THE GEORGE WRIGHT

FORUM

Volume 19 ❖2002❖ Number 2

THE JOURNAL OF THE GEORGE WRIGHT SOCIETY

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

The George Wright Society

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The George Wright Society is a member of
US/ICOMOS (International Council on Monuments and Sites—U.S. Committee),
IUCN—The World Conservation Union, and
The Natural Resources Council of America

ISSN 0732-4715

Editorial guidelines may be found on the inside back cover.
Text paper is made of 50% recycled fibers.
Printed by Book Concern Printers, Hancock, Michigan

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Volume 19 ❖ **2002** ❖ **Number 2**

On the Cover: Re-enactors depicting frontier life at 18th annual fair, Fort Frederick State Park, Maryland. Part of the frontier defenses in the French and Indian War, and now restored to its 1758 appearance, Fort Frederick is an example of the value of historic resources in public parks. Maryland State Forest and Park Service photo, courtesy Bob Beckett.

Society News, Notes & Mail

GWS, NPS Cultural Resources to Meet Jointly in 2003

The next George Wright Society biennial conference will be held in conjunction with CR2003, the National Park Service's servicewide cultural resources conference. The GWS conference is one of the leading interdisciplinary professional meetings on research and resource management in parks and other protected areas; the 2003 conference will be the 12th in a series dating back to 1976. CR2003 is NPS's flagship cultural resources meeting, and is designed not only for agency employees but for a wide array of preservation partners in the public and private sectors. The GWS arranged logistics for the first edition of the CR conference, which was held in Santa Fe, New Mexico, in December 2000.

By holding the conferences jointly, the GWS and NPS hope to encourage cross-disciplinary interaction among attendees while covering critical issues across the whole spectrum of cultural and natural resources. The theme of the joint conference, "Protecting Our Diverse Heritage: The Role of Parks, Protected Areas, and Cultural Sites," emphasizes that heritage (both natural and cultural) is varied yet shared, and that parks, protected areas, and cultural sites are critical to its protection.

The joint conference will be April 14-18, 2003, at the Town and Country Resort and Conference Center in San Diego, California. Abstract submissions and registrations will be centralized through the GWS. A Call for Papers (CFP) will be issued August 1, 2002, and the joint conference Web site will be launched then as well. The deadline for abstracts will be October 20, 2002; complete details to appear in the CFP. Attendees will be fully cross-registered and so can attend either GWS or CR2003 sessions as they wish.

If you'd like to be notified when the CFP is issued, send an e-mail to the GWS office at conferences@georgewright.org.

Back Issues of The George Wright Forum on the Web

Last year the GWS Board of Directors decided to make all back issues of the Forum available for free downloading from the GWS Web site. Over the past several months, the GWS's Bob Linn has been working away at scanning in the early issues. That task is now complete, and by the time you read this we expect to have most, if not all, the back issues up on the site in PDF format. Check out:

http://www.georgewright.org/pubslist.html

Note that the versions of the PDF files posted on the Web will be of screen-resolution quality and are intended primarily for on-line viewing; if downloaded and printed, the results may not be satisfactory. The original scans are high-res (600 dpi), and we plan to offer those versions for sale on CD at a modest price. It will be a great opportunity to get more than 20 years of insightful writing about parks in a nice, neat package. Check the URL above for details.

Correction

In the last issue's Society News, Notes & Mail, the Web site and e-mail addresses for "Making Ecosystem-Based Management Work: Connecting Managers and Researchers," the Fifth International Conference on Science and the Management of Protected Areas (SAMPA V), were given incorrectly. The Web site is http://www.sampaa.org and abstracts should go to abstracts@sampaa.org. The deadline for abstracts is December 31, 2002.

Maurice H. Schwartz

The Many Values of Public Parks

Like most of us, I took the national and state parks and forests for granted—until the shock struck. That they were "public" simply had not really entered my consciousness. High-level talk about privatizing the national parks in the early 1980s, however, sent an imperative signal. Though early, the time had come to recognize the long-term threat of the parks' being converted into yet another money-making machine. This issue of THE GEORGE WRIGHT FORUM is intended to remind us, and to extend our understanding, of the foundations of America's remarkable system of national, state, county, and municipal public parks.

Normally, I like to have my say. However, the authors of the papers written for this issue of the FORUM responded so powerfully to the challenge "Once Again; Why Public Parks?" that I have decided to use two sets of their words to introduce my editor's summary.

In "Recreational Values of Public Parks," Bob Manning and Tom More write: "The spectrum of values [of parks] reflects the various purposes or functions that parks can serve within our society. A further qualification must be applied, however: What does it mean for something to be a 'public' park? There are, after all, private parks and reserves that can provide many of the same values. What differentiates public parks and makes them necessary? In a society that prides itself on market-based solutions to problems, we need to be clear about which of these values are publicly important and why." They continue:

> John Dewey argued that the public interest arises from the consequences of actions. When the consequences of an action or transaction are confined to the individual(s) directly engaged in it, the action/transaction is essentially private. So, if two people have a discussion or make an exchange, their action is private if nobody else is affected. However, most transactions have consequences that extend beyond the individual participants to affect others, often in non-obvious ways. For example, we have a better breakfast because of the principally private transactions of farmers, grocers, and butchers all acting in their own interests than we would if we were served in a philanthropic spirit. Such transactions are social because they affect others beyond the immediate participants. But Dewey is careful not to conflate the social with the public: 'Many private acts are social, their consequences contribute to the welfare of the community or affect its status and prospects.' Rather, the dividing line between public and private comes when the indirect consequences of actions are recognized as being so important as to require systematic regulation to either enhance positive consequences or control negative ones. Thus, the public sector is justified in acting when the market fails to produce sufficient quantities of something positive or when the negative effects of market transactions must be mitigated. The public provision of parks is clearly an instance of the former.
>
> So the reason that the public sector inter-

venes is because private markets sometimes fail to produce enough of something that we consider valuable. We have public schools, public libraries, and public health clinics because we believe that all children should receive at least some education, that it is desirable to encourage the distribution of books and other educational material, and that low-income people should have access to at least a minimal level of healthcare. Almost certainly these goals would not be accomplished if we relied solely on private markets. In the past, public parks and recreation have been cast in the same mold. For example, we have public playgrounds because the mothers of the playground movement wanted safe, stimulating, educational spaces that would keep children off the streets and they recognized that public action was required to achieve these goals. Or we established public campgrounds because we believed it was desirable to encourage citizens to explore America and its natural and cultural history.

This view of parks as public goods has sometimes come under attack by those who challenge the idea that recreation is socially necessary and who argue that the private sector could do a better, more efficient job of fulfilling public recreation demand if it did not face public-sector 'competition.' This argument is bolstered by the many changes that have occurred since the great eras of park construction in the United States in the late 19th and early 20th centuries. For example, cities now have many private play spaces, reducing the need for public playgrounds, and the private campground industry is now a very effective supplier of camping experiences. It becomes imperative, then, that we ask what today's public parks do that is different from what the private sector does. In other words, why, and for whom, do markets fail so that the public sector needs to step in to provide systematic enhancement?

Perhaps the most obvious example of market failure is with unique resources—there is only one Yellowstone, only one Liberty Bell. If we concede that such resources are central to our national heritage such that it is desirable for all Americans to see them, then it would be inappropriate to have them in the private sector. If they were operated privately (or quasi-privately according to market principles), their rarity would drive up the price, excluding low-income people—as may be happening with the current fee demonstration program in the national parks. In standard economics, when the supply of something is scarce and the demand is high, the market will signal producers to expand production, and demand and supply would eventually reach equilibrium. But Yellowstone and the Liberty Bell are not widgets—their supply is fixed at one, and it is impossible to expand production in any meaningful sense. Consequently we ask the public sector to oversee their allocation, not to allocate them efficiently to the highest bidders (those most willing to pay), but fairly, so that everyone has an opportunity to visit. Private markets are efficient, but they may not treat people equally.

The second set of words is from the closing paragraph of Tom Power's "The Economic Foundations of Public Parks":

From the very beginning of Western European urban settlement, open spaces to which all citizens had a right of access were central to urban political and social life. With industrialization and the growth of very densely settled urban areas, public health considerations led to an expansion of that urban open space ideal: Citizens needed access to some bit of the natural world or our urban areas would become increasingly unlivable. Public parks could provide that. Public parks helped maintain crucial connections between citizens and the natural world and among fellow citizens by providing a shared

common area. Our state and national parks simply extended those concepts as we became an increasingly mobile population. Community and citizenship centers on the sharing of a broad range of values and commitments. Public parks have played an important role in that civic sharing. That role has not diminished in this 21st century. The 'new' urbanism that seeks to revitalize our cities has come full circle to see the importance of shared, open, common spaces in making our cities attractive, livable places where economic vitality can blossom.

Surely one of the distinguishing values of modern democratic societies is their public parks. The roots of those parks extend back to the earliest of ancient civilizations. In our opening essay, "Origins of Fully Funded Public Parks," John Henneberger tells us that "parks were part of the ambience and public activity" of the ancient cities in which civilizations were born. Henneberger, who was with the National Park Service (NPS) for thirty-three years as a ranger, superintendent, planner, and manager in a number of parks and central offices, is currently writing a history of parks from Paleolithic times to the present. He points out that the early parks were not dedicated to "the specific purpose of affording an amenity site for leisure and recreational activity for use by all the people of the community." That purpose emerged only very recently. The early parks mainly served the royal and religious purposes of ruling elites.

With the passage of time, the private parks increasingly admitted more and more of the general population, initially only for festive occasions. We can think of them as private parks open to the public. The first fully funded public park dedicated at the outset as a commons financially supported by taxes was Birkenhead Park on the outskirts of Liverpool, England, upon which work began in 1841. "Public parks in early nineteenth-century England made the transition from those created under royal and private initiative to those that were fully publicly funded," Henneberger notes. "The transition occurred within the context of a public park movement that sought to meet recreational needs and deal with the social problems of poverty, disease, and wretched living conditions of the lower classes caught up in the excesses of the Industrial Age." At Birkenhead, the establishment of a fully funded public park was socially and physically based upon opposite directions. Socially, it was a top-down process, from royalty to commoner. Physically, it was a bottom-up process of transforming an "unattractive, swampy, low-lying tract" to the exciting landscape of the park built on its foundation.

The early royal and private parks of antiquity served primarily for recreation, including sport hunting, which is no longer an acceptable form of recreation in many public parks. New forms of recreation became popular from time to time, and most were added to the growing repertoire of recreation in parks. Given the common origins and mutually supporting continuity and growth of parks and recreation, we have placed Manning and More's paper, "Recreational Values Of Public Parks," immediately following Henneberger's "Origins."

Bob Manning, a professor of recreation management at the University of Vermont, and Tom More, a U.S. Forest Service research scientist, report that their survey of visitors to Vermont state parks reveals that visitors rate recreation as the most important value of parks.

Beyond their analysis of the connections between parks and recreation, Manning and More set forth a number of arguments that support the view that much of the recreational value of parks can be realized only when they are owned and maintained by common action through government. They write: "In sum, parks are publicly important because they provide recreation (and other) services that the market either cannot create or cannot distribute equitably." Nowhere do they imply, however, that any and all forms of recreation are acceptable in public parks or that there are no limits to recreation. Indeed, they close with the following candid appraisal of the downside potential that one way or another is an inevitable partner of all human affairs:

> The primacy of recreation in parks has led to several paradoxes that challenge contemporary park management. For example, if parks provide increasingly important recreational values to society, how can we ensure these values accrue equitably to all members of society? Minority populations are historically underrepresented in the national parks, and this issue will become increasingly important as minority populations grow substantially in the coming decades, and issues of social and environmental justice demand greater attention in public policy. Ironically, the popularity of parks may lead to 'capacity' problems, at least in some places at some times. For example, the U.S. National Park System now accommodates nearly 300 million visits annually. While the popularity of parks is a testament to their success and cause for celebration, it may lead to unacceptable impacts to parks and to the quality of recreation experiences. How much and what kinds of recreation can ultimately be accommodated in public parks? A related issue concerns potential conflicts among the multiple values of public parks. When recreation affects significant natural, cultural, historical, scientific, educational, and other values of public parks as described in this special issue of THE GEORGE WRIGHT FORUM, informed management must balance all these increasingly important values.

Given that, "as a social science, economics focuses on improving the ways we use scarce resources to satisfy human needs and desires," and given further that public parks serve a significant array of those needs and desires, the linkage between public as well as private parks and economics is very clear. In his article, Tom Power, professor of economics and chair of the economics department at the University of Montana, examines both the direct and the indirect ways that the range of public parks serve a wide variety of human purposes of economic significance.

The economic role of public parks includes the variety of ways they "improve the 'livability' of neighborhoods, cities, and regions. They do this by providing a flow of valuable environmental services: open space, reduced congestion, contact with nature and wildlife, recreational opportunities, scenic beauty, improved air and water quality, quiet, a slowed pace of human activity, a relaxed place to meet and interact with

fellow citizens, and so on." This flow of services constitutes economic activity. "The point is that local environmental quality—natural, social, and cultural—matters to people, and, because of that, has significant economic importance. It is the contribution of public parks to those site-specific local amenities that is the basis of their economic importance."

A major, very positive economic influence of the national parks is strikingly summarized as follows:

> For the longer period of analysis (1969-1998), almost all the areas surrounding the large national parks showed above-average economic vitality. Ninety-one percent showed above-average population and job growth; 86% saw aggregate real income rise at above-average rates. A third had above-average growth in average real income. Averaged across all 21 large national park areas, population growth was almost four times faster than the national average. Job growth was almost three times faster. Aggregate real income grew twice as fast as the national average.

Beyond their economic utility, parks are important symbols of social equity. "People of all ages and various walks of life ... strolling, chatting, eating, playing games, boating, and generally enjoying themselves" says it all for most public parks of the world. Sure, our great national parks and others like them, such as Africa's game parks, conjure up a very different vision. Parks in general, however, are wonderfully pictured in Heath Schenker's article, "Why Public Parks: A Matter of Equity?" She is associate professor of landscape architecture at the University of California–Davis, currently on sabbatical in Mexico, working on a book about nineteenth-century public parks.

Schenker reminds us that "it is important to remember that public parks are a potent symbol of certain principles that should never really be taken at face value. For one thing, they symbolize the principle of equity. The notion of equity has been intrinsic to public parks since they first began to proliferate around the world in the nineteenth century." As a milestone example, Schenker points out that equity — fairness — was critically important to Frederick Law Olmsted in his pioneering designs of American parks. As she also points out, even tyrants have established public parks open to all. Reading her article has led me to a new conscious realization that there are no places more equitable than public parks.

A second meaning of equity has to do with financial considerations, namely, "the money value of a property or of an interest in a property in excess of claims or liens against it." Modern parks, both private and public, early on had close financial connections. "The idea of public parks took hold around the world not only because they served certain political agendas and represented certain ideals of social justice, but also, in large part, because of real estate speculators who began to view them as a marketable amenity." Successful middle-class businessmen "advocated public parks because they believed that they would improve the image of a city, and therefore make it more attractive to new business investors. What kind of businessman would want to bring his fam-

ily to live in a city with no public park?!"

The case for the great natural public parks is clearly laid out in the history of wilderness, wildlife, and ecological protection. One can imagine only very rare instances in which a private refuge was set aside for wilderness, wildlife, and ecological protection. If there is any preservation need as acute as "protecting scenic wonders and wilderness landscapes of unique beauty against tawdry exploitation and industrial incursion," the root of the national parks, it is the need to protect wilderness, wildlife, and ecological values.

True, "wildlife" was specified in the National Park Service Organic Act. It was not until 1930, however, as Jim Pritchard informs us in "The Meaning of Nature: Wilderness, Wildlife, and Ecological Values in the National Parks," that "ecological and wildlife values became firmly intertwined in the national parks." As a matter of very special interest to most readers of this journal, that firm intertwining drew heavily on the pioneering biological work of George Melendez Wright, for whom the Society is named. The newly established wildlife division of NPS, led by Wright, "instituted the *Fauna* series of publications on national park wildlife, recommended extensive biological research in the national parks, and proposed guidelines for wildlife management that departed from single-species management to emphasize an ecosystem-oriented approach and the restoration of wildlife to natural conditions."

It was only after passage of the Wilderness Act of 1964 that NPS overcame its historical reluctance to feature wilderness and to "embrace the wilderness preservation movement." NPS leadership viewed Yellowstone, Glacier, and Grand Canyon "as entire units, possess[ing] the essential qualities of wilderness. Declaring any particular part of the park as wilderness was simply redundant, and so the NPS advanced conservative proposals for park wilderness areas." As the years went by wilderness, wildlife, and ecological values gradually rose in importance in the management of the parks. Like so many significant developments, this was necessarily a step-by-step process. Pritchard, an environmental historian and teacher in the departments of landscape architecture and of animal ecology at Iowa State University, vividly details the events and the people who made that development happen. It required "successive understandings of nature" to redefine "the meanings of wilderness, wildlife, and ecological relationships."

Maryland's state parks evolved from state forest reserves, and were initially devoted to nature preservation and shortly thereafter to public recreation. As Ross Kimmel, supervisor of cultural resource management for the Maryland State Forest and Park Service, notes: "It wasn't long, however, before sites of historic significance were added to a growing universe of public parks." This process of nature conservation first, followed by recreation and then historic preservation, can be seen in the development of Maryland's state forests and parks as described in Kimmel's article "The

Value of Historic and Cultural Resources in Public Parks."

Although in Maryland many of the acquisitions of historically or culturally significant resources were made explicitly to acquire the resources, many such resources in "nature" parks were celebrated upon their discovery later on. Fort Frederick, a large stone relic of the French and Indian War (1756-1763), pictured on our cover, is an example of the first kind. A second, very different example is Point Lookout State Park, the site of the largest prison camp of the Civil War. Acquired for its historic significance, it has become a major resource for a wide variety of water-based recreation.

Kimmel also describes a paradoxical management situation in which an area "that is not natural at all" is being managed as if to keep it in a "pristine 'natural' state":

> Soldier's Delight Natural Environment Area is a shale barren incapable of sustaining the typical deciduous forests of most of the rest of [Maryland]. Left to nature's design, Soldier's Delight would become a forest of scrub pine and swamp oak, the soil is so poor. However, the state, with volunteer help, routinely burns off sprouting trees in order to maintain the area as prairie grassland hosting flora and fauna that are rare in the state. And in so doing, we today continue a practice started in prehistoric times by Native Americans, who burned the poor forest cover in order to drive game and provide clear fields of fire for hunting. Is Soldier's Delight truly a "natural environment area?" One could argue that it is in fact a *cultural* environment area, because human beings have for centuries artificially maintained it as grassland....

He concludes: "A wise society husbands its historic and cultural resources, saves and protects them, and lets the people, whose heritage those resources constitute, experience and learn from the resources. Public parks are among the largest repositories of historical and cultural resources. It is therefore morally and profoundly incumbent upon public parks to protect, enhance, and interpret those resources for the benefit of humanity."

Science and public parks present a remarkable mutuality. As David Graber, the senior science advisor for Sequoia and Kings Canyon National Parks, sets forth in his article "Scientific Values of Public Parks," the parks are important objects of a great variety of scientific research purely for the purpose of expanding our understanding of the universe. On the other hand, the results of such knowledge-seeking research increasingly contribute to the day-to-day and long-term management of the parks. We could call such a flow of information and analysis a by-product of the research. Scientific research conducted explicitly on behalf of park management in the first place, in order to enrich the surety of a wide range of management decision-making, is becoming more frequent.

Of course, very good reasons account for the scientific interest in the parks. Parks contain "natural or historic objects of significant interest and value to society" that are attractive objects of research to the scientist. Secondly, as Graber points out, "parks are relatively unperturbed by confounding variables," making for cleaner targets of research. In the third place, many parks provide "invaluable

reference points for comparison with the ever more extensive altered landscapes that have been converted to human utility." This is of particular value to long-term studies.

