

The George Wright
FORUM

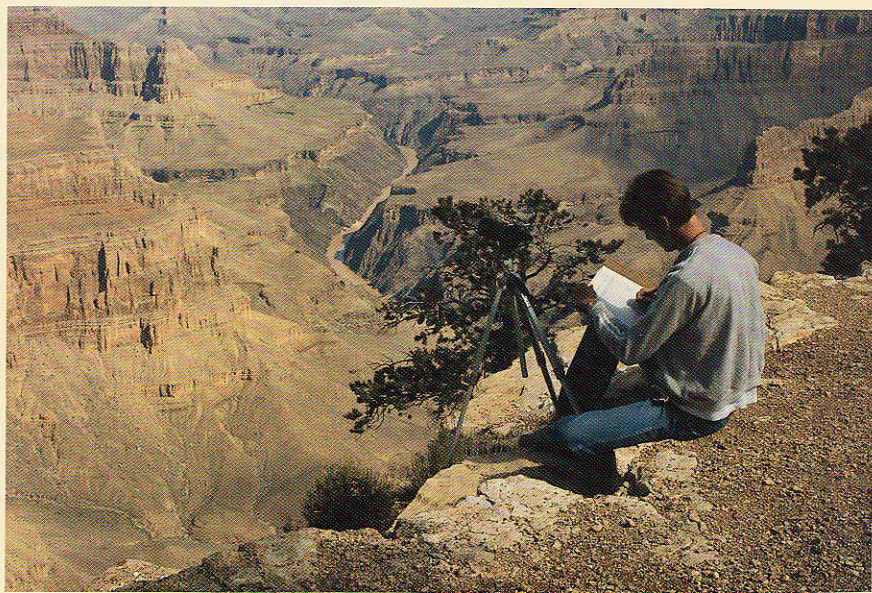
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Number 1



U.S. National Park Service Employee James Ward Monitors Aircraft over Grand Canyon National Park from Pima Point on the South Rim.

Photo by Michael Ebersole

The George Wright Society

Dedicated to the Protection, Preservation and Management
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Through Research and Education

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On the Cover

At some particularly scenic and popular parks and wilderness areas, overflights by aircraft have become a major resource management concern because they can disturb the peace and quiet. Grand Canyon National Park in Arizona is perhaps the best known protected area facing this problem. Article on page 15.

The George Wright Forum

Volume 8

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Protecting Park Resources within a Developing Landscape

David A. Haskell

*Shenandoah National Park
Luray, Virginia*

Parks, wilderness areas, and other protected natural areas across this country, and indeed throughout the developed world, are under increasing pressure from various types of land development. Human population growth continues to increase at an alarming rate. In the United States, emigration adds to an already pressing problem of accelerated resource consumption. When viewing the condition of the world natural resource base, added to economic pressure for continued intense resource use within this country, the mission of the U.S. National Park Service takes on herculean proportions.

The USNPS, charged with managing the world's first national park system, is faced with the challenging task of assuring that the natural, biological, and cultural integrity of the parks are perpetuated. The USNPS has always been faced with problems relating to that age-old balance between resource preservation and visitor use within the parks, but only within the last two decades have major threats from outside the parks began to be recognized. Today many of these perceived threats have become a reality and have developed into seemingly impossible problems to solve.

Increasing land use pressures resulting from the expansion of residential areas and the conversion of natural landscapes to agricultural and industrial purposes is becoming one of the most pervasive and widespread of these threats. One of the parks where many of today's pressing issues are coming to a head is Shenandoah National Park.

Located within 50 km of the greater Washington, D.C., metropolitan area, Shenandoah National Park is in a geographic region which is experiencing rapid population growth. Although rapid growth is occurring throughout the entire eastern section of Virginia, the greatest direct impact to the park results from the continual rapid outward expansion of the greater Washington area. Expanding growth has moved high-density populations closer to the park, resulting in changes in its use. Day-use visits now account for a greater proportion of total visitation than they did a decade ago. Highway improvements and the relocating of major businesses to the suburbs have reduced commuting time from the park to major job markets from two hours to a little over one hour. This

allows people with a wide range of occupations to reside next to the park while retaining their high-salaried urban jobs.

Rapid expansion of these metropolitan areas has had a dramatic effect on local economies. Real estate values have risen over 400% in the past decade. Land parcels that have common boundaries with the park have increased at an even greater rate. Much of the park boundary area is experiencing a land rush that continues to drive prices up. The effects of these price increases are already beginning to be seen. Farm and forested lands are being divided, and are either developed as residential subdivisions or sold as 10- to 20-acre farmettes. Opportunities for traditional uses such as hunting and other outdoor sports are being lost as more and more properties are posted "No Trespassing." Long-standing public access to park trails originating along the boundary are also being lost.

Coping with the economic and social issues brought about by rapid land-use changes is a growing concern for people residing in many areas of the country. The USNPS, however, has the unique responsibility of developing long-term strategies to preserve those delicate ecological balances that are the foundation of the biological significance of national parks. At particular risk is the ability of park ecosystems to function without constant human manipulation. A current and pressing example is the management of the larger species of mammals. Strip development along park boundaries decreases the opportunity for the larger mammals to move freely in or out, therefore having a negative effect on population dynamics and genetic transfer. At Shenandoah, reduction

in harvest of species such as white-tailed deer and black bear during legal hunting seasons around the park may result in over-abundance of these species. Habitat destruction attributed to over-browsing by deer is already being seen in several areas of the park. Continued population growth will lead to increased incidents of property damage and livestock and crop depredation on nearby farms and residential areas.

Changes in land-use patterns near the park are also starting to have an adverse effect on visitor enjoyment, particularly as it relates to scenic quality. The Shenandoah National Park enabling legislation refers to the park and the world-famous Skyline Drive as an elevated viewing platform from which spectacular views of the Shenandoah Valley to the West and the Piedmont Plateau to the East can be enjoyed. The traditional view is a pleasing pattern of a rural landscape dominated by farms, woodlots, larger forested areas, and small communities. These pastoral scenes are being replaced by views of industry, housing subdivisions, and the pervasive influx of residential farmettes.

Increases in local industry and demands for additional electric power generation are adding to the degradation of air quality. Once-grand views are already seriously impaired by air pollution. Visibility in the region has decreased by over 50% in the last two decades. Sulfur dioxide and nitrogen oxide emissions are causing an unprecedented increase in stream acidification that threatens the functioning of aquatic ecosystems.

Similar problems are shared by other parks throughout the U.S. National Park System. However, the situation at Shenandoah is unique.

Approximately 90 percent of the 352-mile park boundary is bordered by privately owned lands. Park issues and programs related to land and resource management must be communicated to thousands of landowners and scores of local governments. This is unlike most other large natural-area parks that are bordered by national forests or other public lands. These factors make the assessment and monitoring of lands related to the park and the development of any cooperative land-use planning programs very complex.

Now that the litany of woe and despair has been presented, we ask ourselves, What can we do? It is becoming increasingly clear that the USNPS must quickly learn how to integrate the values and needs of park protection with local socioeconomic needs and lifestyle values. The management of Shenandoah National Park has recognized this growing need for several years. In 1989, preliminary plans were made to initiate an intensive planning effort to address the growing problems associated with rapid local growth. Any further delay would result in a serious loss of opportunities to have a positive influence on land development along major sections of the park boundary area. A program, now commonly referred to as the "Related Lands Initiative," began to take form. A conceptual framework was established which contains several key elements that will be carried out in three phases.

Phase I consists of two primary elements: an inventory of the current status and conditions of those lands related to the park, and the implementation of a two-year research project referred as the "Related Lands Study."

Based on a conceptual framework of the desired results of the program, land-use data needs were identified that include: statistics on the contribution of the park to local economies, current land forms and use patterns in areas where the park borders private land, existence of critical habitats or resources that lie outside the park boundary, the relative visibility of private landscapes from key viewpoints inside the park, and current land-use zoning ordinances in the eight counties bordering on the park.

The objectives of the Related Lands Study are to: (1) identify values and concerns that are important to the residents of the eight counties that border the park; (2) identify values and concerns that USNPS believes are relevant to continued protection and perpetuation of the park; and (3) identify those values and concerns which are common to the citizens and USNPS, and then establish a cooperative framework for their long-term protection. An important component of the study will be public involvement, in which private landowners; city, county and state governments and agencies; and special interest groups will be asked to identify values and resources both within the park and on nearby lands that deserve special management or protection. These values will then be compared with USNPS values. Areas of agreement and potential conflicts will be identified.

Resolution of any areas of conflict will be carried out in a series of public meetings that are to be conducted by the Center for Environmental Negotiation, a portion of the University of Virginia study team.

The study team will seek to identify methods that can protect the agreed-upon set of values. One set

of methods that has been used in a similar process in Canada (Patter, et al., 1988) included an array of land protection possibilities, including (ranging from least to most restrictive): voluntary, verbal commitments from land owners to protect the designated resource; voluntary, written land protection agreements; enforceable county zoning; enforceable covenants or easements on identified lands purchased by local governments or environmental organizations; purchase and sellback with easements, and lastly, direct acquisition or donation of lands by private citizens to the park. All of these methods are strictly voluntary. No private landowner would be forced to enter into any form of agreement. Other methods of attaining the desired protection would also be explored.

Phase II is the creation of a set of interactive Geographic Information System (GIS) databases that will support the Related Lands Study and can be used analytically to assess values and to monitor changes in a wide array of themes. To quickly obtain data from large geographic areas, the park staff will use remote sensing technology such as SPOT satellite scenes and color infrared photography. These new themes will be used in conjunction with existing themes to inventory land uses and sensitive resources, record land ownership, and perform analytical functions such as viewshed determinations.

The basic GIS land themes developed for the park GIS since 1986 were configured for use with SAGIS software. The park's new Related Lands Initiative accelerated the planned change from this vector system to the more widely used raster-based GRASS software. GRASS is

now operated on a new SUN SPARKS computer station and 1.2-gigabyte tape drive. Existing SAGIS themes being converted to GRASS include: topography (DMA), streams, forest cover types, geology, soils, fire history, critical habitats, locations of threatened and endangered species, Long-Term Ecological Monitoring System (LTEMs) plot locations, cultural sites, and the human-related themes of park and county boundaries, developed areas, roads, trails, utility rights-of-way, and special park uses. Major new themes under development for non-park lands include: land classification along the park boundary (forest, agricultural, low-density residential, high-density residential and industrial); land ownership of all parcels adjoining the park; viewsheds (analyzed from 76 different viewpoints along the Skyline Drive and four mountain peaks); significant habitats, such as winter range, threatened and endangered species outside the park, etc.; wildlife travel corridors; critical access lands (parcels that include trail access, etc.); protected private lands (those with restrictive easements currently in existence); and unprotected cultural resources.

Phase III will be the evaluation of alternative methods for the USNPS and local governments and citizens to work cooperatively toward the protection of the values and concerns identified in Phase I. One such alternative which will be evaluated is the creation of a Central Appalachian Biosphere Reserve. The park and the neighboring two national forests were identified as a high-priority site for biosphere reserve designation by the Man and the Biosphere Program's eastern deciduous forest biome study team in 1985. A highly

active biosphere reserve could well be the ideal interactive medium to bring the private sector and the various federal and state agencies together in a truly common sense of purpose for the good of all.

The Shenandoah National Park Related Lands Initiative is still in the formative stages and continued fine tuning is expected. It is obvious from this program overview that it could not be done without the land-based data acquisition, storage, and analytical capabilities of advanced GIS technology. Critical management programs such as this provide vivid illustrations of the importance of resource management technology that is firmly rooted in the sciences. Disciplines that are needed to provide critical input into the various GIS themes include forest ecology, wildlife biology, aquatic ecology, fisheries, hydrology, soil science, ge-

ology, entomology, archeology, sociology, and economics.

The critical management needs of Shenandoah National Park are amply depicted in this new management initiative. They highlight the importance of research and scientifically based professional resource management programs to the continued existence of parks and the U.S. National Park System.

LITERATURE CITED

Patter, M.V., H. Gerts, and S. Hilts. 1988. "Enhancing Private Land Stewardship." *Natural Areas Journal*, Vol. 10, Number 3.

This paper was presented at the Society's Sixth Conference on Research and Resource Management in National Parks and Equivalent Reserves, held in November 1990 in El Paso, Texas.

The date and venue of the 1992 GWS Conference have been set. Instead of the first week of November 1992 (as we tentatively said in the last issue), we will meet during the third week. The site will be the Marina Hotel at St. John's Place in Jacksonville, Florida. Full details and a call for papers will be mailed to all GWS members soon, and will also appear in the next Forum.

NOVEMBER 1992

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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THIRD WEEK IN NOVEMBER 1992—GWS SEVENTH CONFERENCE—JACKSONVILLE, FLORIDA						
22/29	23/30	24	25	26	27	28
Thanksgiving						

Management Planning at Gorce National Park, Poland

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Danuta Ptaszycka-Jackowska
*Institute of Physical Planning
and Municipal Development
Cracow*

FOREWORD

Dr. Maria Baranowska-Janota made a presentation based on this paper at a joint American-Polish national parks workshop at Bialowieza Parku Narodowy (National Park) near the Soviet border in October 1988. Baranowska-Janota and her colleague Danuta Ptaszycka-Jackowska are highly respected professional planners living in the southern Polish city of Cracow. Other than minor changes or explanatory notes, I have left the text as the planners translated it to give the flavor of her contribution. Readers will readily observe many parallels to USNPS planning—resource data gathering, analysis of threats,

development of alternatives concepts, and heavy emphasis on public involvement.

