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The George Wright Society

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

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The George Wright Society was founded August 18, 1980 by Drs. Theodore W. Sudia and Robert M. Linn, both former Chief Scientists of the U. S. National Park Service. The Society is chartered in the State of Delaware, in accordance with the laws of the State of Delaware and of The United States of America, as a nonprofit educational and scientific organization dedicated to the protection, preservation and management of cultural and natural parks and reserves through research and education.

 The George Wright Forum is published quarterly. The Editorial Board of The George Wright Society welcomes articles that bear importantly on objectives of the Society, and contributions from readers in the form of letters to the editor. Manuscripts, letters and news items (preferably double-spaced typewritten) should be addressed to: Jean Matthews, Editor, The George Wright FORUM, Room 126 Forestry Sciences Lab., Oregon State University, 3200 Jefferson Way, Corvallis, OR 94331.

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Preface

At the 1986 meeting of The George Wright Society's Science in the Parks Conference, President Christine Schonewald-Cox suggested that The George Wright Forum should become more pointedly a forum for floating ideas and opinions that invite response from the membership – suggesting hypotheses that have not yet been subjected to acid testing, stating principles that others may find debatable or ill-conceived – in short, that Forum should be more vigorous in the exercise of cage-rattling.

While we have tried to do that whenver the opportunity presented itself, we have never re-stated our purpose in exactly that way, nor have we specifically invited commentary from our readers.

In this issue, you will find a point of view as to where the National Park System is rooted and where its growth should be leading it. The author, Bill Brown (who wrote Islands of Hope), has a deeply thoughtful set of beliefs, which he presents in his typically image-provoking prose – suggesting analogies whose truth is indisputable and which tend to lend their strength to his arguments. We don't expect everyone to agree. We think that some of you will not want to be on 'the other side,' but will prefer a different emphasis or perhaps even see a different outcome.

This issue of Forum presents the varied views of others as well – some from the 1988 Conference in Tucson, some from recent research activities in the parks, and so on. A few might disturb you; all invite comment.

The editorial gates are wide open!

Jean Matthews, Corvallis, Oregon

Values and Purposes of The National Park System[1]

William E. Brown

In value systems as in matters of taste there are no absolutes. Value systems are cultural artifacts—part old, part new—that ideally guide a society on its way.

In stable times of social cohesion we *know*, in a general way, the values that guide us. In times like this one—the dynamo screeching, society fragmented, the future more threat than fulfillment—we must *define* our values. Then comes the question, who is "we"?

Tradition, the lodestone of value systems, is everywhere under attack. Innovation displaces the old and the trusted. Exploitation through commercialization degrades tradition. Cultural illiteracy breaks the links of tradition. Immigration brings its own traditions.

Traditions of social behavior and valuation derive from social practice, social function. Social evolution inevitably produces a social dialectic. Traditional modes and values either survive by adaptive modification in the new synthesis or they die after a period of nostalgic lingering.

In this context, defining the values and thus the social purposes of the National Park System is no easy matter.

In the very early days the parks themselves were all more or less alike. And their critical constituency (the elite, literate, and powerful) was similarly homogeneous. That constituency swung enough weight to establish and maintain an instant national parks tradition and value system. For several decades, until after World War II, that core constituency accepted recruits and converted them to the value system. This could occur because the flow of recruits was gradual. Increasing geographic mobility, meaning the possession of a family car, coincided with gradually increasing social mobility. For these recruits, visiting a national park was an earnest, a symbol of stepping up in American society. Entering a park was like entering a cathedral or a museum. And the recruits respected these sanctuaries and followed the rules. The inculcation of values was profound and personal. The patrons of the grand hotels set the social tone. Friendly park rangers mingled and talked with the visitors; their interpretive brethren took the people in tow and expounded personally and at length upon the glories of Grand Canyon, the Yosemite, and Yellowstone, or the heroic battles and personages of our history. All of this represented social progress and a genteel democratization of the parks. Very largely, the value system flowed from the center outward. And the substance of the value system was that the parks became more than pleasuring grounds; they became mythic landscapes and bearers of tradition.

It was during this period, when the parks began to be the property of

the people at large, that the positive ideals of the national parks became imbedded in our society and in the National Park Service. In essence, the parks became our secular church. They represented the best of a maturing America. In their preservation and respectful use we could show the heretofore condescending world that America had high ideals, a social system that worked, esthetic sensibilities, and cultural traditions of its own. Together, the parks matched, perhaps overmatched the ancient glories of the Old World. Here was our Chartre, our Acropolis, or Verdun, our Louvre, our civilized leisure.

Even today, the core of the national parks tradition and value system—in our society generally and in the hearts of its stewards—roots back to that time, say 40 years ago, when our national destiny seemed secure and the great national parks requited the esthetic, intellectual, and historical yearnings of a victorious and progressive people.

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Of course, even then the picture was incomplete. 'Our society' was in fact the dominant part of it. The democratic mechanism of the melting pot allowed access to the dominant segment that controlled the definition of values, but selectively. Many people were left out. They lacked the social and geographic mobility to visit parks and their traditions were too often uncommemorated or travestied had they gotten to the parks. These things are said not to denigrate the imperfect lights and strivings of our forebears, but to state the facts. These facts help condition us to ensuing scenes, even to the one now spread before us, where the shaping forces of history still grind away at our ideals.

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Followed, the deluge. Interrupted briefly by the Korean War, the pent up demand to share the national parks by a now almost universally motoring public broke down the gates of what was yet a pre-war park system. The Mission 66 response—a giant catch-up effort—produced its own response of esthetic and environmental concerns, still a leading theme of those fighting park overdevelopment. Numbers of visitors and a broadened constituency produced many effects:

1. The city moved to the park bringing both crime and social groups heretofore unknown to these precincts. Law enforcement and a tendency toward morals-squad attitudes changed the complexion of the ranger force.
2. Park interpretation resorted to mechanical, electronic, people-moving techniques to 'process' the unceasing flow of visitors. The old-style teacher in uniform, discursive and knowledgable, became a rare bird.
3. Internally, the Service changed from a family of all-around park people to a bureaucracy in danger of sterilization by specialization and dosages of scientific management, whose business-style concepts of efficiency fit ill with ideals of public service.

4. Proliferation of programs and responsibilities diluted the mission of the Service, and the simplicity of work and reward. The shift into urban parks and programs of social amelioration exemplify this trend, which was swallowed with difficulty by the archetypal western park person.
5. Increasing politicization of the Service added another 50 lashes across the back of the institutional ethos.

In sum, the visitor wondered what had happened to the friendly ranger and the university in the giant grove; the park employee questioned the survival of the institutional soul.

The broader issues we now face—some of venerable evolution, others just coming into view—further complicate the search for guiding values and defined purpose—a few examples:

1. The melting pot idea has gone out of fashion. People who were here but who did not qualify for the melting pot 40 years ago—Native Americans, Blacks, Hispanics, Asians—are trying with varying success to revive or maintain their cultural identities and values; their recently arrived brethren are doing the same. Many and varied are the cultural combinations and adaptations of these subsets of the larger society. This diversity widens the spectrum of cultural approaches to national parks, expressed as valuations and uses of them. Does this mean that existing parks and the culturally determined valuations and uses now in place must be changed? Or must we establish new kinds of parks that fit the cultural needs of the subsets in our society? How many histories does this Nation have? Is that history defined by ethnic and cultural groups alone, or is there a *national* history of ideas and ideals that can be made to apply universally throughout our society?
2. Up until World War II, though the United States was rapidly urbanizing, the traditions of most of its people were still rural, or only a generation or two removed. Parks then were places mainly of passive enjoyment—contemplation of Nature, the meditative stroll through historic scenes and homes. With the triumph of urbanization and disposal of that last-link old farmstead, parks have become evermore targets of active recreationists. Recreation areas, as such, have proliferated. But still the great nature parks and the hallowed grounds of history are invaded by forms of recreation and technology-based activity that compromise their integrity. Where should the line be drawn in these crown jewels?
3. From earliest days scientists have used parks as outdoor laboratories. Now, in an evolved and threatened biosphere, many scientists assert the urgent international significance of the great parklands as benchmarks of environmental health and change. Are parks still parks for the enjoyment and edification of the people at large, or are some of them or some parts of them

scientific reserves that may contribute to the survival of mankind and the hosting Earth?

4. As competition for resources increases parks could become expendable. To date most threats to parks stem from encroaching land/water/air uses, but how long before first one then more boundaries are redrawn for urgent—as then defined—utilitarian purposes?
5. As numbers of visitors increase at favored parks we approach more decisions that limit visitor use in favor of resource preservation. Will carrying capacity or the political economy of gateway cities and the tour industry prevail? Can visitor dispersion and more parks be the only alternatives to destruction of park values in a future even more than now stressed for oil and land?
6. Our population ages. To what extent should sunbelt parks be modified in facility and operation to accommodate the aged?
7. Will parks be able to fulfill their potential as field schools for neighboring students, the voters of tomorrow whose environmental ethics will largely determine the fate of the System? Or will constraints on facilities and personnel reduce the educational function to the conventional interpretive programs that now prevail?
8. Will the plight of urban dwellers, many of them disadvantaged, be ameliorated by a comprehensive national urban park system? What form might such a system take, combining jurisdictions and administrations? At a deeper level, what is the role of the National Park Service in related fields of social reconstruction, such as aid to community parks and neighborhood or regional revival projects? Answers to these questions involve equity, dilution of core mission, provisions for inter-agency and inter-jurisdictional cooperation, and the danger of backlash and frustration lacking specially conditioned personnel and administrative funding/continuity.
9. To what extent is the international significance of the U.S. National Park System/Service a determinant or modifier of its intra-societal role and function? The NPS serves as model and technical advisor on many international park planning and development projects; it hosts exponentially increasing numbers of international visitors (with trade balance implications); and as noted above, it is a recognized international scientific resource, with opportunities now emerging for cooperative park and resource management programs with other nations, including a growing liaison with the U.S.S.R.

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This has been only a sampler, but it is enough to throw the values/purposes collequy into pandemonium, lacking a compelling philosophy for guidance and a simplifying strategy for definition and selection.

Let us revive the old concept of moral philosophy in this work. The national parks institution of this country was founded upon a value system that found ***intrinsic worth*** in chosen landscapes and artifacts of the national patrimony. The other side of the founders' equation dealt with another form of intrinsic worth: the benefits accruing to the people from access to and enjoyment of those chosen places and things.

The parks in all their variety and the varied people who use them are bound together by a system of applied ethics, stated in law and derived from experience. The core is that these places and things are to be passed on unimpaired to future generations. In our evolved and evolving society a flow of new demands knocks on the park gates. The choices of which to let in must always be governed by the founders' equation. By law and logic the hierarchy of values starts with the preservation of the physical patrimony, for without this base the System will erode and the benefits to the people, now and down the generations, will be lost. All other objectives and activities are subordinate to the preservation imperative.

As to the Service, whose people protect the System, it is in charge of the operation of that imperative. Whether times are good or bad, expansive or constrictive, preservation of the physical base must always be the first order of business. All future options, all variations of access and use, all outreach that complements the System and spreads its benefits depend on the integrity of the physical base. Whatever good can come from the System, for visitors within the boundaries, for those beyond who seek inspirational models, the quality of the resource is what conveys the values.

The first step in rejuvenation of the Service is tying all of its people, root and branch, back to the physical patrimony within the boundaries of the parks. The touchstone of the System's physical reality is unknown to or only faintly apprehended by too many Service employees.

An ethical system stands on judgments between right and wrong. In the context of this discussion, aimed at judging uses ***within*** the System, the terms can be softened to appropriate and inappropriate. To preserve the physical patrimony we must keep out those proposed uses that degrade the patrimony, whether the degradation is physical or in the realm of esthetic intangibles.

There is no way for the stewards of the System, whether Service personnel or friends of the parks, to avoid moral judgments at these moments of decision. The law helps, experience helps. But finally, there will come a new demand or a nudging into the gray that will force decision. This is usually a lonely business, but it goes with the territory. Sometimes it helps to realize that the value system girding the national parks —preserved land, intrinsic worth, edification of people —is an alien even blasphemous one for large segments of our society. But then utilitarianism has a long history too, and we have met before.

