

*The George Wright*

# FORUM

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Elephants at a Watering Hole in Tsavo National Park, Kenya. Author Harold Eidsvik discusses the "massive devastation to the vegetation of Tsavo" as "one of the earliest controversies which led to the growing acceptance of today's interventionist philosophy." His article begins on page 12.

Bob Linn photo, 1975.

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of Cultural and Natural Parks and Reserves  
Through Research and Education

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# The George Wright Forum

Volume 8

•

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Number 3

---

Principles and Practices of a Research and Resource Management Program

Jonathan B. Jarvis

**2**

Strengthening Protected Areas through Philosophy, Science, and Management: A Global Perspective

Harold K. Eidsvik

**12**

Conference Report: "Biological Pollution: The Control and Impact of Invasive Exotic Species"

Lloyd L. Loope

**21**

An Update to "Gone, But Not Forgotten: The Delisted Units of the U.S. National Park System"

Alan K. Hogenauer

**26**

---

Revision of the By-Laws of the George Wright Society

**29**

Errata

**20**

Society News, Notes & Mail

**46**

About the George Wright Society / Membership Form

**47**

# **Principles and Practices of a Research and Resource Management Program**

**Jonathan B. Jarvis**

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## **THE IDEAL SITUATION**

From an ideal standpoint, a national park system area should have boundaries drawn for ecological reasons. Before any development or visitor use occurs, all park resources are inventoried and meticulously recorded into databases that can be retrieved to identify key indicators and processes. Monitoring programs, based on conceptual models of anticipated change, are in place and operated to provide early warning of natural and anthropogenic influences. Using an interactive Geographic Information System with detailed data, planning is completed for necessary park facilities, trails, roads, interpretation, and appropriate activities. Physical improvements are

constructed with sensitivity to resources and aesthetics. When the area opens to the public, on hand are the necessary staff and funding to scientifically investigate and monitor resources. Alternatives are developed by interdisciplinary teams of managers, resource managers, and scientists. Decisions are made in an atmosphere of understanding of the long-term consequences to park resources.

## **THE REAL WORLD**

Unfortunately, the existing situation is far from the ideal. In the real world of park systems, such circumstances do not, and may never, exist. Instead, lands are inherited with built-in problems, such as pre-existing use patterns or facilities adjacent to sensitive resources. Rarely are there baseline resource data of existing conditions, nor a clear record of past activities. Even a complete bibliography or a repository of studies is a rarity. Existing staff and funding do not accomplish much more than maintain position against a myriad of internal and external pressures. Consequently, management makes development and policy decisions without the necessary data. Not unique to new park areas, even older, well-established areas often suffer from a lack of baseline information and a process to gather it. At Crater Lake National Park, established in 1902, the USNPS did not initiate baseline monitoring of the water quality of the lake itself until 1980—78 years later. However, to shut the doors to visitor use and associated development until the necessary scientific resource data are gathered is unrealistic and probably politically impossible, but



to continue making decisions without adequate information is a disservice to the resources and the public. It is the challenge of the USNPS to modify the "real world" with the tools it has in hand so the situation more closely approaches the "ideal."

## DEVELOPING A BALANCE

Due to limited staff and funding, political pressures, and the immediacy of resource problems, parks spend an inordinate amount of time on so-called "brush-fire" issues. With baseline data unavailable, park staff must start from scratch each time a problem arises to collect data, assess impacts, respond to conflicting pressures, and develop mitigation strategies in a short time. Had baseline information been available, an issue may have been anticipated and mitigation alternatives more efficiently and effectively developed. In addition, many parks are completely absorbed in the operational demands of visitor services, law enforcement, interpretation, and maintenance. The constant operational demands and rapid response to "brush fires" focuses on short-term objectives and solutions. Long-term objectives are not thoughtfully developed or pursued, and long-term needs for data are rarely identified nor monetarily competitive with "brush fires." This becomes a vicious circle of having too many demands on staff time to develop, support, and continue programs necessary to gather, analyze, and assimilate data needed to make sound decisions. It is a system out of balance.

To cope with the inefficiencies of "brush-fire" management, parks need to develop and implement a

balanced program between the press of daily park operations, the planning required for program implementation, the identification of long-term objectives and strategies, the gathering of information through research and monitoring, and the mitigation of recognized impacts. This can be accomplished, even with low budgets, by a proactive approach and the application of the following field-tested principles and practices. For clarification, I have organized them into two logical groups: Relations with Research, and Resource Management Program Development.

## PRINCIPLES AND PRACTICES

This list provides examples which managers, scientists, and resource management staff can apply to facilitate a balanced team effort. As good scientific research is the backbone of solid resource management, half of the list is about how management should relate to and solicit research and half is about how research is converted into sound resource management programs.

### RELATIONS WITH RESEARCH

*1. Understand the science process.* Scientific research has a specific process that includes articulating research questions, developing a theory, collecting and analyzing data, drawing conclusions, writing up results and having them reviewed by peers, and preparing a final report. It is a process that may not fit within short time frames; however, its importance is recognized worldwide. Deviations or short cuts are quickly recognized and may leave the results and any management recommendations more

subject to question, criticism, or rejection by peers. Two time-consuming processes are the collection of enough data for a statistically valid sample and the thorough review by peers. Peer review and publishing provide scientists the opportunity to have their ideas and work scrutinized by others of similar expertise. This process strengthens the stature and credibility of the scientist, the data, and the decisions which are based upon the research.

**2. Support research other than that which provides only direct, foreseeable benefits.** Due to the complexity of park resources, not all of ecosystem dynamics are readily discernible to science. A study today that seems to have no direct value to park management may have high importance in the future. Even if this type of research cannot be directly funded, it can be supported by logistics or work space. At a minimum, research that increases our knowledge about park resources and their interactions should be encouraged.

**3. Recognize that research does not make management decisions.** Research itself will not, even with well-developed management recommendations, make management decisions. At best, research will provide a range of possible consequences to resources resulting from management action or inaction. The decision still remains with management and must be considered with all other consequences to operations, visitor use, public opinion, etc. All too often we hear "I need answers!" Research will provide answers to research questions; if those questions are well-formulated with input from management, the re-

search results will go a long way toward providing viable solutions.

**4. Learn what scientific capabilities are available in your area.** Managers should know what special areas of expertise are available in the region, and in other park system areas. In addition to in-house capabilities, local and regional educational institutions should be investigated for specific expertise. University-based scientists have ready access to other specialists and university libraries. Knowledge of other land management agency expertise is also invaluable. For example, existing agreements between the USNPS and the U.S. Forest Service allow parks to tap into the extensive expertise of USFS fire specialists and scientists. State and provincial fish and game agencies and park systems also often have expertise in managing wildlife populations. If managers do not know the answers to resource questions, they should at least know whom to ask.

**5. Encourage research through offering operational support.** Research by independent scientists and universities should be encouraged through offering a basic level of support. Working in a U.S. National Park System area has an intrinsic appeal that many scientists find irresistible. USNPS areas can capitalize on this appeal without taking advantage of the researcher and without overwhelming the park operation. Valuable research from independent scientists and universities can be obtained with a minimum of expenditure through offering basic amenities such as work space, low-cost housing, laboratory space, library or collection access, or logistical assistance. Careful screening of who can use the park offer-

ings is as important as controlling the numbers. At Crater Lake National Park, former USNPS quarters were converted to provide housing for visiting researchers. This provided an atmosphere for informal exchange among visiting scientists as well as providing low-cost housing in a remote location. In U.S. national parks, the Volunteers in Parks (VIP) program may be used to register visiting researchers; other park systems may have similar programs. This provides some small monetary compensation and legal use of government facilities and equipment.

**6. *Communicate research needs to local educational institutions.*** Once an area has determined its research needs within the process of a resource management plan, a list should be prepared of suggested research topics or projects and provided to universities. Included in this list should be the contact person's name and a list of the minimum operational support offerings (logistics, housing, work space) that the park can offer.

**7. *Identify the research problem clearly.*** Good problem identification is essential to developing a sound research proposal and achieving the desired results. Management questions must be well thought-out and articulated before initiating any research. Developing the question(s) can most effectively be done as a joint effort between researchers and managers. During this process, a closer accord can be reached between the desires of management and the capability of research. Managers have a responsibility to clearly articulate their needs, and scientists have a responsibility to articulate the limi-

tations of a specific research project.

**8. *Ensure that park-supported research relates to resource management objectives.*** With limited funding and staff, park-sponsored research should relate to a specific resource management objective as identified in a resource management plan. Such a relationship will instill a greater desire by park staff to support the research operation and a higher chance that the results will be used.

**9. *Inform scientists of the needs of management.*** Through early meetings, scientists should be made aware of the needs of management in relation to a particular project. Managers need facts before they can make decisions and the facts need to be scientifically based and capable of withstanding scrutiny by other specialists in a public or legal forum. Because managers need information in relatively short time frames, interim results are helpful. Managers like "catchy" quotes or phrases that reach to the heart of the issue but are based on defensible data.

**10. *Inform researchers of management constraints.*** Researchers should be informed of expectations, rules, regulations, constraints, and the relevant land-management philosophy. Researchers are generally responsible individuals with sensitivity to park system concerns and will follow rules and regulations if informed beforehand. They should be informed also of the "whys" of the regulations. Exceptions to the rules and regulations should be applied only with justification and prior permission. Parks should develop a written statement or checklist about conducting research in their park. The statement

can accompany collecting permits or responses to research proposals.

**11. Assign a park-based liaison as the contact with researchers.** Researchers should have a park-based liaison who understands their needs, the value of the projects, and the requirements of the area. This liaison should facilitate research accomplishments without subjecting a visiting researcher to the confusing park organizational structure and protocol.

**12. Encourage and provide the opportunity for researchers to present briefings.** Researchers should be requested to make formal and informal presentations to the staff on the intent and findings of their research. This type of presentation is an excellent method of communicating research information to park staff. Requiring researchers to present such talks is generally easy to negotiate. For contracted research, this requirement should be placed in the contract. For volunteer researchers, it can be requested in exchange for logistical or other staff assistance. Researchers should also be requested to present programs directly to the public in a park setting.

**13. Monitor research closely.** Research within park areas should be monitored to ensure that it is not damaging or consuming resources. The basic premises of resource preservation must be remembered in initiating any park-based research. The long-term impacts of consumptive research must be weighed as would any proposal affecting park resources. If necessary, alternative areas outside the park boundaries or alternative techniques may be employed or negotiated so research can still be completed with a minimum of impact on park resources.

**14. Regularly review ongoing research.** Ongoing research should be regularly reviewed to ensure that the research is on track and responding to the needs of management as originally intended. As new information becomes available, research may be adjusted to better apply to the needs of management. Interim reports and regular contact are essential to ensuring that the work is being carried out as envisioned. Changes in mid-project can be sensitive situations and should be carefully approached and mutually negotiated. Mid-project modifications can be best avoided through open, early design discussions.