This paper gives insight into how park planning is conducted in Poland. Gorce National Park reflects a mosaic of land ownership divided between the public and private sector. Of the various socialist nations in Eastern Europe, Poland has retained the highest amount of private land ownership, especially in rural areas. The park is located in the Gorce Mountains of southeastern Poland, not far from Czechoslovakia. The plan was developed by professional planners at the Institute of Physical Planning and Municipal Development at Cracow, about 35 miles from the park.

Interestingly for a planned centralized economy and political state, there is no central park planning office similar to the USNPS's Denver Service Center. Municipal planners make contracts with the central government to prepare a plan for a national park. Thus, planning is done on a park-by-park basis with some assistance from officials in Warsaw. This approach seemingly works, but the resulting plans do not offer consistent management, development, interpretive, or operational alternatives for the nation's parks. And as one tours the various parks, this lack of a systematic approach is apparent in diverse development, operational, and interpretive infrastructure. Also, one does not see a consistent design ethic at the various parks, or in development at individual parks, for that matter. Little consistency regarding infrastructure was observed during our tour of four national parks.

In terms of planning for Poland's concentration of national parks in the southern mountains, managers, scientists, and planners must deal with the heavy impact of acid rain and reduced air quality produced by low-grade coal use in the heavily industrialized triangle

of eastern Germany, Czechoslovakia, and Poland—an area known as Silesia. Several presentations at the 1988 conference focused on poor air and water quality as well as the effects of acid rain. It is only since the collapse of the Eastern bloc that the severe environmental costs of socialism have been publicized in the West.

—Ronald W. Johnson
USNPS DENVER SERVICE CENTER

INTRODUCTION

The Gorce National Park, founded in 1980, with an area of 6,000 hectares (approximately 15,000 acres), covers the upper part of the Gorce Mountains massif from 700 to 1,300 meters above sea level.

The park is easily accessible from all sides, mainly by valleys. Forests (95%) of the area dominate in its utilization structure. In the period preceding establishment of the national park, the forests were intensively exploited and a dense network of forest roads (41 km, or 25 miles) developed. Intraforest clearings and pastures were used for sheep grazing. Forty shepherds' shelters—at present of relictic value—remain from that time. On the whole area of the present national park herbs and fruits of the woods were collected.

The Gorce Mountains were always attractive for tourists and skiers; therefore, the park itself and its vicinity is cut with a dense network of touristic tracks, there is a big shelter house, two camping sites, holiday centers, and summer houses, a chair lift, and five ski lifts. The park is surrounded with a number of villages characterized by advanced urbanization processes.

A great part of the territory of the national park belongs to the state;

there is, however, also private and communal ownership, and many private owners and inhabitants of the adjoining territories would still like to make use of the territory of the park.

The complex situation of the park causes acute conflicts between nature protection and utilization of the territory.

GENERAL REMARKS ON THE MANAGEMENT PLAN

Development of the Gorce National Park in perspective of time and goals is the object of a general management plan. The plan was elaborated according to the law as a regional plan.

The aims of the plan are to establish the adequate basis for all decisions on natural resources protection and park use and indicate the proper ways to solve or minimize the inner and outer conflicts.

The plan was elaborated in an open way. All information about goals, problems and controversies occurring, new ideas, and work progress as well, were confronted with the public. Through meetings, consultations, reports, and publications, the public opinions were collected and discussed. The main task was put on the discussions with the people interested in the key issues of the park development and management.

WORK PROCEDURE ON THE PLAN

According to the law regulations in Poland, the plan was elaborated in two stages: (a) assumptions of the plan; and (b) scheme of the plan.

Each stage had to be accepted by the National District Council (Wojewodzka Rada Narodowa).

These stages were preceded by a preliminary phase of data collecting.

The range of data or entry materials for the plan included collection and analysis of:

- Regulations, instructions, and postulates concerning the plan;
- Establishment of development plans of the district and respective communes into the area of the park and its vicinity; and
- Data on the state of the area as natural environment, utilization, development ownership, and negative phenomena are concerned.

Stage I: Elaboration of Assumptions for the Plan. According to the regulations, assumptions for the plan are to determine the aims, conditions, and ways of their realization, as well as other problems which should be solved in the plan. Assumptions should be elaborated in variants considering functional associations of the territory the plan is made for with neighboring areas.

The stage of elaboration of assumptions for the Gorce National Park was divided into two phases, i.e., a phase of analysis and studies, and a phase of elaborating a functional and developmental conception.

The first phase (analysis and studies) comprises four points:

1. Elaboration of diagnosis of the existing state and the foregoing processes of development;
2. Recognition of the prognoses of development; and
3. Determination of aims and functions of the park.

Aims and functions are the basis of all activities undertaken in the park since they determine the ways of utilizing its area. Use of the park cannot be extended in an unlimited way, but must be subordinated to

the occurring conditions. Hence, the next activity was:

4. Determination of the development in the aspect of: (a) nature, which permitted the determination of a developmental and quantitative framework of the development for all ways in which the park may be used;¹ (b) social-economical, which permitted determination of activities necessary to reconcile problems of nature protection in the park and those of its uses.

Conditions of the social-economical development result first of all from:

- Occurrence of private and communal ownership of the territory within the park area;
- Social needs for development of determined activities in its territory (scientific research, tourism education);
- Problems of local people as coexistence with the park is concerned (e.g., indemnities for crops destroyed by the park game, and the park as a place of work); and
- Organizational-legal determination of the kinds of human activities undertaken in the park area and qualitative possibilities of using its area.

¹The natural environment of the Gorce National Park is differentiated as concerns uniqueness, resistance to anthropopressure, and departure from the natural state. Therefore, fragments of the Park with the highest degree of uniqueness and low resistance were appointed to be excluded from total or limited utilization. Evaluation of the park's nature was carried out in this respect by use of the method of ultimate natural thresholds.

The phase of analyses and studies was concluded with a synthesis and conclusions which gave an outlook in the scope of permissible solutions as concerns necessary protective activities, development possibilities, and ways of using, including all restrictions and conditions.

The second phase was construction of a functional-developmental conception.

Optimal solution of the development of the Gorce National Park required, first of all, determination of all development directions and principles of development in the field of functional-developmental zones, program of development, and distribution of objects of development.

Restriction of the development of the park interior to the necessary minimum was the adopted principle in constructing the program of development. Therefore, particular elements of the development were distributed mainly in the nearest vicinity of the park. Simultaneously with determination of the development directions and principles, two realization variants of the functional-developmental conception of the park were elaborated and evaluated.

In consequence, a set of assumptions for the plan with variants of its realization was elaborated.

Formal agreements foreseen by legal regulations were followed by the choice of one of the variants, and this was approved by the District Council in Nowy Sacz.

Stage II: Elaboration of the Plan Design. Basing upon the assumptions, the design of the plan was elaborated. Establishments of the plan include functional-developmental structure, size and distribution of the program, and principles of realization of the plan.

Moreover, conclusions and postulates were formulated with respect to institutions and organizations acting in the territory of the park itself or territories adjoining.

CONTENTS OF THE ELABORATION

The whole elaboration of the plan consists of three parts: assumptions for the plan, the plan, and documentation of the plan. Assumptions for the plan consisted of the text of the assumptions and a table on a scale of 1:25000 entitled "Functional-Developmental Structure with Basic Elements of the Development." Similarly, the final plan consists of the text of the plan and a table on a scale of 1:10000 entitled "Plan of the Development of the Gorce National Park."

These two documents contain basic and binding establishments of the plan.

Documentation of the plan consists of studies on a scale of 1:10000 (ten tables on various subjects, e.g., stock-taking of the existing development, valuation of the natural environment, analysis of uniqueness, deformations and resistance of the park nature), and fifteen volumes of texts. Every volume concerns another subject, e.g., organizational-legal state, state of utilization, tourism, analysis of architectural forms.

All these elaborations include conclusions for the plan.

Moreover, the documentation contains materials and information concerning realization of the postulates concerning the plan, and agreements and opinions on the assumptions for the plan and on the plan design.

Environmental Glasnost: Protecting a Resource You Do Not Own

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*Upper Delaware Scenic &
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What does it mean to protect natural resources without federal land ownership? For the past ten years I have been deeply involved in a new and very controversial approach to land management for governmental agencies, one which requires a personal dedication to convincing those who own the land that it is in the best interest of both the public and private sector to work together to prevent resource degradation without substantial federal control through land acquisition.

The conflict between land acquisition for public use and private property rights has been around a long time. Prior to World War II, federal

parkland acquisition in the western half of the United States was less impacting on private land ownership because most of the newly established parks came out of lands already publicly owned.

Demand for nationally managed public recreation areas in the eastern half of the United States is best illustrated by the development of Shenandoah National Park in Virginia (which includes the scenic Skyline Drive) and the Blue Ridge Parkway, which stretches over 460 miles from northern Virginia to Great Smoky Mountains National Park in North Carolina. Each was set up to provide open space to meet recreational needs for a growing, mobile urban population.

One of the lesser known bits of history related to the development of these two parks is the fact that thousands of rural families who had lived in the picturesque Blue Ridge Mountains for generations were bought out and resettled in the valleys whether they wanted to move or not. Family land and ancestral history meant more to many of these folks than any price the government offered, but the greater need for public recreational opportunities prevailed.

Until very recently, land acquisition for U.S. National Park Service areas and other federal lands was based on a policy that outright ownership by the government was the method of choice to preserve, or conserve, the best of the country's natural resources. Each area had a well-delineated boundary, federal law enforcement jurisdiction, and a ton of written guidelines for every conceivable resource or administrative issue.

Until the late 1950s, land acquisition for public use did not create a very large or well-organized outcry from private land holders. During

the 1960s, many National Recreation Areas were authorized by Congress to provide open space for public use within reasonable distances of major metropolitan areas. Each new area caused a louder and louder controversy over the taking of private land from *either* willing sellers or acquisition through condemnation procedures from *unwilling sellers*.

Places like Assateague Island National Seashore in Maryland and Virginia, Fire Island National Seashore in New York, and Delaware Water Gap National Recreation Area on Pennsylvania's eastern border were established only after thousands of small landholders, who dearly loved their rural hideaways, *were bought out*. Buying out all private land ownership within a defined boundary got tougher and tougher because of the cost and very vocal resistance against the loss of home and *home rule*. Various incentive methods were offered to land owners, such as life tenures and ten- or twenty-five-year continued-use options, but for those who did not want to sell, there was no acceptable method of compensation for their loss.

Long before the Wild and Scenic Rivers Act was passed in 1968, urban dwellers, on a nationwide basis, had been carving up prime riverfront land into quarter-acre plots on which cheap summer homes were built. They often used converted school buses or built shacks because good land management practices, like zoning, did not exist. This quest for a summer place in the country somehow passed right by the Upper Delaware River valley up through the 1960s. Recreational boating activity was minimal, so land in the river valley remained in large parcels.

During the 1970s, recreational canoeing and rafting along the Upper Delaware River increased dramatically. This section of the Delaware is no more than a three-hour drive from twenty-five million people. Annual use at Upper Delaware Scenic and Recreational River rose from 100,000 visitors in 1980 to over 225,000 in 1990. Most want to come for the day to rent canoes or rafts or just spend a day enjoying a drive along the river. However, subdivision signs sprang up along major roads in the mid-'80s, and the race was on to own a piece of land near the Delaware River. Seasonal home development has not been as great in the Upper Delaware as farther downstream, but it is increasing and we are trying to prepare local communities to plan effectively for it.

The legislation which created Upper Delaware Scenic and Recreational River is designed to protect both public use rights on the river and private land rights adjacent to it. It mandates a management structure which requires a maximum of public involvement and a minimum of direct federal control. There is a heavy reliance on the use of citizen advisory groups, the local political structure, and existing agency jurisdictions to mitigate resource issues affecting the river.

To demonstrate how the Upper Delaware management approach differs from traditional methods and why many federal agencies might balk at accepting this approach, I would like you to imagine yourself in the following situation. You are a twenty-year veteran of the USNPS, having worked primarily in parks whose lands are owned by the government. You have just received a job announcement for a vacancy in the position of superintendent of Up-

per Delaware Scenic and Recreational River. It states:

The incumbent will be responsible for recreational use management and resource protection along a 73.4-mile stretch of the Upper Delaware River basin. Congressional legislation for the area has identified approximately 56,000 acres of land as a federal area of interest for developing and maintaining land management practices that will sustain the high water quality in the Delaware River for public recreation, and as a water supply for millions. Resource impacts may involve the jurisdiction of up to nine federal agencies, environmental law for two states, and local zoning in fifteen communities along the river edge.

The following management guidelines have been established for the area:

A. Lands actually owned by the federal government are currently 15.2 acres that have been purchased over the past ten years. Land acquisition is very limited and done primarily for administrative offices. The area's river management plan calls for land acquisition to not exceed 130 acres corridor-wide.

