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Dedicated to the Protection, Preservation and Management  
of Cultural and Natural Parks and Reserves  
Through Research and Education

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**On the Cover:** Swallow Falls State Park, Maryland. Swallow Falls are the highest in the state. Photo courtesy of Bob Beckett.

# Society News, Notes & Mail

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## **Crossing Boundaries in Park Management: The 2001 GWS Conference**

If you are a GWS member, by now you should have received a Call for Papers for the 2001 GWS conference, by regular mail and/or e-mail. "Crossing Boundaries in Park Management: On the Ground, In the Mind, Among Disciplines" will be held April 16-20 in Denver. For complete information, go to:

<http://www.georgewright.org/2001.html>

If you'd like to propose a paper, session, poster, or computer demo for consideration, the deadline for abstracts is October 20, 2000.

## **Peter Brinkley Named to GWS Board**

In August the Society's Board of Directors named Peter Brinkley of New York City as its 10th member. The Board was acting under newly revised by-laws which allow the size of the Board to be expanded from nine to as many as twelve members. The Board also approved a by-laws change which allows the annual election to be cancelled if incumbent members of the Board are running unchallenged for re-election.

For several years, Peter has been heavily involved in promoting the NPS Natural Resource Challenge, particularly those portions relating to Learning Centers and relations with the private sector and academia. After graduating from the University of North Carolina, Peter spent most of his professional career as a corporate banker with Chase Manhattan, after which he worked with a series of smaller investment firms. Peter and his wife Barbara, also a financial manager, maintain a strong interest in American history, natural history, and outdoor activities. Peter also serves on the boards of the Association for the Protection of the Adirondacks, CDS International (a German-American exchange program), the Institute of Environmental Studies (University of Wisconsin), and Partners in Parks.



William R. Supernaugh

## Box 65: Commentary from the GWS Office and our members

### The Role of Inventory in Resource Stewardship

Parks are storehouses for natural diversity. We are stewards—of a wondrous collection of America’s biological heritage—but we often don’t know what is on the shelves.

Resource stewardship, that is, providing informed care for the varied resources contained within the parks entrusted to us by the American public, has been integral to our duties from the very earliest history of the National Park Service. The Organic Act calls for NPS to manage the parks so as to “conserve the scenery and the natural and historic objects and the wildlife therein....” Basic to this charge is the need to know what the elements of those “natural objects” and “wildlife” truly are.

As elementary as this sounds, the 1980 *State of the Parks Report* documented that few parks had even a preliminary inventory of basic resources, such as a vegetation map. Furthermore, there was no programmatic approach to collecting, storing, or displaying these data. A few parks were filling the information gap through efforts undertaken as part of research projects or, in a few cases, by means of direct inventories. Many, though, would never be able to complete these inventories due to a lack of staff expertise, funding, or outside interest. As a result, the Park Service, overall, lacked the ability to make resource management decisions based on sound scientific information. Even

where there was information on the species found within parks, an understanding of how species interact within the ecosystem was missing.

Long ago, Aldo Leopold cautioned that the art of intelligent tinkering is to keep all the pieces. NPS was guilty of tinkering without knowing what the parts were or how they fit together.

Wise stewardship requires planning, based on a knowledge of the resources being conserved. The resource management plan is at the heart of our efforts to define a park-based natural resource conservation program. But you can only develop plans to protect those things you have located and identified. Otherwise, their damage, loss, or extinction will go unnoticed. If you don’t know what you have, how can you protect it?

This deficiency was addressed in the *Threats Mitigation Report* and, later, in the *Vail Agenda*. However, progress has been glacially slow during the past two decades, though there have been remarkable exceptions. The all-taxa inventory undertaken at Great Smoky Mountains National Park stands out as an example of what a qualitative and quantitative search of a rich ecosystem is capable of

producing.

You might well ask, "How will this information be used, now and in the future?" Well, if you don't ask the question, rest assured that somebody out there beyond park boundaries will! Inventories of insect populations, including species presence, distribution, and life history, might well influence the establishment of a beneficial fire-use regime or the control of alien plant species through chemical or biological means. Many park fauna lists are developed not from field collections but from distribution maps published in field guides. We all know that such projections are fraught with inaccuracies. Floral inventories are similarly subject to gross assessments of readily accessible sites and charismatic plants. Climatological and seasonal variations in growing requirements ensure that plant inventories must be conducted repeatedly under a wide range of conditions and times in order to ensure the widest possible opportunity for the most accurate data collection. Once we have identified the key indicator species of our park's health, we can initiate a program of "vital signs" monitoring. Just as we have an annual check-up on our personal or physical system through monitoring of vital signs such as blood pressure, heart rate, tempera-

ture, and cholesterol levels, we believe it is possible to do something similar to this for park systems. Inventory data will help us decide *what* we eventually monitor.

The known presence of a high-interest species (not one which is just suspected of being present or is presumed to be absent) will, of necessity, strongly influence our management actions. Federally listed species, state-listed species, and locally rare species require specific management actions. The abundance and distribution of species and the relationships among species are key to our decision-making process. We have for too long gotten by on a minimal knowledge level. That is no longer acceptable, and in this litigious society—with the National Park Service increasingly found on the losing end of challenges to our decisions—we can neither defend nor afford to perpetuate our past practices.

The current initiative, the Natural Resource Challenge, has fortunately provided both an opportunity and a directive to move forward on several fronts. We are here today to initiate an exciting and much needed effort directed at an information deficit. I hope it comes in time for us to "save all the pieces" as we proceed with our intelligent tinkering.

**William R. Supernaugh** is superintendent at Badlands National Park. These remarks were originally delivered at the Northern Great Plains Inventory Scoping Session held at Rapid City, South Dakota, April 24, 2000.



*Reminder: this column is open to all GWS members. We welcome lively, provocative, informed opinion on anything in the world of parks and protected areas. The submission guidelines are the same as for other GEORGE WRIGHT FORUM articles—please refer to the inside back cover of any issue. The views in “Box 65” are those of the author(s) and do not necessarily reflect the official position of The George Wright Society.*

# Our State Parks

A volume of the THE GEORGE WRIGHT FORUM dedicated mainly to state parks is something of a departure from our usual concentration on national parks and other protected places whose scale is similar to that of a typical national park. A historical remembrance should be the first reason for concentrating on the state parks. As the president of the National Park Trust, Paul Pritchard, notes in the concluding article of "The State of State Parks," it was Stephen T. Mather who first used the term "our national system of parks." Paul reminds us that Mather said "that there would be no National Park System until there was a national system of parks." Indeed, Mather convened the first Conference on State Parks. This has been described in a previous FORUM article by Rebecca Conard ("The National Conference on State Parks: Reflections on Organizational Genealogy," Volume 14, Number 4).

More than a few of America's state parks could well be national parks. The most precious special value of the state parks in relation to the national parks is their ready accessibility. For example, in Maryland we say that "You are never more than 40 miles from a state park." And it is only half a day's drive from Assateague State Park's Atlantic beach to Swallow Falls State Park's mountain setting in Appalachia. That accessibility, it must be stressed, does not interfere with dedication to preservation in most state parks.

Our first two articles shed considerable light on two pairs of contending tendencies of both the national and the state parks. The first pair has to do with the much-labored issue of

preservation versus development. The second is concerned with natural versus cultural and historical resources.

State parks share the vision articulated so succinctly by Ethan Carr in the most recent issue of THE GEORGE WRIGHT FORUM. He wrote that the language of the National Park Service organic legislation, to "conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same" while leaving the parks "unimpaired for the enjoyment of future generations" has often been described as "a dual mandate." He challenged the authenticity of the "dual mandate" by citing the vision of preservation and development "as



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indivisible parts of one undertaking" ("Park, Forest, and Wilderness," Volume 17, Number 2, p. 20).

That vision of indivisibility has been a fundamental force in the shaping and managing of the state parks no less than the national parks. While significant differences exist in the balance of preservation and development (and commercialization) of the state parks among the 50 states, one great commonality has been continuous efforts to adapt that vision from park to park and from time to time.

John Henneberger, who is well known to many readers of the FORUM through his substantial contributions to the work of the National Park Service, presents a deeply human-oriented analysis of "State Park Beginnings." In setting forth the details of personalities and beliefs, Henneberger makes clear the roots of the regularly made statements about a supposedly built-in contradiction in objectives. He concludes with a clearly stated recognition of the vision of indivisibility: "What is needed is a massive program comparable with that of the CCC era so that state parks can help meet the needs of the American public for outdoor recreation and the preservation of their natural and cultural heritage."

His closing words are an unplanned perfect linkage to Rebecca Conard's and Michael Carrier's analysis of integrating the second pair of contending tendencies in state park

management. That pair consists of protecting *natural areas* and protecting *cultural resources* (their italics). Managing each of the pair, readily divisible in this case, has been characterized by the authors as "intellectual dissonance." Overcoming the competition between the two great types of resources is becoming increasingly more visible in the national parks. Admittedly, the necessary teamwork is more difficult to achieve among state park organizations, in important part because of their differing authorizing laws. A major theme of the integration of philosophies and actions is that "human actions are a factor in ecological processes and in environmental change and that, at heart, environmental problems really are people problems." Public "understanding of the connections between human agency and environmental change" will foster "a greater sense of individual responsibility for environmental stewardship."

Susan Flader makes abundantly clear the critical need for "a statewide focus on the health and integrity of a state park system as a whole." She provides insights on the historical development of critically important citizen relationships with the Missouri State Park System and its administration. In providing support for the state parks, the Missouri citizen organization concentrated initially on the appropriate education of public officials as well as of citizens and on

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establishing an enduring financial base. Flader describes the problems and successes of attaining citizen support for dedicated taxes for state park purposes. It is her dedication to the very special value of "an alert, active citizenry" that sets her article apart from most statements about support of public parks.

With the thought that "partners are wonderful, while co-owners are dangerous," Rick Barton concludes a thoughtful analysis of the potential traps and unexpected control-oriented side effects of corporate sponsorship. Those sponsors can certainly provide fully constructive financial support and other benefits that accrue eventually to park visitors. On the other hand, if not carefully circumscribed, sponsors can unwisely interfere with park leadership initiatives. It is up to park managers to assess the risks and accept any necessary involvement constructively while guarding vigilantly and vigorously against sponsors extending their reach beyond support to influence management plans and actions.

Michael A. Reiter, James P. Eagleman, and Jenna Luckenbaugh present an emerging form of close cooperation between state parks and universities built upon experiential "service learning" relationships. University students would benefit from close hands-on experience with environmental and related subjects. The parks would benefit from the information that would be developed by

the work of involved students and by other contributions made in the planning and implementation of specific substantive projects. A major element of the kind of program set forth in the article is the matching of student interests and park management priorities. The article elaborates on the step-by-step details that take the program from concept to on-the-ground reality.

The final two articles in this series answer a question which might be put colloquially as, "How are things these days?" The first response, by Glen D. Alexander, deals mainly with highly macro-level trends that sweep across the states. He advises that the overall state of the state parks is "quite good." A particularly significant current trend is, in fact, really a revival and broadening of the establishment of state-level foundations. The Maryland foundation, for example, is 17 years old. In contrast, the nearby Pennsylvania foundation, modeled substantially on the Maryland experience, is less than a year old. The primary role of the state park foundation is very generally some kind of financial support to make up for, as much as possible, reductions in tax-supported revenues. Other add-on funds come from a variety of growing sources, including corporate partnerships of many kinds for many purposes.

The idea for the final article, by Paul Pritchard, arose on the very day that I was about to transmit the first

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six articles to the George Wright Society headquarters. I learned that the National Park Trust had just announced its second Legacy Report, this time focusing on state parks. Given the very special relevance of the report, we had to include a connection to it in this issue of the FORUM. In fairness to Paul, I suggested a very short article that would skim the cream of the Legacy Report, something that might be prepared overnight. And indeed, Paul did respond overnight. In contrast to the overall OK status described by

Glenn, Paul reports on two significant challenges confronting the state parks. The first is the lack of "real" government commitment to fund the parks consistent with their heavy visitation loads, present and prospective. The second is dealing with the "wall of sprawl" that is reaching the edge of too many parks. The article presents very summary statements about five needed actions, several well underway and several only recently underway, all very promising for the future of America's state parks.

**Maurice H. Schwartz**, P.O. Box 12220, Silver Spring, Maryland 20908



John Henneberger

# State Park Beginnings

State park systems constitute an important and valuable component of the USA's total complement of national, state, regional, local, and private lands devoted to the preservation of nature and culture. These lands also provide outdoor recreational activity, aesthetic enjoyment, and education to many millions of people. A tracing of the history of the state park movement presents an intriguing story that begins with the Yosemite grant to the state of California in 1864. There, the national and state park ideas emerged within a new form of park, one whose purpose would be to retain outstanding natural wonders in public ownership for all the people for all time. A succession of state parks then appeared through the efforts of individuals and groups, especially the wealthy. Several national parks; many state, county and city parks; the national forest reserves; a few state forests; and several national and state wildlife refuges were established within what can be called the *first wave* of the conservation of America's natural resources. During this first wave, state parks often proved difficult to establish. Land acquisition, development, and operational funding were initially sparse. State legislatures were reluctant to spend tax dollars on parks. The *second wave* of the conservation movement occurred after World War I under the influence of a growing population, increasing affluence, and the arrival in common use of the automobile. Mobility became a distinctive feature of American life. This produced tremendous outdoor recreational demand. Numerous state parks were created in the 1920s in many states to handle populations streaming out of the cities into the countryside in search of camping and cabins in the outdoors. Growth in state park systems reached its highest levels when vast federal sums were poured into state park and recreation area programs during the Great Depression. The *third wave* occurred after World War II. It lasted until the presidency of Ronald Reagan, when a period of consolidation and stability in all park programs set in. Accounts of the establishment of some of the earliest and most notable state parks present reasons why the institution of state parks came into existence.

**The Yosemite state grant.** After Yosemite Valley was entered in 1851 by the California Mariposa Battalion of Rangers, who were pursuing Indians through the foothills of the Sierra Nevada in order to place them on reservations, the great scenic wonders of Yosemite Valley and the Mariposa

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Grove of Big Trees to the south became known to the people of California, the nation, and the world, and soon grew into prime tourist attractions. Each region of the West was a dynamic section of its own, forming part of a larger developing "West" which itself was becoming a distinct "half" of the nation in apposition to the East. Such places as Yosemite, Yellowstone, Sequoia, Mount Rainier, Glacier, and the Grand Canyon helped form a specific view of the West that was vital, had power, was progressive, was different from European ideas and models, and was part of the construction of urban institutions, structures, and places devoted to social reform. The parks that were created were part of a larger phenomenon within the general American experience: the establishment of tourism as a prominent cultural activity, one that encompassed a growing appreciation of and concern for nature.

San Francisco was the major focus of a developing section of California coming out of its Gold Rush days. The northern California region possessed a world-famous, highly distinctive climate, along with attractive landscapes of mountains, valleys, and seacoast. In the national mind it became a very special place. Out of this bustling region, through the efforts of a few people, there emerged the proposition of the Yosemite Grant. The Yosemite park creation utilized the mechanism of a federal

grant of lands to the states for the purpose of the public use, resort, recreation, and, in this case, protection of an attractive part of the Sierra Nevada region. Congressional grants of public domain to the states were a common political instrument used to build canals, highways, railroads, public works, and schools. The Yosemite grant was different in that the parklands were given with the stipulation that they *not* be sold. The proponents of the Yosemite Valley and Big Trees grant initiated a novel park category of natural scenic lands to be protected in public park status, one which in a short period would become conventional in American culture. It joined the landscaped urban central public park, which was then being adopted in Eastern cities, to form two distinct park categories that would come to be blended over the next hundred years to produce a variety of parks at the federal, state, and local level.

The principals involved in the Yosemite grant were a group of northern Californian residents of various occupations. Israel Ward Raymond and Frederick Billings were businessmen. Raymond was an officer in the Central American Steamship Transit Company of New York. Between 1849 and 1864 he made numerous round-trips between New York and San Francisco to promote his company's efforts to construct a railroad across the Nicaragua Isthmus to carry people and

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goods between the East and West coasts. Billings was engaged in mining ventures, urban residential schemes, and railroad construction in the West. Both Raymond and Billings visited Yosemite and the Mariposa Grove. At Wawona, they met Galen Clark, who was proprietor of an overnight facility that catered to tourists going to Yosemite. Billings was often in the Yosemite region at John C. Frémont's nearby Mariposa property to discuss mining business. Also stopping at Frémont's Las Mariposa home were Carlton Watkins, the California photographer; Thomas Starr King, a minister from San Francisco; and State Geologist Josiah Dwight Whitney and his assistant William Ashburner. All of them went to Yosemite. At Mariposa, they were greeted and made at home by Frémont's wife, Jessie Benton Frémont. When the Frémonts moved to San Francisco, Jessie's home at Black Point became the cultural center of the city. Between 1860 and 1863 it was a meeting place, akin to a country salon, for writers, artists, politicians, businessmen, photographers, ministers, and other intellectuals of the region. Jessie's role was that of a catalyst and muse, prodding and encouraging such men as Bret Harte and King to write and speak, as she could not in a period where women were expected to inspire rather than create. The emergence of the idea of a particular California landscape occurred through such activity as Starr's

articles on Yosemite and the work of the very lively Watkins, who would become one of the West's most distinguished commercial photographers. Billings urged Watkins to photograph the Valley and Mariposa Grove, which he did.