**15. Request management recommendations or implications in final research reports.** Park-supported research should, where appropriate, provide alternative management recommendations or implications as a part of the final report. Not all research can appropriately provide management recommendations, and some researchers may be uncomfortable in doing so. If researchers are provided a clear understanding of management constraints, the alternative management recommendations will be more practically applicable. The researcher needs to realize these are recommendations only and may be adopted, rejected, or modified as necessary.

**16. Provide management feedback to researchers.** Researchers should receive notice that their research is being applied, providing the framework necessary for future working relationships. Feedback also allows for evaluating the work's applicability and for refining future studies. When specific applications of research results are envisioned beyond the scope of the

original work, the researcher should be contacted for a discussion of applicability.

**17. Communicate research to park staff.** Research plans, progress, and reports should be shared and interpreted to field and administrative staff. Field staff who provide logistical support should receive feedback on their efforts and benefit from the research project information. To send out a 300-page dissertation with a routing slip ensures that the information would be read by few if any of the park staff. To send the document with a one-page summary discussing implications for the management of the park would ensure greater interest. The resulting higher level of interest improves future field support for research.

**18. Co-author articles between managers and specialists.** Managers and specialists should work together to publish articles on programs that involve a successful collaboration between scientists and managers. Such publications would create a medium for better understanding each other's needs and a forum for information exchange.

## DEVELOPING A RESOURCE MANAGEMENT PROGRAM

**19. Develop clear resource-oriented management objectives.** Often, management objectives are oriented toward serving visitors without identifying the necessary studies, inventories, or mitigating actions. Resource management or science staff should be closely involved in the development of management objectives so that resource concerns are articulated. Broad management objectives, as well as the specific resource management

objectives, should include short- and long-term information needs and the methods to obtain the information.

**20. Identify research and resource management needs with an interdisciplinary team.** Identifying, documenting, and prioritizing research needs and resource management projects should be an interdivisional, interdisciplinary process. This should include participation from interested field staff in all divisions, including seasonals, because of their exceptional firsthand knowledge of the resources. Likewise, assistance should be sought from visiting researchers or park-system scientists based at universities in defining research questions or resource management problems.

**21. Convert management recommendations and research results into practical and affordable programs.** Management recommendations are seldom in a form that can be easily or directly implemented. Converting results of research into practical programs requires understanding the constraints, options, funding, and staffing limitations. This responsibility for translation should be assigned to the staff person with the greatest understanding of operations and the meaning of the research. In complex situations, interdisciplinary strategy teams should be used.

**22. Ensure resource management programs are marketed.** Resource management programs of mitigation or monitoring that require support from field staff should be well thought-out, organized, and marketed. Park field staff most often already feel a burden of too much work and not enough time or money. Additional work is often looked on with



suspicion and received with less than enthusiastic support. A new resource program should be designed to fit into other operational duties. The importance of the project must be marketed to field staff in such a manner that they understand and support the idea. If they see how a project would benefit their operation or the resource, or how they would learn a new skill, or enhance their professional knowledge, they will more enthusiastically support the program.

**23. *Ensure that resource management programs are logical.*** Resource management programs that require support from field staff must be logical. Projects that require time commitments and major shifts in other operational requirements are less likely to be supported. Locating sampling points, for example, along regularly traveled patrol routes provides a better opportunity for field staff to assist in data collection. A remote location may be slightly better in terms of representation of a particular resource, but it is wasted if too remote to allow regular access and data collection.

**24. *Design resource management programs for quality.*** Resource management programs should be designed for quality rather than quantity. "Brush fire" management attempts to solve all problems at once but none very well. Resource management programs should be developed with goals, priorities, and high standards. Using action plans or task directives to outline the chronological events, allocate funding, and set standards for implementation are excellent tools in establishing quality programs. Accountability, tracking, follow-up, and periodic review of the actions

are important in maintaining high standards.

**25. *Make baseline monitoring a high-priority program.*** Each park should set a high priority for baseline monitoring of specific indicator resources. It is never too early to start a baseline monitoring program, but it can be too late. Long-term monitoring is the best method to watch and interpret trends of change in park resources that may be human-caused and is the best way a database can be developed for future decisions. Baseline monitoring programs should have periodic professional review to ensure the data are collected in a manner that serves the purposes of the program, i.e., it can be statistically analyzed, and is responsive to the changes that are anticipated.

**26. *Institutionalize long-term monitoring and resource management programs.*** The key to success of long-term programs is often linked to low turnover in staff; however, park systems may have a relatively high level of transfer and turnover. By working to institutionalize resource management and monitoring programs into day-to-day operations, there is greater assurance that they will be continued. Important long-term resource programs should become such a part of the operation that they are as routine as fee collection or road patrol. This technique can be accomplished by establishing long-term monitoring and resource programs within the Resource Management Plan, parkwide and district annual work plans, and individual performance standards.

**27. *Make research data and resource management information retrievable.*** Research data and resource monitoring information

should be organized and stored in such a manner that the information is retrievable and capable of being compared and analyzed. Managers in the future will need to analyze increasingly large databases with a multitude of interrelated factors. The sheer volume of information will require that data be manipulated by automated data processing (ADP). Already a backlog of information exists to be entered, a backlog that seems almost insurmountable; however, parks should begin to create and enlarge databases for analyzing resource trends. Small databases can be easily managed with "off-the-shelf" data management software. The most efficient process is to enter data at the time the information is collected. Field data sheets should be modified, if necessary, to facilitate entry of data into ADP systems. Mappable data should be collected at a specified standard and stored for entry and use in Geographic Information Systems.

**28. *Communicate resource projects to the public.*** The reasons for and the results of resource projects should be effectively communicated to the public through the various media. Park visitors generally are interested and educated users. They are the grass roots supporters of the park system and its programs for resource protection. Their support becomes stronger and more effective to the degree they understand the varied resources. Short articles on resource projects should be presented in park newspapers or other park publications. Where possible, a research or resource management field team should be accompanied by someone with interpretive skills who can discuss the project on site with interested visitors.

**29. *Use the news media effectively to sell resource management programs.*** Resource managers should learn to use the news media effectively to deliver information about its programs. The news media is often willing to come to a park for a story about research findings, ongoing research, and resource programs. Good press contacts should be established and cultivated so that they increase the opportunity for balanced handling of controversial issues. Press releases on resource issues are an important tool and should contain specific quotes and short clear phrases to be used verbatim by the media.

**30. *Accomplish resource management goals through strategic planning.*** Achieving resource management goals is most frequently affected by a variety of interrelated factors, such as funding, staffing, time, politics, communication, meetings, planning, logistics, and personalities. The key to managing these factors is strategic planning. Strategic planning is best done on paper, with each step articulated and timed for the greatest effectiveness. This planning is especially effective when done with a team of interested and informed staff identifying and assigning each task for completion in a logical, chronological order.

## SUMMARY

A park system has the overwhelming responsibility of managing and protecting complex resources in the midst of increasing threats. A past lack of emphasis on data gathering, resource monitoring, and research, coupled with a focus on daily "brush-fire" issues, has brought the USNPS to the point of dealing with increasingly complex

problems with a deficiency of information. Barring a major overhaul of the park system's organization to dramatically increase the number of scientists within the organization, parks must evaluate their own programs and use tested practices to incorporate research and monitoring from all available sources into park operations. This will assist parks in using the best available knowledge to develop mitigation strategies, implement monitoring programs that are worthwhile and practical,

and gather necessary data to interpret and respond to unforeseen change brought on by human actions. These practices and principles are simple in concept yet require constant attention and the commitment of park management. No one practice stands alone, but when all are applied in concert, a balance is achieved, and these practices become a strategy for solid management of park resources for the future.

## REFERENCE LIST OF PRINCIPLES AND PRACTICES FOR RESEARCH AND RESOURCE MANAGEMENT

### Relations with Research

1. Understand the science process.
2. Support research other than that which provides only direct, foreseeable benefits.
3. Recognize that research does not make management decisions.
4. Learn what scientific capabilities are available in your area.
5. Encourage research through offering operational support.
6. Communicate research needs to local educational institutions.
7. Identify the research problem clearly.
8. Ensure park-funded or -supported research relates to resource management objectives.
9. Inform scientists of the needs of management.
10. Inform researchers of management constraints.
11. Assign a park-based liaison as the contact with researchers.
12. Encourage and provide the opportunity for researchers to present briefings.
13. Monitor research activity closely.
14. Regularly review ongoing research.
15. Request management recommendations or implications in final research reports.
16. Provide researchers with feedback from management.
17. Communicate research to park staff.
18. Co-author articles between managers and specialists.

## Developing a Resource Management Program

19. Develop clear, resource-oriented management objectives.
20. Identify research and resource management needs with an interdisciplinary team.
21. Convert management recommendations and research results into practical and affordable programs.
22. Ensure that resource management programs are marketed.
23. Ensure that resource management programs are logical.
24. Design resource management programs for quality.
25. Make baseline monitoring a high-priority program.
26. Institutionalize long-term monitoring and resource management programs.
27. Make research data and resource management information retrievable.
28. Communicate resource projects to the public.
29. Use the news media effectively to sell resource management.
30. Accomplish resource management goals through strategic planning.



## Interested in the '92 GWS Conference? Don't forget to send in your postcard!

By now, all Society members, as well as the institutions on the Forum mailing list, should have received an announcement/call for papers giving initial details of the Society's Seventh Conference on Research and Resource Management in Parks and on Public Lands. If you are thinking of joining us in Jacksonville, please return the preaddressed postcard that was included with the announcement. When you do, we'll put you on the mailing list to receive a conference registration packet, which will be available starting in February. If you don't have the preaddressed postcard, simply send us your name and mailing address via mail or fax. *Remember: the registration packet will be sent only to those who request it!* Also keep in mind that the deadline for poster & paper abstracts is February 15. Send all cards, abstracts, and other correspondence to the GWS, P.O. Box 65, Hancock, MI 49930-0065 USA, or fax to (906) 487-9405. For more information, give us a call at (906) 487-9722.

# Strengthening Protected Areas through Philosophy, Science, and Management: A Global Perspective

Harold K. Eidsvik  
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Hull, Quebec

*(Ed. note: This paper was given at the International Conference on Science and the Management of Protected Areas, Wolfville, Nova Scotia, May 1991.)*

As the opening speaker at this International Conference on Science and the Management of Protected Areas, I would like to extend my congratulations to the organizing committee and all of their collaborators. The topic is timely, the breadth of the subject is vast, and the program is inspiring. I feel comfortable that the next few days will expand our knowledge and in due course influence how we manage protected areas.