B. All land will only be purchased with the consent of the local government where the land is situated and must be approved by a local council which represents all local, state, and federal management interests in the river corridor. All land acquisition will be on a willing-buyer, willing-seller basis.

C. Condemnation authority, although provided for in the enabling legislation, will only be used if a significant resource threat exists which cannot be mitigated or resolved by existing legal authority.

D. Agency jurisdiction will be restricted to the surface of the river and the acreage actually owned by the agency. All river access points managed by the National Park Service are leased from existing state agencies.

E. The incumbent will have full responsibility for public use and safety concerns for a park where public visitation exceeded 200,000 in 1990. Over 30% of the canoe safety patrols are carried out by volunteers from local canoe clubs.

F. The incumbent will present agency objectives as a non-voting advisor to a local council made up of volunteer representatives from the fifteen towns or townships that border the river. The council also has a representative from the states of Pennsylvania and New York, and a representative from an inter-state compact concerned with water quality and quantity throughout the entire Delaware River basin.

G. Every effort will be made to encourage local communities to zone in such a manner so as to be compatible with the intent of a set of land management guidelines established by consensus among all parties to the council. These guidelines are not legally binding.

H. All development by the NPS unit will conform to local zoning, and projects taken on by the unit will be reviewed for approval by the municipality where the development occurs.

I. All land-based law enforcement, emergency rescue response, and trash removal (related to public use on the river) will be subsidized through contracts to local jurisdictions.

The Upper Delaware management approach stimulates communication between governmental factions that have not been really talking with each other for a long time.

Local politicians can now find just who is supposed to deal with their problem and they know how to apply pressure to be heard by a very thinly spread state resource protection organization. Each landowner, local supervisor, county executive, agency bureau head, and agency director has been identified and educated about the concept.

Will this approach work? Well. . .

If your management objectives are to stop development, totally protect the wildlife habitat, and keep the area in a totally natural state, the answer is *probably not!*

On the other hand, if your objective is to allow for well-planned *appropriate* growth, to pool agency personnel and funding to monitor or prevent resource threats from new dams, mining, landfills, toxic spills, soil erosion, etc., and make the private sector more responsive to finding solutions to resource issues, then this concept is definitely working.

There will be lost open space, but with good planning, the impact will be far less than without this approach. With hard work and good communication, we will prevent major pollution to the federal area of interest *and influence the prevention of pollution within the entire Upper Delaware watershed.*

This approach reaches out to all of those affected by a public project. It provides the opportunity for each citizen to understand the environmental impacts that are affecting their community and the delicate balance between economic development and maintaining open space to keep the natural processes functional. It offers land owners a *real* chance to help manage the public use generated by a Scenic River designation, rather than just cussing out the federal gov-

ernment for bringing all those noisy city folk to their peaceful valley.

The fear over federal condemnation ran rampant during the planning stages for this concept. It is still there to some degree because of past and existing governmental land acquisition policies. During the intense public debate, there was a recurrent theme from those land owners who could be affected by this approach: "This is my land and I will do whatever I want with it or to it!"

Unfortunately, the world is too small and environmental problems too complex to assume that land ownership carries no responsibility towards the world's environmental problems. We also can no longer lay the total burden of preventing environmental degradation on public officials and government agencies. Today the cry should be: "This is my land, but I must work to preserve its natural values in order to protect the world's environment for the survival of future generations."

Protecting the Upper Delaware River valley is now the responsibility of a labyrinth of governmental entities, every private land owner, and those who come to use the resource. Minimizing human impacts on the environment starts when each individual becomes concerned about their own impact. That responsibility cannot be delegated because the future of humankind depends on our ability to manage our environment, *which is a resource that we do not own.*

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Defining the Effects of Aircraft Overflights on Parks and Wilderness Areas

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INTRODUCTION

What is "natural quiet"? How does one protect it? Is the aircraft overflights issue a resource allocation issue similar to protection and management of other park resources and values?

These are some of the questions explored by Aircraft Overflight Study Project being conducted by the U.S. National Park Service (USNPS) and the U.S. Forest Service (USFS). From 1989 to 1992, research on the effects of aircraft overflights will be conducted under this project at an average cost of about US\$1 million per year. Virtually all types of potential effects of aircraft overflights on park visitors and resources, positive as well as negative, will be studied, as funding and time permit. What may at first seem a fairly simple subject turns out to be extremely

complex, involving the fields of psychoacoustics (the study of the effects of sound on people), outdoor recreation sociology, computer modeling, acoustics (the science of measuring sound), airspace management, statistical sampling, and technology development. The diversity of fields and the highly controversial and far-reaching nature of the subject make this an extremely challenging project.

CONGRESSIONAL MANDATE FOR THE STUDY

In the mid-1980s, aircraft overflights at Grand Canyon National Park were a hot topic for the news media, receiving emotional attention from environmentalists, the aviation industry, and government agencies in several federal departments. Congress took note of all this, and the result was Public Law 100-91, signed into law in August 1987. Sometimes called the "National Parks Overflights Act," Public Law 100-91 did several important things. It required development and implementation of an aircraft management plan at Grand Canyon which would "provide for substantial restoration of the natural quiet and experience of the park and protection of health and safety from adverse effects associated with aircraft overflight." It also established temporary altitude restrictions for overflights at Yosemite and Haleakala national parks.

As significant as those requirements are, the most important provision of the law is the requirement that the USNPS do a study "to determine the proper minimum altitude which should be maintained by aircraft when flying over units of the National Park System." The law requires the USNPS to specifically evaluate the impacts of aircraft noise

on the safety of park visitors, impairment of visitor enjoyment associated with overflights, other injurious effects of overflights on park resources (natural, historical, and cultural), and the values associated with overflights (e.g., visitor enjoyment, protection of persons and property, search and rescue, firefighting). The law also requires the USNPS to develop recommendations for legislative and regulatory action which could be taken regarding the information collected.

Under the law, the USFS is also required to do a study, but it has a more limited requirement to "conduct an assessment to determine what, if any, adverse impacts to wilderness resources are associated with overflights of National Forest System wilderness areas." The USFS is not required to develop recommendations.

The law requires the USNPS to study at least eleven parks, seven of which are named in the law. The required parks are: Cumberland Island National Seashore in Georgia, Glacier National Park in Montana, Grand Canyon National Park in Arizona, Haleakala and Hawaii Volcanoes national parks in Hawaii, Mount Rushmore National Memorial in South Dakota, and Yosemite National Park in California. A minimum of four additional parks will be selected from a list of those that have indicated concerns about aircraft overflights.

Because the results of the study must be extrapolated to the entire U.S. National Park System as much as possible, an attempt is being made to develop a statistical sampling plan which balances requirements for reliability, validity, and cost-effectiveness. Estimates of aircraft noise exposure and visitor use are

the two major criteria being used in developing this sampling plan.

It is important that information on each park be accurate and up-to-date to receive full consideration in determining from the sampling plan which other units will be studied. In addition, parks will be contacted to verify the information used in the draft sampling plan, and to determine logistical feasibility and special mitigating factors that might influence the selection of each park for further consideration.

USEFUL PRODUCTS EXPECTED FROM THESE STUDIES

The primary thrust of this project is to develop products that parks will find useful to address concerns regarding aircraft overflights, consistent with the mandates of Public Law 100-91. Some examples:

1. An attempt will be made to develop models of aircraft noise propagation in park environments, using USNPS geographical information system capabilities, so that the effects of a change in overflights at a particular park can be predicted with a minimum of new data being collected.

2. A standard methodology will be developed to characterize park noise levels, both with and without aircraft and other non-indigenous noise sources.

3. A standard methodology will be developed to characterize the nature of overflights in a particular area, in such terms as flight altitudes, aircraft types, estimated number of flights, etc.

4. The state of knowledge and probability of effects of overflights on natural and cultural resources will be assessed.

5. The feasibility and effectiveness of certain mitigation measures will be assessed, including the effects of flight altitude on noise levels and visitor reactions on the ground.

6. Baseline data on the ambient noise environment of a variety of park units will be collected, which will aid park managers in assessing the effects of any noise source.

7. Extensive sociological studies will be done which are intended to support development of a dose-response relationship between aircraft noise levels and visitor response, as well as to provide information on visitors and motivations.

8. Practical guides will be developed for park personnel on such subjects as how to recognize and properly report problem overflights and get results.

EARLY DECISIONS SET THE STAGE

For many reasons, the USNPS and USFS decided to fund and manage this project cooperatively through a contract administered by USNPS's Denver Service Center. To ensure the most scientifically defensible, objective, and effective methodologies and results, and to ensure credibility with the many competing publics interested in this project, nationally recognized contractors were selected to design and do the research. The two primary contractors are BBN Systems and Technologies Corp. (BBN) and Harris Miller Miller and Hanson, Inc., (HMMH). Subcontractors and consultants provide the required expertise in the fields listed above. Individual research projects are funded as separate work orders negotiated with one of the primary contractors.

In addition, a Technical Review Group was formed as an informal steering committee to provide input to the USNPS-USFS management team from a technical as well as a managerial perspective. This group comprises technical advisors at the senior level, senior management personnel, and representatives of key interest groups. In addition, the project management team has made a strong commitment to publish research methods and results, both in project reports available to the public and in professional and scientific journals. Formal peer review will be sought whenever possible.

RESEARCH DESIGN

There is an impressive body of scientific literature on the effects of aircraft overflights. However, most of it relates to urban environments near airports, and it was discovered early in the project that many of the basic assumptions underlying that literature are not applicable to most park environments. This meant that, to accomplish the goals for this project, innovative methods were necessary to advance the state of the art much more than was originally anticipated.

A research program was developed by BBN under the project's first work order. Because the USFS had earlier funding and reporting dates than the USNPS, the plan was oriented to accomplish USFS objectives and test several hypotheses early in the project. The USNPS portion of the work later in the project was left deliberately flexible to take advantage of knowledge gained in the earlier stages. The USNPS-USFS management team decided to re-evaluate the research design based on the experience of the first year of the project. BBN and HMMH have been directed

to develop a revised and more detailed research program for the remainder of the project, which will involve primarily USNPS work.

The revised research program is intended to guide allocation of resources and scheduling of research for the duration of the project, and to document the rationale for major project decisions. The USNPS expects to have two full field seasons so that testing and refinements of methodologies and design are still possible as the project progresses.

As of November 1, 1990, only one report had been fully accepted from the contractor and was made available to the public ("Acoustic Measurements of Sonic Booms and Ambient Sound Levels in the Selway-Bitterroot Wilderness Area," NPOA report No. 90-2).

An evaluation of aircraft noise models has been completed which showed major problems with using any of them to map aircraft noise exposure in most park and wilderness settings. A proposal is now being considered for developing a new model. Considerable acoustical data have been collected at Grand Canyon, and will be used in any attempt to model the noise environment as soon as a decision is made. It is expected that this Grand Canyon model will serve as a prototype for noise modeling and assessment efforts in other parks under this study.

An experiment with a microphone array and meteorological station has also been completed and is being analyzed. It is hoped that this study will help to develop a cheaper way to characterize ambient sound levels in park environments, and to determine how meteorological variables affect noise measurements in these types of environments. Most of the acoustic data that has been collected

so far has been one-third octave band recordings which require extensive (and expensive) analysis. A method of automatically eliminating the effects of wind blowing across the microphone on these recordings has been developed as a useful side effect of the data analysis. Also, there is hope that correlations will be found between the sophisticated acoustical methodology employed for field data collection so far in the project and cheaper data collection methods, such as using A-weighted decibel meters, to facilitate acoustic data collection in subsequent stages of the project.

Acoustic and sociological data are being collected in parallel with USFS areas to try to define a dose-response relationship. The methodology is expected to be refined and tested further in USNPS areas over the next two years.

Much has been learned about the effectiveness of acoustic equipment configurations under park and wilderness field conditions, and on exactly how the park and wilderness environment differs from the urban airport environment in terms of characterizing aircraft noise effects. We are steadily moving from a situation where much was "known" anecdotally about aircraft effects in park and wilderness environments, to a situation where much is now known scientifically. The paucity of hard scientific data which characterized much of the debate about Grand Canyon overflights a few years ago is gradually becoming a thing of the past as the issue is considered for the rest of the U.S. National Park System.

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Toleration of Ambiguity

A Critical Skill for Managers

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Recently I received a letter from a park ranger with "8 young years of experience in the National Park Service." In this letter, the ranger reflected upon USNPS Director James Ridenour's comments made before the Association of National Park Rangers at their annual Ranger Rendezvous in 1989. The ranger wrote that he "was pleased that the Director made a commitment to the protection of natural resources."

Still, I've heard directors, regional directors, superintendents, chief rangers, district rangers, and subdistrict rangers make this same verbal commitment, but somehow that commitment seems to get lost on its way to the field employees. If protection of resources is our priority, then that's where the money and personnel should go. Endorsing protection of natural resources to a crowd of park rangers is pretty safe, and I think it's quite easy to say, but . . . "where's the beef?" Resources are easy to ignore because they can't complain. Without supporting funding and personnel, resource protection in the NPS will continue to remain an unfulfilled promise.

