

parkbreak

perspectives

Park Break: The challenges and rewards of interdisciplinary collaboration

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A WHIRLWIND WEEK OF SPEAKERS AND ACTIVITIES covering numerous resource management challenges, Park Break is difficult for us to encapsulate in a short reflection. Yet the program's very diversity was one of its greatest strengths. This diversity included the graduate student participants, selected from a variety of disciplines, each with a unique perspective on the challenges facing the National Park Service (NPS), US Geological Survey (USGS), US Fish and Wildlife Service (FWS), and other natural resource management and science agencies. The following essay brings together the perspectives of four graduate students who participated in the 2012 Park Break session held at the Pocono Environmental Education Center (PEEC), located within the Delaware Water Gap National Recreation Area (DWGNRA). These students are: Cathy Bell, a field naturalist master's student at the University of Vermont, Katherine Dennis, a PhD student in social science at Texas A&M University; Cori Knudten, a PhD student in history at the University of California–Davis; and Bridget Sharry, an environmental studies master's student at the University of Oregon.

During this week-long session (March 18 through March 23, 2012) the four of us worked together to design a sustainable living curriculum for eighth graders participating in programs at PEEC. During the week, we developed an interdisciplinary lesson plan, discussed issues presented by invited speakers, and enjoyed connecting with others committed to bringing the insights of academia to a wider public.

The naturalist: Cathy Bell, University of Vermont

“Interdisciplinary collaboration” is a hot topic in academia and in park management circles, and with good reason: it promises a multiplicity of viewpoints and a balance of perspectives representative of different stakeholders. Yet true interdisciplinary collaboration is difficult to accomplish. At Park Break, I connected with people coming from a wide array of academic and professional backgrounds, including park managers, resource specialists, lobbyists and private consultants, and—of course—a cadre of my graduate student peers. We were able to parlay our collective skills and knowledge into a potentially life-changing educational experience for eighth-graders, as we developed a curriculum on sustainability for students visiting PEEC.

In order to teach about sustainability, we first needed to define it. Our different academic backgrounds lent us different perspectives on that question, as well as different possible pathways for teaching about it. We found that “sustainability,” like many terms or concepts that are fairly common in casual parlance, is in fact quite difficult to define. Indeed, it is a word that has become so widely used that it has begun to ring hollow. This is a problem throughout the natural resource conservation profession: all too often, we talk about things like “sustainability” or “ecosystem health” as our management goals, without really pinning down what we mean.

“Interdisciplinary collaboration,” like “sustainability,” is a buzzword. Everyone talks about interdisciplinary collaboration and how great it is, but when it comes to practicing it, many would-be practitioners fall short. Part of the challenge is that too many organizations assume that assembling a team of specialists with expertise in diverse fields is by itself enough. It is not.

Bringing a number of people from different disciplines into a room together is a good and necessary first step, but true interdisciplinary collaboration is more than that: it requires the involvement of people specifically trained to use interdisciplinary frameworks for thinking about problems and their potential solutions. This is a shift from the increasing trend, in both academia and NPS, towards ever-more specialization within a discipline.

Indeed, one of my concerns about the national parks is that their management is increasingly fragmented, with more and more specialization within the workforce. When do specialization and necessary expertise become tunnel vision and narrow-mindedness? In the academic world, different university departments with overlapping research areas can end up competing for financial or material resources instead of working together. I worry that this is the future for NPS as well—both within a park, as one division competes against another for scarce budget resources, or between the Park Service and other federal land management agencies.

This petty infighting is something the national park system cannot afford, especially as the realities of climate change begin to take hold. As Destry Jarvis, former special assistant to the director of NPS, told us at Park Break, “Climate change will require the Park Service to be nimble.” To achieve this necessary versatility, recruiting interdisciplinary thinkers—people comfortable looking at management problems from a variety of different perspectives—is a must.

How can NPS achieve a nimble workforce? To answer that question, I look to my own educational and work experience. When I graduated from Princeton in 1999, many of my classmates went straight into jobs in investment banking or management consulting. Countless others went on to study law or medicine. Why? Besides offering potential for high pay and prestige, these professions were popular because they had a strong recruiting presence on campus. If the Park Service wants to attract the best and the brightest young minds, it needs to represent itself more strongly at universities. It needs to present public service as a desirable, feasible, and meaningful career option for diverse young professionals.

I therefore propose that NPS develop a new program, “Rangers on Campus,” that fuses educational outreach and career recruiting. This program would partner selected universities with units of the national park system. A uniformed ranger-in-residence would co-teach college courses in park management, working with professors to develop a curriculum that is academically rigorous and rooted in real-world problem-solving. On-campus learning would be complemented by field experiences in the partner national park; through in-depth case studies, students would be exposed to the complex variety of issues and perspectives facing park managers.