It is in the relatively new arena of long-term ecological research and monitoring that parks and scientific research really come together, according to Graber. "Traditional research, in national parks and elsewhere, was designed to fit well within a period of a few years—the typical amount of time allotted to a graduate student's research and (not coincidentally) the usual duration of a funding grant. The accelerating urgency of understanding the change taking place all over our planet, and an increasing need to place that change in the context of ecological time scales (decades to millennia) and evolutionary time scales (millennia to millions of years) has moved long-term research and monitoring to the forefront of conservation biology as well as to that of parks' perceived needs for scientific information.

Alfred Runte, author of the modern classic *National Parks: The American Experience,* opens his article "Why National Parks?" with this observation:

> Detailing why there are national parks in THE GEORGE WRIGHT FORUM would seem like rehashing what is obvious for those already convinced. Who better than park professionals know the evolution of the national parks, from cultural pride to biological sanctuary to historic preservation and urban redemption? More, who believes in these mandates without question? Who better understands—and again accepts—why the size and diversity of the system requires the federal government, including the power of the federal purse to buy out local frivolities and special interests?

He goes on to remind us: "It is the common knowledge of 130 years. At their largest, America's national parks maintain the hope of preserving natural systems; as historical parks, they remain the nation's shrines. Parks of the people should be owned by the people, managed by the people, and remain a statement of pride to the world. The national parks are indeed a national mission, the country acting in Congress assembled."

Whereas the principal "attackers" of the past were motivated virtually exclusively by economic considerations, Runte identifies more recent detractors as including persons of the very same intellectual character as the great early advocates and leaders for the parks. He vigorously denies the charges that the parks fail in terms of satisfying diversity and multiculturalism concerns. He focuses so sharply on the intellectuals that he practically brushes the far right and its "Sagebrush Rebellion" off to the side. Altogether, he provides a powerful answer to the question, "once again, why public parks?"

James Dunmyer, assistant secretary of the Maryland Department of Natural Resources, identifies state parks as the backbone of the system of public lands in the United States ("State Parks: The Backbone"). He recognizes that state parks "have been created by all techniques imaginable, are managed in a variety of innovative ways" and provide a unique service to the public. Like a backbone, state parks provide a connection, in the system of public parks, between the local and federal parks. Recent events pro-

vide additional support for the value of these parks.

Having supervised Maryland's state public lands system during the 1990s, Dunmyer concludes that the period was "not kind to state parks." The responsibilities of state park systems expanded while budgets and staffing declined. Parks simply could not compete for scarce public funds against schools, hospitals, or prisons. As a result, the state parks became innovators in the park profession, developing creative volunteer programs and other new ideas in funding, revenue generation, and operating policies. As parks became more business-like, problems arose because state parks are not a business. He clearly relates the business dilemma for parks: "it is impossible to delegate the public portion of the system's responsibility." There rests a powerful argument for the existence of state parks as a distinct aspect of the public domain.

State park systems learned from the experience and now operate with numerous partners. This approach forms an important part of their future as state parks face significant changes in user trends, such as those seeking more active "flow-through" experiences on bicycles and kayaks. State parks must meet the challenge of these recreation trends and also develop a sense of stewardship ethic in each citizen. "What state parks need the most," says Dunmyer, "are advocates." The citizen–advocate can ensure that government follows the directive of the people. State parks—indeed all public parks—are an irreplaceable element of society. That, perhaps, is the fundamental answer to the question posed in this issue of the FORUM.

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John W. Henneberger

Origins of Fully Funded Public Parks

It is commonly held that Birkenhead Park on the outskirts of Liverpool, England, was the first fully funded public park. The Birkenhead Park project began in 1841 as a venture initiated by municipal authorities with participation by private developers, and differed from previous efforts to create parks for the English general public. Birkenhead embodied a vision of the future in which a large area of land within a town was to be set aside in perpetuity for the specific purpose of affording an amenity site for leisure and recreational activity for use by all the people of the community. Moreover, the people would tax themselves for that purpose.

There had been previous "public" parks in all of the cultures of the ancient and medieval worlds, where parks were part of the ambience and public activity of the city. The concept of the urban landscaped area emerged some 6,000 years ago in the first cities of Mesopotamia, ancient Egypt, China, and a few other parts of the world. Landscaped spaces were initially located within the inner religious and political sanctuaries that were reserved for royalty, the priesthood, and privileged citizenry, though most had some public aspects. The well-known "Park in the Center of City" of Mesopotamian Nippur of 1,500 BCE is a representative example of a religious landscaped area within the city's *temenos* that served as a site for ritual (Kramer 1963, 64). It was an irregularly shaped 21-acre area that was most likely connected to nearby temple complexes, and possibly served as the site for the New Year's Festival, or perhaps held plants and animals for offerings to the god of the city. Such spaces often took on aspects of a public park in the lives of the people when used at festival time. Festivals and public events are held today in any modern landscaped urban central park. An ancient Babylonian text (ca. 2000 BCE) indicates the public nature of such open spaces. People ate splendid food, drank beverages, rejoiced in the courtyards, and thronged for celebration; monkeys, elephants, water buffalo, and other exotic animals jostled each other in the public squares (Cooper 1983, 50). Cities in this period (4000-1000 BCE) were centers for managing rural districts, for craft making and trading, and for military, administrative, and cultural-ideological activities where religious and political events were important in holding the cohesiveness of society. Such public places were maintained by a religious and political leadership who ran the affairs of the city-state. Similar landscaped public places existed in ancient Egypt and China. The great Shang-lin parks connected to the ancient Chinese capitals provided a garden setting for palace, temple, and tomb, where the emperor and nobility undertook hunting, fasting was performed, and rituals were held. The "Park as Empire" played various roles in Chinese life.

Many governmental units were located within the park, such as the royal mint, the headquarters of the tax collector, and even a prison (Schafer 1968). The modern-day National Capital Parks in Washington, D.C., have many of the characteristics and uses of the ancient Chinese Supreme Imperial Parks, in that they provide landscaped backdrops for important buildings in United States governmental operations, including the Capitol, White House, and Treasury Department, among others.

Landscaped backdrops were prevalent in ancient Greek and Roman cities: around the agora, the temples of the gods and goddesses, the monumental public buildings, and the gymnasiums. Roman imperial rulers provided green open spaces for public use between theaters, baths, temples, government buildings, and residences. In the Augustan era, a major building program for Rome was concentrated around the centers of Campus Martius, the Forum Romanum, and the Palatine. Spaces around these political structures were landscaped and opened to the public (Van Sickle 1948, 397). Augustus used his friend Maecenas, an unassuming Etruscan of equestrian rank, to aid in his rebuilding of Rome. Maecenas bought a plot of ground just outside the city walls that was an old city dump and pauper burying ground. Here he laid out a splendid park for the general public. In this summery Mediterranean region, people were inclined to stroll such landscaped areas and enjoy each other's company. (In similar fashion, many centuries later, landscaped areas were decreed by the Colonial Assembly in Philadelphia for around the Pennsylvania Statehouse—later Independence Hall—for proper walks planted with suitable trees for shade.) The use of undesirable plots and remnants of city land for parks was to become common practice. At both Birkenhead and New York City's Central Park, undesirable, uneconomical lands were converted to parks.

In the ancient cities, emperors, victorious generals and the wealthy created and financed the construction and operation of parks for the public. The practice of the elite part of society providing landscaped open spaces for the public continued on through the medieval period into the European renaissance. Royalty often used their private parks for public purposes. In the sixteenth century, Queen Elizabeth I opened some of her royal parks in London so the public could watch the military reviews she held there. Some English royal parks remained private to the monarchs; others became ceremonial points for public receptions on important holidays in the same way that ancient Greek kings assembled the public at the Acropolis for ritual and celebration (Lasdun 1992, 42). By Queen Victoria's time (mid- to late nineteenth century), much of the royal park space had been opened to the public. Hyde Park, for instance, was opened to the public by Charles I about 1635. George IV in 1826 acted on a report on the state of London's royal parks by issuing instructions that "the whole range and extent of Parks should be thrown open for the gratification and enjoyment of the Public" (Lasdun 1992, 13). Public monies given by Parliament to the

Office of the King's Works maintained such parks. The public usage of a royal park was at first a rather limited, privileged activity, confined by dictate of royalty to a select class of socially acceptable people who held keys to the locked park gates. This privileged use was gradually eased. Many of these parks became full public parks about the time urban development reach their boundaries. Most have since become integral parts of the London scene.

The opening of royal parks for public use was one part of a growing idea of the park as public venue as England moved from monarchial control to a democracy. Walking became a national pastime in the Tudor period. The general public in the cities needed areas in which to stroll. Churchyards provided opportunities for leisure time in many of the provincial towns of England. Cemeteries were pleasure grounds for the diversion of gentry. The general public for years had the grounds of commons for outdoor activity. Gradually, however, the common was made unavailable to them under enclosure practices. With the rapid expansion of English cities after the Restoration, there began a movement toward parks as integral parts of cities for the public at large. Londoners began to see the delights of placing their residences adjacent to the inner-city royal parks: St. James's Park, Green Park, Hyde Park, and Kensington Garden. To have a residence overlooking one of these parks became the preferred way to live.

In the early 1830s, the prominent architect John Nash and the landscape architect Humphry Repton worked on the Regent's Park project with the Prince of Wales through the Department of Woods and Forests. They took a roughly circular-shaped property of about 1,000 acres that had been a royal forest in medieval times and a hunting preserve and Mary-lebone Park in the Tudor era and developed it into a residential park (Saunders 1969). Regent's Park thus went through virtually all the stages of English park development: first a medieval royal forest, then a royal hunting preserve, then a private park, and finally a public park open to all. Nash and Repton combined urban architecture with country landscape elements by setting terraces around a park that made up about half the total acreage of the development. They combined the orderliness of Georgian London with the openness and wildness of the countryside. Nash reversed the visual direction of the palace and manor park, where residences were surrounded by parkland. He framed the park with handsome terraces of classic design that housed people who then had magnificent views across the park. Nash and Repton wanted to create an in-city relationship with nature similar to that enjoyed by many people in the English countryside who had a Georgian mansion set in a park of modest proportions. Royalty and the wealthy, of course, had great countryside palaces and mansions surrounded by expansive parks. Merely well-to-do people sought to follow the essayist, poet, and politician Joseph Addison's advice in *The Spectator* (Essay no. 414, 1712) to make a neat mansion pleasantly situated in a park that would show a "pretty landskip of their

possessions."

Such rural landscape values were introduced into the English urban fabric during the cultural transition from late feudalism to a full capitalistic economy. The park and the public square were arenas for working out major class tensions in the struggles over public and private rights. With the public square and the park, the English were the first to develop effective ways of integrating elements of the natural landscape into the urban fabric. The public square was one model that was taken and augmented with greater amounts of nature so as to form a large public park. The residential square and the large public park, says Henry Lawrence, are cultural acts that carry with it some expression of the social values of class distinction, domestic isolation, and private open space that later forms the basis for suburban living (Lawrence 1993, 60). The park portion of Regent's Park was gradually opened to the public. Residential subscription maintained the park for a number of years until it became a fully funded public park. Like most of the early large urban parks, Regent's Park had a zoo, a band kiosk, meeting place structures, an open-air concert theatre, and playing fields. On a trip to England in 1839, the American painter George Catlin sold two grizzly bears he had brought from America to Regent's Park operators (Catlin 1852, 1:28-33). In time the park itself became a historical monument, as have many famous parks, to be placed on lists of historical properties worthy of preservation.

Public parks in early nineteenth-century England made the transition from those created under royal and private initiative to those that were fully publicly funded. The transition occurred within the context of a public park movement that sought to meet recreational needs and deal with the social problems of poverty, disease, and wretched living conditions of the lower classes caught up in the excesses of the Industrial Age. People were moving to English cities in uncontrollable numbers. Unplanned tenement housing quickly ate up open space. Efforts were made in the 1840s to convert some commons to public parks in those cities associated with manufacturing and in the towns that had factoring systems. J.C. Louden, writing in *Gardener's Magazine* in 1829, campaigned for public parks as "Breathing Places" for towns and cities. Democratic political action toward this goal moved with the issuing of reports on the problems and the need for open space to solve the lack of working-class recreation. In 1841, Parliament voted the sum of £10,000 to promote the opening of parks, on the condition that political bodies wishing to benefit from this fund should match such loans with at least an equal amount of their own money. Applications were immediately made by numerous public entities. Other avenues to create public parks included exchanging Crown properties in one area to produce park sites where there were no royal parks. Wherever such a residential development as Regent's Park was proposed, it became government policy to require the local municipal body to purchase the residential strip to be let out as building plots. The income from the plots, and the increased value

of the property adjacent to the public park, would pay for the cost of the park. Within this general milieu, Birkenhead Park came about.

The city of Birkenhead in the early 1820s was one of series of dormitory towns that emerged in Great Britain as a suburb of a main city to serve the residential needs of the Industrial Revolution. A steam ferry service in 1820 provided commuting between Liverpool and Birkenhead. Prosperous Birkenhead residents commuting to Liverpool wanted a small version of what the wealthy possessed in the larger private park estates in the countryside and in the in-city residences of the kind connected to Regent's Park and to a similar park–residential development in Liverpool itself, Prince's Park. This desire was coupled with recognition by the Birkenhead municipal authorities of the need to control and establish municipal power over community development. In effect, they began to zone the community. A park became a prime focal point of that zoning as well as figuring in the economic development of the suburbs. Parks were also desired objects in a growing Reform movement. Robert Owen, the Welsh manufacturer turned reformer, proposed what was later termed the "garden city," where dwelling units were arranged around open landscaped spaces with community facilities connected to a central square. Owens was convinced that environment affected character. Improved surroundings, including parks and gardens, would have a salutary effect upon workers, and this in turn would benefit the industry of the nation (Cole 1925).

A Birkenhead Improvement Commission was set up under an Act of Parliament that gave them authority to implement the zoning they desired. In 1841 the idea for a Birkenhead Park was raised. Two years later, empowered by a Third Improvement Act, the Birkenhead Commissioners were allowed to purchase land for a park with a loan of £60,000 made to them by the central government. Birkenhead was the first town to apply to Parliament for permission to use public funds for the purpose of establishing a public park. The money was borrowed on behalf of the city ratepayers with the proviso that not less than 70 acres was to be set aside for the "free recreation of the town's inhabitants" within a 226-acre area along an estuary across from the city of Liverpool. The resulting Birkenhead Park became the world's first publicly fully funded park.

The section of land chosen for the park was an unattractive, swampy, low-lying tract at the foot of a sandy ridge that lay entirely within the town. The area of land was a mixture of fields, marsh, and commons that contained a small farmhouse, which was a known beer den where illegal gambling and dog fighting took place. One hundred and twenty-five acres of this site was designated for public use. The remaining acreage was sold for private residential development (Borough of Wirral Leisure Services and Tourism Department 2000, 6). The general relationship between the park and associated housing had its inspiration in John Nash's work at Regent's Park. At Birkenhead, detached villas were located on terraces surrounding the

park. The proceeds from the sale of the building plots were sufficient to recoup all the public costs incurred by the purchase of the land and the construction of the park. There was a mutually beneficial blending of an ornamental public park with private residential estates that seems to have been the outcome of a self-conscious linking of the commercially profitable with the socially useful. This combination of values that early Victorians strove to achieve proved influential for subsequent park projects in Great Britain and then in America with the creation of New York City's Central Park. Essential to the existence of the park were steady income streams for park development and maintenance costs. The park contributed significantly to the town's tax base. The park fostered rising property values. Commissioners planned the character of the housing and park as one entity. Residential styles were confined to early English, Elizabethan, and Tudor. Architectural controls were designed to promote messages of authority, dignity, and political power. The park also was to reflect these purposes in acting as an attractive backdrop for the spatial residences abutting it. However, the pursuit of the park was not entirely in the public interest. Several commissioners were speculative owners of the land to be purchased for the park and the potential residential lands surrounding it.

The well-known English landscape architect, Joseph Paxton, whose work on Liverpool's Prince's Park had brought him to the attention of the committee, was engaged in August 1843 to design and supervise the construction of the park. He thought it a credit and an honor to make something handsome and good out of the undesirable property. A completed plan was soon presented to the committee, which approved it. Preparatory work began under an individual who would become the park's first superintendent. Lakes were excavated and the major planting of trees was carried out in the planting seasons of autumn 1844 and spring 1845. The planting of grassy areas followed. A prime feature was the irregular shape of the park set within a built-up suburban setting of a grid of straight streets. A circulation system provided for carriage pleasure traffic around and through the park. Within the park there was a separate circulation system for pedestrians. There were four small lodges at the park's gates, quaintly named the Gothic, Italian, Castellated and Norman lodges. Bridges across sections of the lakes and over roads were Victorian in style. The park was completed in 1847. It had a park superintendent and a staff of keepers and maintenance personnel that were paid out of municipal funding. It was to be opened to the public without restrictions.

Birkenhead was conceived in a pastoral landscape tradition, which resembled grounds surrounding a country mansion, except there was no central residential structure. The first public parks were essentially transfers of the palace and countryside manor park landscapes without that central structure. The residences surrounded the park, rather than the park surrounding the residences. The vision sought by Paxton featured islands in lakes, winding paths, open glades, and

wooded areas designed for strolling and quiet reflection. While some of the open spaces were suitable for active games, Paxton's main emphasis for Birkenhead was on the passive enjoyment of pastoral landscaped scenery. In time, sport clubs imposed cricket, archery, quoits, and football ground conversions of many of the open spaces. Considerable modification of Paxton's design occurred over the years as the park went through what was to be a typical transformation of most urban parks from initial areas of pastoral quality to busy places for active sports and large-scale public events. There were times of deterioration of the landscaped areas, followed by restoration. Commemorative trees were planted. Memorials and sculptures were erected. Unemployment relief schemes were undertaken within the park in 1878-1879, 1893, and 1947. Two World Wars intruded on the park. Different buildings and structures were erected and then demolished. The Friends of Birkenhead Association was formed in 1970 to aid park administrators in controlling intrusions and raising monies to maintain the park. Corporate sponsors provided monies for restoration projects. The park was included in the late 1980s in a regional political body's "Leisure Strategy" to promote tourism. This pattern of creation, intrusion, deterioration, restoration, and then a re-focusing on the heritage and economic value to the community, was to be repeated in many urban parks around the world.

"There is more to be gained by a study of it [Birkenhead Park] than in any others," said Charles Smith, the Edinburgh garden architect, writing on English garden park design in 1852. Smith's commentary influenced many park designers' works (Smith 1852). Frederick Law Olmsted visited Birkenhead in 1850 and 1859. He noted the carriage roads, walks, and aquatic ponds. He recorded the mounds made natural with trees, shrubs, flowering plants, rural lodges, temple pavilion structures, bridges, bandstand, cricket and archery grounds, and the verdant valleys. He commented that "all this magnificent pleasure-ground is entirely, unreservedly and forever, the people's own" (Olmsted 1859, 62-64). He later was to incorporate many of the features he saw at Birkenhead into the design that he and Calvert Vaux prepared for New York City's Central Park. Olmsted credited the development of the American urban public park system to the inspiration he received from his Birkenhead visits.

According to the historian George Chadwick, the general design of British public parks has changed little since Paxton's day, "although elsewhere there are now examples of the acceptance of twentieth-century aesthetic standards in this field" (Chadwick 1961, 253). Olmsted was to set a somewhat different style in his parks in America: a wilder, more rugged style. He did borrow the Birkenhead procedure of placing the park within an urban residential setting that has strong commercial connotations. This commercial aspect also was applied to the early expansive national parks of the American West, where tourism played an important role in their creation. Starting with Regent's and

Birkenhead parks, the idea of a residential belt around or in association with an interior public park is still a valid proposition for most communities.

