

THE NATIONAL BIOLOGICAL SERVICE AND NPS SCIENCE-BASED MANAGEMENT:

Examining a static need in a dynamic relationship

By RICH BACHAND

THE NATIONAL BIOLOGICAL Service (NBS) was created in October 1993 by U.S. Department of the Interior (DOI) Secretary Bruce Babbitt to provide independent and objective science for department bureaus. The agency is "to work with others to provide the scientific understanding and technologies needed to support the sound management and conservation of our nation's biological resources" (NBS Mission 1995).

In creating the NBS, most biological research, survey activities, and personnel of the eight department bureaus (U.S. Fish and Wildlife Service, National Park Service (NPS), Bureau of Land Management, Bureau of Reclamation, Minerals Management Service, Office of Surface Mining, U.S. Geological Survey (USGS), and Bureau of Mines) were combined in the new agency leaving their respective parent bureaus without an internal biological research staff. The National Park Service found itself with 183 fewer scientists and staff (Ombudsman Committee Report 1994). This coincided with the publication of the National Academy of Sciences report on *Science and the National Parks* (1992), a report that strongly urged fundamental changes in NPS structure and culture to effect a greater emphasis on scientific research in parks.

It is easy to understand how these events left NPS officials uneasy. The National Park Service had a new and clear mandate to improve the quality of its research at a time when it would lose jurisdiction of its research staff. This crossroads is where the National Park Service and its former scientists would unfold a new partnership.

EXPERT PANEL

At the George Wright Society meeting in Portland, Oregon (April 1995), I served as chairman of a panel session entitled, "The Role of NBS in Meeting NPS Management Needs." This session provided

one of the first opportunities to explore the new alliance between the two agencies. The expert panel offered a variety of perspectives and consisted of individuals with broad expertise in park research and resource management. They included Craig Allen (Scientist-Bandelier National Monument, NM), H. Ron Pulliam (Director) and Charles van Riper III (Scientist-Colorado Plateau Research Station) from the National Biological Service; and Bob Moon (Regional Chief of Resource Management for the former Rocky Mountain Region) and Karen Wade (Superintendent-Great Smoky Mountains National Park, Tennessee and North Carolina) from the National Park Service.

With the imminent transfer of the National Biological Service to the U.S. Geological Survey, I have highlighted insightful observations made during that discussion for consideration as the former NPS science program undergoes further change. The issues discussed during that session remain pertinent to current discussions and serve as a reality check in an effort to continue providing scientific information to park managers.

OPPORTUNITIES

Panelist Bob Moon tailored his comments to the complexities of the simultaneous creation of the National Biological Service with NPS efforts to reorganize and reinvent itself. "At the same time the Park Service is reorganizing itself, we're trying to figure out how we're going to do science with NBS." Moon saw these changing times as a chance to move forward in improving the quality and accountability of research. Although positive steps were made toward more closely tying quality research with science-based resource management, pre-NBS science conducted in house was not "the good old days," and he said "the movement still had a long way to go." Separating research from the National Park Service provided the National Biological Service with an opportunity to act independently and to

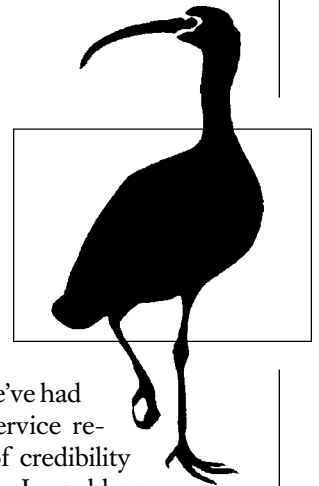
establish its credibility by providing science for management. "One of the problems we've had with past Park Service research in terms of credibility was accountability. I would encourage the NBS to build in a lion's share of accountability," Moon recounted.