To move science into the forefront of our management decision making processes is one of the challenges of this conference. Science cannot, however, help us attain our objectives if our objectives have not been clearly established (Table 1). We cannot develop science-based technology to support management unless we know what we are trying to achieve.

We are concerned with natural areas at various stages of evolution and under different regimes of management. Frankly, I have found it extremely frustrating trying to build linkages between science and management. There seems to be no beginning and no end, everything is abstract, and this is the reality of nature.



**Table 1**

**Primary Conservation Objectives for Protected areas**

- Maintain essential ecological processes and life support systems
- Preserve genetic and biological diversity
- Protect aesthetic values and natural ecosystems
- Conserve watersheds and their production
- Control erosion, sedimentation, and soil depletion
- Maintain air quality
- Protect habitat of representative, and rare and endangered, species
- Provide opportunities for ecotourism and recreation
- Provide opportunities for research, education, and monitoring
- Contribute to sustainable use and ecodevelopment
- Protect natural and cultural heritage
- Retain future options

We need to recognize that

a concern with nature is not merely a scientific curiosity, but a subject that pervades philosophy, theology, aesthetics, and psychology. There are deep reasons why we desire a balance and harmony in the structure of the biological world and that we seek to find that structural balance, just as our ancestors desired and sought that kind of balance in the physical world.<sup>1</sup>

**NATURE, CULTURE, AND THE PROTECTED AREA MANAGER**

As park managers, our culture reflects writers such as Muir, Marsh,

Thoreau, Olmsted, Leopold, Harkin, Mather, Sarasin, and Nash. We have a built-in culture which is different than that shared by the Gifford Pinchot utilitarian school of forest resource management. Failing to make our cultural assumptions explicit is perhaps the root cause of our failure to communicate conservation concepts to many foresters, the mining community, and other economically driven decision makers.

In brief, we must be explicit about where we are coming from; we cannot assume that everyone has the same ideology.

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<sup>1</sup>D. Botkin, *Discordant Harmonies* (New York: Oxford University Press, 1990), pp. 188-89.

**THE FIRST 100 YEARS**

As protected area managers, we have for 100 years "managed" pro-

tected areas on a non-interventionist basis. Where we have intervened, it has been to favor "good species" over "bad species." With respect to habitat, we stopped fire, which we believed to be "bad." Other than this, we believed that nature should prevail. As Thoreau once said, "In wildness is the preservation of the world." This concept of non-intervention is, however, changing.

## THE CURRENT SCENE

The massive devastation to the vegetation of Tsavo [National Park] in Kenya and the ultimate decision to cull the elephant herd in the mid-1960s marks one of the earliest controversies which led to the growing acceptance of today's interventionist philosophy.

Because of our long tradition of non-intervention, to abandon this belief in the constancy of undisturbed nature is psychologically disturbing. As long as we could believe nature undisturbed was a given, we had a comfortable basis upon which we could judge our actions. Abandoning this base leaves us uncomfortable.

We do not have a strong rationale for charging off in new interventionist directions. E.O. Wilson tells us that we have somewhere between 5 and 30 million species on earth; of these, 1.4 million have been named. The question is: If we don't even know the names of most of the species with which we work, how can we embark on an interventionist program at the ecosystem level?

I guess the simple answer is that we have no choice: the world is changing rapidly and relatively small protected areas will not survive without intervention. And

that requires better science than we have been able to deliver to date.

## KNOWLEDGE AND MANAGEMENT TECHNOLOGY

Back in 1972, Morton Boyd of the U.K. Nature Conservancy wrote that "the 'scientific management' of a national park is talked about as a reality, when, in the vast majority of cases, it is a figment." The lack of commitment of financial resources makes the management of the natural resources in parks—as opposed to road building, catering, and law enforcement—something to talk about rather than to do!

Last year, Howard Chapman, retired regional director of the Western Region of the U.S. National Park Service, said "it is unconscionable that there is not a more comprehensive science program" in the U.S. national parks."<sup>2</sup> The circumstances are not dramatically different in most protected areas.

Underlying the concerns about our lack of species knowledge and Boyd's and Chapman's about the lack of investment in science and its application (technology) has been an assumed myth of nature in balance. This has been reflected in the concept of non-intervention. However, as our understanding of the dynamic nature of nature grows, the need for intervention through management action is becoming the accepted route for protected area management. The

change in perception of nature and the new answers to the ancient questions

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<sup>2</sup> Howard Chapman, "Thoughts & Observations from an ex-Regional Director," *The George Wright Forum*, Vol. 7, No. 4 (1991), p. 45.

about nature arise from new observations and new ways of thinking that even now seem radical. The transition that is taking place affects us today and will continue to affect us deeply, in ways that may not be obvious, for decades.<sup>3</sup>

Science can help to manage protected areas, but it must be placed in context. Dan Botkin does this admirably in his new book *Discordant Harmonies*:

A harmony between ourselves and nature depends on—indeed, requires—modern technological tools to teach us about the Earth and to help us manage wisely what we realize we have inadvertently begun to unravel.

From the new perspective, nature does not provide simple answers. People are forced to choose the kind of environment they want, and a “desirable” environment may be one that people have altered, at least in some vicinities some of the time.<sup>4</sup>

Some elements of this approach are outlined in IUCN’s framework for protected areas (Table 2). Within the framework, scientific reserves and wilderness areas (Category I) are intended to provide the least disturbed ecosystems for scientific monitoring, baseline studies, and the conservation of biological diversity. Clearly, research into the functioning of ecosystems is one of the central reasons for the existence of Category I protected areas. Without such activity, biodiversity will indeed be at risk.

At the other end of the scale, protected land- or seascapes (Category V) incorporate natural areas which have undergone considerable cultural transformation, either as

result of a long history of human occupation such as the national parks of the United Kingdom or through industrial transformation such as the Rideau Canal system. Also incorporated in this category are many marine parks and coral reefs. In between these two extremes are traditional national or provincial parks (Category II), natural monuments (Category III), and habitat and wildlife management areas (Category IV).

Protected areas cannot exist in isolation from other forms of land use. They must be integrated into broader systems.

Having identified categories of protected areas as a component of global planning, attention must be turned to their management. The elements of protected area management are: law and policy, identification and selection, establishment, planning and management, and monitoring.

## LAW AND POLICY

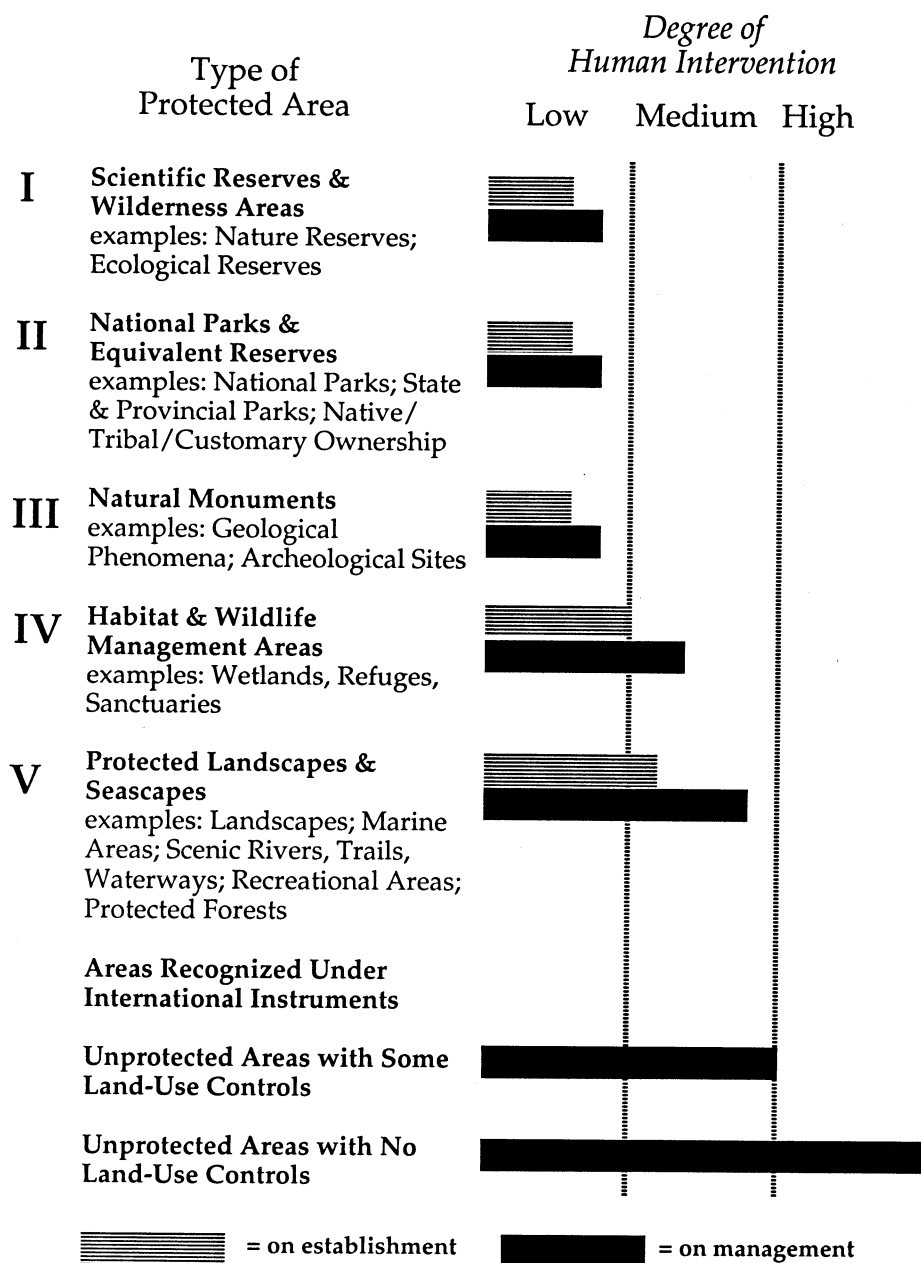
Governments clearly have a critical role in creating a favorable environment for the establishment and management of protected areas. For example, legislation, funding, and tax structures which encourage private incentives are relatively well developed in the United Kingdom and the United States, though the same cannot be said of Canada. It is an area of policy which requires further research, as well as public education and communication.

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<sup>3</sup> Botkin, p. 189.

<sup>4</sup> *Ibid.*

**Table 2**  
**IUCN's Framework for Terrestrial and Marine Protected Areas**



## IDENTIFICATION AND SELECTION

Protected area identification and selection can be divided into two major periods: pre- and post-1960. Until 1960, the concept of representation on a systematic basis was the exception. Subsequently, developments of concepts such as "natural regions" began to evolve. The scientific basis for the identification and selection of protected areas continues to evolve.