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Recreational Values of Public Parks

Introduction: Recreation, Parks and Society

While there may be a temptation to think of recreation as trivial, even frivolous, most of us know better. As paradoxical as it might seem, recreation is a serious matter. The importance of recreation manifests itself in a number of ways. Perhaps the most obvious to readers of *The George Wright Forum* is the philosophical and legal foundation of U.S. national parks as laid down in the National Park Service Organic Act of 1916. While national parks are clearly to be conserved, they are also to "provide for the enjoyment" of the people. This two-fold mission is at the heart of most public parks and related areas. Thus, recreation, in a variety of forms, is vital, even integral, to parks.

The etymology of the word "recreation" is also suggestive of the importance of its role in society. Rooted in the Latin "recreatio" and "recreare," "recreation" means, respectively, "to refresh" and "to restore" (Edginton et al. 2002). Given the increasing pace and stress of contemporary society, it seems likely that recreation will continue to grow in importance, and that parks will likewise escalate in importance for their role in providing public recreation.

The social importance of recreation is further reflected in the professional activity and literature that has grown up around it. There is a received history of the "recreation movement" in the U.S., a social movement designed to provide the benefits of recreation to all Americans. Students can now earn degrees in recreation, parks, and related fields at over 50 colleges and universities. There are public- and private-sector jobs and careers in recreation planning and management. And there are professional organizations devoted to recreation, such as the National Recreation and Park Association. A widely accepted definition in the professional literature states that recreation is "an activity that is engaged [in] during one's free time, is pleasurable, and which has socially redeeming qualities" (Kraus 1990). Thus, recreation is widely seen as having value at the level of both the individual and society.

This view has suggested that recreation might best be understood and appreciated not necessarily as the activities in which people engage, but as the reasons that motivate it and the benefits that it produces (Haas et al. 1980; Driver et al. 1987; Driver 1990; Driver 1996). For example, research suggests that people engage in recreation to satisfy a variety of motivations, such as appreciating nature, learning about culture and history, and enhancing family togetherness (Brown and

Haas 1980). Moreover, participation in recreation might produce a number of benefits to individuals (e.g., advances in physical and mental health, personal growth and development), society (e.g., strengthened family relationships, enhanced community pride, reduction of social deviance), the economy (e.g., increased productivity, reduced health costs), and the environment (e.g., reduced pollution, protection of endangered species) (Driver 1990; Driver 1996; Stein and Lee 1995; Allen 1996).

The Primacy of Recreation in Parks

This special issue of *The George Wright Forum* outlines a diverse range of values that public parks might serve. How important is recreation among these potential values? This question has received recent research attention in a variety of park and public-land contexts (Manning and Valliere 1996; Manning et al. 1996; Negra and Manning 1997; Manning et al. 1999; Minteer and Manning 2000; Morrissey and Manning 2000). As might be expected, human values have been the subject of considerable attention across a variety of academic disciplines (Rokeach 1973; Andrews and Waits 1980; Brown 1984; Bengston 1994; Kempton et al. 1995). While several theoretical dimensions of value have been identified, the focus of this study is on preference-based held values. "Held values" have been defined as "an enduring conception of the preferable which influences choice and action" (Brown 1984, 232). The preference-based component of this concept signifies that value is assigned through human preference as opposed to social obligation (e.g., societal norms that suggest what people should value) or physical/biological function (e.g., the ecological dependence of tree growth on soil nutrients). Recent commentary suggests that preference-based held values are the appropriate focus of park, forest, and the public-land values research (Bengston 1994; Hetherington et al. 1994). As used in this study, values are specific notions that define "an enduring concept of the good" as applied to parks.

Several classifications of park and related environmental values have been proposed in the literature (Rolston 1988; Rolston and Coufal 1991; Manning 1989; Kellert 1985). Based on this literature, 11 potential values of parks were identified as shown in Table 1. This set of potential park values was designed to be as comprehensive as possible based on review of the literature. (It is interesting to note the papers included in this special issue of *The George Wright Forum* address nearly all of these values.) These potential park values were incorporated into a study of the Vermont state parks. A representative sample of 478 visitors to 37 Vermont state parks was administered a mail-back questionnaire in the summer of 2001.

Two batteries of questions addressed potential park values. The first asked respondents to rate the importance of each potential value "as a reason for having state parks." A six-point response scale was used that ranged from 1 ("extremely important") to 6 ("not at all important").

Table 1. Values of state parks. Column key: 1 = "extremely," 2 = "very much," 3 = "moderately," 4 = "somewhat," 5 = "slightly," 6 = "not at all." In "Mean Score" column, letters indicate statistically significant differences.

	Importance						
Value	(1)	(2)	(3)	(4)	(5)	(6)	Mean Score
Recreation ("State parks are places to enjoy outdoor recreation activities")	64.4	27.9	5.7	1.1	.9	0	1.46[a]
Aesthetic ("State parks are places to enjoy the beauty of nature")	60.4	29.5	6.6	2.4	1.1	0	1.54[b]
Education ("State parks are places to learn about nature")	31.8	31.6	24.1	7.2	4.8	.4	2.23[c]
Moral/Ethical ("State parks are places to express our moral or ethical obligation to respect and protect other living things")	31.0	31.4	19.7	8.3	5.2	4.4	2.38[d]
Economic ("State parks are places that can enhance the economy through tourism")	23.2	36.9	23.9	10.8	3.5	1.7	2.40[e]
Ecological ("State parks are places to protect the environment in order to insure human survival")	33.6	25.5	18.5	11.3	6.1	5.0	2.46[e]
Therapeutic ("State parks are places to maintain or regain one's health and mental well-being")	24.0	28.2	26.4	11.6	7.1	2.7	2.58[e]
Historical/Cultural ("State parks are places that are important to the history of this area")	20.1	28.5	20.1	17.9	9.1	4.4	2.81[f]
Scientific ("State parks are places to conduct scientific studies on the natural environment")	16.0	18.7	29.3	19.6	9.6	6.9	3.09[g]
Intellectual ("State parks are places to go to think because civilization cannot interrupt")	17.8	19.6	22.2	17.0	16.5	6.8	3.15[g]
Spiritual ("State parks are places to get closer to God or spiritual matters")	9.9	14.6	15.8	20.0	20.3	19.4	3.84[h]

Findings are shown in Table 1. Two conclusions are evident from these data. First, nearly all potential park values appear to resonate with respondents; ten of the eleven potential values received an average rating of at least "moderately important," suggesting that the evolving diversity of park values included in this study (and addressed by other papers included in this special issue) is being increasingly recognized in society. Second, there is a hierarchy of values associated with state parks, and recreation is rated as significantly more important than other potential values. The second battery of questions asked visitors to allocate their willingness to pay to sup-

port the Vermont state park system among the potential park values. (Prior to this battery of questions, respondents had been asked to estimate their maximum willingness to contribute to a fund to support the state parks.) For this battery of questions, the list of potential park values was reduced to ten to simplify burden on respondents. Findings are shown in Table 2, and are similar to those in Table 1. However, using this question format, respondents discriminated among park values to a greater degree, and recreation emerged more strongly as the single most important value of the state parks.

Table 2. Allocation of willingness to pay for state parks among park values.

Values	Percentage of Willingness to Pay
Recreation	28.3
Aesthetic	13.9
Ecological	13.5
Therapeutic	8.1
Economic	7.3
Scientific/Educational	7.2
Historical/Cultural	7.2
Moral/Ethical	6.3
Spiritual	4.2
Intellectual	4.1

Recreation and *Public* Parks

The spectrum of values described above reflects the various purposes or functions that parks can serve within our society. A further qualification must be applied, however: What does it mean for something to be a "public" park? There are, after all, private parks and reserves that can provide many of the same values. What differentiates public parks and makes them necessary? In a society that prides itself on market-based solutions to problems, we need to be clear about which of these values are publicly important and why.

John Dewey (1954) argued that the public interest arises from the consequences of actions. When the consequences of an action or transaction are confined to the individual(s) directly engaged in it, the action/transaction is essentially private. So, if two people have a discussion or make an exchange, their action is private if nobody else is affected. However, most transactions have consequences that extend beyond the individual participants to affect others, often in non-obvious ways. For example, we have a better breakfast because of the principally private transactions of farmers, grocers, and butchers all acting in

their own interests than we would if we were served in a philanthropic spirit. Such transactions are social because they affect others beyond the immediate participants. But Dewey is careful not to conflate the social with the public: "Many private acts are social, their consequences contribute to the welfare of the community or affect its status and prospects" (Dewey 1954, 13). Rather, the dividing line between public and private comes when the indirect consequences of actions are recognized as being so important as to require systematic regulation to either enhance positive consequences or control negative ones. Thus, the public sector is justified in acting when the market fails to produce sufficient quantities of something positive or when the negative effects of market transactions must be mitigated. The public provision of parks is clearly an instance of the former.

So the reason that the public sector intervenes is because private markets sometimes fail to produce enough of something that we consider valuable. We have public schools, public libraries, and public health clinics because we believe that all children should receive at least some education, that it is desirable to encourage the distribution of books and other educational material, and that low-income people should have access to at least a minimal level of healthcare. Almost certainly these goals would not be accomplished if we relied solely on private markets. In the past, public parks and recreation have been cast in the same mold (More 2002). For example, we have public playgrounds because the mothers of the playground movement wanted safe, stimulating, educational spaces that would keep children off the streets and they recognized that public action was required to achieve these goals (Cranz 1982; Taylor 1999). Or we established public campgrounds because we believed it was desirable to encourage citizens to explore America and its natural and cultural history.

This view of parks as public goods has sometimes come under attack by those who challenge the idea that recreation is socially necessary and who argue that the private sector could do a better, more efficient job of fulfilling public recreation demand if it did not face public-sector "competition" (see, for example, Beckwith 2002). This argument is bolstered by the many changes that have occurred since the great eras of park construction in the United States in the late 19th and early 20th centuries. For example, cities now have many private play spaces, reducing the need for public playgrounds, and the private campground industry is now a very effective supplier of camping experiences. It becomes imperative, then, that we ask what today's public parks do that is different from what the private sector does. In other words, why, and for whom, do markets fail so that the public sector needs to step in to provide systematic enhancement?

Perhaps the most obvious example of market failure is with unique resources—there is only one Yellowstone, only one Liberty Bell. If we concede that such resources are central to our national heritage such that it is desirable for all Americans to see them, then it would be inappropri-

ate to have them in the private sector. If they were operated privately (or quasi-privately according to market principles), their rarity would drive up the price, excluding low-income people—as may be happening with the current fee demonstration program in the national parks (More and Stevens 2000). In standard economics, when the supply of something is scarce and the demand is high, the market will signal producers to expand production, and demand and supply would eventually reach equilibrium. But Yellowstone and the Liberty Bell are not widgets—their supply is fixed at one, and it is impossible to expand production in any meaningful sense. Consequently we ask the public sector to oversee their allocation, not to allocate them efficiently to the highest bidders (those most willing to pay), but fairly, so that everyone has an opportunity to visit. Private markets are efficient, but they may not treat people equally (Okun 1975).

Many parks are set up to protect unique resources, but the uniqueness can be problematic because there are so many ways to describe a place—as a landscape, a historic site, a potential location for a chemical plant, a vegetative or soil type, etc.—that virtually any place can be made to sound unique under some description or another (O'Neil 1993). Consequently, we must ask what it is that makes an individual park valuable in and of itself, which returns us to the values discussed above.

Recreation is undoubtedly the most widespread public value associated with parks, as indicated by the state park survey described above. For many national parks, and for some state parks, the scarcity argument can be cogently made and supported by referencing other values such as historic/cultural, aesthetic, spiritual, and the like. That is, parks such as Yosemite or the Grand Canyon offer recreational activities and experiences in settings that are absolutely unique. If these areas were privately owned and operated, their rarity would cause the price to rise so much that they would be unavailable to much of the general public. Public ownership also helps to ensure the long-term protection of these values by regulating commercial development that could threaten them.

Uniqueness or rarity is also a relative factor that can be locally important as well. For example, lakeshore is an economically valuable resource in many eastern states where lakes often are surrounded by privately owned property. The wealthy have access in many different ways; they may own shoreline property, belong to various clubs and marinas, etc. But as we descend the socioeconomic scale, access through private venues becomes increasingly limited, so public parks along lakes are warranted to preserve lake access for the rest of the public. Many urban parks also preserve green space that can be considered unique relative to the immediate surrounding environment.

In addition to preserving public access to unique aesthetic and historic/cultural resources, recreation also serves other ends that traditionally have been considered publicly important in Dewey's sense of requiring systematic enhancement. For

example, parks provide family-oriented experiences as well as opportunities to explore nature and learn about the outdoors. In the past, we have considered such activities to be socially desirable and worth encouraging through recreation in public parks.

A similar argument can be made for historical/cultural values, although they were not as highly rated as recreation in the Vermont survey. Colonial sites or Civil War battlefields, for example, are scarce resources. If we want to encourage people to visit these areas to reconnect with their heritage, then these areas properly belong in the public sector where visitation can be encouraged through subsidization. Of course, there are many private foundations and not-for-profit organizations that operate historic/cultural sites successfully. However, since the public funding for museums and other historic/cultural nongovernmental organizations is limited, these institutions have needed to rely increasingly on fees, which again means that low-income people may be excluded. In addition, some parks were initiated by the private sector, but were turned over to the public sector after it was found that they could not be operated at even a "break-even" level (Saugus Iron Works National Historic Site in Massachusetts is an example). For such parks, the choice is public-sector operation or non-existence.

Ecological values may occasionally be justified on the basis of scarcity. Many parks protect habitat for rare and endangered plants and animals. The survey results suggested that people placed moderate importance on this value, yet ranked it more highly when asked to apportion their willingness to pay. There may be widespread public recognition that this value can be important in specific locations, but that not every park may contain rare and endangered species.

There was also widespread recognition of the economic values associated with parks. Unique natural or historic parks provide an identifiable destination for tourists and are frequently used by the public to stimulate economic activity and financial investment in low-income areas.

The other values—educational, moral, intellectual, scientific, and therapeutic—were not as highly rated, or had mixed ratings between the value measures (though nearly all potential values were rated as at least "moderately" important). This does not necessarily mean that they are not publicly important, however; it may simply be that the population surveyed was not as familiar with them. Spiritual experiences, for instance, may not be commonly associated with parks. Similarly, the scientific values associated with parks may be particularly important to researchers, yet the general public may only be beginning to recognize this significance. Often these values—moral, intellectual, scientific, and therapeutic—involve processes that are not yet fully clear either to researchers or to managers, or to the public themselves. As research identifies the processes involved in each, we may come to a clearer understanding of the role of each, which may make their public importance more readily apparent.

In sum, parks are publicly important because they provide recreation

(and other) services that the market either cannot create or cannot distribute equitably. The different values represent combinations of functions that help us understand the unique role that public parks can play in contemporary society.

Conclusion

This paper suggests that recreation has taken on increasing importance to the well-being of both individuals and society. Moreover, parks are clearly identified with recreation, and, in fact, recreation may be their most important value as judged by those who visit them. Finally, a number of arguments suggest that much of the recreational value of parks can be realized only when they are owned and maintained by common action through government. History suggests that public use and appreciation (i.e., public recreation) were instrumental in the establishment and growth of parks systems, including the U.S. national parks (Runte 1997; Nash 2001). While an increasing number of values of parks are evolving, recreation remains an important, often dominant, public value, and should remain a vital part of the philosophical and management foundation of parks.

The primacy of recreation in parks has led to several paradoxes that challenge contemporary park management. For example, if parks provide increasingly important recreational values to society, how can we ensure these values accrue equitably to all members of society? Minority populations are historically underrepresented in the national parks, and this issue will become increasingly important as minority populations grow substantially in the coming decades, and issues of social and environmental justice demand greater attention in public policy (Floyd 1999; Floyd 2001). Ironically, the popularity of parks may lead to "capacity" problems, at least in some places at some times (Manning 2001; Haas 2001). For example, the U.S. National Park System now accommodates nearly 300 million visits annually. While the popularity of parks is a testament to their success and cause for celebration, it may lead to unacceptable impacts to parks and to the quality of recreation experiences. How much and what kinds of recreation can ultimately be accommodated in public parks? A related issue concerns potential conflicts among the multiple values of public parks (Sellars 1997). When recreation affects significant natural, cultural, historical, scientific, educational, and other values of public parks as described in this special issue of *The George Wright Forum*, informed management must balance all these increasingly important values.

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Thomas Michael Power

The Economic Foundations of Public Parks

The Human Purposes of Parks

From a historical point of view, America's public parks, including city, state, and national parks, were not primarily created for what we would now call "ecological" reasons. Human use and benefit were central from the beginning of park creation. For our national parks, for instance, human visitation and enjoyment ("pleasuring") were a central part of the legislative purpose (National Park Service Organic Act, 16 U.S. Code 1). Even a cursory review of the character of the national parks created during the first 85 years of existence of the National Park Service indicates not an attempt to protect the biologically most fragile and threatened ecosystems, but an attempt to protect the most "charismatic" of our natural landscapes, those that awed and inspired human visitors. The establishment of our first national parks was motivated by a "monumentalism" that aimed at "putting the most extraordinary displays of nature" within public parks (Runte 1982; Smith 2000, 233).

At the same time, what we would now recognize as environmental or ecological concerns were also part of the motivation: "To conserve the scenery and the natural ... objects and the wild life therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations" (16 U.S. Code 1). But human "enjoyment" was a central purpose. This emphasis on human use of public parks clearly conflicts with some of our contemporary environmental sensibilities that are skeptical of a purely anthropocentric view of the environment.

The conflict between the original objective, human use and enjoyment, and the contemporary concern with potential environmental damage continues to be important in the management of even our "premier" national parks: Witness the ongoing battles over the use of snowmobiles in Yellowstone, the use of personal watercraft in many national parks, sightseeing overflights of Grand Canyon, efforts to control visitor congestion by mandatory use of public transportation, etc.

When "public parks" in general are considered, the focus on human needs as opposed to protecting natural systems is even clearer. The first urban parks were created in response to the impacts of industrialization on the urban environment. As factories, crowded working-class tenements, and the accompanying congestion and air and water pollution transformed cities, public health became an impor-

tant issue. Public parks were partially a somewhat naïve public health initiative: to provide access to fresh air, uncrowded space, and some contact with the natural world in an otherwise degraded industrialized setting (Ward 2002). Urban parks continue to provide relief from an urban industrial landscape by introducing a human-designed "natural" landscape, but rarely do these urban parks seek to preserve or recreate indigenous ecosystems. Instead, they focus on creating spaces free of dense building, opportunities for recreation, and places of quiet contemplation.

There are other human purposes that public parks served, especially in an urban setting; for instance, the provision of open public spaces to which all citizens have a right to access. Such public spaces have important political and cultural meaning within the European tradition that dates back to ancient Greece and Rome. With industrialization and the rise to dominance of private property and capitalism, such public spaces were lost, especially in "new" cities and neighborhoods. With that "enclosure" of "public space" went a loss of social and civic vitality that had economic implications as those new or expanded urban places failed to develop the economic dynamism of earlier urban centers (Jacobs 1961). Many contemporary civic organizations (e.g., the Project for Public Spaces, Trust for Public Lands, and Partners for Livable Communities) are focused on repairing this loss as a way of revitalizing our urban areas. Public parks play a role here too.

The Economic Purposes of Parks

In popular public policy dialogue, the word "economics" is often equated with the worlds of commerce and finance. But as a social science, economics focuses on improving the ways in which we use scarce resources to satisfy human needs and desires. The objective is either to boost the satisfaction we can derive from the limited resources at our disposal, or to reduce the waste of those scarce resources as we satisfy our highest priority needs and desires, or both. In that conventional economic setting, the focus is on *all* human needs and desires that rely on the use of scarce resources. (It should be noted that there are areas where economic analysis may not be appropriate because the trade-off analysis that is central to economics is considered ethically or culturally inappropriate.) In that context, public parks, because they seek to serve important human needs and desires, have an important economic aspect to them.

