeological Bill. I have no doubt this law can be so construed as to protect substantially all the important ruins yet remaining on the public lands in the Southwest." Indeed, it did much more than that.[34]

Considering Lacey's many preservation and conservation interests, the bird and game law and the Antiquities Act are his two most significant contributions, and both bear the "Lacey Act" designations. These twin designations pay tribute to the Iowa congressman for his foresighted leadership and his persistence in advancing the federal government's emerging efforts to preserve natural and historic features of special value to Americans, including the great archeological sites of the Southwest.

In the realm of historic and natural preservation on the nation's public lands, no law had ever approached the scope of the 1906 Antiquities Act. Much more broadly than with individual national park enabling legislation, the act made explicit that preservation of historic, archeological, and other scientific sites on lands controlled by the federal government was indeed a federal responsibility. Somewhat analogous to the government's concern for protecting private interests on private property, the national government accepted its obligation to protect the broad public interest on public lands, in this instance at places containing important remnants of the American past and significant scientific areas. The act also made it clear that, unlike the forest

reserves, the primary value of such special places lay not in their commercial value—in economics, sustainable harvesting, and profits—but in their contribution to education and knowledge for the general public good through research conducted and information disseminated by scientific and educational institutions.[35]

In what was from the first its most prominent section, the act authorized the president to reserve special places located on lands controlled by the federal government: to "declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest." These places were to be designated "national monuments," a term Hewett devised, which distinguished them from national parks.[36] While it employed the same proclamation procedure that had been used to establish the Casa Grande Ruin Reservation, it gave the president far greater authority, moving from the one-site authority for Casa Grande to placing no limits on the number of sites presidents could set aside. It thus significantly advanced the preservation authority of the Executive branch, from not only *managing* preserved places such as archeological sites, battlefields, and national parks, but also *establishing* areas to be preserved. The act's inclusion of the phrase "scientific interest" opened the way for presidential proclamations that ultimately would set aside a huge array of scenic national monuments having important scientific values. (In 1978, the "scientific interest" wording of the Antiquities Act would help provide statutory authority for President Jimmy Carter to proclaim national monuments in Alaska that added more than 40 million acres to the national park system.)[37]

The act also mandated who could—and who could not—work with archeological sites on all federally owned or controlled lands. It authorized a formal permitting process to restrict research and examination of sites (which would include excavation and the collection of objects) to institutions deemed "properly qualified." Investigations were to be permitted only for the purposes of benefiting "reputable museums, universities, colleges, or other recognized scientific or educational institutions," with the intent of "increasing the knowledge of such objects." The objects were to receive "permanent preservation in public museums." In contrast, the law criminalized the disturbance of sites on federally controlled lands without an official permit and provided penalties and fines for violators.

Soon after passage of the act, President Theodore Roosevelt began to proclaim national monuments, with many of the early ones converted from withdrawals made by the General Land Office. Some of the monuments protected scientifically important natural areas, such as Devils Tower in Wyoming (America's first national monument), Petrified Forest in Arizona Territory, Natural Bridges in Utah, and Muir Woods in California. (Muir Woods was created from lands donated to the federal government by William Kent, a wealthy Californian destined to enter Congress and play a major role in creating the National Park Service.)

Early historical and archeological monuments included El Morro and Chaco Canyon in New Mexico Territory and Montezuma Castle and Tumacacori (an old Spanish mission and associated Indian sites) in Arizona Territory. Despite the overwhelming emphasis on archeological areas during the legislative campaign, the larger portion

of these early national monuments was set aside for natural, or "scientific," importance. And, most of these early monuments were rather small—but not all of them. Chaco Canyon, for example, was 10,643 acres, while the Petrified Forest National Monument was initially proclaimed at 60,776 acres.[38]

Both of these monuments touched on the important question of *size*—the congressional intent regarding the areal extent of individual national monuments. In fact, the final wording of the Antiquities Act had been intended to alleviate concerns (mainly from western politicians, a number of whom sat on Lacey's public lands committee) that presidents might proclaim too many national monuments too great in size. In light of past experience with the forest reserves, critics of the Antiquities Act believed that the monuments could take even more of the public domain out of the reach of private ownership or use. In the act's language, the use of the word "objects" in indicating what might be declared a national monument ("objects of historic or scientific interest") did not mean something very small like an Indian pot or other hand-held item. Instead, the term "national monuments" is variously characterized in the act as "landmarks," "structures," and "parcels of land"—all indicating something far larger than a hand-held object.

From the very beginning, size—the extent of lands to be set aside—was an issue that antiquities advocates had to confront. During the legislative campaign, the proposed size limit crept up from 320 acres, to 640 acres, to the final wording—which Hewett purposely made vague—that the monuments would be "confined to the smallest area compatible with proper care and management of the objects to be protected. . . ." An open discussion about size occurred on June 5, 1906, just before the bill passed the House of Representatives. Congressman John Stephens of Texas, apprehensive that too much public land would be, as he stated, "locked up" by the act, asked Lacey if the antiquities bill would, like the Forest Reserves Act, keep large tracts of public land under permanent federal control. Essentially avoiding the heart of the question, Lacey replied, "Certainly not. The object is entirely different. It is to preserve these old objects of special interest and the Indian remains in the pueblos in the Southwest. . . ."[39]

No evidence has been found to indicate that Lacey, the leading congressional proponent of the Antiquities Act, protested the size of any of the large, early national monuments. Instead, using as an example the congressman's Petrified Forest National Park proposals, he had sought to preserve an area just over two-thirds the size of what Theodore Roosevelt would proclaim for Petrified Forest National Monument in December 1906. After the Antiquities Act had passed, but before the president signed this proclamation in December, Lacey reiterated his intent to establish a national park at Petrified Forest, a goal he had "endeavored for six years" to attain, and which he was sure Roosevelt would sign. He recounted his efforts to gain majority support through three consecutive Congresses and lamented the crippling indifference of the Senate Committee on the Public Lands. Then, several months after passage of the Antiquities Act, President Roosevelt proclaimed not only Chaco Canyon with more than 10,000 acres, but also Petrified Forest National Monument—the first federal pale-

ontological preserve—with 60,776 acres, later reduced to 25,625 following a closer survey of fossilized trees in the area. Surely even Roosevelt's *initial* and extensive Petrified Forest proclamation was satisfactory to Congressman Lacey, who had sought to create a national park of about 41,600 acres, approximately two-thirds as large.

As for Roosevelt, he had few, if any, misgivings about size. In early 1908, he proclaimed the huge, 808,120-acre Grand Canyon National Monument. Then, in May 1909 he proclaimed the 629,200-acre Mount Olympus National Monument in Washington state. These early and vast proclamations set a precedent (upheld in 1920 by the U.S. Supreme Court in a Grand Canyon case) that would influence future presidents' willingness to create extensive national monuments. Furthermore, in 1916, a portion of the Pajarito Plateau would be proclaimed by President Woodrow Wilson as Bandelier National Monument, at more than 23,000 acres. Earlier, Congressman Lacey's proposals for a Pajarito National Park had sought to set aside a much larger area (approximately 153,000 acres), another indication of his willingness to preserve very large tracts of land.[40]

Confronted by the rising Progressive movement in Iowa, Lacey suffered defeat in the November 1906 congressional race. With his local constituency, other issues trumped conservation. During the ensuing years, Lacey continued to lobby sportsmen's organizations and his contacts in Congress to enact a migratory bird protection law. Also, as evidence of his genuine personal interest in Southwest archeology, in the summer of 1911 the former congressman returned to New Mexico's Pajarito Plateau to attend an archeological field school conducted by his friend, Edgar Lee Hewett.[41] Just over two years later, in late September 1913, Lacey died suddenly at his home in Oskaloosa, Iowa.

In the early 1970s, former National Park Service Director Horace M. Albright recalled his appreciation—and that of his predecessor Stephen T. Mather—for "the significance and importance of the Lacey Antiquities Act" and its enrichment of the national park system. Albright added that Lacey "was far ahead of his time in demanding protection for prehistoric sites and artifacts on the public domain."[42] Today, Lacey's name is best known by the individuals, organizations, and bureaucracies that oversee the nation's bird and game laws. Yet his legacy also includes the statutory authority for enormous increases to the national park system and the protection and preservation of significant places on other lands under federal control. In addition, he helped lay the groundwork for the nationwide development and perpetuation of historical, archeological, and scientific education and research programs. Despite this, John F. Lacey has remained unheralded by, and in fact virtually anonymous to, both the National Park Service and the public at large.

Mesa Verde National Park

In February 1901, during the very early stages of the legislative drive for the Antiquities Act, a bill was introduced to create a Colorado Cliff Dwellings National Park (later changed to Mesa Verde). The bill failed, and for the next several years proposals for broad antiquities protection and a Mesa Verde park followed more or less parallel tracks, with repeated failures in Congress. In 1906, however, in a sudden burst of legislative energy, both bills were passed

and signed into law by Theodore Roosevelt—the Antiquities Act in early June, followed by the Mesa Verde statute on June 29.[43] Backed by Colorado politicians and determined, politically enterprising women's organizations, Mesa Verde became the first area to be designated a "national park" because of its archeological values. (Indeed, it remains the only "national park" established solely for archeological significance.)

Curiously, these two major preservation laws contained significant redundancies. To be sure, the Antiquities Act included the all-important presidential proclamation authority to create national monuments, whereas the Mesa Verde Act created a single archeological national park. However, in two other key sections, the Mesa Verde statute virtually replicated the antiquities law. In one of those sections, the Mesa Verde Act provided for research and education through a federal permitting process to allow universities, museums, and other educational institutions to conduct research in the national park. In another section, it outlawed vandalism and looting in the park. Approved only three weeks earlier, similar mandates in the Antiquities Act had applied to *all* lands controlled by the federal government, and thus to the lands that would soon be included in Mesa Verde National Park. The Mesa Verde Act's redundant sections seem mainly to have reaffirmed and strengthened sections of the Antiquities Act within the new park. The final wording of both acts reflected close philosophical and policy ties, with clear and specific mandates for preservation, research, and education.[44]

Yet the Interior Department's newly arrived supervisors of Mesa Verde quickly and aggressively sought to accommodate public use of the park, thereby beginning a significant transition away from the Antiquities Act's dominant concerns for archeological preservation, research, and education. In contrast to the infrequent reference to tourism as a rationale for the Antiquities Act, Mesa Verde's emerging public appeal had been a principal factor in the park's establishment. Even as early as 1889, a suggestion was made that Cliff Palace be "converted into a museum and filled with relics of the lost people and become one of the attractions of southern Colorado." This never came to pass, but soon the ancient structures set in cliff-side alcoves were steadily attracting small numbers of visitors, and Mesa Verde's supporters more fully recognized the tourism potential.

In the mid-1890s, the Colorado Federation of Women's Clubs became intensely interested in preserving Mesa Verde's rich archeological heritage. Their plans for the park included development for tourism that was typical of the several large scenic national parks then in existence, including roads, trails, and hotels. Railroad companies also took interest, and communities near Mesa Verde vied to become the main tourist hub whenever the rush began. On the other hand, an impressive number of anthropologists from leading universities, museums, and associations lobbied for the preservation of Mesa Verde's ancient sites, just as many of them campaigned for passage of the Antiquities Act. Thus, unlike the lobbying for the Antiquities Act, strong support for Mesa Verde came from both preservation- and research-minded anthropologists and their allies, and from tourism proponents.[45]

However, neighboring Indians, the Ute Mountain Ute tribe, had serious concerns of an altogether different sort when it was discovered that a number of the major cliff

dwellings were not actually within the proposed boundaries of the new park, but on their tribal lands. In the spring of 1906, not long before the Mesa Verde act passed, Edgar Lee Hewett had participated in a survey of Mesa Verde sites. He then suggested that a clause be added to the draft bill, which Congress and President Roosevelt soon approved. Intended to resolve the situation with the Ute lands, the clause allowed the Interior Department to administer "all prehistoric ruins that are situated within five miles of the boundaries … on Indian lands and not on lands alienated by patent from the ownership of the United States." The Utes responded that they had preserved the sites simply by leaving them alone, but their concerns were overridden by Interior officials and other national park proponents. In 1911, Interior Department representatives pushed through a land-swap agreement with the Utes that confirmed the major sites to be within expanded park boundaries. In 1913, President Taft signed an act to that effect.[46]

Even though interest in the tourist trade was an important factor in the legislative drive, the wording of the 1906 Mesa Verde Act contained no clear indication that tourism was intended for the new park. The statute termed Mesa Verde a "public reservation" and a "public park," but went no further. It contained none of the specific language regarding on-site public enjoyment typical of earlier national park enabling legislation, beginning with Yellowstone in 1872 and including parks created just before Mesa Verde. For instance, laws creating Crater Lake and Wind Cave national parks, in 1902 and 1903 respectively, spoke directly to the matter of the "accommodation of visitors" and elaborated on what that might include.[47]

The absence of specific congressional authority for tourism accommodations in Mesa Verde did not go unnoticed. The first superintendent reported that the act creating the park was "defective" and lacked any provision for the park to provide for the "entertainment and accommodation of tourists." His remarks were echoed by the Interior Department and by members of Congress. A special "Memorandum" at the end of a House bill to correct this problem confirmed that "no authority" existed to provide for the "accommodation and comfort of visitors to the park." Nevertheless, preparations for public access and enjoyment at Mesa Verde continued essentially as if there were no deficiency. The superintendent and his staff, with approval of the Interior Department, let contracts for surveying and constructing a wagon road to the mesa top. The park hired rangers to protect the archeological sites and guide visitors through them, and initiated restoration and stabilization work on the ancient structures to better interpret them to the public.[48]

The interest in tourism to the park was closely tied to educating the public about archeology. This was particularly apparent when in May 1908 archeologist Jesse Walter Fewkes began his work at Mesa Verde, on assignment from the Smithsonian Institution and having already done stabilization projects at Casa Grande. Similar to his efforts at Casa Grande, Fewkes excavated, stabilized, and repaired portions of Mesa Verde's Spruce Tree House, which, with a campground nearby, was usually the first of the famous sites that visitors encountered. In the introduction to his report entitled "Educational Ideals" (included in the superintendent's report to Washington), Fewkes discussed his restoration work and stated that the "impressions which a visitor

obtains from [the site] are lasting, and … must be of great aid in the interpretation" of other sites that would be encountered in Mesa Verde. Overall, he sought to make Spruce Tree House "more attractive to visitors and to increase its educational value." Seemingly unaffected by any deficiency regarding on-site public use in the 1906 legislation, Fewkes planned a similar project to help visitors understand Cliff Palace.[49]

On June 25, 1910, Congress finally corrected the statute's deficiency with a brief clause in a general appropriations act. It stated merely that "leases and permits" may be granted "for the use of the land or development of the resources," provided that such "leases or grants" not "exclude the public from free or convenient access" to the ruins. For the superintendent and everyone else, this seems to have put the issue at rest. With statutory authorization, progress on tourism accommodations in the national park, involving roads, campgrounds, and archeological site restoration, continued apace.[50]

The 1910 law confirmed Mesa Verde as a park in transition, moving from a congressional mandate much like the Antiquities Act, with preserved sites intended to be researched and protected, to also include the more typical national park concept that embraced both preservation and public use. Similar to the Antiquities Act, educational activities would serve the public good, first via research, then through museums and universities. But at Mesa Verde, education would also be *on-site*—in a national park setting near the ancient dwellings themselves. In such regards, Mesa Verde's legislation reflected the broader "double mandate" for preservation coupled with public use and enjoyment that Congress had declared for the earlier national parks. Its legislation thus foreshadowed the double mandate that Congress would employ when creating the National Park Service in 1916.