I found the comments somewhat troubling. Perhaps it was the candor

in displaying a bit of institutional cynicism. Perhaps it was because I also sensed many "unfulfilled promises" and might have made a few of my own. Perhaps it was the naïveté (or was it idealism?) in the comments that prompted me to reply.

I wrote of the "difficulty of managing resources in this age of budgets and decreasing flexibility of discretionary funds to do anything about the platitude." Somehow I wanted to convince this young ranger that the issue is extremely complex and affected by many factors that make it difficult to carry out the mandate to the extent or with the ease that he suggested. I wanted him to understand that simple propositions can get quite complicated and what we would like to do is often far different from what we can do. And when we fall short of our expectations, it shouldn't always be interpreted as a lack of commitment to fulfilling the promise.

The ranger wrote back and once again drove the stake to the heart. Admittedly, he said, he had

no real idea what political and budgetary pressures are on park managers. Yet in my short career I continue to hear from managers how important protection of resources is, and I have not often seen this correspond into consistent action on their part. There do seem to be those rare individuals who will go to the wall to support their beliefs. Flexibility of discretionary funds should not have anything to do with protection of park resources. Protection of park resources is our mandate; so when a park manager defines his needs in terms of a budget, there should be no discretion on protecting park resources. This is where the money

should go, and everything else is discretionary.

All of a sudden, I felt old and jaded in what I still consider to be my own "young 21-year career." How can something so simple be so complex? The ranger was so right in the absolute that there "should be no discretion in protecting park resources." But he is so wrong because there is no absolute when resource protection issues are thrust upon us with no clear solutions, and judgment and discretion must accompany every decision. The ranger was so right in the absolute that protection of the resource must always come first. But he is so wrong in the belief that flexibility of discretionary funds should have nothing to do with protection of park resources.

The ranger ended his letter with the view that the realities of resource protection and management in the U.S. National Park System are

at odds with the rhetoric which the NPS passes out to the public and its employees about how protection of resources is the most important thing to do. If we are going to be true to our mandate, and if I'm going to be true to the reason I became a park ranger, then I've got to continue to point out to park managers that action (money and planning) for resource protection speaks louder than flowery, idealistic speeches or memorandums.

Is it really rhetoric or is it reality? The time in which we now manage our national resources is fraught with conflict and ambiguity. Never before has such a set of pressures and stresses been brought to bear on the vitality and survivability of those resources we manage. Never before has the job been so complex and susceptible to budgetary and political events, to the external forces that

threaten ecological integrity, and to conditions that have no easy answers or solutions. Our mission to preserve and protect for the enjoyment of present and future generations is clearly more difficult to interpret and implement. The job of a park manager has changed from a strict custodial and technical response to agency regulations, guidelines, and manuals, to a more wide-ranging, strategic profile pursuing stated but often vague public purposes, through programs whose outlines are rarely more than sketched. Now, we often work with, and within, mandates and missions that can be vague, contested, or ambiguous. There are fewer and fewer "absolutes." Resource protection issues are not so clearly defined as we would like. The job of protecting the resource grinds on within a confusing context of changing public values, political realities, harsh budget and personnel constraints, and strategic linkages to programs and events greater than those within the parks we manage. The extent to which we can manage and tolerate ambiguity now constitutes perhaps one of the most essential ingredients of successful resource management.

Contrast much of our job in managing resources with the Webster's definition of ambiguity:

Having two or more possible meanings; not clear; indefinite; uncertain; vague; obscure; doubtful or uncertainty in meaning or intention; more than one meaning; difficult to comprehend, distinguish, or classify; equally capable of two or more interpretations.

I do not promote practicing a vague and uncertain management style. Instead, the manager must not expect clearly defined issues and circumstances which are absolute and

must be ready and able to manage within ambiguous conditions. The inability to function under these conditions creates managerial anxiety. The reality of resource management in today's world is characterized by ambiguity. The great challenge is how to maintain idealistic integrity in the face of this ambiguity.

Managing within the climate of ambiguity requires a resource manager to become more strategic, giving shape and form to broad program outlines, taking vague and often conflicting mandates and reforming them into concrete goals. Managers must be responsive to program realities and must find ways to position key resource programs to be responsive to changing political demands. They must be creative in dealing with the reality that not every resource preservation or protection program can be funded. They must be an important part of the process of policy formulation and redesign. They must develop the capacity to understand what creates public value. Seeking and exploiting new opportunities for providing services, responding to change in political demands in innovative ways, and building a mandate for changes they believe are in the public interest must be the cornerstone for resource protection action. The job requires substantial discretion. It demands political consciousness. It insists upon decision making and risk taking. It is essential that a manager recognize ambiguity, sort out the facts, and strategize effective linkages that lead to solutions. Rarely will the solution be absolute.

Those least comfortable with ambiguity seem to me to be technical managers who adhere to management principles that constitute too narrow an image of their responsibil-

ities, of being defined primarily by strict guidelines, manuals, and regulations. Ambiguity is quickly resolved in the refuge of "by the book" and viewing the job as simply implementing programs through ordinary administrative systems and controls. Measurable products provided by monitoring systems, internal controls, rules, and procedures are created to assure strict conformance to the implementation mandate. These controls, in and of themselves, are not wrong. These "conformance systems" provide useful management and organizational tools for analyzing, directing, and controlling our jobs of managing park resources. But they can also handicap strategic management and unnecessarily add to the ambiguities of our job of managing resources.

As I re-read the letters from the young ranger, I found that I was really in agreement with many of his points. After all, can you truly disagree with the statement that "protection of park resources is our mandate," or that "there should be no discretion in protecting park resources," or that "this is where the money should go"? Yet, only the most naïve would not agree that great ambiguities exist within the framework of those same simple and truthful statements. I suspect it has always been so. When the need for management policies within the U.S. National Park Service was first articulated by Secretary of the Interior Franklin K. Lane in a letter to the first USNPS Director, Stephen T. Mather, on May 13, 1918, Lane stated that administrative policy should be based on three broad principles:

First, that the national parks must be maintained in absolutely unimpaired form for the use of future generations as well as those of our time;

second, that they are set apart for the use, observation, health, and pleasure of the people; and third, that the national interest must dictate all decisions affecting public or private enterprise in the parks.

These principles, based on the 1916 National Park Service Organic Act, remain as valid today as they were when first written. Yet, then as now, these principles contain ambiguities and contradictions that create difficulties when we attempt to take these broad meanings and formulate clear, achievable goals. We now know that many of the parks brought into the System then, as well as now, are ecologically impaired. To what level of original ecological integrity do we strive? We also know that setting apart parks for the use and pleasure of the people also creates ambiguous situations bringing into fundamental conflict competing programs. What human carrying capacity upon a resource will we allow to impair that resource? And finally, the national interest must dictate decisions affecting public or private enterprise in the parks. To what extent do the political agenda and values of the public control our decisions in protecting resources? Ultimately, the national park idea is an expression of the nation's will, and "will" will always be a changing and fluid representation.

It seems to me the number and context of the ambiguities we now face have greatly increased from those early years. I am not sure that our ability to cope with and manage them has similarly increased. Some things bother me—things that are both custodial and strategic in nature. It seems I never know enough about the resource I manage and protect. It seems my ability to monitor a resource is regularly infringed upon

by the lack of data bases, and by not knowing enough about how the ecosystem really works and to what other elements it is linked. It seems there is a sense of management confusion, and an institutional inability to cope with the spectrum of problems we face, and a lack of leadership in defining a strategy for an equation of success. Sometimes I feel we have lost the intuitive feel of what the System stands for and how the USNPS is to represent the "great, grand idea." I frequently feel that management of natural resources has changed almost exclusively to issue reaction rather than a measured, strategic implementation of long-term goals. Resource managers are necessarily now cast in the role of gunslingers, frequently shooting from the hip.

Change and transition are several of those many ambiguities we must now manage. Clearly, our world today is locked into an ever-increasing period of change: changes in fundamental and long-held geo-political balances, changes in world ecosystems, changes in public values and aspirations, changes in workforces and family needs, changes in our knowledge of national park ecosystems and what is required to care for them. Perhaps it is change that is the most fundamental ambiguity of all.

In retrospect I really enjoyed the two letters I exchanged with this young ranger who registered some of his doubts and strong beliefs. I appreciated his candor and insight. The idealism was refreshing. As he continues in his career, I hope he holds firm to his beliefs and learns the lessons that will be taught. There is never an easy answer. There never was, and there probably never will be.

Public Land Management Skills for the 21st Century

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It is common to discuss the dawning of a new century in terms of change. Already in the last decade of the 20th century, we can begin to sense the magnitude of this change. Computers are revolutionizing the communications process. The world order that has existed since the end of World War II is crumbling. We debate the drastic predictions of the environmental consequences of how the nations of the world treat the earth's resources. Often it appears that the only constant of the 21st century will be change.

We can fully expect that this tidal wave of change will sweep over our profession of public land management. Some of the changes are already apparent. The public, for in-

stance, is demanding a larger role in public land management decision-making. People are no longer willing to leave decisions solely to the professionals. Agency mission statements are being modified under pressure from public land advocacy groups, many of which are increasingly critical of the consumptive uses of public resources. Agencies must subject their proposed actions to strict cultural and environmental compliance procedures that are likely to become even more strict in the future. Many of these procedures place the agencies in the difficult position of deciding between the preservation of a natural community and the continuation of a way of life that has sustained groups of people for years.

If, then, our agencies will face adapting to wholesale change in the future, we will need a new breed of employee, one that is equipped to meet the certain challenges that will accompany this change. The critical task for present-day public land managers is to be able to identify the knowledge, skills, and abilities that these new employees will need. We can then design agency training programs to train, or, in some cases, retrain our current employees and begin to work with academic institutions to assure that future graduates of professional programs receive the appropriate preparation for subsequent work in the field.

I have tried to place the following list of knowledge, skills, and abilities into priority order, with the most important being first. I freely admit that I am not sure that we can teach some of these skills in an academic or agency-training environment. In some of cases, what may be necessary is a change in the bureaucratic environment in which our employees work if the specific ability is to

take root and flourish. I only know that if our employees do not possess these skills and abilities, they are not going to cope with the challenges confronting our agencies.

DEALING WITH RAPID CHANGE

I believe the most important skill for future employees will be the *ability to tolerate ambiguity*. The process of change implies the replacement of one set of land management realities with another. Until the new reality, complete with policies, procedures, programs, and the like, is in place, there will be few absolutes upon which an employee can depend. They must be able to see the shades of grey that will dominate the land management landscape instead of the blacks and whites. They must be ready to respond to new situations with creative, innovative decisions that will not come from handbooks, guidelines, or policies. In an era of change, such instruments will be hopelessly out-of-date before they are even published.

An example is the rapidly evolving environmental consciousness that is a factor in the American political scene. I cannot think of a single land managing agency whose policies and guidelines are proactive in relation to this change. While the agencies struggle to catch up, our employees face an era of rapid environmental change. Often, our own employees are forcing changes in the agencies. A dissident group of U.S. Forest Service employees in the Northwest are challenging the timber practices of the bureau. The Association of National Park Rangers has challenged the personnel and administrative practices of the U.S. National Park Service, questioning whether these

practices are appropriate in an era of rapid environmental change. In both cases, the groups have developed positions which have taken root in a bureaucratic vacuum in which old policies and practices simply do not work very well.

In concert with tolerating ambiguity must come the *ability to manage change*, not to be overwhelmed or engulfed by it. Our employees will need to see change as an opportunity to be seized, not a problem to be overcome. In my own agency, I see instance after instance of program managers literally stopped in their tracks by changing conditions. The most common reaction to change is to deny that it is happening. This attitude is a certain prescription for failure. The second most common is to be angry about the change, to worry about how it is going to affect them personally. This reaction will stifle the flexibility and creativity that they will have to bring to bear upon the issues that arise because of change. It is difficult to be innovative when one is angry.

Managing change often means taking risks. That is the third attribute that our employees will need. To be successful in a time of change does not mean doing things the way they always have been done. Taking risks is scary, but employees can reduce the chances for disaster considerably if they carefully analyze the pluses and minuses of a risky decision before they make the decision. Failure to do so converts the risk decision into a kamikaze run. Without careful analysis, the agency must improvise its responses to public comment. Such improvisation will often cause more problems than it purports to resolve.

Taking risks implies a highly refined *ability to set priorities and com-*

municate these priorities to the other agency employees and to the diverse groups with whom the agency deals. Setting priorities is a skill, not a God-given gift. Our employees can learn to do it better than most of them do now. It requires that they spend their time only on those programs and projects that most fully accomplish agency goals and objectives. Too often, though, the goals and objectives are so poorly articulated that our people cannot set priorities. They simply do not know what is most important. Without clearly defined and mutually agreed-upon goals and objectives, it is impossible to mobilize the efforts of people to accomplish tasks.

LIVING WITH CONTROVERSY & POLITICS

Once the goals and objectives are defined and the priorities set, our employees must be able to communicate them. Yet most of them are such poor communicators that they can never tell anyone what the plans are. In the future, when our actions will be subjected to ever more public scrutiny, the ability to communicate ideas, to build public consensus for proposed actions, will be vital for agency success.

