

AIBS news

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AIBS *news*

MAY 2007/VOLUME 57 NUMBER 5

AIBS Marks Its 60th Anniversary at 2007 Annual Meeting with Program on Evolutionary Biology and Human Health

Additional sessions to include discussions of framing issues in scientific explanations, launch of online Encyclopedia of Life

AIBS will mark its 60th anniversary at its 2007 annual meeting, to be held 14–15 May 2007 at the Capital Hilton Hotel in Washington, DC. The theme of the meeting is “Evolutionary Biology and Human Health”; the program chair is 2007 AIBS president Douglas Futuyma, of the State University of New York at Stony Brook. The meeting is cosponsored by the Federation of American Societies for Experimental Biology.

Plenary speakers and discussion groups will approach the meeting’s topic from a variety of cross-cutting themes involving science, education, and public policy. Principles and methods of evolutionary biology are becoming increasingly important in many aspects of health science, among them understanding the human genome, the normal functions and malfunctions of human genes, and the origin and evolution of infectious diseases. These are among the topics addressed in sessions on infectious diseases, genes and genomics, and human adaptation and malfunction. The rest of the meeting’s program will be rounded out by events such as a contributed poster session, a diversity lunch, and the AIBS awards presentations.

The AIBS meeting will be held in conjunction with the annual meeting of the Natural Science Collections (NSC) Alliance. The AIBS and NSC Alliance meetings take place immediately after the International Union of Biological Sciences Conference and General Assembly, 9–12 May, also at the Capital Hilton. Following the annual meeting, the AIBS

Council of member societies and organizations will meet at the Capital Hilton, 15–16 May (contact: spotter@aibs.org).

AIBS Annual Meeting Program Monday, 14 May

8:30 a.m.

Opening remarks

- AIBS President, Douglas Futuyma, State University of New York at Stony Brook

8:45 a.m.

Keynote speaker

- Eric Green, National Human Genome Research Institute, National Institutes of Health: “Comparative Genome Sequencing: Using Evolution to Decode the Human Genome”

9:30 a.m.

Session A: Infectious Diseases

- Edward Holmes, Center for Infectious Disease Dynamics, The Pennsylvania State University: “The Evolution of Emerging Viruses”

10:15 a.m.

Coffee break and exhibits

10:45 a.m.

- Rustom Antia, Emory University: “Modeling the Emergence of Infectious Diseases”

11:30 a.m.

Session A: Discussion Session

- Plenary speakers Edward Holmes and Rustom Antia
- Irene A. Eckstrand, National Institute of General Medical Sciences, National Institutes of Health
- Stephen J. O’Brien, National Cancer Institute, National Institutes of Health
- Diane Griffin, Johns Hopkins Bloomberg School of Public Health

**12:00 p.m. (Lunch break on your own)
Special event**

Diversity luncheon (separate registration required; see the meeting registration form)

- Speaker: Georgia M. Dunston, Director of Molecular Genetics, National Human Genome Center, Howard University: “Human Genome Variation in Human Identity and Health Disparities”

12:30 – 1:15 p.m.

Discussion group

“Education at the National Evolutionary Synthesis Center,” with Kristin Jenkins, NESCent, Durham, NC. Includes information on the NESCent conference, 23–26 May, “Evolution in Contemporary Human Populations: Medical, Genetic, and Behavioral Implications.”

1:30 p.m.

AIBS awards presentations

- Print Media Award: Kenneth R. Weiss and Usha Lee McFarling, for “Altered Oceans”
- Broadcast Media Award: David Baron, for “Bioko’s Endangered Monkeys”

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- Past-President's Award: Kent E. Holsinger, University of Connecticut
- President's Citation Award: Niles Eldredge, American Museum of Natural History
- Education Award: Carol A. Brewer, University of Montana
- Outstanding Service Award: William Murdoch, University of California, Santa Barbara
- Distinguished Scientist Award: Simon A. Levin, Princeton University

2:30 p.m.