Colorado supporters had long lobbied to establish Mesa Verde as a national park, a designation that would give it high status and that had a proven record for attracting tourists, which could enhance the whole state's reputation as a travel destination. The designation "national monument" had not been used before passage of the Antiquities Act, so that it had no cachet, whereas the term "national park" had earned distinction in association with increasingly popular attractions such as Yellowstone and Yosemite.

Likely, supporters of both the antiquities and Mesa Verde bills could not have been absolutely certain which, if either, of the bills would become law. Thus, the proposal for a national park at Mesa Verde at least offered the possibility of protecting this famous archeological area should the broader antiquities legislative proposal fail in Congress. On the other hand, if the Mesa Verde bill had failed, and with portions of the area already withdrawn by the Department of the Interior, an excellent chance existed that with passage of the Antiquities Act President Roosevelt would have proclaimed Mesa Verde a national monument in order to preserve it permanently. It seems clear that proponents of both the Antiquities and Mesa Verde bills sought to maximize the chances that Mesa Verde would receive full federal protection.

Historic preservation and the 1916 National Park Service Act

It took a natural resource issue of epic proportions—the proposal to dam Yosemite National Park's magnificent Hetch

Hetchy Valley—to spark what would become a prolonged campaign to establish a central federal office to administer the national parks. In 1910, deeply disturbed by the Hetch Hetchy dam proposal, J. Horace McFarland, a widely influential horticulturalist and conservationist based in Harrisburg, Pennsylvania, who had previously lobbied for creation of a national parks bureau, began a more determined campaign for unified and efficient oversight of the parks that could defend them against dams and other adverse intrusions. The effort that McFarland initiated would culminate on August 25, 1916, when President Woodrow Wilson signed the National Park Service Act (usually referred to as the Park Service's "Organic Act"), officially creating the new bureau.

Before the National Park Service was established, the emerging national park system had no truly coordinated administration. McFarland was correct: The system existed only under a haphazard arrangement ("mixed up and inefficient management," as one high-level critic put it). As detailed in a later hearing before the House Committee on Public Lands, park superintendents reported to the "Miscellaneous Section" of the Interior Department's Office of the Chief Clerk, in Washington, which lacked the staffing and expertise to provide effective supervision and coordination of the parks. When President Wilson signed the Organic Act in 1916, the clerk's office had responsibility for 14 national parks, of which only Mesa Verde had been set aside for significance in human history. The office also oversaw about 20 national monuments, plus the Casa Grande Ruin Reservation (which would remain under Interior's General Land Office until 1918) and the Hot Springs Reservation in Arkansas, established in 1832 to protect natural spring waters for their medicinal purposes. Indicating yet further complications, McFarland expressed frustration that federally preserved areas were managed by three different departments—Interior, War, and Agriculture—with no uniform rules for managing the areas. This was true for historic and archeological, as well as scenic, national monuments such as Grand Canyon and Mount Olympus, both of which were then on U.S. Forest Service lands.[51]

Studies of the legislative history of the National Park Service Act have paid little attention to historic preservation matters; instead, they have focused mainly on efforts to establish a federal bureau that would provide efficient and coordinated management to preserve the scenic national parks and make them more accessible for public use and enjoyment.[52] Yet, broad historical and archeological issues were present from early in the legislative drive to create a national parks central office. At stake in the legislative campaign was the difficult question of bureaucratic control of historic sites: Should the proposed parks bureau have jurisdiction not only over the existing parks and monuments under the Interior Department, but also over the War Department's battlefield parks, national monuments, and other historic sites, as well as those national monuments, including archeological areas, controlled by the Agriculture Department's Forest Service? Moreover, leading proponents insisted that a national parks act contain a fundamental "statement of purpose" as a central mandate for managing the national park system. Yet during the legislative campaign, even with these important issues at hand, historic preservation played

a generally marginal role, always eclipsed by the compelling interest in the large, scenic national parks.

Horace McFarland's quest to establish a national parks bureau gained early support, and his influence reached to the highest levels. In December 1910, Secretary of the Interior Richard A. Ballinger, persuaded by McFarland, endorsed a new bureau, stating that the parks needed to be "opened up for the convenience and comfort of tourists and campers and for the careful preservation of their natural features." McFarland also anticipated presidential support, and in a December 1911 address, incorporated two months later in a special message to Congress, President William Howard Taft urged that "proper management" be given the national parks. Both of Taft's statements were aimed almost entirely at the large scenic parks.[53]

In the fall of 1910, McFarland recruited from the private sector a particularly influential supporter, his friend, the talented Frederick Law Olmsted, Jr., widely considered to be the nation's leading landscape architect. In Congress, Senator Reed Smoot of Utah and congressmen John Raker and William Kent of California provided critical support for creating an office to run the national parks. This small group was later joined by Stephen T. Mather, a wealthy, retired borax mining executive who had become a passionate champion of the parks. Mather brought in a publicist, Robert Sterling Yard, and a young assistant, Horace Albright, who had been working on national park matters for the Department of the Interior since arriving in Washington in 1913 and who had completed studies at the Georgetown University Law School. All of these enthusiastic advocates sought a continued alliance with Secretary of the Interior Franklin K. Lane, who entered office under President Wilson in 1913 intent upon establishing a central office for the national parks. Along with McFarland and Olmsted, this highly influential group comprised the chief "founders" of the National Park Service. With support from many others, they provided the stimulus, influence, leadership, and persistence to carry the day politically. Mather, appointed as Secretary Lane's top assistant for national parks, would spearhead the legislative campaign. Among the founders, Horace Albright appears to have had the strongest personal interest in American history.[54]

In marked contrast to the earlier Antiquities Act legislative drive, backed mainly by prominent educators and anthropologists, the efforts to establish a national parks bureau enjoyed especially close ties to the tourism industry, including major railroad companies, the American Automobile Association, and state automobile associations. The founders drew support from such business-oriented groups, which were focused overwhelmingly on the need for a new office to provide improved, efficient management of the scenic national parks and ensure public access and enjoyment. This direct link between the tourism industry and national parks reflected economic and utilitarian motives that were intertwined with an altruistic sense of serving the greater public good—a link that had existed from the beginning of the movement for large, scenic parks. As the archetypical example, the Northern Pacific Railroad Company was the principal lobbyist for the Yellowstone legislation of 1872. It then

helped develop the park for tourism (for the "benefit and enjoyment of the people," as stated in the 1872 act), from which the company hoped to profit.[55]

Tourism proponents found strength in numbers at the three national park conferences held during the legislative campaign. For the first conference, held in Yellowstone in 1911, the list of attendees indicates that general tourism advocates together with concessionaires already doing business in the parks had more delegates at the meeting than did the Department of the Interior, including those from its Washington office and the national parks. Tourism and the scenic national parks dominated the agenda of the first conference. National monuments were discussed; but, as the head of the General Land Office noted, the majority of the monuments were natural, rather than historical, and they seemed to be smaller versions of national parks. Of all the areas set aside because of human history, only Mesa Verde got much attention, which tended to be perfunctory. Similar to the 1911 meeting, attendees at subsequent park conferences in 1912 and 1915 placed great emphasis on the scenic national parks and on public use and enjoyment.[56]

As passage of the National Park Service Act grew nearer, the early large national parks had proven that they could attract the touring public, who were enticed in part by the promotional efforts of railroads, automobile associations, and local tourism backers. And with the campaign intensifying, nationwide publicity on the parks increased, boosted by the tourism industry, major coverage in the *National Geographic* and *Saturday Evening Post*, and the publicity efforts of Robert Sterling Yard, Mather's publicist.[57] Even with nationwide attention to the parks, proponents remained vigilant and were determined to ensure that the national park concept succeed.

It comes, then, as no surprise that, like the national park conferences, the congressional hearings on the proposed new bureau held in 1912, 1914, and 1916 reflected the dominant interest in continuing the development of the large national parks for tourism—while also revealing a general lack of interest in the lesser-known historic and archeological areas, with the exception of Mesa Verde. Repeatedly these hearings focused on the pragmatic necessities for effective management of individual parks, plus a central office for coordinated oversight of an expanding system of parks. Specific topics of discussion included roads, bridges, automobile traffic, trails, campgrounds, park entrance fees, concessionaires, hotels, sanitation, sewage treatment, livestock grazing, the need for engineers and "landscape engineers" (landscape architects) in parks, the need for foresters to protect park scenery from devastating fires, the importance of coordination among parks, and funding, salaries, and positions for the new bureau.[58]

Meanwhile, following J. Horace McFarland's initial maneuvers in 1910, Reed Smoot, chair of the Senate Committee on Public Lands, introduced a bill in January 1911, and another the following December, for establishing a national parks bureau. Significantly, Smoot's December bill called for the new bureau to have extensive historic preservation responsibilities. The following year, John Raker, a freshman congressman, introduced a parks bureau bill similar to Smoot's. The Smoot and Raker bills both provided that the new service would control not only the national

parks and monuments under the Department of the Interior, but also those lands "*reserved or acquired by the United States because of their historical associations*." This provision contained no exceptions.[59]

This broad "historical associations" mandate would have handed the new bureau a far-flung domain of historic and archeological sites. Not only would the bureau administer Mesa Verde and the national monuments already under the Interior Department, but also the War Department's military parks, national monuments, and other historic sites, plus the Agriculture Department's archeological national monuments managed by the U.S. Forest Service. Although McFarland seems not to have been concerned about historic areas, the "historical associations" wording was much in line with his efforts to consolidate federal park and monument management nationwide. And repeatedly through the end of 1915, Smoot and Raker kept their "historical associations" wording intact. It appears in bills they introduced in December 1915, as late as about eight months before passage of the National Park Service Act.[60]

In the meantime, Horace Albright, since moving to Washington in 1913, had broadened his interest in American history to include the *places* where history occurred. He often spent his personal time exploring sites in and near the nation's capital, including Civil War battlefields and fortifications. In late 1915, farther afield on his first visit to Chickamauga and Chattanooga National Military Park, Albright was deeply impressed by this War Department site, as well as by the analysis of the battles given by two Confederate veterans who guided him around the park. These experiences raised his awareness of the fate of sites where significant human events had played out, particularly the battlefield parks.

Immediately after leaving Chattanooga, Albright wrote to Stephen Mather asking, "Why should a military department be in charge of lands which are predominantly an attraction for all people?" He added that he had "real determination to plunge into this thing with the War Department. . . ." What is more, his epiphany fit perfectly with the broad "historical associations" proposal still included in the Smoot and Raker bills. Years later, Albright would recall his visit to Chickamauga and Chattanooga, stating that he "never forgot that day," and he was "sure that it marked the germination" of his idea that "battlefields and other historic places" should come under control of the proposed National Park Service.[61]

By early 1916, however, this possibility lay out of reach. Albright was keenly aware of the bills before Congress, as creation of a national parks bureau was then his overriding concern. And the pending legislation had brought him in steady contact with members of Congress, one of whom, William Kent, hosted frequent meetings (in his red-brick Washington mansion at F and 18th streets) with the founders and other key strategists for the proposed service. Surely with Albright almost always in attendance, the implications of the broad "historical associations" responsibilities included in the bills was a topic of discussion. Yet the founders included powerful, influential advocates in and outside Congress who had spent much time and energy promoting the creation of a new bureau dedicated to managing and protecting the large, scenic national parks. Even Mather, Albright's close friend and mentor, seems not to have had a particularly strong interest in the bat-

tlefield parks, national monuments, and other historic places. Albright would come to refer to the national monuments as "orphan monuments," which, like the battlefield parks, received insufficient attention and interest in his opinion.[62] Only in his mid-twenties and a newcomer to Washington politics, Albright lacked the status and political contacts—and thus the persuasive power—that most of the other founders enjoyed. Whatever arguments in support of broad historic preservation responsibilities that he (and perhaps others) may have made failed to convince.

Indeed, throughout the legislative campaign there were many voices urging protection of the large, scenic parks, but no truly influential advocates repeatedly and emphatically speaking out for historical parks and monuments. It is significant that while McFarland, Olmsted, Smoot, and Raker had been involved with the drafts that included the "historical associations" wording, none of these founders provided much support for historical parks and monuments, either rhetorically in congressional hearings, at conferences, or in written correspondence. And in the political give-and-take as passage of the National Park Service Act approached, the Smoot-Raker "historical associations" mandate providing that the new bureau control the broadest possible array of federally protected historic sites became a kind of pawn: It could be traded off if necessary to achieve passage of the bill.