These principals interacted with one another at Las Mariposa, Clark's way station, and Black Point. Billings and Raymond were conservationists in a day when there were few in America. (Billings was a great admirer of fellow Vermonter George Perkins Marsh, who authored *Man and Nature*, the landmark conservation book of the time.) Billings felt that commerce could serve the cause of conservation by bringing visitors to a site such as Yosemite that was worthy of protection, thus building a political constituency and creating a source of funds to meet the costs of development and protection. Raymond initiated the Yosemite legislative campaign by composing and sending a letter from his New York Wall Street office on February 20, 1864, to Senator John Conness of California. The letter outlined the essence of the Yosemite grant proposal. To prevent private exploitation, he recommended a grant encompassing both areas to the state of California. Raymond appears to have been the main developer of the critical pronouncement of purpose: that Yosemite was to be granted for public use, resort, and recreation, with the lands held inalienable forever. Con-

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ness sent Raymond's letter to the General Land Office Commissioner and asked him to prepare suitable legislation to effect the grant. The GLO promptly complied. Conness then introduced the legislation in the Senate. It passed there and went on to the House, where it also passed. President Lincoln signed it into law on June 30, 1864.

Raymond, Clark, Whitney, and Ashburner became members of the Yosemite State Board of Commissioners, the body created by the state to administer the park. Clark was also named "Guardian of the Yosemite." The famed landscape architect Frederick Law Olmsted, who at the time was managing the Las Mariposa mining properties, was also named to the board. The state commissioners ran the park between 1864 and 1906. Most accounts of their management have deemed it a failure. The state legislature refused to give the board sufficient funds to properly take care of the property. There was deterioration of the natural condition of the Yosemite Valley floor. Finally, John Muir and his Sierra Club's criticism of the board's management pressured the state to re-cede control back to the federal government in 1906. The first park under state administration was an unsuccessful venture. Yosemite nonetheless became a model that enlarged the scope of public park systems.

**Niagara Reservation.** Niagara Falls was located on one of the most

important transportation corridors in North America. By the 1820s it had become a heavily frequented tourist destination. It quickly degenerated into a shabby resort as private entrepreneurs sought to wring money out of tourists. Frederick Law Olmsted also became involved in Niagara Falls when, in 1869, he and others launched a media campaign to place the U.S. overlook in public ownership. The New York state legislature responded in 1883 by creating a park commission empowered to acquire land and manage it as a scenic reservation. Enough funding and land acquisition followed to establish a 107-acre park in 1885. Restorative work was undertaken that removed many unsightly buildings. Olmsted and his partner Calvert Vaux developed a park design that eliminated additional structures and re-established indigenous communities of trees and shrubs along the shoreline. Shelters, walks, and benches at overlook points provided a reasonably attractive setting within a rather small park reservation. Still, they never achieved the superior effort of the Canadians, who approached the administration of their side of Niagara Falls differently. They vested in their park commission all the lands above and below the falls and gave it leasing powers with authority over the design and location of generating plants to assure that the spectacle remained unmarred. On the American side there emerged a rather small standard landscaped park set up

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as a scenic attraction.

**Adirondack Park.** The drive for an expansive park for the Adirondack Mountains first surfaced publicly in 1864 when *The New York Times* suggested that the spacious mountains and forests in upper New York state be created as "a Central Park of the world." The editorial summed up the view of many New York City summer residents of the Adirondack mountain region: namely, that a park there would make a fine wilderness suburb for the city, holding the capacity for imparting recreational and aesthetic pleasure as well as increasing wealth through tourist activity. Such a park would be a distinct outdoor adjunct to urban life. An Albany resident, Verplank Colvin, led the legislative campaign for such a grand park. Colvin approached the park proposal as a vehicle to halt the region's destructive logging practices in order to save downstate water supplies. Sportsmen joined in the campaign, for they knew that the best way to preserve hunting habitat was to make the case for a large preserve to augment and include their private hunting preserve holdings. Resort-oriented persons seeking recreational opportunities in relatively untouched country joined these factions. Doctors proposed the enclosure of the mountains in a park as a good place for the treatment of pulmonary diseases.

The initial step toward an Adirondack park/forest preserve oc-

curred in 1883 when the state legislature banned the exchange or sale of all state land in ten Adirondack counties. Funds were provided to acquire the underlying fee title to tax-sale lands held by the state within what was called "Lands in the Adirondack Forest Preserve." In 1885, the state authorized the establishment of a state forest preserve modeled after European municipal forests. There was opposition to creating a "park." That word conjured up taxpayer expense in maintaining an area for the enjoyment of those who had the time and money to spend in hunting, fishing and other recreation. Within a five-million-acre region in the upper New York state counties, some 681,000 acres of state land was designated as a forest preserve under an umbrella concept of these lands being kept forever wild. Private lands were not included within the preserve. The preserve was to be managed under scientific forestry principles that were being introduced in America in the 1870s and 1880s.

Management and protection of the new state forest preserve were virtually non-existent in the years immediately after its creation. Disregard for proper protection and utilization brought on demands for a state park. The state legislature corrected the situation in 1890 by calling for the gathering of the scattered preserve holdings into a park of "one grand domain" that was to lie within a larger forest preserve. A map of the entire



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region was developed in which a blue pencil outlined a rough circle that took in nearly all of the Adirondack Mountains. Within the blue line was some 2,800,000 acres defined as park, of which the state owned just over 550,000. There were patches of forest preserve, with the rest of the land remaining private. It was recommended that the state buy up all the private land and turn the whole region into a unified forest preserve—or Adirondack Park. To this day, the “Blue Line” has remained synonymous with the park area, which has expanded to 5,927,600 acres, with 2,337,936 state-owned. The 1890 park legislation had loopholes that permitted the sale of timberland for logging. The fight over the future of the park was joined. In 1894 the forest reserve versus park issue became part of state constitutional convention proceedings. Preservationists won when a proposal for a “forever wild” park was approved to be put before the voters. The voters agreed. Civilization gradually encroached upon the Adirondacks via railroads, and then the automobile. Transportation opened the region to hordes of vacationists and sportsmen. Trails, shelters, and campgrounds were built. The mountains became a place to ski, canoe, and climb. The years ahead were turbulent until the 1970s, when a master plan was brought forth for both the public and private lands in which some portions remained wild while others were de-

voted to recreation, and there was an extension of governmental control over private property. Forty-five percent of the state lands were designated as wilderness. There finally had emerged a commitment to wilderness and the perpetuation of natural plant and animal communities by the state after a hundred years of struggle to preserve the Adirondacks.

**Itasca.** Greater numbers of state parks appeared at the end of the nineteenth and the beginning of the twentieth centuries as states used the designation to establish scenic, recreational, and historic sites to meet outdoor recreational needs and to save particularly attractive and important cultural sites from encroachment and destruction. Itasca, at the headwaters of the Mississippi River in north-central Minnesota, became an active state park reservation in 1893. The source of the Mississippi River is a basin of lakes lying within a semicircle of wood ridges some two hundred miles north of the Minneapolis–St. Paul metropolitan area. Excursions to these headwaters brought the area into prominence. The need to protect this unusual place was seen by the Twin Cities community as they watched the region being dismembered through timber cutting, homestead entry, and railroad grant activity. At first, efforts were made to make Itasca a national park. Since there wasn't enough federal land to do so, the campaign shifted to the state level. Authorization by the state legislature

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for an Itasca State Park came in 1891. A superintendent was appointed who proceeded to put together a sizeable park out of federal holdings, some Northern Pacific railroad grant lands, a Weyerhaeuser timber tract, state school lands, and miscellaneous purchased lands. The state later authorized additional purchases that brought the park to 32,000 acres. Park rules and regulations were drawn up, and penalties provided for infractions.

As in the Adirondack situation, at Itasca there was initial indecision over whether the area was to be a state park or state forest. Itasca initially shifted from a public outdoor recreation area that preserved scenery to a reserve where conservation of timber became the prime objective. The federal-state public works program of the 1930s brought substantial recreational facilities to Itasca. Federal funding for development forced the state to remove Itasca from supervision by its Forestry Department and place it under a newly created State Parks Division. Transitions through the whole range of park purposes, from scenic protection and outdoor recreation development to ecological concerns, were realized at Itasca when a 2,000-acre wilderness sanctuary was designated there after World War II.

**Palisades Interstate Park.** In 1895, New York and New Jersey created the nucleus of the Palisades Interstate Park along the Hudson River

with the involvement of prominent and wealthy personages who entered the field of public park establishment with timely gifts and donations of property. Such philanthropy became common as America produced a great number of millionaires who used their wealth in many areas of social reform—public parks being one prime area of interest. Many national and state parks throughout the country have benefited from individual and corporate wealth and interest.

The unbroken line of perpendicular Palisade rock, rising 550 feet from the shoreline, was being quarried to feed the demand for rock for New York City brownstone buildings and for ship ballast. The state legislatures responded to the threat by passing legislation creating a Commission for a Palisades Interstate Park who were directed to put together a park proposal. The first segment of the park was a Hudson Fulton Boulevard skyline drive corridor along the Palisades. An extension was then created to connect the Palisades with a Bear Mountain Park that was being established around the 1,314-foot-high mountain that overlooks the Hudson River. The Bear Mountain portion became a reality in 1901 through gifts from John D. Rockefeller and J. Pierpont Morgan. In 1909, Mrs. E. H. Harriman gave a million dollars and ten thousand acres to form the nucleus of a Bear Mountain-Harriman State Park complex. Eventually the two state parks were

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expanded to over 85,000 acres. Bear Mountain became a popular outdoor recreation area. Steamers brought people from New York City on day and overnight excursions. Two million visitors were using the Interstate park areas by 1913. The Palisades Interstate Parkway was completed in 1958 to connect the Bear Mountain Park with the George Washington Bridge. This provided direct automobile access from New York City to the Bear Mountain Park and to the additional state parks that had been developed to the north and along the Hudson River to meet the park and outdoor recreational needs of the greater New York metropolitan region.

**The Massachusetts State Park System.** As the nineteenth century was ending, some states began to think in terms of park systems for their residents. The state of Massachusetts created the Trustees of Public Reservations (1891) and a Metropolitan Park Commission (1892) as their direction in establishing park, forest, and game reservations. The Metropolitan authority quickly created many parks in the Boston area. The Trustees for Public Reservations accepted gifts of park land to be administered by a special commission to handle each park, forest, or game refuge. A forested and mountain area in the Berkshires of 8,600 acres was given to the state in 1898 to become the Mount Greylock State Park. The Wachusett Mountain State Park of

1,500 acres in the southwest corner of the state, and a Martha's Vineyard Game Reservation of 1,601 acres, followed. These areas formed the nucleus for the Massachusetts State Park System that grew in scope in the next century.

**The Oregon experience.** The genesis of Oregon State Park System occurred in 1913 when the state legislature designated the entire coastal area as a public highway. Included were all the ocean tidelands from the mouth of the Columbia River to the California State line. This gave public access to the ocean shore for hiking, fishing, clamming, and aesthetic pleasure. The Oregon State Highway Commission in succeeding years acquired lands for highway construction along the coast, in the Columbia River Gorge area, and in the Willamette Valley. Remnants of parcels were developed into roadside parks and waysides. State legislation emerged to preserve timber along the rights-of-way and for parks, parking places, campsites, public squares, and outdoor recreation grounds. The State Highway Commission in 1925 was directed to improve, maintain, and supervise these parklands. Oregon's state park system thus primarily developed out of its state highway program. Substantial acreage for park purposes was subsequently acquired under aggressive leadership to facilitate a number of park areas of up to 4,000 acres that extended well beyond the highways.

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**Katahdin—The wilderness state park.** The Katahdin region in Maine was wild, isolated, mountainous country to the early settlers. In the nineteenth century, there was little need within Maine to create parks, preserves, and refuges. The state possessed substantial acreage for outdoor recreation that was available to residents, tourists, hunters, and fishermen. It was only when lumber companies began to open up and log off huge blocks of timber that interest in setting aside some of Maine's wild country occurred. National park status for Katahdin was pushed in 1911, but Congress took no action—they were not yet ready to "buy" national parks. Percival P. Baxter, a wealthy Portlander and member of the state legislature, became a champion for park status for Katahdin. He began a remarkable lifelong campaign to preserve this area in a wilderness condition. Baxter was unexpectedly propelled into the state's governorship in 1920. From that position he succeeded in 1923 in getting the legislature to create a 90,000-acre Katahdin Park Game Preserve that was made up mostly of private timber company holdings.

After Baxter left state office, he intensified his crusade by deciding to purchase Katahdin himself and give it to the state. He bought an interest in about 5,620 acres from a lumber company. The state accepted his donation along with conditions of use that expressed his conception of wil-

derness. In 1933, the legislature approved setting aside this land as Baxter State Park. Baxter continued fighting for a larger park. He eventually managed to get it to 202,000 acres. Baxter developed an individual philosophy of wilderness for the park. In the 1930s, he developed a close relationship with Robert Marshall and other members of the Wilderness Society, who supported Baxter on wilderness status for the park. As the park grew larger and more popular, it became exceedingly difficult to maintain Baxter's rather pure wilderness philosophy for Katahdin. Like most state parks everywhere, Baxter Park was developed in the 1930s under Civilian Conservation Corps (CCC) programs. A central wilderness component was, however, retained to somewhat secure Baxter's vision.

**The Redwoods.** By the end of the nineteenth century, logging companies had appropriated most of the redwoods on public domain lands from the Monterey Mountains up the coast into Oregon. They were cutting *Sequoia sempervirens* at an alarming, devastating rate. Individuals and groups began rescuing remnants to preserve sections as tourist attractions and for scientific interest. The initial focus was on a 20,000-acre grove at Big Basin in the Santa Cruz Mountains south of San Francisco. A local group and Stanford University became interested in this grove. They called themselves the Sempervirens

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Club, which was later enlarged to broaden support. A successful campaign was mounted that obtains State legislation in 1901 to create a California Redwood Park Commission to save the Big Basin grove. Funding was obtained. Negotiations with lumber companies resulted in 2500 acres of prime redwood being acquired for the park. Additional cutover land was donated, along with 3,980 acres of federal land that was turned over to the State.

Interest in redwood preservation shifted to northern California in 1916 when state highway construction opened up the magnificent groves along the South Fork of the Eel River to logging and tourism. A prominent group of San Franciscans began a campaign to have some of the groves placed into park status. A Save the Redwoods League was formed in 1918 to consolidate redwood purchase efforts. Large amounts of money came forth from wealthy individuals and average citizens. Groves were purchased by the League and dedicated to particular individuals. The problem as to where the groves would eventually reside for their management and protection was turned over to the secretary of the League. Obtaining the necessary state legislation was difficult, but finally was achieved in 1927. State funds were made available that permitted a survey of potential state parks by Frederick Law Olmsted, Jr. The younger Olmsted developed a standard pro-

cedure for planning a diverse park and recreation system over a large and varied geographical area. He developed criteria for the creation of comprehensive state, county, and local park systems. For California, Olmsted proposed 125 park projects he felt worthy of inclusion in a state park system. Many projects were beach sites; redwood and Sequoia groves; areas with lakes, rivers, mountains, and deserts; and sites of historical and cultural interest. Under this guidance, California began to build a remarkable State Park System. Voters approved a \$6 million matching state bond in 1928 to acquire the majority of the recommended parks.

**The National Conference of State Parks.** The automobile transformed outdoor recreation for the middle classes of America. The creation of state and local park commissions came about from the growing influence of the middle-class tourists who on weekends and vacations wanted to "get back to nature." These commissions sought to provide the needed areas and facilities. State park leaders and other advocates gathered in Des Moines, Iowa, in 1921 to strengthen state parks systems under the leadership of Stephen T. Mather. The Des Moines group proclaimed that outdoor recreation was a basic human need. The resulting National Conference of State Parks began to effectively promote the creation of parks that were closer to centers of

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population and more easily accessible. Conference advocates met annually to discuss matters. They called for coordinated national outdoor recreational planning to provide a full range of recreational opportunities. In 1924, President Coolidge convened a National Conference on Outdoor Recreation, which assembled twenty-eight national organizations and a substantial number of state park representatives. The Conference resulted in the creation of a cooperative association of national, state, and local park and recreation groups to coordinate national policy. Under this emphasis, states began to plan for systems of scenic and recreational areas, parkways, and historic sites.

**CCC build-up.** The 1930s brought the most radical change to the status of state parks in America. The CCC was utilized by almost every state to perform emergency conservation work in their parks. The National Park Service (NPS) provided guidance for state and local park development. The creation of new state parks and the design of facilities was supervised from NPS's Branch of Recreation, Land Planning, and State Cooperation under the leadership of landscape architect Conrad L. Wirth. He vigorously pursued state cooperative activities. Where states had no parks or park commissions, he helped them prepare a recreational land-use plan so they could qualify for federal funding

for land acquisition for state parkland and development of the acquired individual park and recreational areas. His approach to state park activity was to embrace both scenic protection and the development of new kinds of recreational areas within a nationwide park and recreation planning structure. There was close cooperation between NPS and the states in park and recreational planning and development until the 1960s, when this function was taken away from NPS and given to the new Bureau of Outdoor Recreation. The CCC state park program was a major component of the American park movement, equal in scope to the development of the National Park System. State governments acquired over one million acres of new parklands during the CCC period. Hundreds of state parks were designed, with the characteristic features of roads and trails, picnic areas, and campground and cabin facilities.

**The future of state parks.** Tight budgets for public park maintenance and expansion in the last two decades of the twentieth century has to a great extent dissipated the work of the New Deal and that which occurred in the immediate post-World War II period. State outdoor recreation areas are now, for the most part, overcrowded and ill-maintained. Hardly any new parks have been created. What is needed is a massive program comparable with that of the CCC era so that state parks can help meet the

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needs of the American public for tion of their natural and cultural  
outdoor recreation and the preserva- heritage.