Building upon the preserved System, what can this institution do for the society that created and sustains it? In the broadest sense the NPS (both System and Service) stands for a profound commitment to a civil society and to citizenship values. In ways that respect cultural diversity and, to the greatest extent possible, individual needs and interests, the NPS will continue to expose the people of this Nation and their guests from abroad to park environments where they can experience the *natural world* in all its depth and beauty; the *world of history*, its events and personages, the cultures of the past and the choices they made that meant success or failure; *recreational and social opportunities* in environments where amenity can flourish and new friends can share a sense of community.

In the heirarchy of values this is the second imperative of the NPS task, to provide for its visitors. The mode is a compound of courtesy and knowledge in a context of management and maintenance that preserves the sense of discovery in wild places and the echo of ancestral footsteps in cultural places.

That differing cultural groups may experience and perceive wilderness or scenery in their own ways, subject only to the preservation of the resources, is no problem. Artists, too, see the same things in different ways. Through discursive association perhaps we can share our various perceptions and thereby enrich each other. Through this means the NPS could sensitize itself to citizens of ethnic and cultural groups that need welcome and invitation to the parks.

In the field of human history we have made significant strides relating to Native Americans, Blacks, and Hispanics, though much more needs to be done. We need to reach out to newly arrived Asians. In all cases we can share the ideas and ideals—from whatever historical tradition—that transcend cultural differences and comprehend cultural diversity. And we must be sure that as the new arrivals make their marks, their histories are incorporated in the flow of our national history.

Sensitization to culturally distinct recreational and social

preferences can lead to modifications of facilities, time zoning, and other methods that accommodate those preferences. It is not contemplated here that a park need become an exclusively ethnic park. The same facilities environment, however, can be adaptively and modestly modified as a matter of courtesy to meet particular needs. We have often done this for other identifiable groups in the past; the spectrum is simply broadening.

The base value is that everyone likes a park. Our task is to welcome equally all citizens to the park family.

The parks, wherever they exist and of all types, offer stabilizing contrast to the relentless change and modernization of our fast-moving culture. In the parks we can experience primordial natural rhythms; glimpse other times, responses, and standards; risk and develop social contacts unthinkable on a city street. The Service is a part of that fast-moving culture, yet it must maintain the authenticity of the heritage properties that provide contrast. It becomes difficult for the Service not to reflect back onto those properties the temporal, shifting standards of the moment. To the extent that the Service gratuitously joins the prevailing pace—madness, some would say—in its management techniques, its personnel policies, its embracing, for example, commercial marketing techniques, it loses touch with its philosophy. If NPS values are to be perpetuated, if the environments of contrast are to survive, if serenity and social amenity are to be our marks on society, we must maintain a proper distance from the vortex. The kinds of sensitivity recommended above do not come out of a computer, a multi-media projector, or a time-and-motion study. This is not the cry of a Luddite. It is the plea of a humanist in a values-centered institution. The superficial kinds of efficiency have their places; so do the deeper kinds.

The discussions on pages 3 to 5 suggest a number of fields in which the values and purposes of the NPS can more actively reach beyond park boundaries, in addition to already established historic preservation programs. The four most important of these in this writer's opinion are 1) expanded cooperation with schools both beyond the boundaries and at field schools and research centers within the parks, 2) urban park programs and associated social and regional reconstruction activities, 3) cooperative science programs, including scientific reserve studies, and 4) international cooperation, with particular attention at this time to recently initiated US-USSR Heritage Preservation Projects, which have direct bearing on the new Alaska parks.

The NPS has a history and a cadre of experience in these fields. They represent direct extension of park ideals; they return direct, supportive benefit to the Service.

Always there are targets of opportunity that require instant commitment based on existing management resources. The US-USSR project is one of these. But long-term commitments, say to a system of

field schools throughout the System, must be carefully prepared, funded, and staffed. Otherwise they will bleed the operating System, be resisted, and die. The same is true of urban programs. In both cases specially selected and trained staffs must operate in a climate of administrative and funding continuity.

Reading over this paper, I detect many biases in selectivity and treatment. The values and purposes subcommittee will have little trouble discounting as appropriate. Perhaps the tone of the paper is more important than its particular, exemplary topics or the recommendations that crop up in my discussion. That tone reflects my conviction that the National Park System/Service—the whole institution—is a very special civilizing and socializing agent in the larger mix of this Nation. What it does and how it does it can fulfill some of the higher purposes of this Nation. It can be a healer and a democratic solvent, within the strict lines of its core mission. The reason is that the parks are dedicated lands—lands dedicated to something more than the daily grind of doing to others and being done to. They are neutral, sanctified ground. They are an exercise in civilization, a kind of refuge for people in a world growing less kind to people. It is because these values are embodied in landscapes—in actual physical places—that they have such power. Anyone can go to a park and see how that power works, on one's self and on others.

That is why the land base comes first, then the visitors, then—to the extent our energies can stretch—other things.

Notes:

1. A thought paper solicited by the National Parks and Conservation Association Commission on Research and Resource Management Policy in the National Park Service, and presented to the Commission on July 11, 1988 at a meeting in Washington, D.C.

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Wolves Approach Extinction on Isle Royale: A Biological and Policy Conundrum

Rolf O. Peterson and Robert J. Krumanaker

Abstract—The wolf population at Isle Royale National Park, Michigan, is currently declining rapidly and may be close to extinction. Declining wolf numbers since 1983 were attributed to high mortality (greater than 40% per annum) and low reproduction, but studies based on observation alone did not reveal specific causes of mortality. Aside from a documented food shortage, disease and loss of genetic variability might explain the population demise. In a departure from previous study techniques, in 1988 wolves were live-trapped, blood-sampled, and released wearing radiocollars. Technical and philosophical issues associated with this study are reviewed, as well as managment options in response to likely extinction of wolves on Isle Royale.

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One ecosystem component that is notably lacking in many national parks and reserves throughout the northern hemisphere is predation by large carnivores. Forty years ago, when wolves crossed the ice of Lake Superior and established themselves in Isle Royale National Park, this island became the only national park in the U.S. with a wolf population. It may soon become the first park to lose a wolf population, not at the direct hand of man, but to the insidious biological troubles that face any small, isolated population. In order to appreciate the general significance of what may be happening on Isle Royale, we need to consider the present status of the black-footed ferret, giant panda, Florida panther, Yellowstone grizzly, or any of the growing number of other species that exist in small, isolated populations in fragmented habitats. Some studies have suggested that there is not a single park or reserve in the world large enough to sustain top carnivores in perpetuity.

The predator-prey relationship which developed between the wolves and moose of Isle Royale became the focus of the longest running study of mammalian predators ever conducted, now in its 31st year. The isolation and protection of this simplified animal community has provided an incomparable outdoor laboratory, a real-world microcosm available nowhere else in the world. For the public, the wolves of Isle Royale became symbolic of a natural system at its finest, uninfluenced by human meddling.

In 1988, after a steady 5-year decline, the wolf population inexplicably sank to its lowest level, just 12 animals, and now the possibility of wolf extinction looms large on the horizon. In an attempt to understand the decline, the National Park Service agreed to break the long-standing tradition of observation only. Approval was granted in spring 1988 to examine and blood-sample the animals themselves for the first time, and to radiocollar them in hopes of discovering

causes of mortality. In this article we briefly review the biological issues involved, and then address some of the interesting questions raised for park managers.

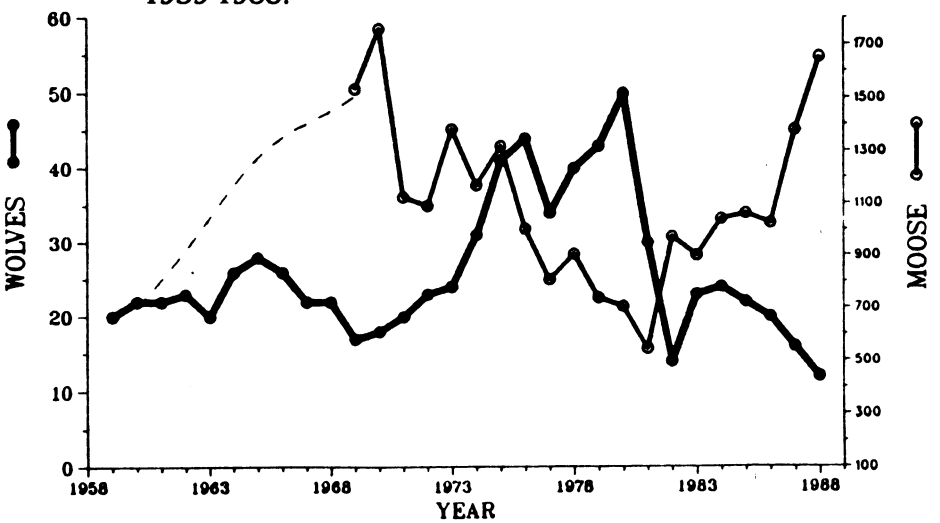
Annual population records for the last 30 years (Figure 1) reveal a very dynamic system, hardly the stable equilibrium suggested by the "balance of nature" notion. Wolf numbers have tended to follow moose numbers after a decade or so, possibly explaining the current trough in wolf population trend. The decline of the last 5 years has arisen from constant high mortality, about 40% per year, coupled with a steady drop in reproduction. In 1982 there were 4 reproducing females, while in 1988 we found none.

Three hypotheses may explain the decline:

1) decline in food supply
2) mortality from new diseases
3) loss of genetic variability

In the strictest sense of scientific inquiry, none of these hypotheses can be proven true, but the disease and genetics hypotheses could potentially be ruled out if animals were examined and sampled.

Figure 1. Wolf and moose fluctuations, Isle Royale National Park, 1959-1988.



In the past, food level alone has explained 85% of the variations in wolf numbers. Most wolf prey are moose older than 10 years of age, which now are rare. The current moose population is dominated by moose 7 years old or younger, born after the wolf crash of the early 1980s. Although food levels in winter are low, there has been no measurable change since 1982.

Disease concerns center on canine parvovirus, a virulent dog disease which appeared initially in 1977 and rapidly spread around the world. A new strain appeared in 1981 and in that year the disease reached the Houghton, Michigan, area, headquarters for Isle Royale

National Park. Its arrival on the island can be attributed to human action, either from domestic dogs or in soil carried on hikers feet. Although dogs are prohibited, they are occasionally brought to Isle Royale by visitors. In 1981 the Isle Royale wolf population was in the middle of a 2-year long crash when over 50 wolves died, but causes of death remained unknown. Canine parvovirus remained an unconfirmed possibility.

Loss of genetic variability is also a possible explanation for the wolf decline, as it has led to reduced reproductive fitness in some captive and wild populations of other species, from reduced survival of young as well as increased susceptibility to disease.

In order to evaluate these possible causes of the wolf decline in 1988 NPS agreed to the immediate handling of up to half the population (6 wolves), and these wolves would be blood-sampled and released wearing radiocollars. The capture effort was terminated after 4 wolves were handled, as few additional animals were located. Studies of disease incidence and genetic variability by collaborators are now underway, using wolf blood samples from both Isle Royale and Voyageurs national parks.

Preliminary results from the disease screening confirm that Isle Royale wolves have been exposed to both canine parvovirus and Lyme disease, although the role of these diseases in the wolf decline is still uncertain. The best news was that the wolves themselves were young to middle-aged adults, and seemed to be in good condition. While the main reproducing pack apparently has disappeared, by year's end the radiocollared wolves were travelling frequently through the pack's former territory. These animals may now initiate breeding and reverse the decline. Simulation modeling based on the history of the population suggests that there may be a 50% chance of extinction just from normal oscillations of wolf numbers. The Isle Royale wolf population, perhaps the most famous and most protected wolf population in existence, is clearly in jeopardy.

What do we do now?

Assuming for the moment that extirpation of the Isle Royale wolf population is imminent, there are several options that management might consider taking immediately. These include (and are listed in order of decreasing conservatism):

- **Attempt Inoculation.** At this point we know the animals have been exposed to canine parvovirus. We don't know how seriously they have been affected, if at all. Hence is this a preventative response to a real threat or a "shot in the dark?"
- **Supplemental Feeding.** Unfortunately, lack of food may not be the primary problem. The "artificiality" of this approach gives us some pause as well.
- **Augment Population With Additional Breeding Animals.** Certainly a possibility, although arguably a population under stress would not take kindly to invasion of its territory by newcomers.
- **Capture for Captive Breeding.** This would be more seriously

considered if these were the last animals of the species, which they are clearly not. Besides, the genetic makeup of this population may be the very root of the current problem.

