A Letter to the NEON Community

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BioScience Impact Factor Rises

BioScience's journal impact factor, based on citations in 2005 to articles published in *BioScience* in 2003 and 2004, rose to 4.708, according to Thomson Scientific's *Journal Citation Reports*. The new impact factor means that *BioScience* ranks 7th out of 65 journals in Thomson's biology category. The new Thomson data also indicate that *BioScience*'s journal immediacy index is 0.731, and the cited half-life 7.9 years. AIBS takes pride in this recognition of *BioScience*'s importance in the scholarly community.

Kansas Voters Opt for Pro-Science Candidates, Again

As most biologists and science educators are aware, Kansas has been in the forefront of the political movement to introduce intelligent design/creationism into the science classrooms of public schools. Just over one year ago, by a 6 to 4 vote, the Kansas Board of Education approved a policy that redefines science in such a way that supernatural phenomena such as intelligent design could be taught as science in Kansas classrooms.

A broad cross-section of individuals and organizations focused attention on Kansas in response to the board's political attack on science. Individuals opposed to the pro–intelligent design policy stepped forward to challenge board incumbents and contenders who supported that policy.

On 1 August 2006, the citizens of Kansas had their opportunity to weigh in on the debate. In the primary election to determine which Democrats and Republicans would contend for seats on the board during the November 2006 general election, Kansas voters sent their message. Of five board races on the ballot, three were won by individuals opposed to the board's 2005 policy. It appears that science supporters may once again control the board after the November elections.

Following the primary, AIBS president Kent Holsinger said, "This appears to be a great outcome. People want students to get the best education possible so that they will be able to compete for quality jobs. The lesson for the science community is that we must recommit ourselves to making sure that every American understands the nature of science."

To read the AIBS press release on the subject, visit *www.aibs.org/position-statements/20060802_biologists_resp.html*. For additional information about developments in evolution education policy in Kansas and elsewhere, visit *www.aibs.org/public-policy/teaching_evolution.html*.

Sign Up to Receive AIBS Public Policy Press Releases

Members of the news media and other interested parties may now sign up to receive press releases and public policy statements from the AIBS Public Policy Office. To sign up for this new service, please go to *www.aibs.org/media-inquiries*.

Executive Director's Recent Blog Entries at *http://blogs.aibs.org/richardograd y/*

- Need scientific peer-review services? Call AIBS!
- Education at the National Evolutionary Synthesis Center
- AIBS Public Policy Office: Activities and growth
- Researchers and educators working together
- AIBS annual meetings through to 2009

Recent Articles Online at *www.actionbioscience.org*

Original article in English

- "Genomic Puzzles Old and New," by T. Ryan Gregory, assistant professor in the Department of Integrative Biology at the University of Guelph, Canada, and creator of the Animal Genome Size Database

Spanish translations of previously posted articles

- "Las Colecciones de los Museos de Historia Natural en el Siglo XXI" [Natural History Museum Collections in the 21st Century], by Keith S. Thomson, director of the university museum and professor emeritus of natural history at Oxford, United Kingdom
- "Malaria, Alga, Amebas y Usted: Desenredando las Relaciones Eucarióticas" [Malaria, Algae, Amoeba, and You: Unraveling Eukaryotic Relationships], by Joel B. Dacks, research fellow at the Natural History Museum, London, and the University of Newcastle upon Tyne

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- New title for ASM's microbiology education journal
- American Society of Human Genetics' Katrina equipment and book drive
- AAAS's retired scientists volunteer program
- Upcoming conferences

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

Public Policy Report 31 July 2006

- OSTP and OMB release annual research and development memo
- Bush vetoes stem cell research bill
- Science policy employment opportunity at AIBS
- New in *BioScience:* "Senators Propose Fundamental Change to Scholarly Publishing"
- From the *Federal Register*

Public Policy Report for 17 July 2006

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- From the *Federal Register*

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ActionBioscience.org: *editor@actionbioscience.org*

Education Office: *smusante@aibs.org*
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Executive Director: *rogrady@aibs.org*
202-628-1500

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A Letter to the NEON Community

On 22 July 2006, Jim MacMahon, chairman of the NEON Board of Directors, posted the following letter online (*www.neoninc.org/archive/2006/07/a_letter_to_the.html*) to update the broad ecological community and others on NEON activities.