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# Integrating Cultural and Natural History in State Park Management

There is a persistent dissonance in the dialogue between those who work to protect important *natural areas* and those who work to protect significant *cultural resources*, that is, those human-made elements on or of the landscape that are associated with important aspects of human history and prehistory. This inability to work together effectively is curious because, historically, natural and cultural resources have been linked together in protective laws since Congress passed the 1906 Antiquities Act, which enables the president to set aside as national monuments public lands with significant prehistoric, historic, or natural features.

Long considered the cornerstone of cultural resource law in the United States, the Antiquities Act is the product of environmental thought that flows from the German naturalist and explorer Alexander von Humboldt, whose holistic concept of the universe was widely influential. As Humboldt's thinking evolved in his lectures, essays, and books, he integrated human geography, political economy, and ethnography into his studies of physical phenomena. He employed the term *Naturgemälde* ("painting of nature") as a metaphor capturing a holistic concept of natural phenomena in a societal context (Rupke 1997). Humboldt's five-volume

*Cosmos*, published serially between 1845 and 1862, was considered the standard encyclopedia of science in the nineteenth century (Worster 1977). It can fairly be said that the comprehensive language of the Antiquities Act reflects another concept closely related to *Naturgemälde*, that of *denkmal*, which refers to things, both human-made and natural, established in commemoration (Conwentz 1909; Wonders 2000).

By and large, natural scientists and conservationists of the late nineteenth and early twentieth centuries did not disassociate natural resource protection from human activity. However,



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another concept of environmentalism also took shape in the United States, one that eventually crystallized around Henry David Thoreau's now-famous declaration, "In Wildness is the preservation of the World." The concept of "wildness" became a passion for wilderness preservation, and the environmental politics of wilderness preservation has only increased in intensity in recent decades. "For many Americans," William Cronon has observed, "wilderness presents itself as the best antidote to our human selves, a refuge we must somehow recover if we hope to save the planet" (Cronon 1996). Paradoxically, the social construct of wilderness places human beings entirely outside the natural environment. This is best expressed in a mind-set rooted in twentieth-century natural resource management which relies on trained specialists and has compelled federal and state park managers to draw lines of distinction between natural and historical parks and to minimize traces of prior human activity from "natural" parks.

The segregation of natural and cultural resource protection is thus a phenomenon of twentieth-century public land-management practices that have been influenced by differing—some would say competing—philosophies of environmentalism and that are now embedded in a progression of inconsistent laws. Many federal and state laws recognize the inter-relatedness of natural and

cultural resources, including the 1916 National Park Act, the 1917 Iowa State Park Act, the 1969 National Environmental Policy Act, the 1972 California Environmental Quality Act, and 1980 Alaska National Interests Land Act. At the same time, many other laws focus exclusively on protecting natural resources *or* cultural resources: the 1891 Forest Reserve Act, the 1935 Historic Sites Act, the 1964 Wilderness Act, and the 1966 National Historic Preservation Act, to name only a few. As a result, we have developed a fragmented way of thinking about environmental stewardship. Even so, the Antiquities Act still serves its intended purposes, evidence not only of its legal soundness, but also that a holistic concept of environmentalism still has merit in the modern world.

While there is increasing recognition that "the bios" and "the cultural" must work together, it is still difficult to engage in more than dialogue. In addition to philosophically inconsistent legislation, professional specialization has bred institutional segregation, competition for funding, and a tendency to associate only with those of similar training and interests. Specialization thus tends to keep professionals of diverse expertise from collaborating even when it would be of mutual benefit. Ironically, one of the things lost in the modern university is the very notion of *universe*. As a result, entrenched philosophical differences about what

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resources should be preserved, protected, or restored make collaboration a true intellectual challenge.

For instance, the National Park Service has developed an extensive protocol for studying and evaluating historic and prehistoric resources in their environmental settings—cultural landscape studies—the objective of which is to protect or restore human-made resources in landscapes that evoke an appropriate sense of time and place. Although historical botanists and other naturalists may participate in the process, the central focus remains on things made by people. The natural environment, even though it may be an environment that has been manipulated by humans for agriculture or other purposes, often is treated as setting (McClelland 1998; National Park Service guidelines). Conversely, a prairie ecologist wrote in a recently published book that “...just as important as reestablishing native vegetation is restoring the structural integrity of the prairie landscape, in other words, removing everything that is not prairie, such as buildings, rock piles, old machinery, wells, shelterbelts, and other human-made features” (Licht 1997, 143).

It is time for a serious dismantling of obstacles that prevent greater professional collaboration. There are compelling reasons to do so. First, the pressures to intensify land use will continue unabated, and, as a result, will continue to erode or degrade

open space, threaten more plant and animal species, and rip up more of the historic fabric that, in many ways, defines the diverse cultures of America. Second, regardless of which professional line we walk as environmentalists, there is a common cause that unites us: to inculcate in our fellow human beings a greater respect for the environment that sustains us physically and nurtures our spirit.

It is difficult to overstate the centrality of professional deference in the search for collaboration among professionals. Nora Mitchell and Susan Buggie recently explored the potential for convergence of the nature–culture dichotomy in the proposed anthropological approach for the World Heritage Committee’s Global Strategy. This approach would combine existing criteria for evaluating the natural and cultural resources of potential World Heritage Sites to “facilitate recognition of the diverse values of both cultural landscapes and protected landscapes” (Mitchell and Buggie 2000, 43). On the surface, this seems like an eminently sensible proposition, but it also has an unmistakable reinventing-the-wheel quality, albeit on a global rather than national scale.

Twenty years ago, folklorists and cultural anthropologists argued persuasively for the inclusion of “cultural conservation” in federal historic preservation guidelines. The result was a set of special guidelines for

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evaluating “traditional cultural properties” (Parker and King, n.d). It is true that these guidelines have resulted in some notable resource studies, mostly documented in the technical literature, but they have not stimulated any appreciable degree of communication, let alone collaboration, among historians, folklorists, and cultural anthropologists—and these are supposedly sister disciplines. Guidelines alone will not produce collaboration.

While the intellectual dissonance can be alternately ironic, amusing, and frustrating, there are other signs that we are capable of overcoming our institutional and intellectual handicaps. An increasing number of instances of professional collaboration have produced new models for resource protection and environmental education. The National Park Service represents perhaps the best institution where the “bios” and “culturals” *can* collaborate to achieve common as well as separate goals. Certainly, there are many stories of failed cooperation within the ranks of the National Park Service, but its organic mission remains the same today as when it was established: “to conserve the scenery and natural and historic objects and the wildlife 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” (16 U.S.C. 1; Brown 2000).

It is more difficult for state park agencies to forge teamwork. State laws authorizing park systems vary widely. Most of them were passed between 1890 and the early 1930s, when, by today’s standards, the professional establishment, then in its infancy, took a very narrow view of history and American culture. Even so, some of the earliest state parks were historical parks established to preserve Revolutionary War sites, Civil War battlefields, military forts, and Indian–white battle sites, but land acquisition and state park management was and remains focused on promoting outdoor recreation and protecting natural areas. In addition, the structures of state government vary. Typically, state park functions are administered separately from historical and cultural affairs, which tends to reinforce the notion that historic sites and state parks should be distinct entities. Relatively few states—Alaska, Arizona, California, Georgia, Hawaii, Indiana, Missouri, Nevada, New Jersey, New York, Oregon, and Tennessee—house their State Offices of Historic Preservation with the same agency that has jurisdiction over state parks. Simple administrative proximity, however, has not fostered a widespread sense of common mission or collaboration among the professional ranks.

In some ways, the Iowa state park agency exemplifies both the norm and new directions. Authorized by the state legislature in 1917, the crea-

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tion of Iowa's state park system was placed in the hands of a commission that had a broad mandate to acquire lands with scientific interest, historic association, or natural scenic beauty. The board also was charged with investigating potential forest reserves, wildlife preserves, and places valuable for archaeology or geology (State of Iowa 1917). Despite a clear mandate to incorporate both natural and cultural resources into the state park system, the latter did not receive serious attention until the 1940s when the state's approaching centennial (in 1946) gave rise to a short-lived Historical Program. Even then, official interest in historic and prehistoric resources waned again in the 1950s, and cultural resource protection remained an administrative shadowland until the 1990s.

The 75th anniversary of the Iowa state park system and a coincidental environmental and institutional history of the state park agency had the effect of awakening an institutional memory and recapturing the agency's sense of mission to include a concern for all resources under its jurisdiction. Among other things, this led to Restore the Outdoors, a \$15 million dollar program to restore and rehabilitate Civilian Conservation Corps (CCC) and Works Progress Administration (WPA) structures in state parks. It also influenced a more comprehensive approach to evaluating the resources of and designing management plans for designated state

preserves, which since 1965 have been managed under more restrictive guidelines and which now contain the most significant historic and prehistoric sites under the agency's jurisdiction.

Another example comes from South Carolina. The South Carolina Heritage Trust, created in 1976, is a state-funded program to acquire natural and cultural resources for the public (State of South Carolina 1976). At present, the Trust owns more than sixty heritage preserves totaling more than 75,000 acres. The goal of the Heritage Trust Program is not only to protect these public lands, but to make them available to state agencies, educational institutions, and public and private groups for research and teaching (Stroup 2000). South Carolina's heritage preserves, like Iowa's designated state preserves, are managed by an advisory board comprising professionals who represent a wide range of disciplines.

Currently, twelve of the sixty heritage preserves are classified as cultural sites; an additional eight have a cultural resource component. For the most part, these are prehistoric or historic Native American archaeological sites, but they also include an eighteenth-century town site, an early-eighteenth-century British fort, a mid-eighteenth-century farmstead, Civil War fortifications, and the ruins of an important nineteenth-century pottery works. As the cumulative acreage has climbed toward a

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100,000-acre cap imposed by the state legislature, it has been possible to shift more attention and funds to developing research and educational programs. For instance, the Trust now sponsors an annual archaeological excavation, four weeks in duration, at the site of a Native American village at the Great Pee Dee Heritage Preserve. Related public programs are designed to promote public awareness of archaeological, ethical, and preservation issues in the region. At some preserves, stewardship committees have been established, and their functions are to monitor preserve activity and provide interpretation of both natural and cultural history for school groups and at public events (Stroup 2000).

This brings us back to the underlying theme: that human actions are a factor in ecological processes and environmental change and that, at heart, environmental problems really are people problems. Perhaps, then, we could foster a greater sense of environmental stewardship by integrating the professional staff people who manage parks and by integrating the interpretation of cultural and natural history for people who visit parks. The previous examples reflect a relatively recent trend, not just in park and recreation agencies, but throughout natural resource agencies as well. Several factors have combined to signal the potential for greater dialogue and integration of natural and cultural resource man-

agement.

As state park systems mature, many agencies have taken stock of their physical assets as historic and cultural resources. In part, the new interest in historic park buildings is a result of surveys begun in the late 1980s to identify park structures built during the Great Depression under the auspices of the CCC and other New Deal work-relief programs. At least sixteen states have completed comprehensive surveys and listed hundreds of Depression-era park structures on the National Register of Historic Places (National Register of Historic Places 2000). As is true of Iowa, interpretive histories of several state park systems, most published in the last decade, also have focused new attention on the mission of state park agencies (see Authors' Endnote). As a result, state agencies have discovered important stories that are of interest to the public and that represent new opportunities to develop and deliver engaging interpretive programs to park visitors, who increasingly seek education and entertainment as part of their outdoor experience. Many park systems have always contained historic and prehistoric sites as part of their assets and generally have done a good job of protecting them. However, viewing other park assets, namely those built in the past century to serve park visitors, as culturally significant has fostered a greater interest in and understanding of

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cultural resource management in general.

Along with this new way of viewing park assets comes increased emphasis on developing appropriate interpretive themes, as well as managing those assets so as to preserve their historic integrity. A natural outcome of this is for park professionals to seek advice and support from cultural resource managers. Iowa, like many other states, through collaboration between park and historic preservation agencies, commissioned the evaluation and nomination of assets built as part of the New Deal public works programs with an eye toward listing them on the National Register. While listing offers a pragmatic benefit of raising awareness and public support to protect and enhance such assets (most frequently expressed in funding from legislatures and others), it also reflects a growing desire to act according to professional precepts. This is an outcome of the growing emphasis throughout the nation on park management as a science.

Other natural resource agencies have slowly embraced cultural resource management, and recent trends point in positive directions. Several factors have contributed to greater support for cultural resource management in agencies whose scope of work has been largely devoted to conserving and developing land, fish, wildlife, and forest resources. In many states, park and other natural

resource entities are tied together under a single, comprehensive resource administration. As resource divisions interact within their umbrella agency, they tend to alternately share, compete, and collaborate. One dynamic of such relationships is the diffusion of new technologies and ways of thinking throughout the divisions, regardless of how diverse their missions may be. Particularly, as park staff have focused on increasing professionalization, they have begun to adopt both natural and cultural core values in addition to the traditional values of park maintenance and providing recreation opportunities. To an extent, such values are transmitted to cohort divisions in subtle, yet effective ways.

As cultural resource managers have gained a louder voice in federal resource management agencies, that voice has begun to echo through the myriad state-federal relationships. Many of these relationships are forged through federal funding of state activities in areas such as park and recreation development, fish and wildlife management, and soil, water, and forest conservation. Early on, there was a trend toward exempting federally supported state projects from many of the requirements imposed on federal agencies by measures such as the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. For several reasons, not the least of which has been an increasingly

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sophisticated environmental constituency demanding that state activities supported with federal dollars be held to the same tests as federal agencies, states now comply with many of the same requirements as their federal counterparts.

When the environmental regulatory framework began to take shape in the 1970s, state resource managers often responded to such requirements with resistance, including those related to cultural resource protection. Over time, as they have become familiar with the protection goals and techniques of cultural resource management, many natural resource managers have developed greater appreciation for all cultural resources. Natural resource professionals who have entered the ranks more recently work side-by-side those who have memory of the time when their work was carried out unencumbered by cultural resource considerations, but increasingly both view cultural resources management as simply part of the regulatory landscape within which they work.

Doing so, however, is not the same as integrating natural and cultural resource management. An important factor in the Iowa story was the commitment of top agency leaders to cultural resource management as a core value. This commitment led to the adoption of a formal agreement between the state's natural and cultural resource agencies to consult and coordinate on matters related to his-

toric sites under the jurisdiction of the natural resources agency. This agreement, along with the example set by agency leaders, has created an environment in which staff in both agencies work in concert on National Register nominations, management and restoration of historic sites, and Section 106 compliance. It represents a cognitive shift that has opened the door for new programs to educate park visitors about natural resources, cultural resources, agency history, and site histories. Commitment on the part of leadership has been observed as a key element in other state natural resource entities that have begun to embrace cultural resource management as a core value.

There are other ways that park agencies can foster collaboration between "bios" and "culturals." They include more frequent use of interdisciplinary planning teams on which historians, archaeologists, and other cultural resource specialists are represented. At the policy level, cultural and natural resource agencies could cross-pollinate their boards and commissions. When policymakers commit to collaboration, it sends a powerful message to professional staff members.

In addition to dismantling barriers that impede communication and collaboration in natural and cultural resource agencies, we also need to consider the academic institutions that prepare professionals, for they are not without problems as well.

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Narrowly specialized programs of study, especially at the graduate level, do little to prepare resource management professionals for the diverse work environments in which they later find themselves. While this is a subject for another article, some guiding principles are readily visible. In colleges and universities, we could do much more to foster programs of study that cross the lines of history, geography, and cultural anthropology with those of forestry, wildlife biology, and botany. Equally important, we could seriously rethink the nature of scholarship, particularly in the humanities, to admit that there is intellectual merit in applied scholarship; and we could revalue the role of service in the holy trinity of the academic tenure and promotion system.

When professionals send frag-

mented and competing messages about resource value and stewardship, we should not be surprised by the confused echo. By reconciling our perceptions of the natural environment and the cultural landscape, we can provide more coherence to complex stories. When people, in the sense of common humanity, can find themselves in the story, there is a greater chance that a deeper understanding of the connections between human agency and environmental change will occur. If we can manage to do this with greater clarity and greater frequency, perhaps we can begin to foster in the public at large a greater sense of individual responsibility for environmental stewardship. And if we can do that, we will have rendered service to society that is without measure.

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# Building a Constituency for State Parks: The Missouri Experience

**A**t a time of ever more constrained finances and increasing demands on state parks, the support of a constituency with a statewide focus on the health and integrity of a park system as a whole can be critical. This paper assesses Missouri's experience with constituency groups, including, in the past two decades, a citizen organization devoted solely to state parks and historic sites, the Missouri Parks Association.

Missouri has been called "determinedly average" by one pundit and "the forty-something state" by the St. Louis *Post-Dispatch* in a series of articles about its low tax effort and poor funding of education, welfare, and other public services in comparison with other states. Yet it has long been recognized as a leader among the states in natural resource conservation. Today, the state has two highly respected resource agencies, but historically it won regard largely for its pace-setting, highly professional conservation department. Led since 1937 by a bipartisan commission, the department has been supported from its very inception by a strong citizen constituency group, the Conservation Federation of Missouri, and generously funded since 1976 by a dedicated sales tax of one-eighth of a cent that was written into the constitution

after a citizen-led initiative petition.

State parks, however, are a separate matter. The earliest parks had been acquired beginning in 1924 by a legislative diversion of 25% of hunting and fishing license fees, so upsetting sportsmen that when they organized in 1936 "to take fish and game out of politics" they provided for a conservation commission with responsibility for fish, game, and forests, but not parks. Parks, led thereafter by a park board, subsisted on meager public funding and grew modestly through the generosity of individuals and agencies who contributed more than 60% of park units and acreage over the years. Missouri's system, which includes historic sites as well as natural parks in the mold of the National Park System, attained high quality in its representation of the natural and cultural diversity of

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the state, but it has been only middling among the states in number of units and acreage, and, until recently, ranked very low in funding per capita.