Several options are available to management after extirpation. Again, listed in order of decreasing conservatism:

- **Allow for Natural Recolonization.** Some might argue this is a "do nothing" approach. Its success depends entirely on the status of wolf populations in Ontario, opposite Isle Royale.
- **Introduce New Wolves to Repopulate the Island**....Hopefully.
- **"Control" Moose Population via Artificial Means.** There are precedents in the NPS, but we are never comfortable with this approach.

Whatever decision is taken, it is critical that we consider the policy mandates that are supposed to drive all NPS decision-making. These are statutory (e.g., the Organic Act), regulatory (e.g., Code of Federal Regulations), and administrative (e.g., NPS Management Policies book) mandates. For the first 29 years of the wolf-moose monitoring program at Isle Royale, we had maintained a strict "hands-off" style of wolf management, perhaps the most conservative interpretation of agency policy:

> *"The primary objective...will be the protection of natural resources and values...with a concern for fundamental ecological processes...Managers...will try to maintain all the components and processes of naturally evolving park ecosystems."* [NPS Management Policies 5:1 (3/88 draft)]

We had never actually touched a live wolf—no collars, no tags, no blood samples, etc. This "minimal intervention" strategy was entirely consistent with both the recommendations of the 1963 Leopold report as well as the "minimum tool" concept of the 1964 Wilderness Act. At Isle Royale, more than 98% of which was brought into the national wilderness system in 1976, our wolf monitoring/research approach was a matter of symbolism as well as tradition. Our one major concession was the regular use (in winter) of low-flying aircraft for aerial observation and tracking of the wolves. We recognized the compromises inherent in this approach, and our uniqueness, but were willing to forego some types of information in the pursuit of non-interference.

The decision a year ago to change this approach—to actively handle the animals in order to get blood samples—came only after a good deal of soul searching and reflection, much of it (deliberately) exposed in the national media.

Faced with the preliminary results from the four sampled animals and the probability of imminent extirpation, any management actions must be driven by our need to know the "naturalness" of the decline. Unfortunately, however, there may be a built-in conflict at Isle Royale between natural process management and endangered species

protection—both stated NPS management objectives.

The Endangered Species Act never considers "natural" species decline; legislative history of this law consistently assumes that all species decline is at the hand of man. The Act also assigns the designation of "endangered" status on a state-by-state basis, using artificial political boundaries rather than ecological ones. The Isle Royale wolf population is much more closely tied to Minnesota and Ontario, where wolves are not legally endangered (they are "threatened" in Minnesota) than to the mainland of Michigan, fifty or more miles away, but in the same state. The U.S. Fish and Wildlife Service's Eastern Timber Wolf Recovery Plan—a new draft of which was released just last fall [1988]—never addresses even the possibility of a wolf decline on Isle Royale (natural or otherwise), classifying the park as "critical habitat" and directing the Park Service merely to continue current management direction regarding wolves and moose.

Perhaps natural processes are not sufficient anymore as the principal determinant of NPS wildlife management philosophy. Large carnivores, as previously discussed, appear to be unable to survive on their own in habitat that is being increasingly fragmented. Isle Royale, which is often considered pristine, has been impacted massively by human influences locally and in the region. Moose might not have come to the Island had it not been for large scale logging, settlement, and fires which opened the boreal forest (particularly on the mainland) and created habitat conducive to moose prosperity.

Are moose therefore "native" to Isle Royale? If we are to abide by agency policy, that could be an important point:

> *"The NPS will seek to perpetuate the native animal life...as part of the natural ecosystems of parks..."* [NPS Management Policies 5:5 (3/88 draft)]
>
> *"The native animal life is defined as all animal species that as a result of natural processes occur or occurred on lands now designated as a park. Any species that moved onto park lands directly or indirectly as the result of human activities are not considered native."* [NPS Management Policies 5:5 (3/88 draft)]

Wolves clearly are at Isle Royale due to the presence and high densities of moose. Are wolves native? The first surveys of the park by European man, in 1847, showed caribou, lynx, and coyote—all of which are gone today—and of course no moose or wolves. Hence there is no comparable presettlement fauna and Leopold's concept of a "vignette of primitive America" may be meaningless.

Perhaps the purists amongst us would recommend the elimination of moose, and an attempt to restore the vegetation and caribou that were here before man "intervened." An interesting sidelight on this discussion is a thought out of the Leopold report (1963), one which we question a bit today in its emphasis: *"Maintenance of the moose population is surely one goal of management on Isle Royale."*

Moose numbers will undoubtedly increase regardless of

"naturalness," presenting management with another imminent dilemma. According to policy,

> *"Natural processes will be relied on to control populations of native species to the greatest extent possible."* [NPS Management Policies 5:6 (3/88 draft)]

Does that mean we should not attempt to control moose numbers? Or is the operative phrase "to the greatest extent possible?"

What about natural recolonization? The status of wolves on the mainland is the key to informed decision making, but unfortunately not much is known about wolf populations in Ontario, on the north shore of Lake Superior. Wolves are there, but in what numbers? How do they compare to the late 1940s, when the wolves first crossed the ice? Even if the odds are the same—is that probability enough to base a management strategy upon? If we do, there is a real possibility of an Isle Royale with moose but not wolves. Can we, as an agency, accept that? Can we sell it to the public?

It is important here to step back and remember a little island biogeography theory. Islands normally have a limited fauna and flora, due to reduced opportunities for immigration and limited habitat. Irruptive populations are the norm, not the exception. It may not be pretty, and it may not be popular. But it may be natural.

Of course, if our objective is the maintenance and preservation of the distinctive wolf-moose relationship, then waiting for recolonization is arguably in conflict with that goal.

Isle Royale has been considered by many scientists to be the ideal natural system in the National Park System, if not the world. Unfortunately, it just isn't so. The Park is unique, however, in that the lack of human presence makes it hence as close to a "natural" predator-prey system as exists anywhere in the world. Opportunities to learn from what happens here are unparalled—even if we have to prop it up occasionally. We may even find that we have to do so repeatedly, perhaps exemplifying the oft-spoken idea of a park as a "living laboratory." Certainly this scenario is consistent with the mandates of the park's designation as an International Biosphere Reserve.

What's happening at Isle Royale is going to happen in all other preserves sooner or later. Unfortunately, our policy doesn't tell us what to do; in the absence of precedent and guidance, perhaps we might as well choose which "natural" policy we like...

The outlook for the Isle Royale wolves is poor. But as long as they have **any** chance to survive on their own, we intend to resist any suggestions to intercede more than we already have. Let the experiment continue!

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Remarks of George B. Hartzog, Jr.

At The Fifth Triennial Conference of The George Wright Society Tucson, Arizona—November 14-18, 1988

Mrs. Hartzog and I traveled by car to Grand Teton from McLean this summer, stopping along the way at several national parks. I bring you good news and bad news of that trip.

The good news is that the talented career professionals of the National Park Service in the field are alive and well—like seeds in the desert they await only the life nourishing spring rains to flower again. Hopefully, the rains will arrive with the new Administration.

The bad news is that our national parks are being choked to death between the ravenous, vise-like jaws of unbridled self-interest and political bureaucrats hostile to the park preservation ethic. Many distinguished Journals and Citizen Organizations have detailed the crisis. To cite just a few:

U.S. News and World Report (August 29-September 5, 1988), reporting on Secretary Hodel's visit to the fires at Yellowstone, wrote: *"Largely obscured by the acrid smoke and political hyperbole was the fact that fires actually benefit wilderness areas by clearing undergrowth and dead trees, thus regenerating the forest and improving wildlife habitat. Left unmentioned altogether was the real threat to America's first and most ecologically pristine, national park: An ever tightening circle of mining, oil wells, timber clear-cutting, geothermal leasing, vacation homes and growing communities that is closing in on Yellowstone from every direction."*

The *Wilderness Society,* in its recent report illuminated the myriad of similar activities at park boundaries that threaten the integrity of many other national parks. The Society asserts that ten of our national parks are now 'endangered' and many more are under seige.

The *National Parks and Conservation Association* has documented the adverse impact of inappropriate and unnecessary developments within many of the national parks.

The threats to the survival of our national parks are more than physical—they are ideological and personal, as well.

In an article on the national parks (July 28, 1986) *Newsweek* suggests that society needs—

"...to re-think the role national parks and wilderness play in the American psyche, to decide once and for all whether a given natural feature is worth any more than people are willing to spend for postcards of it. On the one hand, there is the romantic idealism of William Reilly, President of the Conservation Foundation, *who considers parks the cathedrals of American civilization, 'the quintessential American idea.' On the other is the tough-minded utilitarianism of Assistant Secretary of the Interior William Horn, who reminded park directors in a memo last December that 'natural features are conserved chiefly for the benefit, use and enjoyment of the general public.' Put more succinctly: do the parks exist to conserve nature or to put it on display?"*

On the personal side is the elite cadre of career professionals in the Washington and Regional Offices of the National Park Service which has been cowed, demoralized and decimated by the assaults of successive waves of partisan political appointees with special interest agendas. Today, only about five percent (5%) of the employees in the Washington Office of the National Park Service have ever pulled a day's duty in a national park.

Is it any wonder, then, that the agency has lost its way:

- promoting all areas of the National Park System as "jewels in the crown" implying that the domestic water supply reservoir of Amistad National Recreation Area in Texas is the ecological equivalent of the real "Crown Jewels": Yellowstone, Yosemite, Glacier and our other treasured national parks;
- developing and re-developing highways and resort accommodations in the national parks while stifling and neglecting the development of public facilities at the great urban recreation areas designed by the Congress to serve the teaming millions of our citizens living in the plastic and concrete environments of our Metropolitan Areas;
- where, at Yellowstone, more money is spent collecting and disposing of garbage than on trying to understand the web of life.

We may disagree on the battle plan, but none will gainsay that the battle to determine whether our national parks shall survive is joined on three fronts:

- How to cope with the activities outside park boundaries that threaten their survival?
- What park uses are compatible with their preservation?—and,
- Who shall manage our national parks: a cadre of career park professionals or short term, revolving door politicians driven by agendas of the special interests?

Outside Dangers

In the past, when parks were threatened with adverse uses outside their boundaries, the boundary was extended to include the troubled area and then purchased. This is much like the approach recently approved by the Congress to resolve the issue of proposed development of a shopping mall/office park on hallowed ground adjacent to Manassas National Battlefield Park, Virginia. It will work there since the undeveloped land is valued only in the millions. It is doubtful, however, that such orthodoxy will work, for example, in the ten-million acre ecosystem of the Yellowstone Basin of which Yellowstone National Park is only one-fifth. There, the cost of the land outside the park and the relocation of households and businesses is to be counted in the billions, to say nothing of the special interest and bureaucratic wars such a move would ignite. Most of the remaining eighty percent (80%) of the land in the Basin consists of National

Forests, Wildlife Refuges, Indian Reservations and ownership by state and local governments whose programs are driven by multiple-use, commercial exploitation. Depending on their extent and location, many of these activities can be continued in the Basin compatibly with the preservation mission of Yellowstone National Park—but not when they are hard against its boundary.

Beginning in the 1960s, we tried cooperative regional planning with the Forest Service to protect the greater Yellowstone area. Our successes were small and temporary, not because of bad faith, but because the resource missions of the Forest Service and the Park Service are, for the most part, incompatible and adversarial. Specifically, the mission of the Forest Service is consumptive resource utilization—incompatible, in most instances, with the Park Service mission of non-consumptive resource management. Moreover, there was no final authority to adjudicate between the differing management options and missions.

Director William Penn Mott, Jr., has called for buffer zones around the troubled parks. Under this proposal, Congress would define the extent of the buffer needed to protect the biotic communities of the park. The Secretary of the Interior would be authorized to determine the level of protection needed within the buffer zone to insure the objectives of park preservation.

Competitiveness among government agencies for turf is as intense as between businesses for market share. And where large bureaucratic turfs of competing agencies are at issue, such as at Yellowstone, the Congress is not likely to grant unilateral authority to Interior to direct uses on Forest Service lands controlled by the Agriculture Department.

This is not unlike the issue that the task force on historic preservation faced in trying to draft legislation to protect our cultural heritage from destruction by competing programs of urban renewal, highways, etc. HUD, the Federal Highway Administration, Army Corps of Engineers and others, would not defer to Interior to adjudicate issues impinging on their bureaucratic turf.