Session B: Genes and Genomics

- Carlos Bustamante, Cornell University: "Computational Methods for Enabling Gene Mapping in Natural Populations and Domesticated Species"

3:15 p.m.

Coffee break and exhibits

3:45 p.m.

- Douglas C. Wallace, Center for Molecular and Mitochondrial Medicine and Genetics, Biological Chemistry, University of California, Irvine: "A Mitochondrial Paradigm of Metabolic and Degenerative Diseases, Cancer, and Aging: A Dawn for Evolutionary Medicine" (sponsored by the Federation of American Societies for Experimental Biology)

4:30 p.m.

Session B: Discussion Session

Plenary Speakers

- Carlos Bustamante and Douglas Wallace
- Stephen J. O'Brien, National Cancer Institute, National Institutes of Health
- Robert Fleischer, National Zoological Park, Smithsonian Institution
- Adam Fagen, National Academies

5:00 p.m.

Special discussion groups

Session 1

"Framing Science: The Road to 2008 and Beyond"

- Matthew Nisbet, School of Communication, American University

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- Chris Mooney, Washington correspondent, *Seed* magazine

Session 2

"Why Don't Doctors Learn Evolution, and What Can We Do about It?"

- Randolph Nesse, Evolution and Human Adaptation Program, University of Michigan
- Kenna Shaw, American Society of Human Genetics
- Joseph McInerney, National Coalition for Health Professional Education in Genetics

Session 3

"The Encyclopedia of Life: A Web Site for Every Species"

- James L. Edwards, Global Biodiversity Information Facility

6:00 p.m.

Dinner on your own

8:00–10:00 p.m.

Welcome reception, poster session, and exhibits

Tuesday, 15 May

9:00 a.m.

Session C: Human Adaptation and Malfunction

- Sarah Tishkoff, University of Maryland: "Genetic Variation and Adaptation in Africa: Implications for Human Evolution and Disease"

9:45 a.m.

- Martin Nowak, Harvard University: "Evolutionary Dynamics of Cancer"

10:30 a.m.

Coffee break and exhibits

11:00 a.m.

Session C: Discussion Session

- Plenary speakers Sarah Tishkoff and Martin Nowak
- Jay Labov, National Academy of Sciences
- Kenna Shaw, American Society of Human Genetics

11:45 a.m.

Endnote speaker

- Randolph Nesse, Evolution and Human Adaptation Program, University of Michigan: "Evolutionary Medicine is Flowering; How Can We Help It Set Seed?"

12:30 p.m.

Meeting adjourns

For more information about the meeting, please visit www.aibs.org/annual-meeting/annual_meeting_2007.html.

AIBS Council to Meet 15–16 May

The 2007 meeting of the AIBS Council of member societies and organizations will be held 15 May (2:00–5:30 p.m.) and 16 May (9:00 a.m.–12:30 p.m.) at the Capital Hilton Hotel, 1001 16th Street, NW, Washington, DC 20036. This meeting will take place immediately after the 2007 AIBS annual meeting, "Evolutionary Biology and Human Health," which will be held in the same hotel. The meeting will focus on opportunities for collaborative action among the AIBS membership on research, education, and public policy issues.

Tuesday, 15 May

2:00–3:00 p.m.

Welcome

Agenda overview and brief update on AIBS programs and operations (public policy, education, diversity affairs, science programs, and finances)

- AIBS Board and staff

3:00–3:30 p.m.

Progress report and discussion

BioOne and the publishing environment for nonprofit electronic journals

- Mark Kurtz, director of business development, BioOne
- Lauren Kane, manager of library and publisher relations, BioOne

3:30–4:00 p.m.

Project launch discussion

The Encyclopedia of Life: A Web site for every species

- James Edwards, executive secretary, Global Biodiversity Information Facility, Denmark

- Thomas Garnett, associate director for digital library and information systems, Smithsonian Institution Libraries

4:00–4:15 p.m.

Break

4:15–4:45 p.m.

Progress report and discussion

Workshops on data sharing in ecology, evolution, and organismal biology

- Clifford Duke, director of science programs, Ecological Society of America
- Samuel M. Scheiner, program director, Division of Environmental Biology, National Science Foundation

4:45–5:30 p.m.