Discussing issues in public is sure to generate controversy as public land managers face a growing number of constituent groups competing for public resources and making more demands on our agencies for what these groups consider to be their share of the resources. Our new breed of employee is going to have to *be comfortable with controversy*, recognizing that conflict resolution will demand another skill, that of negotiation. Employees will have to negotiate with a wide variety of peo-

ple and groups, many of whom will have diametrically opposite objectives during the negotiating sessions. All of the skills of negotiation—when to compromise and when to stand firm, setting up win-win situations, sizing up areas of potential agreement—are the abilities our employees will have to possess in the future.

To complement this negotiating skill, our employees will have to possess a sophisticated *understanding of the political process*. The interest groups with whom our agencies deal have become far more adept at using the political process to try to influence agency decisions. Our employees will have to develop similar skills. Many current land managers have argued that we should try to remain above politics, believing that our missions are too important to discuss in the political arena. If, however, we accept the fact that politics are neither evil nor good but simply the way things get done in our system, then staying above politics will be the worst possible decision. It will guarantee that we will be outside the decision-making circle. Our employees must recognize that what we cannot afford is to become involved in partisan politics. This should not prevent them, though, from being skilled observers of, and effective participants in, the political process.

DIVERSITY: THE NEW REALITY

Dealing with the variety of interest groups will require another skill from our folks, that of *recognizing, valuing, and dealing with cultural diversity*. The racial, cultural, and ethnic make-up of the users of public lands is rapidly changing. No longer can we assume that these users will primarily be white and come to areas in traditional nuclear families. Not

only will the users represent the diverse mix of American society, but also they will come in single-parent or extended families. More of them will be older and will arrive in non-traditional forms of transportation. Many more will not speak English as their first or second languages. Disabled people will represent a larger percentage of users. All this means that our employees will have to be more sensitive to this kind of diversity.

This sensitivity, of course, will have to be applied to our work force also. The U.S. Forest Service estimates that approximately 50% of the people who will be employed by the bureau in 2000 do not currently work for the USFS. Other land managing agencies have lower estimates, but all are in the 35-40% range. The question is, Who will these new employees be? One fact is sure. If agencies wish to remain competitive for top quality in a shrinking labor pool, these new employees will not be predominantly white males as they almost always have been. Eighty percent of the entries into the labor pool in the next ten years will be women, minorities, or immigrants. Our workforce will surely reflect this fact. This means that our current crop of front-line supervisors will face managing a workforce that will be fundamentally different than it now is. They will have to be much more sophisticated in dealing with cultural, racial, and gender differences. They are going to have to push our agencies into adopting flexible programs that will allow us to retain these new employees after we have made the substantial training investment that we make in our employees' first few years of service. That is going to mean the implementation of programs such as job shar-

ing, dual careers, language training, child care, flex-time scheduling, cross-cultural training, and a host of innovative other ways of scheduling and accomplishing work. Our employees are our most visible symbol of our agencies' commitment to equality of opportunity for our employees and to equal provision of services to our user groups.

THE ENDS, NOT THE MEANS

Our employees will have to *focus increasingly on results, rather than on process*. One of the fundamental flaws of every bureaucracy is its fixation on process. Whenever an agency completes a management review of one of its components, the review team invariably focuses on process: are all the required plans in place, are administrative controls adequate, have the required number of public meetings been held, have equal opportunity goals been met, etc. In almost no instance with which I am familiar, is the real questions asked: Is this unit, park, forest, or preserve better managed because of these efforts? Are resources better cared for? Are user groups better served? Even if the so-called peace dividend becomes a reality in the 21st century, I know of no one who truly believes that the dividend will provide the amount of money necessary to accomplish all that needs to be done in public land management. We are going to have to find employees who are willing to concentrate on what we might call the bottom line, to focus their attention, energy, and resources on the agency's core mission. We will not have the luxury of continuing to deal with process.

This focus on results is one of the assumed products of strategic planning, a process that allows an agency

to assess its ability to cope with predicted changes in its area of jurisdiction. Almost every land management agency has its version of what my agency calls its 21st century task force. The Director of the U.S. National Park Service charged members of his task force with analyzing the environment in which the USNPS would operate in the next century. Once they had completed this analysis, the task force was to assess the agency's ability to meet the challenges that would arise from this predicted future.

Although its members were carefully selected, the task force found the analysis and assessment extremely difficult. Very few members had the required analytical skills to chart the future environment of the USNPS and to assess what changes would be necessary if the agency were to operate successfully within it. Our future employees, in addition to possessing technical skills, must have *the ability to analyze complex issues and develop plans for their resolution*. In the past, agencies have devoted their recruitment strategies to either finding highly skilled technicians or fulfilling affirmative action goals. While neither course of action is wrong, and the latter is certainly an important factor in developing diversity within our workforces, it is clear that we are going to have to add some thinkers to our ranks.

ARE PUBLIC LANDS BECOMING IRRELEVANT?

Adding these kinds of people is absolutely critical, since land management agencies face some threat of becoming irrelevant in the 21st century. It is common to argue that public lands will become all the more important in the future since we live

in a society that is rapidly closing in on its remaining open spaces. There are several holes, however, in this optimistic view of our future importance. The first is demographics. By 2000, an overwhelming percentage of Americans will live in urban areas. More of these people will be non-white, older, living in non-nuclear families, and be heavily involved in the issues of urban America. None of these groups is a particularly heavy user of public lands. The second is economics. To rebuild the infrastructures of the urban areas is going to require a massive capital investment in roads, sewers, waste management facilities, and similar public works projects. Spending on public land issues could be seen as a luxury that the nation cannot afford. We will need our best thinkers to develop strategies for plans and programs that will assure that our agencies remain relevant in the future.

If land management agencies are successful in finding employees with the skills and abilities I have listed, agency leaders will have to create an environment in which these employees can fully use their talents. For many agencies, this is going to represent fundamental changes. Bureaucracies tend to stifle creativity. Rigid lines of authority hamper delegation. Concentrating decision-making power in the hands of a few discourages risk-taking. Guidelines, policies, and manuals substitute for independent thought. Agencies will have to develop a vision for the future that stimulates their employees and must create an atmosphere in the workplace that permits employees to work together to achieve the elements of the vision. Even the brightest and best will fail if these conditions do not exist.

A New Beginning: A Vision for the Future

William E. Brown
Gustavus, Alaska

Years ago someone said that the national parks are the best idea the United States ever had. *Idea* is the key word in this essay.

An idea is something intangible and aspiring. It bids us to shift from the shambling gait of just getting by.

An idea needs good soil to flourish. Yet both within the U.S. National Park Service and System and beyond—in the socioeconomic, political, and environmental context that nourishes or stunts—that “best idea,” embodied by serving people and sacred places, faces malnourishment. Society fragments and wars upon itself—nationally and internationally—over diminishing resources. Politics degenerates into a theater of the absurd that mocks values and ideals. Local and world en-

vironments strike back after centuries of pillage and rapine.

Small wonder, in such a debilitating context, that the National Park Service and System suffer deficits, deficits spiritual and material. Glitter gets the gold. Things of substance waste away.

The USNPS, as guardian and trustee of the System, faces two choices. It can shuffle along with the rest of the pack, its highest goal the pragmatics of survival. Or it can lead with its founding ideals. Like the salmon leaping over the falls, powered by the energy of the stars, the USNPS can transcend the givens of this world. One thing is certain: Neither Service nor System can perpetuate that “best idea” if we join in killing our motivating ideals.

The U.S. National Park System must be viewed as a cultural achievement unparalleled in world history. It must continue to be seen as a standard of excellence in a world bent on degrading excellence—excellence of spirit, mind, and body; excellence of both built and natural environments.

Deep attrition at all of these levels has already occurred. The *élan vital* of the Service, the physical patrimony of the System have suffered. But they are not yet dead.

We know the foreseeable future will be hard, for it is mortgaged and our children and their children will still be paying the bills incurred in our times. We know that centuries from now humankind will still be trying to re-establish the balance with Nature so prodigally upset by the excesses of recent history. We can hope this imperative, peace with Nature, will act as solvent in human affairs as well. The alternative is too bleak to discuss. So, in summary, our job will not be easy.



Initially, the national parks represented a social investment for the inspiration, edification, and enjoyment of the people. They still do, of course. But now we are beyond that simple innocence of purpose, which was aesthetic at its root.

In the world just described we have the opportunity to repay society with coin of a different sort, not more valuable but more utilitarian. In the process we can find ourselves again. We can shake lethargy and apathy. We can resurrect our *élan vital*. And we can save the parks, our first obligation as trustees.

There have always been those who viewed the parks as mere amenities of an enlightened and affluent society. An amenity is nice, but not necessary. We members of the choir have always viewed the parks as necessities, as foundation blocks in a civil, caring society. But, to be specific, we seldom hear about reciprocal harmonies from the federal government's Office of Management and Budget. There, gimlet-eyed budgeteers deal in measurable quantities, including votes for the party in power. In the lean years ahead, sharp-pencilled Philistines will wield ever more power and will support only the starkly necessary. Nice won't count.

You may have guessed the direction of this argument. We—meaning pre-eminently the parks, but also their committed guardians and trustees—must be *necessary* elements of this society: not only to those who have consistently shared our values and helped us stick to them, but also to those whose values have heretofore questioned the value of parks.

Now, there are many levels of necessity. The USNPS from the beginning has (if not shamelessly, at least enthusiastically) consorted with railroads, tourism boomers, and the economic interests of neighboring communities to promote the System. Even—in fact, especially—the great founders Mather and Albright knew that the higher appeal of the parks could not alone suffice in a society whose main motivations tended to focus on the Almighty Dollar. Nor has the USNPS been altogether loath to further the cause of parklands by playing the quid-pro-quo game of politics.

These forays into the real world continue and will always be with us. They are not evil. Within reason they are the price of acceptance for high-order values in a society only partly composed of Thoreaus and Muirs.

But what if we could find a role for parklands central to the necessities of this stressed society (and species), a role untarnished by lower-order economics and politics?

We have that opportunity—in a dual, entirely complementary thematic nexus that is also central to the original and evolved mission of the USNPS.

Most readers of this essay and increasing numbers of the lay public know that the states of health of society and the environment are reciprocal. An unhealthy, unstable, and warring society (or species) wastes the environment. A wasted environment produces chaos and lacks the buffering sustenance to calm such chaos. In these circumstances, the haves fight to keep, the have-nots fight to get. Thus the wars—economic and military—go on, further wasting the environment. Add to these daily headlines the ominous

global trends of climate change and the like: the products of two centuries of techno-fantasy that imagines still that a finite world is infinite in resources and capacity for absorption of waste, all compounded by the astronomical increases of population in modern times.

This is not a pretty picture. Unchecked, this progression promises to invade and consume every last combustible, mineral, rock, body of water, and gasp of air. National parks, as already in less fortunate lands, would cease to exist—whether consumed, flooded, or desertified by the combination of desperate humans and berserk natural forces.

In this context let us revisit the National Park Service Organic Act: To preserve and protect the national parks is the first and constant prerequisite to the end that they remain "unimpaired for future generations." Only an idiot could fail to see the connection between what has been written above and the central mission of this Service. If one accepts the premises of this argument, then the current interpretation of that central mission registers like a two-by-four to the temple: The USNPS must dramatically expand its functions as social and biological solvent and healer in a world desperately needing succor.

On the *social front* the parks provide one of the few truly democratic facilities for enjoyment and inspiration for *all* of the people. To the extent that we become inclusive in our welcome, understanding, accommodation, and interpretation of all the constituent populations of this nation (and beyond), we help reduce fragmentation and strife. Use of the Columbus Quincentennial opportunity to redefine our national history

by fully and fairly interpreting the contributions of the diverse cultural elements of our society provides an example of this social function. It aims to make the parks the cultural property of all culture groups in this country, not the exclusive resort of the dominant group that until recently monopolized our historiography.

Remember, only a unified society can move with vigor in the cause of environmental reform.

On the *biological front* our already established programs and local planning involvements to convey the environmental ethic must be geometrically enhanced by a two-part (science and interpretation) leadership role in the biospheric science network now building. The national parks of the United States provide a large number of the best baseline geographies left in this world. As research and monitoring stations in the worldwide network that checks and forecasts global change, they are, in aggregate, unparalleled. But only through the most skillful interpretation can the messages of science be delivered to help humankind and avert the worst consequences and adapt to those that can't be solved.

Remember, only a sustaining environment can save our society and species, and the national parks.

Note that sociology and biology are one.

Remarks in Remembrance of 1990

Durward L. Allen
West Lafayette, Indiana

The author delivered these remarks in accepting the Audubon Medal on December 6, 1990, in New York City.

Last spring—it must have been sometime in May—I received an exciting call from Peter Berle [president of the Audubon Society]. He said the Audubon board had met somewhere down in South America. I was being summoned to receive the Society's highest honor at the December meeting.

Peter needed to make certain that I would be there, and, without considering other possibilities (this was my 80th year), I hastened to assure him that Suzanne [Allen] and I would mark our calendar. I had witnessed this beatification ceremony several times, and I knew that the public would be held in suspense about it until late in the year.

