

Science Communications: Successful Strategies for Collaboration (panel discussion summary)

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The National Park Service has more information about the condition of natural resources than ever before. It is increasingly important that we translate information into simple messages to inform and connect people to these special places. In their opening comments in the first plenary session of the 2009 George Wright Society biennial conference, Ken Burns and Dayton Duncan reminded us to be good scientists first, but to share our findings through compelling stories with everyone. Appropriately, a concurrent session in the final hours of the conference returned to the topic of science communication. This session explored science communication from researching the barriers to effective science communication, to formulating recommendations for best practices, to on-the-ground efforts to inform park staff and visitors.

In designing a natural resources communication strategy for the San Francisco Bay Area Network, National Park Service and partner staff members were surveyed about current communications practices, preferred information sources, and obstacles to getting sufficient natural resources information. Their responses revealed that more often than not, information was presented in a way that was too technical to be useful, and that information needs were similar among people in a particular division or group regardless of what park they work in.

The surveys also provided insights into how natural resources information is currently being communicated and how these processes can be improved. By far, the primary means for sharing information was personal communication between staff members—including meetings, through conversations with coworkers, and/or knowing whom to call with questions.

Many respondents had not heard of the existing information sources they were being

asked to evaluate, including existing websites, newsletters, e-mail updates, reports, fact sheets, and presentations. Most found it hard to get information when they needed it because it is scattered among various websites or local network drives. Partners found it particularly difficult to access park sources, because they cannot access network drives and are often not on park e-mail distribution lists. To help resolve these issues, a majority of respondents asked for a one-stop-shop website to house a wide variety of information. Other recommendations included:

- Establish a contact list of experts whom employees may call when they have a question.
- Encourage opportunities for personal communication such as meetings and field trips.
- Produce more concise briefings, factsheets, and newsletters with visuals.
- Expand and improve current newsletters and e-mail updates.
- Include executive summaries on all annual reports.
- Produce an annual state of the resources update.
- Develop a Power Point road show describing the network.
- Hold an annual science symposium.
- Expand the existing brown bag lunch series.

The first phase of developing a communication plan for the North Coast and Cascades Network similarly examined perceived motivations and barriers to communication between and within divisions gathered through a quantitative survey and 24 qualitative interviews. Research revealed that the most commonly reported reason for lack of communication between resource managers and interpreters was time. Holding true across divisions, interviewees felt overwhelmed by current responsibilities and unable to take on additional work.

Additionally, scientific information collected in the field does not always reach the public or interpretive staff. Interviews revealed that it was often unclear whom, if anyone was responsible for relaying information or determining which information should be communicated. There is currently no standardized process or procedure in place to translate scientific information to the public. Recommendations include increasing regular communication between divisions, standardizing the process of information flow, incorporating communication responsibilities into work plans, and hiring a full-time science liaison to work with both resource managers and interpreters. Consideration of the motivations and barriers to communication led to the strategies recommended in the communication plan.

Lessons learned from five years of developing a science communication program in the Heartland Inventory and Monitoring Network echoed these research findings. Early efforts by the network to provide interpretive materials to parks had mixed success, primarily attributed to the difficulty of linking natural resource information to park specific resource issues in material designed for use across 15 network parks. Engaging park-based interpreters and education specialists in meetings with resource managers and network scientists led to the development of more focused and effective products. An interdisciplinary working group organized a meeting in 2008, this time with an interpretive writing focus that incorporated natural resource information. The final presentations of this session highlighted on-the-ground projects that emerged from the workshop.

Citizen science bolsters Heartland Network monitoring at Herbert Hoover National Historic Site, Iowa

Breeding birds are a “vital sign” for prairie conditions at Herbert Hoover National Historic Site. The Heartland Network inventory and monitoring program completes breeding bird surveys in the park only one out of every four years. These data gaps are not a problem in long-term monitoring, but they hamper short-term decision-making. To fill this gap in monitoring, the park asked the local bird-watching community for volunteer help. The volunteer program is a way to involve citizens directly in preserving park resources.

The Heartland Network developed a user-friendly guide to breeding bird identification and a protocol to ensure that interim monitoring by volunteers remains compatible with the network’s monitoring. A Park Stewardship grant of \$1,500 paid for necessary supplies and equipment. After training in field methods, volunteer birders from the Iowa City Bird Club surveyed breeding birds at the park in 2008.

Interpreters also help make the scientific data collected in these surveys accessible to the public. Simple, low-cost products like web pages, a park-specific bird checklist, and an outreach slide presentation incorporate interpretive messages that relate specific resource management issues, projects, and research to the park’s visitors.

Any project that requires good science and good communication with the public is an opportunity for interpreters and resource managers to collaborate. If you think you don’t have time for collaboration, think again. Collaboration adds value to the hard work already being done by both resource managers and interpreters. With critical problems that threaten the integrity of park resources, can you afford not to do this?

Interpretation and natural resources collaborate at Hopewell Culture National Historical Park, Ohio

Hopewell Culture National Historical Park consists of five separate units totaling 1,170 acres. Each unit protects a vast earthen-walled enclosure and mounds, remnants of the pre-historic Hopewell Culture (200 BC-AD 500). Protecting and interpreting the significance of these resources has been an on-going challenge. The park’s Interpretive division and Resource Management division have been collaborating to improve effectiveness in meeting these challenges, with close collaboration planned on future projects.

The main challenge to interpretation has been the current condition of the earthworks. All of the geometric earthworks are situated on prime agricultural land and 200 years of plowing has eroded them to the point where they are no longer easily visible to the untrained eye. This also presents a challenge for resource management in that a stable grassland cover must be established above-ground to protect the archeological resources below-ground. An essential component of meeting this challenge is to generate public support for resource management practices and to encourage public cooperation in protecting the resources.

To this end, interpretive waysides have been set out in our grasslands to help the public understand management strategies for stable grasslands. Additionally, pages have been added to the park’s website to help the public understand the importance of the grasslands, as well as inventory and monitoring (I&M), and how they can get involved. Other collaborative activities include school programs, special events such as the annual Hopewell Dis-

covery Days, and involving volunteers and partnership organizations in our scientific I&M procedures.

In the future, the Interpretive and Resource Management divisions will collaborate in an interpretive mowing project. This project will consist of mowing the grasslands to bring out the footprints of the earthworks. Different mowing regimes will be tested and a rotation will be established to prevent invasion by woody vegetation and to minimize the impact on grassland nesting birds.

Conclusion

A wealth of compelling stories exists about the natural resources of National Parks, and they are often woven within the cultural and historical events we commemorate. While we acknowledge the challenges to sharing these stories, it is incumbent upon us to do so in order to protect park resources unimpaired for future generations. Experience demonstrates that sustained, modest effort can achieve substantial results.

These examples from the San Francisco Area Network, the North Coast and Cascades Network, and the Heartland Network illustrate the benefits of collaboration. Interpreters, scientists, and resource managers are professionals, and have specific sets of skills and knowledge. Collaboration between professionals will result in more effective and engaging science communication that reaches the intended audiences. Collaborative science communication efforts benefit parks and visitors by raising awareness about park resources and more deeply connecting visitors to their heritage and developing stewardship ethics. Finally, collaboration may seem like an additional expenditure of valuable time, but results of that effort will bring greater benefits to the park than each individual or division working separately.