

Research Learning Centers: Promoting Resource Stewardship through Partnerships

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National parks throughout the system are encouraged to engage in partnerships that allow us to most effectively fulfill our mission. Research learning centers (RLCs) are directed to increase the amount and effectiveness of research and research education through partner projects. Each RLC has its own unique partnerships; the range includes bringing together organizations with overlapping goals, to collaborating on funding and facilitating science and research education efforts. Four RLCs highlight the scope of collaboration.

Partnering to provide the program

The new Crater Lake Science and Learning Center was born from the collective vision of the park and its partners to establish Crater Lake National Park as a wellspring for research information, a testing ground for educational techniques, and a source of inspiration for artistic expression. Unlike many of the other RLCs, no federal funds are used for the on-going operations of this center.

The Crater Lake Science and Learning Center is a public-private partnership. The center is managed through a collaborative partnership with two Oregon universities. Southern Oregon University and the Oregon Institute of Technology provide faculty staffing and support to coordinate educational and artistic programs and to implement independent research activities, respectively. The park retains the authority to review and approve the center's programs and projects and to assume responsibility for management and maintenance of the center's facilities.

Building renovations, furnishings, office equipment, and other start-up costs totaled \$2,317,376 and were financed through federal construction funding, Crater Lake National Park budget allocations, park entrance fees, and major individual and foundation gifts from the greater Oregon philanthropic community. Funding for center operations comes primarily from an endowment derived from the sale of a Crater Lake commemorative motor vehicle license plate. Proceeds are held in trust, invested and made available to the park upon request. So far, net proceeds from the sales of the plate have exceeded \$2 million, providing an on-going corpus of funding after investment. Eventually, we estimate a 5% return on this investment that will provide the necessary operating capital for the center.

Ivory-billed woodpecker recovery

The Old-Growth Bottomland Forest Research and Education Center, in Congaree National Park, greatly contributes to the stewardship of floodplain forests at the regional and national level by providing critical support to the recovery of the recently rediscovered ivory-billed woodpecker. In order to investigate the potential existence of ivory-billed woodpeckers in South Carolina, a joint partnership was formed between federal and state agencies, non-governmental organizations, and private entities to share information and resources relating to this critically endangered species. Core members of this working group include the National Park Service, U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service, South Carolina Department of Natural Resources, and The Nature Conservancy.

In January 2006, the working group secured \$75,000 in USFWS funding to conduct formal surveys for the ivory-billed woodpecker at Congaree National Park. The center hosted and coordinated all field activities associated with this search, including providing logistical and technical support throughout the entire four-month survey effort, and training citizen scientist volunteers on field protocols. The Southeast Coast Inventory and Monitoring Network also provided essential in-kind support, including development of an observational database and funding for a Student Conservation Association intern for database management.

More than 46 volunteer citizen scientists contributed over 2,000 hours to survey significant wilderness acreage across Congaree National Park. Survey data were analyzed, summarized, and compiled into a final report submitted to the USFWS. Results of this work were presented at a historic three-day regional meeting and training workshop coordinated by the center and held at Congaree at the end of August 2006. This workshop included meetings, presentations, and field demonstrations led by Cornell University Lab of Ornithology and USFWS and was attended by more than 60 people representing 11 states involved with ivory-billed woodpecker recovery activities. Field activities and support through this partnership are on-going in 2007.

Training citizen scientists to assist researchers

The Appalachian Highlands Science Learning Center works with Great Smoky Mountains National Park, Discover Life in America, and scientists from colleges and universities across the nation to train volunteers with the skills they need to assist with research activities in the park. Volunteers are either trained to work side-by-side with a researcher or carry out simple protocols for researchers to expand their capacity.

Since 2000, hundreds of college students, park neighbors, and other interested people have attended workshops to gain skills that will be used during bio-blitzes (intense biological inventories usually centered on one taxonomic group or one habitat) and the “adopt-a-plot” project for the Smokies’ All Taxa Biodiversity Inventory. During bio-blitzes, an additional 600 people, mostly students and teachers, have participated in collecting specimens. These citizen scientists have been responsible for reaching areas of the park that researchers don’t have the time to get to and during times of the year that researchers aren’t in the park. Some of these species have turned out to be new to science, while others were new park records. In addition, eight exotic species were seen for the first time within the boundaries

of the park. To date, the All Taxa Biodiversity Inventory has added 4,740 new species to the park list and 829 species previously undescribed to science.

Collaborating on internet field trips

The Jamaica Bay Institute at the Gateway National Recreation Area collaborated with the New York/New Jersey Harbor Estuary Program in proposing Jamaica Bay as a featured site in EstuaryLive 2006. It was selected as one of four estuaries nationwide; the others were: Peconic Bay, New York; Tillamook Bay, Oregon; and, Padilla Bay, Washington. On National Estuaries Day, September 29, 2006, a field trip to Big Egg Marsh on Jamaica Bay was broadcast live on the internet. Designed as an interactive field trip for classrooms, on-line participants joined local middle and high school students as they explored the estuary with scientists, resource managers, educators, and community members. More than 250 schools from 35 states, representing at least 15,000 students, registered to participate in this live virtual tour of Jamaica Bay. During the hour-long EstuaryLive broadcast, participating students submitted more than 300 questions to our on-site field trip leaders. The goal of this field trip was to increase students' awareness and understanding of the urban estuary, giving them the knowledge they need to become good stewards of estuarine resources. A series of interactive segments on the following topics were presented:

- Aquatic organisms of the estuarine environment;
- Aerial photography kites;
- Salt marsh restoration and functions;
- Sediment core examination;
- Water chemistry and healthy levels; and
- Stewardship and connections to everyday life.