The above discussion of the human objectives of public parks lays the basis for the discussion of the economic role of public parks. In a variety of ways public parks improve the "livability" of neighborhoods, cities, and regions. They do this by providing a flow of valuable environmental services: open space, reduced congestion, contact with nature and wildlife, recreational opportunities, scenic beauty, improved air and water quality, quiet, a slowed pace of human activity, a relaxed place to meet and interact with fellow citizens, and so on. Just as the well-to-do can pursue such amenities through the purchase of large

estates or homes in gated park-like settings or through membership in private clubs, the general public can pursue them through a political process that establishes accessible public parks in their neighborhoods or communities. In both cases, scarce resources are allocated to the satisfaction of important human needs and desires. Both types of actions are economic in character, even though one is private and relies on markets and the other is public and relies on the government.

As a result of changes in the American economy, the quality of the living environment ("livability") has become increasingly important to people and an increasingly important economic force. This is clear in the near-consensus nationally that environmental quality is important and ought to be pursued even if there are economic costs associated with it. This is partly a result of the success of our economy in providing a reliable level of affluence that has allowed citizens to confidently consider the full range of values they would like to pursue, not just their survival needs. It is also tied to the negative side of that economic success: the damage that ongoing economic growth has caused to natural and social environments. Our rising ability to afford higher-quality living environments has coincided with degradation of those same environments. Hence the broad-based movement to reverse that degradation.

That impetus to protect and enhance the environments that we inhabit has become an economic force as well as a political force because of other changes that have taken place in the economy. The shift away from natural resource industries and heavy manufacturing towards light manufacturing (including high tech) and services has made economic activity much less tied to particular places. Economic activity is more "footloose." Higher levels of income, the difference in the cost of housing in larger metropolitan areas and smaller urban and rural areas, the rise in the importance of investment and retirement income, improvements in transportation and communication, and the mobility of families during the Great Depression, World War II, and the post-war period have all combined to make for a much more mobile population and workforce. People are more "footloose" too.

As a result of these changes, perceived differences in the attractiveness of different areas as places to live, work, and do business can lead to shifts of population and economic activity. Subjective judgments about the site-specific amenities associated with different places have led to significant in- and out-migration that has transformed the economic geography of the United States in the last half of the 20th century. These include the shifts from center-cities to suburbs; the shift from the frost-belt to the sunbelt, especially the Southwest; and the "resettlement" of both the Deep South and the Mountain West. Tens of millions of people and a good part of the American economy have changed location. Often it has been people moving and economic activity following, rather than the other way around (see Power 1996a, 1996b; Power and Barrett 2001; USDA 1999; Shumway

and Otterstrom 2001).

The point is that local environmental quality—natural, social, and cultural—matters to people, and, because of that, has significant economic importance. It is the contribution of public parks to those site-specific local amenities that is the basis of their economic importance.

From an economic point of view, the economic importance of public parks should be measured by the contribution they make to individuals' overall well-being. It is the direct satisfaction of human needs that is the basis of economic value. Economists measure this through the sacrifices that people are willing to make to gain access to such parks. Studies of how property values vary with distance from parks and of the travel costs incurred to reach parks, as well as the analysis of survey data, are used to quantify the economic value of public parks to their direct beneficiaries. Those estimated values are usually quite high in dollar terms.

In addition to the direct value of public parks to those who actively use and enjoy them, there is the potential that those parks support local economic vitality by drawing residents and visitors to the park area, stimulating local businesses. For those worried about declining communities or regions, this type of economic impact of public parks may also be very important.

The Impact of Parks on Local Economic Vitality versus the Economic Value of Parks

Because many of our original national parks are located in relatively isolated areas, distant from urban population centers, considerable travel is required for their enjoyment. As a result, "tourism" is a necessary aspect of human enjoyment of those parks. But when the focus shifts to all public parks, including community, city, county, and state parks, human use takes on a somewhat different meaning since it is largely local residents who use and enjoy those parks. Tourism and commercial businesses facilitating visitation from distant locations play a relatively modest role or no role at all. This, it turns out, is an important economic distinction.

The economic impact of public parks often has been analyzed almost exclusively from the point of view of their ability to attract visitors who spend money in the local economy. Although these tourist impacts can be significant in some locations, there are two drawbacks to this approach to measuring the impact of public parks on local economic vitality. First, the approach tends to emphasize large volumes of temporary visitors—so large a volume that the community may be disrupted and the park damaged. Second, it turns out that from a quantitative point of view, the ability of public parks to help communities hold on to current residents and attract new permanent residents is usually a more important economic force than tourist visitation. This is especially the case when the public parks are not nationally or internationally "charismatic."

Focusing on the local economic impact of public parks through their impact on making a community a more attractive place to live has the

additional advantage of going back to the primary economic concern: to what extent are human needs and desires being satisfied by the park. A focus on residents who value the park, rather than on the economic activity stimulated by tourist spending, is closer to the actual direct economic values at issue.

National Parks and Local Economic Vitality

Analysis of the impact of national parks on local economic vitality provides some important evidence of the role that public parks can play in supporting local economies. Our analysis here focuses on all of the large national parks (including the designations "national monument" and "national preserve") in the lower 48 states. "Large" was arbitrarily taken to mean those covering more than 250,000 acres, of which there are 21. The economic vitality of the 45 counties in which those large national parks are located was analyzed by looking at growth in population, employment, and real income. Two time periods were used: the 30-year period 1969-1998, and the 10-year period 1989-1998. For summary purposes, we combine all of the counties adjacent to a particular national park in a "national park area" and report on them together.

For the longer period of analysis (1969-1998), almost all the areas surrounding the large national parks showed above-average economic vitality. Ninety-one percent showed above-average population and job growth; 86% saw aggregate real income rise at above-average rates. A third had above-average growth in average real income. Averaged across all 21 large national park areas, population growth was almost four times faster than the national average. Job growth was almost three times faster. Aggregate real income grew twice as fast as the national average.

Over this 30-year period, *all* of the large national park areas showed some signs of above-average economic growth. The Isle Royale area in the Upper Peninsula of Michigan only saw average incomes grow (slightly) more rapidly than the national average. That area also saw very little population growth. The Big Bend area also saw below-average population and aggregate real income growth, but had above average income and job growth. Canyonlands saw below-average growth in aggregate income, but had above-average growth in jobs and population. All of the other large national park areas had above-average growth in population, jobs, and aggregate real income.

During the most recent decade (1989-1998) the results were similar: 91% of the 21 large national park areas had above-average population and job growth. Two-thirds saw aggregate real income grow at above the average. Averaged across all of the 21 areas, during the period the population grew 2.5 times faster than the national average. Jobs grew twice as fast as in the nation as a whole, and aggregate real income expanded 65% faster.

During the 1989-1998 period, all of the large national park areas showed signs of above-average economic vitality. One, the Death Valley area, showed above-average growth only in

population while experiencing below-average growth in the other three economic indicators. None of the large national park areas showed a decline in population in the 1990s, although two, Big Bend and Isle Royale, had very slow population growth compared with the national average. Only one area, that around Death Valley, saw employment contract during this period. The Everglades area saw employment grow at only 90% of the national rate. All of the other large national park areas had above-average job growth. None of the national park areas saw aggregate real income decline.

Public Parks, Amenities, and Local Economic Vitality

The relatively high rates of population, job, and real income growth in counties adjacent to national parks reported here are not new findings. Economic research has repeatedly demonstrated that areas with high-quality natural environments that are protected by official park or similar status have been able to attract higher levels of economic activity and, as a result, show signs of superior economic vitality.

A study of the impact of the presence of state parks on employment and population growth in 250 rural Western counties found that state parks served as an amenity, attracting population to those counties with more state park lands while also supporting employment growth (Duffy-Deno 1997). A similar analysis of the impact of federal wilderness areas and national parks in the Mountain West found that when a rural county was adjacent to a national park, population growth was higher. In addition, there was no negative impact of wilderness designation on employment or income (Duffy-Deno 1998).

Analysis of the economic development of rural counties near large wilderness areas found that population growth in those counties was somewhat higher than the growth rate for either the state as a whole or the major urban area in the state. During the 1990s, the advantage of the rural wilderness counties over the state and urban averages expanded (Booth 1996). Another researcher found similar results for the Rocky Mountain West even when he focused on truly rural counties—those that had no cities with a population greater than 2,500. That study included not only federal wilderness as protected areas but also national parks and national monuments. Relatively high correlations ($r = .5$) were found between measures of the relative importance of these federal protected lands as a percentage of total county land and several measures of economic vitality: employment, average income, total aggregate income, and population growth (Lorah 2000).

Rudzitis has also shown that federal protection of landscapes through national park and wilderness designations not only did not appear to slow local economic growth, but was associated with growth rates two to six times those for other non-metropolitan areas and two to three times those of metropolitan areas over the period 1960-1990. He showed that this was also true for National Park lands. His research clearly indicated that the protected lands drew new residents who

were willing to sacrifice a certain amount of income in order to live in the higher-quality natural environments that they perceive federal protected landscapes provide (Rudzitis 1996, Table 7.1, 112-116).

Of course, most urban and community public parks are very far removed from these large national and state parks in terms of size. But the economic vitality in the areas adjacent to national parks, state parks, wilderness and roadless areas, etc., demonstrates the very real economic importance to people and communities of higher-quality living environments. In that sense, these unusual (in terms of their size) public parks dramatize the economic importance of parks in general. All public parks provides some of the same environmental qualities that large national parks do: open space, scenic vistas, some natural systems and wildlife, quiet spaces, a partial escape from the industrial or post-industrial world, recreational opportunities, and so forth. Access to these is important to people both in urban and ex-urban settings. Communities that can provide them for their residents will be stronger because their citizens will have a stronger commitment to place, their civic involvement will be greater, and their economies will be more vital. That is the reason that there has been an increased emphasis on creating new public spaces or rehabilitating old ones in revitalizing our communities. Public parks have a large role to play in the effort.

The discussion throughout this paper should help clearly answer the question this particular issue of the FORUM poses. From the very beginning of Western European urban settlement, open spaces to which all citizens had a right of access were central to urban political and social life. With industrialization and the growth of very densely settled urban areas, public health considerations led to an expansion of that urban open space ideal: Citizens needed access to some bit of the natural world or our urban areas would become increasingly unlivable. Public parks could provide that. Public parks helped maintain crucial connections between citizens and the natural world and among fellow citizens by providing a shared common area. Our state and national parks simply extended those concepts as we became an increasingly mobile population. Community and citizenship centers on the sharing of a broad range of values and commitments. Public parks have played an important role in that civic sharing. That role has not diminished in this 21st century. The "new" urbanism that seeks to revitalize our cities has come full circle to see the importance of shared, open, common spaces in making our cities attractive, livable places where economic vitality can blossom.

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Heath Schenker

Why Urban Parks: A Matter of Equity?

Equity: justice according to natural law or right; specifically: freedom from bias or favoritism (antonym: inequity).

On a normal Sunday afternoon, Chapultepec Park in Mexico City (Figure 1) is filled to capacity with throngs of people—so many, in fact, that no grass survives beneath the trees of the park, except in areas fenced off from human use. The activities in Chapultepec Park are similar to the activities in Central Park in New York or the Bois de Boulogne in Paris on a Sunday afternoon. People of all ages and various walks of life are strolling, chatting, eating, playing games, boating, and generally enjoying themselves. Although not exactly free of congestion, the park does offer a strong contrast to the surrounding city in many ways. It is primarily a pedestrian zone, in contrast to the automobile-clogged city streets nearby. Its canopy of trees, curving paths, fountains, and lakes all serve to encourage a different pace, a Sunday pace. That is to say, it is a landscape dedicated to leisure, as opposed to work. It is also a landscape dedicated to the aesthetic of "nature." It is soft, absorbent, and green in contrast to the paved, walled, hard surfaces of the rest of the urban environment. Representing "nature" in the heart of the city, the public park is the *other* landscape, by which the city defines itself. Chapultepec Park is Mexico City's public pleasure garden, clearly much loved and much used by residents of this thriving metropolis.

It is easy to take public parks like Chapultepec Park at face value, simply as pleasurable places to spend a Sunday afternoon. But it is important to remember that public parks are a potent symbol of certain principles that should never really be taken at face value. For one thing, they symbolize the principle of equity. The notion of equity has been intrinsic to public parks since they first began to proliferate around the world in the nineteenth century. The first public parks were a potent symbol, in the nineteenth century, of an increasing emphasis on equity as a governing principle in public affairs. Equity is a term with several meanings, but the most common definition is: justice according to natural law or right; specifically, freedom from bias or favoritism. This meaning of equity is a product of the eighteenth-century Age of Enlightenment, with its emphasis on the natural rights possessed by individuals. The public park, as a civic institution, was conceived to correct certain injustices, or inequities, that were perceived to be in violation of natural law. The concept of natural law guarantees certain basic or universal rights, across the social spectrum, rights that transcend political, social, or economic status; for example, the right to the pursuit of

Figure 1. Like many urban parks, Chapultepec Park in Mexico City offers people a contrast to the "hardscape" of the city. Photo by the author.

happiness.

People enjoying themselves in a public park on a Sunday afternoon are certainly exercising their right to pursue happiness. It is amazing to realize that two hundred years ago most people would not have had access to this particular method of pursuing happiness. In the eighteenth century, parks were the exclusive property of aristocrats; ordinary people were not allowed to enjoy them. The first parks in Europe were actually former aristocratic properties: in the eighteenth century, hunting parks and private gardens were gradually opened to the public for special events and on festival days. In the nineteenth century, these private properties were transformed completely into public parks. That century was a period of major transition throughout the world from autocratic systems of government to government by a broader-based public. In Europe and in many former European colonies throughout the world, monarchies were being transformed into republics, sometimes through violent conflict, sometimes through more gradual, peaceful processes. Public parks were a potent symbol of this transformation. An example can be seen in the famous parks of London, such as Hyde Park, Kensington Gardens, and Saint James Park. These parks evolved from royal parks into public pleasure grounds in the nineteenth century, and their

transformation represented the increasing democratization of government as the British Parliament gained power and influence. The example of the London parks was widely emulated in other cities throughout Europe and European colonies as public parks and gardens in the "English style" proliferated in the nineteenth century.

The first public parks in the United States were heavily influenced by English parks, and were also firmly grounded in natural law and the principle of equity. Frederick Law Olmsted, one of the most eloquent nineteenth-century spokesmen for public parks, left a voluminous body of work, including many written justifications of the idea of public parks. These documents reveal that he was a firm believer in the basic principles of natural law. Olmsted argued that "it is the main duty of government, if not the sole duty of government, to provide means of protection for all its citizens in the pursuit of happiness." An important ingredient of happiness, according to Olmsted, was the ability to rest from work, or, in other words, the right to leisure. Throughout much of history, leisure was a luxury enjoyed by the aristocracy. But in the nineteenth century, workers throughout the world gained increasing political power and pressured governments for a limited work week and a guarantee of leisure, protected by law. As public parks proliferated in cities throughout the nineteenth century, they represented this newly guaranteed right to leisure for a much broader public, including working men and women. Public parks were a potent symbol of the more equitable distribution of leisure that occurred in the nineteenth century. Olmsted often linked happiness and leisure in his writings and public addresses. For example, in an important address entitled "Public Parks and the Enlargement of Towns," he argued that the urban park should be a place "to which people may easily go after their day's work is done ... where they may stroll for an hour, seeing, hearing, and feeling nothing of the bustle and jar of the streets, where they shall, in effect, find the city put far away from them." Olmsted designed the urban park as an antidote to the stresses and pressures of urban life. He felt that the constant demands of work in modern cities inhibited the pursuit of happiness.

Olmsted linked the aesthetic enjoyment of nature to the pursuit of happiness. He wrote that "the occasional contemplation of natural scenes of an impressive character ... not only gives pleasure for the time being but increases the subsequent capacity for happiness." Public parks in the United States were intended to make the aesthetic enjoyment of nature available to a broader public, i.e., to distribute more equitably the pleasure that Olmsted, and those of his class, believed could be derived from contemplating natural scenery. Designing urban parks, such as Central Park in New York, Olmsted took "nature" as his model, creating a landscape of woods and meadows that recalled the countryside beyond the city limits. His goal was to make the experience of nature available to ordinary, working people living in modern, industrial cities. The increasing industrialism of the nineteenth century separated people from

the experience of nature, forcing large migrations, especially in the working class, from farms to factories. Olmsted, and other proponents of public parks in the United States, argued that this was not only detrimental to the pursuit of happiness, but also inequitable, because people of means could still enjoy natural scenery, while the working class did not possess the means to do so.

Olmsted emphasized that the aesthetic appreciation of nature should not be restricted to "heads of government" and "the wealthy classes," that it should not be "a monopoly, in a very peculiar manner, of a very few, very rich people." However, while Olmsted may have believed that the aesthetic enjoyment of nature was a basic human right, he also believed that it was an acquired taste. He noted that "the power of scenery to affect men is, in a large way, proportionate to the degree of their civilization and the degree in which their taste has been cultivated. Among a thousand savages there will be a much smaller number who will show the least sign of being so affected than among a thousand persons taken from a civilized community. This is only one of the many channels in which a similar distinction between civilized and savage men is to be generally observed." This passage is a potent reminder that public parks served powerful political ideologies in the nineteenth century.

For people like Olmsted, public parks were a symbol of democracy, as opposed to traditional, hereditary systems of government. Olmsted viewed public parks as a means to educate and elevate the political base in a democracy. He worked in a time when democracy was far from secure in the United States; its democratic ideals and national sovereignty were being severely tested, both during and after the American Civil War. Olmsted believed that it was the duty of members of the "new aristocracy" in the United States (by which he meant educated, powerful, self-made men of means) to bring a certain level of "civilization" to the masses, thereby strengthening the whole political system.

It must be noted, however, that public parks were not exclusively created by democratic republics in the nineteenth century. Public parks were also created by monarchies. Napoleon III, of France, for example, constructed an impressive network of parks in Paris during the Second Empire. In his effort to characterize the Second Empire as the "peoples' empire," Napoleon III anchored key Parisian neighborhoods with public parks. These neighborhoods represented key political constituencies that Napoleon III depended on for his political power. The public parks of the Second Empire were intended as a potent political symbol of the emperor's commitment to equity. By creating a series of public parks throughout Paris, he aimed to demonstrate to his political supporters that the monarchy was paying attention to certain basic rights, such as health, leisure, and the pursuit of happiness. The public parks of New York may have symbolized American democratic ideals, but the public parks of Paris symbolized Napoleon III's vision of monarchy in France. Both were rooted in notions

about basic rights and equity.

Equity: (a) a right, claim, or interest existing or valid in equity; (b) the money value of a property or of an interest in a property in excess of claims or liens against it; (c) a risk interest or ownership right in property.

The foregoing examples have illustrated how one definition of equity, signifying social justice and based in natural law, was an intrinsic principle underpinning the public park in the nineteenth century. But another definition of equity also applies to the public park, as a product of the nineteenth century. The term "equity" also signifies monetary value, and in that century, public parks represented considerable equity of this kind. The idea of public parks took hold around the world not only because they served certain political agendas and represented certain ideals of social justice, but also, in large part, because of real estate speculators who began to view them as a marketable amenity. As public parks proliferated in cities around the world, they were linked to an international wave of real estate speculation.

An early example was Regent's Park in London, which was developed in 1811 as the setting for a series of expensive villas, marketed to members of the English upper class, including both the landed aristocracy and the wealthy, industrial bourgeoisie. The developers of Regent's Park recognized that many members of this class wanted a house in the city for the social season, but missed some of the comforts of their country manors when they moved to the city, particularly their private parks and pleasure grounds. Regent's Park was intended to simulate a country estate in the city, with row houses surrounding it on the periphery and detached villas located throughout the interior. Although originally intended as a private park, it was opened to the general public in 1838, as the other royal parks in London were also opening to public use.