When state government was reorganized in 1972, the more powerful conservation department, with its strong citizen allies, resisted being swallowed by a super environmental agency, so Missouri ended up with two agencies—the original conservation department and a new department of natural resources for state parks, air and water quality, and other environmental functions. Despite the ferment of reorganization, the 1970s were relatively good years for parks, with dynamic young leadership that was creative in utilizing matching funds from the federal Land and Water Conservation Fund to augment the system.

The crisis came in the early '80s when federal funding dried up and recession and inflation forced recisions in state support, leaving parks with a \$7.7 million budget for 1982 that was only half what it had been in the late '70s. To many legislators and others, an obvious solution was to transfer parks to the conservation department, now well funded with its new dedicated tax, but citizens who had worked so hard for the conservation sales tax in 1976 were opposed to such a raid. Park officials were also concerned about dilution of the more preservationist mission and land management philosophy of the parks, and about what would happen to

historic sites and other cultural resources in an agency that had no experience with or mandate to protect them. The matter came to a head at a statewide Audubon meeting when the director of the park division, an environmentalist with many personal friends in attendance, made a plea for citizen support of another alternative—transfer of a portion of the conservation tax to the department of natural resources to fund parks.

The resulting turmoil in the meeting revealed to many present their abject lack of understanding of statewide park issues and needs. Everyone in the room had visited individual state parks and some were even members of friends groups for particular parks or historic sites. But if they thought at all about the park division, they tended to view it as a poor cousin of the conservation department concerned primarily with providing for camping, swimming, picnicking, and other mass recreation. They had little comprehension of the array and quality of resources preserved in the system as a whole or of the values at stake in the current crisis. In truth, the park division itself had not traditionally reached out to environmental groups, but rather to recreational user groups and local organizations interested in individual parks. Audubon and Sierra Club activists, like the national organizations of which they were a part, tended to focus on the U.S. Congress and federal land management agencies rather

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than on state government. On state legislative issues they usually worked through the Conservation Federation, which dealt with a wide range of issues but, when the chips were down, almost always supported the conservation department.

The contention and uncertainty in the meeting finally reached a measure of resolution when Charles Callison, a former executive vice president of the National Audubon Society living in retirement in Jefferson City, rose to speak. "You are doing a good job with the parks and you need help," he told the director; "we will see that you get it, but we are *not* going to raid the conservation sales tax." Callison's idea of help was to found a new citizen group devoted solely to state parks—the Missouri Parks Association (MPA). As a leader who had developed the Audubon regional structure and encouraged the formation of hundreds of new local chapters in previous decades, he was a great believer in the power of an alert, active citizenry, and he also understood the importance of a focused mission. The new non-profit organization, independent and non-partisan, would be dedicated to the protection, enhancement, and interpretation of Missouri state parks and historic sites. Callison volunteered to edit the newsletter.

Leaders of the association saw their initial challenges as twofold—to educate Missouri citizens and public officials about the nature and mission

of the park system and to establish a consistent base of financial support. Fortunately, park officials had devoted considerable attention during the darkest days of the funding crisis to developing a clear understanding among park staff of the three-fold mission of the Missouri system—to preserve and interpret the finest examples of Missouri's natural landscapes, to preserve and interpret outstanding examples of Missouri's cultural heritage, and to provide healthy and enjoyable outdoor recreation opportunities consistent with its mission—and they had undertaken conceptual planning to lay the groundwork for a prioritized program of improvements should funds become available. But they had barely begun to communicate these efforts to the general public.

In a rush of enthusiasm MPA began laying plans with park administrators for an ambitious color-illustrated book about the nature and mission of the system with essays on the special contributions of each of the 75 parks and historic sites, somewhat on the model of the early national park portfolios that created the mystique of national parks as sacred places back in the 1920s. They also began to work with legislators, especially on a promising proposal for a one-tenth-cent sales tax to be split evenly between parks and soil conservation, both programs administered by the department of natural resources. The plan was obviously modeled on the

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state's conservation sales tax, but it was more modest and combined an appeal to urbanites (parks) with a program for rural areas (soil); at the time Missouri was second in the nation in the severity of its cropland erosion problem.

In tax-averse Missouri, there would be no chance to secure enactment of such a measure by legislators, but in the throes of the park and soil crises legislators might be willing to approve a resolution placing the measure on a statewide ballot for Missouri citizens to decide. With the MPA in strong support and other citizen organizations following its lead, the measure won legislative approval literally in the final hour of the session, after an amendment to add a five-year sunset clause. MPA officers hosted a series of meetings that summer with conservation, agriculture, and agency leaders to plan strategy for a major public campaign for citizen enactment of the tax, eventually spearheaded by a new umbrella organization, the Citizens Committee for Soil, Water, and State Parks.

While the campaign for the parks and soils tax was underway, the MPA, now aware that its proposed book on the parks would be a long time in coming, sought to focus more public and media attention on the park system by hosting, in concert with a wide array of other cosponsoring organizations, what they billed as the "First Missouri Conference on State Parks." It was a three-day event

funded in part by the Missouri Committee for the Humanities, complete with field trips to nearby parks and workshops on park resources and issues. Realizing the importance of a broader perspective on the values at stake in the Missouri system, MPA invited two nationally known experts on state parks—historian Robin Winks of Yale University and Ney Landrum, Florida park director and former president of the National Association of State Park Directors—to keynote the conference, taking them on a whirlwind tour of ten representative parks and historic sites with park officials before the conference.

After months of substantial public education and media spotlight on the parks, Missouri citizens in August 1984 voted by the narrowest of margins—only 1,699 votes out of nearly a million cast—to approve the tax. Money for the new tax would not even begin to flow for nearly a year, and only a few years after that it would be necessary to return to the voters for reauthorization, so it was critical for the park division to show quick results and for MPA to be vigilant in defending use of the tax for its intended purposes. These purposes, in true Missouri conservative spirit, were primarily "to take care of what we have," rather than substantially to expand the system. In the years to come, MPA would spend far more time and energy fighting *against* inappropriate proposals than *for* new parks.

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As it happened, there would be more new funds in the ensuing years than anyone had contemplated. A state bond issue for capital improvements that had been kicked around in the legislature for years at last became available in 1985, after a change in administration, and parks (because of shrewd decisions by officials in the depths of the funding crisis in the early '80s) would ultimately reap nearly \$60 million for visitor centers and museums at a number of units, upgrades of water and sewer systems, roads and campgrounds, and restoration of historic structures. Combined with more than \$13 million a year in additional funds from the sales tax, mostly for operations, the Missouri system was poised for a renaissance akin to that in the Civilian Conservation Corps days of the 1930s.

The aura of sudden wealth attracted an enormous array of proposals for use of what became known as the "park barrel," the trough of riches at which it was supposed anyone could feed. Proposals surfaced for urban storm sewers and for local parks, museums, golf courses, swimming pools, zoos, and other projects that could not possibly meet the test of statewide natural or cultural significance. But each was in the district of some legislator who wanted his or her share, and MPA was kept busy in the halls of the capitol explaining the mission of the system and the need to resist diversions and use funds as the voters intended. Some proposals

were more difficult to fight than others because of the array of political forces lined up on their behalf. MPA failed to turn back a \$2 million diversion for an African-American community center in Kansas City (it would be fourteen years before an agreement was finally negotiated with the city, under continued prodding by MPA, for the park division to share in operating the center as a black heritage museum and bona fide state park facility). But on another high-profile issue they were successful. When the governor himself proposed use of \$1.4 million in park funds to repair the exterior stonework of the state capitol, park officials had no choice but to acquiesce. It remained for MPA to issue press releases and rally other organizations in opposition to the diversion. Each victory in defense of the park system added to the credibility of the organization and made the next battle a bit easier.

Proponents of sundry worthy causes came out in force when it came time to consider renewal of the sales tax—so much so that there were proposals to combine it with the conservation tax and increase the total in order to fund more programs. In an effort to prevent tampering with the conservation tax, which had no sunset, the conservation federation sided with certain urban interests to promote a legislative resolution enlarging only the parks and soils tax, a proposal that MPA feared would doom

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the tax to defeat at the polls. After two legislative sessions failed to enact a satisfactory resolution, MPA and several other groups, including soil conservation interests, decided to mount an arduous initiative petition campaign for simple renewal of the tax; it would require the gathering of well over 200,000 signatures of registered voters properly distributed across congressional districts in order to place such a measure on the ballot. Following yet another unsatisfactory legislative session replete with tension among groups working at cross purposes, the federation and other organizations finally joined the initiative petition campaign, and the measure was ultimately approved more than two to one by the citizenry. However parsimonious Missourians might have been with their state government, they were proud of their parks and willing to support them.

A year after reauthorization of the parks and soils tax, it was the featured case example of park funding in a major national study of state parks underwritten by the Conservation Foundation. Generalizing from experience with special funds in a number of states, the study concluded: "Perhaps the most important lesson is that an earmarked fund does not put a park system outside the political arena.... It is rather a fresh point of entry to raise the visibility of state parks, air information about their condition and future prospects, and build new alliances" (Myers 1989).

Indeed, the Missouri experience suggests that parks are inevitably political because virtually every citizen and public official feels some sort of personal stake in at least certain parks or certain uses of parks; the challenge is to create a vision for the system as a whole guided by a clearly articulated mission that can provide a basis for assessing the myriad issues and proposals that arise, and to develop a constituency committed to defending that mission and advancing the vision.

In 1992, a full decade after the initial groundwork for a color-illustrated book about the system, the ambitious project came to fruition with the publication of a handsome, large-format volume, *Exploring Missouri's Legacy*. The new book—coupled with the presentation of the parks themselves through new visitor centers and museums, superb natural and cultural interpretation, and upgraded facilities and stewardship—left little doubt about the quality and integrity of mission of the Missouri system by the mid-'90s. Because MPA had been so closely involved in shepherding the book project from its inception, in raising funds to keep the price within reach of ordinary citizens, and in providing complimentary copies for legislators and other public officials, the organization gained additional credibility to augment that gained from the passage, renewal, and defense of the sales tax.

Because parks are so inevitably political and the institutional envi-

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ronment within which they function is so dynamic, the challenges for park systems and their constituencies never abate. In Missouri, although MPA enjoyed some success in preventing diversions of park funds for inappropriate or non-park projects, it was less successful in preventing internal siphoning for various state services. MPA helped the park division retain most of its general-revenue funding after initial passage of the sales tax in 1984, but after the overwhelming vote to reauthorize the tax in 1988, legislative and executive officials were determined to capture park funding for other functions of state government. Within a few years general revenue for parks had disappeared, previously unbudgeted expenses (such as staff benefits, rent, and certain administrative surcharges) were now being transferred to various agencies from the sales tax fund, and parks received no help from other state funds in responding to the extraordinary demands of the ADA, the Americans with Disabilities Act of 1991. MPA could ferret out, tote up, and publicize the losses—some \$7 million in general revenue and \$5 million in transfers annually, plus an estimated \$7 million in ADA compliance costs—but it was powerless to prevent them (MPA 1993). The result was that even the growing parks sales tax, by the mid-'90s bringing in some \$25 million annually, was needed almost entirely to fund current operations, with little

remaining for capital improvements.

In preparation for yet another initiative petition campaign for renewal of the sales tax in the mid-'90s there was discussion of the advisability of changing the 50–50 split between parks and soils on the grounds that soil conservation measures were now largely installed on Missouri farms and needed only to be maintained, while park needs continued to mount. But the unwillingness of farm interests to give up funds and the demands of municipal interests for any funds that might be available led cooperating organizations once again to advocate simple renewal of the tax, which was again approved two to one by voters in November 1996.

Facing lean operating budgets and a dearth of funds for capital improvements, park officials initiated a feasibility study for a foundation with a full-time executive director to promote and facilitate major donations to the park system. MPA has 501(c)(3) charitable status under the Internal Revenue Code and has done some fund-raising over the years for its own projects, including the park book, conferences, and an urban outreach effort to bring inner-city youths to state parks, but it does not have a salaried executive director and it has never raised funds for transfer to the park system; it is supported primarily by annual dues from about 1,500 members. Discussions about the proposed new foundation inevitably raised the possibility that MPA might



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be restructured to take on more sustained fund-raising functions, but there were concerns whether its independent watchdog role related to park issues and the integrity and continuity of the sales tax might thereby be compromised. On the other hand, a new foundation, if it sought membership or annual gifts from ordinary citizens, could drain membership and support from MPA and imperil its vital functions.

The dilemma, not yet resolved in Missouri, has thrown into sharp relief the differences in types of constituency groups—park foundations dedicated to raising funds for system needs, such as the well-known California State Parks Foundation; local friends groups devoted to particular parks, of which every state has examples; user groups focused on camping, spelunking, all-terrain vehicles, or the like; professional associations of interpretive naturalists, historians, or park administrators; citizen organizations such as the Sierra Club, Audubon chapters, historical societies, or the Conservation Federation of Missouri, which may act on certain park issues but miss others; and

statewide watchdog groups focused on the system as a whole, such as the MPA.

The experience of Missouri suggests that there is a vital role for an independent citizen organization devoted to the system as a whole. Such an organization may identify issues emanating both from within and outside of the system and shape a recommended course of action; at times it may be necessary to challenge administrators of the system or to support a position when officials' hands are tied. It may assess proposals from interest groups or legislators for new parks or developments in existing parks for their bearing on the mission and viability of the system. Although on major issues there may be little it can do on its own, a citizen organization devoted primarily to the park system can provide essential leadership and gain support from a wide array of other organizations and individuals that collectively can make a major difference for the health and integrity of the system. Above all, the Missouri experience suggests that there is no substitute for an alert, active citizenry.

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# The Implications of Sponsorship for State Park Management

**W**hen a grizzly bear wanders toward the land surrounding the municipal dump in Dillingham, Alaska, people take notice. The attraction of bears on the prowl arose to the point earlier this year that a tour operator set up nightly trips to the landfill. For a fee, an interested tourist can watch the bears in less than natural habitat, 325 miles southwest of Anchorage.

The occasion of tours to the landfill raised some local controversy in Dillingham, not because a commercial operation might be borrowing the popularity of grizzly bears, but surrounding the image of Dillingham's prime attraction being a landfill. Meanwhile, the tour operator began to enjoy a new source of income thanks to the nocturnal habits of grizzly bears. While the Dillingham case study hardly represents the commercialism of parks, the parallel offers a valuable lesson. The tour operator would very likely pitch in to fund a cost associated with the maintaining the bear visits. If the town incurred crowd control or traffic management issues which could threaten the permit for the bear tours, a smart business operator would offer to help pay the costs, to become a partner, to actually "sponsor" the bear visits. Tourists would likely accept the notion with open arms even if they were

told "this bear is brought to you by...."

The grizzly bear visits are not a sole example unique to Alaska. At Moosehead Lake in Maine, people visit with the expectation of seeing a large creature with spreading antlers. For a fee, a guide offers to show people the best viewing spots, and the visitors bring their cameras and binoculars. Did the visitors purchase the right to see the moose by virtue of the cost of their trip to Moosehead Lake and by hiring a guide? Might the guide be willing to sponsor the activity and share the costs with the town?

The implications for professional park managers lie in similar territory. The owners of businesses that spring up around great national and state parks certainly have a stake in the operation of the park. If a service of the park is threatened by budget stress, or some policy change may influence the attraction of visitors to the park,

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related private businesses may offer to help. At first glance it seems rather harmless to accept local partners as sponsors of an event or activity within the park. Most visitors will not even notice.

Those simple terms, "sponsored by" present no great threat to the listener. The same terms represent the great controversy of ownership in the realm of natural resource management and especially the profession of public park management. Professionals on one side of the debate accept the presence of sponsors as partners, if only as the silent financiers of park services. The alternative argument is offered by those who believe close involvement by private business eventually soils the image of pristine natural resources. The argument carries forward to a progression of business influence beyond acceptable limits. Imagine the vision of a wonderful, publicly owned national park that suddenly shares the name of a powerful corporate entity.

Each day the Statue of Liberty hosts thousands of people who travel from the New Jersey shoreline to Liberty Island via boat. Standing vigil over the waters of the New York harbor, the grand statue once welcomed millions of immigrants who passed though neighboring Ellis Island. In recent years, the National Park Service funded the complete renovation of the statue as well as an extensive renovation of the Ellis Island facility. Each day visitors leave the park with

an appreciation for the attraction as well as the significance each site played in the history of our nation.

Many of the thousands of daily visitors also leave with souvenirs purchased at a concession. Some people leave with a foam replica of the statue's crown adorned to their heads. Others take a drinking cup formed in molded plastic with lady liberty holding the container. Postcards, models, and jewelry also serve to satisfy the urge to own a piece of the statue in a personal physical memorial. To the pure-minded park professional, the commercial exploitation of souvenir items may lessen the quality of the park. Other park professionals refer to such commercial activity as a creative funding. Often upon the wings of the financial bird rides the plague known as sponsorship.

For most professional park managers, the test of sponsorship arrives in the endorsement. A statement over the boat's intercom, as visitors approach Liberty Island, "The Statue of Liberty is brought to you by..." would go too far. Yet acceptance rides a solitary horse, away from the herd, carrying a grand denial of any membership in the group. Over the same intercom we hear a message regarding the location and hours of park concession stands, which is accepted in the realm of providing a service desired by the visitors, accepted as a traditional means of raising funds.

