AIBS news

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AIBS*news*

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2008 AIBS Annual Meeting to Examine Climate, Environment, and Infectious Diseases; Rita Colwell to Chair

Plan now to attend the 2008 AIBS annual meeting, to be held 12–13 May in Washington, DC. Chaired by 2008 AIBS President Rita R. Colwell, the meeting will feature invited speakers and discussion leaders examining linkages among climate, environment, and infectious diseases. The program will also include a poster session and a diversity affairs luncheon. The meeting is being held in conjunction with the Biological Sciences Curriculum Study, which was created by AIBS in the 1950s and is now entering its 50th year of independent operations. Information about registering and submitting posters will be posted later this fall at *www.aibs.org/annual-meeting/*.

Coalition on the Public Understanding of Science Nears 100 Organizations, Hubs Forming

The Coalition on the Public Understanding of Science (COPUS) project—*www.copusproject.org*—continues to grow and build toward Year of Science 2009. Nearly 100 organizations are now part of the network; among the most recent members are the Association for Science Teacher Education, the American Physical Society, the American Society for Microbiology, and the Chicago Council for Science and Technology. The network has begun embracing opportunities to share and work together, developing resources and teaming up for community-based action. Other organizations, including all AIBS member societies and organizations, are invited to participate in these and other COPUS endeavors. Check the COPUS activities page at *www.copusproject.org/activities.php* to identify opportunities to collaborate. If you have an idea that you would like to develop with the COPUS network, share it!

COPUS activities database and resource finder. The COPUS activities database and resource finder continues to grow as participating organizations contribute information about their programs and events to promote the public understanding of science. The database is a valuable resource for sharing your organization's activities with the network and broadly disseminating information about successful programs.

Hubs forming. A COPUS regional hub is a locally based community of COPUS participants and science stakeholders who work together within a designated geographic region to promote the public understanding of science. Its membership may include scientists, universities, K–16 educators, informal science education centers, business leaders, and any other professionals who wish to work together to develop or coordinate activities to engage community members in science. The first five COPUS hubs are now forming in Tampa Bay, Florida; the San Francisco Bay Area, California; Cambridge, Massachusetts; Seattle, Washington; and Research Triangle Park, North Carolina.

Year of Science 2009. Year of Science 2009 is a nationwide celebration of science. Led by members of the COPUS community, activities are being coordinated that will stimulate interest in and appreciation of the process and nature of science. As they develop programs for 2009, participating organizations will share program ideas such as making the public understanding of science the theme of their 2009 annual meetings; hosting free public lectures or programs at museums and science centers; providing hands-on experiences in science; participating in K–12 classroom activities and roundtable discussions; producing radio spots, editorials, or online resources; or starting a local science café—in all, focusing on how science plays a vital role in the future of humanity and inspires the best qualities of the human spirit. To get involved in the planning of nationwide events to celebrate science in 2009, see *www.yearofscience2009.org*.

Understanding Science Web site. The University of California Museum of Paleontology, in concert with several partners, is preparing to launch this free resource in late 2008. The purpose of the Understanding Science Web site is to accurately portray science—what it is and how it works—as well as to provide tools for teaching associated concepts. Several features are being developed in support of the COPUS effort, including a Gallery of Scientists and an Amateur Hall of Fame, both of which

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highlight how science is conducted. See *www.understandingscience.org*.

For more information, contact Sheri Potter, COPUS network project manager, by e-mail: spotter@copusproject.org.

AIBS Submits Comments on STEM Education Plan

On 24 August, AIBS submitted comments to the National Science Board (NSB) in response to the board's draft action plan for improving science, technology, engineering, and mathematics (STEM) education. The 20-plus-page document, "A National Action Plan for Addressing the Critical Needs of the U.S. Science, Technology, Engineering, and Mathematics Education System," was released for comment by the NSB in August.

In its comments, AIBS noted that the draft plan provides a timely response to many of the common science education concerns raised by AIBS individual and organizational members.

The draft plan proposes the creation of a "National Council on STEM Education" to coordinate efforts among the large number of government programs that are tasked with improving STEM education and instruction. The independent, nonfederal council would comprise representatives from various stakeholder groups, including local and state governments, K–16 educators, informal science education institutions, STEM disciplinary organizations, and business and industry. AIBS recognized the potential benefits from the formation of the National Council on STEM Education, but registered concerns about the proposed staffing level and authority prescribed by the NSB. AIBS also applauded the recognition of informal science education institutions, including natural history museums, as key stakeholders in STEM education and the promotion of the public understanding of science.

The draft plan also addresses the importance of recruiting and training highly qualified STEM educators. AIBS encouraged the NSB to include professional, disciplinary societies in the development of initiatives to improve the quality of STEM teacher preparation.

The final report is slated to be released in October 2007.

AIBS's complete statement on the plan is at *www.aibs.org/position-statements*.