Another English example of the link between public parks and real estate was Birkenhead Park in Liverpool, also developed as a setting for housing, although aimed at the more modest, "middling" class. Birkenhead Park was open to the public from its inception, and its houses proved highly popular. Olmsted was much impressed by Birkenhead Park when he visited Liverpool as a young man, long before he became involved with Central Park in New York. Real estate speculators were also instrumental in developing the parks in Paris during the Second Empire; in fact, scandals that emerged in that regard eventually forced the resignation of Baron Haussman, the Prefect of the Seine, who was in charge of rebuilding Paris under Napoleon III. In New York, the selection of a site for Central Park was held up for years due to competition among landowners and speculators who stood to gain, or lose, from one site or another. That scenario was repeated in innumerable cities across the United States, as public parks were proposed by prominent citizens from San Francisco to Buffalo.

The public park, as a new public institution, received vital support from a powerful and influential bourgeoisie with increasing international ties who recognized the potential equity of

public parks, not only in terms of political and social capital, but as financial capital. The members of this bourgeoisie were educated, well traveled, interconnected, and politically influential. They advocated public parks because they believed that they would improve the image of a city, and therefore make it more attractive to new business investors. What kind of businessman would want to bring his family to live in a city with no public park?! This class of citizens supported public parks around the world, under various political systems, with varying degrees of risk and varying amounts of altruism, but always with an eye towards this other meaning of equity. Some realized direct returns on their investments in terms of rising real-estate values or other financial gains directly linked to public parks. Others only gained symbolic capital. But regardless of the financial equations in individual cases, the overall result was that public parks proliferated in cities around the world, from Beijing to Cape Town, from New York to Havana, from Saint Petersburg to Mexico City.

Today these public parks are a ubiquitous element in the urban fabric, offering green relief from the glare, noise, and pollution produced by industry and commerce. They are cherished oases amidst the hardscape of modern cities. Most are heavily used and meticulously maintained. The equity values that were embedded in these parks in the nineteenth century are still intrinsic to them today, although obscured by nearly two centuries of habit and imitation. It is important, once in a while, to brush off the layers of historic dust that have accumulated on these parks, obscuring their social, political, and ethical meanings. Doing so not only reminds us of the historic period that produced them, but also stimulates us to reconsider the values that public parks embody in cities today. Do they represent time-honored or outdated ideas about equity? Does the notion of equity enter into the picture at all any more? If so, have ideas about parks and equity changed? These are important questions to be asking as we begin not only a new century, but a new millennium of park design.

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James A. Pritchard

The Meaning of Nature: Wilderness, Wildlife, and Ecological Values in the National Parks

Author Judith Meyer (1996) suggests that tourists writing postcards home from Yellowstone added layers of cultural meaning to the park. In a similar way, Americans layered wilderness, wildlife, and ecological values on top of the original meanings assigned to national parks. Of considerable interest is how these values became tied together in a cultural bundle, with wildlife taking the starring role. Yellowstone provides an example of how scientists and the public came to see wilderness, wildlife, and ecological significance linked together in the national parks.

As historians Aubrey Haines (1977) and Alfred Runte (1979) point out, Congress established Yellowstone National Park for protecting scenic wonders and wilderness landscapes of unique beauty against tawdry exploitation and industrial incursion. Yet animals did not receive effective protection for some time, and various animals were valued very differently. Two useful milestones indicating the addition of wildlife values to park purposes occurred in 1886, when the U.S. Army protected the park, and in 1894, when the Yellowstone Park Protection Act made poaching in the park a federal offense. While this ended the local slaughter of wildlife for market, federal assumption of authority over wildlife in the parks also ended traditional hunting practices by Native Americans and transformed hunting by rural folk into an illicit activity (Spence 1996; Jacoby 2001). Motivated by the near-extinction of the plains bison, conservationists looked to Yellowstone as a refuge for big game animals. In 1919, Yellowstone's first National Park Service (NPS) superintendent, Horace Albright, worried that elk might become extinct if they were not protected in Yellowstone.

Wilderness, as environmental historians remind us, is partly a place and partly human conceptions of a place (Worster 1997). Around 1900, a nature study movement helped alter views of the wilderness from an intimidating force toward a landscape that challenged people (Nash 1967). When Theodore Roosevelt visited Yellowstone with nature writer John Burroughs and Yosemite with John Muir, he brought along his conceptions of the virtues of a strenuous life. Although he shared cultural prejudices against wolves and coyotes, Roosevelt moderated his view, partly because of his experiences in Yellowstone (Johnston 1998).

The founders of animal ecology first added ecological values to the meanings of wilderness and wildlife in the national parks. From 1908 into the

Figure 1. Ranger Sam Woodring nurturing "good" animals in Yellowstone National Park. Common wisdom of the 1910s vilified the "bad" predators. Woodring wrote the rationale for predator control in the park. Courtesy National Park Service, Yellowstone National Park.

1920s, scientists came to believe that places where naturalists might study nature at work were disappearing quickly. Despite the warnings of botanist Ada Hayden from 1919 to 1947, Midwestern prairies continued to disappear under the plow. Plant ecologists became concerned that no prairie larger than a few acres would remain. On the Mississippi River, scientists propagating mussels for the U.S. Bureau of Fisheries (ca. 1914-30) witnessed pollution and power dam construction that profoundly altered riverine habitats and species composition. Observing the profound changes in prairies and rivers in Midwestern landscapes, as much as watching the development of tourism, agriculture, and timber and mining industries in western states, drove botanists, zoologists, and ecologists to argue for landscape preservation throughout North America. The words "landscape preservation" are used here because scientists from 1908 to 1920 didn't start with the term "wilderness"; rather, they began by arguing for the preservation of "natural," "primeval," or "primitive" conditions in particular places.

From 1916 well into the 1920s, Joseph Grinnell, director of the Museum of Vertebrate Zoology at the Uni-

versity of California at Berkeley, provided leadership in countering intense development pressures in Yosemite (Runte 1990). Charles C. Adams, who wrote *Guide to the Study of Animal Ecology* in 1913, and Victor Shelford, like Adams an organizer of the Ecological Society of America (ESA), provided enduring enthusiasm for landscape preservation. They formed a Committee on the Preservation of Natural Conditions under the auspices of the ESA. The national parks were prominent in the committee's 1926 wish-list of places worthy of preservation, *The Naturalist's Guide to the Americas* (Shelford 1926; Shelford 1943). Beginning in 1919, Adams had sent scientific teams from the Roosevelt Wild Life Experiment Station (at New York State University's School of Forestry) to Yellowstone, where Milton P. Skinner, the park's first naturalist and associate of the station, examined the life history of grizzly bears in ecological detail not replicated until the 1970s. Animal ecologists' first concern—vanishing animals such as the mountain lion and wolf—contributed to their worry over transformations of natural landscapes.

Landscape preservation did not come without a cost. In the 1920s, when Congress considered establishing Glacier Bay National Monument, scientists lobbied for its creation. This group, including plant ecologist William S. Cooper, made efforts to exclude native hunters from the new monument. Conservationists' views of the landscape as "pristine" led them to see humans as apart from nature and shaped their conclusions regarding policy (Catton 1997; Cronon 1996; Turner 2000). Yet a substantial part of their thinking also was shaped by practical concerns. The hunting methods employed by native peoples, for example, worried scientists. Seal populations historically had done well in Glacier Bay, they reasoned in 1920, but now that native peoples used high-powered rifles, and would surely begin to use motorized boats, in hunting, what would prevent the decimation of the seals?

Some conservationists may have conceived of a "pristine" wilderness untouched by human hand, but most scientists thought of landscape modification and preservation as conditions on a relative scale. For example, while the metaphor of "the balance of nature" was used frequently, ecologists of the early twentieth century knew this was a relative balance, not an ideal condition. The term "natural conditions" signified that scientists thought humans had not substantially altered a landscape. Informed by the contemporary context of modern landscape-scale development, Victor Shelford believed that indigenous people had a relatively limited effect on the environment. In terms of preservation, Shelford discussed first-, second-, and third-class nature sanctuaries, research reserves, natural and buffer areas, and experimental, primitive, and wilderness areas. All these designations depended on relative degrees of disturbance and differing agency purposes (Shelford 1933; Sloan 2002). Similarly, around 1926 Charles Adams wrote on "the varying degrees of the wilderness," making distinctions among human influences on a landscape. Areas to preserve "natural"

Figure 2. Horace Albright shows tourists how to feed the bears, ca. 1923. Property damage and many injuries, as well as views on a more natural presentation of wildlife, prompted NPS to discourage this activity in the early 1940s. Courtesy National Park Service, Yellowstone National Park.

or "wilderness" conditions would be places where "nature is allowed to take her course with the minimum of human interference." Adams felt that even the "excellent and necessary work" of civilization had "reasonable bounds" (Adams 1929).

Placing those reasonable bounds on remaining undeveloped landscapes became an obsession for Shelford and

Adams. By 1932, the ESA's Committee on the Preservation of Natural Conditions had written a detailed plan for nature sanctuaries and the ESA had unanimously adopted it. By this time, their language emphasized "the preservation of natural biotic communities." The National Parks Association helped publicize the plan for nature sanctuaries and pushed the Park Service to help carry it out. By 1933, NPS established twenty-eight research reserves in ten parks.

Development of the NPS educational division, beginning in 1920 when Harold C. Bryant organized the NPS Yosemite Free Nature Guide Service, provided an institutional home for college-trained naturalists. While the ranger division provided the personnel for managing wildlife, the naturalist division housed most wildlife research until 1964. Referred to as "posie pickers," the naturalists provided leadership in adopting ecological values. During the 1940s, for example, Yellowstone Park Naturalist C. Max Bauer defended the coyote when ranchers on the Absaroka Conservation Committee desired deadly baits placed close to the park's northern border.

Author Jennifer Price (1999) identified public protest over women's feathered hat fashions (ca. 1890s) as a turning point in valuing wildlife. Birds were also central to Yellowstone's new valuation of wildlife, at the same moment that ecologists were urging the NPS to protect coyotes and wolves, as parks had traditionally protected big game animals. Partly in response to mammalogists' protests against the Bureau of Biological Survey's predator control program, the National Park Service declared in 1931 that all animals would find refuge in the national parks (Dunlap 1985). Yet for some time pelicans feeding on native trout stocks had been surreptitiously killed on Yellowstone Lake, in theory to enhance fish-

Figure 3. Scientists banding pelicans on Molly Island on Yellowstone Lake, ca. 1932. With a nudge from Rosalie Edge and ecological knowledge from the NPS wildlife division, all predators in the park received protection. Photo by Chief Ranger George Baggley, courtesy National Park Service, Yellowstone National Park.

ing and reduce losses from the Bureau of Fisheries' trout propagation program. Ardent conservationist Rosalie Edge called public attention to the slaughter of pelicans and bird lovers objected, causing embarrassment for NPS Director Horace Albright. The final crux over the role of predators in the parks had been reached over nature's feathered friends. In 1932, Yellowstone Superintendent Roger Toll declared that pelicans also would be protected. In doing so, he redefined the park's valuation of wildlife and put nature's purposes ahead of human designs.

During the 1930s, ecological and wildlife values became firmly intertwined in the national parks, represented by the establishment of the NPS wildlife division, led by George Melendez Wright. The division instituted the *Fauna* series of publications on national park wildlife, recommended extensive biological research in the national parks, and proposed guidelines for wildlife management that departed from single-species management to emphasize an ecosystem-oriented approach and the restoration of wildlife to natural conditions. At the same time that the division contributed ecological knowledge, it brought a confidence that human intervention could restore natural balances disturbed by humans, for example by controlling "abnormally large" ungulate populations (Wright 1992; Sellars 1997).

During the early 1940s, ecological values pushed park management away from overly artificial wildlife management. NPS Director Newton Drury proposed discontinuing bison rearing activities (e.g., artificial feeding), reducing the herd size, and ending the bison stampede for visiting dignitaries. Similarly, Drury advocated ending the roadside feeding of bears and the popular "bear shows" at amphitheaters. Horace Albright protested ending the bear shows, claiming visitors should have every chance to see wildlife. Reflecting the goals of the NPS wildlife division, Drury argued that "our aim ... should be to place each wild species ... on its own, without dependence upon man, and occupying its natural niche in the biota of the park." Drury received strong support from ecologists nationwide, such as S. Charles Kendeigh, chairman of the ESA Committee for the Study of Plant and Animal Communities, who suggested that the bear shows were "not in harmony with the purpose of the national parks as representing natural communities of plants and animals in an undisturbed condition, where each species is leading its normal existence" (Pritchard 1999). Although Drury solicited scientific opinion, from the 1940s into the 1960s scientific research within the NPS took a backseat to its traditional emphasis on tourism (Sellars 1997, Wright 1992).

The National Park Service did not embrace the wilderness preservation movement that culminated in the Wilderness Act of 1964. The roots of that reluctance dated from the early days of the NPS. At a fundamental level, NPS founding fathers Stephen Mather and Horace Albright did not see a serious conflict between preservation and development. As Ethan Carr (1998) points out, they believed

Figure 4. The Bison Ranch, where Yellowstone's herd was nurtured back from the brink of extirpation, was closed in the early 1940s as part of an effort towards a more naturalistic presentation of wildlife to the public. Courtesy National Park Service, Yellowstone National Park.

that preservation of scenic landscapes would be effected best through development creating a wide base of support for the national parks. Road building in the parks, however, elicited resistance. The modern wilderness movement, argues Paul Sutter (2002), began with opposition to road building projects such as the Skyline Drive in Shenandoah National Park. During the early 1930s, Benton MacKaye, Harvey Broome, Bob Marshall, Howard Zahniser, Olaus Murie, Aldo Leopold and others created The Wilderness Society. During the 1950s, conservationists successfully opposed a Bureau of Reclamation plan for a dam at Echo Park, inside Dinosaur National Monument (Harvey 1994).

Like writer Freeman Tilden (1951), wildlife biologists Olaus and Adolph Murie looked to large natural parks as they considered wilderness. Undoubtedly aware of the 1946 resolution by the American Society of Mammalogists endorsing the preservation of natural areas "against which the practices in game production on lands under management can be measured," their use of the term "wilderness" incorporated both new meanings and implications previously attached to "primeval conditions." Both brothers had studied coyotes in Yellowstone, and Adolph scrutinized wolves in Mount McKinley National Park. They lobbied against coyote control along Yellowstone's northern border, and Adolph tried to moderate wolf control in Mount McKinley during the 1940s (Rawson 2001). To Olaus Murie, wilderness advocate, Yellowstone and Grand Teton national parks appeared largely unaffected by the managing human hand when compared with the industrial forestry

just to the west on the Targhee National Forest, an example of the maximum-yield approach to forest management. Concerned about the press of tourists, Murie wanted the NPS to protect the feeling of wilderness by limiting facility development. The Muries remained uncomfortable with needless manipulation of park landscapes, appreciating a friend's comment to a tourist, "This ain't no zoo, lady."

The wilderness movement did not attract enthusiastic commitment from the NPS. Park Service Directors Newton Drury (1940-1951) and Conrad Wirth (1951-1964), a landscape architect by training, supported the view that large parks such as Yellowstone, Glacier, and Grand Canyon, as entire units, possessed the essential qualities of wilderness. Declaring any particular part of the park as wilderness was simply redundant, and so the NPS advanced conservative proposals for park wilderness areas. In Yellowstone, only remote parts of Yellowstone Lake were zoned as wilderness in 1958. In 1980, however, Congress designated 32.4 million acres of Alaskan parks as wilderness, and thus the Park Service came to manage more wilderness than any other agency (Sellars 1997). Beginning in the 1960s, controversies over the construction of visitor facilities in Yellowstone got as hot as the wilderness debate in surrounding states.

The 1963 Leopold Report accentuated wilderness and ecological values for the park system (Rydell 1998). Originally convened in response to the controversy over direct reductions of elk in Yellowstone, the special advisory committee chaired by A. Starker Leopold agreed with the common wisdom that the elk herd should be reduced to the carrying capacity of the range. Today, the Leopold Report is remembered for suggesting that the parks should represent a "vignette of primitive America." This vision made the Leopold Report an enduring icon for park management. The committee did not advocate any particular landscape condition, but rather spoke to the purposes of the parks as a management guide. The Robbins Report, released shortly thereafter by the National Academy of Science, called for more biological research in the Park Service. Science was briefly elevated to a high priority, yet a reassignment of biologists to regional offices again reduced the profile of park science (Sellars 1997).

During the 1960s and 1970s, wildlife and ecological values found new focus in Yellowstone with the work of John and Frank Craighead. The Craigheads' work on elk and bear movements provided proof positive that wildlife were not just park denizens, but animals of a significantly larger ecosystem (Craighead et al. 1995). Conservationists began to see problems that transcended boundary lines, and, beginning in 1983, the Greater Yellowstone Coalition advocated conservationists' viewpoints on regional issues and conveyed to the public the conception of a larger ecosystem centering on Yellowstone National Park.

During the 1960s and especially the 1970s, scientists began to incorporate new concepts into ecological values for the parks. By the time of the 1976 Tall Timbers Fire Ecology Con-

Figure 5. Frank and John Craighead with radiotelemetry gear, 1966. Their work on elk migration and bear movements shaped modern perceptions of a Greater Yellowstone Ecosystem. Courtesy National Park Service, Yellowstone National Park.

ference, for example, Yellowstone staff, including plant ecologist Don Despain, created a plan allocating natural fire zones encompassing thousands of hectares. Scientists' arguments for restoring this natural process to Yellowstone's landscape were related to wider interests of the scientific and land management community, including restoration ecologists. Landscape ecology contributed notions of patches, mosaic patterns, flux, and disturbance. Indeed, the entire classical equilibrium paradigm (known as "the balance of nature") was replaced during the early 1970s by a new paradigm of flux, characterized by change and unpredictability (Pickett 1995). Instead of "natural conditions" or "wilderness," scientists began to refer to "natural processes." Since 1967, the Park Service view that direct manipulation of elk herd numbers was not *necessarily* warranted within large parks was facilitated by new understandings of ecosystems in dynamic flux, disturbance as the rule, and multiple states of equilibrium. The subject of "natural regulation" remains a matter of vigorous debate

(Boyce 1998; Wagner et al. 1995). Significantly, 1988 NPS management guidelines calling for working with natural processes leave room for interpretation. This flexibility is desirable, because no policy could cover all contingencies. In Isle Royale National Park, for example, there is a recent concern that wolves could be extirpated. Preserving the wolf in the park might require highly manipulative techniques (Wright 1992). Judging how much to intervene to re-establish natural processes, or when to watch nature at work, has been a complex judgment call since the NPS wildlife division came to Yellowstone in 1930.

It is hard to overstate the enduring significance of ecological, wildlife, and wilderness values associated with the national parks, even while we conceive of new models for national parks or wildlife refuges to be established in places where existing land uses make any traditional archetype unworkable. Aboriginal land use and hunting, for example, remain central issues for species preservation efforts in third-world countries (Rettie 1995). Today, we wonder how to establish wildlife corridors to link existing refuges within a larger matrix of developed landscapes, and worry over external threats to existing parks (e.g., at Everglades National Park). Scientists echo the call of Victor Shelford and Charles C. Adams when they suggest that protected areas where managers use a light hand "have become baselines for measuring ecological change" elsewhere (Sinclair 1998). Ultimately, understanding the parks as continually evolving landscapes, rather than as places where managers select for desired conditions, has proven a significant transition in valuing wilderness and ecological qualities of the parks.