Such a program would satisfy multiple needs for the Park Service. It would help to cultivate a new generation of enthusiastic, well-informed, sophisticated park managers. It would represent an expansion of the educational role of NPS, in keeping with the goals of the director’s *Call to Action*: currently, the Park Service excels at educational outreach for elementary, middle, and high schoolers, but has little formal programming available for college and graduate students. Targeting university students could also lead to diversification within the Park Service workforce, helping to maintain the relevance of the parks for all Americans.

Planning for an uncertain future will require more and better interdisciplinary collaboration, both within parks and across management boundaries. Initiating an NPS Rangers on Campus program would represent an important investment in the future of the agency, but the program has the potential to be far more than that: Rangers on Campus would demonstrate the leadership role the NPS could fulfill in landscape- and regional-scale conservation efforts.

The conservation social scientist: Katherine Dennis, Texas A&M University

Participating in the Park Break session was an enlightening experience. I knew that all of the participants of the program had different backgrounds, training, and insights shaped by life experiences, which would strengthen the project that we were working on and make the experience more enriching. As such, I was looking

forward to collaborating with people of diverse fields and interests on a project that involved the theme of sustainability.

Working collaboratively and across disciplines also seemed to be priorities in the work of many of the speakers. Of particular importance within the national park system was integrating social science and natural science components to better manage natural resources. This type of integration resonated with me, as I am a trainee in the National Science Foundation–Integrative Graduate Education and Research Traineeship (NSF–IGERT) Applied Biodiversity Science Program at Texas A&M University. The goal of this biodiversity science and conservation-focused program is to have students integrate the social and natural sciences in their research. Students in this program also apply conservation theory and practice while working in collaboration with conservation institutions and actors.

The presentations from guest speakers and their communication with Park Break participants highlighted NPS as being focused on managing natural resources within and around the park system at a landscape level. To me, this implies that individuals with a variety of expertise are needed at that scale of management. Furthermore, these individuals can work in a collaborative and multidisciplinary manner to achieve conservation goals at a landscape scale. Expertise could be drawn from Park Service staff and other professionals, as well as stakeholders and local actors from neighboring communities to incorporate ideas from a wider audience. At larger scales of management, interdisciplinary collaboration has the potential to involve a diversity of actors to benefit the environment. Another issue that was raised during Park Break, which resonated with me, was the need to increase the involvement of minorities working in the Park Service and visiting the protected areas within the park system. This would provide different perspectives and insights on issues of importance that were not necessarily voiced in the past.

Park Break reaffirmed for me that interdisciplinary collaboration could lead to positive outcomes. I also felt reinvigorated to strive for the integration of the social and natural sciences in my research.

The historian: Cori Knudten, University of California–Davis

I arrived at Park Break with a slight feeling of trepidation. I knew that I would be the only historian among the other graduate students, and that all of us had different disciplinary backgrounds. Environmental history, my area of study, emphasizes interdisciplinary connections in its exploration of the changing relationship between humans and their environment, but I still wondered if the participating students would be able to incorporate all of our diverse viewpoints into the team project. As it turned out, I need not have worried. My fellow students proved to be respectful of my opinions and willing to incorporate history into our discussions and group project. Indeed, I had scarcely voiced one of my ideas for the project, specifically the possibility of tracing historic uses of energy in the landscape, before Cathy Bell was envisioning a potential activity that would incorporate not only history, but science as well. As I talked further with the other students that week, I discovered other points where our interests converged. Feminist theory, the social and environmental impacts of coal mining, the intersections of technology and nature—all of these were topics I had read about, if only briefly. Perhaps I should not have been surprised at the convergences of our intellectual trajectories, but disciplinary boundaries can be difficult to overcome at times.

As historian Mark Fiege pointed out in a recent article about the history of environmental history within NPS (Fiege 2011), the agency itself provides spaces for interdisciplinary collaboration. To manage the complex resources under its care,

NPS requires a diverse array of expertise. Interdisciplinary collaboration does not automatically happen, but the opportunities for it exist. Park Break demonstrated to me that although disciplines may employ different methodologies, I can still find areas of common ground with my colleagues.

The openness of interdisciplinary work—the possibility for multiple approaches to operate simultaneously—also reminded me of another issue that we discussed at Park Break. Several of the speakers asserted that NPS needs to reach out to new constituencies, and Ron Tipton, from the National Parks Conservation Association, talked about the importance of continuing to expand the diversity of sites within the NPS system as well. I support these aims wholeheartedly, in particular because they also envision the possibility of exploring multiple narratives in one place. Echoing the findings of the recent Organization of American Historians' report (Whisnant et al. 2012), it should be kept in mind that although a site may be designated to commemorate a single event or person, it remains a dynamic place, with a changing history and environment. One place can offer visitors a window into an incredibly diverse variety of subjects, including the history of women and other marginalized groups as well as nonhuman actors, such as wildlife.