In fact, a complete turn-about occurred: The final wording of the 1916 National Park Service Act did not include the all-inclusive "historical associations" mandate, and the act changed nothing regarding existing bureaucratic territory. The National Park Service would manage only those historical and archeological national monuments, plus Mesa Verde—the very responsibilities previously carried out by the Office of the Chief Clerk within the Department of the Interior.[63] Maintaining the territorial status quo that left the monuments and other historic sites under separate departments seems to have resulted from compromises made with the intent of deflecting existing or potential opposition to creating a national parks bureau that might be given control of special places that the War and Agriculture departments did not want to lose.

The War Department, especially with its widely known Civil War military parks, was in a strong position to discourage any challenge to its jurisdiction over historic sites. It also controlled two small national monuments: Big Hole Battlefield in southwestern Montana, the site of an 1877 conflict between the United States Army and the Nez Perce Indians; and a one-acre memorial to the Portuguese explorer Juan Rodriguez Cabrillo on the hills above the San Diego harbor. In addition, the department also oversaw sites in the District of Columbia (such as the Washington Monument) plus the Statue of Liberty located on the grounds of Fort Wood in the New York harbor and, in Montana, the National Cemetery of Custer's Battlefield Reservation—surely a site guaranteed to be nonnegotiable.[64]

Although the passing of time, the death of many Civil War veterans, and the ongoing war in Europe had somewhat diminished the War Department's concern for the battlefield parks, it nevertheless used Chickamauga-Chattanooga (and later Gettysburg) for military purposes. As far back as the spring and summer of 1898, during the short-lived Spanish-American War, approximately 72,000 troops spent time at

Chickamauga battlefield park, where they encamped and held field exercises and maneuvers. Military use of Chickamauga declined after the war with Spain; but, in 1902 Congress authorized a permanent facility, Fort Oglethorpe, on adjacent lands, plus a small portion within the park. The outbreak of World War I in Europe in the summer of 1914 brought about a gradual increase in military use of the park. In 1916, the year the National Park Service Act passed and the year before America entered World War I, the fort and the park were also being used as a convalescence facility for wounded and sick from the ongoing conflict along the U.S.-Mexican border.

At Gettysburg, military use of the battlefield park focused on strategic and tactical studies, which slowly built up after the war began in Europe—and while Congress was still considering bills for the possible transfer of all federal historic sites to the proposed National Park Service. (Not until 1917 did the Army establish training encampments, which ultimately led to the formal designation of Camp Colt at Gettysburg in March 1918.)[65] In most respects, the War Department seems not to have felt threatened by the "historical associations" wording of the Park Service bill. The war in Europe and military activities at the two most visited Civil War battlefield parks provided substantial reason for leaving the department's historic areas alone.

Nevertheless, the War Department seems to have decided not to let the matter rest. In July 1915, it issued Bulletin no. 27, which proclaimed as "national monuments" a huge number of sites that the Department itself administered, including historic forts, national cemeteries, and even individual memorials commemorating events or heroes. The department specifically—indeed, blatantly—based its actions on the Antiquities Act's proclamation authority and inserted the complete text of the act in the bulletin. Included on its list of "national monuments" were Fort Wood (location of the Statue of Liberty), several other active military installations, the Arlington National Cemetery, the National Cemetery of Custer's Battlefield Reservation, additional national cemeteries such as those adjacent to the battlefield parks, a few Confederate cemeteries under the department's control, and ancient Indian mounds in Shiloh National Military Park. Overall, the list included more than sixty entries, some containing multiple components. According to Bulletin no. 27, management of these monuments would continue to be handled by military personnel, "without extra expense."[66] The Antiquities Act of course provided no authority whatsoever for the War Department to declare national monuments, as that power was vested only in the president—a detail that seems not to have fazed the upper departmental echelons.

This extraordinary move may have come as an effort to ensure that bureaucratic jurisdiction over historic sites controlled by the department would continue—at least there is unusual evidence suggesting this possibility. As it happened, the Army Chief of Staff, General Hugh L. Scott, signed Bulletin no. 27 only four months after a chance meeting with Stephen Mather, Horace Albright, and a group of top park supporters in March 1915 on board a train heading to California for the third national parks conference. Albright recalled that he invited General Scott to join them in the posh railroad car Mather had obtained for the trip. The group held almost continuous discussions on park issues, and Mather "took advantage of the opportunity to talk

with the general about national park problems."

Albright stated further that they discussed the army's continued involvement in Yellowstone, where troops had been stationed since the mid-1880s to protect against the poaching of wild animals and other kinds of vandalism. It thus seems quite plausible that other topics involving parks and the military would have arisen, given that the language of the bills before Congress would transfer the battlefields away from the War Department if the "historical associations" mandate survived. The issuance of Bulletin no. 27 in July 1915, four months after the meeting on board the train, suggests that while enjoying the camaraderie and park discussions General Scott may have become more fully alerted to the possibility that the War Department could soon lose its historic sites. The outside chance that Scott intended instead to identify sites that he was willing to see Congress or the president (via a national monument proclamation) take away from the War Department is negated by the fact that some of the individual sites included on the list were located on active military posts, such as Fort Oglethorpe and the Presidio of Monterey.[67] The fortuitous meeting with General Scott occurred before Albright's first visit to Chickamauga in December 1915 that would heighten his interest in the battlefields.

The "historical associations" mandate disappeared from the National Park Service bills before Congress in early 1916. In part, this resulted from a shift of congressional strategy in which Senator Smoot and Congressman Raker, having led the fight unsuccessfully, asked Congressman William Kent to lead the legislative efforts. In January 1916, Kent introduced the first of several National Park Service proposals that he would submit that year, and he had removed the "historical associations" clause. As planned, Smoot and Raker actively supported Kent's efforts, yet Raker continued to introduce his own bills. Perhaps seeking to make amends for his exceptionally controversial role in promoting the act authorizing the Hetch Hetchy dam—known informally as the "Raker Act"—the California congressman in an April 1916 hearing on his national parks bill passionately spoke out that "my whole soul is wrapped up in this legislation."[68]

Beyond Kent's January 1916 bill, another indication of compromise came that same month when Kent cautioned the American Civic Association (of which McFarland was president) that to gain passage it might even be necessary "to considerably change" the bill, including abandoning the idea of a new bureau—perhaps essentially to accomplish efficient oversight of the national parks by expanding the authority and capability of Interior's Office of the Chief Clerk. Similarly, Horace Albright recalled a general sense of the necessity to "strike out items that seemed potentially troublesome."[69] Kent, Albright, and others thus recognized that compromises might have to be made—and, indeed, some of them would affect the status of historic preservation in the final act.

Although abandoning the "historical associations" clause, which had been in place since Smoot's December 1911 proposal, William Kent's January 1916 bill would still have had *all national monuments* come under the National Park Service. It would have left the War Department in full control of its historic battlefields and other sites, but the department would lose control of its two monuments,

Big Hole and Cabrillo.[70] Yet, removal of the "historical associations" wording amounted to a substantial change, given the breadth of commitment to historic preservation that the language of the earlier bills would have mandated for the Park Service, and given Albright's desire to gain control of the Civil War battlefields. By the wording of Kent's bill, the battlefield parks, with their high public visibility, had moved beyond reach of the proposed National Park Service.

Evidence suggests that a compromise was indeed seen as a temporary expedient to gain passage of the legislation, as once the National Park Service came into being it quickly and openly stated its interest in the battlefield parks and other historic sites. In June 1917, Horace Albright, top assistant for the newly appointed director, Stephen Mather (who was ill at the time), completed the Park Service's first annual report. In it, Albright argued that the new bureau should have control of the battlefields and other sites under the War Department "in order that the administration and promotion of all of these reservations may be conducted according to a uniform policy."[71] Bringing this out in a public document, and so very soon after the Park Service was firmly established (it had gotten its first appropriation and formally opened an office only weeks earlier, in mid-April 1917), strongly indicates that Albright, and perhaps others, never really abandoned the idea of controlling the battlefield parks. Their chief goal had been to establish the National Park Service, and a struggle over the battlefields might have blocked that.

At first, U.S. Forest Service spokesmen bluntly opposed even the basic idea of creating a national parks office. Gifford Pinchot, first chief of the Forest Service, from 1905 to 1910, who still maintained his influence and high-level connections, fully recognized a huge and threatening territorial issue: the prospect of a new, rival land management bureau that could gain control of some of the Forest Service's most prized scenic landscapes—a threat not without substance. Early in the legislative drive, Pinchot argued to Horace McFarland that the national parks must be "handled by the Forest Service, where all the principles of good administration undeniably demand they should go." Emphasizing the parks as playgrounds, he stressed the similarities more than the differences between national parks and national forests, contending that creating a parks bureau would mean "needless duplication of effort" and "would not … be wise." McFarland, who had fractious disagreements with Pinchot, replied bluntly to the former chief forester, accusing him of being "an unsafe man in regard to national parks in general."[72]

Upon taking office in 1910, Henry S. Graves, Pinchot's successor as head of the Forest Service, took a similarly hard line against creating a national parks bureau. And he, too, tangled with McFarland, who lectured him on the differences between the national park system and the national forest system: The former was the "nation's playground" and the latter the "nation's woodlot." The new chief forester later accepted the idea of a National Park Service; nevertheless, he fought with determination to retain full authority over the Forest Service's national monuments. But still, as was the case with the War Department, in Congressman Kent's January 1916 bill the Forest Service would have lost control of its national monuments. Graves was more likely concerned about the natural, or "scientif-

ic," monuments, given that by early 1916 they outnumbered the archeological monuments by eight to four and collectively were much larger in size. In the latter half of March 1916, Graves wrote separate letters to Kent and McFarland confirming that he supported having a "separate organization." He even added that Grand Canyon National Monument—the largest and most well-known of all the monuments—should become a national park, to be "handled together with the other National Parks." But, he told Horace McFarland that the Forest Service's other national monuments should *not* be placed under the proposed parks office. Playing his trump card, Graves revealed to McFarland that both he and the secretary of agriculture had discussed this matter directly with Congressman Kent. Subsequently, in hearings held before the House Committee on the Public Lands, the committee chairman revealed that he had been astonished to read an Agriculture Department report on Kent's bill indicating the department's "quite strenuous objection" over losing national monuments. This, he feared, could create a "stumbling block" for the bill.[73]

Kent was hearing from others besides Graves. Writing to the secretary of agriculture, the congressman noted that he had received "a number of letters" from the Agriculture Department, including from the Forest Service itself, that "superficially, at least, appear to be hostile." Without admonishing the secretary, Kent let it be known that he had revised his national park bill so that the Forest Service would retain control of its existing national monuments. His revision soon appeared in a new draft of the bill; and, indeed, the final wording of the National Park Service Act, approved August 25, 1916, left both the agriculture and war departments in full control of national monuments on their lands. The National Park Service would administer only those monuments that were under the Department of the Interior.[74]

Looking back, had the all-inclusive "historical associations" wording been retained in the National Park Service Act, it would have bequeathed to the Park Service at birth an extensive domain of historic sites, a fledgling bureaucratic empire stretching from coast to coast and including the well-known Civil War battlefield parks in the more populous and politically influential East. Especially with the battlefields, such an array of sites had the potential to bestow the Park Service's incipient historic preservation program with a stronger presence within the early organizational structure of the new bureau—and thus perhaps a greater political heft and status with which to promote historic preservation policies and goals and to articulate a vision for future directions in historic preservation. That could come later, but for the time being, the newly created Park Service had responsibility for nearly a dozen historical and archeological national monuments, plus Mesa Verde National Park.

Theoretically at least, all of these areas were available for professional research and analysis, but the monuments themselves had received minimal congressional funding for management and protection. As an Interior Department report noted a year before the National Park Service Act was passed (it repeated verbatim what had been said in earlier reports), the very limited supervision of the archeological sites was "wholly inadequate and has not prevented vandalism, unauthorized exploitation or

spoliation of relics found in those prehistoric ruins, whose preservation is contemplated" by the 1906 Antiquities Act. (Somewhat of an exception to this criticism resulted from the determined protection—and education—efforts by Casa Grande's custodian, Frank "Boss" Pinkley, who would become Interior's most influential manager of its southwestern archeological areas.) In any event, none of the archeological monuments had much potential to attract large numbers of visitors any time soon—surely a factor that dampened congressional interest.[75] Only Mesa Verde National Park had truly widespread name recognition, and the research and development underway there was, in effect, aimed at making it a showcase archeological park.

Significantly, the wording of the 1916 National Park Service Act makes it clear that the Department of the Interior's national monuments, both historical and natural, had come under new, additional mandates. The 1916 act mentions "monuments" no less than ten times, in eight of which the word "monuments" is coupled directly with "national parks." Collectively, then, monuments and parks were made subject to the same mandates in regard to, for instance, the disposition of diseased timber, the destruction of animals and plants "detrimental to the use" of the areas, and the allowance of livestock grazing "within any national park, monument, or reservation" except for Yellowstone, but in all cases only when grazing "is not detrimental to the primary purpose" for which an area was established. In addition, the act called for the granting of "privileges, leases, and permits for the … accommodation of visitors in the various parks, monuments, or other reservations." It imposed restrictions on the leases to protect important features and to ensure public access.[76]

In this manner, the National Park Service Act of 1916 modified and expanded the Antiquities Act mandates, which included establishing national monuments and permitting "recognized scientific and educational institutions" to conduct professional research on federal lands. To this, the National Park Service Act added the mandate to leave the national monuments—and parks—"unimpaired for the enjoyment of future generations," a mandate for the monuments that had not been specifically stated in the Antiquities Act. The 1916 act's authorization for a variety of tourism development and resource management activities within the national monuments was chiefly aimed at enhancing public use and enjoyment. This act did not alter the authorization and facilitation of professional research in the monuments. But it did specifically authorize public use and enjoyment to take place *on site* in the monuments, a mandate that differed from the Antiquities Act's emphasis on education through universities and museums. Thus, like the national parks, the national monuments would themselves become outdoor education centers.