Since the parks were established, each generation has assigned its own significance to the national parks, adding meaning and cultural depth. As author Paul Schullery (1997) suggests, "the search for Yellowstone is as much a search for ourselves as it is a search for biological understanding." Successive understandings of nature have redefined the meanings of wilderness, wildlife, and ecological relationships. While parks of the late nineteenth century originally provided scenic landscapes envisioned as wilderness, these landscapes also provided physical habitats and resident wildlife, a grand focal point for adding layers of ecological meaning to the significance of our national parks.

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Ross M. Kimmel

The Value of Historic and Cultural Resources in Public Parks

Ask a person to describe a "national park" or a "state park" and likely you will hear about some sort of a natural preserve where people can enjoy passive recreation amidst the unspoiled beauty of nature. Such a description indeed encompasses the purpose and forms of our early national and state parks. The federal government set aside Yosemite and Yellowstone as very early national parks in the 19th century in order to protect them from degradation and despoliation.

It wasn't long, however, before sites of historic significance were added to a growing universe of public parks. This process of nature conservation first, followed by historic preservation second, can be seen in the development of Maryland's state forests and parks.

The first state forest in Maryland was a bequest of 2,000 acres of largely despoiled forest lands. Brothers Robert and John Garrett, heirs to the Baltimore and Ohio Railroad fortune, made this bequest in 1906. Moreover, the Garretts made their largesse contingent upon Maryland's instituting a state-managed scientific forestry program. Maryland's first state forester, Fred W. Besley, seized upon this task with gusto. As early as 1910, another state forest reserve along the Patapsco River was informally being referred to as "Patapsco Park." By 1912, a part of the reserve had been developed specifically for public recreational use. Besley realized that one way to sell the public on the value of wise forest management was by inviting people to use and enjoy forests, not by keeping them out.

A decade later, a site of immense significance to Maryland history, Fort Frederick—a large, but ruined, stone relic of the French and Indian War (1756-1763)—was purchased and designated a "forest reserve," though it was informally referred to as Fort Frederick Park. The main purpose of designating the fort a "forest reserve" was for the state to acquire and preserve an important *historic* resource. Acres of trees were planted near the fort to justify its official status as a forest reserve. The influential individuals who had lobbied for the fort's acquisition really had preservation of the fort as their motive, however, and designating it a forest reserve seemed the best way to accomplish that mission. Indeed, during the Great Depression, a company of the Civilian Conservation Corps assigned to the reserve/park devoted its main energies to partially restoring the fort, and secondarily to reclaiming associated natural resources.

Today, Maryland's system of state forests and parks encompass a daunting array of historically or culturally significant resources. Some were acquired on purpose, as was Fort

Frederick, in order to save an important historic site. Many parks, however, were acquired for recreational or nature conservation purposes with no thought given to historic resources that might come along with the package.

A good example of this phenomenon is Point Lookout State Park. Located on the tip of the peninsula formed by the confluence of the Potomac River and the Chesapeake Bay, Point Lookout offers unparalleled opportunities for water-related recreation. Boating, fishing, swimming, camping, and nature study, with appropriate facilities for public accommodation, make Point Lookout one of the most popular parks in Maryland. However, aside from all that is an immensely important historical fact that, at the time of the park's acquisition and master planning, was given no thought. Point Lookout was the site of the largest prison camp of the Civil War. Between 1863 and 1865, Union authorities interned 52,000 Confederate prisoners at the Point. Four thousand of them died and are buried nearby in a federal cemetery. Fortunately, through the efforts of a succession of several dedicated park managers and staff, and a very dedicated corps of volunteers, the story of the prison is memorialized and interpreted for the public at Point Lookout.

Today, Maryland's state forests and parks, as with parks in other states and on the national and local levels, contain a myriad of resources reflective of not only the hand of God, but also the hands of humans. In fact there are few—if any—parks that do not show human influences. In Maryland we have a good example of a park (we call this one a "natural environment area") that is kept in a pristine "natural" state that is not natural at all.

Soldier's Delight Natural Environment Area is a shale barren incapable of sustaining the typical deciduous forests of most of the rest of the state. Left to nature's design, Soldier's Delight would become a forest of scrub pine and swamp oak, the soil is so poor. However, the state, with volunteer help, routinely burns off sprouting trees in order to maintain the area as prairie grassland hosting flora and fauna that are rare in the state. And in so doing, we today continue a practice started in prehistoric times by Native Americans, who burned the poor forest cover in order to drive game and provide clear fields of fire for hunting.

Is Soldier's Delight truly a "natural environment area?" One could argue that it is in fact a *cultural* environment area, because human beings have for centuries artificially maintained it as grassland. (Or, one could concede that human beings are part of the environmental equation, rather than intruders upon it, and have their impacts on other species the same way plants and other non-human animals do.)

Thus nature and culture (or history) are inextricably intertwined in our nation's system of national, state, and local parks. To compartmentalize the two is to do a disservice to the diversity of park resources. Management of natural and cultural resources should be viewed as two sides of the same coin, and therefore as a common currency, a currency that is very valuable to the park-visiting public.

The philosopher George Santayana remarked that those who don't know their history are condemned to repeat it. In other words, a society without knowledge of its past is like a person without a memory. If someone can't remember what happens when he sticks his hand in a fire, history will repeat itself and he will find out again soon enough.

Historical and cultural resources, tangible or not, serve to remind a society of its past, the same way familiar faces, places, and things can put a person in mind of his life, successes and failures alike. Without these signposts, a society, like a person, can easily lose track of where it has been, probably does not understand where it is now, and has no frame of reference to anticipate the future. History gives us a sense of place, and a sense of place in time. Without knowledge of history, we are abysmally ignorant.

While most people remember history classes in school as boring, and while history receives less attention in schools today than formerly, the American public nevertheless has an insatiable desire to experience history, if not from books then from getting out and living it. Historic sites are among the most popular tourist destinations across the country. Living history reenacting and crafting grow ever more popular. History themes are once again fashionable in motion pictures. Antique collecting grows. The desire for "colonial" style houses shows no sign of abating. What, then, is going on?

What is going on is that modern life, with its temporal, situational, and societal dislocations, makes people yearn for a sense of both place and a place in time—a sense of who they are, where they came from, and confidence about where they are headed. History, the collective memory of humankind, supplies these needs. While history can well be studied from the written page, it can also be studied from experiencing the places where it happened and by examining things that have come down to us from the past. Historic places and things are anchors both in place and time. It is one thing to read about the Declaration of Independence or the Constitution. It is quite another to stand in Independence Hall where those documents were debated and adopted; it is quite another thing to stand at the National Archives and behold the actual documents themselves. Experiencing these places and things, if they are properly managed and interpreted, inspire a certain awe and wonderment that nourish the human soul.

A wise society husbands its historic and cultural resources, saves and protects them, and lets the people, whose heritage those resources constitute, experience and learn from the resources. Public parks are among the largest repositories of historical and cultural resources. It is therefore morally and profoundly incumbent upon public parks to protect, enhance, and interpret those resources for the benefit of humanity.

Cultural resources management is a relatively new discipline in park management. Though parks have cared for historic resources for many years, over the past 20 years or so cultural resources management has emerged as a discrete professional discipline with-

in overall park administration. Cultural resources managers usually have academic backgrounds in history, archeology, anthropology, architectural history, historic preservation, and allied fields. And many institutions of higher learning now offer professional degrees in cultural resources management, which is a cross-disciplinary curriculum that includes coursework in public administration, something your traditional academic historians know little about.

Cultural resources management may be broken down into two major components. The first is inventory and curation; the second is public benefit. Inventory and curation mean knowing what cultural resources a park has and taking proper care of them. Public benefit means providing the public the opportunity to experience those resources in a way that does not endanger them but does encourage the public to enjoy and learn from them.

Many, but by no means all, cultural resources are tangible. Structures or other historic landmarks, historic landscapes, archeological sites, artifacts, and historical records make up the bulk of tangible cultural resources to be found in public parks. The extent of tangible cultural resources in most park systems can be overwhelming. Such is the case in Maryland.

A survey of historic structures on Maryland's natural resources public lands, undertaken in the late 1970s, revealed a total of 403 separate historic structures distributed over 173 sites across the state. These ranged in importance from National Register-eligible properties to 1920s bungalows. A new inventory about to be undertaken is projected to find 1,000 qualified structures, with many having been acquired since the last count, and the 50-year rule of thumb having advanced from 1929 to 1952. Clearly, in strategizing for the preservation of these structures, some sort of triage protocol will have to be adopted. What must be saved in the public interest, what would be nice to save, and what must, unhappily, be written off?

We have no way of inventorying all of our archeological sites. Hundreds are known, but thousands are yet to be discovered. Because geographical areas that are now attractive for public parks were attractive to prehistoric and historic peoples for settlement, we assume the number is astronomical. Methodology for predictive modeling is contemplated, with actual excavation reserved for areas undergoing natural degradation (shore erosion for example) or slated for new construction.

We know the Maryland Archeological Conservation Laboratory has in storage an inventory of over 300,000 artifacts that have come from archeological projects in our parks and on other public lands. Additionally we know of about 8,000 artifacts and pieces of archival material that are in the possession of 22 field units, either on public display or, in many instances, in storage. These range in importance from 18th- and 19th-century furnishings, original Audubon prints, and a rifle used by a Confederate soldier at the Battle of South Mountain, to amusement park bus tokens from the 1950s. When budgets

permit, we hope to digitize this inventory as a first step toward a comprehensive plan of conservation and display of these artifacts for public benefit.

For years we have been depositing with the Maryland State Archives all sorts of archival materials relating to the history of our agency. Many linear feet of shelf space are occupied with traditional manuscript and printed materials, some artifacts that were donated with the archival materials, and thousands of photographs taken in our state forests and parks as early as the 1910s. Among the later is an inventory of 1,100 glass lantern slides dating up through the 1940s. These, we feel sure, were used by early state foresters for public presentations on wise forest management. While academic historians routinely mine this archival material for papers meant to be read by other academic historians, we are systematically inventorying and scanning the more interesting photographs and hope, for our agency's centennial in 2006, to have a Web site and perhaps a table-top picture book on the development of natural and cultural conservation in Maryland. This, we think, will have broad appeal to the general public.

Complementing these archival materials, we have a collection of 50 taped oral history interviews conducted in 1980 by a summer intern with veterans of the Civilian Conservation Corps. The tapes are on deposit with the Maryland Historical Society's Oral History Project. They too represent a treasure-trove of first-hand information about the history of natural and cultural resources conservation in Maryland.

Other park cultural resources are intangible. Folklore is one example, and the systematic collection of folk traditions associated with certain parks should be part of a comprehensive inventory of cultural resources. Once collected, this material can easily be incorporated into park educational programs for public benefit. And in many cases, tangible park resources can be used to illustrate larger, intangible resources.

For example, Fort Frederick, previously mentioned, is the centerpiece of a Maryland state park of the same name. The fort itself is an impressive 17-foot-high stone wall, with four diamond-shaped bastions, encompassing two acres of land, with two major reconstructed buildings inside. As a tangible resource, the fort can be viewed, touched, and marveled at. We can interpret to the public its physical attributes, such as the bastions, and explain what function those attributes served. But to fully educate the public about the importance of Fort Frederick, we have to be conversant in the more esoteric story of the French and Indian War, during which the fort was built. Most visitors to Fort Frederick have, at best, heard of the French and Indian War (also called Seven Years War), but remember virtually nothing about it. Therefore we must be able to set the fort in its historic context, which is imperial rivalry between the English and the French in the 18th century, and, more importantly, the effect that particular conflict had upon the shaping of modern North America.

Similarly, the inextricably entwined

story of natural and cultural history needs to be brought down from the arcane level to the concrete for the public's educational benefit. For example, at Herrington Manor State Park, the stately hemlocks found around the lake grow in straight rows. That's not how God plants trees, but it is how humans plant them. The fact is, while Herrington Manor presents to the public a beautiful natural setting with, besides the lake and forest, rustic log cabins for public accommodation, all three of these resources are the product of human artifice, having been developed by the Civilian Conservation Corps in the 1930s. The park is a humanly landscaped "natural" resource. The interplay of humans and nature is the intangible story here, though tangible evidence remains to help tell that story. Moreover, this is a story that should be told in the context of our agency's tradition of reclaiming and managing natural resources that otherwise would be irretrievably lost and doing so in the public interest.

Public parks are stewards of cultural, as well as natural, resources that are important to the heritage of the public those parks serve. Conserving and interpreting those resources not only serve the altruistic purpose of preserving them and informing the public about resources important to them, but have practical results as well. First, an informed public is an interested public, and an interested public provides a powerful constituency in helping park professionals manage and enhance their park resources. Secondly, parks with enhanced cultural (and natural) resources are a boon to local economies because they attract visitors with disposable incomes. Nature and heritage tourism are now both recognized as important initiatives in the economic development of areas supporting natural and cultural attractions. The management trick for park professionals, of course, is how to maximize public benefit from the resources, without the public's "loving them to death" through overuse. This issue is of growing importance with the growth of population and affluence and the growth in appreciation of the nation's parks and their natural and cultural resources.

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David Graber

Scientific Values of Public Parks

The fit between public parks and scientific research is in some ways an obvious one. Many national, state, and regional parks were set aside, at least in part, to protect natural or historic objects of significant interest and value to society. Those same objects, whether they be a prehistoric kitchen midden or a vast natural ecosystem, are likewise attractive to the scientific community. Secondly, compared with other potential sites for field research, parks are relatively unperturbed by confounding variables. That is, those "objects of interest" have likely been less modified by intervening human activity: A tree in the forest probably got there through the actions of the local biotic community, and not because some helpful human planted it. Or if it was intentionally planted—say as part of an orchard during an earlier point in its history—the particulars of that plantation are likely recorded somewhere. This factor also makes parks invaluable reference points for comparison with the ever more extensive altered landscapes that have been converted to human utility. The tacit promise that the elements that parks seek to preserve will persist, or at least evolve through the ordinary processes of nature, makes parks and preserves especially attractive to the increasing numbers of scientists interested in long-term research. And lastly, parks are designated for public use: Scientists as part of that public may have a reasonable expectation of accommodation so long as their activities do not compromise park values.

Equally obvious on its face is the notion that a thorough knowledge and understanding of a park's resources are essential to its long-term preservation and welfare. The primary mechanism for the generation of such knowledge is scientific research. Moreover, the principles of science likewise inform park management, so that the outcomes of management actions are predicted in advance with some associated measure of reliability, and unintended consequences are minimized. As Sellars (1997, Chapter 3) documented so cogently, management for perceived publicly desirable or useful outcomes was the order of the day in the American National Park System until the 1940s. Those outcomes included such activities as reductions of predators and other "vermin" to increase herds of ungulates; manipulations of forest structure through removals and plantings, and vigilant fire suppression to increase vigor (in the forestry sense); "scene management" to mold parks toward accepted norms of landscape beauty; and provision of what were thought to be more entertaining experiences for visitors through such devices as wildlife feeding shows. By the 1960s, however, an increasing appreciation for untrammeled nature, warts and all, and greater scientific understanding of ecology and the important roles of

predators, tree snags and logs, and even native pathogens, for example, led to a growing "hands-off" respect for the work of natural processes and humility regarding the ability of humans to improve upon nature's handiwork. This was particularly notable in passage of the Wilderness Act in 1964, and the subsequent addition of many American national parks to the National Wilderness System. Neither the sentiment for intervention, nor the subsequent belief that nature knew best, was particularly well informed by formal research or monitoring to see if the system was behaving as predicted.

It is ironic, and in some ways quite sad, that the belief that parks could be preserved intact for future generations simply by "letting nature take its course" survived only about one generation's tenure in the park management business. Its inevitable demise was occasioned by the convergence of several factors. Among them are the juggernauts of population growth and development that have increasingly turned parks and preserves into isolated fragments of once-ubiquitous ecosystems, and the increasingly pervasive influence of anthropogenic stressors such as air pollution, climate change, and the global transport of pests, pathogens, and weeds. Concurrently has come the unraveling of the ecological paradigm of "the balance of nature" and the traditional assumption that intact ecosystems are fundamentally homeostatic. Within the halls of academe this has been replaced with a new appreciation for the dynamism of ecosystems and the powerful role that catastrophic events—droughts, floods, fires, volcanic eruptions, as well as long-term cycles, such as climate—play in periodically toppling the ecosystem applecart and even pointing it in new directions. Thirdly, the timely maturation of the natural sciences—ecology in particular—to the point where they have predictive power has radically increased their importance to park management during this time of accelerating planetary change. To a great extent, of course, scientific principles and knowledge of the biology of particular organisms or their ecosystems can be generated by research conducted outside parks. However, this ability to generalize remains quite limited, unfortunately, so that to a great extent predictive power is achieved only from information collected on site. Consequently, on-site research is more important to parks than it has ever been, and has not infrequently been directly connected to their preservation (Davis and Halvorson 1996).

It is increasingly true that parks and equivalent reserves provide the best—and not uncommonly the only—examples of unimpaired ecosystem elements such as wild rivers, uncut forests, untilled lowlands, and unroaded uplands. Although parks have become greatly altered nearly everywhere, natural catastrophic events such as fire and flood more frequently are permitted to play out there than elsewhere; hence the increasingly important research on how ecosystems reset after such events may require parks. Although examples of rare plant and animal populations are now protected through a myriad variety of government and private manage-

ment arrangements, parks typically offer the critical wild ecosystem context for rare species so important for many scientific studies, especially those involving ecology, that may be necessary to restore and sustain these species elsewhere in the wild.

A scientific objection to the use of parks for scientific research has occasionally been the intervening effects of park visitors. Without doubt, there are popular sites, such as Yellowstone's Old Faithful or Yosemite Valley, where the crush of humanity itself, as well as the infrastructure created to support it, are pervasive ecosystem influences. For the most part, however, and especially in the larger natural parks, visitors are highly localized and seasonal. Because they are generally forbidden to harass or hunt wildlife (with, in the U.S., the notable and bizarre exception of fish) or remove native materials (with the equally notable and bizarre exception of many plant foods for local personal consumption), in fact park visitors do not generally represent a perturbing influence on studies of wild ecosystems. As a consequence, closing park areas while scientific studies are underway is generally unnecessary.

Parks with interpretive educational programs benefit greatly from park-based scientific research. Park visitors, finding themselves in unfamiliar surroundings, are themselves on voyages of discovery: They are open to new possibilities. There is a freshness and immediacy to communicating the latest findings about this place in which they find themselves directly to park visitors. New discoveries—perhaps fresh from the previous field season and not yet published—may be provided to park educators by enthusiastic investigators. Sometimes scientists or their technicians make themselves available for public presentations, or may be persuaded to translate what they've been doing into understandable vernacular accounts. Also of great value is the presence of the scientific activity itself. Encountering wildlife fitted with ear tags or radio transmitters, discovering tagged trees, stream gauges, soil lysimeters, or remote weather stations with satellite uplinks, or perhaps meeting a scientific team itself engaged in excavating an ancient village site or coring trees to determine their age, is generally a highly positive, stimulating, and educational experience for park visitors. It renders the abstractions of science real to a public that has little direct experience with either the practice of science or its practitioners, and helps make the connection between research and the conservation of a well-loved place.

The fit between parks and scientific research may be greatest in the relatively new arena of long-term ecological research and monitoring. Traditional research, in national parks and elsewhere, was designed to fit well within a period of a few years—the typical amount of time allotted to a graduate student's research and (not coincidentally) the usual duration of a funding grant. The accelerating urgency of understanding the change taking place all over our planet, and an increasing need to place that change in the context of ecological time scales (decades to millennia) and evolutionary time scales (millennia to millions of years) has moved long-term

research and monitoring to the forefront of conservation biology as well as to that of parks' perceived needs for scientific information. The National Park Service has developed, and is now funding, an ambitious monitoring program intended to provide not only a more rational basis for park management, but to inform the larger society how and how quickly its world is changing (Davis 1993). Closely allied to this interest in long-term research is a newly rediscovered enthusiasm for cataloguing the earth's biological diversity before much more of it is lost (e.g., Wilson 2002). A so-called all-taxa inventory has been initiated in the Great Smoky Mountains National Park by a large consortium of public and private, scientific and lay organizations. In 2000, the All Species Foundation was established and dedicated to enlarging this effort to the entire planet. No doubt, many of their first efforts will occur in parks and preserves.