In those intervening months, you get to wondering how this glorious thing ever happened to little ol' me.

And especially you think about the great people who received the Audubon Medal in previous years. To me the honor was always something akin to knighthood—with certain differences, of course. This distinction was conferred only once a year, and consistently the chosen one seemed to be a person who deserved it.

Here in Manhattan our thoughts turn naturally to the group of founding ornithologists who made bird watching famous in the environs of New York many years ago: Roger Peterson, Dick Pough, Bill Vogt, Joe Hickey, and others who have been great names in Audubon.

Vogt never got the medal because he did not live long enough. Hickey got it most recently. In considering what I might say or do, I reflected on his classic performance at some length. Some of you will recall that in response to public demand, he led the assembly in heavenly song.

It seemed like something I could do—after all, Hickey was only mortal. I expected to strike a blow for population control, and as a faintly original touch maybe I could invoke that stunning acclamation from the drinking man's hymnal, "Glory be to God that there are no more of us!"

It was a nice idea, but I couldn't remember any more of the words. (I do have one thing in common with a former President: I have a hard time remembering things.)

Reserving for the moment the subject of overpopulation, and turning aside from the great imbroglio in the Mideast, I will offer a few more ideas on a more modest theme—what 1990 has meant to me. I think this past year will have a special historic significance to Americans—at least to those who have some respon-

sible interest in the future. It seems probable that most of us will remember 1990 as the year when the United States Congress demonstrated for all to see their inability to handle the public's business apart from their personal affairs.

This perception obviously got to a lot of people, even school kids. I have a friend whose young son had an assignment in his high school history class to write a term paper on Congress. Evidently the teacher wanted to bring out a few points on the law-making process. Somewhat unexpectedly, the boy got interested, especially in the humanistic side of legislation. He called his paper "Congress and the Four S's." Some reading was required to get to the point, but it was finally revealed what the four S's stood for: senescence, seniority, senility, and cynicism. My friend says his precocious kid only got a B in the course, and now he wants to sue the school board.

We can be thankful that a few members of the Congress understand the relationship of human numbers to living standards and to resource use. But these few are outnumbered by a majority who have little interest in such abstractions. This is exemplified by recent proposals for legislation that would open wider our immigration floodgates to the great population surpluses of Latin America and the Far East—people caught in a bind who understandably would like to share our diminishing resource wealth, our great ideal of two jobs for every household, our health facilities, our welfare and educational systems. And of course they bring their birthrates with them. In 1990 the world's population increased by 93 million; each year that statistic grows by a couple of million.

The human environment is being subdivided, and the lots grow steadily smaller. Previous to the world population conference of 1984, this country was contributing \$38 million annually to international population programs. That year we withdrew all support for such activities. Today you can read the quarterly bulletin of the U.S. Agency for International Development without encountering the word "population."

This, the foremost problem of humanity—as someone aptly said, "the multiplier" of all our environmental and social ills. Maybe I should not be surprised, because in the past decade we have developed a national conspiracy of silence in regard to human numbers—actually it includes every aspect of human biology. Is this ignorance, dogma, or both? Can it be that our leadership simply does not care about the future?

This past year brought us the second coming of Earth Day. I naïvely expected an inspirational summing up of twenty years of conservation progress. It was a jarring disillusionment that so little was said about human numbers. The emphasis in various celebrations was on the many-sided issues of land, water, and atmospheric pollution and the huge—even prohibitive—cost of cleaning up our industrial act. Beyond doubt, the public needs such information, but the reports consistently failed to make the population connection. It appeared to me that the average citizen must have come away from Earth Day with the idea that environmentalism is a cult devoted to the theory and practice of trash disposal.

For better-informed persons there were some Earth Day consolations, especially in the superb environmen-

tal literature that is being developed. This is the information and philosophical resource on which plans for the future of humanity must depend. A major problem is that the bulk of our public do not read *Audubon Magazine*, *Natural History*, *The Amicus Journal*, *World Watch*, and books, bulletins, and articles by Paul Ehrlich, Denis Hayes, Lester Brown, and Herman Daly—obviously I slight the many by naming a few. It should be the policy of every conservation organization to get the enormous implications of population growth into the daily news where most people do their reading. Often we write on subjects where space is not sufficient for explaining relationships. But it does not take many words to mention them, and we should miss no opportunity to do so.

In such a meeting as this, I could not fail to recognize that National Audubon has long promoted an understanding of population issues. Most recently, president Russell Peterson strongly supported such activities, as does Peter Berle now. A few months ago *Science Magazine* carried an editorial on population in which its author, Constance Holden, complimented the Audubon program; Patricia Baldi's picture accompanied the article. This is unusual recognition.

The end of 1990 finds us in the middle of "the old-growth controversy." A knowledgeable editor told me that we have allowed the issue to be "trivialized" by representations that it is a choice between spotted owls and jobs. This, of course, is the kind of misleading one-liner dear to the hearts of politicians and the media.

It is more truthful to say that we are arguing for the right of the public to preserve, for present and future

non-destructive uses, the last ten percent of a forest ecosystem that took many centuries to develop and which, in practical terms, is not replaceable.

The old-growth has other than stumpage values. It is a scientific reserve in which we can continue to learn how natural systems work. They are the most complex entities that we know about in the universe, and we have only begun to unlock the secrets of their operation. Of course, also, the old-growth is a unique recreational resource. Its benefits could stretch indefinitely into the future. As we well know, such forests are high-quality watersheds: they stabilize soils, maintain fish habitats, and preserve other native wildlife, including, to be sure, the endangered spotted owl.

The loggers and their companies do indeed need the rest of the old-growth, for the value involved in cutting it off. Just as the loggers of a century ago needed the last of the great pineries in the Lake States and the Northeast. In Michigan we once looked at thousands of acres of stump fields and tried to imagine what a few square miles of those towering trees would be worth today. But someone needed them, nearly all of them, and they went to the mill. We found old farm houses with 20-inch floor boards of clear white pine.

In and before the early '70s we fought the battle of the redwoods. Someone needed those trees also. Environment-minded people wanted to keep them for durable benefits into the future. We got our Redwoods National Park, such as it is. After a generous Congress had bought off all the vested interests, it cost us more than all the lands in the parks before that time.

I think we must consider critically this matter of human need, for it is a bottomless pit. In a country without a population policy we will be getting down to the last ten percent of many things. There is no value from coast to coast and for miles out to sea that someone does not need. I doubt that immediate need is a useful criterion in planning for the future of any declining resource. You will have noted long ago that the most viable policy in this realm of planning is to require that all uses of renewable resources be sustainable. This, certainly, is the way to the greatest good for the most people, over the longest time.

In terminating this visit with many friends, I want to share with you something I found last summer when disposing of old archives. I don't know where it came from, but I think it includes some ideas worth remembering.

It was a few paragraphs on an old wrinkled paper, and in the upper corner it said, "The lesson." It had a short title: "The System of Nature."

I will read it to you:

In wild nature there is an ancient law well-known to those who seek their pleasure in the out-of-doors. It rules that every creature must live and die to such purpose that its species is preserved.

This natural law has scant concern for those born feeble or misshapen, for the sickly or disabled, for the doltish or unsocial. These unfortunates have but little time. It is to the common good that they should not pass on their faltering spark to sap the vigor of the stock and peril its survival.

In ages gone before, this husbandry of fitness made the deer more fleet that it might escape its enemies. It made the wolf sagacious and strong that it might capture

the deer. It caused the rabbit to be vigilant, and it muffled the wing beat of the owl. From its order came the song of the kinglet and the beauty of a butterfly.

In waters, woodland, lea, and desert, no living thing endures by privilege or is wronged in being extinguished. The rule is impartial. It sees no evil, knows no virtue. It led a legion of sturdy species through endless testing to the present. Those that could not abide the law were lost along the way.

Let none be doubtful that man, too, emerged from that sacrificial march, from natural havens where, few in number and in peaceful struggle, he gained support from the bounty of his habitat.

Now he comes to rule the universe. Uninstructed in natural law, in swarming numbers and with crude devices, he violates the tested virtues of the earth. He sanctifies the weak and cherishes the villain. He squanders his estate and makes no covenant with the future.

Man of today might well observe the frugal systems of the wild. Earth's creatures are his kin, their welfare his own. If he finds no meaning in his lineage, no sentiment for other forms of life, then the nature that gave him trial may yet find him unqualified.

Like the myriad of creatures that went ahead, man too could leave his unkempt scene. He could yield the earth to the roach, the opossum, and the ginkgo tree. His artifacts would wear away, and he would be gone—unrepentant, unforgiving, unremembered.

THE 75TH ANNIVERSARY SYMPOSIUM

CELEBRATING THE 75TH ANNIVERSARY OF THE
U. S. NATIONAL PARK SERVICE

BILL BRIGGLE, DEPUTY REGIONAL DIRECTOR, PACIFIC NORTHWEST
IN AN INTERVIEW CONDUCTED BY
BILL BROWN, CONTRIBUTING EDITOR, THE GEORGE WRIGHT FORUM

INTRODUCTION BY BILL BROWN

To establish the base of the tape, I would indicate that it's May 24, 1991, and Bill Brown, ex-Park Service Historian is here in discussion with Bill Briggie, Deputy Regional Director of the Pacific Northwest Region. We're in our respective locations. Mine is Gustavus, Alaska; Bill Briggie's is Seattle. We're going to talk about the National Park Service's 75th Anniversary Symposium. A question is: Why this discussion, or interview? Melody Webb felt that The George Wright Society's *FORUM* would be a good place for Bill Briggie to share the experiences and aspirations of the Symposium steering committee, which he heads—where we're going, why we're going, and what result we seek.

BILL BROWN: *Bill, could you begin by giving us some kind of a background on the 75th Anniversary Symposium? Why did it get started and what's it about?*

BILL BRIGGLE: Thank you Bill, and to the Society for their past and continued support to the Service and the opportunity to discuss an important event that is unfolding during this, the 75th Anniversary of the National Park Service.

The idea of an anniversary symposium began over a year ago. Director Jim Ridenour and Deputy Director Herb Cables desired a forum by which they could re-examine Service capabilities, structure, programs, and policies. They conceived the idea of a symposium that would allow a process for citizen evaluation of our programs and identify opportunities to improve our capabilities to meet the future. To carry out the thinking, the Director appointed a group of Park Service

people to take the lead, and develop an action plan. It was the consensus of this group that a stellar cross-section of those whose work, writings and observations have probed the operations and values of our parks should be invited to assist. These divergent interests could examine the issues facing us and help close the gaps between what we've done and what we must do in the 21st Century. It was the opinion that this would be an undertaking well worth the effort and time devoted to it. It's important to note that we received generous support from outside the Service, to plan the Symposium. With the Service matching the contributions. Our goal was to enlist the best thinking of citizens and experts inside and outside of government, to chart a dynamic course for the future. To do this we engaged the World Wildlife Fund/The Conservation Foundation and Harvard University's Kennedy School of Government. Both of these institu-

tions have an excellent record of dealing with conservation and management issues on a worldwide scale. Another important partner that came on board was the National Park Foundation, who has been long active in our programs: its credo is to assist the Park Service in its mission. With these co-sponsors on line, and the National Park Service in the center, we were ready to begin the task before us.

Recent studies and reports about the Service gave us a good starting point. The most notable of these, is "The National Park and Conservation Association Report on the National Park System." An internal group, appointed by former Director Bill Mott, also took a look into the 21st Century. With these two thought-provoking reports to guide us, and discussions with many people inside and outside the Service as to their views on the major issues, we had much of the background we needed.

A prestigious Steering Committee was Chartered under the Federal Advisory Committee Act to develop work issues, segregating them into four themes: *Environmental Leadership, Resources Stewardship, Organizational Renewal, and Park Use and Enjoyment*. We then sought the best leadership from outside the Service to head up each of these working groups. Special pains were taken to assure that the Service did not overwhelm this effort, while remaining a major player in the process. The working groups, comprised of nine members, included six outside members, and three from the Service.

BILL BROWN: *With all this high powered help brought in through your consortium, people might assume that the ideas are already in. I think that*

would be wrong. I think you want continuing participation from the readers of the FORUM and the Courier, both inside and outside the Service. Is that true?

BILL BRIGGLE: The jury is still out, and the process we have embraced, allows and encourages dialogue, both prior to the Symposium, and afterward.

BILL BROWN: *Bill, in reading over Glenn Baker's Symposium article for the Courier, my eye lit on the theme of the Symposium, "Protecting our National Parks: Challenges and Strategies for the 21st Century," and I thought about the word "protecting." Often in the past that word has been used in a defensive way—the parks barricading against the outside world. In today's world, that old-line defensive posture is dubious policy. I think we have to go forth beyond our boundaries and turn the situation around out there.*

BILL BRIGGLE: I agree, and our Park Managers are for the most part stepping out of their traditional role of watching events unfold outside the park. They have become more aggressive in calling attention to threats to the boundaries, and with encouragement, will become more effective. I believe the public expects the Service to be a strong advocate when it comes to speaking out on environmental issues that pose a threat to park values.