Indeed, these statutory modifications amounted to a significant shift for national monuments, one that would become increasingly apparent through the decades. Accommodating tourism by developing the monuments with roads, trails, museums, and other facilities to enable the public to visit them satisfactorily would become a driving force in their management. Over time, tourism and public use needs would

contend with archeological matters for management's support, and very often prevail.

Horace Albright's observation that national monuments were like orphans provided one indication of their lesser status in the minds of national park leadership and the American public. Yet, statutorily at least, with the Antiquities Act's research mandates and the Organic Act's emphasis on public use and enjoyment, the national monuments under the National Park Service were authorized to provide not only scientific research opportunities for museums and universities, but to become tourist attractions whenever the demand—and the funding—would arise.

Historic preservation and the National Park Service statement of purpose

From very early in the legislative campaign for creating a national parks bureau, leading advocates believed that Congress must include in the act a declaration of fundamental doctrine by which the parks and monuments would be managed. They sought, as Frederick Law Olmsted, Jr., put it, a "legal safeguard" to ensure that managers through the years would adhere to the parks' "primary purpose." In Horace McFarland's words, they needed a "Gibraltar," a statement of true principles and purposes. McFarland believed that such a statement was "extremely important" and that even the new bureau itself needed a clear understanding of the "true and high function" of the parks.[77]

During the campaign, the statement of purpose went through several versions, in which concern for historic preservation was marginal. The first version came as early as December 1910, in a draft bill prepared mainly by McFarland and Olmsted, on behalf of the American Civic Association and in cooperation with the Interior Department. It declared that the parks and monuments must not be used "in any way detrimental or contrary to the purpose for which dedicated or created by Congress." This version died quickly, as Olmsted had concerns about its lack of specificity and clarity necessary for a fundamental statement of purpose. Later that December, the Civic Association submitted a second draft statement written by Olmsted, stating that the parks and monuments were for

> promoting public recreation and public health through the use and enjoyment by the people of the said parks, monuments, and reservations,… and of the natural scenery and *objects of scenic and historic interest* preserved therein….[78]

However, Senator Reed Smoot's January 1911 bill included a significant change of wording in this statement. Before this bill was introduced, Olmsted had reworded the phrase "objects of scenic and historic interest" (which identified the intended focus of public use and enjoyment). Instead, he inserted a statement that the public should use and enjoy "*the natural scenery and objects of interest,*" the exact phrase that Smoot used in his January 1911 bill.

The reason for Olmsted's change of wording, including omitting the reference to "historic," is not clear. However, as a landscape architect exceptionally familiar with parks in general, Olmsted knew what attracted people to the national parks. His career was mainly dedicated to designing and preserving beautiful landscapes, and "scenery" was the single park characteristic that Olmsted insisted be protected by the

statement of purpose. His newly altered phrase clearly made "natural scenery" the central concern, followed by the very much nonspecific "objects of interest."[79]

With the emphasis on natural scenery and public recreation and health, the statement of purpose to govern management of the national park system was clearly focused on the large, spectacular parks, in line with the dominant thrust of the legislative drive. Conversely, given the complete absence in the statement of purpose of any expression of substantive concern for historic sites following removal of "historic interest" from the wording, it seems quite clear that the statement of purpose that appeared in both Senator Smoot's and Congressman Raker's early bills reflected little, if any, concern for archeological and historic resources.

For five years, Olmsted's "natural scenery and objects of interest" clause was included in the statement of purpose for the proposed national parks bureau, along with the commitment to "promoting public recreation and public health." It lasted until William Kent placed a revised bill before Congress in January 1916. Even though Olmsted's wording had omitted direct reference to historical parks and monuments, Horace McFarland wrote enthusiastically about the statement of purpose, "Here is, for the first time, a declaration of the real purpose of a National Park.... [I]t is of extreme importance that such purpose be declared in unmistakable terms, as here declared."

It is also worth noting that, although the "natural scenery and objects of interest" clause—*without* the earlier reference to objects of "*historic* interest"—remained in the bills for five years, it was oddly juxtaposed with the still-included "historical associations" mandate, which would have given the new bureau oversight of the broadest possible array of federal historical parks and monuments.[80] But within the statement of purpose itself—the central, controlling mandate to be given the National Park Service by Congress—there seemed to be no interest in including specific reference to history during this five-year span of time.

With a presidential election due in late 1916 and a horrific war in Europe threatening to entangle the United States, proponents of legislation for a national parks bureau had begun to feel an increasing sense of urgency to get an act passed before the national political situation might change. In a renewed effort in mid-October 1915, the American Civic Association asked Olmsted to review a revised draft of the legislative proposal and "offer any changes" or criticism that he believed necessary. Olmsted's response, in early November, included a complete revision of the statement of purpose, in which he reinserted a reference to "historical objects" (soon changed to "historic objects"). In the bills introduced beginning in 1916, the revised statement gave "historic objects" representation alongside scenery, natural objects, and "wild life." Yet, ironically, these bills no longer contained the "historical associations" mandate that would have transferred all historic and archeological sites from the War Department and Forest Service to the National Park Service. Olmsted's new draft of the statement proved so acceptable to the American Civic Association and members of Congress that it would undergo only slight changes before the bill was passed. The final wording of the statement of purpose, as it appeared in the August 1916 Organic Act, read:

> the fundamental purpose of the said parks, monuments, and reservations … is to conserve the scenery and the natural and *historic objects* and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.[81]

Although the newly created National Park Service did not gain all of the historic areas that it might otherwise have, it was given a mandate that included historic and archeological sites—through the repeated inclusion of "monuments" in the act and the phrase "historic objects."

It had been the threat of congressional approval of the Hetch Hetchy dam that sparked the final campaign to establish an office to oversee the parks. And the threat aroused the determination of McFarland, Olmsted, and others to protect the parks with an overriding statement of purpose—the National Park Service's governing preservation mandate, which in the final wording embraced places important in human history.

Present at the creation: An ambiguous mandate, plus park educational programs

The statement of purpose, with its mandate to leave the parks and monuments "unimpaired for the enjoyment of future generations," would prove critically important. Indeed, the word "unimpaired" provided the act's only real standard by which the Park Service itself, as well as its supporters and critics, could judge the actions of park management through the decades. It was, on the face of it and as often interpreted, a high standard; and it applied not just to the scenic national parks and monuments, but also to historic areas, including Mesa Verde and the other archeological and historic sites administered by the National Park Service.

Significantly, however, the full wording of the unimpairment phrase constitutes a vital ambiguity that is essential to understanding the Organic Act *and* the management practices and policies of the National Park Service since its founding in 1916. This ambiguity is evident in the difference between, on the one hand, leaving the parks and monuments "unimpaired," and on the other hand, leaving them "unimpaired *for the enjoyment of future generations*." The complete phrase (surely the most frequently quoted words in the Act) concludes by modifying what is meant by the otherwise emphatic "unimpaired." The phrase itself does not define what managerial measures, if any, should be taken to enhance public enjoyment while maintaining the areas in an unimpaired condition; and the full wording of the mandate to leave the parks and monuments "unimpaired for the enjoyment of future generations" implies a degree of managerial latitude. (Such latitude has certainly proved to be the case with National Park Service policy and practice up to the present in both historical and natural parks.) Similarly, the wording that immediately precedes the unimpairment phrase in the statement of purpose ("to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same") also suggests a duality of purpose, as well as managerial flexibility, through the use of "to conserve" (arguably a less stringent mandate than to leave "unimpaired"), coupled with "enjoyment."

Regarding public use and enjoyment, the 1916 act contains other provisions that

clearly indicate that "unimpaired" parks did not necessarily mean pristine parks: For instance, the statute's allowance of development for "accommodation of visitors" in the parks, the cutting and selling of timber when necessary to fight "attacks of insects or disease," and the "destruction of such animals … and plant life as may be detrimental to the use" of the areas all implicitly permit varying degrees of park manipulation and impairment. Over time, the many different management actions that for one reason or another would be selected as being appropriate for providing for public enjoyment while leaving the parks unimpaired would prove to be a persistent source of debate and contention inside the National Park Service itself and among a growing number of public voices.[82]

The ambiguity in the 1916 act prompted Horace Albright's comment the following year: "The devil of the thing is the conflicting principles in our organic act. How can we interpret the unrestricted use of the parks for the public and still retain them totally intact for the future?" In fact, the 1916 act's provisions allowing park development for public use and enjoyment came at a time when intrusions on sites and landscapes had already substantially impacted historic and natural areas in the national park system. For instance, at Mesa Verde the road into the heart of the park continued under construction, and trails and roads near the major archeological sites had begun so that park visitors could get to—and in and around—the more well-known cliff dwellings. Other preparations for visitor enjoyment included stabilization and restoration work on Spruce Tree House and additional sites in Mesa Verde, altering, for better or for worse, the pre-park conditions of these ancient structures and associated features. Among the natural parks, Yellowstone, for example, had experienced village-like development and construction of several hundred miles of roads; and the Yosemite Valley had been extensively and somewhat randomly developed to accommodate tourism. This was true even though legislation for each of these parks mandated the park's "retention in [its] natural condition"—essentially synonymous to leaving them "unimpaired."[83]

In the realm of publicly managed parks and monuments—historical and natural—preservation has generally gone hand in hand with tourism. Particularly given the National Park Service Act's mandates, sites in the park system were intended for people to enjoy, understand, and commemorate not just by supporting their preservation, but also by *going there*. Thus, a perpetual tension has existed between leaving the parks and monuments "unimpaired" (which implies minimal manipulation and intrusion) versus developing them for public use and enjoyment (which often involves extensive manipulation and intrusion). Significantly, the latter, more tourism-oriented and manipulative option has usually been accepted as a necessity if the public is to visit and enjoy sites and thus continue to give potent political support for the national park and monument idea. This assumption would become an enduring, underlying aspect of National Park Service management, and the policies and practices stemming from that assumption would be contested again and again—thereby perpetuating the tension that lies at the heart of the statement of purpose.

The statement of purpose with its mandate to leave the parks and monuments "unimpaired for the enjoyment of future generations" arose from deliberations that

stretched over six years (1910 to 1916) and remained closely focused on the large natural parks with no substantive analysis of the statement's application to places preserved for their significance in human history. In its final form, the mandate also applied to the historic and archeological areas under the National Park Service; and already the ongoing projects at Mesa Verde and the efforts of Custodian Frank Pinkley at Casa Grande—all intended mainly to enhance public enjoyment—suggested strong parallels with the management practices underway in the large natural parks.[84]

Long after passage of the Organic Act, Horace Albright recalled that the "belief in 1916 was that education and passive enjoyment were the foremost reasons for the parks." In this regard, it is important to point out that public use and enjoyment in the early parks and monuments clearly involved educational, or interpretive, activities—they were in fact present as a significant management concern well before the creation of the National Park Service. Educational activities had been (and would remain) closely interconnected with historic preservation and frequently had a strong bearing on preservation goals and practices. For example, as Smithsonian archeologist Jesse Walter Fewkes discussed in his 1908 report entitled "Educational Ideal," education was a primary objective when he excavated, stabilized, and repaired portions of Mesa Verde's Spruce Tree House. Parts of Spruce Tree House had collapsed, and some intensive pot hunting had already occurred there. Fewkes' determination to ensure that his work would "aid in the interpretation" of the site was aimed at helping visitors understand not only that particular cliff dwelling, but also other, similar sites in the park. His project included the excavation of 114 habitation and storage rooms and eight kivas. Fewkes asserted that his plan at Spruce Tree House was to *repair*, rather than to *restore*, the latter of which would have required "theoretical questions"—in effect, a best guess at how the site would have appeared in ancient times. Altogether though, his efforts to enhance the potential of Spruce Tree House for public enjoyment brought about extensive alterations to a site that had already been greatly impacted by time and vandals.[85]

Museums reflected another early educational interest at the archeological reserves. By at least 1905, Casa Grande Custodian Frank Pinkley began to display objects found on site to help explain the area's ancient history, thus initiating limited museum activity there. Yet the artifacts from Casa Grande projects undertaken by Jesse Walter Fewkes at intervals from 1906 to 1908 were to be shipped back to the Smithsonian Institution for professional care, as intended by the site's General Land Office overseers. The shipment took place despite Pinkley's strong interest in retaining these larger collections in the reserve and building a museum to enhance public understanding of Casa Grande. He was allowed to keep only a small number of objects for display and received no funds for a museum.

At Mesa Verde, objects deemed most valuable from Fewkes' Spruce Tree House excavations beginning in 1908 were also shipped to the Smithsonian, although many others were stored in the park. Interest in a park museum arose early, but not until about 1914 did a new superintendent initiate an earnest campaign for a museum to exhibit Mesa Verde artifacts—an effort that

would not succeed until after the National Park Service came into existence. These incipient museum efforts were augmented by other educational activities, particularly guided tours to interpret sites to the public, with Custodian Pinkley himself giving tours at Casa Grande and park rangers guiding visitors in Mesa Verde beginning in 1908. Similarly, prior to the establishment of the National Park Service, managers in both Yosemite and Yellowstone had created small, museum-type displays for visitors, and in Yellowstone a move began in 1915 to establish a permanent museum. Well before that, in the late nineteenth century, Yellowstone concessionaires had begun offering guided tours to explain the park's geysers and other natural features. By 1914 the Interior Department's Office of the Chief Clerk began publishing educational booklets to inform visitors of the natural features in Yosemite, Sequoia, Glacier, Mount Rainier, and Yellowstone.[86]

Education also appeared in early legislation. Authorizing the protection of federally controlled archeological and scientific sites and presidential proclamations of especially important places as national monuments, the Antiquities Act of 1906 was centered squarely on research on public lands for purposes of public education. Provisions in the Mesa Verde acts of 1906 and 1910 reaffirmed the Antiquities Act's education-oriented sections and also created the national park with the authority to provide for public use.[87] The park road to the top of the mesa, the ranger guides, plus Fewkes' work helped make it possible for the public to visit and learn about the ancient cliff dwellings and the people who built and lived in them.