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Alfred Runte

Why National Parks?

Detailing why there are national parks in THE GEORGE WRIGHT FORUM would seem like rehashing what is obvious for those already convinced. Who better than park professionals know the evolution of the national parks, from cultural pride to biological sanctuary to historic preservation and urban redemption? More, who believes in these mandates without question? Who better understands—and again accepts—why the size and diversity of the system requires the federal government, including the power of the federal purse to buy out local frivolities and special interests?

It is the common knowledge of 130 years. At their largest, America's national parks maintain the hope of preserving natural systems; as historical parks, they remain the nation's shrines. Parks of the people should be owned by the people, managed by the people, and remain a statement of pride to the world. The national parks are indeed a national mission, the country acting in Congress assembled.

So again, why do we need the reminder? Simply, we need it because others do. Always ready to honor an open dialogue, we have let every detractor into the tent. Now some want to own the tent, and us to give it up. Our openness is their opening wedge. Certainly throughout the twentieth century the principal threats were the traditional ones—economic instead of intellectual. Even then, the controversy was whether parks were too large, not whether the parks ought to exist. People in the West (still with the vast majority of public lands) were themselves not so much against the idea of having parks as they were against the few that allegedly preserved too much.

Today the opposition is as likely to come from anywhere, and indeed, dares ask why the nation should have parks at all. To re-emphasize, in the past that was mostly a subliminal question, and largely from those perceiving some economic loss. Consequently, it remained possible to write off the worst attacks on the national parks as principally a regional outburst. By itself, the West did not speak for American culture, in whose heart affection for the national parks was secure.

The difference today is that the public lands are everywhere under attack—all of them, including parks. "The time has come to rethink wilderness," writes the historian William Cronon, for example. "This will seem a heretical claim to many environmentalists, since the idea of wilderness has for decades been a fundamental tenet—indeed, a passion—of the environmental movement, especially in the United States. For many Americans wilderness stands as the last remaining place where civilization, that all too human disease, has not fully infected

the earth." Think again, he further insists. If civilization is "contaminated," so must be the wilderness. "Wilderness hides its unnaturalness behind a mask that is all the more beguiling because it seems so natural. As we gaze into the mirror it holds up for us, we too easily imagine that what we behold is Nature when in fact we see the reflection of our own unexamined longings and desires."

Arguing with Cronon is not the point here; rather, it is why anyone in his position would make this argument. Historically, people of letters were the preservation movement, just as people in extractive industries were its antithesis. As Roderick Nash put it in *Wilderness and the American Mind*: "The literary gentleman wielding a pen, not the pioneer with his axe, made the first gestures of resistance against the strong currents of antipathy." Now it would appear that antipathy to the national parks has spread even to America's universities. Certainly William Cronon's, the University of Wisconsin, is a major institution. So is the University of California at Santa Barbara, which has not replaced Roderick Nash since he retired.

For the question, why national parks? both examples are troubling portents. There is more going on here than free speech or a predictable Devil's advocacy. Increasingly, scholars are serious about the argument that the national parks are out of date. It begins by chastising anything American that allegedly fails diversity and multiculturalism. Fine, start over with that history; how does it follow the parks have failed? Is there another institution that has done more for international relations and goodwill? Is it not possible the tensions of the Cold War and European colonialism were eased by the spread of parks? Is any country poorer for having established them, either culturally or economically? Would any country—would the world—be better off without the natural wonders and wildlife populations the national parks have undoubtedly saved?

Where does it say the national parks reject humanity just because they demand of civilization a bit of sacrifice? What do diversity and multiculturalism mean—the right to forget posterity? Yes, parks are always a deprivation to those who wanted something else, and to anyone who wants it now. They fall hardest on the local populace whose extractive traditions may be disrupted. The point is whether they should be disrupted, as in what would happen to those resources in the future were they not. Do we personally go on a diet just for today, or because we hope to live more tomorrows? As it stands, technology far more than parks has forced people to give up one livelihood and accept another. Blaming parks is but another convenient scapegoat for changes that would have come to the world regardless.

The worry is when citizen educators cannot see the difference. After all, it is in universities that we prepare the future to resolve the issues without choosing scapegoats. If the parks must give way to anyone, whether led by the Sagebrush Rebellion or New Left—or others—what is it we have really saved? Besides, the vast majority of parks are marginal lands, both in the

United States and abroad. If they had ever been more than marginal the vast majority would not have been parks in the first place. In truth, the straw man of wilderness is so easily blown over there is practically no straw there.

Meanwhile, the voice of history reminds us that the critics are wrong. Parks have always been more than sentimental. As early as 1870, the Berkeley geologist Joseph LeConte took his students to Yosemite Valley to study science. That was two years even before the establishment of Yellowstone National Park, and only six after Congress granted Yosemite Valley to California. True, the general public was drawn to Yosemite and Yellowstone as repositories of cultural nationalism—waterfalls, mountains, canyons, and geysers that could be waved under the nose of Europe. Scientists, on the other hand, were already looking behind the scenery. As America's "outdoor laboratories" the parks filled a critical, practical need. When William Cronon describes affection for wilderness as "unexamined longings and desires," he most certainly does not speak for geologists and biologists who believed in parks for the study of creation.

It is a relationship that has only grown, flourishing today in cooperating arrangements between the National Park Service and a number of universities—many institutions if the list includes individuals pursuing contracts. But again, beyond that, history by the term "tradition" means something larger. It is rather the vitality given conservation by intellectuals who made no apologies for believing in parks. Consider Wallace Stegner, as a professor at Stanford University, declaring the national parks "the best idea we ever had." Consider Joseph Grinnell, A. Starker Leopold, and Roderick Nash at the University of California, urging—indeed inspiring—their students to pursue careers on the public lands.

What happened to the tradition of a national faculty pursuing criticism without being cynical? It is the cynicism that is new—and dangerous. Suddenly, as another example, the national parks are "unfriendly" to women and minorities. But again, is it true? As early as 1967, I was told in the Washington, D.C., headquarters of the National Park Service that slots in the agency were being "banked" for women and minorities. I should not expect an easy time of it being hired right out of college. When in 1980 I did put on a Park Service uniform as a seasonal in Yosemite, my colleagues indeed represented every ethnic group with a claim to the nation's past. As interpreters we were Native American and Hispanic and European and African American. We were equally divided between women and men. What kind of "unfriendliness" to women and minorities is that?

If the point is really to suggest that the interpretation is flawed, again, where is the evidence? In Yosemite, the tragedy of the Miwok was boldly interpreted, and no less than the contributions of John Muir. Just because our emphases were often different, no one would have dreamed of saying the park was illegitimate. The Miwok had been dispossessed, and that was tragic, but so would be the tragedy of dispossessing the future of the right to

have national parks.

Now that the teaching of parks has turned either my way or no way, it is no wonder the question why parks has regressed, as well. Fashionably, revisionists second-guess the past rather than admit its events can never be changed. Then would we change back the national parks into other than protected lands? Again, it would be a stupid question were it not for the fact that many have proposed just that.

Fortunately, it is not a proposition likely to get very far because history has answered it boldly. The very fact we have parks says loudly we wanted them, and yes, the royal "we" is here inclusive. Minorities do not need to be patronized to fall in love with parks.

All we need protect is the existence of parks and the dream will catch up with everyone. For me the year was 1959. My father had died the previous year, leaving my mother, my brother, and me without our primary means of support. We were that very family now allegedly denied the parks, living just above the poverty level first identified by the federal government in 1964. Worse, my mother had only a ninth-grade education, having been forced out of school during the Great Depression to help save the family farm.

Cynically, what had the national parks ever done for her? Just this—they had inspired her. Rural Americans, no less than urban Americans, could at least subscribe to national magazines. *Life* and the *Saturday Evening Post* were among her favorites. In the movie *It's a Wonderful Life*, as we recall, George Bailey waves at Mary a copy a *National Geographic*. See here what I hope to see. As poor as my mother was she could have such dreams. She could dream beyond her limitations to the hope of one day getting out of Bedford Falls (in her case, Binghamton, New York).

When finally her opportunity came it was because my father had left her a small life insurance policy. Well might she have spent it on many other things we needed. Instead, she gathered her courage to realize her dream: It was more important that she and her family see the country. It was time to live her dream and see the national parks.

It was not a new car we drove west (she drove, my brother and I navigated) but rather a station wagon five years old. All four tires were retreads. But it was all we needed to feel the magic of a country as magnificent as it was healing. Although at the time we knew little about who had established the national parks, we needed nothing more than being there to convince us they were special. Nor did mother feel intimated, or uneasy, coming as a woman to the national parks. Her only confrontation was with three bears in the Tetons she believed had gotten too close to our tent. Mother prevailed, as she always did, believing that the bears themselves had done nothing wrong.

She returned from that trip determined to obtain her high school equivalency (which she did) and that her sons would finish college (which we did). If, at the opening of the twenty-first century, that is such a troubling result of wilderness, I thank my good fortune that I was born in the twentieth century before the world had turned so selfish.

It would seem that being against

everything has replaced being for anything; institutions need only be attacked rather than be explained. Critics know how to drag everything down. It is not a matter of proving whether a charge is warranted, but rather making as many charges as can be imagined.

Fortunately, an honest debate can always be won, and the national parks need only be defended simply. "I am glad I shall never be young without wild country to be young in," wrote Aldo Leopold. "Of what avail are forty freedoms without a blank spot on the map?" Is the blank spot artificial, in that maintaining it takes constant effort? Of course. Does it mean that some people are denied access because they never wanted it to be blank? Of course again. But does that mean the idea is bogus? No, it simply means that the idea of preservation in any form is controversial.

Those who dreamed the national parks said all that is needed about why they should exist. They knew the world to be changing destructively, and they were right. They knew that beginning with indigenous peoples everyone would get swept up in those changes, and they were right again. There would be no turning back the clock on technology and population. On that point their foresight was downright sobering. The country that invented the national parks had a population of 30 million. When my family and I visited the parks the population was six times that. Within what remains of my lifetime it promises to double again.

The time is past for arguing who has been dispossessed of what used to be the privileges of the public lands. We have all been dispossessed of the freedom to choose the future as individuals. Buying more time, we could sacrifice the national parks, but it would be a huge sacrifice and not very much time. Every ending would be the same. Now added to a more crowded world without natural resources, we would have bought only a future without national parks.

As for the charge that wilderness is artificial, remember that the forces creating the national parks are abundantly real. Yellowstone National Park could blow at any time; Mount Lassen did blow, and will again. Crater Lake exists because Mount Mazama exploded with the force of a million bombs. The Tetons still are rising and Jackson Hole falling, and there is no stopping the earthquakes that rattle Yosemite.

Only we can allow these experiences to be cheapened; they are hardly that in themselves. I think what my life would have been without the national parks, and I would not want that for posterity. I concede all that is imperfect about civilization and the expenses so many pay for others' preferences. The national parks may indeed be a preference, but they are hardly a frivolity. The real debate here is not about extravagance. It is rather about believing that some things are larger than we are, and that such things are always so good to have.

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James Dunmyer

State Parks: The Backbone

State park systems in the United States are the backbone of the park network that exists from the national level to the tiniest unincorporated township in America. State park systems have been created by all techniques imaginable, are managed in a variety of innovative ways, and are usually unique when compared with their counterparts. These state systems underlie and support the body of public lands that provides the diverse recreation for our diverse society. We love our national parks. We plan our vacations around them, when we can—but some of us never get the opportunity to visit them. We love our local parks, using them for softball and soccer leagues, pick-up basketball games and a variety of active recreational opportunities—but they are not always the quietest places in our neighborhood. State parks are close, solid, safe, and dependable ... essential to our inner health, and often overlooked until a problem surfaces.

The decade of the 1990s was not kind to state parks. Looking back, it was a constant struggle for survival for state parks in a system that continued to expand with new public lands while operating and maintenance dollars for existing facilities declined. State parks just can't compete against schools, hospitals, or prisons in a tight economy. Their failure to compete is understandable, but it doesn't mean that they are not important. During that same period of the nineties, twice as many visitors came to use the country's state park systems. Part of the reason for the increased attendance was that the economy kept folks closer to home. We also have more people now, a problem that will never go away. So, the system will continue to increase in size, the visitors will continue to increase in number, and the backbone will be expected to carry these challenges.

You should not think that state park managers ignored all these realities. They're pretty proud of how innovative they became. Early in the decade, some parks were closed in an attempt to deal with shrinking budgets. That action caused a huge outcry from the surrounding communities. The neighbors were upset, and they were vocal about it. They realized that their state park had been a dependable friend who brought peace and safety to their neighborhood. In retrospect, that action of closing a state park put the first spotlight on the system and can be credited for the dramatic increase in volunteers. Those volunteers have grown into a series of "Friends of" groups that provide perpetual care to their neighbor. Today, the system could not operate without them. As parks were re-opened with volunteer assistance, individual parks were clustered so that they could pool their diminishing resources and prioritize their efforts. Programs followed

to reduce commitments of scarce resources. "Grow, Don't Mow" and "Trash-Free Parks" not only helped on the expense side of the ledger, but they also allowed park professionals to highlight key concepts to visitors, such as the importance of natural resource management and the need for recycling. Both the state park system and individual parks within that system were examined under a microscope; that examination was the first step in the development of a health plan for the backbone.

The health plan required the system to define its purpose, its place in the body of national public lands. State parks have a distinct niche between the national park system and the local park system. Even though examples from each of those systems are resident in any state park system, emphasis on the management of natural resources and on "passive" recreation became the dual focus of the state system. (More on the term "passive" later.) Diversity exists across the entire system, both in what a state park is and in who comes to visit it. State parks seem to epitomize the idea of uniqueness. They come in all shapes and sizes, were bought or donated for myriad reasons, have passionate supporters and detractors, have a local flavor with state-wide or regional appeal, provide the perfect setting for user conflicts (no two of which seem to be alike), and are the product of the physical environment that defines their individual identities.

As the 1990s continued, state parks were positioned to take advantage of these identities. Concurrently, different techniques were tried in individual state parks in order to deal with the fiscal crisis. Parks became more business-like, orienting towards making money as a necessary requirement for survival. Although the system was successful in increasing revenues to offset the decreasing taxpayer dollars, problems arose because state parks are *not* a business. They are part of state government and can have an unfair advantage over the private sector when it comes to competing for the almighty dollar. So, entrepreneurial efforts had to be tempered to avoid direct competition with the private sector. Moreover, just like a business would do, techniques to reduce costs were explored while attempts were made to bring in more revenues. Once again, the system could not operate exactly like a business, since parks are unable to "close profit centers" that are operating in the red. Managers had already learned that closure was not really an option. In addition, park customers are not "always right" and can be downright dangerous at times, requiring a different customer-service approach than one would expect from a business.

Privatization became fashionable in government in the nineties, and state parks tiptoed into that arena. In Maryland, a complete park was leased to a non-profit group that had a special interest in keeping it operational. After long negotiations, the lease was initiated with a two-year trial period that would allow the non-profit to emphasize that group's special interest while the group agreed to keep the park open for the general public. Public land management learned a lot in that process. They learned that well-mean-

ing people with a special interest could not provide the public services that the state park system is charged to perform. In other words, it is impossible to delegate the "public" portion of the system's responsibility. Based on that experience, the system now "partners" with special-interest groups so that a state park presence is maintained at the facility. Major maintenance repairs are paid for by the state park system while the non-profit group emphasizes its special interest, welcomes everyone to use the facilities, and covers the expenses of the day-to-day operations. Time will tell if this new approach is successful.

Toward the end of this past decade, significant changes occurred in the use patterns of state park visitors. "Passive" recreators weren't just coming to picnic or swim or hike the trail systems as they had in the past. Now, they are becoming "flow through" recreators, moving through a series of state parks by backpacking, riding mountain bikes, paddling kayaks, or a combination of techniques. These recreators are looking for more challenges, more risks, such as rock climbing or rappelling, in a system that prides itself on providing a safe environment for all visitors. Now, many of these same visitors are demanding the right to take more personal risks. The requests for these forms of recreation will continue to increase, far outstripping the ability of a state park to provide the service. A new role for state parks is emerging, one that requires them to be facilitators or links between the "public" and the adventure providers. Once again, the system is involved in business development and economic benefit that will affect directly the region where the state park is located. Nature tourism is the trend for the future, underscored by the fact that society is moving towards shorter work weeks, more leisure time, and much more emphasis on healthy lifestyles. That trend brings with it the potential for significant impacts on natural resources, the very essence of the state park system; and that trend becomes the major threat to the health of the public land backbone.

We cannot allow those impacts to run rampant. Much like picnic sites are rotated to minimize impacts to the immediate area, we now need to rotate and adjust trail usage so that we don't wear out the trails. We need a better understanding of "carrying capacity," an inexact science that should provide us with an early warning system so that we can re-route visitors before they cause irreparable damage to the ecosystems that create a state park's identity. That re-routing is easier said than done. When a trail system in a state park is studied, some user group will invariably object to a trail closing, even though it is obvious that the trail has had severe impacts on it. Trying to close a trail before the impacts are apparent is a real challenge and hits at the core of educating visitors in a manner that will generate a stewardship ethic in all of them.

Inculcating a stewardship ethic in each citizen is the ultimate solution for the long-term health of natural resources in our country, and, similarly, is the ultimate solution for the continued health of the backbone, the state park systems. Creation of the stewardship ethic in all of us begins in

the educational system. We can't focus on just the young student at this point because everyone needs to hear the message. We need a place to "spread the word." State parks have long been the outdoor laboratory for the entire educational system, from pre-school through doctoral dissertations. You can study nature macroscopically or microscopically within their boundaries. You can be rigorous or casual, serious or lighthearted. On any given day, you can observe both levels of study occurring side-by-side as a recreator passes by in some mode of travel. You have just discovered the state parks' secret. They are flexible, much like a healthy backbone that allows the body to accomplish the full range of motion needed to meet the diverse requirements placed on it. And, they are the perfect place to spread the word. State park systems probably come the closest to meeting that famous cliché, "You can't be all things to all people." They are the places that blend conservation with preservation, a balancing of needs, of demands, of wishes. They are the dependable friend that will be there when you need help, regardless of the problem you face. They represent the history of the region where they reside, both from the landscapes they protect to the activities they support. State parks *must* be healthy to stand the rigors of those diverse demands.

State parks are perfectly aligned to deal with the recreational needs for the new millennium. They can provide a nearby escape, an opportunity to take deep breaths, to think, to relax when you can't afford the time or the money to go far away. Simultaneously, they can offer a wide array of experiences that are nature-based with increasing levels of difficulty and risk, either free of charge or at a reasonable cost. They are the daily hosts and educators for school groups of all ages, for adults from all walks of life, and for the residents of nursing homes. They are the open space that is so desperately needed as the population continues to grow and continues to require more homes, more schools, more recreation, more everything. They continue to improve accessibility for the disabled communities throughout the system, be they fishermen or hunters, campers or bathers, bird watchers or trail users. The ultimate goal of every state park system in America is a barrier-free recreational experience for all.