Congress solved the problem by approving a two-step process: first it authorized and directed the Park Service to establish, maintain and publicize a National Register of Historic Places (buildings, districts, etc.). This register reflected the scholarly, professional judgment of what was important in the preservation and presentation of our cultural heritage. Second, it established a Presidential Advisory Council on Historic Preservation composed of private citizens, state and local government officials appointed by the President and ex-officio membership by such involved agencies and organizations as HUD, Transportation, Agriculture, General Services Administration and the National Trust for Historic Preservation.

The council is charged with the responsibility of advising the President and the Congress on the competing, conflicting demands of use and development *vis-à-vis* preservation of our patrimony. Even though its authority is advisory, in practice its ability to resolve conflict is comparable to mediation and arbitration. The council has

its independent staff. The whole concept has worked extremely well with a minimum of bureaucratic conflict and cost.

To resolve the competing, conflicting uses that threaten the ecological survival of our national parks, we need a congressionally-sanctioned Register of Natural Places and a President's Council on Nature Preservation to arbitrate among these uses.

The federal government lacks zoning authority inherent in the states and local governments. Thus, to enforce its decisions the Council should be empowered to promulgate compensable land use regulations. An owner aggrieved by the regulations would have the right to sue in the local U.S. District Court for damages alleged to have been suffered. If damages were proven, the court would enter judgment against the government. And when paid, the payment would operate to transfer a land interest to the government consistent with the regulation—a result similar to an easement.

Threats Inside The Parks

Before we can deal with the serious threats that endanger the national parks from within, we need to re-think the meaning and purpose of our Crown Jewels, as suggested by *Newsweek*. Are the purposes of national parks—

- ✦ To be destination resorts to assuage the feverish rich and networks of highways for sight-seeing Americans in a hurry or places to exult amidst superlative wildness and scenic grandeur?
- ✦ Money machines for purveyors of tasteless food and tawdry merchandise, subsidized enclaves for private second-home retreats or places to gain an understanding of the people and events that shaped our heritage?
- ✦ Motor home parks for relaxing in recreational vehicles with all the modern conveniences from the home left behind or protectors of gene pools and preserves for scientists to research and learn about the web of life of which we are all a part?

The Congressionally mandated purpose of national parks is "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

On the other hand, the President's Advisory Council on Outdoor Recreation decreed that National Recreation Areas (most of them near large urban populations) "should be readily accessible at all times for all-purpose recreational use." Moreover, it decreed that federal investment in such areas should be "more clearly responsive to recreation demand than other investments that are based primarily upon considerations of preserving unique natural or historical resources."

The Congress endorsed these differing policies for National Parks and National Recreation Areas: first by establishing a number of large urban recreation areas; and secondly, by changing its historic policy for resort accommodations in the national parks.

For example, initially, the policy of the Congress was to permit development of hotels and related facilities in the parks "**as the comfort and convenience of visitors may require.**" In 1965 it changed this policy to provide that only those commercial facilities "**necessary and appropriate for public use and enjoyment**" would be allowed. Many **unnecessary** commercial facilities remain in the national parks.

A glaring example is to be found in Zion National Park. When Director, I persuaded Jim Evans, the chief executive officer of Union Pacific—and a dedicated park enthusiast—to donate its concession facilities at Zion to the Park Service rather than sell them to someone else. I sought the donation for the avowed purpose of removing the facilities from Zion. They had been determined to be neither "necessary" nor "appropriate for public use and enjoyment" of that fragile, tender valley. The facilities were to be allowed to continue in operation only on an interim basis while private enterprise developed adequate lodging and food facilities in the gateway area to the park.

When it came time to remove the facilities in 1975 (after my departure from the Service), the trade association of concessioners, the Utah governor and some of the Utah congressional delegation mounted a campaign to retain them, and they succeeded. One of the more interesting arguments advanced to keep the facilities in the park, according to historian William C. Everhart, was made by Governor Calvin Rampton who "spoke of a 'devastating' economic impact, predicting [that if the facilities were removed] the traveling public would bypass the region, threatening the solvency of motel, restaurant, and service station owners."

Remarkably illuminating: the throngs of visitors to America's national parks do not come to see the parks but to stay in the concession accommodations! Such "shortness of vision," as the late Ansel Adams lamented in his autobiography, is now one of the greatest enemies of the National Park idea.

Other **inappropriate** resort facilities in our national parks impact adversely on the habitat of endangered wildlife as at Yellowstone. At the same time the John D. Rockefeller, Jr. Memorial Parkway (the recreation corridor connecting Yellowstone and Grand Teton National Parks) remains largely undeveloped.

When many of the great western national parks were established, small enclaves of vacation cabins and modest year-round residences were included in the park boundaries. By law, the National Park Service fulfills the role of local government to these enclaves, with responsibility for health, fire, police, etc. A private consulting firm compared the cost of acquiring these properties *vis-à-vis* the cost of letting them continue to exist and develop into town-sites concluding that it would cost the federal government millions more to allow these environmental cancers to remain than it would to eliminate them. Each

Administration for more than three decades supported the policy to acquire these lands. In an abrupt reversal of this long established policy, Interior Secretary James Watt gutted the Land and Water Conservation Fund, the source of funding for such acquisitions.

So long as these environmental cancers remain within the boundaries of our national parks, our national parks cannot be saved.

Who Shall Manage Our Parks?

Soon after his arrival, Watt removed the career Deputy Director of the National Park Service replacing him with a partisan loyalist inexperienced in park management and lacking empathy for the career park professionals. The Regional Director in Alaska—a third generation, career park professional—was summarily demoted because he had antagonized powerful, partisan park opponents. Another career Regional Director was harrassed into retirement.

William Penn Mott, Jr. who had served President Reagan as State Park Director when Reagan was Governor of California was appointed Director of the National Park Service in May, 1985. Among park people, Mott is a lengend in his own time. He moved quickly to replace the politically partisan Deputy Director with a talented career professional. Lamentably, Mott's tenure soon became trouble-laden. His new Deputy Director was censured by Secretary Hodel for drafting a memorandum Mott signed to the Secretary protesting Assistant Secretary Horn's reorganization of Mott's top staff; Horn changed Mott's evaluations and bonus awards for his senior staff to the extent that, in outrage, Mott refused to attend the awards ceremony; departmental underlings appointed for partisan political loyalty by-pass Mott to countermand decisions of park professionals and to interfere with park operations in the Regions and in the Parks.

The obscenity of this destruction of one of the most highly regarded professional agencies in the federal government has been compounded with a many-weeks long Inspector General Investigation of Mott and one of his assistants on unstated charges of alleged misconduct. How disgraceful—even Salem "witches" knew the charges!

Conclusion

There are encouraging signs that the environmental storms that have ravaged our nation and, especially, our national parks may be abating.

First, the President-Elect told us during the Campaign that he "is an environmentalist" and that positive concern for the environment will be a priority of his Administration.

Second, during his Campaign he issued a pro-civil service position paper. The paper promises a White House orientation program for new appointees to show them "how to be effective in the federal environment," ensure that they understand "the limitations our democratic system" places on them, and stress that they must "build teamwork among the political and career officials in their agencies.

(Mike Causey, *Washington Post*, November 10, 1988.) In short, no more bureaucrat bashing!

But we do not have to rely on these promises alone. Our Constitution vests public land policy-making in the Congress. And there are encouraging signs that the Congress will take an active role in remedying the deplorable situation with respect to park land acquisition and put an end to the abusive management style of successive Secretaries of the Interior that has plagued the National Park Service.

Congressman Morris K. Udall (D. Ariz.) introduced legislation in the 100th Congress to establish an American Heritage Trust Fund that would be financed with revenues from recreation user fees, park admissions and a portion of the income from off-shore oil and gas leasing previously earmarked for the emasculated Land and Water Conservation Fund. No new taxes would be required. This legislation should be enacted by the Congress.

Congressman Bruce Vento (D. Minn.) introduced legislation in the last Congress to put an end to the existing abusive management style. His bill would provide for a statutory term for the Director of the National Park Service, appointment by the President and confirmation by the Senate, similar to what was done with the FBI when White House and Justice Department meddling threatened the professional foundations of that Agency during the Watergate scandal. The Congress should enact Vento's measure.

The theme of your Conference *Parks and Neighbors* is aimed at *Maintaining Diversity Across Political Boundaries*. That word "Diversity" seems to be the new buzz word of the environment. It is a good word and I believe it is especially instructive today if we are to preserve our national parks. Webster's first or preferred definition of the word is: "a state or an instance of difference; unlikeness..." Webster goes on to illustrate it with a quotation by George Bernard Shaw: "They are concerned with the *diversities* of the world instead of with its unities."

My first encounter with the word as related to park management was at the symposium on National Parks for the Future sponsored by the Conservation Foundation at Yosemite National Park in 1972. The National Park Service and the National Park Centennial Commission had contracted with the Foundation to overview the National Park System and make recommendations for its second century of service to the American people. At that symposium Maitland S. Sharpe presented a most thoughtful paper entitled *National Parks and Young America* in which he wrote:

Diversity

"Running as an undercurrent throughout this report is the question: "What are parks for?" I think it can be argued, following Dasmann, that, above all, diversity is the value which we should seek to maximize and against which proposals for new programs and facilities should be judged. It is critical, however, that we clearly delineate the unit within which we seek diversity.

"A manager of Yosemite argues that arts and crafts programs would increase diversity; they do not at present exist in the park. The preservationist replies that such proposals are undesirable and seeks to exclude them, also in the name of diversity. Both with good intentions, both ostensibly seeking the same goal, they disagree violently. Where they differ is in the size of the unit of analysis.

"We do not, most of us, live in parks. We live, rather, in a nation, the United States, and it is within that unit that the research for diversity is most meaningful. In contrast to an increasingly urbanized, mechanized, noisy, and crowded society, the parks stand out as quiet, natural, open, and wild places. As such, they represent a chance for different kinds of experiences—for diversity. To the extent to which parks are maintained as places which contrast sharply with the rest of our society, diversity will be maximized. If, however, they become more like every place else (even though that would represent a gain in diversity within the park), diversity will be lost over-all and our lives would be poorer.

"The notion of diversity is potentially of great utility in talking about the parks, particularly in deciding whether certain proposals are legitimate or appropriate. But the concept is useful only if we select a sufficiently large unit of analysis, i.e., the nation, within which diversity would be sought."

For much too long we have been frustrated and fragmented by arguments over "preservation and use" at each area, forgetting that this was a Congressional objective for the management of the whole of the National Park System as articulated in the Act of August 25, 1916, establishing the National Park Service. In the meantime, since 1916, the Congress has created a wondrously diverse National Park System: irreplaceable national parks, monuments **and** sites to preserve and commemorate our natural and cultural heritage and expansive natural landscapes for outdoor recreation. Thus, while the Congress has greatly expanded the "National Park World" within which to implement the diversity of its objective, "preservation and use" we doggedly pursue the diversity within the boundaries of each individual area. The result is that we continue to clutter our Crown Jewels with "unnecessary and inappropriate" developments while denying outdoor recreational opportunities to millions of our citizens living in the desolate urban environments of our nation.

It is predicted that by the Year 2,000 eighty percent (80%) of our population will be crowded together in our Metropolitan areas.

Much of the two billion dollars of deferred park maintenance identified in the recent report of the General Accounting Office—the watch dog of the Congress—is aimed at improving roads, campgrounds and infrastructure to accommodate ever-increasing visitation to our endangered national parks. Before the next Administration and the Congress appropriate billions more for "park improvements" they should take a closer look at the "unnecessary and inappropriate" developments that already endanger our national parks and the shameful lack of maintenance and development of our National Recreation Areas. We should seek "preservation and use" within the

diversity of the total of the National Park System.

Only then will we serve the outdoor recreation needs of our growing urban population and at the same time preserve their irreplaceable natural and cultural heritage. If we continue blindly, to seek the same standard of "preservation and use" within the constricted boundaries of each area of the National Park System—managing each like the other—we shall neither fulfill the objective of the Congress nor save the "Crown Jewels" of our nation—our great National Parks!

George B. Hartzog, Jr., Director of the U.S. National Park Service, 1964–1973. McLean, Virginia.

The Role of the National Park Service in American Education

—An Address to The George Wright Society— Tucson, Arizona—November 15, 1988

Alston Chase

Last August, before Yellowstone's wildfires had cooled, the NPS Division of Interpretation announced plans to launch an ambitious campaign to interpret the fires for park visitors. Summer school courses, exhibits, posters, and books for adults and children are planned. Fifty part-time and twelve full-time naturalists, it was reported, will work on the project.

I personally can think of few things better than informing the public about the ecological role of fire in North America. So why does this announcement not make me happy?

