

AIBS*news*

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AIBS and NSC Alliance Sign Strategic Agreement

The American Institute of Biological Sciences (AIBS) and the Natural Science Collections (NSC) Alliance, each a major umbrella group for biological science organizations, have signed a strategic partnering agreement that will advance the public policy interests of biologists, natural science collections, and the research and education communities that utilize these facilities. The partnership provides a valuable bridge between the scientific research and education communities represented by AIBS and the NSC Alliance, as well as an opportunity for scientists in the fields of taxonomy, systematics, ecology, and evolutionary biology to work with AIBS and the NSC Alliance on public policy and advocacy goals in support of their science.

The partnership will give the NSC Alliance's 100-plus institutional members equivalent status in AIBS's membership rolls of scientific societies and other organizations, currently numbering approximately 90—thereby allowing NSC Alliance members to enjoy the institutional membership benefits of both organizations. Also under the agreement, AIBS director of public policy, Robert Gropp, will serve on a cross-appointment as director of public policy for the NSC Alliance. This arrangement provides the NSC Alliance with an experienced science policy professional to represent the organization's interests in Washington, DC, as well as the other resources offered by the AIBS Public Policy Office.

"Natural science collections form a foundation for much of comparative biology and provide a critical base for verification of many studies. Many of the fundamental issues faced by AIBS are also of interest to our members. Together we have a much greater chance

of solving them," said NSC Alliance president Terry Yates.

In recent years, AIBS has been actively involved in collections-related policy issues. For instance, the public policy office's Washington Watch column in *BioScience* has helped raise awareness of the issues many university-based collections have faced in recent years. Moreover, AIBS is at the forefront of work being done in the area of biological research infrastructure planning.

The NSC Alliance has been active in advocating for the need to support the nation's biological collections as a vital national resource and to make the information contained in these collections available to the broader AIBS community to help solve societal problems.

"This is an excellent opportunity for the biological science and natural science collections-based research communities to leverage resources," said AIBS executive director Richard O'Grady. At a time when research budgets for fundamental biological research are at risk of becoming stagnant, or even backsliding, it is important for scientists to speak with a common and coordinated voice.

NEON Progress Report

Planning for the National Ecological Observatory Network is beginning to yield new specifics about NEON science and the deployment of sensors and cyberinfrastructure.

NEON's ultimate goal is to forecast the future state of key ecological systems in the United States. When fully deployed, the observatory will function as a widely distributed national laboratory—a network of shared infrastructure for ecological research.

NEON will support systematic study of seven US ecological priorities: invasive species, infectious disease, climate change, land-use change, biogeochemical cycles, biodiversity, and aquatic ecosystems. A

standardized set of sensor technologies and cyberinfrastructure will enable continuous, long-term data collection, storage, and dissemination.

NEON will deploy sensors and cyberinfrastructure within 20 distinct climatic domains across the continental United States (in addition to Alaska/tundra/taiga, Hawaii/Pacific Tropical, and Atlantic Neotropical domains). The domain boundaries were determined through a cluster analysis of climate state variables, combined with air mass seasonality data. (See www.neoninc.org for more on the climatic domains and an interactive tool for exploring the maps.)

Within each domain (or NEON node), infrastructure will be deployed in three land-use/land-cover types: wild, managed, and urbanized, each of which will contain transition zones between terrestrial and aquatic systems. Every NEON node will feature a range of standardized instruments deployed at three fixed sites to provide critical data streams related to the ecological priorities, as well as mobile capacity to conduct routine manual sampling and to respond to sudden ecological events, such as the outbreak of an infectious disease.

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NEON infrastructure will be networked through state-of-the-art communication and computational tools. It will include cutting-edge laboratory and field-based instrumentation, enabling scientists to collect key biological, atmospheric, chemical, and physical measurements; site-based experimental infrastructure; biocollections facilities and sample archives; and the computational, analytical, and modeling capabilities required for NEON forecasting.

NEON will be based on an open architecture that gives scientists access to new and evolving hardware and software technologies. A suite of NEON education programs will explicitly translate NEON science in ways that capture the imagination and attention of the general public, including teachers, students, decision-makers, and citizens from all walks of life. Teachers will have real-time NEON data as a classroom learning resource, students and citizen-scientists will participate in field trips to collect data, and the general public will learn about their environment through daily ecological forecasts.

As NEON planning progresses, updated materials describing the project will be available in print and online. The NEON Preliminary Project Execution Plan—a document providing details about the costs, scheduling, and build-out of NEON instruments, facilities, and cyberinfrastructure—will be delivered in 2006.

AIBS and NESCent at the 2005 SACNAS Conference

The Society for Advancement of Chicanos and Native Americans in Science (www.sacnas.org) held its annual conference in Denver, Colorado, 29 September through 2 October 2005. The goal of SACNAS is to improve and expand opportunities for Latin Americans, Native Americans, and Alaska Natives in the scientific field. To that end, over 4000 students, faculty members, teachers, and other science professionals participated in scientific presentations, education workshops, and professional development sessions.