William F. McComas Wins the 2007 NABT Evolution Education Award

The National Association of Biology Teachers (NABT) announced that William F. McComas, Parks Family Professor of Science Education in the College of Education and Health Professions at the University of Arkansas, is this year's winner of the 2007 NABT Evolution Education Award. In November, McComas will deliver the inaugural Kendall/Hunt Lecture in Biology Education at the NABT national conference in Atlanta, Georgia. His lecture is titled "Using the History and Philosophy of Science to Solve the Challenges in Evolution Education."

The award, sponsored by AIBS and the Biological Sciences Curriculum Study (BSCS), acknowledges McComas's dedication to high-quality evolution education. Through outstanding classroom teaching, valuable scholarly publications, and insightful public presentations, McComas has promoted understanding of biological evolution.

The Evolution Education Award, which is presented annually, recognizes the innovative and effective classroom teaching and community education efforts of an individual who promotes the understanding of evolution. All K–16 science educators who teach life science lessons or units in their classrooms are eligible for the award. Applicants must demonstrate that their teaching of evolution incorporates investigative, student-centered, and original materials and resources; they must participate in community and professional education and outreach on the subject of evolution; and they must help students and the local community understand biological evolution and the impact of evolutionary insights on society. The award recipient receives a recognition plaque, a combined $1000 cash prize from AIBS and BSCS, and a complimentary one-year membership in NABT.

For more information on the Evolution Education Award and other awards presented by NABT, visit *www.nabt.org/sites/S1/index.php?p=290*.

DIBS Holds Fall Meeting

On 6 September, the Diversity in Biological Sciences (DIBS) coalition held its fall meeting at the offices of the Science and Engineering Alliance, Inc., in Washington, DC. The meeting opened with a presentation by Robert Shepard, executive director of the Science and Engineering Alliance, on the history and work done by his organization. Richard O'Grady and Holly Menninger of AIBS also spoke to the group about the Coalition on the Public Understanding of Science project. The group discussed challenges facing students from underrepresented groups in the sciences, as well as issues to be explored at future DIBS meetings. The committee chair of the AIBS Diversity Affairs Committee, Geraldine Twitty, was in attendance, along with DIBS members from the National Science Foundation and EnvironMentors. For more information about the DIBS coalition, visit *www.aibs.org/diversity/DIBS.html*.

NEON Welcomes Senior Staff

NEON is pleased to announce that Michael Keller and Marshall Peterson have joined the headquarters staff in Washington, DC.

Chief of Science. Michael Keller, project scientist for the NASA component of the Large-scale Biosphere–Atmosphere Experiment in Amazonia (LBA) since 1996, has been named NEON Chief of Science. His extensive scientific experience and ability to coordinate the research activities of other scientists have prepared him well for the challenges of his new position with NEON.

"The chief of science will function as 'secretary of state' for the NEON enterprise," said NEON CEO David Schimel. "Michael Keller has the outstanding diplomatic skills required for this important leadership role in NEON."

Keller's own research focuses on the effects of land-use changes on biogeochemical cycles. It covers a broad range of

Michael Keller, NEON Chief of Science, has expertise in remotely sensed observations and in situ *measurements of Amazonian ecosystems.*

scales, from forest plots to regional studies of carbon and trace gases, and uses remote-sensing techniques for understanding ecosystem structure and function. In his capacity as project scientist for the NASA portion of the LBA initiative in Amazonia, he coordinated the scientific research of as many as 35 simultaneous investigations led by American and Brazilian scientists. He also served as cochair of the International Scientific Steering Committee for LBA.

Keller earned his BA at Harvard University and his PhD at Princeton University. His most recent professional appointments include Research Scientist, International Institute of Tropical Forestry, USDA Forest Service; Affiliate Professor, University of New Hampshire; and Visiting Professor, University of São Paulo.

In addition to publishing extensively in scientific journals, Keller has substantial involvement in educational activities. At the University of Puerto Rico, he lectured on ecosystem productivity, nutrient cycling, and the fluxes of trace gases. He developed and taught short courses designed for the LBA project on the operation of experimental sites (conducted at the Instituto Nacional de Pesquisas da Amazônia); an intensive field course on observational methods for micrometeorology and carbon and trace-gas flux measurement; and integration of modeling in LBA, a course on ecological modeling with lectures on general principles and sessions on practical applications.

Among Keller's first NEON activities was chairing the Fundamental Instrument Unit technical meeting to further develop detailed sensor and tower layouts for two NEON domains. He is also leading the effort to recruit NEON domain chief scientists prior to the NEON Final Design Review in 2008.

"As the new chief of science for NEON, I want to involve the whole US environmental biology community in our enterprise," said Keller. "I want to take into account all of the points of view out there and try to build an inclusive program."

Chief Technology Officer. Marshall Peterson, the NEON chief technology officer, is recognized around the world as an expert in high-performance computing in the life sciences. For most of his 25 years as an information technology (IT) professional, he has focused on high-performance scientific computing, including the design of missile guidance systems, acquiring and processing satellite data, and collecting and analyzing vast quantities of DNA sequences.