Because I am not convinced that what the public will get from this campaign is an education. Those of you who have read my book may know some of the reasons for my lack of optimism, but there are other reasons as well.

While doing research on natural regulation in Yellowstone, I sometimes asked a park naturalist, "What do you think of professor X?"

Often the reply would be, "Professor X is not credible."

Over time I learned many otherwise distinguished scholars were deemed "not credible" by researchers and interpreters in Yellowstone.

Why, I wondered, were these people not credible? The answer, I discovered, is that they had the misfortune once to criticize park policy, or had done research that failed to confirm hypotheses propounded by park biologists.

Later, I observed that papers written by park researchers also carried no bibliographic citations of works by these, apparently incredible, scholars. Some of these omissions were glaring.

While working on *Playing God in Yellowstone*, I was, as many of you know, Chairman of the Board of the Yellowstone Association. I saw no conflict in this. The duty of the Association was to support research

and education in Yellowstone, and that was what I thought I was doing. After the book appeared, however, it was made plain to me that the Association—and its board members—were supposed to support the Park Service, not the park. Only the NPS had the right to decide what was educational and what was not. Feeling uncomfortable with this interpretation, I left the Association.

Since leaving, I have become distressed to see that the Yellowstone Institute—the summer school run by the Association—no longer employs as instructors any critics of park policy. Similarly, the park administration declined (and still declines, so far as I know) to permit the sale of my book in visitor centers in Yellowstone.

How then, I now wonder, can the Division of Interpretation be entrusted to give visitors a balanced view of anything as controversial as last summer's conflagrations?

Fortunately, the Park Service community is a large one, and does not speak with one voice. The fact that I am here now reflects the fact that you, along with many others in the agency, share my belief that knowledge is achieved by dialogue, and that research and education require a commitment to the truth which transcends institutional loyalties. Nevertheless, the Division of Interpretation, as it is staffed and organized, is often required to act, not as an educational institution, but as spokesman for NPS policies.

I would therefore like to talk with you today about the role which interpretation should play in our national parks. This role could be far greater than it has been in the past. Indeed, I shall suggest the Park Service should provide a broad range of scholarly and educational services to the American people that extend well beyond park boundaries, but that doing so requires fundamental reforms.

The job of the Division of Interpretation, according to official guidelines, is "informing visitors about the National Park System, its significance and values, its policies and purposes..." As therefore, interpretation is expected to articulate the purpose of the parks, its mission can be intelligible only so long as the goals of the park system are themselves intelligible. Unfortunately, these goals are not very clear.

The Organic Act, as we know, is at best vague and at worst—in calling for conserving park resources while providing for the public's enjoyment of them—inconsistent. The attempt by the Leopold Committee to restate the purpose of parks in the more palatable language of ecology does not fair much better. In urging that parks represent a reasonable illusion of the primitive scene, the Leopold Report's prescriptions, if taken literally, are both unachievable and undesirable.

We cannot bring the Indians back, make extinct species reappear or hope to eliminate many so-called exotic species. And by urging that parks be vignettes of primitive America, the committee was in fact asking managers (using the phrase of historian Lynn White) to "deep-freeze an ecology, as it was before the first Kleenex was dropped"—thus ignoring the role of evolution in natural systems.

In the absence of a clear statement of purpose for the parks,

therefore, park managers improvise. Often this means following the line of least political resistance—a strategy that inevitably leads to inconsistent and often harmful policies. And in some parks, conscientious park managers, recognizing they can neither restore the primitive scene nor arrest evolutionary forces, simply do nothing by following the stratagem sometimes called natural regulation. This too often causes great harm to the biotic system of the parks, which, being incomplete ecological units, are not self-regulating.

Lying behind both the Organic Act and the Leopold Report, moreover, is a dualism which is fundamentally incoherent: the supposition that society and nature belong to different worlds, and that keeping nature pristine requires protecting it from society. According to this philosophy, the preservation of natural systems requires their isolation from the impact of people and civilization.

This presupposition—that humankind is not part of nature—as I have noted elsewhere, forms the cornerstone of American conservationism and indeed has been copied throughout the world. Nevertheless, it has no rational foundation. Indeed, if we define humans and their activities as unnatural, we must, as philosopher Frederick Turner noted, side with the creationists who say humans are not governed by the laws of nature which apply to other living things.

Nevertheless, from this dualism the basic tenets of park management follow: If the best way to protect nature is to build a wall between it and society, the ranger's job should be principally custodial—to protect the resource from the people—and the wisest management should be a passive one, allowing "nature to take its course." Only when the task is one of eliminating signs of man from the park—as for example, removing "exotic" species or animals "corrupted" by people, such as "garbage bears"—is more active, or interventionist, management required.

By driving a wedge between man and nature, this philosophy places an impossible burden on park managers. They are charged with keeping parks—which have been affected by human activity for thousands of years and which continue to be altered by it—in "pristine" condition. And they are expected to do this by natural means, whenever possible.

At the same time this dualistic approach to management encourages a fortress mentality in park administrators. Expected to protect the resource from the people, rangers are required to erect barriers, not only between visitor and the resource, but also between the park itself and the surrounding communities. This stance in turn often puts the park on a hostile footing with its neighbors, exacerbating the so-called "boundary problem."

Clearly, therefore, we need a new statement of purpose for our parks, one which is less ambiguous, more coherent and more achievable than the present one. What should it be? Answering this, of course, requires making a value-judgement which can only be provided by the American people through their elected representatives. It is *not* a question which we should depend on experts, blue-ribbon panels or social critics such as myself to answer.

It is therefore urgent that Congress speak unambiguously on this matter, to forestall further attempts—by park managers, environmentalists, travel lobbying groups and others—to provide their own *ad hoc* answers.

Nevertheless, while it is up to the American people to say what parks should be, it is critically important, before the public makes up its mind, that thoughtful individuals publicly discuss this question. In this spirit, to carry on a constructive debate, I have already, elsewhere, offered my own prescription, urging that the goal of our parks be to promote biocultural diversity.

Such a program would be based on two principles: first, *holism*, that there is no seam between culture and nature; and second, *localism*, that no park can survive without the enthusiastic support of the surrounding population. Park management, which presently vacillates between two goals—striving on one side to be pleasuring grounds that please the visitor, and on the other to be places of artificial wilderness to please environmentalists—should aim at one thing: to be exemplars of ecologic sustainability.

Rather than dividing society and nature, therefore, we should build bridges between the two. Rather than dedicating some parks to preserving our cultural heritage while others promote biological diversity, we should see that all strive to preserve biocultural diversity. Rather than taking a fortress approach to protecting park borders, we should develop a buffer zone strategy, where land use surrounding parks is planned in cooperation betwen federal officials and local communities. Rather than running parks exclusively from Washington, we should give local communities a role in park governance. Rather than excluding all but some recreational activities within parks, we should permit appropriate economic activities as well, not only within buffer zones, but within some parks as well. And finally, we should replace the present, largely passive management with a more active one, using, where appropriate, techniques of habitat manipulation such as restoration ecology.

Such a program would place, on the National Park Service, a profound responsibility for public instruction. Interpreters would become educators and ecological consultants, working, for example, with local farmers to promote sound agricultural techniques, and offering courses in ecology at the local public schools.

Unfortunately, the Division of Interpretation is not ready to shoulder these responsibilities. As it is presently defined, interpretation is not an educational activity at all, and regulations do not permit it to be practiced outside park boundaries. And even if these regulatory hurdles were overcome, other obstacles remain.

Any educational enterprise presupposes the freedom of instructors to test new ideas and to dissent, if they so desire, from the conventional wisdom, and freedom for students to do likewise. Yet, given the present duties of the Division of Interpretation, defined in part as enhancing public understanding of management policies and programs, naturalists often do not have this kind of liberty.

Additionally, successful teaching, like successful learning,

requires a commitment to research and study. Teachers must know what they are talking about, and they can do so only if they are scholars as well. But interpreters, expected to be merely communicators with neither scholarly credentials nor research experience, cannot be educators in this sense.

Transforming the Division of Interpretation into a true educational institution, therefore, would require taking steps to address these limitations.

First, its name should be changed to the Division of Ecology, reflecting a fundamental shift in its priorities.

Second, rather than explaining policy, the Division of Ecology should be dedicated to understanding the means of achieving biocultural diversity. Its role in public instruction should be to promote *dialogue* on these matters, demonstrating to the public that science is a process of debate, in which there are seldom clear, simple answers.

Third, to ensure linkage between teaching and research, and to establish the professionalism of this division, the functions of research and education should be merged and all researchers/teachers should have earned an advanced degree in appropirate academic disciplines.

Fourth, to guarantee their academic freedom, individual researchers/teachers should be graded by a system of peer review, where emphasis should be placed on publication in refereed journals by colleagues not in the National Park Service. In each park the chief of the Division of Ecology should be answerable, not to the superintendent, but to the chief of his division at regional level.

Fifth, researcher/teachers should be eligible for managerial jobs, including superintendencies. It is simply mistaken to believe that academics don't know how to run large organizations. Woodrow Wilson and Henry Kissinger, remember, were scholars. The presidents of major universities (such as Harvard), are scholars.

Sixth, the Park Service should ask Congress for money to establish an autonomous Fund for Biocultural Diversity. This foundation would be the principal funding source for park research, replacing the present system of disbursement through contracts awarded by parks and CPSUs. Rather than awarding contracts, the foundation would be a grant-making agency, where independent peer-review panels would respond to proposals.

Seventh, as a concomitant to the establishment of the Fund for Biocultural Diversity, both 'mission oriented research' and support for CPSUs should be revised. Research projects should be defined by the individuals in the proposals which they submit to the Fund. Monetary support for CPSUs also come from the Fund, again through a system of grants awards.

Eighth, multidisciplinary research centers should be established in some of the major national parks. The choice of who works there, and decisions concerning the direction of research, should be made by non-NPS scholarly review boards responding to proposals. Staffing at such centers would be on a rotating basis, with individuals chosen

from within ranks of NPS researcher/teachers and university community, for fixed terms. Financial support for this research should be through the Fund for Biocultural Diversity.

Ninth, NPS researcher/teachers should alternate between tours of duty at these research centers, and periods engaged in public instruction within parks or buffer zones.

This, to be sure, is a bold plan, but, is it impractical? I think not. As Connie Wirth found with Mission 66, Congress gives money for bold plans more readily than it does when asked for more to do the same old thing. Better a new ship than simply plugging leaks.

As bold as these suggestions may be, however, they alone will not allow us to save our wildlands. The greatest impediments to natural preservation do not lie within the Park Service, but elsewhere. In particular, parks can advance their efforts in preservation no faster than progress in the science of ecology will permit. And progress in many branches of this field has been painfully slow.

The principle culprit here, I believe, are the universities. Ecology—the study of "all the conditions of existence," (to use Haekel's definition)—should be multidisciplinary, incorporating contributions of scholars from the social and natural sciences as well as from the life sciences. But the institutional forces within academe are in the other direction—promoting specialization and often penalizing those who seek to widen their disciplinary horizons.

Academic departments constitute the organizational components in our colleges and universities, not only for the disbursement of funds, but also for providing direction for, and evaluation of, scholarly activities. This arrangement strongly discourages interdisciplinary cooperation among scholars. Young scholars quickly learn that the avenue to pay and promotion does not lie in pursuing multidisciplinary directions.

This trend, in turn, encourages scholars to develop disciplinary biases that further inhibit multidisciplinary studies. Having little familiarity with other fields, they have insufficient understanding of the potential contributions other scholars might make to their own research.

The continuing decline of general education in the undergraduate curriculum (an undergraduate curriculum in which students are required to take interdisciplinary courses) also leads to declining breadth of understanding, not only among students, but among faculty as well.

Thanks to these institutional forces which promote specialization at the expense of interdisciplinary perspectives, the academic environment is not entirely hospitable to ecology. Yet universities as they are presently organized are unlikely to break down barriers between disciplines without outside help. This, I think, is an opportunity for the National Park Service. Indeed, there are several steps which the NPS could take to encourage multidisciplinary science and improve the status of the study of ecology within academe and elsewhere.

First, the Fund for Biocultural Diversity should provide grants for

university researchers to do work, not only in national parks, but elsewhere as well.

Second, it should establish a professional journal for multi-disciplinary studies, to give those scholars with a true interest in ecological research that transcend the boundaries of biology the opportunity to publish their work in a reputable scholarly publication.