In 1972, Raymond Dasmann, through IUCN, published a first effort at global systems planning. This was followed by Miklos D.F. Udvardy's seminal work in 1975. During this period, the USNPS and the Canadian Parks Service were establishing systems plans based on physiography and vegetative systems. Subsequently, Unesco adopted Udvardy's classification of realms, biogeographic provinces, and biomes as a basis for the global biosphere reserve network.

Research continues to improve upon the classification of large geographic areas. Canada has now been classified into ecozones (15), ecoprovinces (40), ecoregions (177), and ecodistricts (5,400). This process illustrates how, with the use of satellite imagery and Geographic Information Systems (GIS), we can improve our identification and selection of protected areas at the macro-scale.

In Canada, research at the University of Waterloo led to the "ABC" approach to inventory and selection. Briefly, this involves an inventory of abiotic and biotic resources, followed by an examination of cultural elements.

The ABC method is a classic example of the transfer and integra-

tion of scientific information into applied planning methodologies used within the Canadian Parks Service.

From a national parks perspective, if abiotic and biotic criteria representative of an ecoprovince are found in a locale which is a "gap" in the system of national parks, a potential new park, referred to as a National Area of Canadian Significance (NACS), is identified. Establishment of a new national park is a cultural and political decision involving local people as well as federal, territorial, and provincial governments. Several NACS may be found within one ecoprovince, and abiotic, biotic, and cultural values are assessed against broad criteria to establish objectives for a potential new park.

## ESTABLISHMENT

As a part of the planning process, it is essential to separate "establishment" from "identification and selection." The latter are technical and scientific decisions, whereas establishment is a political process. It may proceed rapidly if the managing authority acquires or owns the land, e.g., Mingan National Park Reserve, or it may be a lengthy process where native or local people are involved, e.g., Grasslands National Park or the East Arm of Great Slave Lake, where 30 years have passed since the early initiatives were taken.

Protected areas have been around for at least 2,000 years. They were initially established for religious, aesthetic, or ethical reasons. In the first category, we could include Aboriginal sites and well-defined religious sites, such as the Bo Tree in Sri Lanka or Mount Taishan,



where Confucius meditated. The objectives of these areas were generally quite clear.

It is when we begin to examine areas selected for aesthetic or ethical reasons that our objectives become less clear, e.g., Yellowstone, Banff, Tongariro, or Tsavo.

Essentially, objectives should flow from early research undertaken during "systems planning." However, since this did not occur until the early 1960s, we have many protected areas without clear objectives. The lack of clear objectives is a root cause of public and bureaucratic misunderstanding of the fundamental purposes of many parks.

The establishment process involves building in safeguards related to the future ecological integrity of areas. Is the area an independently operating ecosystem? What considerations have been given to water quality and quantity? What considerations have been given to air flows? Is climate change a factor? Historically, we were satisfied that bigger was better; this is probably still a truism, but what corridors and linkages have been provided for? Is the protected area a factor in future natural resources development? There are myriad questions.

Fundamental research issues remain. For example, what is representation of an ecoprovince, how many areas are needed, what area (size) should they incorporate? In light of this, Canada's Green Plan 12% solution sounds simple!\*

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\* Canada's national environmental plan calls for incorporating 12% of the total territory as protected space—up from about 7% today.

## PLANNING & MANAGEMENT

There is a wealth of information on most areas that have been studied. My deep concern remains, however, that most of this information remains in the files of a fisheries biologist, an entomologist, an amateur ornithologist, an archaeologist, museums, universities, etc.

Federico Mayor, director general of Unesco, recently said, "We must try to make scientific information available to decision makers. Not only do politicians want to know what scientists are doing—they have to know." In reality, the concepts of planning and managing national parks have taken on a scientific flavor only in the last thirty years—and that may be stretching it. Prior to this, with a few exceptions, parks were managed on the basis of intuition and judgment. Both will continue to be necessary, but scientists must provide a sound

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The federal government has committed to:

- establishing at least five new national parks by 1996;
- negotiating agreements for the remaining 13 parks required to fill gaps in the terrestrial system by 2000;
- establishing three new national marine parks by 1996, including South Moresby/Gwaii Haanas and Saguenay; and
- establishing three other national marine parks in areas to be chosen by 2000.

In addition, the government has promised to fill thematic gaps within the national historic sites systems by commemorating 15 new sites by 2000. Government of Canada, *Canada's Green Plan* (Ottawa, 1990), pp. 79-80, 89.

intellectual base upon which to narrow these judgment calls.

## MONITORING

Nature, like politics, is a dynamic process. Thus, periodic reviews of the effectiveness of management must be undertaken. Preferably, monitoring will demonstrate that we are not going in circles but are moving forward in an iterative fashion on an inclined spiral.

## CONCLUSION

As we move away from a concept of nature as a static force to nature as a dynamic force, we need more research and better science to guide our management. We also need to enhance our managerial abilities in framing research programs and utilizing the results.

As managers of protected areas, we live with an assumption that large areas require less management intervention than small areas. Wilderness, on the one hand, and a zoo, on the other, are often used to illustrate this assumption.

A second assumption is that small areas require a stronger scientific foundation for their management than do large areas.

As a somewhat distant observer of the tuberculosis-brucellosis debate in, within, and between wood bison, plains bison, and hybrid bison in Wood Buffalo National Park, I am not convinced that big is always better, safer, or in need of minimal intervention and minimal science.

Canada's park managers are now carrying out gene typing of three different kinds of bison to find a conservation solution to an alleged problem in one of the world's

largest national parks. At the root of the issue is the need to re-examine some untested assumptions about the non-interventionist policies of most park agencies.

Botkin, in *Discordant Harmonies*, calls for investments in ecosystem and biodiversity understanding on a scale of the massive investments of the U.S. Geological Survey. Current efforts by park agencies amount to little more than tinkering.

The Swedish Environmental Protection Agency has created a research council to establish a scientific basis for nature conservation. This research is funded mainly at universities, a concept which we all need to endorse.

Howard Chapman has called for an altogether different relationship between scientists and managers. Since they are not natural partners, it will require real dedication to forge the kind of partnership to meet the kind of aggressive program envisioned. To meet such demands, the [U.S. National Park] Service will have to go to Congress and seek a charter that recognizes science as a major program that requires funding stability to be an effective long-range effort.<sup>5</sup>

In Canada, we tend to admire the science commitment of the USNPS. If they are not satisfied, we have a long way to go.

Dr. [Gro Harlem] Brundtland [chair of the U.N. World Commission on Environment and Development], the upcoming World Conference on Environment and Development [UNCED, scheduled for Brazil in June 1992], the Green Plan, the Group of Seven, and the Global Environmental Facility [a newly launched conservation banking pro-

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<sup>5</sup> Chapman, "Thoughts & Observations," p. 46.

gram] all call for sustainable development. We have a vast knowledge of our abiotic resources and the macro-socioeconomic system. To live in a world that will not survive without the effective management of its biological diversity means that society is not sustainable. We must stop being apologists for nature and culture. We must shift investment from the *abiotic* dead to the *biotic* living world. Scientifically managed protected areas are a critical element in ensuring biological

sustainability. We need to shift from seeking an economically sustainable world to a biologically sustainable planet. This needs better science and better management.

None of the elements of protected area management can be fully developed without a scientific approach to the solution of problems. Our major failing is that we neither invest sufficiently in the subject or communicate results effectively.



## Errata

In the last issue of the Forum, a couple of typesetting mistakes played havoc with the article "National Parks in the Eastern United States: The Mammoth Cave Experience," by Bruce J. Noble, Jr. Two lines were repeated at the bottom of page 40 and top of page 41. More critically, some words were omitted from the final paragraph on page 41 carrying over onto page 42. That paragraph should read:

"In addition, the Dust Bowl had left the American public with vivid images of clouds of topsoil blowing across the Plains states. At least part of the Dust Bowl phenomenon resulted from the extension of agricultural pursuits into regions of the country that were not ideally suited for farming activities. As a preventative measure, natural parks would serve as bastions of correct conservation practice where the virtues of conserving timber and preventing topsoil erosion could be publicly demonstrated. Given the perceived magnitude of such environmental threats during the 1930s, Mammoth Cave National Park advocates proceeded on the assumption that they were serving the larger interests of society by promoting the conversion of marginal Kentucky farmland into a natural preserve."

# CONFERENCE REPORT

## **"Biological Pollution: The Control and Impact of Invasive Exotic Species"**

a conference sponsored by the  
Indiana Academy of Science,  
October 1991

**Lloyd L. Loope**  
**Haleakala National Park**  
**Makawao, Hawaii**

On October 25-26, 1991, I attended a conference called "Biological Pollution: The Control and Impact of Invasive Exotic Species" at the Indiana University—Purdue University at Indianapolis Conference Center. It was a national conference, with 230 attendees from 34 states and an agenda featuring topics of nationwide interest. Personally, I have been preoccupied with exotic species issues and problems beginning with my move to Everglades National Park in Florida in 1977. Since 1980, I have been involved in an effort to determine impacts of exotic species and to develop strategies against them at Haleakala National Park in the Hawaiian Islands.

In the Hawaiian Islands, there is a consensus that efforts to combat invasive exotic species, both preventing new introductions and controlling the problem species we already have, rate higher in priority than direct efforts to save endangered species, since the future habitats of all native species depend on limiting inroads by exotics. It is also becoming recognized that managers of protected areas have a huge potential reservoir of allies in combatting exotic species, since new introductions threaten agriculture, health, and even tourism. As soon as I saw the brochure with the agenda for this conference in Indianapolis, I decided that I had to attend. Nothing about the conference was disappointing. Bill McKnight, the organizer, and the Indiana Academy of Science, the sponsor, did a first-rate job on everything, most notably in arranging for a spellbinding group of speakers.

As one would expect, the heart of the conference was a litany of horror stories about seemingly intractable exotic species and their impacts. There were actually a few upbeat presentations. Perhaps the most notable of these was by Francis Harty, who gave an inspiring talk on how, within just a few years, the Illinois Department of Natural Resources changed its policy from one of planting exotics throughout the state to one of planting almost nothing but natives. Stephen Hight of the U.S. Department of Agriculture (USDA) Insect Biocontrol Lab in Maryland described promising beetles brought from Europe to control purple loosestrife, *Lythrum salicaria*.

But most of the speakers were not so upbeat. The problems are very complex, but can be boiled

down to the fact that humans are moving organisms around at an ever-accelerating pace, and these organisms thrive with increasing frequency and intensity because of habitat modification. One would think that hardly anyone cares, based on the pathetic response in budgets for preservation and control. Much of the funding is directed toward dealing with the effects rather than with the root of the problem. The public and policy makers are very poorly informed about the magnitude of the problem and ways of appropriately addressing it. It seems to have been the zebra mussel, *Dreissena polymorpha*, introduced from Europe with ship ballast into the Great Lakes in 1985 and already causing billions of dollars of damage annually (especially by clogging water intake structures), which has recently raised awareness and, among other things, has caused initiation of a major study of exotic species problems in the United States by the Congressional Office of Technology Assessment.