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Agency managers, under the scrutinizing gaze of budget analysts, seek any lawful source of alternative funds. They must find another way to financially support their activities. Sometimes such creativity is necessitated by the addition of a new management area; or conversely, the bright new activity has the energy of a recent ribbon cutting, so the manager must fully fund the operation while an existing activity suffers the consequences. A corporation interested in Maine's moose population might seize the opportunity to fund either a hunt or the wildlife viewing activity. The influx of corporate dollars enables public budget managers to direct tax revenues elsewhere. In their view, it is acceptable that the moose is "brought to you by...."

Considering wildlife management elsewhere, black bear continue to increase in areas that cannot support the creatures. Bears moved into central New Jersey several years ago, roving from the wild lands of northeastern Pennsylvania. When bears forage amid human civilization, they first seek livestock and crops. As bears moved further into the human habitat of central New Jersey, they discovered new food sources, including trash receptacles, gardens, and perhaps even domestic pets. The bears found shelter in garages and under porches. At first, people enjoyed the novelty of the furry visitors, but the wildlife guests soon wore out their welcome. A bear hunt, managed by the New

Jersey state government, will occur soon.

By comparison, the westernmost part of Maryland serves as the home range for approximately 400 black bears. The result is similar to the experience in New Jersey, leaving residents tired of bear intrusions into their lives. Citizens in western Maryland demanded a bear hunt but the Maryland Department of Natural Resources (MDNR) sought alternative ideas. The MDNR began a creative program selling a bear stamp and directed the proceeds to help citizens offset their bear-induced losses.

So far, corporate sponsors have avoided the bear management controversy even though wildlife issues offer plenty of opportunity for public advertising exposure. From the perspective of the corporate executive, sponsoring the hunting of bears, or even the alternative to hunting, creates at least as many enemies as friends. Such executives would love to attach their product to the great world of nature, but they seek a more universally positive relationship, something that everyone appreciates. One such theme is the notion of people having fun in the outdoors. An advertising executive may find no more positive message than attaching his or her product to the realm of parks.

Adventure activities represent the greatest trend in outdoor recreation. More people are hiking, climbing, cycling, rafting, and exploring back-

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country wilderness than ever. Off-road bicycles have taken over trails in several parts of the United States. Companies that sell products related to recreation activities traditionally seek that market to advertise their products. Companies that sell hunting, fishing, camping, hiking, and other outdoor gear products always supplied the segment of the population that pursued outdoor adventure. Today, companies that produce a wide array of goods and services advertise the attachment of their product to the notion of outdoor adventure. Buy their product, and you will have a fun adventure. Any general-interest magazine provides examples of automobile, beverage, and food products attached to outdoor adventure, and ultimately attached to the parks where the adventure takes place.

That set of circumstances, along with increasing demands upon public funds available for parks, created an environment for corporate sponsorship. This environment began simply and quietly, but now presents perhaps the greatest single potential for change in park management philosophy of the new century. At the heart of this issue rests the primary question of ownership of the parks.

When the first great parks were established during the late 19th century, public ownership served as the basis for the movement. The theory of setting such wonderful resources aside for the pleasure of future gen-

erations served as the motivation for the creation of every park for the following century. Every time a great opportunity for new public land arises, the support for action rests in the notion of preserving the resources for future generations. Today, private corporate ownership may sneak in through the back door, offering to provide a support mechanism for public ownership, financing the stewardship of the land if not the original purchase.

During the 1990s, it became good management for government agencies to seek partners with other levels of public service and, eventually, with corporate interests. The recession of the early 1990s fueled much of this course of action as a means to make dollars stretch further. As a result, park agencies sought sponsors for small events and activities. Local businesses eagerly stepped forward to pitch in as sponsors of nature programs or to help pay for the printing of brochures. In return, the businesses merely asked for a simple mention of their name or the inclusion of their company logo in a discrete location on the publication. At the time, this seemed like a reasonable way to stretch government agency dollars.

Maryland State Parks, faced with no funding for its statewide brochure, sought a corporate partner. They looked no further than Gore Industries, the manufacturer of Gore-tex and a company that could benefit by

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advertising its product to park visitors. For its contribution, Gore was presented with a quarter-panel of the brochure upon which it placed a description of how a person might best prepare for a visit to the outdoors, featuring the type of equipment and clothing to bring along for the trip. While the brochure panel certainly might encourage a person to buy Goretex products, the presentation was much more of a service to the prospective visitor. Once the well of corporate sponsorship was tapped, the funds began to flow steadily. There are numerous other examples of both tasteful and rather overdone advertising by park corporate partners.

New Hampshire State Parks came under great pressure in the early 1990s to become "self-funded." New Hampshire's leadership dictated that the park system should generate sufficient funds and function efficiently enough to be self-supporting. Under the leadership of now-retired director Wilbur LaPage, New Hampshire State Parks achieved the mandate. Along the way, they set a new tone for corporate partners.

New Hampshire became the first state park system in the United States to accept a single beverage provider as the "official soft drink" of the state parks and the sole provider of resale soft drinks at all park concessions. The parks received assorted benefits, including a large cash payment. There were no neon signs or bill-

boards installed, no park names were changed, and the park employees wore the same traditional uniform. In other words, New Hampshire State Parks had not sold out their principles; they had merely offered the advertising rights and resale market.

Since that initial action, several other state park systems have followed New Hampshire's beverage sponsor example, gaining even greater rewards and in some cases offering larger exposure for the soft drink company. Washington State Parks is the most recent example, having awarded a contract which gives exclusive vending rights in return for a cash payment of \$60,000 and other benefits estimated at \$2.1 million over the five-year life of the agreement.

Elsewhere, corporations have co-sponsored countless events, supplied computers, printed materials, provided free vehicles leasing or outright donations of cars, given free labor, and even provided uniform clothing to park agencies. In each case, the park agency has offered relatively little in return other than some recognition and logo placement.

This all seems so harmless that no one should even take notice. After all, advertising and corporate support are a typical everyday part of modern life. Great modern sporting events feature numerous sponsors who seemingly own some portion of the event. "This kickoff is brought to you by..." are words which now exist as an accepted

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part of football game broadcasts in the United States. Little League teams all seem to be sponsored by an auto parts store, construction company, car dealer, or some other business. People who watch the annual championship game of the National Football League, the Super Bowl, have great expectations of the advertisements. It may be argued that part of the entertainment value of the game lies between the action, during the commercial breaks. Advertisers certainly own an interest in each of those sporting activities, but no one has yet proven that the corporation even slightly influences the outcome of the event.

The obvious corporate presence in the sporting world generates fear regarding similar involvement in public parks. The title of sporting events, such as the college football bowl games, which occur at the end of each football season, carry the mark of company names. We can easily imagine the logical progression of such names to other events such as the Westinghouse Wimbledon, or the Wendy's World Series. New stadium names, such as Pac Bell Park in San Francisco, remind the visitors that their beloved team shares ownership with a corporation. The fact that these places are called "parks" produces a clear message for all supporters of our great national and state parks.

The notion of influence must remain the guiding force of corporate sponsorship in parks. The park sys-

tem, or individual parks, must not alter properly established public policy in order to satisfy a corporate partner. The government agency must not implement, or delay, a bear hunt in New Jersey or bear viewing in Alaska in order to appease its corporate benefactor. Such choices remain easy in the realm of controversies such as hunting, but the decisions become cloudy when dealing with less-controversial issues.

The corporate threat to parks magnifies when partners own an interest in an increasing amount of park activities. If an individual corporation contributes a great amount, then the threat intensifies. There is no specific formula for trouble, much as there is no single selling price for any service. There remains no certainty at which point or what amount of sponsoring results in buying influence. Imagine the pressure upon park officials if a single corporation contributed twenty or thirty percent of a park's operating budget or funded twenty or thirty percent of its activities.

Imagine the potential implications of corporate sponsorship upon the decision by the National Park Service to limit vehicle access into the Grand Canyon area. Consider how a corporate sponsor might influence such an aggressive management action. If a corporation's financial support reaches deep into the operation of the park system, then its influence must follow. Local businesses and corporations that are affected by park deci-



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sions already exert influence; the situation multiplies greatly if the corporation also holds the added power as financier of the park.

Regardless of the acceptance of corporate support, parks are under the great influence of corporate interests, especially in the United States. As part of a government entity, park policies and budgets are subject to considerable influence from people who hold elected office. Those elected officials must run for office and often receive financial assistance from various sources, including corporate executives. The influence of those contributing corporations likely varies depending upon the individuals, the issues, and the overall set of circumstances. At the very least, an elected representative often acts in the best interest of corporations that operate within the voting district. Therefore, the realm of corporate donations remains significant even if parks do not directly receive the benefits.

The argument against significant corporate funding of parks remains a practical matter more than a moral statement about the purpose of parks as a public entity. While corporations may influence park management indirectly through political pressure, such control remains secondary. A corporation that owns a part of the park's budget or activities must evolve into a controlling mechanism. The partner becomes a supporter, and the financier eventually generates policy decisions. In such a scenario, the partner no longer shares, it owns.

George Orwell might agree that a corporate influence on parks could evolve to ownership. Such a reaction likely represents an overstatement. The danger remains as a guidepost to park managers to beware of the risks, walk lightly amid the hazards, and take only a step at a time. As a sort of motto, park managers may recognize that partners are wonderful, while co-owners are dangerous.

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# The Design and Value of Service Learning Partnerships in State Parks

## Introduction

**T**he park's perspective. Chronic revenue and budget shortages have led state and national parks to consider alternative methods to achieve their recreation or resource management missions. Attempts to maintain public facilities at reduced cost have included consideration of privatized and development-oriented facilities in an attempt to obtain economies of scale and lower personnel costs (see Callahan 1989; Power 1998; Reiter and Askari, in preparation). One rationale behind these changes is that the funds saved by such privatization efforts can be channeled into the management, resources, or personnel of park operations, though competition for funding from other government sectors can prevent this transfer from occurring.

A state park's resource management plan is a long-term strategy that is commonly subject to review by central office staff, managers, and resource specialists. The focus of such a management plan is to identify primary resource concerns and establish objectives to address them. As management objectives are established and information needs determined, park staff attempt to address priorities as funding and staffing allow. But particularly in times of stretched park budgets, management plans and the funds set aside to address resource concerns can be redirected or elimi-

nated altogether. This can leave parks with static or reduced personnel to implement their present management plans or perform the necessary research to address new or updated management issues. More importantly, it can lead to management decisions based upon incomplete, outdated, or missing information. As a result, new ways to accomplish planning and resource management goals are also being sought.

**The university's perspective.** Recently there has been concern over the number of students who do not complete college science and math

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programs. A number of studies have attempted to find answers to this complex issue. In a report by the Boyer Commission (1998), a new model of undergraduate education was recommended that called for "connected and integrated communities" rather than the fragmentation that has occurred between departments and the teaching and research communities. As a result of this fragmentation, the report argues that students do not know how diverse fields overlap and intermingle. They identified "collaborative learning experiences," integrating the skills of analysis, evaluation, and synthesis, as the hallmark of a good education. The report further recommended making research-based learning the standard for undergraduate education, where "learning is based on discovery guided by mentoring rather than on the transmission of information." Finally, the report encouraged "faculties to reexamine their methods of delivering education, to ask how, in every course, students can become active rather than passive learners."

At the conference "Expanding Opportunities in Oceanic and Atmospheric Sciences" held at the University of Maryland-Eastern Shore (USDOC 1999), a student panel named two factors that had the most influence on participants' career choices—local environment and early exposure. The conference also identified professional contacts, research experience, and interdiscipli-

nary strengths as important for students (minority students in particular) to enter and succeed in graduate programs.

Field experience has been identified as a way to get students involved in the research process, enhance and broaden their knowledge base and their ability to synthesize and analyze information, engender interest, and increase student retention in scientific fields (Light 1992; NSF 1993, 1996). For those students who hope to work within natural resource fields or continue their studies in a resource-related discipline, participation in an experiential learning program would enhance their educational experience and offer a competitive advantage in applications for employment or graduate school.

**An opportunity for mutual assistance.** Given the range of interdisciplinary resource management issues to be addressed in state parks, there exists a significant opportunity for a synergistic experiential learning relationship with universities. Through such a program, the need for field experience to improve student retention and preparedness can be turned into a positive for the state. By providing "manpower" to address critical resource issues, the program provides the opportunity to (1) sharpen the skills of baccalaureate and graduate students in resource management, (2) address a collection of interrelated resource management issues of real-life significance, and (3) develop the

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interdisciplinary resource managers who will be required by the state and nation in the near future. In return, park managers would have a means of obtaining information for important management decisions that may not otherwise be obtained because of personnel or financial constraints.

We recommend addressing both park and university concerns by establishing service learning relationships between university departments and state parks, matching the academic goals of students and faculty with the needs of park managers. As management plans are considered and research objectives established, park staff members meet with interested students and faculty to help design projects so that they address both the interests of the students and the priorities of the park's management plan. A program of this type addresses many of the issues outlined earlier for both parks and universities, and includes many of the recommendations made by the National Science Foundation (NSF 1993) and the Boyer Report (1998), including integrating research into the teaching curriculum.

Over the past eight years, service learning programs have been established three states: in Florida, between Blue Springs State Park (BSSP) and Seminole Community College (completed); in Indiana, between Brown County State Park (BCSP) and Indiana University/Purdue University-Columbus; and, most

recently, in Delaware, between Trap Pond State Park (TPSP) and Delaware State University (DSU). The Indiana Department of Natural Resources has offered the service learning program initiated at BCSP as a model to its other state parks, forests, and managed areas in order to extend the benefits of the program statewide. With support from state resource officials, university faculty, and park staff, these programs have offered exciting learning opportunities to university students while demonstrating the potential to serve elementary through high school students, local interests, seniors, and the visiting public.

### **Establishing a Program**

The service learning programs were established through initial contacts between one of the authors (Reiter) and park naturalists or principal managers. Where mutual interest was found, a program was designed that would serve both the needs of the park and the students. The finalized program contains up to three different components that can be implemented at any time or left unimplemented depending upon the needs of the park: K-12 and public environmental education, college-level service learning research projects, and a summer residency program in interdisciplinary resource management.

**K-12 and public environmental education.** Our nation's parks are a favorite destination for the public

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throughout the year. Parks and their facilities act as resource centers for campers, hikers, fishermen, etc. during the outdoor season, visiting school and club groups during the school year, and the general public at any time. In most state parks, the interpretive centers, trails, and facilities are utilized heavily each spring through fall. It is common for groups to contact the park naturalist to organize trips and programs. The number of requests can become difficult to accommodate if staffing is inadequate or during busy times such as the end of the school year. A service learning relationship can help provide a source of students and faculty to supplement the normal park program staff during peak seasons.

For example, not all requests to meet with a naturalist-interpretor can be accommodated at BCSP because of limited staffing, forcing some groups to conduct classes, fieldwork, or outdoor exercises on their own. While facilitators are available in a wide range of programs (such as Project WILD, Project WET, etc.) to train interested educators, the programs are presently separate efforts. The service learning program at BCSP addressed this issue by offering to act as a coordinating body and as a source of programs for K-12 and general-public environmental education efforts at BCSP. The program provided the capacity to offer grade school, high school, and general-public environmental education pro-

grams run by college students, allowing for a range of programs for visitors without requiring park staff. At the same time, environmental education and field biology students obtained experience in program development. This can be particularly useful at locations such as TPSP, where a renewed emphasis on advanced programming for secondary school students and beyond is being encouraged despite staffing restrictions.

To give an illustration, a student participant was responsible for obtaining the background information necessary to initiate a friends' group at BCSP. The group has since been established, and is providing a useful conduit for information, ideas, and activities. The group recently dedicated an "easy access" trail for National Trails Day (June 3) that they helped fund and install, and have provided a source of feedback between park staff and the general public. The group is increasing in membership in its first year, giving the park a source of volunteers and funding when paid staff are not available.

By providing training for teachers and students, such service learning programs can fulfill a need for environmentally aware citizens in the local community, the student population, and the state without increasing time demands on park personnel. By organizing and directing such programs, the population of knowledgeable students and teachers is en-

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hanced, and a clearinghouse of environmental education opportunities provided for those who wish to further their own academic pursuits at a state park.

**College-level service learning research projects.** In many locations, parks are attempting to supplement their own staff's research efforts. In such a situation, students wishing to gain field experience, or faculty wanting to further their own research endeavors, can be valuable to park staff by providing an important and inexpensive data source to help the park address its management goals.

Students interested in this portion of the program meet with a faculty advisor and a park representative to identify a project that covers the academic needs of the student and the information needs of the park. The project is agreed to and carried out by the student under the supervision of faculty and park staff, and the results are provided to park managers in both written and oral form for use in management plans. Students are also free to publish their data through traditional academic channels. In this way the student gains the research and communication experience recommended for retention and strength of background, while the park gains valuable data for its management decisions.

At TPSP, concern exists over the condition of the park's ponds and their population of bald-cypress (*Taxodium distichum*). However,

there is a lack of basic data from which to derive a comprehensive management plan for the ponds and the cypress, and limited personnel hours available to perform the basic research. The service learning program in conjunction with DSU, as its first step, aims to provide field equipment and personnel to begin collecting the data necessary to make management decisions. Issues addressed in a similar way at BSSP included the behavior of the rare Blue Spring hydrobe (*Aphaostracon asthenes*) and Blue Spring siltsnail (*Cincinnatia parva*), the proliferation of invasive exotic plants from outside park boundaries, and the use of controlled burns in regenerating native vegetation.