Third, it should create a series of Distinguished Fellows awards, not unlike the old Woodrow Wilson Fellowships, to promote ecological education, both in secondary and post-secondary schools.

Fourth, to inform Americans about ecological issues, the Fund should establish public education outreach programs in the schools, including a scholarship program for public school ecology teachers.

The Park Service, in short, should be at the cutting edge of ecological research and education in America. In helping Americans come to understand better the requisites of ecologic sustainability, national parks, would, as my friend biologist Daniel Janzen puts it, become instruments for social change.

If we are to address the problem of preservation at its source, we must recognize its cultural roots. Biologist John Bonner, in his book *The Evolution of Culture in Animals*, defines culture as "the transmission of information by behavioral means, most particularly by the process of teaching and learning." Education, in short, is one of two ways (the other being passage of information by genetic means) by which species ensure their survival. That, I think, is a critical message which the Park Service should carry to the American people.

Alston Chase, Author and Columnist, Livingston, Montana.

Some Comments on Natural Resources Management[1]

Al Lovaas

Reviewing proposed new natural resources and science guidelines, policies, and reorganization schemes, caused me to reexamine some fundamentals and attach examples to them. The thoughts expressed are not new or at all profound, but perhaps they will elicit some interest.

An Observation

The visitor brochure for Denali National Park and Preserve has pictures of mountains, a caribou, a wolf, an Arctic ground squirrel, a moose, a grizzly bear and three Dall sheep. Are those features more important than others, such as mice, moss, and mosquitos? Sure; that's why they got their pictures on the paper. Visitors come thousands of miles to see Mt. McKinley and the pictured wildlife, but are indifferent to moss and don't want to contend with mice and mosquitos. Importance, though, is relative. What the brochure emphasizes is importance in attractiveness to visitors. We don't manage natural zones to enhance visitor attractions.

The Ground Rules

The goal for natural zones, rather, is to maintain system structure, integrity, and function. To paraphrase a Dave Graber talk[2]: the aim is unimpeded interaction of native ecosystem processes and structural elements; and to quote George Pring[3]: "There are no primary or secondary resources in nature. The first lesson of ecology is that all resources, all facets and features of an ecosystem, are equivalently important and indispensible because they support one another." The Alaska National Interest Lands Conservation Act (ANILCA) mandates optimal functioning of entire ecological systems. By those rules and laws, resources in natural zones cannot be managed to give preference to species which might be especially important in their attractiveness to visitors. USNPS was not always that thoughtful. At Denali for example, wolf reduction programs were carried out until 1953, for the purpose of protecting Dall sheep and other "good" animals[4]. Visitors, at least subliminally, understand the ecosystem concept; after all if they just wanted to see a moose or a bear they would get a better look in a zoo, but that's not what they travel thousands of miles to experience. And overuse of parks, a major problem, is an indication the concept is popular. Areas are designated as national parks because they contain outstanding features but once a park is designated, all features in natural zones become equal in status. It's the rules.

A Contrast

In historic zones, differences in importance are important. The house where a commemorated person lived is more important than the barn where his/her horse lived, or the shed where the tools were stored. And the development is the most important element of a development zone. If a natural tree dies a natural death and falls

naturally across a road, it is removed so the development can function as planned.

A Thought

Should national parks be managed differently by changing the rules? No. That conclusion is based on my favorite quotation from the Management Policies: "The concept of perpetuation of a total natural environment or ecosystem, as compared with the protection of individual features or species, is a distinguishing aspect of the Service's management of natural lands." This concept is included in point 4 of the Director's 12-point Plan: "Communicate both here and abroad the importance of ecosystems and their processes, not just individual features." I put it there when our Region was assigned to elaborate that point, which is to "share effectively with the public our understanding of critical resource issues."

An Illustration

In the 1970s, I was a biologist in a relatively small national park that contained bison. Other herds were located nearby, leading to an inter-agency, inter-disciplinary meeting to discuss management of those interesting animals. I happened to lead off, giving a slide talk to describe the park, how it was fenced on the boundary, but was otherwise open except for small headquarters and campground enclaves. May slides illustrated the annual roundups by helicopter, driving the bison into a winged trap for corralling, testing and vaccinating for brucellosis, and removal of surplus animals. When the house lights rose, the first questioner was a person from an even smaller national wildlife refuge. He was incredulous about our management. He said the refuge was fenced into a number of pastures for rest-rotation grazing. Moving bison periodically through the system by riders and pickups accustomed them to being driven and they were easily pushed into the roundup pasture each fall. He couldn't see why we didn't follow a similar management scheme, to obviate the need for expensive helicopter rental and to carry three or four times the park's present herd because rest-rotation grazing allows maximum utilization of the range. Before I could respond, a university professor jumped up and said at the park we were not trying to raise as many bison as we could, our goal was to maintain conditions as natural as possible under prevailing circumstances, with bison as a part. The light that dawned on the refuge man's face was a delight, as he immediately grasped the point. He said the refuge was established to save the bison, and remnants from the great slaughter were gathered there for protection. But, now the bison were safe; there were thousands, many in private hands. He had often thought management emphasis should be changed from production to something like providing a herd for enjoyment of visitors.

A Comment

Management of national wildlife refuges and national parks are becoming more similar in many instances. For example, ANILCA

changed the name of the Kenai National Moose Range to the Kenai National Wildlife Refuge and required management "to conserve fish and wildlife populations and habitats in their natural diversity." That is not quite the same as required for the Noatak National Preserve (USNPS): "to assure the continuation of geological and biological processes unimpaired by adverse human activity," but it's close. Conversely, ANILCA provided for consumptive uses, sport and/or subsistence, in most of the new USNPS areas in Alaska. But consumption was subordinated to preservation through requiring maintenance of natural and/or healthy wildlife populations.

Another Illustration

After designation of Katmai National Monument (now Park), but prior to establishment of USNPS presence, well-meaning but unintentionally arrogant persons from another government agency constructed a fish ladder to help salmon get over Brooks River Falls on their spawning runs. The fact that salmon surmounted the falls for thousands of years, at least those genetically programmed to do so, was ignored in the seemingly universal human effort to make things "better." I use the word "arrogant" because a pristine wilderness basin and lake largely isolated aquatically by a natural waterfall seems to me to have wondrous scientific and aesthetic values which should not be tampered with by man just to put a few more salmon into commercial fishermens' nets. Our recent proposal to remove the ladder created an astonished response and furor. In Alaska, fish ladders are almost sacred, they are to be built, not dismantled, even though we could show that removal of the out-of-place Brooks Falls ladder would have an infinitesimal effect on the salmon population and commercial harvest. While we are presently stymied, the disagreement at least temporarily stopped frequent requests for other aquaculture developments in Alaska parks. Critics of ladder removal pointed out correctly that USNPS condoned and even built several structures just as obtrusive to the natural scene: a lodge, roads, cabins, a bear-viewing platform, a foot bridge, etc. But we muted that criticism by arguing while the USNPS Organic Act requires conservation of scenery, natural objects and wildlife, it also requires provision for "enjoyment of the same." There is a profound difference between development designed for visitor use and safety and development for enhancement of natural resources.

A Digression

Some question the effort of even trying to regain or maintain natural conditions because 100% success cannot be obtained very often. Indigenous wolves and grizzly bears will never be reintroduced to the North and South Dakota national parks, for example. The answer: we do the best we can. Prescribed fire is more natural than no fire, reduction by trapping of bison populations in fenced parks with ineffectual predators is more natural than no reduction, exotic plants should be removed only to the point where surrounding natural vegetation will be damaged, etc. An unusually simple answer to a complex problem,

although determinations, and methods and means can involve great complexity.

A Complication

By law, some natural elements of natural zones *are* more equal than others: threatened and endangered species. Adherence to the Endangered Species Act, I believe, will severely tax our management ingenuity because at times it will be at the expense of ecological integrity. Hopefully, the requirements of the Law will be accommodated without turning national parks into *de facto* national wildlife refuges. There is nothing wrong with national wildlife refuges, but mandates for their management do not mirror those for national parks.

On Research

Much of the review mentioned in the first paragraph concerned research, the paucity of it in USNPS and poor use of results. Why not more emphasis on research? The payoff is in the future. We prefer gratification now, payment later on the installment plan. Personally, we are forced to save for the future through salary withholdings for retirement, Social Security, and income taxes and learn to get along on the remainder. USNPS could also save for the future by withholding an inviolate research fund, free from all tampering, and learn to manage on the remainder of its appropriation. Expecting a manager, during a 5 or 6 year job tenure, to budget for a payoff 100 years in the future when present crises often appear overwhelming is unrealistic. But the future belongs to those who prepare for it.

Management is making more use of research findings all the time. Certainly managers in the Alaska Region appreciate and request research. For example, the responsibility for managing the Noatak "to assure the continuation of geological and biological processes unimpaired by adverse human activity" and: "to protect habitat for, and populations of, fish and wildlife, including but not limited to caribou, grizzly bears, Dall sheep, moose, wolves, and for waterfowl, raptors, and other species of birds; to protect archeological resources; and in a manner consistent with the foregoing, to provide opportunities for scientific research," cannot be met without research, and plenty of it, especially considering the consumptive uses allowed there by law.

A Lighter-note Conclusion

The recent recommendations for change mentioned in the first paragraph support closer ties between USNPS and academia. I agree, but why should trees have all the glory? As an equivalent to "forestry," I suggest "parkery." We need young people with degrees in "parkery," awarded by "Parkery Schools" at appropriate colleges and universities. Why not? We are now of age.

Notes:

1. Comments are based on a "brown bag" lunchtime talk presented in the Alaska Regional Office.

2. Graber, D. M. n.d. Rationalizing management of natural areas in national parks. 15pp. Mimeo.
3. Pring, G. W. 1987. Resource protection and the national parks: meeting the challenge of the future. Proceedings of the Confer-ence on Science in The National Parks, 1986, Volume 1:9-19. The U.S. National Park Service and The George Wright Society.
4. Singer, F. J. 1986. History of caribou and wolves in Denali National Park and Preserve—appendices. NPS Research/Resources Mgmt. Report AR-11. 89pp.

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Global Ethic: Fostering Parks in America[1]

J. Hauptmann, James Donoghue* and *Theodore W. Sudia

The U. S. National Park System is in place. It represents one of America's outstanding historic achievements. It was 70 years in the making and has grown from 14 national parks and 21 national monuments in 1916 to 343 units in 1988 with an annual operating budget of one billion dollars.

The creation of each unit is an individual story of forward-looking people and groups who were on the cutting edge of the environmental movement of their time. Some did more than others, but they were all part of an era of creating parks in America and a park ethic that has been emulated around the world. We honor many of them when we tell their stories every day in every park in the National Park System.

As a result of their efforts, we are left with the task of stewarding and expanding on a system which includes a wide array of resources—historical, natural and recreational—which collectively are national treasures. Past park managers—decision makers—have dealt with many complex and ever changing issues over the years. They have followed policies, procedures and guidelines, as well as their own professional expertise. From the Lane Letter, with its management principles and twenty-three operational directives, to today's resource management policy, park managers have consistently made resource protection decisions based on known environmental principles. Unfortunately, the impact of increased urbanization and accelerated growth on park resources were not always easily predictable; no one could have anticipated the extent of development pressures of recent years and their long-range impacts on park resources. Nevertheless, resource management decisions over the years were generally made with the best information available.

In 1915, Stephen Mather was able to dynamite Great Northern's sawmill to remove an "eyesore" and thereby protect a park resource. Today, however, such a "quick fix" solution would generate more problems than it would solve.

Without a doubt, we need to better protect park resources from adverse influences within, as well as outside of, the boundary. On one

hand, a key to future park protection is to influence the growth management decisions being made by the communities which surround our national treasures; and on the other, it is equally important that we influence the national economic and environmental decisions.

Just as Mather took a bold step to protect Glacier National Park, today's park manager needs to emulate that decisiveness and effectiveness in a much more complex time. The promises and pitfalls of increased direct interaction with nearby communities and the influencing of national and regional growth policies are many. The effort may tax one's nervous system, strain financial and staff resources, and give rise to accusations of "Federal interference." On the other hand, it may put some vitality and excitement into an organization's blood that some feel has grown thin. Today's park managers need to expand their vision, knowledge and expertise over the boundary fence and become directly involved in the growth issues of nearby communities. We can better preserve our national treasures by taking a leadership role in protecting ecosystems, landscapes and waterways, whether or not we own them. When we protect the *region* from the adverse impacts of acid rain we protect our *parks*. When we help manage visitor impact on neighboring communities, we in fact manage visitor impacts within our parks.