Too often, we may become locked into one historical narrative, just as we become enclosed behind interdisciplinary boundaries. Too often a white, male, heterosexual viewpoint dominates that historical narrative. Native Americans, African Americans, Latinos, lesbians and gay men—the histories of these people and many others need to surface in the narrative and continue to be heard. NPS faces the challenge of not only adding new sites devoted to the diversity of our society but of uncovering the stories and perspectives of marginalized groups in the sites that already exist. And those narratives can be found not only in cultural sites but in every landscape.

At Park Break, I found that my colleagues and I connected based on affinities that were sometimes surprising. Our interdisciplinary collaboration worked because we recognized that although our methodologies and interests diverged in many ways, no one assumed that their discipline provided all the answers or the only way of approaching a problem. Instead, our different backgrounds opened collaborative possibilities. That same openness and those same possibilities exist throughout NPS, USGS, FWS, and other groups we heard from and will hopefully continue to expand in the future.

The environmental studies scholar: Bridget Sharry, University of Oregon

The Park Break program had first caught my interest because of the topic assigned for the group project: energy resource management and environmental education. What I experienced as a participant in Park Break, however, was much more than a chance for collaborative work on an issue near to my heart—the program invites participants to speak with and learn from experienced and respected personnel from NPS, USGS, FWS, and other affiliated agencies and management groups.

My own studies require a good working knowledge of several distinct disciplines, and I am comfortable using research from environmental sociology, ecology, and ethnic studies in preparing professional papers. For my degree, I am defending several chapters of a book on the environmental justice impacts of hydraulic fracturing on indigenous communities in North Dakota and New York. I also have a background in environmental education and have taught students from kindergarten through college. The topics and group project of this particular Park Break session was a perfect complement to my research, and the invaluable access to professional advice from Department of the Interior and other state and local agency

employees reinvigorated my desire to ground my research in practical service—I envision a career in natural and cultural resource management.

It seemed to me that most of the other participants had extensive experience with the NPS, as employees or affiliated researchers. Since my experience with the parks had been enthusiastic but primarily recreational, I was both a bit nervous that I would have less to offer to my teammates and eager to learn more. Cori Knudten's experience with NPS, particularly her environmental history work for Pecos National Historical Park, was a wonderful component of our multifaceted team. Her ability to hold the resource issues facing DWGNRA in conversation with other debates over land use for several centuries grounded our lesson plan. Cathy Bell, with several seasons of work as a naturalist in Yellowstone under her belt, had stories and suggestions to share; Katherine Dennis, with research interests in community-based conservation, and access to Texas A&M's Cooperative Ecosystem Studies Unit, brought her shared social-natural science perspective on the parks to the project.

The deep wells of fairly specific knowledge that each of us brought to the table allowed us to incorporate a multitude of perspectives in our lesson plan. Essential to our success was the opportunity to network with each other and with the esteemed personnel of NPS, USGS, FWS, and the non-profit agencies that spoke with us throughout the week. Science and natural resource management issues that crossed disciplines and professions were reflected in the material included in our sustainable living curriculum, which traced different cultural values and resource management strategies over time.

As Katherine notes in her reflection earlier in this essay, one aspect of park management that Park Break underscored was the importance of diversity. Representation of all stakeholders in management decision processes is important to the development of a sustainable system. In our lesson plan for middle-school participants, we challenged them to come to their own definition of sustainability via inquiry-based learning and structured the lesson so they would find the core components: environmental, economic, and social sustainability. Creating space for discussions of often-overlooked viewpoints was a shared goal among our group. We also incorporated exercises to develop science and technology skills, because measuring and monitoring are key components of resource planning in the national parks.

As our nation faces the environmental challenges of the next years, the reasons that we value the national parks are going to need to be articulated and shared, though they may diverge and conflict occasionally. One of the greatest values of this Park Break session was being able to engage with a passionate group of people, each differently trained. An even greater diversity in future groups would continue to benefit all of us in this growing network of professionals, and the government or other agencies we will work in, as well.

Conclusion

As our four perspectives show, Park Break proved to be a fruitful experience for us. We connected with future colleagues, explored new perspectives, and considered the challenges facing several Department of the Interior agencies and other natural resource and conservation groups. Despite some initial anxieties in attending the session, all of us found the interdisciplinary collaboration to be rewarding. As we pursue careers in the natural and social sciences, perhaps within the Department of the Interior, we will draw on our Park Break experience as proof that interdisciplinary approaches are not only valuable but necessary for achieving sound stewardship of our nation's resources.

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