AIBS education and outreach program associate Abraham Parker attended

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the conference to promote AIBS resources and initiatives. In addition, one of the featured speakers was SACNAS Board member Sonia Ortega, who also serves on the AIBS Human Resources Committee. AIBS has taken an active role in the efforts to diversify the field of biology and attract more underrepresented groups (www.aibs.org/diversity), and considered this conference to be an opportunity to connect with a wide and diverse audience of biologists and educators.

Joining Parker and Ortega at the conference was National Evolutionary Synthesis Center (www.nescent.org) director Cliff Cunningham, who was on hand to promote research and education opportunities at the center and to connect with students interested in evolution-related research and study. NESCent is partnering with AIBS to develop educational programs and opportunities for the center, and this level of participation at the SACNAS conference is an example of their joint commitment to creating a more diverse community of scientists and scholars in the fields of biology and evolution.

Long Term Ecological Research Network Holds Hill Briefing

Scientists from the Long Term Ecological Research (LTER) Network, which marks its 25th anniversary this year, briefed Capitol Hill staffers, government officials, and members of the press on 13 September at the Rayburn House Office Building.

The LTER Network, which is a member organization of AIBS, is a long-term fundamental ecological research program supported by grants from the National Science Foundation. Its research has yielded data and insights that help scientists and decisionmakers better understand and respond to pressing issues, such as climate change, sustainable agricultural ecosystems, and the improvement of urban planning and revitalization. The 26 LTER sites have participating researchers from 46 different states and territories.

Representatives from three sites were on hand to describe some of this valuable research: Barbara Bond, director of the H. J. Andrews Experimental Forest in

Oregon; G. Philip Robertson, director of the LTER Agricultural Ecology Program at the W. K. Kellogg Biological Station in Michigan; and Steward T. A. Pickett, director of LTER's Urban Ecosystem Study in Baltimore, Maryland. University of New Mexico biology professor Jim Gosz, chairman of the LTER Coordinating Committee, moderated the forum.

Scientists Head to Capitol Hill in Support of the National Science Foundation

On 14 September, scores of scientists met with members of Congress and their staffers on the first Congressional Visits Day sponsored by the Coalition for National Science Funding, of which AIBS is a member.

Scientists worked in multidisciplinary groups and put forth a unified message: Support the National Science Foundation. Participating with AIBS were scientists representing the American Ornithologists' Union, the Society of Wetland Scientists, and the Cornell Center for the Environment.

NSF provides 65 percent of the federal support for fundamental biological research.

Recent Articles Online at www.actionbioscience.org

Original article in English

- "More Misconceptions to Avoid When Teaching about Plants," by David R. Hershey (University of California–Davis), a biology education consultant and author who also answers botany questions for *madsci.org*, an "ask a science expert" Web site. This article expands on Hershey's first article, "Avoid Misconceptions When Teaching about Plants," posted in August 2004.

Spanish translations of previously posted articles

- "Exactitud de los Fósiles y de sus Métodos de Medición" [Accuracy of Fossils and Dating Methods], by Michael Benton, chair, Vertebrate Paleontology, University of Bristol, United Kingdom

Recent Education Reports Online at www.aibs.org

- Evolution symposium and session on defending the teaching of evolution at NABT 2005
- Call for proposals: National Evolutionary Synthesis Center
- Announcing the new "Understanding Evolution" Web site
- Professional societies and the scholarship of teaching and learning
- PKAL: What works, what matters, what lasts
- Biology success: Teaching diverse learners
- Two announcements from the National Science Foundation
- Database of Central European women scientists
- News from the National Postdoctoral Association
- Upcoming conferences

Recent Public Policy Reports at www.aibs.org

Public Policy Report for 11 October 2005

- Congress approves first continuing resolution to fund federal government
- Agriculture and Defense appropriations update
- AIBS and BSCS release evolution book and video

- Senate committee approves USFWS, EPA nominees
- House Government Reform Committee recognizes the Year of the Museum
- House passes major changes to Endangered Species Act
- Senate passes NASA reauthorization bill
- Hollywood comes to DC: Michael Crichton testifies about climate change in the Senate
- Dover ID trial moves forward
- New in *BioScience*: "Streamlining the Federal Water Research Portfolio"
- From the *Federal Register*

Public Policy Report for 26 September 2005

- Senate approves appropriations legislation for NSF, NOAA
- Republican Study Committee issues post-Katrina budget plan
- Almost over in Dover, PA
- Long Term Ecological Research program holds congressional briefing
- Scientists head to Capitol Hill in support of the National Science Foundation
- Senate begins confirmation process for US Fish and Wildlife Service director
- Nominee for deputy administrator of NASA named
- AIBS and NSC Alliance sign strategic agreement
- New in *BioScience*: "Politics and Peer Review"
- From the *Federal Register*