First and foremost, the parks are an integral part of the national and international tourist industry, serving as destinations for hundreds of millions of people. This is not surprising given that tourism is the second or third most important industry for most of the states of the Union. In many cases, the parks serve an important role in local and regional economies.

Parks are part of the educational community. They are increasingly used for scholarly pursuits and illuminate the historical and scientific value and virtue of the parks and the nation. The scholarship associated with the parks is heavily dependent upon their protection, preservation and restoration, and *vice versa*. The research and education that go on in the parks and which are transferred to the public establish the parks as unique entities in the social, educational, political and economic community in which they are located. Their unique identity and the vital role they play in the nation and the community defines their social worth and justifies their ultimate protection. The parks will be safe only as part of an enlightened social, political, economic, and educational system.

An exciting prospect arises from the resolution to take a leadership role in protecting, and enhancing American parks: it is the wonderful opportunity to help make a park of America.

As we accept the mission of the National Park Service to protect, preserve and restore park values, educate visitors and non-visitors alike about park values and provide the highest quality visitor services, it is necessary that we actively participate in today's environmental decisionmaking.

To do this we must accept the need and take a leadership role at all levels of the Service in today's tourism, education and environmental

issues. The job of being "just a park manager" is big enough; however, in today's world it is necessary that we play a significant role in a more and more complex local, regional and, yes, even the global environment.

Some of the Specific Tasks Ahead Include the Need To:

- Set standards of excellence in resource protection, park management, uses of appropriate technology in solid waste disposal, energy conservation, collections management, historic vista management, and employment of state-of-the-art techniques in inventorying and monitoring resource systems both within park boundaries and those external which impact park values.

- Increase and systematize our capacity as an educational institution. Examples include: expanding both the depth and breadth of interpretive programs to reach a larger, more informed audience.

- Develop, articulate and accept the responsibility as a major participant in American tourism by knowing the value of parks to tourism so that the rest of that industry does what it needs to do to protect its own interest and park values.

- Plan and provide visitor surveys for changing populations and leisure trends.

- Know and use all the tools available to actively participate in the nation's growth management agenda and help craft comprehensive stewardship strategies that are feasible. Only by participating can we be part of the solution.

Notes:

1. A report of the National Park Service's 21st Century Task Force.

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National Parks in the 21st Century

Theodore W. Sudia

The need to protect, preserve, and restore the natural and cultural heritage of the United States will continue to increase from now through the 21st Century as it has increased from the inception of the Service to this day.

The need to provide for a national system of parks—coordinating the Federal, State and local system of parks—is a great unmet need of this nation.

The need to provide to all citizens quality outdoor recreation is a fully legislated mandate waiting to be fulfilled.

A National Park Service that can supply the above needs will meet the requirements for the National Park System of the 21st Century.

The principal function of the Park Service of 1988 is tourism. The infrastructure of the Service, including most of its dollar and human assets, is devoted to servicing the needs of visitors to parks. Development and maintenance, which are tourism functions, alone consume 70% of the Service's 1 billion dollar annual operating and construction budget. Although its impact has not been measured, the Park Service is undoubtedly a major factor in the rural economy of the United States. In the history of the National Park Service, tourism has been the main function and has been the function performed best by the Service. The high quality of this visitor service has gained for NPS the esteem of the American citizenry and the traveling public from around the world.

The present function and organization of the Service is a matter of historical development and the priorities perceived by the founders as necessary to win the support of the American public for the National Park concept. The wisdom of these actions is confirmed today in the overwhelming support of the Parks by the American people and the high regard in which the System is held in the rest of the world. Having solved the problem of handling large numbers of people in the parks, it is the responsibility of this and future generations of managers to build upon the success of the past and extend the fiscal and intellectual resources of the Service to protect, preserve and restore the resources through research, and educating the parkgoing public as to the values of the resources. Education and research will be the principal means of 'maintaining the resources unimpaired for future generations.' Cooperative education and research will be the basis of forming a partnership with the States and Localities to protect the resources of the National System of parks. Research and education will be the means of devising the delivery system that will assure that all Americans have opportunities for outdoor recreation. And the education and research programs of the National Park Service will contribute to the ability of man to survive in a world whose biology is imperiled.

Physical protection will always be needed. Rangers will always have to be on guard for unlawful uses of parks, but no number of

rangers will protect the parks from well intentioned but uninformed visitors, nor will any number of rangers protect sensitive components of the environment from uninformed or poorly informed planners and developers. An education program with a research function is the only solution to these larger protection problems. The Park Service of the 21st Century will have a balanced program of tourism, education and research and protection.

The National Park Service of the 21st Century, then, will consist of the following components:

1. A system of Federal Parks known as the National Park System, together with programs to preserve resources of "national significance," for which the National Park Service is the acknowledged leader.
2. A "Cooperative States" parks program similar to the cooperative states forestry program of the Forest Service and the cooperative State fish and wildlife program of the Fish and Wildlife Service.
3. An outdoor recreation program serving all citizens of the nation through the agency of the Outdoor Recreation Act of 1962.
4. A program of international cooperation to share knowledge, educational principles, planning and development technologies, and research findings with the rest of the world; and, through the World Heritage Program and the Man and the Biosphere Program, to foster a world system of parks and protected areas.

The cooperative states program will provide assistance to the States in the form of cooperative research programs and will cooperate with park, parkway and recreation planning in accordance with the Park, Parkway, and Recreation Act of 1936, which by then will be amended to accomplish the broader purpose of a Cooperative States Park Program. A National System of Parks will evolve from 1 and 2. The Land and Water Conservation fund will be expanded and will make grants to the States and Federal programs to increase park assets as needed.

Recreation will be found to be the major remedy for the stress of modern living and will permeate all facets and levels of our society. Rural and urban areas alike and all instrumentalities of government will become involved with recreation.

To prepare for the obligations that will fall to the National Park Service in the 21st Century the present mission must be examined and amended as needed and the present staffing and management must be examined and overhauled as necessary.

A new mission statement emphasizing protection of resources, education of visitors, park goers and the public will be a step in the right direction. An interpretive program that provides high quality information in highly digestible, rapidly assimilable fashion is what is needed for tourists, while high quality in depth information is what is needed for the serious park goer.

Protection of the resources has to be based upon a well founded and funded education and research program managed at the local level. Protection of resources in a cooperative states program has the same requirements.

The Park Service of the 21st Century will continue the superb tourism program of the present, but will add to it resource management based upon research, and resource protection based upon education. The National Park Service of the 21st Century will be the leader in nature studies and the teaching of the history of the nation.

The single most important step that can be taken by the present management to prepare for the 21st Century is to reprofessionalize the Service. The competence of the Service to carry out its present function is first rate. The present staff is not prepared to carry out the non-tourism functions of the future. The problem is easily solvable: (1) determine the future mission of the Service, (2) set the Employee Development Division to work putting together the plans needed to satisfy the future personnel needs of the mission, (3) issue directives to line managers to execute the mission plans, (4) position management now to insure a successful mission in the 21st Century.

Recreation must permeate all the plans for the future mission of the Service. Recreational education and educational recreation and plain old recreation must be included everywhere it is appropriate to do so. Recreation must be appropriate to the mission of units of the Service. Recreation must not threaten resources managed by the States and localities. But outdoor recreation must be available everywhere possible, in urban and rural settings alike.

A National Park Service sensitive to its changing mission will be as successful in the 21st Century as the present Service has been in the 20th.

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Feral Fish and Kayak Tracks
—Thoughts on the Writing of a New Leopold Report—

Paul Schullery

[A presentation given to the *Commission on Science and Resource Management Policy in the National Park System*, National Parks and Conservation Association. April 18, 1988.]

I'm tickled to be here for two reasons. One is that knowing what I know about the history of the National Park Service, I recognize the immense significance of what this commission is up to, and I'm honored to have a chance to take part tonight. The second reason is that believing the things I believe about the parks, and hoping the things I hope for the parks, I really want a shot at you people.

I know that this distinguished Commission will be addressing more than just ecological issues, but I am going to concentrate on those, especially on the Leopold Report. I hope to suggest, not how difficult your job will be, but how amazingly stimulating and exciting it is. Among the many things the parks have given us is a precious and often underappreciated gift: the opportunity to think really hard about where we fit in our world.

A few years ago, as part of an assignment for *Newsweek*—except perhaps for brandishing an automatic weapon, there's nothing that focusses attention in a government office like saying, "Hi, I'm from *Newsweek*"—I interviewed some young men in Bozeman, Montana. These men were expert whitewater kayakers, and they were sneaking into Yellowstone Park and illegally floating some twenty miles of the Yellowstone River in its Black Canyon.

The Black Canyon of the Yellowstone is a spectacular gorge, singular not only for its beauty but for its primitiveness. If you walk or ride its trails you will be moved by what you see, but you may be even more impressed by what you don't see: rare is the river of this size in the contiguous forty-eight that has neither road along it nor boats in it.

For most of Yellowstone's history, that was just fine, but in the past twenty years the skills and equipment of whitewater sport have come a long way. About ten years ago a few local kayakers began eyeing the river, and finally a few of them decided to risk arrest and run it. Some of the ones I talked to had been caught. One had run it eight times and been caught three; the third time they fined him heavily and gave him a one-year suspended jail sentence. This river, he told me, was such a great ride that it was worth it.

The kayakers who sneak into Yellowstone to run the river aren't doing it to make a political statement. They love rivers, and they question the illegality of closing this one to them. One of them put it this way:

> "Kayaks don't do much harm. They're not noisy like snowmobiles, they don't dig up trails like hikers, and they don't kill fish like fishermen. Except for where we need to put in and

take out we leave no trace. We don't leave any scars on the water."

I can quibble with some of that. We now know that simply the passage of nonmotorized rivercraft can have the effect of reducing wildlife use of riparian corridors. We also know that there are many kinds of harm, including esthetic intrusions, and that a bright blue kayak can be a formidable one in an otherwise wild setting. But this man was onto something important, so I'll quote him some more.

> "Take a look around the national park system. There are boats on rivers in the Smokies, in Glacier, in the Grand Canyon.... boats were the only way to *explore* the Grand Canyon. The uses that are considered okay in national parks today are mostly established by tradition, and there isn't a kayaking tradition in Yellowstone, so we're out of luck."

And, as another of the kayakers chimed in, "Hikers were there first, and that's all they have going for them. We could claim we don't like seeing *them* hiking along with their aluminum and nylon backpacks and digging up the trails with their shoes."

This was strong stuff for me, because I went to them pretty sure I disapproved of what they were doing. I still did, and still do, but I know they've got a case of sorts. These were environmental activists, smart, nature-loving people. In fact, they had mixed feelings about the possibilities of legalizing kayaking, because they knew that once a bureacracy got hold of it, there would be patrols and signs and formal put-in stations and the wildness of the whole experience would be diminished. Some of them preferred things to stay the way they were, so the trip would still be pure.

Let me pick at their arguments a little. One of their justifications for allowing rafting was that since it's okay to raft in other parks it's okay to raft in Yellowstone. That assumes a lot of things. It assumes, first, that it really should be okay to raft in those other parks.

I question the appropriateness of the inner tube parades on the Merced or the big streams in the Smokies. I don't question the appropriateness of floating the Grand Canyon as much, but everyone seems to agree that we have a lot to worry about in the Canyon in terms of the kinds and amounts of floating that go on.

But even if we accept his assumption that it's somehow "right" for people to be floating pleasure craft down the rivers of these other parks, there's the bigger question—does that necessarily mean it's right for Yellowstone too? These areas we call national parks were set aside because each had unique qualities. That suggests to me that we should be prepared to apply unique management principles to them in order to do each of them justice.

Then there's this: the kayaker's argument implies that, because he's doing no more harm than the hiker, he should be allowed in too. The national parks are not democracies. Unlike the national forests, the parks have no legislative mandate to honor any multiple use concept that pretends to guarantee that everyone gets a piece of the pie. Do we perhaps have the right to more or less arbitrarily decide that *this* many uses in *this* area are enough, that others shall be excluded, not

because they are more harmful, or in some ultimate sense wrong, but just because the ones already there are enough?

These are difficult questions, and in the parks, as much as we may buttress our policy decisions with this study or that ecological wisdom, it still often, and I think necessarily, comes down to a certain amount of arbitrary, seat-of-the-pants judgment. Sometimes it's good, sometimes it's awful, usually it's political. But at its best it's one of the most exciting, creative things about the Park Service's mission.