I can touch upon only a few examples to give an idea of the flavor of the conference. A proceedings will be published by the Indiana Academy of Science sometime in 1992.

Margery Daughtery, from Cornell University's Long Island Horticultural Research Laboratory, gave a presentation on the dogwood anthracnose disease, a mysterious malady which has been affecting *Cornus nuttalli* on the West Coast of the U.S. and *Cornus florida* of the East for more than a decade. The disease was noted almost simultaneously on both coasts in the late 1970s. In the East, it started in the New York-Long Island area and gradually spread southward and

westward; it made a major leap south to the southern Appalachians in 1987. The disease, which will eventually rate with chestnut blight and Dutch elm disease, was initially ignored because of its simultaneous spread with the gypsy moth. The causative agent is *Discula* sp., a new species of fungus currently being described, which apparently is native to Asia and came with plantings of *Cornus cusa*, an Asiatic dogwood which was first introduced via the Arnold Arboretum and widely planted. *Cornus cusa* is only mildly affected by the disease. The disease is getting much attention now, particularly in the Southeast, since the eastern flowering dogwood is an extremely beautiful and popular tree—many states have it as their State Tree. Whereas the attitude in the Northeast is that we have to live with the disease, Southeasterners have more of a will to fight it. Research is underway in the Southeast by the University of Tennessee, U.S. Forest Service, and U.S. National Park Service. Data on survival of a dogwood population in Catoctin Mountain Park in Maryland is not particularly encouraging; very high mortality was measured during 1984–88, but some trees do recover and survive (unlike the situation with chestnut blight and Dutch elm disease.) Dogwood seedlings continue to thrive on favorable sites in sunny locations.

Paul Kalisz of the University of Kentucky gave a valuable perspective from earthworm biology. The bottom line is that in the Cumberland Plateau, where the forests are continuous, severe disturbance is required if exotic earthworms are to replace native ones. Exotic earthworms occur there only in highly



modified sites. In Kentucky's "bluegrass" zone, where forests have been highly fragmented and occur in small patches, exotic earthworms have largely replaced native ones, even in forests which have received virtually no human disturbance. The earthworm data support the paradigm of increasing invasiveness of exotic species as native habitats become more and more fragmented.

George Craig, a medical entomologist at the University of Notre Dame, told of the establishment and spread of the Asian tiger mosquito, *Aedes albopictus*, in the United States. This vector of dengue, La Crosse encephalitis, the Potosi virus, and other deadly virus diseases arrived in Houston in 1986 and has since spread into twenty-two states and north as far as Minneapolis. It has overwintered four Chicago winters and is well established in a ghetto area seven miles square in the city, where it breeds in discarded tires, pop cans, styrofoam cups, etc. Disease outbreaks are almost invariably in close proximity to such garbage, although the mosquito also breeds in tree holes. Authorities were surprised when this southeast Asian mosquito spread so far north. Research using isozyme data has shown that our race is from the northeast edge of the insect's range in Japan. It apparently arrived in Houston from Japan with a shipment of used tires destined for recapping. Tiger mosquito populations already show resistance to organophosphate insecticides. Without DDT, there is no really effective way to control them. Removal of breeding sites is attractive in theory, but the U.S. Environmental Protection Agency estimates that the U.S. has two bil-

lion tires in scrap heaps. The virus diseases carried by this mosquito are of the type that doctors don't like to diagnose; there is no cure, although mortality is only 1-2%. One-third of children infected with La Crosse encephalitis suffer brain damage. The Asian tiger mosquito is still evolving and spreading in the U.S.; it was recently detected in a tire dump in Polk County, Florida.

Walter Tschinkel of Florida State University vividly recounted the somewhat familiar story of the fire ant, *Solenopsis invicta*, whose very appropriate species name means "unconquered." This ant was introduced to Mobile, Alabama, from Brazil in the late 1930s, probably as queens in soil of nursery stock. Fire ants are well known for their painful stings; their impact in displacing native biota is undoubtedly devastating but not well documented. A massive campaign by the USDA in the 1960s and early 1970s using the insecticide Mirex was aimed at controlling this pest. The U.S. Environmental Protection Agency cancelled the use of Mirex in the mid-1970s because of its persistence, bioaccumulation, and carcinogenic properties. However, by the time Mirex was banned, its effectiveness against fire ants had been seriously called into question. It apparently did give immediate temporary relief from fire ants, but had a much more destructive effect on other biota. Fire ant populations were temporarily knocked back, but other organisms were all but eliminated, making for a rapid recovery of fire ant populations. Research is still going on, but no effective strategy against *Solenopsis invicta* is in sight. The vast amount of knowledge available about the biology of

this ant is highly useful in characterizing what makes it unbeatable, but not in diminishing its hold on the environment.

Among managers of protected areas, there is a lot of lip service paid to controlling exotic species, and an increasing though still modest amount of action in recent years. A presentation by Gary Johnston showed that the U.S. National Park Service has been a genuine leader in recognizing the theoretical threat to parks by non-native species. As early as 1920, USNPS Director Stephen Mather recognized the need to eliminate feral burros from the Grand Canyon, based on the USNPS mandate. One of twenty recommendations made by USNPS Chief Scientist George Wright's team of biologists in 1933 was that "any exotic species which has already become established in a park shall either be eliminated or held to a minimum provided complete eradication is not feasible." And the USNPS has had some great successes in controlling exotics in the 1970s and 1980s, most notably feral burros in Southwestern parks and feral goats and pigs in Hawaii. Yet the \$3 million the USNPS spends annually on exotic species management (perhaps half of that in Hawaii), about 0.3% of the agency's budget, is pathetically small given the magnitude of the problem. This is roughly what the state of Florida spends annually to clear water hyacinth out of water bodies to facilitate boating and fishing.

And although the USNPS and others support the concept of biological control, very little funding has gone to it from the USNPS or anyone else. John Drea, a recently retired researcher from the USDA In-

sect Biocontrol Lab, reported that classical biological control is all but dead due to a lack of funding, even though the need is greater than ever. The position he vacated is not being filled. In spite of the obvious need for a well-funded effort against widespread and damaging pests such as tamarisk (*Tamarix* spp.), which severely damage resources managed by a myriad of agencies in the Southwest, virtually nothing gets done. One biocontrol researcher assured me that you can almost count on the fingers of one hand the number of active workers on plant pest biocontrol projects nationwide. One problem is that classical biological control has been around for some time and is not considered at the cutting edge scientifically—somewhat like taxonomy, which faces a similar shortage of support. "Biotechnology," though lacking a track record, is being highly touted in some circles as the dynamic discipline to replace classical biocontrol. There was no presentation given at the conference on the future of biotechnology in controlling exotics. Perhaps this was an oversight on the part of the organizers, but I suspect that it is far from being an idea whose time has come.

The Nature Conservancy (TNC) has recently appointed John Randall, one of its California employees, to specialize in exotic species problems and strategies nationwide. TNC is doing a lot with volunteers, as are certain national parks. They have fostered communication through their "stewardship abstracts" dealing with exotic species. One of the most promising TNC initiatives of which I am aware is their Hawaiian project (shared with the Natural Resources Defense

Council) to coordinate interagency review of mechanisms through which exotic species get established in Hawaii and of ways to eliminate weaknesses in the quarantine, detection, and control system.

Two speakers from USDA's Animal and Plant Health Inspection Service (APHIS), Michael Shannon and Randy Westbrooks, gave useful perspectives on what that agency is doing to stop new invasions. The prospect of Soviet timber imports to idle sawmills in our Pacific Northwest necessitated a scientific analysis of the tremendous risks of introducing new forest pests and extensive discussions in the political arena to identify management options. Shannon reported that required treatments of imported Soviet timber have been identified, and it is now up to the sawmill industry to determine whether economics warrant the drastic treatments required to prevent unacceptable risk of dozens of new pest introductions. Westbrooks described implementation of the federal Noxious Weed Act of 1974. The U.S. Congress has provided the authority to prevent the introduction and spread of designated foreign weeds (about 100 taxa), but much of the effort is left to the states, since adequate federal funding has not been forthcoming to really accomplish the job. It would seem that APHIS, with seventeen years of experience in administering this act, has an excellent framework to build upon through interagency cooperation. The weeds on the list to date are all threats to agriculture, but there is not reason that the same framework can't work for foreign weeds that could threaten biological diversity.

What are the lessons from all this? Faith Thompson Campbell of the Natural Resources Defense Council challenged participants to take advantage of the energy generated from this conference by organizing for action. What we have going for us are three things: 1) the generally recognized importance of preserving biological diversity in the United States; 2) the ongoing study of the problem by the Office of Technology Assessment, to be completed in about a year, which can serve as a rallying point; and 3) an abundance of horror stories illustrating that action is desperately needed to stop new introductions and to apply the best technology available to control existing ones. What we have going against us are huge budget deficits and a lack of understanding of a difficult and complex problem by the public and administrators. A well-funded national program is needed. Piecemeal solutions won't work. We will have to build on existing structure, such as the federal Noxious Weed Act. Domestic legislation needs to be strengthened, and a new international treaty to retard the spread of exotic species is required.

In summary, I am delighted to have had the opportunity to participate in this conference and am hopeful that, through cooperative efforts, we can raise exotic species issues before the public and public officials to obtain the serious attention they deserve.

*(Ed. note: Lloyd Loope and Gary Johnston of the USNPS Washington Office will be editing an upcoming special Forum issue devoted to exotic species. The issue is scheduled to appear early in 1992.)*

author returned to the United States after nearly two years in Thailand (and fifty-nine other countries). He arrived just after the Forum went to press minus a number of essential changes to his paper. He has therefore prepared the following update to the original 1983 text. Readers are invited to send any additions, deletions, or other changes of the delisted list to Dr. Hogenauer, c/o the Forum.

## **An Update to “Gone, But Not Forgotten: The Delisted Units of the U.S. National Park System”**

**Alan K. Hogenauer**

*Ed. note: In Volume 7, Number 4 of the Forum we published Alan K. Hogenauer's research paper on "defrocked" units of the U.S. National Park System. (Hogenauer writes from a uniquely first-hand perspective: In August 1980 he became the first person to visit every USNPS unit when he arrived at Katmai National Park and Preserve.) Last spring, the*

### **AUTHORIZED, BUT NEVER ESTABLISHED, UNITS**

The correct number of such units is eleven, based on three changes to the previous *Forum* article list:

**Fort Benton** should be added. In 1976, legislation authorized the USNPS to build and maintain a visitor center at the site, forty miles northeast of Great Falls, Montana, to commemorate the historic fur trading post and uppermost steamboat landing on the Missouri River. The authorization was never acted upon, however, and the park-elect was delisted by 1985. There is still a small, but active, community at Fort Benton; the superb Grand Union Hotel and the ruins of the original fort can still be visited.