The backbone must be ready to meet the demands of millions of visitors annually. The backbone must be flexible to fill its essential role in the system of parks that exists in America. What state parks need the most are advocates. Unlike their federal or local counterparts, state park systems normally do not have an organized constituency. The decade of the nineties placed stress on the backbone—but the decade also brought a host of friends to help a neighbor in distress. Those friends need to ensure that their state government recognizes the value of its state park system and commits resources to keep that system healthy and growing. State parks can help themselves, and they do; however, they cannot do it alone. They are not a business. They are not a profit center. They are the future of recreation for you and your family, and they need your support and your voice at

the state government level. That need for support will continue to increase as the population continues to increase, placing more demands and more stress on the constantly expanding system of public lands. As we all realize, stress brings out the worst in our own backbones. The backbone system of our national public lands has felt stress. It will survive, of course; and, the system will continue to have its fair share of aches and pains. We must not let those stresses cause a failure requiring major surgery or, even worse, place the entire body into serious decline. How that body functions in the new millennium depends on all of us. Get involved. You'll love it, and you will feel *much* healthier.

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Ikuko Fujisaki

Management of Resources-Based Tourism at Tikal National Park in Northern Guatemala

Introduction

Resources-based tourism is often an economic necessity in natural resources-dependent communities. Tikal National Park, located in the Petén region of northern Guatemala (Figure 1), contains an ancient Mayan urban center and was declared a mixed cultural–natural World Heritage Site by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 1979 (National Geographic Book Service 1987). Since then, the number of visitors has been growing and the park has become an important tourist attraction in Guatemala (Matola and Platt 1998). Currently the Guatemalan government and non-governmental organizations (NGOs) are making efforts to develop resources-based sustainable ecotourism in the Petén (Norris and Wilber 1998). This study investigates the economic contribution of Tikal to the economy of Guatemala and the Petén region, and examined visitors' satisfaction level, attitudes toward conservation, and demographics to identify the future possibilities of ecotourism promotion in the region.

Figure 1. Map of Guatemala showing location of Tikal National Park.

Environmental and Development Aspects of Tourism in Guatemala

The land area of Guatemala is 108,000 sq km, of which 35% is covered with forest (World Bank 1999). The Guatemalan government's efforts to protect historically and naturally valuable areas increased the number of protected areas from 13 in 1989 to 17 in 1994. From 1989 to 1996 the extent of the protected area estate nearly doubled, reaching 18,200 sq km, or 17% of the total land area (Figure 2). International tourism is an important source of economic growth in Guatemala. During the period 1995-1999, tourism generated US$394 million in economic benefits and created 63,291 jobs nationwide (Global InfoGroup 1999), and the number of international tourists increased 46% (Figure 3).

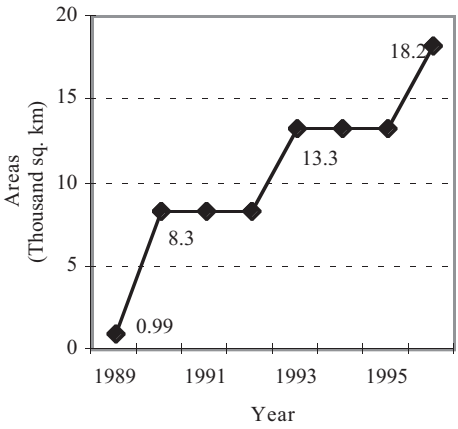

Figure 2. Nationally protected areas in Guatemala. The data are based on World Development Indicators (World Bank 1991-1999).

Ecotourism, Conservation and Regional Development

Ecotourism is a growing segment of the world tourism industry. The term "ecotourism" is a variant of "alternative tourism," in contrast to "mass tourism" (Cater and Lowman 1994). Ecotourism is defined as tourism to protected natural areas and stresses ecological and sociocultural integrity, responsibility, local participation, education, and sustainability (France 1997; Wight 1994).

In the past, it was perceived that an environmental program could not contribute to local economic development, and vice versa. Currently, it is recognized that ecotourism could promote sustainable development that addresses both economic development and environmental conservation (Theophile 1995). Advantages of ecotourism include diversifying local economies and achieving independence from the donations upon which environmental programs often depend. New employment opportunities in tourism-related services are the most direct local benefit. Other possible economic benefits include income from locally produced goods and fees collected from tourism (Sherman and Dixon 1997). These benefits motivate local communities' awareness of environmental and resource protection.

Central America is one of the world's major nature tourism destinations; at the same time, its nations are

facing economic and social difficulties (Weaver 1994). Tourism's contribution to the cumulative regional Gross National Product is 2%. The host-to-guest ratio ranges from 0.8:1 to 52:1. In Guatemala, the estimated host-to-guest ratio was 21:1, ranking in the middle among the 10 Central American nations. These countries are promoting resources-based development approaches that aim to integrate sustainable ecological and economic development (Ashuvud 1991).

However, ecotourism in these countries continues to constitute only a small fraction of tourist revenues. A lack of local participation in planning and implementation, and small local economic absorption of benefits generated by ecotourism projects, are still problems (Whelan 1991). Additionally, over-dependence on tourism industries (Lea 1999; Cater 1997) and increased retail prices, land and property values, and taxes are potential negative side effects.

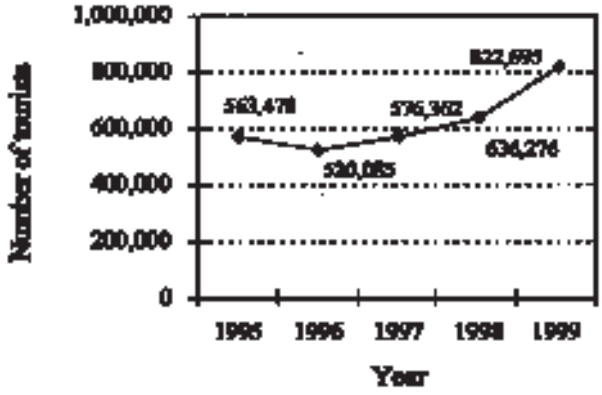

Figure 3. Number of International Tourists in Guatemala 1995-1999. The data were provided by the Seción de Estadistica (Section of Statistics) of Institute Guatemalteco de Tourismo (INGUAT), Guatemala's tourism agency.

Methods

Study site. The Petén, which covers 33% of the nation's land area, is a culturally and ecologically significant region in Guatemala. According to the Consejo Nacional de Áreas Protegidas (CONAP), the national council for protected areas, all of Guatemala's biological reserves, 99% of its cultural monuments, and 96% of its national parks (56% of all protected areas, excluding "special protected areas") are located in the Petén. Within the past few decades, rapid modernization and growth have occurred in the Petén (Reining and Soza 1998). The region's population has increased from roughly 20,000 in 1960 (Schwartz 1990) to more than 300,000 in the mid-1990s. Despite this, a study revealed that the region's income had decreased substantially (Ashuvud 1991). The Guatemala government explains that this is the result of a lack of efficient natural resources management and strategic planning of the region's resources use. It requested the assistance of IUCN–The World Conservation Union to formulate a national conservation strategy to improve resources management for long-term development. Local and international conservation groups also have been facilitating multilateral projects to develop community-based eco-

tourism and encourage visitors to explore attractions of the Petén. According to the Ecotravel Center (www.ecotour.org), because visitors typically spend only one or two days in the region, the local communities have received few benefits from tourism, although tourism is one of the Petén's primary industries.

Annual visitation to Tikal National Park has grown considerably since World Heritage Site declaration (Figure 4). From 1981 to 1999, the number of non-resident park visitors increased eight times to 110,494, and resident visitors increased 35 times to 27,400. This was 17% of visitors to Guatemala in 1999.

Data collection. Between 1990 and 1999, the average annual increments of resident and non-resident visitation were 6.6% and 6.9%, respectively. Using past data as a guide, the 2000 visitation was estimated to be 117,787 for residents and 29,291 for non-residents, or 147,078 in total.

The survey instrument included five types of questions: trip characteristics, expenditures in the Petén, satisfaction level, opinions, and demographics. The original English-language questionnaire was translated into Spanish, French, German, and Japanese. A park visitor survey was conducted during May 2000. All households who were spending time in the parks' two main sites (Gran Plaza and Temple IV) were asked to participate in a short on-site interview. An 87% response rate yielded 341 completed interviews, including those of 45 residents and 296 non-residents. Questionable answers were excluded.

Results

Trip tendency. The non-residents' number of days stayed in Guatemala varied from 1 to more than 100. The average was 17 days, while 58% of visitors spent fewer than 10 days in Guatemala. The proportion of residents staying overnight in the Petén region (78%) was slightly higher than those of non-residents (72%). Sixty-three percent of the non-residents spent one or two days in the region, while 62% of the residents spent more

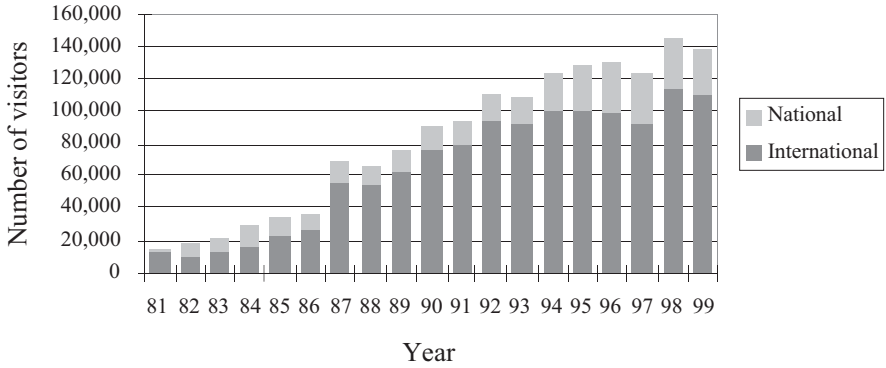

Figure 4. Number of visitors to Tikal National Park, 1981-1999. The data were provided by the Seción de Estadistica of INGUAT.

than three days. On average, residents stayed longer (3.8 days) than non-residents (2.8 days).

While 13% of non-residents traveled alone, all the residents traveled with other people. The average number of household members in a party of resident visitors (3.2) was larger than that of non-resident visitors (1.8). Only 30% of the non-resident visitors were using package tours.

Estimating visitor expenditures. The mean expenditures per household per trip within the Petén were $176.21 for residents and $192.62 for non-residents (Table 1). Dividing the average total household expenditures by the average number of accompanying household members, the average expenditure per trip per person was $55.07 for residents and $107.01 for non-residents. On average, non-resident visitors spent nearly twice as much as did residents. Transportation, lodging, and food composed about 60% of total expenditures for both groups. The "other expenditures" in Table 1 included Internet, telephone, and facsimile services, and laundry.

Using the predicted number of visitors to the park, the total annual expenditures were estimated as follows:

$$E_n N_n + E_r N_r$$

where "E_n" and "E_r" are average household expenditures of non-resident and resident visitors, respectively, and "N_n" and "N_r " are the estimated number of days of non-resident and resident visitation in 2000, respectively. The estimated direct annual expenditure was $1.6 million by resident visitors, $12.6 million by non-resident visitors, and $14.2 million in total (Table 2).

Satisfaction level and opinions. Overall, the survey participants indicated high satisfaction levels with the service, facilities, and environment in the Petén (Figure 5).

For both groups, safety and hotels in the Petén received high ratings. For the residents, information availability and price level received the lowest ratings. Those who were dissatisfied with the price level pointed out the high prices in the region. For non-residents, information availability and transportation were the two issues with the lowest ratings. Levels of agreement with described statements were also converted to numerical values (Table 3). Chi-square test showed different levels of agreement between residents and non-residents.

More than 80% of the respondents answered that they were willing to pay higher entrance fees to support park conservation. Compared with the non-resident answer, the resident answer was skewed to "strongly agree" (Figure 6). The mean value was slightly higher for resident visitors (3.3) than for non-resident visitors (3.1). More than half of the respondents thought that the restrictions imposed for conservation purposes in the park were enough, while nearly 30% of the non-resident visitors did not think so (X^2 = 16.91, df = 2, significance = 0.0005). A majority of both resident (66%) and non-resident (53%) visitors answered that the number of the days they spent in the Petén was not enough (X^2 = 18.16, df = 2, significance = 0.0005).

Table 1. Itemized average household expenditures of resident and non-resident visitors.

Expenditure categories	Resident		Non-resident	
	$	Percent	$	Percent
Lodging	39.75	22.6	46.04	23.9
Transportation within Petén	39.68	22.5	32.86	17.1
Eating and drinking establishments	32.64	18.5	35.06	18.2
Souvenirs and gifts	22.11	12.5	11.89	6.2
Food from grocery stores	10.51	6.0	6.78	3.5
Car rental	9.51	5.4	1.77	0.9
Tour packages or guide services	6.90	3.9	28.70	14.9
Entrance fees	4.07	2.3	15.07	7.8
Tips	1.86	1.1	6.90	3.6
Other	9.19	5.2	7.54	3.9
Total	176.21	100.0	192.62	100.0

Demographics. The respondents were from 32 countries. The five highest proportions were from the United States (26%), Guatemala (14%), England (11%), Germany (6%), and the Netherlands (5%). The mean ages of resident and non-resident visitors were similar (Table 4). The largest proportion of visitors was in the age class 21 to 30 for both residents (44%) and non-residents (53%). The proportion of non-residents that were between 11 and 30 was 63%. The proportion of males (69%) was more than twice of that of females (31%) for residents, while the female proportion (57%) was larger than the male proportion (43%) for non-residents. The ratio of single to married was exactly equal for residents, while 72% of the non-residents were singles. Seventy-seven percent of residents had less than $20,000 in annual income. For non-residents, 43% answered that they had less than $20,000, and 78% answered less than $60,000.

Discussion

The results of this survey showed that despite the park's inconvenient location, people did not stay long in the region. However, more than half of the survey participants answered that the number of days they spent in the Petén was not enough. A previous survey found that ecotourists were older than mass tourists, and the age group 45-64 was likely to have more holidays

Table 2. Estimated annual expenditures by park visitors.

	Total per trip expenditure per person	Number of estimated visitors	Estimated total expenditures by visitors
Resident	$55.07	29,291	$1,613,055.37
Non-resident	$107.01	117,787	$12,604,386.87
Total			$14,217,442.24

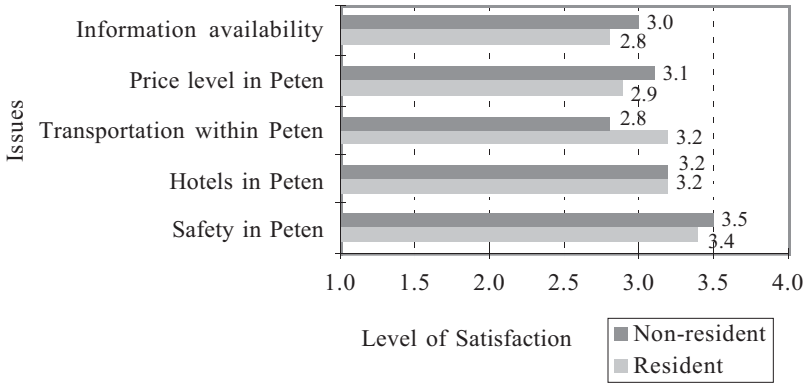

Figure 5. Level of satisfaction. Mean is based on the scale: 1 = very dissatisfied, 2 = dissatisfied, 3 = satisfied, 4 = very satisfied.

annually (Boo 1990). However, this study showed a relatively young mean age for visitors, and a majority of non-resident visitors were singles. The relatively low average household income of non-resident visitors was probably because of variability in their nationalities, their youth, and the large proportion of single visitors. Nearly even gender proportions for non-resident visitors indicated that the park attracts both males and females. Seasonality may influence these visitors' demographics.

Despite residents having longer stays and a larger average number of household members traveling with them, the average household expenditure of non-residents ($192.62) was higher than that of residents ($176.21). The estimated annual expenditure in the Petén during 2000 was $14.2 million. All visitors' expenditures may not be locally absorbed. However, these direct expenditures should generate an indirect and induced economic impact, including a general rise in income level, creation of

Table 3. Level of agreement. Mean is based on the scale: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree.

Statement	Resident mean	Non-resident mean
1. Attitude toward conservation in the park		
You will be willing to pay more entrance fee if it is used for environmental conservation of Tikal	3.3	3.0
2. Perception about conservation in the park		
The restriction in the park is enough to protect the environment	3.2	2.8
3. Satisfaction with trip length		
The number of days in Petén region is enough	2.4	2.4

Table 4. Demographics of visitors.

Characteristic	Resident	Non-resident
Age (mean)	31.5	31.1
Gender proportion (male:female)	69:31	42:57
Marriage status (single:married)	1:1	7:3
Income (median)	<$20,000	$20,000-39,999

employment, and increases in governmental tax revenue.

Both groups were highly satisfied with the facilities, services, and environment in the Petén. Tourism-related facilities, infrastructure, and services in the region are probably well developed to host various types of tourists from abroad. The majority of respondents answered that they were willing to pay more entrance fees for the park's conservation. This indicates the high environmental awareness of the visitors.

visitors will bring a larger gain to the region's economy.

There are possibilities for attracting visitors who would stay longer in the region. The wide range of ages, even male and female gender proportions for non-resident visitors, and relatively lower average income indicate variability of visitor types. More than half of the non-resident survey participants were in the age bracket of between 11 and 30. These people may have the flexibility to participate in locally designed ecotourism pro-

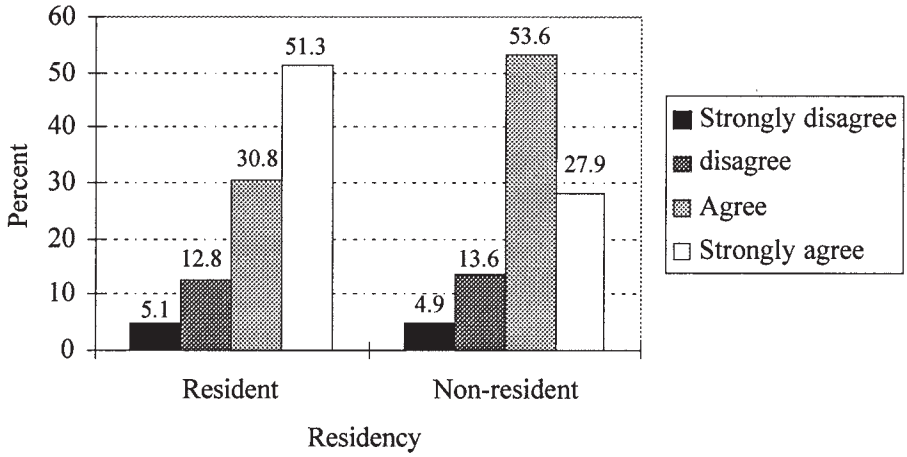

Figure 6. Level of agreement with Statement 1 (X2 = 9.51, df = 3, significance = 0.025).

Recommendations

Based on the rising popularity of ecotourism and increased visits to Tikal National Park during the past 20 years, use of the park will likely increase in the future. Having more

grams. Improvement of facilities and services is an issue managers should address. The issues that showed a lower satisfaction level, including information availability, price level, and transportation, should be

addressed first when planning future programs. For example, prior information about ecotourism programs and other national parks in the Petén region could influence the length of stays of visitors. Since more than half of the survey participants answered that the number of days they spent in the Petén were not enough, there is a potential to extend visitors' stay in the region.

Reassessment of the park's conservation measures and entrance fees will help future management planning. Nearly 30% of the non-residents answered that visitor restrictions in the park were not enough for environmental protection. More than 80% of the respondents answered that they were willing to pay a higher entrance fee for improvement of environmental conservation of the park. To be environmentally sound and to promote the moral and ethical responsibilities of all players are basic premises of ecotourism development (Wight 1994). These efforts facilitate achievement of long-term local and national benefits from resource-based tourism, as well as sustainable resource management.

Acknowledgments

I wish to thank the interviewers, Sergio, Hector, Chie, the members of the Association of Guides Tourism in Petén, José Luis Montúfar of CONAP, and the Seción de Estadistica of INGUAT for offering information resources. Special thanks go to Jon Moris, Dale Blahna, Akiko Ogawa, and Paul Hogue for their invaluable advice.

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