At BCSP, the timber rattlesnake (*Crotalus horridus*) is an endangered species that occupies the hilly terrain in the park's backcountry. While rare in the state and important to the ecology of the hills, encounters between visitors and snakes can be dangerous to both. The snake is presently being monitored for its movements, hunting behavior, and den selection in order to obtain information for addressing management concerns. Also, 24 of the over 100 wildlife ponds on park property were selected for a herptile population study to assess the frogs, salamanders, newts, etc. occupying the ponds both before and after planned habitat manipulations. An investigation of the shrew population is presently being conducted to follow

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up on previous surveys in the early and late 1980s that showed population declines prior to deer management efforts in the park. Now that deer control has been initiated at the park, the study is being redone to determine if shrew populations have responded.

By providing a research-based service learning component, students who desire a career in ecology, biology, environmental science, or resource management gain invaluable field experience as well as a large field site that would be unaffordable for most small colleges and universities. In return, the park receives a volunteer work force capable of addressing critical management questions that would be in danger of being ignored under traditional park programs. The link between school and park thus provides financial and environmental benefits to the state for a small outlay in time and organization.

**Summer residency program in interdisciplinary resource management.** The need for environmental education does not stop with undergraduate students. Resource managers require knowledge of the science behind the systems they manage, as well as the economics, politics, sociology, education, etc. necessary to facilitate their relationship with the public and the political system. The reality of today's educational system is that advanced training usually comes in specialized fields that make it difficult for those aspiring to a career

in resource management to obtain the breadth of information they will eventually utilize. Parks often face the choice of hiring an individual with a strong science background but lacking the non-scientific support information, versus another individual who has the management training but lacks a scientific understanding of the systems he or she would manage.

Service learning programs can address this discrepancy in resource manager training by implementing a summer residency program in interdisciplinary resource management. At BCSP, an old Civilian Conservation Corps cabin, originally built as a residence but later used as a park office, is now utilized as storage for printed brochures and camping forms. Park administrators agree that the structure could lend itself to a small dormitory if repairs were made to accommodate student and faculty residents, and have approved its use for a residential field lab. Plans are underway to obtain funds to renovate the interior of the cabin and the nearby garage to house a limited number of students and faculty during the late spring and summer months. Once established, the program can offer four-week residential courses in interdisciplinary resource management. Participants would spend half of each day in projects and directed study of the natural systems of BCSP, and the other half of each day learning the business, economics, and public relations aspects of park

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management.

By offering a training component, the service learning programs help to provide the interdisciplinary individuals needed to address modern resource management issues. Students living on park property will be able to conduct their classes and research projects *in situ*, hands-on and without interruption, while serving to supplement park programs and update park naturalists with their daily investigations.

### Conclusion

Parks exhibit a vast array of natural environments of incredible beauty that attract millions of visitors annually. Each year our country's parks continue to host visitors from all 50 states and many foreign countries with services and facilities created to provide the visiting public with a positive outdoor experience.

Yet with organization, state parks throughout the USA can offer more to the public than simply a recreation site. As quality outdoor recreational facilities attract visitors in increasing numbers, states have realized that it is the natural environment people have come to see and use all along; it's the "draw" that makes the state park experience different from visiting alternatives such as theme parks or museums. But as increasing numbers of visitors affect parks across the country, resource management must re-

ceive increasing attention if parks are to preserve this "draw" in perpetuity. The service learning programs we have described are designed to contribute to the continued health and integrity of state park ecosystems in a way that benefits visitors, managers, students, and the state. They can also help tomorrow's concerned citizens and conservation leaders become better informed about today's management problems—issues that face the park's, and ultimately the nation's, natural resources.

Hillary Rodham Clinton, in a letter to National Trails Day celebrants, stated that "partnerships" are a sign of the times, and that she sees them becoming a trend nationwide as interested resource users return to volunteer their time and talents. In this respect, it is hoped that the service learning programs we have designed can serve as models of cooperation for other state parks and natural areas with nearby academic institutions throughout the country. By linking the park to a university campus, the strengths of both institutions can be combined synergistically to provide important support for their missions. The arrangement promises to benefit the academic preparation of the students, the management decisions of the parks, and the quality of the environment.



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# News from the State Park Directors

**T**he National Association of State Park Directors (NASPD) is a professional organization formed by the directors of the 50 State Park Systems in 1962 to foster the following goals:

- Provide a common forum for the exchange of information about state park programs;
- Take collective positions on issues affecting state parks;
- Encourage the development of professional leadership in the administration of state park programs;
- Establish and maintain a working relationship with other agencies involved in park and recreation programs; and
- Enhance the ability of the individual state park directors to perform their responsibilities for administering state park programs of the highest quality for the benefit of the state park resources and the public.

The NASPD does not fulfill any directive function over state parks, nor was it ever intended to. It is a professional association, chartered as a 501(c)(6) non-profit corporation to fulfill the goals stated above.

This article is intended to reflect a sampling, based upon my casual contacts with our membership, of the directions or trends affecting some, or even many, but by no means all of the individual states at the present time. Any description of the state of state parks is of necessity a snapshot in time. As such, the material presented here was current as of May 2000; by the time you read this, some of the items mentioned here may well have

changed.

## **Legislation at the Federal Level**

The NASPD has supported two legislative initiatives that are pending in Congress as of this writing. The first is the "Land Legacy Program" of the Clinton administration. In the federal Fiscal Year 2000, this program provided approximately \$40 million for a re-energized state-side Land and Water Conservation Fund

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(LWCF) appropriation. That funding has recently been allocated to the states, according to the standing LWCF formula, less a \$2 million hold-back for administration-selected state projects.

In the federal FY2001 appropriations bill there is a Land Legacy Program request by the administration for \$150 million for state-side LWCF. This program would provide \$72.5 million earmarked for grants to the states, \$72.5 million earmarked as a hold-back for administration-selected projects, and \$5 million for program administration. This program is part of the federal annual appropriations bill which is waiting to be passed by Congress by 1 October 2000, when it would take effect. The National Park Service administers the state-side LWCF grants to the 50 states for outdoor recreation land purchases and facilities development. The NASPD opposes the hold-back of \$72.5 million by the administration, and instead supports the entire amount going directly to the states.

The second legislative initiative is the "Conservation and Reinvestment Act," H.R. 701, which has passed in the House of Representatives. This bill had broad-based support in the House, with over 316 co-sponsors. A companion bill, S. 2123, containing generally the same provisions, has been introduced in the Senate. Its passage is more problematical in the time remaining in this session of the Congress. H.R. 701 contains the

following provisions as of this writing:

- Revenue sharing with coastal states to mitigate the impacts of offshore oil and gas drilling (\$1 billion);
- LWCF revitalization: \$900 million to be equally divided between the states and local governments and the federal government;
- State-level wildlife conservation and restoration and revitalization funds, with state and local parkland eligibility (\$350 million);
- Urban Park and Recovery Program (\$125 million);
- Historic Preservation Fund (\$100 million);
- Federal and Indian lands restoration (\$200 million);
- Conservation easements and species recovery (\$200 million); and
- Payment in lieu of taxes (PILT) for federal lands and species recovery (\$200 million).

### Foundations

If there is any trend just becoming visible among the various state park systems, it is that of forming foundations to assist in supporting the parks. Similar foundations are also being formed to assist a combination of state parks and allied state conservation agencies, such as those managing wildlife or forests. The term "foundation" can cover a very broad range

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## Challenges Facing State Parks

**T**he National Park Trust issued the second of its two Legacy Reports on 25 August 2000, the 84th anniversary of the National Park Service. It focuses on America's state parks, an essential element of our "national system of parks." The term was first used by the founding director of the National Park System, Stephen T. Mather. He said that there would be no National Park System until there was a national system of parks.

In the first Legacy Report, the National Park Trust signaled the nation about the crisis facing the national parks because of growing numbers of privately owned and unprotected inholdings. In seeking to understand the degree of threat to state parks, we used the following three factors that weigh on the protection and determination of "threatened parks":

- Land-use controls around the park;
- Plans to protect the unprotected values; and
- Availability at the state level of funding for land acquisition.

This report found that state parks face two significant challenges. First, there is no real commitment by the states or the federal government to fund the states' land acquisition needs on a continuing basis. This, despite the fact that visitation to state parks equals that of the national parks. The second challenge is that development has spread to the edge of state parks. This development has been called a

"wall of sprawl." America is coming to the parks, and some of them are staying—by building their homes, their hotels, and their new urbania, using the parks as their backyard.

State parks are subject to individual state mandates, to varying political agendas, and to state budgets. For example, some western states with large federal inholdings place little value on state parks. Other western states, such as California, Oregon, and Washington, have extensive and highly regarded state parks.

National parks do not receive primary attention in this report, but we do bring attention on one issue. We grade the federal government on its response to the land acquisition needs of the 20 most threatened parks that we identified in our 1999 Legacy Report. The government gets, at best, a "D."

Why protect all the parks? Our national system of parks is a very small part of our public land holdings. Yet parks are the storehouse of our natural, historical, and cultural

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heritage. They generate millions of dollars in tourism yearly and, for many communities in America, they are the main industry.

First, all of the 379 national and 3,266 state park units (including parks, recreation areas, and natural areas) should be "finished." This means identifying key properties in and around parks, and then purchasing them from willing sellers. There is the challenge for this generation. We need a commitment, and we need a long-range plan. That is the challenge for the National Park Trust, the governmental trustees, and private land trusts.

Second, working with the National Association of State Park Directors, the National Park Trust is expanding its expertise and assistance to state park systems that request our involvement.

Third, federal support of land acquisition for parks at the state level has been lacking for more than two decades, even though it is authorized in the Land and Water Conservation Fund legislation. To counter this, states have taken bold initiatives. Many have established state funding mechanisms for park and resource

protection. They should continue to do this. They should not wait for Washington. But, Washington should support the states or expect to assume this role.

Fourth, there is a growing demand by the public to experience and learn about the heritage of local, state, and national resources. Through our cooperative agreement, the National Park Trust and the National Association of State Park Directors will work together to assure that America's growing need for conservation of important natural and cultural lands and resources across the country is met.

Last, and most important, every citizen who enjoys the parks, who knows of their value in our society, who cares about our heritage, needs to join up with those calling for greater public commitment. For, unlike any other issue, once a historic site or natural area is lost, it is lost forever.

The Legacy Reports are a first effort to bring order to the debate, substance where there has been none, and consensus to addressing a perceived national need: the fulfillment of a "national system of parks" and conservation areas.

*Copies of the second report, "Saving the Legacy of the National System of Parks," can be obtained from Susan Hawley at the National Park Trust, 1-202-548-0500.*

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## Estimating the Tourism Volume and Value in Parks and Protected Areas in Canada and the USA

### Introduction

**S**cience and management are fundamentally dependent upon measurement. The volume, flow, scale, and impact of a phenomenon are understood through measurement. The more comprehensive and precise the measurement, the better the understanding.

The public use of parks and protected areas is an important societal activity in Canada and in the USA. This use has economic, social, cultural, and environmental impacts. The understanding of these impacts is influenced by the measurement of the volume of the use and its identified value. Data on public use of parks and protected areas are important for most aspects of management. Maintenance operations require knowledge of use levels and demands. Visitor services and protection are dependent upon the needs and numbers of visitors. Natural resource protection is partially dependent upon the visitor use type and volume. Local communities and businesses are very interested in use and expenditure levels (Hornback and Eagles 1999).

All park agencies collect some data on the level of public use of parks. Typically, the definitions and approaches to use measurement are developed by each management unit or

park agency. There is no accepted international standard for public use measurement in parks and protected areas; however, Hornback and Eagles (1999) recently proposed one. Tourism volume measurement is useful because of the benefits provided to society by tourist activity. Furthermore, in the interest of retaining and protecting natural resources it is important to establish amenity value.

Worldwide, there is a low emphasis placed on the collection, compilation, and distribution of coordinated park-use data. This is probably due to the single-purpose agency structure, the competition between agencies, and the lack of a coordinated, international park tourism management structure.

It is politically dangerous for any park agency to fail to report use levels and economic impacts on a continuous and consistent basis. Senior politicians, government policy-makers, and business planners make decisions

based upon the available information. Those sectors with weak or incomplete information risk being undervalued when policy, planning, and management decisions are made.

This paper presents a collection of park-use data from Canada and the USA. The purposes of the research are to document the gross volume of and benefits derived from the public use, compare this use between the two countries, and better understand the methodological issues involved. The authors hope that this paper will further the task of better management of the collection, compilation, and distribution of public-use data from parks and protected areas.

### **Methodology**

The public-use data were collected from park agencies in Canada and the USA. The Canadian data largely comes from two national surveys (Wilkie 1997; Murphy 1997). In Canada, the national park, national historic park, and wildlife area data come directly from the relevant agencies. For two regional park agencies in Ontario, the data came from their Web sites (Niagara Parks Commission 1998; St. Lawrence Parks Commission 1998). The 36 regional conservation authorities in Ontario have not had a comprehensive compilation of use data for almost 20 years, so an old figure was used. Some caution is necessary because of a mixture of calendar-year and fiscal-year data for 1996. All of the Canadian data are valid for 1996, except for those from conservation authorities and the regional park

systems in Ontario.

The U.S. data come from a variety of sources. Most are for 1996. The Army Corps of Engineers data are for 1997 (E. Rossman, personal communication, 1 October 1998). The data on state parks come from the National Association of State Park Directors (1997) and are for the 1995-1996 year. The data for the National Park Service, the Bureau of Land Management, the Bureau of Reclamation, and the U.S. Fish and Wildlife Service are from the U.S. Statistical Abstract (1997). The NOAA estimate of usage comes from internal NOAA files (Bunce 1999). NOAA is undertaking a project to develop more precise methods for recording the visitation to the national marine reserves. For the purposes of this paper, only a very rough estimate of visitor-days from NOAA sites is used. The U.S. data are a mixture of visitor-entry and visitor-day figures.

Initially the authors had hoped to include visitation figures from Mexican parks so that a continental view could be obtained. However, it was discovered that Mexico has no national standard or system for the systematic collection of park-use data. Therefore, no such data are available.

Each agency in Canada and the USA uses agency-specific definitions for visitation and varying approaches to measurement, leading to some difficulty when data are grouped from different agencies. To assist with standardisation, the World Commission on Protected Areas has suggested standard definitions for the basic terms

that describe public use of parks and protected areas (Hornback and Eagles 1999). These definitions are found in Table 1.

For the purposes of this paper, and due to limitations in the available data, all visitation is assumed to be domestic. This assumption may be unrealistic, but until more comprehensive and accurate data are available, it is not

possible to accurately indicate the level of foreign visitation.

### **Park and Protected Area**

#### **Visitation in Canada and the USA**

Park visitation in Canada and the USA is estimated as 2,626,275,241 visitor-days of activity in 1996 (Table 2). The massive size of visitation illustrates the importance of this outdoor

#### **Table 1. Basic definitions for public use measurement of parks and protected areas**

The following definitions are taken from Hornback and Eagles (1999). It is important to note that not all park agencies in Canada and the USA collect visitor data using these protocols.

**Visitor:** a person who visits the lands and waters of a park or protected area for the purposes mandated for the area. A visitor is not paid to be in the park and does not live permanently in the park.

**Visit:** a measurement unit involving a person going onto the lands and waters of a park or protected area for the purposes mandated for the area.

**Visitation:** the sum of visits during a period of time (usually annually, quarterly, or monthly).

**Entry:** a person going onto lands and waters of a park or protected area for any purpose and not specifically excluded for statistical purposes.

**Exclusions:** park or protected area use which is neither visitation nor entries for statistical purposes as defined above. Exclusion examples include:

- **Tenants or residents** within park boundaries (including guests);
- **Government employees**, volunteers at, or contractors to the park/protected area (including concessionaires and their employees);
- Brief, **incidental passage** into the park/protected area boundary by pedestrian or vehicular traffic; and
- Persons engaged in the pursuit of specific **legal rights of use** (e.g., subsistence hunting and fishing, traditional ceremonies) unless there is a legal or official requirement to report.

**Count:** the direct observation and immediate recording, measurement by instrument, or recording by registration form (such as fee collections) of park or protected area use.

**Visitor-nights:** the count of persons staying overnight in a park or protected area for a purpose mandated for the area.

**Entry-nights:** the count of persons staying overnight in a park or protected area for any purpose.

**Visitor-hours:** the total length of time, in hours (both continuous and intervals), that visitors stay in the park while visiting for a purpose mandated for the area.

**Entry-hours:** the total length of time, in hours (both continuous and intervals), that visitors and entrants stay in the park for any purpose.

**Visitor-day:** an average length of stay consisting of 12 hours.

**Tourist:** a person travelling to and staying in a place outside their usual environment for not more than one consecutive year for leisure, business, and other purposes.



Table 2. Park visitation in Canada and the USA, 1996

<b>Jurisdiction</b>		<b>Visitation (visitor- days)</b>	<b>Country total</b>
Canada	National Parks and National Historic Parks	38,782,237	
	National Wildlife Areas	96,980	
	Provincial and Territorial Parks	76,444,296	
	<i>Canada subtotal</i>		<b>115,323,513</b>
USA	National Park Service Areas	295,000,000	
	National Forests	849,182,000	
	BLM National Resource Lands	123,611,000	
	Corps of Engineers	377,477,100	
	National Wildlife Refuges	31,200,000	
	NOAA Marine Reserves	4,500,000	
	Bureau of Reclamation	90,000,000	
	State Parks	739,981,628	
<i>USA subtotal</i>			<b>2,510,951,728</b>
<b><i>Grand total</i></b>			<b>2,626,275,241</b>

recreation activity within the national and provincial/state parks of Canadian and American society. More than 2.6 billion visitor-days of outdoor recreation activity has a correspondingly large economic, envi-

ronmental, and social impact. This large volume of activity, previously unpublished, must be viewed as a rough estimate, given the variety of measurement and reporting approaches.