**Georgia O'Keeffe National Historic Site** should be added. The late artist's home and studio in Abiquiú, New Mexico, were authorized for inclusion in 1980 but delisted in 1984 when agreement could not be reached as to site implementation. The structures are still there, so they may be easily viewed from the outside.

**Wolf River** should be moved to the next category; it was delisted, but as an established unit.

Although **Patrick Henry National Monument** properly remains on the list, a footnote is in order.

After a prolonged scenario of authorization and deletion, the site was finally added to the National Park System in 1986, but as an affiliated area: Red Hill Patrick Henry National Memorial.

## ESTABLISHED UNITS LATER DELISTED

The correct number of such units is twenty-six.

**Shasta Lake Recreation Area** should be added to the list. Like Flaming Gorge (1963-68), Lake Texhoma (1946-49), and Millerton (1945-57), Shasta (1945-48) was to be jointly administered. Also like the others, Shasta was delisted when USNPS administration and criteria were seen as not feasible; responsibility for running Shasta was turned over to the U.S. Forest Service. Interestingly, the USNPS now manages a similar unit—Whiskeytown—that is not only physically close by, but actually forms part of a combined Whiskeytown-Shasta-Trinity National Recreation Area that includes the former USNPS Shasta unit.

As noted above, **Wolf River** properly belongs under this category.

There are two footnotes. First, Donald Trump's purchase of the delisted **Mar-A-Lago** apparently makes him the only private owner on record of a former national park unit. The home is still maintained as Trump's occasional residence.

Second, work on restoration of Washington's Union Station was completed in 1989. While no trace of the **National Visitor Center** remains, the spectacular interior redesign make the station a superb visitor gateway to the U.S. capital.

## RECREATION DEMONSTRATION AREAS

Undoubtedly many readers noted the omission of this entire category. Actually, the original paper intentionally dealt only with the non-RDA units.

Forty-five Recreation Demonstration Areas were developed by the USNPS beginning in 1936. Eleven were eventually incorporated, in whole or in part, into USNPS units, and so are not discussed further here. The other thirty-four, however, are a fascinating extension to "Gone, But Not Forgotten." I have visited all of them, primarily in a summer 1983 marathon following preparation of the original manuscript.

- **Alexander M. Stephens**, now a Georgia state park
- **Beach Pond**, now the Acadia Management Area in Rhode Island
- **Bear Brook**, now a New Hampshire state park
- **Blue Knob**, now a Pennsylvania state park
- **Camden Hills**, now a Maine state park
- **Cheraw**, now a South Carolina state park
- **Crabtree Creek**, now William B. Umstead State Park in North Carolina
- **Cuivre River**, now a Missouri state park
- **Custer**, now a South Dakota state park
- **Fall Creek Falls**, now a Tennessee state park
- **Hard Labor Creek**, now a Georgia state park
- **Hickory Run**, now a Pennsylvania state park

- **Lake Guernsey**, now Guernsey State Park in Wyoming
- **Lake Murray**, now an Oklahoma state park
- **Lake of the Ozarks**, now a Missouri state park
- **Laurel Hill**, now a Pennsylvania state park
- **Mendocino Woodland**, now a Camp Association within a California state park
- **Montgomery Bell**, now a Tennessee state park
- **Montserrat**, now Knob Noster State Park in Missouri
- **Oak Mountain**, now an Alabama state park
- **Otter Creek**, now a Louisville, Kentucky, city park
- **Pere Marquette**, now an Illinois state park
- **Pine Mountain**, now Franklin D. Roosevelt State Park in Georgia
- **Raccoon Creek**, now a Pennsylvania state park
- **Shelby Forest**, now Meeman-Shelby State Park in Tennessee
- **Silver Creek**, now an Oregon state park
- **St. Croix**, now a Minnesota state park
- **Swift Creek**, now Pocohontas State Park in Virginia
- **Versailles**, now an Indiana state park
- **Waterloo**, now a Michigan state park

- **Waysides** in South Carolina and Virginia, now highway rest areas except for one which is now Colleton State Park in South Carolina
- **Winemac**, now Tippecanoe River State Park in Indiana
- **Yankee Springs**, now a Michigan state park

## OTHER DELISTED AREAS

To be complete, the list should also include two delisted "affiliated areas" of the U.S. National Park System: **Cherokee Strip Museum and Highway of Flags**. Also, there are five delisted units that were detached from still active units: **Sheboygan Marsh** (Ice Age National Scientific Reserve, Wisconsin), **Chesapeake Lightship** (National Capital Parks, Washington, D.C.), **Turkey Run Farm** (National Capital Parks, Virginia; now called Claude Moore Colonial Farm), **Grey Columns** (Tuskegee National Historic Site, Alabama), and **Confederate Park** (Vicksburg National Military Park, Mississippi).

And, to be really complete, there are six delisted Canadian park units: **Buffalo**, inside the Canadian Forces Base at Wainwright, Alberta; **Menissawok**, near Maple Creek, Saskatchewan; **Nemiskam**, near Etzikom, Alberta; **Vidal's Point**, near Fort Qu'Appelle, Saskatchewan; **Wawaskesy**, inside the CFB at Suffield, Alberta; and **Fort Tom Howe**, in Saint John, New Brunswick.

# **REVISION OF THE BY-LAWS OF THE GEORGE WRIGHT SOCIETY**

The Society's first set of by-laws was approved by the Board (which at that time constituted the entire membership of the Society) in August of 1980. The approval was by mail and the initial board didn't meet face-to-face until October 22 of that year.

At that first meeting of the Board a number of amendments were made to the by-laws, with additional minor amendments being made in September 1981, November 1988, and February 1990.

A review of the by-laws was made by the present Board nearly two years ago and a decision was made that some streamlining was badly needed. Some of that streamlining required a modest change of the Articles of Incorporation, which change may take place only with the approval of 51% or more of the entire membership. A modified Article Seventh of the Articles was submitted to the members for approval in the summer of 1990 and that approval was given by 58% of the members, in person or by proxy, at the annual membership meeting held October 11, 1990. The change was accepted by the State of Delaware on March 18, 1991.

A By-Laws Committee consisting of Board members Gary Davis and Steve Veirs drafted a revised set of by-laws, which, after some considerable amount of discussion and advice by legal counsel, were approved by the Board in December 1991. These revised by-laws follow on the next 16 pages.

# THE GEORGE WRIGHT SOCIETY BY-LAWS

## Article I • Name

The name of this organization shall be *The George Wright Society*.

## Article II • Purposes

The George Wright Society is organized for the purposes of promoting the application of knowledge, fostering communication, improving resource management, and providing information to improve public understanding and appreciation of the basic purposes of natural and cultural parks and equivalent reserves.

## Article III • Definitions

For the purpose of these By-Laws, the terms "Corporation," "Society," and "Organization" are used synonymously and refer to The George Wright Society.

## Article IV • Effect of these By-Laws

Nothing in these By-Laws shall be construed to supersede the provisions of the Articles of Incorporation. In the event of a conflict, the Articles of Incorporation, unless amended, shall prevail.

## Article V • Membership

### Section 1. Classes of Members.

The Society shall have six classes of members, as follows:

**Charter Members**, comprised of members who joined the Society prior to 31 December 1981.

**Regular Members**, comprised of individuals whose annual dues are currently paid and in good standing.

**Institutional Members**, comprised of private and public organizations, including libraries, whose dues are paid and in good standing.

**Student Members**, comprised of active full-time students at colleges and universities.

**Life Members**, members who express a lifetime commitment to the Society.



**Patrons**, members who make a substantial contribution to the Society.

## **Section 2. Subscribers.**

Subscribers are individuals or institutions who do not wish to be members of the Society, but who wish to subscribe to Society publications. A fee for this service shall be determined at each regular annual meeting of the Board of Directors, or at any special meeting of the Board called for such purpose.

## **Section 3. Termination of Membership.**

Membership may be terminated for non-payment of dues, or for cause upon recommendation of the Board of Directors, where a two-thirds majority vote by the Board is required for such recommendation.

## **Section 4. Privileges of Membership.**

All individual members shall have the same rights and privileges except that student members and Institutional Members shall not have the right to vote.

## **Section 5. Local Chapter Affiliates.**

Members may form local chapters, and members may come together to support the activities of a particular park or group of similar parks.

## **Section 6. Sections.**

Members of the Society may form sections to promote the professional interests of the Society.

# **Article VI • Dues**

## **Section 1. Amount.**

Dues for the various classes of membership shall be determined by resolution of the Board of Directors at each regular annual meeting of the Board, or at any special meeting of the Board called for such purposes.

## **Section 2. Period of Dues.**

Payment of dues shall cover the period of one year (except for Life and Patron memberships), unless determined otherwise by the Board.

## **Article VII • Offices**

The registered office of the Society in the State of Delaware is to be located at 725 Market Street in the City of Wilmington, County of New Castle. The registered agent in charge thereof is The Company Corporation at same address. The Society may also maintain offices at such other places without the State of Delaware as the Board of Directors may from time to time determine.

## **Article VIII • Annual Meeting of Members**

### **Section 1. Date of Meeting.**

An annual meeting of members will be held within 90 days of the annual meeting of the Board of Directors, at such a time and location as specified by the Board, to conduct Society business. Members will be notified of the annual meeting at least 30 days in advance.

### **Section 2. Quorum.**

Except as otherwise provided herein, or by statute, or in the Articles of Incorporation (such Articles and any amendments thereof being hereinafter collectively referred to as the "Articles of Incorporation"), at meetings of members of the Society, the presence in person or by proxy of 15% of the membership, shall be necessary and sufficient to constitute a quorum for the transaction of business.

### **Section 3. Voting.**

- (a) Except as otherwise provided herein, or by statute or by the Articles of Incorporation, the affirmative vote of at least a majority of the membership present in person and entitled to vote at a meeting of members with respect to a question or matter brought before such meeting shall be necessary and sufficient to decide such question or matter.
- (b) Except as otherwise provided by statute, or by the Articles of Incorporation, at each meeting of members, each member shall be entitled to one vote.

## **Article IX • Conferences**

The society shall sponsor conferences for presenting learned papers and communications appropriate to the purposes of the Society as stated in Article II hereof.