BILL BROWN: *One of the things that came up during our 21st Century Task Force work was an effort to restate the Park Service mission. You and I both took the position that the NPS Organic Act, like the Constitution of the United States, gave us a mission broad enough to respond creatively to an evolving world. We have an evolved mission that is moving with the evolving world, but we still have those tablets in stone that*

say we will preserve, unimpaired, for the use and enjoyment of future generations. Is that old statement still adequate to meet changing needs and times?

BILL BRIGGLE: In my opinion our mission statement is still adequate. However, I believe we should consider redefining our goals, and establish new goals where necessary, to ensure that we stay relevant with our current and future needs.

BILL BROWN: *The analog, I think, is the Supreme Court Reports vis-à-vis our constitutional history. Periodically, as a Service, we convene a court of elders, within our ranks or with outside help, and we say: "Define our mission for this day, and for the next 10 years, and the next 20 years." I think we are able to use that fundamental statement in the founding Act—the one that all of us have memorized—and add branches to the tree that is the National Park Service and System. This has been a very good thing. But why is it, Bill, that our "future" studies (and you and I have participated in a number of them over the years) tend to elicit a flurry of responses and then wind up on the shelf? It seems that our dreams and aspirations outstrip our ability to realize them. Of course the world is moving ever faster, and these "challenges" grow ever greater. What makes you think this Symposium is going to have a more lasting effect?*

BILL BRIGGLE: I've given this considerable thought. Many well intentioned people have provided plans and recommendations on how we should conduct our business. Reports have been prepared and some good recommendations have been adopted, while others have fallen by the wayside. There is no one single answer, but I would hazard a guess, that given our

decentralized organization, where accountability and the decision to "sign on" is not always enforced, plus a lack of synergism up and down, account for a share of the problem. Hopefully this Symposium: "Challenges and Strategies for the 21st Century," will offer the right ingredients to make the difference. This is the first time, to my knowledge, that the Service has had the opportunity to stage an event of this magnitude before such a broad spectrum of public interest. We're saying to these interests: "Take a look, let's examine together what we do, how we do it, and where we should be." In my earlier words about the Symposium's origin, I described the building of this partnership. We have a Charter, approved by Interior Secretary Lujan, which allows us to bring in the public, and encourage full involvement. The Symposium will provide an opportunity to perfect the ideas that come forth, as partners in a larger public concern. There is no chasm here, between the public, and the Service entrusted with its parks and cultural resources. This is the elixir that will give life and value to these proceedings.

Beyond the Symposium itself, a more aware public base exists; aware of the parks certainly, but also aware of larger environmental concerns; the plight of the old growth forests and the spotted owl, the Exxon Valdez oil spill, and similar happenings have stunned this enlightened public, made it receptive to environmental conservation, of which the National Parks are premier examples. This public concern will further the Symposium's momentum. We build on past studies and reports, the good work already in place, and now must go further, by instituting

an "organizational mentality," to take the recommendations and make them work, to present them in such a manner that they will not pose undue threats, and can be readily understood by the people who have to implement them, as well as by the people who will be on the receiving end. It's also essential that Congress and the executive branches feel comfortable with the final outcome. So given these "windows of opportunities" and the enthusiasm that is, and will be, generated I'm optimistic that we can orchestrate a continuing process of improvement in our programs, policies, and structure.

BILL BROWN: *Bill, taking the cue from your last remarks, let's shift now to a closer analysis of the four Symposium themes. Because I think this "organizational mentality" concept is so important, I'd like to start with "organizational renewal." I think all of us agreed that at this time, with things moving so rapidly, with our evolving mission reaching out internationally to such subjects as global change, and given the stresses in our well-established activities, organizational renewal means more than just a few shifts in personnel management. What do you see as organizational renewal?*

BILL BRIGGLE: To keep any organization viable, it must enhance the resources available to it. We want to be the best place to work, whether it be in training, professional development, housing needs, or emphasis on the health and welfare of our employees. The ability to retain quality people, the professionalism of our work force, the overall esteem of both career and seasonal employees are absolutely critical. It's been suggested that our current practices tend to dehumanize employees rather than support them,

with a loss of esprit de corps and the sense of family in this organization. We're going to have to look closely at how we respond to people, and try to understand and anticipate their needs better. Moreover, we have to create opportunities that will attract people to come into, and stay with the organization. To do this, we have to run the gamut of the Service: recruiting process, selection process, motivation and training, the retention process for managers and finally career ladders with available rungs. We must insist and expect better management accountability for the organization. We must have long range goals, and strategies to realize them...strategies articulated and personified. Each of us must help develop these objectives, and then "buy" into them.

Development of leadership is crucial for us. We have not focused to the degree needed on leadership succession, expectations of our current leaders, or the line-up that succeeds to these positions. Are we doing a good enough job of preparing people to be our future leaders? Horace Albright said it many years ago, "Just don't let the Park Service become another bureau." His vision was, "be the best." Part of not becoming another "bureau" is a strong commitment to the National Park System, taking professional risks to maintain the integrity of the System.

How do we carry this out? We must be realistic, but not frugal, when setting human resources funding priorities. Our commitment to employee development must be strong if we are to successfully carry out our stewardship responsibilities. To have a successful organization you have to recruit and train leaders

that are motivated and dedicated, and you must gather a core of people that have that same motivation and dedication, to take you where you want to be. Everything worthwhile has its price, and the commitment to do a better job could be tougher to achieve than obtaining the dollars to manage and implement needed change.

BILL BROWN: *Let's follow up on this leadership and retention idea. Those two things go so closely together: getting cadres of people who inspire and lead and drag along the rest, and who then inspire the rest to move on their own. We've had so much layering and partitioning in the Service as it has grown that we've lost that big-hatted person up front, who looks back and waves a hand, and says, "Follow me." We've lost, it seems to me, a lot of the day to day informal communication and fellowship. There are people in leadership roles who don't know the names of the people who work for them. They never visit. They are surprised when they do come downstairs to see how many people are there and how many things they are doing. These lapses seem to me inexcusable if we're serious about the kind of leadership and retention of which you're speaking.*

BILL BRIGGLE: Agreed, and that is going to be the stickiest of the wickets we probably have to deal with. It isn't because we don't have well-intentioned people—we do. But the sometimes excessive demands placed upon these people exhaust and break the bonds. I say on occasion, "where you sit, is how you think." It doesn't take long sitting in a leadership position, before the daily torrent can, and does, take its toll. Unless a conscious effort is made each day, you can find yourself getting further away from your co-

workers and the things that are happening in our parks. It takes a real effort, a great deal of energy, strength, and understanding, to keep strong ties to our people and parks.

BILL BROWN: *I like your comments on retaining qualified people, rather than having them work for a few years for the Park Service, get the training, become effective, and then say, "God, I can't move up and I don't see that glimmering light that calls me on." It seems to me we've got to have a calling. We've got to have an ethos in this Service that transcends these day-by-day attritions. We have to have times to renew ourselves, because we've got such important work to do.*

BILL BRIGGLE: One of the ways to get at that is to offer better career development through career leaders and a well established "mentor system" in place. Leaders who have become mentors, if you will. I am a proponent of the mentor system and I think that through career leaders and career planning, backed by employee development and training programs, much of this can be done. But these tools are only as good as the people who wield them. In my opinion, there's too much lip service paid to these goals and too little accomplishment. Call this the "oughta'bes" and "oughta'dos." We have not fully taken the "oughta'bes" and "oughta'dos" and developed a blueprint for how to achieve the goals, and how to better prepare our employees for leadership roles and for a satisfying career. That must be done. And much of this is accountability and, sadly, we may not be much different in that respect from some other organizations. It's extremely difficult to keep a high level of anticipation, of desire,

motivation, and dedication. I think today that our leadership is under such terrific attack, so busy defending its actions and carrying numerous special thrusts and activities, that it draws them further and further away from the real business of running the National Park System. Perhaps we're not organized as competently and as effectively as we should be. We need to look at the organizational structure and its present capability to see if we're in a position to move on forward and do the kinds of things that retain the quality individual, and keep the spirit high.

BILL BROWN: *Let's go to the two things that form the core of the NPS mission: stewardship and public use. We must maintain a tight stewardship over the parks. We call them resources. We can call them a number of other things. We can call them the nation's "mythic landscapes" and its "mystic chords of memory." And beyond this resource base are the derivations of it: park use and enjoyment.*

Then there is the role of environmental leadership. For now, let's talk about resource stewardship. You mentioned the fact that in these lean years—lean in terms of human society's outgrowing its resource base—the parks and our sister landscapes such as the Arctic National Wildlife Refuge come under scrutiny for additional resources. We have other resource problems too. What is the state of the public land philosophy today and how can the Symposium help the nation see the great value of preserved land?

BILL BRIGGLE: The Symposium will offer that opportunity because it will showcase some of the most notable conservation leaders in the arena today. It's going to give these people an opportunity to put these concerns "up front." What are the

long-term balances between preservation, conservation, and wise use of our national patrimony—and what is the formula that holds the parks intact, at the same time healing the rest of our environment, the context of the parks? Through dialogue over the issues we'll try to define what we will be doing, and how we will be doing it. Bill, I think the awareness is there. I think our problem is that we have not yet found the best vehicle by which to articulate these critical balances. We are working at this with our interpretive programs, our opportunity to educate. The Symposium will put these issues on the table, and they will be examined in a new perspective. Not just for the present, but for the foreseeable future. And this public airing I believe, is going to offer us an outstanding opportunity to do what is needed.

BILL BROWN: *Let's try "Organizational renewal" and "resource stewardship" together. One of the things we have talked about often and that is a constant drumbeat in conversations I have with others is the fact that many people in the Park Service do not have a direct and enduring connection to the very reason they are working in the Park Service: the parks themselves. What can we do in terms of "resource stewardship" to use the resource base as a mode of organizational renewal? We have George Hartzog's recent statement that only a few people in central offices, and particularly in Washington, DC, have ever served in a park on any kind of assignment. What can we do to get people out of those buildings with their endless hallways and closed doors, and get them placed in a park? All employees should have such direct contact during their careers so they have some notion of what these resources are about, why their work is important, why they're*

working for the Park Service instead of GSA or Sears.

BILL BRIGGLE: There are many employees by the very nature of their job who will not have the opportunity to visit parks in an official capacity. It's probably not practical to expect anything different. On the other hand, there are those who absolutely by the nature of their work and responsibilities must be conversant with park management and stay abreast of the issues. It's not a case of personal desire, rather a "must" part of their overall performance expectations. They must receive encouragement by their supervisors and others on up the line. I believe that people take their signals, get their motivation and direction from "role" models, people they admire and who have credibility. When leaders show an interest, getting out in the parks, getting to know the resource and issues, and communicating with employees and the park visitors it sets the standard of involvement and commitment. This lead by example goes a long way to encourage central office folks to take an interest and actively promote visits to the park.

I've always kept one goal in mind, Bill: I never forget where my roots are—they are inside our national parks! Given the chance, our dedicated office staffs will probably make the opportunity to "get to know the parks" in a responsible manner. After all, the stakes are high and lack of commitment or opportunity by any one segment of the work force is not acceptable.

BILL BROWN: *We're agreed then that going back to the roots and keeping those roots refreshed is critical. How we do it, by what leadership techniques, by what*

formal or informal modes, is less important than the principle: We cannot function as park people if we don't know about parks.

Let's go now to park use and enjoyment, the third theme of the Symposium. Once we have achieved a solid resource stewardship, then the other half of our basic charge comes into play, and that's to bring people into the parks for inspiration, meditation, physical challenge, and the pleasures of a friendly, safe social environment. Parks are places that let people see the natural processes, look back at our history, and achieve healthy recreation. All of these things are long-developed and well-defined, and in these old-line phases of park use the dilemma between preservation and use has always been with us. But maybe there are some other kinds of park use that we have not thought about—park use that goes beyond the pleasuring grounds and physical challenge, park use that will help the larger world. We can look upon parklands as treasures in the world's data bank as we confront global change, as part of a worldwide scientific effort to ameliorate such change. How can we focus this evolved social utility of the parks—so important to their survival?

BILL BRIGGLE: A more sophisticated framework for scientific monitoring and research is needed. The data we obtain will provide us with the tools to establish limits of acceptable use. It will determine the appropriate balance between meeting people's expectations for modern conveniences while providing for resource-based park experiences. We've got to know more about our public and their impact on the resource. I think we're beginning to find that out through studies now in progress. We thought for a long time that we knew what the public

expected in the enjoyment of their parks and what they wanted in return. But I'm unsure at this point. I believe the information that's being gathered will give us insight on how to maintain the atmosphere in which visitors can be inspired by the values of the parks. How does such inspiration begin? Early education is the first step, and that's why we really must become more involved in educational outreach programs. It helps the potential park users to better understand what they need and what they expect to get from a park visit.

Obviously we're beginning to experience a new type of park user. We have seen the influence of the Pacific Rim nations and Southern border countries. We've already seen the need to respond to the aging, the handicapped, and to culturally and ethnically diverse populations. We need to know what they expect from the parks and what we can realistically deliver; how we presently do business may not cut it 15 or 25 years from now. We're going to be exposing national parks to a whole new world of users—people who come from different backgrounds and have different expectations. The major question here is, do we sacrifice the values that we've held dear to us or do we embrace these new users, take the time to understand their cultures and see how we can bring them all together in a national park that they can understand and enjoy?