LAYERS OF REORGANIZATION

Many concerns dealt with the reorganization the National Park Service went through both before and after the creation of the National Biological Service. Moon noted that research and resource management in the NPS had been coming together (as called for in the Vail agenda). Quality research had been getting underway and lending itself to a more science-based resource management program. When the National Biological Service was created, all this forward movement came to an unexpected crossroads. The transition left the National Park Service without an internal structure for tactical research or technical assistance (it would depend on the partnership with NBS) at a time when it was going through its own reorganization. "This was a reorganization where NPS research was never part of the discussion." He quickly added that the National Park Service is still responsible for conducting research and carrying out science-based management and that the National Biological Service is an organization to help them reach this goal. Moon warned, "None of us (referring to NPS) can have the... attitude to let the NBS do it, so [that] we don't have to worry about it."

PROGRESSIVE STEPS

The departure of park scientists to the National Biological Service greatly concerns Great Smoky Mountains National Park Superintendent Karen Wade for



many reasons. In a proactive manner, the park and the NBS Southern Science Center entered into a memorandum of understanding in 1994 to ensure a continuing working relationship between the two organizations and obtain commitments from scientists for their continued park research. "Since our very modest biological research capabilities were changing hands, my desire was to partner with the NBS and to assure the ongoing consultative relationship so important to the future...." Superintendent Wade continued, "My belief is that together we can do better than what we were doing before this relationship began."

The memorandum addressed many park concerns and fears resulting from the transfer of NPS science capabilities to the NBS. The park wished to ensure that a reduction in tactical research assistance would never occur, especially in a hypothetical scenario where its former scientists were assigned to other NBS priorities. Next, both agencies committed to maintain the park's long-term monitoring program. The memorandum assisted in doing that through mutual agreement to cooperate, resource sharing to gain additional support for the program, and information sharing.

NBS THROUGH THE EYES OF A PARK MANAGER

Superintendent Wade expressed concern that the NBS does not place high enough priority on field stations and (in a prophetic moment) that the NBS would be absorbed into another organization rendering the possibility of more distant ties between the agencies. She believed that field stations have been staffed with devoted scientists, and desired to continue the strong relationship with former NPS colleagues who could provide unbiased, non-advocacy science to park managers. "If the NBS is going to be absorbed into another organization, we must retain our scientists and the wonderful rich reservoir of knowledge that we currently have."

TOO FOCUSED OR NOT FOCUSED ENOUGH?

One question raised was how parks would sustain funding for park-specific needs if NBS concentrated its scarce resources on global, landscape-scale,



multiagency research. Similarly, NBS must strike a balance and remain flexible enough to deal with tremendously difficult generic issues like air quality. Can NBS flex enough to have a unit located in the middle of the country that serves Shenandoah, Great Smoky Mountains, and the parks of the east coast? Bob Moon declared that for the NBS to be successful it must continue to do tactical research and provide technical assistance, "for NBS that's a given."

A PLACE-FOCUSED APPROACH

Based in Bandelier National Monument, NBS scientist Craig Allen championed the idea of a place-focused approach where a national park (or public land or natural area) served as a focal point for long- and short-term inventory, monitoring, and research. He quoted the 1994 ombudsman committee report, *Solutions to Problems faced by former NPS Scientists transferred to the NBS* (van Riper 1994), that stated, "Many [scientists] had a long-term tie to a specific park in which their role usually transcended basic research to encompass information transfer, science adviser, program facilitator, and activities fundamental to maintaining long-term integrity of the national park resources and ecosystems." He noted that what held this together was the focus on a place,

the landscape, and the continuity of the relationships between the people and the place.

Dr. Allen stated that a positive aspect about the NPS research program, albeit small in pre-NBS times, was that researchers were on site in the parks working with managers. In these cases, scientists were closely integrated with management objectives. He also suggested that his role at Bandelier spanned a continuum between spending a quarter of his time monitoring, a quarter dealing with management issues including information transfer, a quarter supporting and catalyzing the work of other researchers, and a quarter conducting new research. "I can't think of just chopping and dichotomizing the individual [areas of work emphasis]; it's maybe more like a soil texture triangle, where for any given issue, you're in some interconnected place...." Allen stated. He continued that many scientists in a similar position assist in synthesizing the work of other people and serve as an interface between research and management.