# **Article X • Board of Directors**

## **Section 1. Number, Election and Term of Office**

- (a) The business of this organization shall be managed by a Board of Directors consisting of nine (9) directors, a majority of whom must be elected, and as many as three (3) of whom may be appointed. The terms of office of the directors shall be for three (3) years. These terms shall be staggered in such manner as will allow three (3) directors to be elected or appointed each year.
- (b) Elections for elected directors shall take place during the final year of the expiring terms. Appointments will be made by the full Board for appointed directors during the final year of the expiring terms.
- (c) A director must be a member in good standing of The George Wright Society.
- (d) An elected or appointed Board director may serve no more than two (2) consecutive three-year terms. Any director who, for any reason, serves less than a two-year term shall be eligible to serve two full three-year terms in addition to any term of less than two years that he/she has served.
- (e) Any directorship that becomes vacant prior to the expiration of its term may be filled by appointment by the Board. The term of office for such appointed directors shall be only for the remainder of the unexpired term being filled; however, the person filling such unexpired term shall be eligible for re-election or re-appointment upon the completion of the stated term, subject to the restriction stated in Subsection (c) above.
- (f) Elected and appointed directors, and appointed Officers, shall assume their office, duties, and responsibilities on January 1.
- (g) A President and a Vice President shall be selected by, and from among, the directors whenever either of those positions become vacant. The selection will occur in January following the annual election. The term of office for the President and Vice President shall be for the duration of the directorship term being served by the director so selected.
- (h) A Secretary and a Treasurer shall be selected by, and from among, the directors whenever either of those positions become vacant. The selection will occur in January following the annual election. The term of office for the Secretary and

Treasurer shall be for the duration of the directorship term being served by the director so selected.

- (i) Each officer shall hold office until a successor shall have been elected or appointed and qualified, or until death, resignation, or removal.
- (j) The Executive Director, at the pleasure of the Board of Directors, serves as an ex-officio member of the Board of Directors.

## **Section 2. Committees.**

- (a) A Nominating Committee shall be appointed by the full Board during the first quarter of each calendar year. The Nominating Committee shall consist of at least two directors who are not standing for re-election or re-appointment for the year for which nominations are being made. The Nominating Committee has the option of selecting up to five non-director Society members as a Nominating Advisory Panel to assist the Committee in its selection process.
- (b) A Finance Committee shall be appointed by the full Board during the first quarter of each calendar year. The Finance Committee shall consist of at least two directors who do not serve as President, Vice-President or Treasurer of the Society.
- (c) The President shall have authority to appoint and discharge such other standing and *ad hoc* committees necessary to conduct the business of the Society, subject to approval by the Board of Directors.
- (d) The term of office of all committees shall be for a period of one year, or less if sooner terminated by the action of the President. However, all committees shall continue until a successor is named and qualified or until such committees as are created under Article X, Section 2(c) are terminated by the President.

## **Section 3. Nominations and Elections.**

- (a) The Nominating Committee selects a slate of nominees to be candidates for the positions that will become vacant with the close of the calendar year in which the Nominating Committee has been appointed. The Committee will ascertain the willingness of persons so selected to serve, make certain that the restriction on the number of appointed directors has not been violated, and secure from each nominee for an elected

position a brief résumé of not more than 500 words which will be supplied to all member voters of the Society for their consideration. The Nominating Committee may also suggest nominees for appointed directorships to the full Board for its consideration; the full Board sitting during the nominating year, however, shall be responsible for selecting the final appointee(s).

- (b) The Nominating Committee will supply all pertinent information concerning the nominees to the Executive Director who will cause appropriate ballots and instructions (including the brief résumés) to be delivered to the membership in time to allow marked ballots to be returned by the deadline date, which date shall be during the final quarter of the calendar year for which the Nominating Committee has been appointed.
- (c) Members who have served on the Nominating Committee two consecutive times shall be ineligible to serve on the Nominating Committee until after a lapse of two years.
- (d) Ten percent of the members of the Society may by written petition nominate a candidate for any elected directorship. If such a petition is received by the Secretary at least ten weeks prior to the election, the name(s) of such nominated candidate(s) shall appear on the written ballot. Any such petition should be accompanied by the brief résumé(s) referred to in Subsection (a) above. Any member of the Society may by written request suggest a nominee or nominees to the Nominating Committee; the Committee will consider such suggestions, but is not bound to include such names on the ballot.
- (e) The names of the directors elected, and the directors appointed, shall be published and sent to the membership within a reasonable time following election. This notice may be delayed until such time as the newly constituted Board has selected its officers (President, Vice President, Treasurer, and Secretary), at which time the announcement may contain all of the pertinent facts relevant to the new makeup of the Board.

#### **Section 4. Resignation.**

Any officer may resign at any time by giving written notice of such resignation to the Board of Directors or to the President or the Secretary of the Society. Unless otherwise specified in such written notice, such resignation shall take effect upon receipt

thereof by the Board of Directors or by such officer, and the acceptance of such resignation shall not be necessary to make it effective.

## **Section 5. Removal.**

- (a) Any director designated in Section 1 of Article X may be removed, either with or without cause, and a successor elected, by a unanimous vote of the remaining directors, regularly convened at a regular or special meeting.
- (b) The officers and agents appointed in accordance with the provisions of this Article X may be removed, either with or without cause by a majority vote of the Board of Directors, regularly convened at a regular or special meeting or by any superior officer or agent upon whom such power of removal shall have been conferred by the Board of Directors.

## **Section 6. President.**

The President shall chair the Board of Directors, and subject to the direction of the Board, shall have general charge of the business of the Society.

## **Section 7. Vice President.**

- (a) During the absence or disability of the President, the Vice President shall exercise all the functions of the President and, when so acting, shall have all the powers of and be subject to all the restrictions upon the President.
- (b) If the office of President becomes vacant, the Vice President shall succeed to office.

## **Section 8. Secretary.**

The Secretary shall be selected by the Board from among its members, and shall:

- (a) Record all the proceedings of the meetings of the members and Board of Directors in a book to be kept for that purpose;
- (b) Cause all notices to be duly given in accordance with the provisions of these By-Laws and as required by statute;
- (c) Be custodian of the records and of the seal of the Society, and cause such seal to be affixed to all instruments, the execution of which on behalf of the Society under its seal shall have been duly authorized in accordance with these By-Laws;
- (d) If called upon to do so, prepare or cause to be prepared, and submit at each meeting of the members, a certified list in

alphabetical order of the names of the members to vote at such meeting;

- (e) See that the books, reports, statements, and all other documents and records of the Society required by statute are properly kept and filed;
- (f) In general, perform all duties incident to the office of Secretary and such other duties as are given by these By-Laws, or as from time to time may be assigned by the Board of Directors or the President.

## **Section 9. Treasurer.**

The Treasurer shall be selected by the Board from among its members, and shall:

- (a) Have charge of and supervision over and be responsible for the funds, securities, receipts and disbursements of the Society;
- (b) Cause the monies, securities, and other valuable effects of the Society to be deposited in the name and to the credit of the Society in such banks or trust companies as the Board of Directors may select; any transaction greater than \$10,000 requires prior approval of the Board of Directors.
- (c) Cause the funds of the Society to be disbursed by checks or drafts, with such signatures as may be authorized by the Board of Directors, upon the authorized depositories of the Society, and cause to be taken and preserved proper vouchers for all monies disbursed;
- (d) Render to the President or the Board of Directors whenever requested, a statement of the financial conditions of the Society, and of all their transactions as Treasurer; and render a full financial report at the annual meeting of the Board of Directors if called upon to do so; and render financial reports at meetings of the members if called upon to do so;
- (e) Provide the Board, or the Board's Finance Committee, all of the information required for an audit of the books of account of all the business and transactions of the Society;
- (f) Be empowered to require from all officers or agents of the Society reports or statements giving such information as the treasurer may desire with respect to any and all financial transactions of the Society;

- (g) In general, perform all duties incident to the Office of Treasurer and such other duties as are given by these By-Laws or as from time to time may be assigned by the Board of Directors or the President.

## **Section 10. Sureties and Bonds.**

In case the Board of Directors shall so require, any officer or agent of the Society shall execute to the Society a bond in such sum and with such surety or sureties as the Board of Directors may direct, conditioned upon the faithful performance of duties to the Society, including responsibility for negligence and for the accounting for all property, funds or securities of the Society which may come into their hands.

## **Section 11. Board Operations.**

- (a) The Board of Directors shall have the control and management of the affairs and business of this organization. Such Board of Directors shall only act in the name of the Society when it shall be regularly convened by the president after due notice to all the directors of such meeting.
- (b) Except as herein or in the Articles of Incorporation otherwise provided, the members of the Board of Directors of the Society and its officers must be members of The George Wright Society.
- (c) Each director shall hold office until a successor is elected and qualified or until death, resignation, or removal.
- (d) Elected and Appointed Directors shall hold office for three years, except to initiate staggered terms.
- (e) Directors shall be eligible for re-election subject to the limitation that they shall not serve more than six consecutive years as a Director in any capacity.
- (f) The Board of Directors may establish an Executive Director position and appoint an Executive Director to same to oversee the day-to-day operations of the Society, and may establish other positions, in the interest of the welfare of the Society and its activities. Positions so established (staff positions) may be with or without salary as determined by the Board of Directors.



## **Section 12. Annual and Regular Board Meetings.**

- (a) A regular annual meeting of the Board of Directors shall be held, within 90 days of the close of the fiscal year at a place to be determined from year to year by the Board of Directors.
- (b) The Board of Directors from time to time may provide by resolution for the holding of other regular meetings of the Board of Directors, and may fix the time and place thereof.
- (c) Notice of any regular meeting of the Board of Directors shall not be required to be given; provided, however, that in case the Board of Directors shall fix or change the time or place of any regular meeting, notice of such action shall be mailed promptly to each director who shall not have been present at the meeting at which such action was taken, addressed to them at their residence or usual place of business, unless such notice shall be waived in the manner set forth in paragraph (c) of Section 12 of this Article X.

## **Section 13. Special Meetings.**

- (a) Special meetings of the Board of Directors shall be held whenever called by the President, or by at least three members of the Board of Directors, at such time and place as may be specified in the respective notices or waivers of notice thereof.
- (b) Except as otherwise required by statute, notice of such special meetings shall be mailed directly to each director, addressed to their residence or usual place of business, at least one month before the day on which the meeting is to be held; provided, however, that after in-person or telephonic discussion with all contactable members of the Board of Directors, a majority voice vote given in such contact of a quorum of the directors may convene a special meeting at a place and time agreed upon therein.
- (c) Notice of any special meeting shall not be required to be given to any director who shall attend such meeting in person or to any director who shall waive notice of such meeting in writing or by telegram or telephone, whether before or after the time of such meeting; and any such meeting shall be a legal meeting without any notice thereof having been given, if all the directors shall be present thereat. Notice of any adjourned meeting shall not be required to be given.

#### **Section 14. Quorum.**

- (a) At all meetings of the Board of Directors, the presence of a majority of the total number of directors shall be necessary and sufficient to constitute a quorum for the transaction of business, except as otherwise provided by law, the Certificate of Incorporation, or by these By-Laws.
- (b) A majority of the directors present at the time and place of any regular or special meeting, although less than a quorum, may adjourn the same from time to time without further notice, until a quorum shall be present.