### **Economic Implications of Visitation**

In addition to the total number of visits, which alone indicates their economic importance, there are two main reasons why any data collected by park and protected area authorities and managers on visitors are potentially of considerable significance from an economic perspective:

1. Information that includes the details of the origin of visitors, the distance they travel, the frequency of visits, the number in each party, and the length of stay on site, as well as expenditures on travel, entry fees, accommodation, clothing, equipment, food, etc.—especially if those expenditures are made in close proximity to the destination—facilitate the estimation of the local economic impact of such park and protected area visits.
2. Such information also helps establish the overall value of the parks and protected areas to society, as well as assisting in decision-making concerning the allocation of resources, especially national and state/provincial funding.

These two aspects of the possible utilisation of data are considered in turn to indicate the implications for the safeguarding and management of parks and protected areas.

**The local economic impact of visits to parks and protected areas.** There have been many estimates of income and employment generation resulting from tourism, applying both

the Keynesian multiplier model and input-output analysis (Archer 1973; Archer 1977; Pye and Lin 1983; Sinclair and Sutcliffe 1988; Johnson and Thomas 1990, Donnelly et. al 1998). Both approaches permit the calculation of the value of the multiplier as the ratio between the income and employment generated and the initial change (increase or decrease) in visitor gross expenditures or tourism-related investment. Input-output analysis goes further than the Keynesian multiplier method as it provides estimates of the multiplier values for economic sectors, other than those directly serving tourism, such as food and drink, electrical equipment, textiles, and infrastructural services. Accurate measurement using these models involves not only estimating income and employment directly stemming from the initial round of expenditures but also that arising from indirect and induced effects. It is also important to ascertain the “leakages” from first-round direct spending, as this clearly lessens the impact. Thus, for example, if parks and related local businesses draw employees from outside the immediate area and import most supplies, the beneficial effect will be much lower than the initial expenditure would suggest. The more remote parks are, the higher the likelihood of substantial leakages.

With respect to nature tourism, there are some studies of its impact concerning the generation of benefits for local communities in the form of, for example, entry fees, provision of accommodations and services. Swan-

son and Barbier (1992) considered the economics of wildlife, Christ (1994) examined revenue generation in Kenya's game reserves, and Wells (1997) documented the range of financial and economic impact studies of nature tourism. However, they are not as broad as the more general tourism studies.

There are two shortcomings with multiplier and input-output approaches. The first is that they tend to underestimate the many other forms of benefits (discussed below) which parks and protected areas generate. The second is that they measure only the gross benefits because the costs associated with, say, increasing visitor numbers and frequency of visits are completely ignored. For example, traffic congestion, disturbance to wildlife, damage inflicted on fragile ecosystems, and the production of solid waste and pollution are not accounted for or deducted from the gross benefits to establish whether indeed there are net positive benefits or not. These externalities often impose direct costs on park authorities because expense is incurred in mitigating their effects.

To ascertain the full multiplier and input-output values arising from parks and protected visits is very expensive in terms of both money and time. It is extremely unlikely that such exercises would ever become a standard and routine aspect of data collection by park authorities and managers. Studies would have to be confined to one-off occasional investigations at specific and representative sites. The use of

input-output analysis, being a more comprehensive approach, is not feasible at the local level. It requires studies at a sub-national or national level. However, recognising that these approaches can show that the impact of visitors' expenditure is both positive and far-reaching is enough to demonstrate the local economic value of the existence of parks and protected areas. In practice, a reasonable estimate of their economic impact can be obtained from information on first-round expenditures using income and employment coefficients from previous research related to nature tourism. There is some recent evidence (given below) of the magnitude of the economic impact of the use of national and provincial parks in Canada and public lands in the USA.

**The social benefits (value) of parks and protected areas.** Except under specific conditions, economics accepts that prices paid in the market (exchange value)—for instance entry fees—do not necessarily represent the value consumers (visitors) attach to the goods and services they purchase. Where there are no entry fees, i.e., access is free to parks and protected areas, this does not suggest a zero value. In such cases, therefore, means have to be devised to attach value. Furthermore, as the subject of environmental economics has developed it has been recognised that there are two elements to the benefits visitors derive from the use of heritage and natural resources, namely *value in use* and *non-use value* which, however, make up total economic value (Allison et al.

1996; Bowers 1997; Bagri et al. 1998). Total economic value posits that, for many amenity resources and natural environments, non-use value can be much greater than use value because they are unique or irreproducible, and, if degraded, irreversible trends may be set in motion, leading to their destruction. In addition to market-based exchange value, total economic value thus consists of option, bequest, and existence of non-use values that are emerging from studies of willingness to pay for natural environments. In short, their value is much higher than effective demand in the market as expressed through the payment of entry fees (where applicable) or proxy entry charges estimated from, for example, travel costs calculated from knowledge of the distances travelled by visitors to parks and protected areas.

It is not possible to explore in detail in this paper the three main methods that can be applied to ascertain the use and non-use values of unpriced natural resources. These are the contingent valuation method, Hedonic price method, and travel cost method. They are fully explained, with examples, in publications such as Allison et al. (1996), Braden and Kolstad (1991), Fletcher et al. (1990), Hanley and Spash (1993), Mitchell and Carson (1989) and Sinclair and Stabler (1997).

There are a number of studies that illustrate combinations of the economic impact and social benefits approaches, because in effect they can be considered additive in respectively measuring dynamic and static values.

Allison et al. (1996) consider heritage conservation, Sinclair and Stabler (1997) tourism, while the Ontario Ministry of Natural Resources (1992) more specifically assessed the impact of visits to provincial parks. Carlsen (1997) employed a combined approach in Australia, and the Canadian Parks Service (1992) simply estimated daily expenditures. As with economic impact studies, the valuation of parks and protected areas based on the benefits derived from them by visitors should be cognisant of associated costs, especially of increased visitor numbers, congestion, disturbance of wildlife, erosion of paths, and degradation of fragile ecosystems.

The Ontario Ministry of Natural Resources found that in 1992 the value of total output arising throughout the economy from expenditures by visitors and government on Ontario provincial parks amounted to CDN\$831.2 million. That year there were 6.9 million visitor-days of activity in this park system (OMNR 1992). Therefore, the economic impact per visitor-day of use amounted to CDN\$120.46, using the direct use value approach. The Canadian Parks Service (1992) calculated CDN\$73.42 of tourist expenditures for each day of visitation to Bruce Peninsula National Park, and CDN\$116.42 for each day of visitation to Pukaskwa National Park. This approach measured use value only.

Carlsen (1997) used secondary data to evaluate tourism and recreation values on public lands in a region of New South Wales in Australia. He calculated both the economic impact

and a quasi-value total economic value based upon user surplus estimated by using the travel cost method. He found that 66% of all visitors to the area visited public lands (mainly beaches, rivers, national parks, and state forests) during their holiday in the region. He estimated that the economic benefit derived from tourism and recreation on such public lands in New South Wales in Australia was AUS\$187.69 per day of recreation. This figure may seem to be on the high side given that domestic visitors spent AUS\$83.00 per day and international visitors spent AUS\$72.50 in 1992-1993, but this is explained by his calculation of an element of total economic value, not just market expenditure (J. Carlsen, personal communication, 13 May 1998).

Both the Ontario and the New South Wales studies provide a range of figures for use in calculating value of parks and protected areas. Over the period of the studies the Canadian and Australian dollars were relatively at par, but traded between 65 and 80 cents to the U.S. dollar. To make comparisons, an exchange rate of 75 cents to the U.S. dollar is used. Therefore, in U.S. dollars the economic impact rates are \$90.35 to \$140.77 per day of recreation. If one assumes that the 1996 figure of 2,626,275,241 entrances to Canadian and American parks represent visitor-days of activity, and one accepts an impact range of \$90 to \$141 per day, the value for park tourism is US\$236-370 billion in Canada and the USA combined. These figures must be

accepted with caution, given the limitations of the data. However, the estimates do show that park-based outdoor recreation is a very important economic activity in American and Canadian society. Even these estimates underestimate value because they do not include option, bequest, and existence values.

Estimates of the magnitude of the economic impact and partial evaluation of total economic value, from the admittedly incomplete data available, demonstrate the benefits visitors both confer upon, and derive from their use of, parks and protected areas. These estimates have two important strategic implications.

The first is of more immediate concern to park authorities and managers in that it could influence the allocation of funds from government. By extending the amount and range of data that can be routinely collected, often by automatic mechanical and electronic means, and by conducting occasional surveys (both by interview and self-completed questionnaire), the basis can be created for estimating values, applying the methods outlined above. Showing that the value of parks and protected areas is much higher than entry charges and visitor spending per day can help justify funding over and above direct revenue generated by parks themselves. In effect, their social value can be used as a political lever to indicate the need for funds to acquire, extend, and manage these natural resources in the same way the grants and subsidies to the arts are justified.

The second implication is related to

the issue of the non-priced characteristics of many natural resources. Since amenity use seldom yields a return in a commercial sense, there is a danger, whenever there is competition for the use of land resources (for example, agriculture, forestry, mining, water supply, electricity generation or development), that these alternative market-based activities will appear to be a "better" allocation of land because they seem more profitable. The ability of market-traded land uses to outbid non-market ones, which is further distorted by tax breaks and grants and subsidies that inflate values even more, is a constant threat to natural environments such as those in parks and protected areas.

Thus the argument for a more comprehensive and better-quality database is reinforced. Just how important parks and protected areas are to Canada and the USA, and their global significance, is indicated in the next section, underlining the case for the systematic collection and analysis of key statistics.

#### **Comparisons Between the USA and Canada**

The USA and Canada are similar in background, sharing comparable European cultural roots. Over the years the two countries have frequently exchanged ideas in the field of park and protected area management. Therefore, one might expect that comparisons between them would show a high degree of similarity in the

proportion of land area protected and the recreation use levels. The park systems can be compared in several ways. The overall extent of parks and other protected areas, that area as a percentage of the country, park visitation compared with the park area, and the park visitation compared with the national population are all important measures.

**Total park area.** Canada and the USA are large countries, similar in size. However, the USA has many more protected areas, 1,878 compared with 861 in Canada, and much more land area under formal protection, 198,714,037 ha compared with 94,900,514 ha (Table 3; World Conservation Monitoring Centre 1998). Importantly, the USA has the largest amount of protected area of any country, Canada being in fourth place behind Greenland and Australia. Both the USA, with 21.2% of the country protected, and Canada, with 9.6%, are more aggressive in the establishment of parks than the global national average of 8.8%.

The USA has a larger and institutionally more complex system of parks and protected areas than does Canada, especially at the national level. This reflects the stronger role played by the national government in resource management. After the U.S. Civil War, the national government tended to retain public lands upon the creation of the western states. This provided a rich resource base for the creation of park and protected areas by the national

**Table 3. Park area in Canada and the USA**

	<b>National area (sq km)</b>	<b>Number of protected areas</b>	<b>Extent of protected areas (ha)</b>	<b>Percent of national area under protection</b>
Canada	9,922,385	861	94,900,514	9.6%
USA	9,372,614	1,878	198,714,037	21.2%
<i>Global Total</i>	<i>148,208,846</i>	<i>12,754</i>	<i>1,320,369,100</i>	<i>8.8%</i>

**Table 4. Use density (visitation per unit of area) in Canada and the USA**

	<b>Protected area visitation</b>	<b>Area of protected area (ha)</b>	<b>Visitation per ha</b>
Canada	115,325,509	94,900,514	1.2
USA	2,510,951,728	198,714,037	12.7

government. As Canada developed, land owned by government was retained by the provinces (for those British colonies that existed before Confederation) or was transferred to them (for those provinces created after Confederation), giving provincial governments the primary opportunity and role in the establishment of parks. The provinces primarily used the institution of provincial parks as their protected area approach. Most of the government-owned crown land outside of parks is devoted to forestry, mining, and hunting, with little formally established as reserves. There is a substantial amount of outdoor recreation occurring in Canada on crown land outside of formally established

reserves. However, very little is known about the volume and distribution of this recreation.

**Park visitation and park area: use density.** The volume of visitation per unit of area has important impacts on parkland. Table 4 presents data on the visitation per hectare of parkland. The USA has a much higher overall level of use—11 times higher. Canada has a much smaller population (one-ninth the size), and the parks are generally much more remote from the centres of population.

**Park visitation and national population.** The level of park use by a population is an indication of the importance of parkland (Table 5). In Canada, the total park visitation di-

**Table 5. Per capita park visitation**

	<b>Park visitation</b>	<b>Population of country</b>	<b>Visitation per person</b>
Canada	115,323,513	29,606,000	3.9
USA	2,506,451,728	266,476,278	9.4

Population figures for Canada are from Columbo 1997; for USA, from CIA 1997.

vided by the overall population gives 3.9 visits per person per year. At 9.4 visits per person per year, there is a much higher per capita rate of park usage by Americans. (These calculations ignore the fact that a small percentage of the visitation in each country is foreign.) There are several possible explanations for this finding. First, as noted above, the U.S. parks are generally closer to population centres. Second, the U.S. parks have a longer outdoor season. Canadian parks typically receive the vast majority of their use over only a four-month period: the warm summer months and time of school holidays. Third, the USA has many more parks than does Canada, 1,878 compared with 861. Fourth, the USA has 21.2% of the country in parkland, compared with 9.6% for Canada. These latter two features presumably provide for a more equitable distribution of parkland throughout the USA.

#### **Limitations of the Data**

Data on visitation to parks and protected areas in Canada and the USA must be considered within the context of several inherent limitations.

The figures in Tables 4 and 5 as-

sume that all visitation is domestic, an assumption that is not valid. Clearly the vast majority of the tourism is domestic. For the park environment and the park managers, many of the impacts are similar no matter the origin of the visitor.

There are 2,738 internationally protected areas in the USA and Canada recognised within the United Nations list of national parks and protected areas (IUCN 1998). The U.N. list only contains information on those areas that are 1,000 ha or larger. There are hundreds of parks smaller than that in Canada and the USA. Therefore, 2,738 is a minimum figure. These 2,738 parks cover an area of 293,614,551 ha, or 22.2% of all the protected area in the world. However, since a large number of smaller parks and protected areas are not reported in the U.N. list, this figure too must be considered an underestimate.

Some parks are large, with many access points. With minimal financial and staffing resources such parks frequently do not adequately document the number and duration of entries at all access points. This leads to under-reporting in official use figures.

Due to limitations in financial and



personnel resources, many parks only collect visitor statistics during peak visitation periods. Some agencies attempt to estimate the uncounted visitation, but most do not. Some count the visitation in low-use periods over intervals of time—say, once every five years—and then report the counted figure as an estimate in uncounted years. Most do not. For example, Ontario had 372 provincial parks in 1996. However, only 104 were “operating” parks, that is, those with staff on a permanent basis. This agency does not estimate use in the non-operating parks, and therefore the reported figure of 8.5 million visitor-days of recreation for that year is a minimum. In Ontario, as elsewhere, the amount of visitation not being reported is very hard to estimate. Nevertheless, these financial and personnel resource limitations result in under-reporting of visitation.

Even with the wealth found in Canada and the USA, the park management agencies are modestly resourced. Most have fewer people and smaller financial resources than desirable to carry out their societal mandate. As a result, every action is weighed according to its costs and benefits. Throughout most of the two countries, the majority of funding comes from tax-based government allocations. There are a wide variety of pricing policies in the park agencies, but generally the outdoor recreation usage provides only a portion of the park income. Where use charges occur, careful tabulation of data, typically due to the demands of

financial accounting, is done. However, when the entrance is free or below cost, tabulation is spotty. When the costs of data collection outweigh the benefits, most park agencies limit such collection. For these structural reasons, the level of park usage is frequently under-reported.

There is no standard for the collection and tabulation of park-use figures. Some parks collect data on visitor entrances, that is, the number of people entering. Less frequently, data are collected on length of stay. Only when these data are available can visitor-hour or visitor-day figures be calculated. There is variability on the issue of excluding those who may just be passing through, who live in the park, or who work in the park. This also makes the tabulation of overall data difficult.

The collection and reporting of use levels is of low priority in some agencies. For example, the Canadian Wildlife Service manages national wildlife areas and national migratory bird sanctuaries. These two systems of protected areas are very large and have important conservation significance. However, the agency does not have a visitor-use data collection policy, a national office to collect the data, or a procedure to report the level of recreation use made of these sites (J. Robinson, personal communication, 23 April 1999). The low level of priority given to visitor management data in such agencies results in under-reporting of visitation.

The data included in this paper are reported as visitor-days. However,

some of it represents visits of undetermined length. For example, in this report each visit to Canadian national historic parks is included as a visitor-day. However, it is probable that each visit represents only a few hours of activity. In this way, some of the data purporting to be visitor-days will be overestimated.

On balance, given the structural issues inherent in tabulating use, the authors conclude that the reported public use levels tabulated in this paper are an underestimate of the actual use occurring, and certainly of the economic impact and value of that use.

### **Conclusions**

The outdoor recreation that occurs in the parks and protected areas in Canada and the USA is a very large and impressive activity. With an estimated 2.6 billion days of use per year, this activity has major economic, social, and environmental impacts.

There are limitations to the data presented in this paper. Differing definitions of use, a wide variety of counting techniques, substantial under-reporting of data, and considerable difficulty in assigning a common definition to the term "visitor-day" all limit the accuracy of the data and the effectiveness of the findings. These research findings point to the need for a standardised approach to public-use reporting and management, both in the study area and elsewhere.