Although education is clearly a chief concern of the 1906 Antiquities Act and Mesa Verde Act, the 1916 National Park Service Act itself does not specifically authorize education—the word is nowhere to be found in the statute. And education per se received very little attention in congressional hearings; instead, ensuring public use and enjoyment was repeatedly put forth as a prime rationale for creating the Park Service. Of the 1916 act's various provisions, the public enjoyment mandate makes the closest connection to education. In truth, the act would have to be very narrowly construed in order to not include education, given its provisions for the Park Service to "promote and regulate the use" of parks and monuments and to provide for the "accommodation of visitors," with one of the fundamental purposes being the public's "enjoyment" of these places. This seems particularly true given that a tradition of educational work in both archeological and natural areas had been established before the 1916 act was approved, and the fact that those national monuments that the act placed under Park Service administration still carried the Antiquities Act's plainly stated education-oriented mandates. Moreover, the Antiquities Act's research and education mandates—which were to involve museums, universities, and other "scientific or educational institutions"—applied to *all* federally controlled lands, including the national parks.[88] Given the thrust of the Antiquities Act toward increasing public knowledge of science and human history, the demonstrated concerns for public education in early parks and monuments (including Mesa Verde), and the legislative history leading up to the 1916 mandate to promote public use and enjoyment *on site* in the preserved areas, the fledgling National Park Service clearly had educational responsibilities.

In 1906, not long after the Antiquities Act had been signed, Congressman John Lacey reflected on federally preserved parks and historic places, stating that they represented an "enlightened method of reservation" that would protect them from "speculative management"—in effect protect them from the uncertainties of the market economy. Lacey wanted special places such as the Grand Canyon and the big trees of California to remain the "property of the Republic," to be "permanently protected from all mutilation."[89] Indeed, the major elements of his comprehensive antiquities protection bill of April 1900, drafted at his request by Department of the Interior officials, had to a considerable degree been realized through passage of the Antiquities Act of 1906, the creation of national monuments and more national parks, and ultimately the establishment of a "service"—the National Park Service—to manage these preserved areas.

When President Wilson signed the National Park Service Act in late August 1916, the War Department and the Forest Service administered a total of 16 historic and archeological sites, while the Park Service was given control over only nine of such sites.[90] Thus, the Park Service controlled only about a third of the federally designated historic places, and the national government's historic preservation responsibilities remained divided among three departments—Interior, War, and Agriculture—the kind of situation that had frustrated Horace McFarland from the beginning.

Of the Park Service historic sites, nearly all were in the Southwest and were related to American Indian history—for instance, Mesa Verde and the archeological monuments such as Chaco Canyon and Gran Quivira in New Mexico. Several of the monuments (Gran Quivira for example) also included significant remains of Spanish missions. In addition to Spanish activity in the Southwest, the National Park Service in August 1916 had only two sites that emphasized the history of other European Americans in this country: Sitka National Monument in Alaska Territory, involving a Russian-American colony and Alaska native people; and El Morro in New Mexico, which featured inscriptions carved in rock by Indians, as well as by European Americans of different generations and national origins.

There is no indication that without the concern for improved protection of the high-profile scenic national parks any campaign to create a national office to oversee the historic and archeological areas alone would have taken place by August 1916, or perhaps for many years thereafter. Establishing an office for coordinated administration of places reflecting the historic American past had to be addressed within the context of determining how best to set up a bureau to provide effective management of the large, scenic national parks. The National Park Service's historic preservation mandate was conceived and would, in time, come to be more fully realized within this context.

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Endnotes

Abbreviations for source materials

- ASLA-LC: Papers of the American Society of Landscape Architects, Library of Congress
- FLO-LC: Papers of Frederick Law Olmsted, Jr., Library of Congress
- JHMcF: Papers of J. Horace McFarland, Pennsylvania State Archives, Harrisburg
- Kent: Papers of William Kent, Manuscript and Archives, Yale University Library
- Lacey–SHSI: John F. Lacey Papers, State Historical Society of Iowa, Des Moines
- MVNP: Mesa Verde National Park Files
- NAA: National Anthropological Archives, Smithsonian Institution
- NPS-HC: National Park Service History Collection, Harpers Ferry
- NPS-W-H: National Park Service, Washington Office, History Files
- NPS-W-A: National Park Service, Washington Office, Archeological Files
- RG79: Record Group 79, Records of the National Park Service, National Archives

1. The epigraphs are from Julian Martinez and Joseph H. Suina, "Two Pueblo Perspectives on the Pajarito Plateau," Robert P. Powers, ed., *The Peopling of Bandelier: New Insights from the Archaeology of the Pajarito Plateau* (Santa Fe: School of American Research Press, 2005), 130–131; Willa Cather, *The Professor's House* (New York: Alfred A. Knopf, 1925), 201; John F. Lacey address to the League of American Sportsmen, New York, 1901 typescript, 1906, Lacey-SHSI, Box 267. Among many accounts of early southwestern inhabitants, see Carroll L. Riley, *Becoming Aztlan: Mesoamerican Influences in the Greater Southwest, AD 1200–1500* (Salt Lake City: University of Utah Press, 2005), 9, 47, 53–55, *passim*; Frances Joan Mathien, *Culture and Ecology of Chaco Canyon and the San Juan Basin* (Santa Fe: National Park Service, Southwest Cultural Resources Center, 2005), 97–98, 125–130, 174–175, 196–209, 241–244; Linda S. Cordell, *Prehistory of the Southwest* (Orlando, Florida: Academic Press, Inc., 1984), 2–18, 50–119, *passim*; Joseph Owen Weixelman, "Hidden Heritage: Pueblo Indians, National Parks, and the Myth of the 'Vanishing Anasazi'" (Ph.D. dissertation, University of New Mexico, 2004).

2. The Aztec myth inspired place names such as for Montezuma Castle and Montezuma Well in Arizona and Aztec Ruins in New Mexico, plus the modern towns of Aztec, New Mexico and Cortez, Colorado. Weixelman, "Hidden Heritage," 102–151; Don D. Fowler, *A Laboratory for Anthropology: Science and Romanticism in the American Southwest, 1846–1930* (Albuquerque: University of New Mexico Press, 2000), 50–54; Josh Protas, *A Past Preserved in Stone: A History of Montezuma Castle National Monument* (Tucson: Western

National Parks Association, 2002), 23–26, 40 n.17, 172–173; Robert H. Lister and Florence C. Lister, "Aztec Ruins National Monument: Administrative History of an Archeological Preserve," (Santa Fe: National Park Service, Southwest Cultural Resources Center, Professional Papers no. 24, 1990), 3–6.

3. Richard West Sellars, "Pilgrim Places: Civil War Battlefields, Historic Preservation, and America's First National Military Parks, 1863–1900," *CRM,* vol. 2, no. 1 (winter 2005), 22–52; John C. Paige and Jerome A. Greene, *Administrative History of Chickamauga and Chattanooga National Military Park* (Denver: U.S. Department of the Interior, National Park Service, 1983), 39–41, 61.

4. By the end of the nineteenth century, Congress had set aside two other national parks and two reserves, all minuscule when compared to the big western parks. The two national parks were General Grant National Park (incorporated into Kings Canyon National Park in 1940); and, on an island in Lake Huron, the small, scenic Mackinac National Park, created in 1875 and turned over to the state of Michigan in 1895. Hot Springs Reservation in Arkansas dated from 1832 and the Casa Grande Ruin Reservation in Arizona Territory dated from 1892. National Park Service, *The National Parks: Shaping the System* (Washington, D.C.: National Park Service, 2005, revised edition), 18; Keith R. Widder, *Mackinac National Park, 1875–1895,* Reports in Mackinac History and Archeology no. 4 (Mackinac Island Park Commission, 1975) 6, 41–46.

5. Paul W. Gates, *History of Public Land Law Development* (Washington, D.C.: U.S. Government Printing Office, 1968), 319–462; Alfred Runte, *National Parks: The American Experience* (Lincoln: University of Nebraska Press, rev. 2nd ed., 1980), 19–47; Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement* (Cambridge, Mass.: Harvard University Press, 1959), 261–276; Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997), 7–20. A short history of the Department of the Interior is found in Robert M. Utley and Barry Mackintosh, *The Department of Everything Else: Highlights of Interior History* (Washington, D.C.: Department of the Interior, 1989). The quote is from the Yellowstone National Park Act of 1872 (ch. 24, 17 Stat. 32); see also Hillory A. Tolson, *Laws Relating to the National Park Service, the National Parks and Monuments* (Washington, D.C.: U.S. Government Printing Office, 1933), 25.

6. Extensive accounts of exploration, documentation, and scientific research in the West are found in William H. Goetzmann, *Army Exploration in the American West, 1803–1863* (New Haven: Yale University Press, 1959); William H. Goetzmann, *Exploration and Empire: The Explorer and the Scientist in the Winning of the West* (New York: Alfred A. Knopf, 1967); and Donald Worster, *A River Running West: The Life of John Wesley Powell* (Oxford: Oxford University Press, 2001). See also Curtis M. Hinsley, Jr., *The Smithsonian and the American Indian: Making a Moral Anthropology in Victorian America* (Washington, D.C.: Smithsonian Institution Press, 1981); and Fowler, *A Laboratory for Anthropology*, 34–49, *passim*.

7. Fowler, *A Laboratory for Anthropology*, 92–127; Worster, *A River Running West*, 396–402; Joseph C. Porter, *Paper Medicine Man: John Gregory Bourke and His American West* (Norman: University of Oklahoma Press, 1986), 73–133, 189–209; James L. Snead,

Ruins and Rivals: The Making of Southwest Archeology (Tucson: The University of Arizona Press, 2001), 8–12; Ronald Freeman Lee, "The Antiquities Act of 1906" (first published by National Park Service, 1970), 198, edited by Raymond Harris Thompson, *Journal of the Southwest*, vol. 42, no. 2, (summer 2000) (special issue on the Antiquities Act). A brief overview of southwestern archeological activities leading into the twentieth century is found in Raymond H. Thompson, "Cliff Dwellings and the Park Service: Archeological Tourism in the Southwest," *International Perspectives on Cultural Parks: Proceedings of the First World Conference, Mesa Verde National Park, Colorado, 1984* (Denver: National Park Service and the Colorado Historical Society, 1984), 219–223.

8. A.F. Bandelier, "A Visit to the Prehistoric Ruins in the Valley of the Rio Pecos," *Papers of the Archaeological Institute of America* (Boston: A. Williams and Company, 1881), vol. 1, no. 2, 42–43, 63–64, 81, 87, 95, 97–98; Lee, "Antiquities Act," 200–204; Fowler, *A Laboratory for Anthropology*, 172–174.

9. A. Berle Clemensen, *Casa Grande Ruins National Monument* (Denver: National Park Service, 1992), 29–56; see also 33 for 1889 Act (25 Stat. 961); Lee, "Antiquities Act," 207–209; Hal Rothman, *Preserving Different Pasts: The American National Monuments* (Urbana: University of Illinois Press, 1989), reprinted as *America's National Monuments: The Politics of Preservation* (Lawrence: University of Kansas Press, 1994), 12; *Thomas Alan Sullivan*, *Proclamations and Orders Relating to the National Park Service Up to January 1945* (Washington, D.C.: U.S. Government Printing Office, 1947), 140–142.

10. 1891 act: 26 Stat. 1095; the "continuous supply" quote is from an 1897 act: 30 Stat. 32, 34-36; Harold K. Steen, *The U.S. Forest Service: A History* (Durham: Forest History Society, 1976, and Seattle: University of Washington Press, 2004), 26–28, 33, 36–37; Hays, *Conservation and the Gospel of Efficiency*, 35–38, 47; Robert W. Righter, "National Monuments to National Parks," *The Western Historical Quarterly*, vol. 20, no. 3 (August 1989), 283.

11. Duane A. Smith, *Mesa Verde National Park: Shadows of the Centuries* (Boulder: University Press of Colorado, 2002), 12–30; Frank McNitt, *Richard Wetherill: Anasazi* (Albuquerque: The University of New Mexico Press, 1957, rev. ed., 1974), 21–38; Fowler, *A Laboratory for Anthropology*, 187–189.

12. Nordenskiold had a serious scholarly interest in analyzing and comprehending the prehistoric Southwest. Following his return home from Mesa Verde in early 1892, he completed *The Cliff Dwellers of the Mesa Verde* (Stockholm: P.A. Norstedt and Sons, 1893; reprinted by Mesa Verde Museum Association, 1990), a classic archeological study that remains highly regarded today. In 1895, Nordenskiold succumbed to tuberculosis and died at age 26 in his native Sweden. Smith, *Mesa Verde National Park*, 30–36; McNitt, *Richard Wetherill*, 38–44; Weixelman, "Hidden Heritage," *passim*; Fowler, *A Laboratory for Anthropology*, 187–192. A recent and favorable account of the Wetherills is found in Fred M. Blackburn, *The Wetherills: Friends of Mesa Verde* (Durango, Colo.: The Durango Herald Small Press, 2006), 37–52, *passim*.

13. Rothman, *America's National Monuments*, 17–20, 49; Lee, "Antiquities Act," 217–219; Fowler, *A Laboratory for Anthropology*, 192–202. Much later, New Mexico Normal School became New Mexico Highlands University.

14. Edgar Lee Hewett, "Government Supervision of Historic and Prehistoric Ruins," *Science*, vol. 20, no. 517 (November 25, 1904), 723; Rothman, *America's National Monuments*, 54–59; Lee, "Antiquities Act," 219–223; Char Miller, *Gifford Pinchot and the Making of Modern Environmentalism* (Washington, D.C.: Island Press, 2001), 195–196. For a discussion of the constitutional and legal aspects of withdrawals, see David H. Getches, "Managing the Public Lands: The Authority of the Executive to Withdraw Lands," *Natural Resources Journal*, vol. 22, no. 2 (April 1982), 279.