Dear Colleague:

It has been several months since the last update on the progress in planning the National Ecological Observatory Network (NEON). The NEON Board felt that we should get a status update out to the broad ecological community, as well as to nonecologists who have helped design NEON. While we have our own lists of people interested in NEON, others such as COREO and ESA were kind enough to send this note to their e-mail lists.

Where to start? The end of 2005 marked a transition from NEON as a simple NSF project to NEON as a formal, not-for-profit corporation in the District of Columbia, complete with bylaws, a conflict-of-interest policy for its governing body, IRS-sanctioned 501(c)(3) status, preparations to be certified by NSF to receive direct funding, and a Board of Directors initially composed of the former Senior Management Team. Over the next few months the Board and leadership of NEON will evolve. Such evolution occurs in nearly all large research programs as they reach different stages in their life histories.

Bruce Hayden, Bill Michener, Jeff Goldman, and our cadre of science associates who form the nexus of our Washington office that is sited with AIBS became deeply involved in developing several versions of documents that had to be completed and submitted on a very tight schedule to compete for Major Research Equipment and Facilities Construction (MREFC) funds from NSF under its Large Research Facility Projects requirements. It should be of special interest to our community that MREFC funds have never before been accessed by a biology project. The downside of this is that both NSF and all of us are plowing new ground, sailing unfamiliar waters, or some other pithy way of expressing that we are doing things individual scientists do not usually have to contend with. The two NEON documents of greatest interest to the scientific community at the moment are the Integrated Science and Education Plan (ISEP) and the Networking and Informatics Baseline Design (NIBD). Both of these can be found on the NEON website under the "Documents" section. A revised version of the ISEP, informed by external review, will be produced over the next few months.

The ISEP was the result of three workshops of more than 150 scientists that developed the scientific questions and general design of NEON. This was followed by elaboration of these plans by the Senior Management Team with the addition of about six other colleagues. This group was termed the National Network Design Committee. There was a lot of back and forth about what we wanted to do, what could we do, how do we get the best science, how can we best phrase the questions we want to address, and on and on. Several times in this period, small committees of scientists and technologically sophisticated colleagues were invited to review the products and changes were made. The scientists and committees involved in planning NEON to this point, including the Board of Directors, are available on the NEON website in the "People" section. Developing NEON, at least to me, has always been an organic process where we expect constant change as we sharpen the program. Many of us have changed our positions several times to this point in NEON's development and we will change them again in the future. As I imply above, change and adaptive management are our only constants at this time.

Both the NIBD and ISEP have undergone merit review by NSF. The NIBD was favorably reviewed and accepted by NSF. The ISEP was merit reviewed by a panel in April. This review was followed by a second merit review in May where NEON Inc. met with the second panel. Following these reviews, the NEON Inc. Board of Directors had the opportunity to respond, in person, to NSF.

The two ISEP panel reviews had a number of very pointed observations that suggested changes in some of the structure of NEON governance, the deployment of equipment, and an expansion of the very small experimental program that was envisioned at the time. By the time the NEON team met with the NSF leadership on 14 June 2006, several changes had already been suggested by the NEON Board of Directors. These suggestions not only addressed the criticisms in the reviews but also improved the program, both structurally and scientifically.

The next step is to convene a new committee to make the final revisions to the ISEP. The NEON Board of Directors, in consultation with NSF, has worked to develop this committee so that it includes a broad and diverse membership. This committee will begin its work immediately. Then, as the final ISEP is finished, Requests for Information (RFI) will be released to the community so that consortia can align themselves to implement the NEON plan.