BILL BROWN: *I would answer yes to the question of "finding new ways," and go back to the other, scientific/environmental part of my question. I remember years ago, in the late 60s and early 70s, we concentrated on instilling environmental ethics through environ-*

mental interpretation, using the parks as models for environmental management. Sometimes the hand got a bit heavy in that effort. Our goal was protection of the parks through environmental interpretation. I think the need is greater than ever today, but I think our message must be more subtle and sophisticated than before. I think people today are much more aware of the environmental health problems that beset the world. They are seeing a world that is physically changing in a threatening manner. Through our interpretive programs and through the experiences we offer these diverse publics you're talking about, we have to show that the parks are instruments for public benefit: as models of good land use and as research and data stations monitoring the global changes that appear in the headlines daily.

That brings us to our last major theme: environmental leadership. We're all aware of the fact that a part of a system can't survive if the whole of the system is going down. I think that's the big message that ties right back to our basic charge—our basic mission set forth in the Organic Act. If we are to save the parks, then the larger environmental context of those parks must be healthy. We know this because our parks, even the large ones, are postage stamps in that larger context. How do we achieve a social utility within the parks through participation in biospheric science that really does make us leaders in the environmental solutions the world needs today?

BILL BRIGGLE: It will help to build a broader constituency and to lead by example. An anecdote helps here: some of the people at the Kennedy School of Government were asked how they perceived various agencies in government, particularly the National Park Ser-

vice. These very bright and talented leaders and managers of tomorrow viewed the National Park Service as a custodian, a custodian of lands. Now, is that how we want to be perceived, as simply a custodian of lands? Certainly, we don't perceive ourselves that way. Of course we manage and take care of the parks and we're very proud of that and we will continue to do that. But where do we step beyond this role—continue with it but step on forward to build a constituency that can convey the values of the National Park System to a more diverse and enlightened public, enlist it in a more diverse cause, a global cause, one where we are a very active player rather than simply standing on the sideline? Our parks represent some of the finest examples of the environment in the world today. We are looked upon, I'm sure, as being an organization that has a significant role to play. The question is, "Are we prepared to play it?" And if we are prepared to play that active role, how far into it do we want to go? That's the question that we are going to be addressing during the next several months. What is our role? The answer to that will help determine our environmental leadership role and ultimate influence.

BILL BROWN: *I couldn't agree more. There has to be a unifying philosophy that defines how far we go, how holistic we're going to be in environmental leadership. In utilizing the parks, not only for education, but also as baseline areas in the scientific endeavor necessary to correct some of the imbalances in our biosphere, we must be guided by a philosophy that fits individual disciplines into a path—a course. Otherwise, our ships will sail on important missions that never come together, never culminate in results.*

BILL BRIGGLE: That is something that we cannot afford to let happen. And I know that Park Service people today don't want that to happen. The question is, "How do we get ourselves organizationally and mentally prepared for this expanded mission?" The Symposium where we'll be talking and learning over the next several months, may hold the key to the answers we seek. We can't afford to ignore the answers.

BILL BROWN: *That's why you've got a Consortium.*

BILL BRIGGLE: And it's their perspective we're seeking.

BILL BROWN: *We've run the string on our hour discussion. Do you have any summing-up statement you'd like to make?*

BILL BRIGGLE: This Symposium is a unique effort to improve the performance of government. Through the process which we have defined it is the hope that we can provide the framework for continuing discussion on the future of the National Park Service among citizens and their public officials.



Research Queries

Native Plants

The Division of State Parks in Virginia is beginning to develop guidelines for the use of native plants in landscape design in our state parks and would like to receive copies of any existing guidelines that Forum readers know of. Thank you for your assistance.

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Upcoming Conferences

"Natural Areas in the Western Landscape"

The Natural Areas Association will be holding its Eighteenth Annual Natural Areas Conference, October 15-18, 1991, in Estes Park, Colorado. For conference information: Natural Areas Conference Coordinator, P.O. Box 260550, Lakewood, CO 80226-0550.

"Managing Water Resources During Global Change"

The American Water Resources Association will be holding its 28th conference November 1-5, 1992, in Reno, Nevada. The conference and related symposia will foster discussions relevant to ecological and water resources management alternatives at a time when our knowledge about the temporal and spatial aspects of global changes will be improving through debate and analysis of new data that are now being collected worldwide. There will be standard 20-minute talks and poster presentations; preferences should be indicated along with abstracts, which themselves should be no more than 250 words. Abstracts are due by January 15, 1992. Contact: Raymond Herrmann, U.S. National Park Service, Water Resources Cooperative Parks Studies Unit, Colorado State University, Ft. Collins, CO 80523.

"Integrated Resource Management"

The 4th North American Symposium on Society and Resource Management will be at the University of Wisconsin in Madison from May 17 through 20, 1992. The symposium will focus on integrating social and biological sciences as they address environmental issues. Activities include concurrent paper/video sessions, plenary theme addresses, round table discussions, a poster session, field trips, and receptions. Abstracts, due by December 1, 1991, should be no more than two double-spaced pages. Contact: Mary Miron, School of Natural Resources, 1450 Linden Dr., University of Wisconsin, Madison, WI 53706. Phone: (608) 262-6969; fax (608) 262-6055.

Complete Sets of 1986 Proceedings Available— Reduced Price for GWS Members!

With the appearance in April of the eighth volume of the proceedings of the 1986 Society conference, we now finally have completed this lengthy publication. Volume 8, edited by Jan W. van Wagendonk, is on Geographic Information Systems. At 56 pages it is much shorter than the other book-length volumes.

If you attended the 1986 conference, or if you already ordered the proceedings, you should have received Volume 8 by now. If you

haven't, please let us know.

We have a fairly large stock of all volumes except for Volume 7, which is nearly sold out. We are offering individual volumes at greatly reduced prices, with additional discounts for GWS members and for ordering complete sets (while they last). If you'd like to order one or more of the volumes, here's a rundown. All prices are postpaid for US addresses. For Canadian addresses, please add US\$2.00 per volume.

Vol.	Title & pages	price for	price for
		GWS members in good standing	nonmembers
1.	The Plenary Sessions (165 pp.)	\$4.00	\$7.50
2.	Wildlife Management & Habitats (184 pp.)	\$4.00	\$7.50
3.	Physical Processes & Water Resources (146 pp.)	\$4.00	\$7.50
4.	Vegetation Change & Historic Landscape Management (214 pp.)	\$4.00	\$7.50
5.	Management of Exotic Species in Natural Communities (129 pp.)	\$4.00	\$7.50
6.	Fisheries and Coastal Wetlands Research (184 pp.)	\$4.00	\$7.50
7.	Interdisciplinary Approaches to Freshwater Wetlands Research (hardback) (163 pp.)	\$6.00	\$7.50
8.	GIS (56 pp.)	\$2.00	\$2.50
COMPLETE SETS, Vols. 1-8		\$28.00	\$52.00

GWS Joins International Biodiversity Conservation Program—Can You Help Us?

At its February meeting, the Society's Board decided to join the Biodiversity Conservation Strategy Program (see *Forum*, Vol. 7, No. 3) as a "partner organization." This means the Society will review documents which are produced by the program, participate in discussions about how to carry out the conservation strategy, and possibly attend symposia on biological diversity.

All this is just beginning to take shape, so we are looking for GWS members who might be interested in getting involved. We have put together a first-line ad hoc committee to do the reviews and comments. Its members are Craig Allen, Jon Jarvis, and Dave Haskell. The committee has already gotten the first document from the Program, but there will be more to come and we would like to get others involved so the burden doesn't fall on a handful of members. *Any expertise would be a*

welcome addition; biodiversity conservation cuts across all lines and requires an interdisciplinary approach. Cultural resource people, take note: the Program explicitly recognizes the maintenance of cultural diversity as a key component of conserving biological diversity. Traditional and folk wisdom, much of it concerning the environment and resource management, is being lost around the world as cultures become homogenized. We are very interested, therefore, in having a good mix of cultural and natural on the ad hoc committee(s).

If you *might* want to help—no commitments right now—drop us a line with a few words about your interests, expertise, time constraints, and so on. As we collect names, we'll contact you about how you can help the Society address the world loss of our natural and cultural heritage.

GWS Attends SAMPA Conference

GWS Deputy Executive Director Dave Harmon represented the Society at the first Science and Management of Protected Areas (SAMPAs) conference in Nova Scotia in May. It was the first such conference ever held in Canada.

It was apparent that science in the Canadian parks is in the same woe-filled state as in the USA. It too is plagued by a lack of funding, no peer review, wardens who do double-duty as resource managers, etc. Only a few parks have Canadian Parks Service (CPS) scientists working in them, though this could soon change. One of the most interesting

sessions of the week was an informal evening get-together by CPS scientists. Their common complaint: data gathered in parks are incomplete, often not gathered according to scientific method (and therefore not publishable), and so scattered about as to be of little use to park managers.

SAMPAs drew attendance from around the world; there were stimulating papers from Costa Rica, South Africa, Australia, and India, among others. Harmon presented a poster to raise awareness of the GWS in Canada and discussed possible joint projects with several conferees.

About the GWS . . .

The George Wright Society was founded in 1980 to serve as a professional association for people who work in protected areas and on public lands. Unlike other organizations, the GWS is not limited to a single discipline or one type of protected area. Our integrative approach cuts across academic fields, agency jurisdictions, and political boundaries.

The GWS organizes and co-sponsors the foremost U.S. conference on research and management of protected areas, held every two years. We offer the Forum, a quarterly publication, as a venue for discussion of timely issues related to protected areas, including think-pieces that have a hard time finding a home in subject-oriented, peer-reviewed journals. The GWS also helps sponsor outside symposia and takes part in international initiatives, such as the Global Biodiversity Conservation Strategy.

Who was George Wright?

George Melendez Wright (1904-1936) was one of the first protected area professionals to argue for a holistic approach to solving research and management problems. In 1929 he founded (and funded out of his own pocket) the Wildlife Division of the U.S. National Park Service—the precursor to today's science and resource management programs in the agency. Although just a young man, he quickly became associated with the conservation luminaries of the day and, along with them, influenced planning for public parks and recreation areas nationwide. Even then, Wright realized that protected areas cannot be managed as if they are untouched by events outside their boundaries.

Please Join Us!

Following the spirit of George Wright, members of the GWS come from all kinds of professional backgrounds. Our ranks include terrestrial and marine scientists, historians, archaeologists, sociologists, geographers, natural and cultural resource managers, planners, data analysts, and more. Some work in agencies, some for private groups, some in academia. And some are simply supporters of better research and management in protected areas.

Won't you help us as we work toward this goal? Membership for individuals is US\$25 per calendar year, and includes subscriptions to both the Forum and the GWS newsletter, discounts on GWS publications, and reduced registration fees for the GWS conference. *New* members who join between 1 October and 31 December are enrolled for the balance of the year and all of the next. A sign-up form is on the next page. Other membership options are available; please call or write to get a brochure with full details.

GWS Membership

You may use this form to sign up for membership or to renew.

Or, pass it along to a colleague or friend who might be interested in the GWS. Annual membership dues are US\$25.

Please send a check or money order to the address below.

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Submitting Materials to the Forum

The editorial board welcomes articles that bear importantly on the objectives of the Society—promoting the application of knowledge, understanding, and wisdom to policy making, planning, management, and interpretation of the resources of protected areas and public lands around the world. The Forum is now distributed internationally; submissions should minimize provincialism, avoid academic and agency jargon, and aim to broaden international aspects and application. We actively seek manuscripts which represent a variety of protected area perspectives, and welcome submissions from authors working outside of the U.S.A.

Language of Submission Current readership is primarily English-speaking, but submissions in other languages will be considered; in such cases an English summary should be prepared.

Form of Submission We strongly urge authors to submit articles on computer disk. This eliminates troublesome re-keying. Almost any Apple Macintosh disk can be read in its original format (please indicate the version of the software). Otherwise, send an ASCII-file disk; both 3.5" and 5.25" double-density formats are acceptable. (No high-density disks, please.) A double-spaced manuscript must accompany all submissions in case there are compatibility problems.

Citations The Forum contains articles in varied fields, e.g., history, geology, archeology, botany, zoology, management, etc. Please follow your field's conventions for citations and bibliographies. Normally these will be retained in our pages.

Editorial Matters Generally, manuscripts are edited only for clarity, grammar, and so on. We contact authors before publishing if major revisions to content are needed. The Forum is copyrighted by the Society; permission for additional publication is freely given as long as the article is attributed as having been first published here.

Illustrations Submit line drawings, charts, and graphs as nearly "camera-ready" as possible. If submitted in a size that exceeds the Forum's page dimensions, please make sure the reduction will still be legible. The preferable form for photographs is black-and-white (matte or glossy) prints. Medium contrast makes for better reproduction. Color prints and slides may not reproduce as well, but are acceptable. We particularly welcome good vertical black-and-white photos for use on the cover. Halftones from newspapers and magazines should be avoided if at all possible. Please secure copyright permissions as needed..

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