The lack of national and international data on parks and protected area use levels and economic impacts is a public policy deficiency. The level of

public use is a concrete representation of the value of these sites to society. The under-reporting of this use does a disservice to the agencies and sites. The lack of continuous and consistent reporting of economic impact and the failure to attempt to measure social value is politically dangerous in an economic rationalist society.

Eagles (1995) and Van Sickle and Eagles (1998) reported a budget crisis in parks at national and provincial levels in Canada. The number of parks increased over the previous decade, as did the area of land and water under protection and park visitation. Conversely, the government allocations for management decreased in real and relative terms. This caused severe management and resource protection problems. There are several reasons for this situation. Governments in Canada responded positively to the many voices asking for more land to be designated as parks, both for recreation and conservation purposes. However, the lobbying groups and individuals demanding more parks were often silent about the need for money for management for these new parks. Accordingly, as indicated earlier, the park managers do themselves and their parks a disservice by not accurately counting, reporting, and interpreting the level of use of their parks in order to show their importance to society. Generally, in Canada and the USA the governments, the general public, and the business sectors are not getting sufficient data on public use and the economic impact and value of parks to make appropriate decisions on their

designation, protection, and management.

This analysis suggests that the citizens of the USA use their public parklands much more than do Canadians. More availability of parklands, those parklands being closer to cities, and longer outdoor recreation seasons are the likely reasons. The implications of this finding are many. The planning and management of parks and protected areas in the USA must occur within the context of much higher levels of use. The Canadian park managers are used at lower levels, something that may only be temporary. Over time, the large USA outdoor recreation market may start to recognise the large area of parkland that is readily available for use in nearby Canada and therefore increasingly shift usage there. This would put more pressure on the Canadian parks and on their tourism facilities.

The estimates of economic impact given in the paper are coarse and im-

precise. However, they lead to the conclusion that the economic impact of parkland use and the value placed on it by society is large and under-reported. If this important economic impact is to be used in shaping public policy, it would be more effective if information about it were developed in a coordinated and professional fashion across the two countries.

Under the North American Free Trade Treaty, a standardised industrial classification system has been established by the statistical agencies of Canada, the USA, and Mexico. Within that system there is a category for park tourism. Therefore, there is now an administrative procedure that can assist with the standardisation of park tourism data collection and reporting across the entire continent. It is a worthwhile goal for all park agencies and their public supporters to work towards the fulfilment of a continental process for park tourism measurement and reporting in North America.

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# Conservation of the Sea Using Lessons from the Land

## Introduction

The protection of natural areas valued by society is a tradition dating back to the earliest human settlements and extending across cultural boundaries (Henneberger 1998). Protected area design for the conservation of biological diversity and the protection of endangered species is a well-established tenet of modern conservation biology (see Primack 1993), and the use of protected areas for the management of natural resources (such as forests and fish) is increasingly popular in management communities. Modern protected areas in the USA encompass topography as diverse as the Alaskan tundra (NPS 1997), the Florida Everglades (USFWS 1998), and the Grand Canyon (NPS 1997). The modern rationale for protection is equally diverse, ranging from tribute to historical personages, to protection of endangered species, to the preservation of natural areas (NPS 1997).

Considered *in toto*, the panoply of modern protected areas in the USA is an impressive representation of what we value, or at least what we seek to value. However, there is a wide disparity between the total area of land and ocean under federal protective management (Brailovskaya 1998; Lindholm and Barr, in review). Of the total U.S. landmass (more than 9 million sq km including Alaska and all territories), approximately 18% is included in some form of protected area (Lindholm and Barr, in review). In contrast, the total area of U.S. waters within the 200-mile Exclusive Economic Zone, or EEZ (including all state and territorial waters), is approximately 46 mil-

lion sq km (Watson and Griffis 1998). Of this, a scant 0.1% is currently under federal protection (Lindholm and Barr, in review).

This disparity may be a function of time and accessibility. The oceans have until recently been widely considered to be vast and limitless and efforts to preserve them are a recent phenomenon. Terrestrial areas are more readily accessible to the public, and it is quite understandable that the beauty and grandeur of the Grand Canyon would be valued and protected years before someplace such as the Monterey Canyon. As a geologic formation, this submarine feature of the California continental shelf and slope may be even more

spectacular than its land-based counterparts, but its visual beauty and prolific resources are hidden in darkness, only to be seen in the lights of a submersible or remotely operated vehicle. The disparity may also rise from the vast differences in program budgets, with comparatively little funding being directed to marine protected area designation and management in the federal budget. And it may also be a result of considerable uncertainty over just what we want to accomplish with federal marine protected area programs. In this paper we discuss the many shared characteristics of the agencies charged with protecting land and water in the USA, and offer suggestions as to how experience in designating and managing public lands can inform the process of protecting the marine environment.

#### **Protection of the Land**

The development of terrestrial federal public land management has resulted in a "toolbox" with a variety of tools for different tasks (such as the National Park, National Forest, National Wildlife Refuge, and National Wilderness Preservation systems). Having multiple options for management does not in itself guarantee an effective system of protected areas, for the obvious reason that competition among programs for funding and visibility can get in the way. However, having a variety of options can make the job of fitting the right authority to the goals of protected areas designation some-

what more straightforward.

The spectrum of federal public lands management programs starts with the Bureau of Land Management (BLM), which has some conservation goals but is more focused on making sure the public's interests are served in the use of lands under their authority. Operating principally under the authority of the Federal Land Policy and Management Act of 1976 (43 USC 1701), BLM is charged with "the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs for the American people...." Next in line is the U.S. Forest Service (USFS). Deriving its authority from the National Forest Management Act of 1976 (16 USC 1600 {note}), USFS establishes conservation goals for the National Forest System, though it pursues these goals through the pursuit of sustainable, multiple-use management, as opposed to any overarching emphasis on preservation. This is the most protective sort of designation that might routinely permit and perhaps even encourage sustainable commercial extractive use of these areas.

Toward the other end of the conservation spectrum are the national wildlife refuges and the national parks, monuments, and preserves, which are designated to preserve areas for their natural values, while allowing the public to use these areas for compatible recreational uses. While commercial extractive uses

generally are not permitted, a broad range of recreational activities are allowed (although strictly managed) consistent with the National Park Service (NPS) and U.S. Fish and Wildlife Service (USFWS) mandates to preserve these areas (see National Park Service Organic Act {16 USC 1} and the National Wildlife Refuge System Administration Act {16 USC 668dd}).

Finally, there is the National Wilderness Preservation System (NWPS), which is used to preserve the most valued wild areas on BLM lands and in national parks, forests, and wildlife refuges. The goal here is entirely focused on preservation of the attributes that make that area "wilderness" as established under the Wilderness Act of 1964 (P.L. 88-557, 78 Stat. 890, 16 USC 1121(note), 1131-1136). There are 625 units in the NWPS, totaling some 423,185 sq km of public land administered by each of the four terrestrial protected areas agencies mentioned above (NWPS 1999). According to the Wilderness Act, wilderness is "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." Under the NWPS, wilderness areas are designated by the U.S. Congress, and since the passage of the original act in 1964, sixty-four designations have been made (NWPS 1999). While there is some variety in how each of these agencies manage wilderness areas under their authority, the diversity of programs provides a

greater opportunity to find a "best fit" with the goals and objectives underlying the designation. At its center, however, is the clear mandate to preserve a legacy of wild public lands for this generation and into the future.

### **Protection of the Sea**

The management of publicly owned waters and seabed areas is, in practice if not in theory, quite different from that of public lands. Unlike the terrestrial realm, where public lands are but a small portion of the largely privately owned landmass of the USA, all the waters of the EEZ (with a very few riparian exceptions) are owned in common by the people. As established through common law, and long supported in American case law, the state and federal governments hold these waters in trust for the public. In addition, the courts have held that these government stewards also have a duty to protect and preserve the public's interest in natural wildlife resources (Britton 1997). Notwithstanding this well-established principle of common ownership of the EEZ, some users have a strong perception of a special standing, and a few even believe that they actually own the resources and have a greater right to them because of some long-standing tradition of use, or a familial legacy. The public, in most areas of the country, have not expressed their concerns about the use and allocation of natural resources in these publicly owned waters, and as a consequence much of

the stewardship and management of these ocean areas is strongly influenced by those who have the greatest economic stake in management decision-making. Clearly, the varied perceptions of resource ownership among managers, users, and members of the public have very significant implications for the preservation and management of marine protected areas.

Until recently, the approach to management of marine resources was minimalist, owing in large part to the perception of the oceans as “vast and limitless”—a perception that has perhaps been contributed to by the apparent hesitancy of ocean and coastal managers to embrace a “public waters” management perspective like that of their counterparts on land. The resulting governance of these public waters has been largely regional in scope, targeted to individual activities or resources, and involving extensive participation in management from users, but little from the general public, in whose interest the resources are supposed to be managed.

In the past few years, there has been more interagency coordination, but there is much resistance to it by some resource managers who see the need to coordinate as confounding the process rather than making it more effective and efficient. It is therefore not at all surprising that so few marine protected areas have been designated compared with land-based conservation and preservation efforts (Lindholm and Barr, in re-

view).

### **Toward a New Paradigm**

A system for effective management of marine resources and preservation of marine wilderness areas calls for a public waters perspective equivalent to public lands stewardship of terrestrial protected areas. If we envision such a system, the first level of management would be regional authorities focusing on individual activities or resources, something with a similar level of authority to that of the BLM. One example of these regional management programs is the National Marine Fisheries Service’s implementation of the Sustainable Fisheries Act (SFA; officially titled the Magnuson-Stevens Fisheries Conservation and Management Act, P.L. 104-297). This law focuses on managing the commercial and recreational exploitation of particular species of fish and shellfish. As a part of the implementation of SFA, seasonal and area closures may be established that target a single species or species assemblage. Such closures have been shown to influence non-target species and taxa (Collie et al. 1997). However, only recently has habitat protection become a part of a nationwide management effort under SFA through the identification and management of essential fish habitat. The SFA has a limited context, largely focusing on the relationship of essential fish habitat to sustainable exploitation of the target species or species complex. Even in area-based manage-



ment under SFA, the law's ability to address other uses not associated with fishing may be quite limited. For example, while the use of mobile fishing gear may be prohibited in such fragile habitats as coral reefs, the authority to prohibit other damaging activities (e.g., anchoring of vessels not engaged in regulated fishing activity) is missing from the SFA. While there have been attempts to broaden the scope of management under SFA to embrace ecosystem concepts, such a change in its single-species approach is not likely to happen quickly.

Another law which has resulted in limited area-based management of marine waters is the Endangered Species Act (ESA; 16 USC 1531). Under this law, certain areas can be set aside as critical habitats for listed species. Only a small number of critical habitats have been designated for marine species, and only a very few of these are in offshore marine areas. One example is the critical habitat designations in the Great South Channel (located between Georges Bank and Cape Cod, off the coast of New England) and Cape Cod Bay for northern right whales. Like the SFA, whatever management that does occur in these areas is limited to this single (in this case, listed) species and its habitat. The authority to manage human activities in these right whale critical habitats is potentially broad, but the designations in this example brought no new restrictions or protections (Barr 1997).

The SFA and ESA, as well as

other federal laws such as the Clean Water Act (33 USC 1251), the Oil Pollution Act of 1990 (33 USC 2701), the Migratory Bird Treaty Act (16 USC 703), and a host of others, provide the basis for ocean management akin to the role BLM plays in the public lands matrix. These laws were established to manage, conserve, and preserve marine areas and resources from specific human activities that occur in public waters. Like the authority of the BLM, the mission of these laws is to ensure that public waters are used appropriately. Extractive uses are managed so that the public interest is served. While more communication and coordination would be helpful—and considerable attention is being paid to the implementation of integrated coastal management both in the USA and around the globe—these programs provide the basic resource management for the EEZ.

The next level of public waters stewardship, roughly comparable with the National Forest System, is the National Marine Sanctuary Program, which is under the authority of the National Oceanic and Atmospheric Administration (NOAA). The National Marine Sanctuary Act (16 USC 1431) provides the authority to identify "areas of special national significance" and establishes "comprehensive and coordinated conservation and management" for these discrete areas of the marine environment in all U.S. waters out to the 200-mile EEZ limit (including state waters). The mandate of the program

is to “facilitate to the extent compatible with the primary objective of resource protection, all public and private uses of the resources of these areas” not otherwise prohibited by other authorities. These areas are clearly focused on multiple-use management, permitting for-profit extractive uses, such as commercial fishing, in many of the sites (Barr 1995), and providing “comprehensive and coordinated conservation and management” in large part through the authorities of other agencies by helping them make decisions that will preserve the resources and those qualities that make them “nationally significant.”

In the past few years, the National Marine Sanctuary Program has begun to move toward seeking greater preservation of marine biodiversity in critical habitat areas within and adjacent to the sanctuaries. It has been particularly successful with initiatives in the Florida Keys National Marine Sanctuary, such as the designation of the Western Sambo Ecological Reserve and 18 sanctuary preservation areas (U.S. Department of Commerce 1996). The National Marine Sanctuary Program is also involved in a multi-agency effort to look at the establishment of marine reserves at the Channel Islands National Marine Sanctuary, and another large ecological reserve in the Dry Tortugas within the Florida Keys National Marine Sanctuary.

As national marine sanctuaries are principally focused on multiple-use management, efforts to establish a

higher level of protection and preservation are generally hard-won. They have required considerable time and effort, through consensus-based multi-stakeholder planning processes, to gain the support of commercial and recreational users of the areas to be preserved. Only a small fraction of the area of the U.S. EEZ that has been designated as national marine sanctuaries can be characterized as fully protected as marine reserves (Agardy 1999; Lindholm and Barr, in review). Agardy (1999) concludes that the total area protected by national marine sanctuary designation is “too small to promote conservation of marine ecosystems” because “sanctuaries cater to commercial and recreational needs and have no teeth whatsoever for providing the necessary controls on damage.” There has also been some general concern raised recently (MPA News 1999; Wuerthner 1999) that such multi-stakeholder processes may, through too much compromise and by vesting considerable power in local user groups to influence the outcomes of the process, result in inadequate protection for critical resources and habitats. While multiple-use management of marine areas that allow commercial and recreational extractive use may be an effective tool to protect and conserve resources in areas that are ecologically robust and resilient, areas that are more fragile and subject to damage from individual or collective human uses may require authorities that more directly embrace preservation.

There are 51 units of the National Park System that manage marine resources within their boundaries (Ficker 1999; Davis 1999). Under our proposed system, the NPS would fill a similar role in the ocean as it does on land. Some examples of national parks, monuments, and preserves that include large areas of the marine environment are: Glacier Bay National Park and Preserve (2,434 sq km), Biscayne National Park (665 sq km), Everglades National Park (2,072 sq km), and Channel Islands National Park (roughly 500 sq km). NPS has also focused special attention on preserving ocean areas that include coral reefs. In the National Park System there are nine coral reef areas, totaling 994 sq km, located in that Atlantic-Caribbean and Pacific regions. While NPS manages no areas that are entirely ocean, its authority to manage and designate ocean areas already seems to be in place—perhaps only some explicit references to protecting marine wildlife need to be appended to the NPS Organic Act (Ficker 1999). The Canadians have a similar program, designating what are called “marine conservation areas,” under the authority of Parks Canada.

Finally, there is the issue of designating and protecting marine wilderness—perhaps the most difficult, but most critical, task at hand. Davis (1998; 1999) has made a strong and eloquent case for protecting marine wilderness. The Clinton Administration also has advocated for marine wilderness designations in its

Ocean Initiative (U.S. Department of Commerce 1999). The issue, therefore, is not whether this is a good idea, but how to get the job done. A possible answer is to formally extend the NWPS into the ocean, as suggested by Brailovskya (1998). This would require some changes to the Wilderness Act to reference NOAA (as stewards of the National Marine Sanctuary Program and managers of fisheries under the SFA and ESA) and to add explicit references to preservation of marine wilderness. A first step has already been taken in Alaska, with the designation in Glacier Bay National Park and Preserve of 215 sq km of marine wilderness under the authority of the NWPS. While these pioneering initiatives in Glacier Bay have been extremely controversial, NPS has been able to use its exceptionally strong public constituency to fend off opposition.

While the most recent Congresses seem to be disinclined to designate much wilderness under the NWPS (only one site since 1995), and some critics have expressed concern about the existing implementation on land, designations under NWPS might benefit broadly from adding the current public constituency for marine preservation to the chorus already advocating for wilderness on land. While the public has been slow to rally to support of MPAs, education and outreach programs related to marine environmental issues (such as those of the Marine Conservation Biology Institute, Center for Marine Conservation, and SeaWeb, for ex-

ample) are working hard to improve this.

There is yet another benefit to using NWPS authority to protect marine wilderness. Because wilderness can be designated using any of the existing authorities, there is little cause for anything other than friendly competition for resources and visibility among marine protected area programs. Like the land-based efforts of NPS, USFS, and USFWS, each marine protected area authority will implement the NWPS in a manner consistent with its mission, vision, and program strengths. For the National Marine Sanctuary Program, adding the NWPS mandate might provide a more appropriate authority to protect and preserve wilderness areas within sanctuary boundaries. For NPS, it would provide park managers with the opportunity to wade into the water deeper than their knees.

### Conclusion

Through a more effective and creative use of some existing tools, and minor modification of others, the toolbox available to protect—and especially to preserve—the USA's marine resources would be expanded significantly under the scenario proposed. No longer would everything look like a nail simply because the only tool available was a hammer.

There is no doubt that land and water are different. Some of the challenges faced by public lands managers would be wholly unfamiliar to those who manage marine protected areas. However, there are clearly more similarities than differences, and the opportunity to share experience and expertise could be the tide that lifts all boats. It can help expand what has been called "America's best idea" from the public lands into our public waters.

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