#### **Section 15. Manner of Acting.**

- (a) At all meetings of the Board of Directors, each director present shall have one vote.
- (b) Except as otherwise provided by statute, by the Articles of Incorporation, or by these By-Laws, the action of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board of Directors.

#### **Section 16. Vacancies.**

Any vacancy in the Board of Directors occurring by reason of an increase in the number of directors or by reason of the death, resignation, disqualification, removal, or inability to act of any director, or otherwise, shall be filled for the unexpired portion of the term by a majority vote of the remaining directors, though less than a quorum, at any regular meeting or special meeting of the Board of Directors called for that purpose.

#### **Section 17. Resignation.**

Any director may resign at any time by giving written notice to the Board of Directors, the President or the Secretary of the Society. Unless otherwise specified in such written notice, such resignation shall take effect upon receipt thereof by the Board of Directors or such officer, and the acceptance of such resignation shall not be necessary to make it effective.

#### **Section 18. Salary.**

No stated salary shall be paid to directors, as such, for their services, but by resolution of the Board of Directors a fixed sum and expenses of attendance, if any, may be allowed for attendance at each regular or special meeting of the Board; provided, however, that nothing therein contained shall be construed to preclude any

director from serving the Society in any other capacity and receiving compensation therefore.

## **Section 19. Contracts.**

- (a) No contract or other transaction between this Society and any other society shall be impaired, affected or invalidated, nor shall any director be liable in any way by reason of the fact that any one or more of the directors of this Society is or are interested in, or is a director or officer, or are directors or officers of such other society, provided that such facts are disclosed or made known to the Board of Directors.
- (b) Any director, personally and individually, may be a party to or may be interested in any contract or transaction of this Society, and no director shall be liable in any way by reason of such interest, provided that the fact of such interest be disclosed or made known to the Board of Directors, and provided that the Board of Directors shall authorize, approve or ratify such contract or transaction by the vote (not counting the vote of any such director) of a majority of a quorum, notwithstanding the presence of any such director at the meeting at which such action is taken. Such director or directors may be counted in determining the presence of a quorum at such meeting. This Section shall not be construed to impair or invalidate or in any way affect any contract or other transaction which would otherwise be valid under the law (common, statutory or otherwise) applicable thereto.

## **Article XI • Executive Staff and Office**

An Executive Director shall be appointed by the Board of Directors, to serve with or without salary at the pleasure of the Board: to conduct the day-to-day business of the Society; with concurrence of the Treasurer, receive and disburse funds and open bank accounts; keep records and issue reports of all the business and transactions of the Society; and serve at the pleasure of the Board as a non-voting member of the Board. The Board of Directors may also authorize the Executive Director to establish such lesser staff positions as required, establish a place of business, and acquire equipment and supplies required for the carrying on of Society activities.

## **Article XII • Execution of Instruments**

All checks, drafts, bills of exchange, acceptances, bonds, endorsements, notes or other obligations, or evidences of indebtedness of the Society, and all deeds, mortgages, indentures, bills of sale, conveyances, endorsements, assignments, transfers, stock powers or other instruments of transfer, contracts, agreements, dividend or other orders, powers of attorney, proxies, waivers, consents, returns, reports, certificates, demands, notices or documents, and other instruments or rights of any nature, may be signed, executed, verified, acknowledged and delivered by such persons (whether or not officers, agents or employees of the Society) and in such manner as from time to time may be determined by the Board of Directors.

## **Article XIII • Fiscal Year**

The fiscal year of the Society shall be 1 October of each year through 30 September of the following year; provided however that the fiscal year of the Society may be further fixed by the Board of Directors from time to time as the needs of the corporate business requires.

## **Article XIV • Corporate Seal**

The Corporate seal shall be circular in form, and shall bear the name of the Society, the words "Corporate Seal," and words and figures denoting its organization under the laws of the State of Delaware, and the year thereof, and otherwise shall be in such form as shall be approved from time to time by the Board of Directors.

## **Article XV • Amendments to the By-Laws**

Amendments or additions to the By-Laws may be made with a simple majority vote of the Board of Directors favoring the change, provided the membership has been informed of the anticipated change 60 days prior to the Board of Directors' action.

## **Article XVI • Indemnification**

Any person made a party to any action, suit or proceeding, by reason of the fact that he, his testator or intestate representative is or was a director, officer or employee of the Society, or of any society in which he served as such at the request of the Society, shall be indemnified by the Society against the reasonable expenses, including attorney's

fees, actually and necessarily incurred by him in connection with the defense of such action, suit or proceedings, or in connection with any appeal therein, except in relation to matters as to which it shall be adjudged in such action, suit or proceedings, or in connection with any appeal therein that such officer, director or employee is liable for negligence or misconduct in the performance of his duties.

The foregoing right of indemnification shall not be deemed exclusive of any other rights to which any officer or director or employee may be entitled apart from the provisions of this section.

The amount of indemnity to which any officer or any director may be entitled shall be fixed by the Board of Directors, except that in any case where there is no disinterested majority of the Board of Directors available, the amount shall be fixed by arbitration pursuant to the then existing rules of the American Arbitration Association.

## **Article XVII • Limited Liability for Directors**

A director of the Society shall not be personally liable to the Society or its members for a breach of the director's fiduciary duty and the Society shall assume all liability to any person other than the Society or its members for claims for monetary damages for a breach of a director's duty in his or her capacity as a director, except for liability for any of the following: breach of the director's duty of loyalty to the corporation or its members; acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law; a transaction from which the director derived an improper personal benefit; or an act or omission that is grossly negligent.

## **Article XVIII • Procedure**

Procedures and other items, not specified in these By-Laws or by action of the meeting, shall be in accordance with the Pocket Manual of Rules of Order by Henry M. Robert.

## **Article XIX • General Prohibitions**

Notwithstanding any provision of the Articles of Incorporation or By-Laws which might be susceptible to a contrary construction.

**Section 1.** The Society shall be organized exclusively for the educational purposes set forth in Article II.

**Section 2.** The Society shall be operated exclusively for the educational purposes set forth in Article II.

**Section 3.** No part of the net earnings of the Society shall or may under any circumstances inure to the benefit of any private shareholder or individual.

**Section 4.** No substantial part of the activities of the Society shall consist of carrying on propaganda, or otherwise attempting to influence legislation.

**Section 5.** The Society shall not participate in, nor intervene in (including the publishing or distributing of statements), any political campaign on behalf of any candidate for public office.

**Section 6.** The Society shall not be organized or operated for profit.

**Section 7.** The Society shall not:

- (a) Lend any part of its income or corpus without the receipt of adequate security and reasonable rate of interest to;
- (b) Pay any compensation, in excess of a reasonable allowance for salaries or other compensation for personal services actually rendered to;
- (c) Make any part of its services available on a preferential basis to;
- (d) Make any purchase of securities or any other property, for more than adequate consideration in money or money's worth from;
- (e) Sell any securities or other property for less than adequate consideration in money or money's worth to; or,
- (f) Engage in any other transactions which result in substantial diversion of its income or corpus to;

any officer, member or director or appointed officer or agent of the Society or to any substantial contributor to the Society.

The prohibitions contained in Section 7 do not mean to imply that the Society may make such loans, payments, sales or purchases to anyone else unless such authority be given or implied by other provisions of the Articles of Incorporation or By-Laws.

**Section 8.** No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to, its members, directors, officers or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in Article II hereof. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to intervene in

(including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provision of these By-Laws, the corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law) or (b) by a corporation, contributions to which are deductible under section 170(c)(2) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law).

## **Article XX • Distribution on Dissolution**

**Section 1.** Upon dissolution of the Society, the Board of Directors shall distribute the assets and accrued income to one or more organizations as determined by the Board, but which organization or organizations shall meet the limitations prescribed in Sections 1 to 7 inclusive of Article XIX.

**Section 2.** Upon the dissolution of the corporation, the Board of Directors shall, after paying or making provision for the payment of all of the liabilities of the corporation, dispose of all of the assets of the corporation exclusively for the purposes of the corporation in such manner, or to such organization or organizations organized and operated exclusively for charitable, educational, or scientific purposes as shall at the time qualify as an exempt organization under section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Law) as the Board of Directors shall determine. Any such assets not so disposed of shall be disposed of by the Court of Common Pleas of the county in which the principal office of the corporation is then located, exclusively for such purposes or to such organization or organizations, as said Court shall determine, which are organized and operated exclusively for such purposes.

## **Article XXI • Non-Discrimination**

The George Wright Society shall not discriminate with regard to terms or conditions of membership because of race, color, religion, sex, national origin, age, or physical/mental handicap.

*23 September 1991*

## **Nominations Sought for Board of Directors**

The revised by-laws call for electing part of the Board of Directors each year. The Nominating Committee for the election of 1992 are Board Directors George Minnucci and Lloyd Loope. Any Society member may suggest names to this Committee to be placed in nomination. Members should refer to Article X of the by-laws (page 33 in this issue), where the requirements and procedures are completely explained (some would say at painful length). The nominating and election process is described in Section 3 of Article X.

The Board must meet at least once each year (it met three times in 1990 and twice in 1991), and this requires some travel. Travel costs and per diem are covered by the Society. Each Board Director serves on at least one Committee—usually more. Committees now functioning are: Finance, Membership, Publications, Awards, Strategic Planning, Nominating, and Conference. Soci-

ety members may send suggestions to either Nominating Committee member, or to the Society office:

George J. Minnucci, Jr.  
Eastern National Park & Monument  
Association  
446 North Lane  
Conshohocken, PA 19428 USA

Lloyd L. Loope  
Haleakala National Park  
Box 369  
Makawao, HI 96768 USA

Nominating Committee  
George Wright Society  
P.O. Box 65  
Hancock, MI 49930 USA

The deadline for nominations is June 1, 1992.

## **"Caring for the Earth" Published**

Some of you may remember a publication entitled *The World Conservation Strategy*, which was put out in 1980 by World Wildlife Fund, IUCN, and the U.N. Environment Program. It was one of the first in a steady stream of documents which appeared in the 1980s outlining the philosophy of sustainable development. That document has now been completely rewritten and updated by the same

three groups. The successor was published in October under the title *Caring for the Earth: A Strategy for Sustainable Living*. It is a livelier read than most "action plan" books on environment and development. We hope to excerpt its section on protected areas in an upcoming *Forum*.



# 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 a major 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.*

*Thank you for supporting the George Wright Society!*

Name

Affiliation

Address

Zip/Postal Code

Phone  
(work)

Phone  
(home)

Fax

Occupation & expertise (optional)

**The George Wright Society**

**P.O. Box 65**

**Hancock, Michigan 49930 U.S.A.**

**☎ (906) 487-9722**

**•**

**Fax (906) 487-9405**

# 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.

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