15. U.S. Representative Jonathan P. Dolliver, also of Iowa, introduced the first of the 1900 antiquities bills upon which the Lacey bill was generally based. Soon chosen to fill a vacant Senate seat, Dolliver did not continue actively promoting antiquities legislation. Robert Claus, "Information About the Background of the Antiquities Act of 1906," Department of the Interior internal report, May 10, 1945, typescript, NPS-W-H; Mark Squillace, "The Monumental Legacy of the Antiquities Act of 1906," *Georgia Law Review*, vol. 37, no. 2 (winter 2003), 473, 478–480; Lee, *Antiquities Act*, 224–226; Raymond Harris Thompson, "Edgar Lee Hewett and the Political Process," *Journal of the Southwest*, vol. 42, no. 2 (summer 2000), 276–278; John Ise, *Our National Park Policy: A Critical History* (Baltimore: The Johns Hopkins University Press, 1961), 149–150. Although use of the "Lacey Act" designation has diminished over time, it remains part of the archeological lexicon. See Snead, *Ruins and Rivals*, 80–81, 93, 218, 222. The official title of the Antiquities Act is "An Act for the Preservation of American Antiquities," 34 Stat. 225 (1906). The full wording of the act is also found in *The Antiquities Act: A Century of American Archaeology, Historic Preservation, and Nature Conservation*, David Harmon, Francis P. McManamon, and Dwight T. Pitcaithley, eds. (Tucson: University of Arizona Press, 2006), 3–5.

16. Lee, *Antiquities Act*, 223–227.

17. For works that focus primarily not on both acts, but rather on either the Antiquities Act or the National Park Service Act, see, for example, on the Antiquities Act: Rothman, *America's National Monuments*; Harmon et al., *The Antiquities Act;* and on the National Park Service Act: Sellars, *Preserving Nature in the National Parks*, 28–46; Runte, *National Parks*, 97–105; Robin W. Winks, "The National Park Service Act of 1916," *Denver University Law Review*, vol. 74, no. 3 (1997), 575–623.

18. Harmon et al., *The Antiquities Act*, 6.

19. Sister Mary Annette Gallagher, "John F. Lacey: A Study in Organizational Politics" (Ph.D. dissertation, University of Arizona, 1970), is the only extensive biography of Lacey. The discussion of his conservation concerns is revised and published; see Annette Gallagher, C.H.M., "Citizen of the Nation: John Fletcher Lacey, Conservationist," *Annals of Iowa*, vol. 46, no. 1 (summer 1981), 9–24. For a more recent account of his political career, see Rebecca Conard, "John F. Lacey: Conservation's Public Servant," in Harmon et al., *The Antiquities Act*, 48–63. Lacey's speeches and essays, plus articles on him and his career, are found in *Major John F. Lacey Memorial Volume*, Louis H. Pammel ed. (Cedar Rapids, Iowa: The Torch Press of the Iowa Park and Forestry Association, 1915). Pammel's volume provides the most accessible source of Lacey's own ideas, as it includes a large number of Lacey's quotes, speeches, and articles. The State Historical Society of Iowa in Des Moines has the most extensive collection of Lacey papers.

20. H.R. 11021, Committee on Public Lands, 56th Congress, 1st session. Using the title, "A Bill to Establish and Administer National Parks, and For Other Purposes," Lacey intended that the lands to be set aside be known as "national parks," rather than "national monuments," a term that had not yet been used regarding reserved public lands.

21. John F. Lacey, "Excerpts from the Autobiography of John F. Lacey," in Pammel, *Memorial Volume*, 381–423.

22. L.H. Pammel, "Major John F. Lacey and the Conservation of Our Natural Resources," 36–47; Col. G.O. Shields, "A Tribute to Major Lacey from a Fellow Bird Lover," both in Pammel, *Memorial Volume*, 16–17. For Lacey's comments on nature aesthetics, see his "Interstate Commerce in Game and Birds in Violation of State Law: Let Us Save the Birds (1900)," 149; "Forestry" (1905*)*, 83–84; "Forests Vital to Nation's Welfare" (1905*)*, 89; and "Pajarito: An Outing with the Archeologists," 219; all above sources are from Pammel, *Memorial Volume*. See also John F. Lacey, Speech on National Parks (n.d.) (draft of speech) (Lacey's comments indicate that he wrote this speech a short time after passage of the Antiquities Act, June 8, 1906), Lacey-SHSI, Box 267. Conard emphasizes not Lacey's personal interests and motivations, but rather his "broad knowledge of law" and his interest in the "intergovernmental nature of legal issues" as they involved the public lands in the West and related concerns. Conard, "Conservation's Public Servant," 57.

23. Lacey's political conservatism is discussed in Gallagher, "A Study in Organizational Politics," *passim*. His personal recollection of early involvement with drafting the act allowing presidential proclamations of forest reserves is found in John F. Lacey, "Address to the Bankers' Convention," 7–8, June 18, 1907, SHSI, Box 283-A; see also Pammel, "Major John F. Lacey and the Conservation of Our Natural Resources," 42; Steen, *U.S. Forest Service*, 26–27; Hays, *Conservation and the Gospel of Efficiency*, 23, 36–37. Lacey's views on forestry in general (which vary from the highly romantic to serious conservation matters) are in a number of his speeches and articles. See Pammel, *Memorial Volume*, 69–153. Lacey also supported the 1905 law that transferred administration of forest reserves from the Department of the Interior to the Department of Agriculture: see his "Forestry—The Tree is the Mother of the Fountain—A Tree is the Best Gift of Heaven to Man," in Pammel, *Memorial Volume*, 110–114; on wildlife refuges and the 1894 Yellowstone Act, see Gallagher, *Citizen of the Nation*, 10, 13–14; An Act to protect the birds and animals in Yellowstone National Park, and to punish crimes in said park, and for other purposes, ch. 72, 28 Stat. 73 (1894); Tolson, *Laws Relating to the National Parks*, 30–33.

24. The Bird and Game Act, ch. 553, 31 Stat. 187 (1900), is officially entitled "An Act to enlarge the powers of the Department of Agriculture, prohibit the transportation by interstate commerce of game killed in violation of local laws, and for other purposes." Lacey's involvement with this act is discussed in Gallagher, "Citizen of the Nation," 10–13; Michael J. Bean, *The Evolution of National Wildlife Law* (New York: Praeger, 1983), rev. ed., 17–18; see also 409–411.

25. Bird and Game Act, ch. 553, 31 Stat. 187 (1900); A.W. Schorger, *The Passenger Pigeon: Its Natural History and Extinction* (Norman: University of Oklahoma Press, 1973; reprinted Madison: University of Wisconsin Press, 1995) 199–205; Gallagher, "A Study in Organizational Politics," 76–81; Richard Rhodes, *John James Audubon: The Making of an*

American (New York: Alfred A. Knopf, 2004), 111–113; Chris Elphick, John B. Dunning, Jr., and David Allen Sibley, *The Sibley Guide to Bird Life and Behavior* (New York: Alfred A. Knopf, 2001), 324–325; Paul Ehrlich, David S. Dobkin, and Darryl Wheye, *The Birder's Handbook: A Field Guide to the Natural History of North American Birds* (New York: Simon & Schuster, 1988), 273–275, 277. The "sucked orange" quote is from John F. Lacey, Address to the League of American Sportsmen, New York, 1901, typescript, Lacey-SHSI, Box 287-B.

26. 51 *Congressional Record* 9072–9073 (1889) (Sequoia National Park); 51 *Congressional Record* 10751–10752 (1890) (Yosemite National Park); 55 *Congressional Record* 2667 (1899) (Mount Rainier National Park). Lacey's quotes are from his "Preserving Petrified Forest" (1900), in Pammel, *Memorial Volume*, 208, and his "The Petrified Forest National Park of Arizona" (1906), in Pammel, *Memorial Volume*, 204; see also George M. Lubick, *Petrified Forest National Park: A Wilderness Bound in Time* (Tucson: University of Arizona Press, 1966), 47–55. In 1902, Lacey remarked in Congress that the proposed Petrified Forest National Park would cover an area of "about two townships," which would be 46,080 acres. 57 *Congressional Record* 4050 (1902). However, the clearest indication of Lacey's proposed Petrified Forest acreage is a 1906 Congressional Record listing of 65 sections (each section being 640 acres) to be included in the park, making a total of 41,600 acres. This is soon followed by a second listing of the same 65 sections. (Lacey's statement—made just before the second listing of sections—that the park would cover 25,000 acres is inexplicable, unless he already had some idea of the size of the area that would eventually prove to include the most impressive petrified trees.) 59 *Congressional Record* 9553, 9559 (1906).

27. Attempts to preserve the archeology of the Pajarito Plateau are discussed in Hal Rothman, *Bandelier National Monument: An Administrative History* (Santa Fe: National Park Service, Southwest Cultural Resources Center, 1988), 110, *passim*; Thompson, "Edgar Lee Hewett," 278–286; Lee, *Antiquities Act*, 245.

28. The 51st Congress had opened with a special Senate session on March 4, 1889 to confirm new presidential appointees—two days after outgoing President Grover Cleveland had signed the Casa Grande proclamation authority into law. Lacey's initial congressional session—and thus his first chance to vote—was the first *regular* session of the 51st Congress, which did not begin until early December 2, 1889; www.senate.gov/reference/Sessions/sessionDates.htm, 51st Congress, 1st session. Gallagher, "A Study in Organizational Politics," *passim*; Grand Army of the Republic, Post no. 10, Iowa, Record of Enlistments (handwritten list of charter members), Lacey-SHSI, Box 285; James A Devitt, "In Memory of Major John F. Lacey," in Pammel, *Memorial Volume,* 4; G. Kurt Piehler, *Remembering War the American Way* (Washington, D.C.: Smithsonian Books, 1995), 57–60; Wallace Evan Davies, *Patriotism on Parade: The Story of Veterans' and Hereditary Organizations in America* (Cambridge: Harvard University Press, 1955), 33–36, 139–155, 189–248; Sellars, "Pilgrim Places," 37, 45.

29. For House votes on Chickamauga and Chattanooga, see 51 *Congressional Record* 5394 (1890); on Vicksburg, see 55 *Congressional Record* 1518 (1899). Lacey's resolutions supporting a national military park at Vicksburg are found in 54 *Congressional Record* 3001 (1896); 54 *Congressional Record* 5091 (1896); 55 *Congressional Record* 154 (1897); 55

Congressional Record 146 (1897). His resolution for "marking the position of the regular troops at Gettysburg" is found in 55 *Congressional Record* 2572 (1898).

30. John F. Lacey, "At Northwest Iowa Veteran Reunion," in Pammel, *Memorial Volume* 242 (including the "teach" and "heritage" quotes); John F. Lacey, "Speech on National Parks," in Pammel, *Memorial Volume* 4 (including the "public sentiment" and "spirit" quotes); John F. Lacey, "Why Do We Create Battlefield Parks and Erect Monuments Thereon?," in Pammel, *Memorial Volume*, 247–255 (at Shiloh, April 7, 1912) (quotes are found on 250–254). Shiloh acreage is given in Timothy B. Smith, *This Great Battlefield of Shiloh: History, Memory, and the Establishment of a Civil War National Military Park* (Knoxville: The University of Tennessee Press, 2004), 52. In his talks, Lacey regularly emphasized heroism, sacrifice, and post-war reconciliation among former North-South adversaries, which suggests his reasons for commemorating the battlefields. In 1899, for example, he spoke fondly of a visit to Chickamauga, where, "amid the battle monuments of that heroic field," he had found former veterans of the Confederate and United States armies mingling together on "friendly terms," as if they had fought on the same side. John F. Lacey, "Memorial Day," in Pammel, *Memorial Volume*, 258. In the House of Representatives, battlefield parks fell under the Committee on Military Affairs, of which Lacey was not a member.

31. Conard, "Conservation's Public Servant," 49 (including the "see for myself" quote); Lacey, "Pajarito," 210–219 (his statements about Hewett's invitation and on "scenic and scientific" are on 210); John F. Lacey, "Poo-yea" [Puye Mesa in New Mexico] (1902), typescript, August 26, 1902, Lacey-SHSI, Box 267. For Crater Lake and Wind Cave national parks, see Anonymous, Major John F. Lacey 5, 9, typescript, Lacey-SHSI, Box 267. Lacey's extensive travels are discussed in Devitt, "In Memory of Major Lacey," 9.

32. Lacey's 1904 bill is Preservation of Prehistoric Ruins on the Public Lands, 58 H.R. 13478, Committee on Public Lands, 58th Congress, 231–235 (1905); Lee, *Antiquities Act*, 231–235.

33. Prehistoric Ruins on Public Lands, H.R. 3704, Committee on Public Lands, 58th Congress 2, 3 (1905); Squillace, "Monumental Legacy," 479–480; Rothman, *America's National Monuments*, 43–45; Lee, *Antiquities Act*, 235.

34. Hewett's activities are discussed in Thompson, "Edgar Lee Hewett," 297–300. The suggestion that Lacey may have inserted "scientific" in the bill is found in Conard, "Conservation's Public Servant," 60–61, 63 n.29. John F. Lacey to W.H. Holmes, June 15, 1906, NAA, Records of the Bureau of American Ethnology, Correspondence, Letters Received, 1888–1906. The act's chief backing in the Senate came from Thomas MacDonald Patterson, of Colorado, to whom Lacey had appealed because Patterson's backing would signal western accord. The evidence suggests that the Senator refrained from any aggressive support. Weixelman, "Hidden Heritage," 241. For Patterson's political career and interests, see Sybil Downing and Robert E. Smith, *Tom Patterson: Colorado Crusader for Change* (Niwot, Colorado: University Press of Colorado, 1955).

35. Discussions of long-range policy implications of the Antiquities Act are found in Francis P. McManamon, "90 Years of Archeology and Historic Preservation," *CRM,* vol. 19, no. 7 (1996), 17, 18–22; Francis P. McManamon, "The Foundation for American Public Archaeology: Section 3 of the Antiquities Act of 1906," 153, 166–174; Jerry L. Rogers,

"The Antiquities Act and Historic Preservation," 176–186; David Harmon, Francis P. McManamon, and Dwight T. Pitcaithley, "The Antiquities Act: A Cornerstone of Archaeology, Historic Preservation, and Conservation," 267–285, all in Harmon et al., *The Antiquities Act*. Lee, *Antiquities Act*, 240–241. See also Thompson, "Edgar Lee Hewett," 314–318; Weixelman, "Hidden Heritage," 239–240; Squillace, "Monumental Legacy," 487–489.