We make so many subjective judgments—appropriateness is such a weaselly term—when we manage parks that nobody should ever feel too sure their use is perfectly right. *All* uses that actually involve entering the park have their faults in terms of what they may do ecologically, *and* in terms of what they may do to diminish the experiences of people engaged in other uses. For many people, there's nothing more distracting than settling in to enjoy a spectacular view of a mountainside and spending the next half an hour watching a blaze-orange backpack slowly move across the slope. For others, there's nothing more comforting than looking across a wilderness lake from a remote compsite and seeing, ten miles away, the bright lights of the park's largest hotel. Life is not simple.

So far I've been talking about parks as people perceive them—the famous "park experience" we spend so much time analyzing. Let me turn to the other side of the story now, and go under those kayaks to the resource itself. Let me say a few words for fish.

Some years ago I wrote a book with John Varley, who is now Yellowstone's research administrator, about the fish of that park. John is among many other things a great recreational thinker, and one day as we were working on the book he asked me, "Paul, what are we going to call the fish that are in the park now but weren't there before white men arrived?"

"Well, we'll call them exotics, I guess."

"No, that's not right. Exotic means 'from another continent,' and the only exotic fish we have in Yellowstone is the brown trout, from Europe. The rainbow, lake, and brook trout are all North American."

This may seem like a fine point to you, but we had it in mind to write a definitive book, and we didn't want to be careless here. We even considered calling them "feral," but that wasn't right, because feral usually suggests something domestic that has gone wild more or less against its keeper's will. You could argue that fish brought to Yellowstone as fry or eggs were domestic, but very few of them were there against anyone's will. We settled for unsatisfying terms like "non-native," which to us was a non-solution. It was sort of like the person who, when asked what grog tasted like, said, "Well, it *doesn't* taste like pork."

Non-native species are a central issue in preserving park ecosystems, not only because we want to keep them out, but also because there are already so many of them *in*. No park is without some life forms that were introduced artificially, and they offer some of the service's biggest challenges and biggest lessons. Again, I consider the fish.

In 1980, an Ad Hoc Fisheries Task Force of the U.S. Fish and Wildlife Service proposed that, "where appropriate and after careful analysis the Director, National Park Service, should be empowered to declare certain introduced species 'naturalized' and managed as natural components of the ecosystem."

What seemed to be going on was an attempt to come to some final resolution of the problem of how to deal, philosophically, with the presence in a wilderness park of non-native fishes for which there was no known way to remove.

What was being proposed, of course, was the equivalent of shortening the mile by a few hundred yards so that more people could run it in four minutes. They were, as I wrote at the time, trying to trim the yardstick. We can't redefine the naturalness of an area. If we try, we're only fooling ourselves. The area, in its unique and elegant evolutionary character, "knows" we are only creating a transient paper construct that will never become more than self-delusion.

More important, we don't need to make such artificial designations. Future managers can deal with exotics as have past managers. They can recognize them as unfortunate facts of life. They can use exotics to teach the public the hard lesson that we have caused irrevocable harm to all primitive ecosystems. They can do all those things, and still have an authentic ideal to hold up as a management goal: to come as close as possible to representing primitive America.

Starker Leopold and I had some interesting conversations about this goal. The Leopold Report has taken a bum rap for being idealistic and impractical because it suggested, at one point, that parks should be maintained, "as nearly as possible in the condition that prevailed when the area was first visited by the white man." Critics of the Park Service have used this statement out of context. It's one of their favorite cheap shots. They routinely trot out this statement to show that the Park Service's mission is naive and impossible: not only don't we know what the area was like, exactly, when it was first visited by white men, we couldn't possibly keep it that way.

Of course, Starker and his colleagues knew that. The whole Leopold Report is a discussion of just how we can manage and manipulate these areas in order to maintain a "reasonable illusion" of a primitive state. Most of the report is devoted to coming to terms with the limitations of this goal. What Starker was doing in his statement about maintaining an area's pre-European condition was acknowledging that we dare not trim the yardstick; we can only approach it, we cannot achieve it fully. As long as we have that absolute to aim for, we have a consistent course in principle. Once we start short-circuiting the absolute, as we would have if we'd tried to pretend the European brown trout was native to the Great Smoky Mountains, we immediately lose our bearings. We may never achieve ecological purity, but we can still have purity of principle. It seems clear to me that Starker knew this.

In fact, what I found intriguing about Starker's position, and this came out both in our conversations and in his correspondence, was the extent to which he was willing to dampen and manipulate ecological processes in the interest of maintaining the primitive vignette he

thought was the right one. He knew that what parks were really preserving were wild processes instead of static scenes, and that the real resource was found in those processes as much as in the wildlife or plants.

But one day I was carrying on about the Park Service mowing Big Meadow in Shenandoah National Park. If nature wanted to close up that meadow, I said, what a great lesson for visitors, to see that there were other important things to appreciate about nature than calendar scenery. Starker rhetorically came down on my chest with both feet, something he could do very well. The important thing for people to see there, he insisted—and at the time it seemed it was all he could do to keep from shaking a finger at me as he talked—was what it looked like before they got there. That meadow was unusual, and if it took a little artificial manipulation to maintain it, it was worth it.

We had a similar conversation about fishing. About nine years ago, I wrote an article that stirred up some of my acquaintances in the fly fishing community. I love fishing, but I pointed out that sport fishing was on shaky philosophical grounds in the parks, that there was no reason except hoary tradition that we should be out there harrassing some wildlife populations just because they had the ill fortune to be hairless and lacking big grown eyes. According to the Park Service's accumulated mandates, all the life forms should be treated as if equal. I noted that sport *hunting* was generally eliminated from the parks a century ago, and quoted a wise fisherman who said that, "If fish could scream, a lot of things would be different."

Starker, though he would acknowledge that fish were sort of second-class citizens in the parks, was, like me, a hard-core fisherman, and understood the truth and beauty to be absorbed in a day astream; for him there was a reasonable tradeoff in letting people fish, especially if you controlled their harvest so that all they really took away from the park resource was a deeper appreciation for it.

I could quibble with that, too. You don't have to snare cougars in the mouth with big steel hooks in order to appreciate them, and cougars are even harder to see and appreciate than are fish. But, being a fisherman and pretty much wanting to keep fishing in Yellowstone, I'm inclined to agree with Starker that fishing is a useful compromise of the Park Service's underlying principles. You may not see it that way. Fishing is a use that has been questioned often in recent years, and it's part of a general trend away from human interference with park ecosystems.

The goal of protecting natural systems asks many questions, some of which you will be addressing. I often find myself thinking of some of these questions, and wishing Starker were still alive to give me his unique perspective on them. Let me conclude with a few.

National parks, like all natural areas, still have their vacancy signs out. They are in no sense ecologically finished, and thus pose certain problems for the creative manager. What should we do, for example, if a trout that is currently non-native to a park overcomes a natural barrier and makes its way into the park? What if it colonizes a stream that is the only remaining habitat for an endangered species of sucker? To which

native do we owe allegiance, and do we violate the park's principles if we choose to protect the sucker?

In a similar vein, what if one mammal in a park, because of, say, a natural shift in climate suddenly has a previously nonexistent edge over competitors, and it begins to push other species off the range they formerly shared? I'm pretty sure that Starker would want to meddle in that one, and I'd love to hear what he'd want to try.

Here's another tough one. The basin of Yellowstone Lake is tilting; in a few years the nesting islands of white pelicans may be submerged, drowning one of the great nesting sites in North America. Should we be hauling gravel out there, or celebrating the imponderable power of natural processes?

I know there are a thousand questions like this, and I envy you getting to ask them and consider them. As you prepare to do so, I would like to leave you with two thoughts about the original Leopold Report—two things about it that strike me as important.

First, like most great and enduring documents, it dealt in main principles. It is still at its best in its generalizations, and is at its most dated when it addresses specific management issues in specific parks. Ever since the idea of writing a "new" Leopold Report surfaced, I've thought of how important it is that the document deal in the grand scale.

—We are concerned with an agency whose soul is an unattainable ideal, and whose life is dependent upon creative, organic evolution, both ecological and bureaucratic —

While we must ensure that the rivers are kept flowing and undisturbed, we must also admit that no two are alike and thus no two will necessarily have identical management. While we must ensure that the primitive vignette for which the park is being preserved is kept as whole as possible, we must be sensitive to the unusual esthetic, biological, and even political needs of some part of that whole. We must remember that the Park Service, unlike many agencies, often generates policy from the bottom up, as problems crop up in the field that test and even shape the mandate and principles of the agency. The bureacratic top must be able to respond to the evolving ecological wisdom of the bottom.

Such sensitivity will come from some compromise between telling the Park Service exactly what it should do in every situation—something nobody knows—and telling it so little that we leave it on its own. We think too much of the Park Service's managers to do the former, and we think too much of ourselves to do the latter. We must strike a balance that gets the best of both the agency's powers and the collective wisdom of the agency's friends and watchdogs. Only in that way lies any hope of success.

The second thing that has always struck me about the Leopold Report is even less tangible. It is something that has struck me about

many of the things Starker wrote or helped write. I am reminded of one of the most enduring of all American documents, the Declaration of Independence—that masterpiece of balance and principle. Thomas Jefferson was chosen by his committee to write it because his prose was, in the words of John Adams, "remarkable for the peculiar felicity of expression." Peculiar felicity of expression...in a different way, and for different reasons, I find the Leopold Report to have a similar quality. I know that this is hard to quantify, and may seem peripheral to the main mission of working out the principles. But if, as I suspect, great principles are by nature well-expressed principles, then my wish for you is that you produce a document that is not only brilliantly thought out but beautifully said. That way lies immortality. Thank you.

Paul Schullery is a former associate editor of *Country Journal*, free lance writer and consultant on NPS matters, and now a technical writer on natural resource topics at Yellowstone National Park.

Society Notes

Going into Our Tenth

The George Wright Society will enter its tenth year of life on August 18, 1989. We began in August 1980, and by November of that year had all of 9 members—8 of whom constituted the Officers and Directors of the Board. By the end of 1981—our stated "Charter Year"—112 had become Charter Members.

The first issue of the Forum, which was to be "a newsletter to enable members to correspond with one another," was produced in the Summer of 1981. It had 12 pages, half of which contained Society Notes of various kinds.

As we begin our tenth year, Forum goes to 950 addressees: members and subscribers 375; US National Park Service parks and offices 354; Canadian Parks Service parks and offices 165; State Park directors 50; overseas 6. Of the original 112 Charter Members, 73 are still members in good standing; 13 are "lost" (i.e., no known address); 2 have died.

Some «Lost Persons»

Over the years we've lost track of 14 members. No doubt some of these might not wish to continue membership—for any number of reasons. But in the event that anyone reading this might know the whereabouts of the following persons, we'd appreciate having their address:

Larry Barden
Denise Domain
Christopher Wright Lloyd
Robert G. McLean
Martin Price
Jennifer Bjork
L. M. Ehrhart
Catherine Lloyd
Ingrid C. Olmsted
E. Jennifer Christy
Judd A. Howell
Donald E. Magee
Charles E. Peterson
Benjamin J. Zerbey

In addition, the following three non-members attended the Triennial Conference in Tucson last November, and we seem not to have a viable address for them—important if they are to receive information relative to that Conference:

Alan Everson (somewhere in New Mexico?)
Yvan Lafleur of the Canadian Parks Service
Kenneth Mabry (somewhere in New Mexico?)

Society Elections

Members of the Society (all those who have A, B, or L in their address label's code line) will soon receive their triennial election notices. Candidates for officers and directors of the Board will be listed along with a thumbnail sketch of each and a self-addressed ballot will be enclosed for your use.

Next Conference—on a Biennial Basis

At its meeting last November in Tucson, the Board of Directors passed a resolution changing the triennial conference to a **biennial** conference. The next conference therefore is planned for the **autumn of 1990**. Two offers have been received by the Society to hold this conference: (1) in Great Smoky Mountains National Park (Gatlinburg, TN); and (2) in El Paso, Texas (Chamizal National Memorial). The choice is being weighed and the Board will have an answer soon.

Changing your Address?

If you plan to change your address, please send us your new address as soon as you know what it will be. The Forum will normally be returned to us with your change of address noted on it; but, sometimes it doesn't make it back, and if it does it has a postage due on it for the 1st class rate. Thanks!