From 2005 to 2007, Peterson served as director of information technology and software engineering at the Howard Hughes Medical Institute's new Janelia Farm Research Campus. He was responsible for the design, procurement, implementation, and operational support of the sophisticated IT infrastructure that enables Janelia's administrative and scientific goals to be met.

As chief technical officer at the Venter Institute (2003–2005), he was responsible for the computing and IT infrastructure, software development, and the design and operation of the laboratory information management systems. In addition, he led the design and construction of the high-throughput sequencing facility and developed the computational infrastructure to support the foundation's objectives in environmental remediation, synthetic biology, and genomic medicine. He also served as vice president for infrastructure technology for Celera Genomics in Rockville,

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Maryland (1998–2002), where he developed the computing infrastructure used to sequence and assemble the human genome.

In 2001, Peterson founded EnSilico, a company dedicated to providing services to the high-performance biotech market. EnSilico has consulted with the Environmental Protection Agency on the use of high-performance computing for computational biology; with Sandia National Laboratory to enhance their ability to use high-performance computing to address *in silico* biology; and with the Department of Energy to design and implement the Sandia 45-teraflop supercomputer, Red Storm.

"I am excited to welcome Marshall Peterson to NEON," said NEON CEO David Schimel. "Marshall brings both knowledge of the needs of scientists for cyberinfrastructure and knowledge of how the private sector meets advanced computing needs in a cost-effective way. Marshall and I have also combined our professional concerns and personal passion for the outdoors by planning wilderness skills training for field staff working in extreme environments."

David Kirschtel Joins CUAHSI

NEON congratulates David Kirschtel on his new position as senior program manager for the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI). CUAHSI is a National Science Foundation–funded alliance of research universities that is developing programs to advance long-term hydrological research at larger scales than have heretofore been possible through the efforts of individual scientists.

Kirschtel was the first of six postdocs to join the fledgling NEON Project Office in late 2004, and he participated in meetings of the 160-member NEON Design Consortium held in 2005. A broad background in environmental sciences, coupled with his experience in science education, made Kirschtel a versatile contributor to many aspects of the NEON design process, including development of the Integrated Science and Education Plan, preparation for the Conceptual and Preliminary Design Reviews, and documentation of the candidate site reviews. During his tenure with the NEON Project Office, Kirschtel was promoted to staff scientist, a position that will move to the new NEON science and education office in Boulder, Colorado, in the fall of 2007.

"NEON is sorry to lose David Kirschtel, who was a key member of our team during its most critical early transitions," said NEON CEO David Schimel.

Kirschtel earned his BA in biology from Clark University in Massachusetts, an MS in aquatic biology from the University of Louisville (Kentucky), and a PhD in botany from the University of Vermont. He served as a lecturer in the biology department at the University of Washington, and received a three-year National Science Foundation grant to conduct workshops in active, inquiry-based learning for college faculty in the Pacific Northwest.

In his two-and-a-half years with the NEON project, Kirschtel participated in NEON outreach activities at scientific conferences and was an enthusiastic voice for innovation in NEON education. In 2007, he represented NEON, Inc., as a member of the Preliminary Site Review Team, which visited candidate core sites in the northern Rockies and the mid-Atlantic.

"David played an important role for NEON during the preliminary site visit process," said Brian Wee, NEON administrative director. "His 'boots-on-the-ground' experience and in-depth knowledge of project design details made him the perfect NEON, Inc., representative in the field."

Recent Articles Online at *www.actionbioscience.org*

Original article in English

- "Polar Bears and Climate Change," by Andrew E. Derocher, professor of biological sciences at the University of Alberta in Edmonton, Canada

Spanish translations of previously posted articles

- "Reavivando las Zonas Muertas de las Costas" [Reviving Coastal Dead Zones], by Robert Howarth, professor of ecology and environmental biology at Cornell University, Ithaca, New York
- "La Peligrosa Promesa de la Terapia de Genes" [The Dangerous Promise of Gene Therapy], by Sophia M. Kolehmainen, director of programs for the Council for Responsible Genetics, Cambridge, Massachusetts

AIBS Public Policy Reports Online at *www.aibs.org*

Public Policy Report for 4 September 2007

- Feds request comments on climate change plan
- AIBS comments on NSB STEM education plan
- Intelligent design/creationism goes Hollywood
- William McComas wins NABT evolution education award
- House passes energy legislation
- New in *BioScience:* "Congress Advances Multiyear Science and Education Plan"
- Bush signs executive order promoting hunting
- From the *Federal Register*
- Employment opportunity: AIBS public affairs/policy representative

Public Policy Report for 20 August 2007

- Administration releases FY 2009 R&D priorities memo
- Former House Speaker hopes to leave mark with carbon cap and trade legislation
- President signs competitiveness bill despite reservations
- Science education advocates urged to avoid complacency
- Vertebrate paleontologists blast creation museum
- OSTP releases national land imaging program plan
- EPA requests comments
- COPUS update
- From the *Federal Register*
- Employment opportunity: AIBS Public Affairs/Policy Representative

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