36. Squillace, "Monumental Legacy," 483; Weixelman, "Hidden Heritage," 239–240.

37. Discussions of President Carter's Alaska proclamations are found in Cecil D. Andrus and John C. Freemuth, "President Carter's Coup: An Insider's View of the 1978 Alaska Monument Designations," in Harmon et al., *The Antiquities Act,* 93–105; Squillace, "Monumental Legacy," 502–507.

38. Quotes are from the Antiquities Act, ch. 3060, 34 Stat. 225 (1906). Proclamation dates and acreage for all national monuments (accurate as of September 2005) are listed in Harmon et al., *The Antiquities Act*, 288–297. For acreage data on Chaco and Petrified Forest national monuments, see 288. Lists of national monuments and all other units of the national park system are found in National Park Service, *Shaping the System*, *passim*.

39. The act's quotes are found in Antiquities Act, ch. 3060, 34 Stat. 225 (1906); the Lacey-Stephens debate is found in 59 *Congressional Record* 7888 (1906). See also Lee, *Antiquities Act*, 226, 228, 235, 240–241; Thompson, "Edgar Lee Hewett," 303, 305; Weixelman, "Hidden Heritage,," 239; Frank Norris, "The Antiquities Act and the Acreage Debate," *The George Wright Forum*, vol. 23, no. 3 (2006), 8.

40. For discussions of the size question, see Norris, "The Antiquities Act," 6–16; Squillace, "Monumental Legacy," 484–493; Righter, "National Monuments to National Parks," 283–286; Lacey, "Petrified Forest" (1906), 203 (including quote), 205–206; Harmon et al., *The Antiquities Act*, 288–289. In 1938, Mount Olympus National Monument would be renamed and re-designated Olympic National Park. Bandelier National Monument was named in honor of archeologist Adolph Bandelier, who had sounded the early alert that Pecos and other southwestern archeological sites were being destroyed and needed protection. The monument was administered by the U.S. Forest Service until transferred to the National Park Service in 1932. The Grand Canyon Supreme Court case, *Cameron v. United States*, 252 U.S. 450 (1920), is discussed in Squillace, "Monumental Legacy," 486 n.70.

41. Gallagher, "A Study in Organizational Politics," 95–97; Pammel, "Major John F. Lacey and the Conservation of Our Natural Resources," 41–42; Lacey, "Pajarito, 210–219. Horace Albright's reflections on Lacey and the "Lacey Antiquities Act" are found in Horace M. Albright, *Origins of National Park Service Administration of Historic Sites* (Philadelphia: Eastern National Park and Monument Association, 1971), 5. Six months before Lacey's death, the Migratory Bird Act of 1913, which Lacey had strongly supported, was signed into law. Considered constitutionally weak, it was replaced by the Migratory Bird Treaty Act of 1918. Bean, *The Evolution of National Wildlife Law*, 19–21.

42. Albright, *Origins of National Park Service Administration of Historic Sites*, 5. Referring to the "Lacey acts," Albright made similarly laudatory remarks about the former congressman in a 1974 address. Horace M. Albright, "The Paradox in Resource Conservation," *The Eleventh Cosmos Club Award: Horace Marden Albright* (1974), 7–9.

43. The Mesa Verde Act's authorized punishments for vandalism were greater than

those of the Antiquities Act. Antiquities Act, ch. 3060, 34 Stat. 225 (1906); An Act creating Mesa Verde National Park, ch. 3607, 34 Stat. 616 (1906); see also Tolson, *Laws Relating to the National Park Service*, 125–127; Smith, *Mesa Verde National Park*, 45–53, 57, 61–66; Ise, *Our National Park Policy*, 164–166.

44. Antiquities Act, ch. 3060, 34 Stat. 225 (1906); An Act creating Mesa Verde National Park, ch. 3607, 34 Stat. 616 (1906).

45. Smith, *Mesa Verde National Park*, 36–68 (quote at 44); Mrs. W.S. Peabody, "Hundreds of Thousands of Dollars," *Modern World Magazine*, vol. 6, no. 12 (October 1907), 159–160; House Report no. 4944, June 15, 1906, 1–8.

46. Even after the 1911 agreement was reached, it turned out that the Balcony House site was still outside the new park boundaries marked by the U.S. Geological Survey. The government then adjusted the boundaries to correct this mistake, apparently without consulting with the Utes. An Act creating Mesa Verde National Park, ch. 3607, 34 Stat. 616 (1906); see also Tolson, *Laws Relating to the National Park Service*, 126–127. An excellent, detailed account of the land swap is found in Bruce J. Noble, Jr., "A Legacy of Distrust: The Ute Mountain Utes and the Boundaries of Mesa Verde National Park," *Colorado Heritage*, summer 1995, 32–42. (This article has no citations, but Mr. Noble has been kind enough to share his documentation with the author.) See also Smith, *Mesa Verde National Park*, 62–63, 66; Weixelman, "Hidden Heritage," 241; An Act making appropriations for the current and contingent expenses of the Bureau of Indian Affairs, for fulfilling treaty stipulations with various Indian tribes, and for other purposes, for the fiscal year ending June thirteenth, nineteen hundred and fourteen, ch. 4, art. II, 38 Stat. 77, 82 (1913). For broader discussions of the fate of Indians living on lands chosen by the federal government to be national parks, see Robert H. Keller and Michael F. Turek, *American Indians and National Parks* (Tucson: The University of Arizona Press, 1998), 34–38; Mark David Spence, *Dispossessing the Wilderness: Indian Removal and the Making of National Parks* (Oxford: Oxford University Press, 1999); Philip Burnham, *Indian Country, God's Country: Native Americans and the National Parks* (Washington, D.C.: Island Press, 2000).

47. Act creating Mesa Verde National Park, ch. 3607, 34 Stat. 616 (1906). The "accommodation" quote is in both the Crater Lake Act, ch. 820, 32 Stat. 202 (1902); and the Wind Cave Act, ch. 63, 32 Stat. 765 (1903); see also Tolson, *Laws Relating to the National Parks*, 125–127, 111–112, 123–124.

48. *Report of the Secretary of the Interior for the Fiscal Year Ended June 30, 1906* (Washington, D.C.: U.S. Government Printing Office, 1906), 219, providing the "defective" and "entertainment" quotes; To Amend an act entitled "An act creating the Mesa Verde National Park, H.R. Doc. no. 19861, Committee on Public Lands, 60th Congress (1908) (including "no authority" quote); *Reports of the Superintendent of the Mesa Verde National Park and J. Walter Fewkes, in Charge of Excavation and Repair of Ruins, to the Secretary of the Interior, 1908* (Washington, D.C.: U.S. Government Printing Office, 1908), 6–9, 15–18.

49. Clemensen, *Casa Grande Ruins*, 52–56; Rothman, *America's National Monuments*, 109; *Reports of the Superintendent of the Mesa Verde National Park and J. Walter Fewkes*, 15–17 (quotes, 15); Jonathon C. Horn and Susan M. Chandler, "History of Ruins Stabilization at Cliff Palace and Spruce Tree House, Mesa Verde National Park," 1989 typescript,

1–10, MVNP; Rothman, *America's National Monuments*, 109.

50. *Report of the Superintendent of Mesa Verde*, 1910, 13; An Act making appropriations to supply deficiencies in appropriations for the fiscal year nineteen hundred and ten, and for other purposes, ch. 385, 36 Stat. 774, 796 (1910); see also Tolson, *Laws Relating to National Parks*, 127; Ricardo Torres-Reyes, *Mesa Verde National Park: An Administrative History, 1906–1970* (Washington, D.C.: National Park Service, 1970), 13–17.

51. J. Horace McFarland to Stephen T. Mather, November 22, 1926, NPS-HC; Frederick Law Olmsted, note to files, November 20, 1910, NPS-HC; Frederick Law Olmsted to John C. Olmsted, December 19, 1910, NPS-HC, including the "inefficient" quote; Frederick Law Olmsted to the Appalachian Mountain Club, Boston, January 12, 1912, NPS-HC; J. Horace McFarland to James Sturgis Pray, February 19, 1915, ASLA-LC, Box 10; Ernest Morrison, *J. Horace McFarland: A Thorn for Beauty* (Harrisburg: Pennsylvania Historical and Museum Commission, 1995), 166–167, 170–171, 173–175; Runte, *National Parks*, 80, 97–98. The number of parks and monuments is found in *National Park Service*, *Shaping the System*, 18–19. For discussions of the Office of the Chief Clerk and its national park duties, see National Park Service, House Report 104, Committee on Public Lands, 63rd Congress 9–20, 69–76 (1914). In addition to overseeing national parks and monuments, the many and diverse responsibilities of the Miscellaneous Section included oversight of the territories, eleemosynary institutions, the United States Capitol building and grounds, construction work in the Interior Department, and even "miscellaneous" projects. Hearing on H.R. 434 and H.R. 8668 Before the Subcommittee on Public Lands, 64th Congress, 1st Session 25–27 (April 5 and 6, 1916).

52. The official title of the National Park Service Act, ch. 408, 39 Stat. 535 (1916), is "An Act to Establish a National Park Service, and for Other Purposes." See also Tolson, *Laws Relating to the National Park Service*, 9–11. Extended discussions of the National Park Service Act's legislative history are found in Winks, "The National Park Service Act of 1916"; Runte, *National Parks*, 82–105; Robert W. Righter, *The Battle over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (Oxford: Oxford University Press, 2005); and Sellars, *Preserving Nature in the National Parks*, 28–46. Winks discusses historic preservation policy and practice in the parks but in his discussion of the Organic Act's legislative history pays little attention to historic preservation concerns. Winks, "The National Park Service Act of 1916," 583–611. Righter's *The Battle over Hetch Hetchy* discusses the National Park Service Act as part of the legacy of the Hetch Hetchy dam controversy. Runte's *National Parks* and Sellars' *Preserving Nature* focus on the central role of the large natural parks in the act's legislative history and its wording.

53. Ballinger's quote is found in *Reports of the Department of the Interior for the Fiscal Year Ended June 30, 1910* (Washington, D.C.: U.S. Government Printing Office, 1911), 57. President Taft's special message to Congress, February 2, 1912, is reprinted in J. Horace McFarland, "Are National Parks Worthwhile?," *American Civic Association,* Series 11, no. 6, December 1912, 16–18; Richard A. Ballinger to Frank Pierce, August 25, 1910, RG79, Entry 6; J. Horace McFarland to Frederick Law Olmsted, October 13, 1910, JHMcF; Morrison, *J. Horace McFarland*, 180–181.

54. Mather would become the National Park Service's first director, with Albright as, in

effect, his deputy. Upon Mather's retirement in 1929, Albright would succeed him as director. Horace M. Albright, as told to Robert Cahn, *Birth of the National Park Service: The Founding Years* (Salt Lake City: Howe Brothers, 1985), 4, 12, 15–18, 34–35; Winks, "The National Park Service," 583–584; Sellars, *Preserving Nature in the National Parks*, 29–32, 42–43.

55. Runte, *National Parks*, 44–45; Sellars, *Preserving Nature in the National Parks*, 8–11, 19–20, 88–90. In the big national parks, cooperation between the federal government and private enterprise seemed very much a "pragmatic alliance," as historian Alfred Runte described it. The "alliance" quote is found in Alfred Runte, *Trains of Discovery: Western Railroads and the National Parks* (Niwot, Colorado: Roberts Rinehart, rev. ed., 1990), 1, which is also remarkable for its superb illustrations of early national park travel posters; for the Yellowstone quote, see An Act to set apart a certain Tract of Land lying near the Headwaters of the Yellowstone River as a Public Park, ch. 24, 17 Stat. 32 (1872); see also Tolson, *Laws Relating to the National Park Service*, 26.

56. *National Park Conference, 1st, Yellowstone National Park, Wyoming, September 11–12, 1911, Proceedings* (Washington, D.C.: U.S. Government Printing Office, 1912), iii–iv, 1–2, 80–101, 171–174; *National Park Service Conference, 2nd, Yosemite National Park, California, October 14–16, 1912, Proceedings* (Washington, D.C.: U.S. Government Printing Office, 1913), 5–7, 85–86; *National Park Conference, 3rd, Berkeley, California, March 11–13, 1915, Proceedings* (Washington, D.C.: U.S. Government Printing Office, 1915), 4–5, 208–225.

57. Sellars, *Preserving Nature in the National Parks*, 28–29, 36–37, 41–42; Albright and Cahn, *Birth of the National Park Service*, 38.

58. Hearing on H.R. 22995 Before the Committee on Public Lands, 62nd Congress, 2d Session 5–22 (April 24, 1912); Hearing on H.R. 104 Before the Committee on Public Lands, 63rd Congress 2nd Session 9–20, *passim* (April 29, 1914); Hearing on H.R. 434 and H.R. 8668 before the Committee on Public Lands, 64th Congress, 1st Session 15–25, 3870, *passim* (April 5 and April 6, 1916).

59. To Establish a Bureau of National Parks, and for Other Purposes, Smoot bill: S. 9969, 61st Congress, 3rd session, January 9, 1911. For the Raker bill, see Establishment of a National Park Service, H.R. 22995, Committee on Public Lands, 62nd Congress (1912) (emphasis added).

60. Smoot Bill, S-9969; Establishment of a National Park Service, H.R. 22995, Committee on Public Lands, 62nd Congress (1912); Morrison, *J. Horace McFarland*, 175–179. For subsequent "historical associations" wording, see, for example, To Establish a National Park Service, and for Other Purposes, S. 826, Committee on Public Lands, 63rd Congress (1913); National Park Service, H.R. 104, Committee on Public Lands, 63rd Congress (1914); To Establish a National Park Service, and for Other Purposes, S. 38, Committee on Public Lands, 64th Congress (1916); National Park Service, H.R. 434 & H.R. 8668, Committee on Public Lands, 64th Congress (1916).

61. Horace M. Albright and Marian Albright Schenck, *Creating the National Park Service: The Missing Years* (Norman: University of Oklahoma Press, 1999), 117, including the "real determination" quote.