Lending evidence to Wade's earlier comments regarding the commitment and allegiance of a scientist to the "place"

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(i.e., park, monument, natural area), Allen noted that through time, and perhaps by default, he had become "the local expert" on the ecology of not only Bandelier, but also of the larger landscape around the monument. To a degree, each scientist becomes the institutional memory and source person for a variety of information concerning local natural resources. He emphasized that he did not think his situation was unique, because it was not uncommon for many park based researchers to spend a good part of a career in a given park producing similar local expertise.

National Biological Service Director H. Ron Pulliam emphasized his strong belief in the importance of having NBS scientists in the parks, though he did not feel it would be possible in the near future to cover each national park in the country. His rationale for increased focus on parks was the lack of basic information concerning the resources in national parks and monuments. He cited a recent publication by NBS scientists (Stohlgren et al. 1994) that examined the status of biotic inventories in parks. "It really pointed out our fundamental ignorance about park resources. We don't have a reasonable inventory of even the birds, mammals, and vascular plants in the parks, much less the [reptiles and amphibians] and other less charismatic organisms." He noted that there is even less understanding of the changes affecting the biological resources.

As an indication of the NBS commitment to providing science in national parks, Director Pulliam intends to continue implementing the recommendations of the 1994 ombudsman committee report. The report proposed establishing a network of long-term NBS research sites including national parks as focal points, dedicating a portion of NBS funding to deal with NPS research issues, continuing to waive NBS overhead on NPS funded projects, and other park oriented initiatives.

RESEARCH GRADE EVALUATION

Dr. Allen brought up one issue that was not addressed in the ombudsman report. He discussed how research grade evaluation status puts pressure on park-based NBS scientists to think more narrowly about their roles. "Within NBS, we could

receive less credit for doing the things the park wants us to do." He spoke of an experience where one NBS scientist was told by the chair of his research grade evaluation panel that the kinds of local interactions with management (information transfer, coordinating research, etc.) were "serving as anchors to a career with otherwise great potential," clearly highlighting the tradeoff between management support and publishing activities. "I think it's a very real problem. There is persistent tension between how you're evaluated under research grade evaluation status (i.e., a publishing record) and the realities of a park-based scientist." Although all would agree that publishing builds scientific credibility, some balance must be made that realizes the realities of a park-based scientist. Some of these concerns are being discussed as part of the current transfer of NBS scientists to USGS.

FINAL THOUGHTS

In closing, the panelists called for leaders to ensure that the National Park Service and National Biological Service take active roles in making the partnership work. Charles van Riper suggested that "the parks should take their planning documents down to [the] local NBS office, wherever it may be, and say 'Here's what I need done, do you have anybody that can do this?'" He felt that when the next call for NBS research proposals would come out, those scientists could show an identified research need, and leverage that in a way where one could say, "Look, I'm meeting a client need," thus aiding in getting the project funded. Van Riper insisted that parks use their planning documents and was adamant that the National Park Service not be charged overhead. Park officials express hope that positive trends like this will continue as NBS merges with the USGS.

Perhaps one of the most important points to come out of the discussion was the need to solidify the NBS-NPS partnership. "How do we make visitors aware of the research challenges that directly relate to wise management?" Superintendent Wade asked. She expressed that research programs need more visibility so that the public could take that awareness to their representatives and make them realize that we need more research to

more wisely manage and protect our nation's resources. "NBS needs to become a household word. If we can make a positive connection between the NBS as the organization in parks doing our research, we will have overnight visibility for our research needs and both organizations will benefit."

It is hard to predict what the most appropriate or even practical model is for science in the parks and science-based park management. Prior to the NBS, science in parks was on an upswing through the National Academy of Sciences report, issuance of the NPS-75 Inventory and Monitoring Guideline, and the beginnings of nationwide ecosystem research initiatives like the Global Change Research Program. However, as Bob Moon noted earlier, "Pre-NBS research was not the good old days."

As 1996 progresses with change and uncertainty swirling about us, the relationship between science and the parks has become as dynamic as the changing research needs. However, the need itself remains constant. Often, times of change present the greatest opportunity to reinvent, improve, or create something positive. As the NBS (soon to become the Biological Research Division within USGS) undergoes its transfer to the USGS and the new relationship to the NPS continues to unfold, each agency must assume the responsibility of procuring a sound, science-based management of natural resources in our parks.



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