

National Cave and Karst Research Institute: Partner for the USGS

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Abstract

The National Cave and Karst Research Institute (NCKRI), created by Congress in January 1998 and headquartered in Carlsbad, New Mexico, aims to provide the cave and karst community with an unprecedented opportunity to further research, education, information transfer, and resource management revolving around these critical, fragile, globally significant, yet poorly understood terrains. The Institute's legislation offers the opportunity to develop a unique style of national effort with a broad base of both federal and non-federal support including 1) collaborative projects, 2) shared administrative responsibilities, 3) matching funds, 4) joint publications, 5) potential as a go-to organization for other agencies, other organizations, and individuals, and 6) other partnership arrangements of a nature possibly not yet even conceived.

NCKRI is an unusual, possibly unique, amalgam of a federal agency (National Park Service [NPS]), a state-supported academic institution (New Mexico Institute of Mining and Technology, aka NMT), and a highly karst-aware municipality (Carlsbad, New Mexico). These three entities joined together to implement the enabling legislation and to create a unified institute from very disparate components. The initial organizational structure, with direct control through NPS and a civil service NPS director, proved cumbersome and difficult in light of unprecedented budget constraints on NCKRI. Unlike other federally mandated organizations, NCKRI has been charged with finding *at least* half of its funding from non-federal sources. The impossibility of a federal entity engaging in active non-federal fundraising became clear and in 2006, NCKRI transitioned to a new arrangement as a non-profit corporation under the aegis of NMT. All employees of NCKRI are thus NMT employees and have full ability to engage in fund raising, grant writing, and solicitation of donations from the business and private sectors. The new permanent director, Dr. George Veni, was brought on board in early 2007 under this new arrangement. Current staff includes Director Veni, Dr. Penelope Boston (Associate Director for the NCKRI Academic Program and Professor at NMT), Dr. Lewis Land (NCKRI karst hydrologist through the New Mexico Bureau of Geology and Mineral Resources), Ms. Deborah Herr (Administrative Services Coordinator), and Ms. Lisa Majkowski (Program Manager for NCKRI and Cave and Karst Studies at NMT). The staffing plan is in hand and new staff members will be added as the financial situation allows and needs dictate. An education coordinator position is planned for later in 2008.

Growing pains have also occurred in other areas. The construction of NCKRI Headquarters in Carlsbad suffered setbacks not unusual for public buildings. It is now back on track with construction to begin soon. The building will be located along the Pecos River near downtown Carlsbad. Its roughly 1,600 m² (17,000 ft²) will include a bookstore, a laboratory, classrooms, and interactive educational and museum space on the first floor. A library and administrative space will occupy most of the second floor. Given the high vulnerability of karst terrains to adverse environmental impacts, the building will be a model for sustainable building and management practices, which will be highlighted throughout the facility. Some features will include recycled materials, water and energy efficient fixtures and equipment, creative building design to minimize energy consumption, and a rainwater harvesting system. The structure will be solar-ready; panels will be installed at a later date. In collaboration with Bat Conservation International, NCKRI Headquarters will be the first building constructed with an artificial bat roost as part of its design. Cameras, microphones, and various probes in the roost will provide live images and data into the museum and the NCKRI website for research and public education.

In spite of the infant nature of the organization, NCKRI has already achieved some significant accomplishments. These include:

- Participation in the development of the U.S. Geological Survey's (USGS) National Karst Map (2001-present);
- Facilitation and support for several karst conferences: Karst Interest Group workshops (2002, 2005, 2008), National Cave and Karst Management Symposia (2005, 2007), Karst Waters Institute symposia (2007, 2008), 15th International Congress of Speleology (2009);

- Coordination, co-authorship, and funding for *Recommendations and Guidelines for Managing Caves on Protected Lands* (2003) published by the Karst Waters Institute;
- Sponsorship for *Ice Age Cave Fauna of North America* (2003) published by the Denver Museum of Nature and Science;
- Organization of symposia and instruction for workshops at the Geological Society of America Convention (2004, 2008);
- Support and education for NCKRI scholars in the Cave and Karst Program at NMT: Setsuko Shindo (MS, 2005), Erin Kay (MS 2008), Kevin Stafford (Ph.D., 2008), Megan Curry (MS, 2008 anticipated), Laura Rosales-Lagarde (Ph.D., 2008 anticipated), four senior thesis students;
- Establish a Visiting Scientist Program, which has included Dr. Thomas Strong, Dr. Scott Rice-Snow, and Dr. Alexander Klimchouk, who as a result of his work with NCKRI produced NCKRI Special Paper No. 1, *Hypogene Speleogenesis: Hydrological and Morphological Perspective*.
- Development of the landmark Karst Information Portal (posted to the Internet in 2007 and discussed separately at this meeting by Spencer Fleury) with the University of South Florida, University of New Mexico, and the International Union of Speleology.

In late 2007, representatives of NCKRI and USGS met in Reston, Virginia, to discuss potential partnerships, especially in lieu of NCKRI's change in status from being part of NPS to a non-profit. They found ample possibilities to work together in the future, but also two significant impediments: limited NCKRI staff and restrictions on federal support for NCKRI without matching non-federal funds. At least one impediment will be removed in the near future. Construction of NCKRI Headquarters is expected by the end of 2009, allowing NCKRI to hire additional staff to more effectively work with USGS and other potential partners. Meanwhile, efforts to rewrite NCKRI's enabling legislation are in progress to allow NCKRI and federal agencies to cooperatively work on the many karst issues that need study, and without the present encumbrances.