62. Albright and Cahn, *Birth of the National Park Service*, 35–36; Albright and Schenck, *Creating the National Park Service*, 51, 125–126; Morrison, *J. Horace McFarland*, 186; see Albright, *Origins of National Park Service Administration of Historic Sites*, 4, for his comments on Mather's early attitudes toward historic and archeological sites. Ironically, Kent's Washington home had earlier served as a meeting place for leading proponents of the Hetch Hetchy dam proposal. Kent, like Congressman Raker, supported damming the Hetch Hetchy, then led the efforts to create the National Park Service. Righter, *The Battle over Hetch Hetchy*, 194; Sellars, *Preserving Nature in the National Parks*, 42–43.

63. An Act to Establish a National Park Service, and for Other Purposes, ch. 408, 39 Stat. 535 (1916); see also Tolson, *Laws Relating to the National Parks*, 9–11. The National Park Service Act and many other important acts and documents related to national parks and monuments are included in Lary M. Dilsaver, *America's National Park System: The Critical Documents* (Lanham, Md.: Rowman & Littlefield, 1994), for the National Park Service Act, see 46–47.

64. In July 1916, just before the National Park Service came into being, the Abraham Lincoln birthplace in Kentucky was established as a preserved site under War Department administration—too late to play a role in the give and take over bureaucratic territory. National Park Service, *Shaping the System*, 40–42.

65. Paige and Greene, *Administrative History of Chickamauga and Chattanooga*, 56, 171–190; Harlan D. Unrau, *Administrative History: Gettysburg National Military Park and Gettysburg National Cemetery* (Washington, D.C.: U.S. Department of the Interior, National Park Service, 1991), 116–119; Ronald F. Lee, *The Origin and Evolution of the National Military Park Idea* (Washington, D.C.: U.S. National Park Service, 1973), 45–46; Smith, *This Great Battlefield of Shiloh*, 122.

66. War Department, "Bulletin no. 27," July 17, 1915, 1–12, *General Orders and Bulletins*, War Department 1915 ("expense" quote, 12). "Bulletin no. 27" even included in its list an American military cemetery in Mexico City dating from the Mexican War, see 5; Lee, "Antiquities Act," 259.

67. Albright and Schenck, *Creating the National Park Service*, 44–45; Albright and Cahn, *Birth of the National Park Service*, 22–23. In addition to Yellowstone, U.S. Army troops had been stationed in Sequoia and Yosemite national parks, but army officials needed the troops for other purposes and transferred them out in 1914. H. Duane Hampton, *How the U.S. Cavalry Saved Our National Parks* (Bloomington: Indiana University Press, 1971), 81–182; Sellars, *Preserving Nature in the National Parks*, 24–48. For Fort Oglethorpe and the Presidio, see War Department, "Bulletin no. 27," 2–3.

68. Congressman Kent introduced two National Park Service bills on January 11, 1916, the first, H.R. 8661, being slightly revised to become National Park Service, H.R. 8668, Committee on Public Lands, 64th Congress 25 (1916). Congressman Raker bore political burdens because of an adversarial relationship he had with the speaker of the House of Representatives, but also because of his persistent support for damming the Hetch Hetchy Valley—a bitterly opposed pursuit. Thus, Kent's leadership seemed a better choice. Raker's quote is found in To Establish a National Park Service, and for Other Purposes, H.R. 434 and 8668, Committee on Public Lands, 64th Congress 25, 120 (1916). See also Righter, *The*

Battle over Hetch Hetchy, 194.

69. Richard B. Watrous to William Kent, January 4, 1916, JHMcF; William Kent to R.B. Watrous, January 17, 1916, JHMcF; Albright and Schenck, *Creating the National Park Service*, 126; Albright and Cahn, *Birth of the National Park Service*, 22–23.

70. National Park Service, H.R. 8668, Committee on Public Lands, 64th Congress 25 (1916).

71. *Reports of the Department of the Interior for the Fiscal Year Ended June 30, 1917* (Washington, D.C.: U.S. Government Printing Office, 1918), 76–77. National Park Service proponents made compromises in other areas. For instance, in addition to cutting the proposed budget for the new bureau and allowing pipelines and similar developments in three national parks in California, the final act allowed livestock grazing, with certain restrictions, in all parks and monuments except Yellowstone. See An Act to Establish a National Park Service, and for Other Purposes, ch. 408, 39 Stat. 535 (1916); Albright and Cahn, *Birth of the National Park Service*, 36–39, 41; Albright and Schenck, *Creating the National Park Service*, 128–129, 256; Sellars, *Preserving Nature in the National Parks*, 44–45.

72. Gifford Pinchot to J. Horace McFarland, March 4, 1911, JHMcF; Gifford Pinchot to Frederick Law Olmsted, December 26, 1912, NPS-HC; Horace McFarland to Gifford Pinchot, March 24, 1911, JHMcF. On Pinchot, see also Righter, *The Battle over Hetch Hetchy*, 194–195.

73. H.S. Graves to William Kent, March 17, 1916, JHMcF; H.S. Graves to Horace McFarland, March 30, 1916, JHMcF; Hearings on National Park Service, H.R. 434 and 8668, Committee on Public Lands, 64th Congress 1, 25, 10; on 11–15, bureaucratic territorial issues involving the War Department as well as the Department of Agriculture are discussed at some length. See also Winks, "The National Park Service Act of 1916," 591; the number of Forest Service national monuments is found in National Park Service, *Shaping the System*, 42–43.

74. H.S. Graves to William Kent, March 17, 1916, FLO-LC; H.S. Graves to J. Horace McFarland, March 30, 1916, FLO-LC; William Kent to The Secretary of Agriculture, April 7, 1916, FLO-LC; An Act to Establish a National Park Service, and for Other Purposes, ch. 408, 39 Stat. 535 (1916). Because of the wording in the National Park Service Act, it was determined that the Casa Grande Ruins Reservation should remain under the jurisdiction of the General Land Office. In 1918, the reservation would be transferred to the Park Service and re-designated a national monument. Rothman, "America's National Monuments," 109.

75. *Reports of the Department of the Interior, for the Fiscal Year Ended June 30, 1915* (Washington, D.C.: U.S. Government Printing Office, 1916), 125–126 (including the "wholly inadequate" quote); Rothman, *America's National Monuments*, 108–116.

76. An Act to Establish a National Park Service, and for Other Purposes, ch. 408, 39 Stat. 535 (1916); see also Tolson, *Laws Relating to the National Park Service*, 9–11.

77. Frederick Law Olmsted to the President and Council of the Appalachian Mountain Club, January 19, 1912, NPS-HC; J. Horace McFarland to Walter L. Fisher, January 2, 1912, JHMcF. A discussion of the statement of purpose as it pertains to natural parks and natural resources is found in Sellars, *Preserving Nature in the National Parks*, 38–46. A discussion of Olmsted's statement of fundamental purpose is found in Winks, "The National Park

Service Act of 1916," 596–599; for Olmsted's suggested criteria regarding allowing park intrusions, or impairments, written in the 1930s, see 599.

78. *Proceedings of the National Park Conference, January 2–6, 1917* (Washington, D.C.: U.S. Government Printing Office, 1917), 104–105; Frank Pierce, Acting Secretary of the Interior, to Frederick Law Olmsted, December 27, 1910, NPS-HC; Frederick Law Olmsted to John C. Olmsted, December 19, 1910, NPS-HC; J. Horace McFarland to H.S. Graves, February 21, 1911, JHMcF; Frederick Law Olmsted to Frank Pierce, December 31, 1910, including Olmsted's second draft of the statement of purpose (emphasis added), NPS-HC.

79. J. Horace McFarland to Walter L Fisher, December 19, 1911, JHMcF; J. Horace McFarland to Walter L. Fisher, January 2, 1912, JHMcF; Frederick Law Olmsted to Frank Pierce, December 31, 1910, NPS-HC; J. Horace McFarland to Henry S. Graves, February 21, 1911, JHMcF. Smoot Bill, S. 9996 (emphasis added).

80. J. Horace McFarland to Henry S. Graves, February 21, 1911, JHMcF. Examples of early and late bills containing the "historical associations" wording include Establishment of a National Park Service, H.R. 22995, Committee on Public Lands, 62nd Congress 1 (1912), introduced by Congressman Raker, April 8, 1912; and To Establish a National Park Service, and for Other Purposes, S. 38, Committee on Public Lands, 64th Congress (1915), introduced by Senator Smoot, December 7, 1915.

81. Richard B. Watrous to Frederick Law Olmsted, October 19, 1915, NPS-HC; Frederick Law Olmsted to Richard B. Watrous, November 1, 1915, NPS-HC; An Act to Establish a National Park Service, and for Other Purposes, ch. 408, 39 Stat. 535 (1916) (emphasis added); see also Tolson, *Laws Relating to the National Park Service*, 9–11.

82. 39 Stat. 535 (1916); see also Tolson, *Laws Relating to the National Park Service*, 10. For a discussion of the unimpairment clause as it applies specifically to natural resources, see Robert B. Keiter, "Preserving Nature in the National Parks: Law, Policy, and Science in a Dynamic Environment," *Denver University Law Review*, vol. 74, no. 3 (1997), 649–695, see especially 650–657, 675–680; Sellars, *Preserving Nature in the National Parks*, 38–46.

83. Albright and Schenck, *Creating the National Park Service*, 239. See also 276, 289 for Albright's reflections on the "paradox" in the Organic Act; Runte, *National Parks*, 35–44, 83–99; Sellars, *Preserving Nature in the National Parks*, 16–27; 17 Stat. 32, see also Tolson, *Laws Relating to the National Parks*, 26; 26 Stat. 650, see also Tolson, *Laws Relating to the National Parks*, 65.

84. In its management of the *large natural parks*, the National Park Service would interpret the Organic Act's mandate to leave the parks "unimpaired for the enjoyment of future generations" chiefly in terms of leaving park *scenery* unimpaired rather than striving to leave the parks' biological resources and ecological systems in an unimpaired condition. This interpretation was much in accord with the legislative history of the National Park Service Act. (Yet it should be noted that the 1916 act was passed the year *after* the Ecological Society of America had been established, which reflected the increasing influence of ecological thinking among natural scientists—but *not* among Park Service founders.) And the interpretation focused on scenic preservation fit well the Park Service's determination to maintain the beauty and majesty of the parks by, for instance, fighting forest fires that would darken

park landscapes and eliminating certain native predators—wolves, mountain lions, and other species that killed and fed upon the charismatic native fauna such as antelope, elk, and bison, which graced park landscapes. By such means the Park Service sought to ensure public enjoyment of the parks, which could help increase public visits and thus increase public support for the national park concept. With the rising influence of the Park Service's wildlife biologists, first in the early 1930s, and then again in the 1960s and beyond, the bureau began a shift toward a broader interpretation of its mandate for unimpairment. In effect, the biologists held that the unimpairment mandate applied to much more than the biological and scenic superstars; rather the mandate applied to each park's natural systems, including all native species. Over time this perspective moved park management toward a genuine concern for park ecological systems while not abandoning its long-time commitment to public enjoyment. For an elaboration on this discussion of natural resources management policy in the parks, see Sellars, *Preserving Nature in the National Parks*, 45–50, 69–148, and *passim*.

85. Albright and Schenck, *Creating the National Park Service*, 127; *Reports of the Superintendent of the Mesa Verde National Park and J. Walter Fewkes*, 8–9, 15–18; see also Jesse Walter Fewkes, *Antiquities of Mesa Verde National Park: Spruce-Tree House,* Bulletin no. 41 (Washington, D.C.: Bureau of American Ethnology, Smithsonian Institution, 1909).

86. Clemensen, *Casa Grande Ruins*, 51–56; Ralph H. Lewis, *Museum Curatorship in the National Park Service, 1904–1982* (Washington, D.C.: Curatorial Services Division, National Park Service, 1993), 1–3, 9–10, 12–17; *Reports of the Superintendent of the Mesa Verde National Park and J. Walter Fewkes*, 7; Barry Mackintosh, *Interpretation in the National Park Service: A Historical Perspective* (Washington, D.C.: History Division, National Park Service, 1986), 2–5. See also C. Frank Brockman, "Park Naturalists and the Evolution of National Park Service Interpretation Through World War II," *Journal of Forest History*, vol. 22 (1978), 24–27.

Regarding the importance of education in early historical parks, it is worth noting again how impressed Horace Albright was with the tour he took in late 1915 at the War Department's Chickamauga and Chattanooga National Military Park. Albright, then deeply involved in promoting establishment of the National Park Service, had spent the day at the park with a battlefield guidebook in hand ("the most complete guidebook I ever had") and was also shown around by two guides, both Confederate veterans. He remembered his tour as a "fascinating experience," and recalled the veterans as being "very knowledgeable," having "put in long years of fighting." By the time of Albright's 1915 visit, Chickamauga-Chattanooga was one of the most extensively memorialized battlefields in the country, if not the world. The battlefield's many monuments, placed so as to mark important aspects of the battles, were augmented by hundreds of sturdy metal tablets informing visitors in detail about the course of the battles. Albright's experiences at the battlefield convinced him that the National Park Service should (as he stated in a letter to Mather written immediately after his visit) control all of the places the federal government wants "to preserve and protect for the education, interest and enjoyment of the population." Albright and Schenck, *Creating the National Park Service*, 117; Sellars, "Pilgrim Places," 31, 42–44.

87. Harmon et al., *The Antiquities Act*, 6; McManamon, "90 Years of Archeology and Historic Preservation"; 34 Stat. 225; 34 Stat. 616; 36 Stat. 796.

88. 34 Stat. 225; 39 Stat. 535.

89. John F. Lacey, "Speech on National Parks."

90. These figures include the Lincoln Memorial; by 1916 the War Department's administrators were already underway with site preparation for the memorial. They also include Papago Saguaro National Monument, in Arizona, which was proclaimed for both natural and archeological features. From 1916 until Congress abolished the monument in 1930, Papago Saguaro was under the National Park Service. National Park Service, *Shaping the System*, 19, 40–43.

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