So where are we with NEON? First and foremost, NEON is alive and well. Candidly, it is gratifying to put to rest the gloom and doom that I have heard from some in the community. Second, we are moving forward rapidly in evolving this organic entity called NEON into a research program that ecologists, other scientists, educators, and engineers, and indeed the nation, will be proud of. The recent changes will increase community involvement in NEON, provide for the possibility of experiments, and give more latitude to the consortia that will form the NEON domains, with regard to implementation. And all of this can and will be done without sacrificing the continental scale of NEON and its focus on scientific questions that are of scientific as well as national interest.

(continued)

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I wish that more details could be included in this note, but there is still work to be done before we roll out the next iteration of the NEON program plans. By my count, over 1500 individuals have been involved in NEON to this point. We want to thank all of those NEON designers for their help. Without them there would be no NEON. We also want encourage all of you to keep track of NEON on the NEON website, and we hope that when you are called to provide help you will be excited to do so.

Personally, NEON has been an emotional roller coaster. I remember the early days, nearly a decade ago, when I spoke with NSF about a project, now called NEON. I got excited about the concept until not much happened and my interest lagged. Enthusiasm began to return when NSF funded AIBS to sponsor workshops and meetings to discuss NEON under the IBRCS banner. Then when our team was awarded the cooperative agreement to help design NEON, I was ebullient, but when the planning work piled up and some of the reviews voiced criticisms, I regressed for a few days. The current improvements have buoyed my spirits, and this time, unabashedly, I believe I will be on a permanent high.

It's worth repeating: NEON is alive and well and will continue to evolve until it matures. Right now it is looking like a vibrant young entity that will grow and learn. Its potential is truly remarkable and I am proud to work with the hundreds of you who have gotten us to this point.

Sincerely,

Jim

Jim MacMahon
Chairman, NEON Board of Directors
Trustee Professor of Biology and Director of the Ecology Center
Utah State University

MACROEVOLUTION:
Evolution above the Species Level

A symposium sponsored by the
American Institute of Biological Sciences,
the Biological Sciences Curriculum Studies, and
the National Evolutionary Synthesis Center

Saturday, October 14 · 8:30 a.m.–4:00 p.m.
at the
National Association of Biology Teachers 2006 Annual Conference
Albuquerque, NM

How do new species and higher taxa originate? How do major innovations, such as sexual reproduction, flowers, and insect, bird, and bat wings, evolve? Basic mechanisms of micro-evolution (evolutionary change below the species level, among populations, and within species) can produce macroevolutionary change (the evolution of novel traits, of species, and of lineages), if given enough time. Macroevolutionary studies explore the evolutionary forces and events that generate the characteristic features of new taxa, the radiations of lineages and their extinctions, and the evolutionary patterns that physical processes (e.g., continental drift) impose on organisms.

Presentations in this symposium will provide current information about macroevolutionary processes, the distinctions between and the interactions of micro- and macroevolution, the development and evolution of key innovations and major lineages of organisms, and the evidence for these processes.

Philip Gingerich
University of Michigan, Ann Arbor, MI
Fossils and the Origin of Whales

Nicole King
University of California, Berkeley, CA
From Protozoa to Metazoa: The Origin of Animal Multicellularity

Scott Hodges
University of California, Santa Barbara, CA
The Generation of Plant Biodiversity: Linking Historical Patterns with Evolutionary Processes

Jeff Levinton
State University of New York at Stony Brook, Stony Brook, NY
The Cambrian Explosion and the Nature of Evidence

David Jablonski
University of Chicago, Chicago, IL
Evolutionary Role of Extinctions and Recoveries in the History of Life

Nipam Patel
University of California, Berkeley, CA
The Evolution of Animal Body Plans: Insights from Arthropod Development

Classroom activities developed by the Biological Sciences Curriculum Studies will be integrated into the program so that educators can gain hands-on experience teaching about macroevolution and learn new ways to improve student understanding of the concept.

For more information, visit *www.aibs.org/special-symposia/2006_macroevolution.html*
or contact Susan Musante, education and outreach program manager for the American Institute of Biological Sciences (202.628.1500, ext. 206; e-mail: smusante@aibs.org).