General discussion

Proposal from the AIBS Council of agenda items for the following day

Wednesday, 16 May

9:00–9:15 a.m.

Setting the agenda for the morning

9:15–9:45 a.m.

Progress report

Interagency Working Group on Scientific Collections and its activities

- Judith Skog, Deputy Division Director, Division for Biological Infrastructure, National Science Foundation

9:45–10:00 a.m.

Feasibility discussion (initiative from 2006 Council meeting)

AIBS is working with and sharing costs with member organizations to produce "State of the Science" reports for posting online and hard-copy distribution.

10:00–11:00 a.m.

Project launch discussion (initiative from 2006 Council meeting)

Year of Science 2009 (www.yearofscience2009.org) and the Coalition on the Public Understanding of Science (www.copusproject.org)

- AIBS staff and Public Understanding of Science Committee

- Jay Labov, senior advisor for education and communications, National Academy of Sciences

- Barbara Kline Pope, executive director for communications and the National Academies Press, National Academies

- Jack Hehn, director of education, American Institute of Physics

11:00–11:15 a.m.

Break

11:15 a.m.–12:30 p.m.

Old business

New business

Adjourn

See www.aibs.org/council-news for more information, or contact Richard O'Grady (e-mail: rogrady@aibs.org).

AIBS Honors Outstanding Contributions to the Biological Sciences

Each year AIBS presents awards to eminent individuals or groups for outstanding contributions to the biological sciences. AIBS is pleased to announce the following award winners for 2007:

- Distinguished Scientist Award: Simon A. Levin, Princeton University
- Outstanding Service Award: William Murdoch, University of California, Santa Barbara
- Education Award: Carol A. Brewer, University of Montana
- President's Citation Award: Niles Eldredge, American Museum of Natural History, New York
- Past-President's Award: Kent E. Holsinger, University of Connecticut
- Print Media Award: Kenneth R. Weiss and Usha Lee McFarling, *Los Angeles Times*
- Broadcast Media Award: David Baron, *The World*

The awards ceremony will take place on 14 May at the AIBS annual meeting, to be held at in the Capital Hilton Hotel in Washington, DC.

AIBS president Douglas Futuyma and executive director Richard O'Grady said in a joint statement, "We are pleased to honor these talented and dedicated

individuals. From a variety of backgrounds, they have all made significant positive contributions to the field of biology.”

For more information on the AIBS annual awards, see www.aibs.org/about-aibs/awards.html. For more information on the 2007 awards ceremony, see www.aibs.org/annual-meeting/annual_meeting_2007.html.

Below are brief descriptions of the award winners.



Simon A. Levin will receive the Distinguished Scientist Award, presented to individuals who have made significant scientific contributions to the biological sciences.

Levin is the George M. Moffett Professor of Biology and the director of the Center for Biocomplexity at Princeton University. He is also a prolific author whose contributions have helped shape modern ecology. His research on the loss of biodiversity due to human impact has led to new methods of environmental protection. Among his many awards and honors are the 2005 Kyoto Prize in Basic Sciences and the 2004 Heineken Prize for Environmental Sciences.



William Murdoch will receive the Outstanding Service Award, presented in recognition of an individual's (or organization's) noteworthy service to the biological sciences. Murdoch is the Charles A. Storke II Professor of Ecology at the University of California, Santa Barbara. One of the foremost ecologists in the world, Murdoch has been awarded a Guggenheim Fellowship, the President's Award from the American Society of Naturalists, and the Robert MacArthur award from the Ecological Society of America. He was the founding director of the National Center for Ecological Analysis and Synthesis, and he is editor in chief of *Issues in Ecology* and a member of the board of directors of The Nature Conservancy.



Carol A. Brewer will receive the Education Award, presented to an individual (or group) who has made significant contributions to education in the biological sciences, at any level of formal or informal education. At the University of Montana, Brewer serves as the associate dean of the College of Arts and Sciences. Her efforts to improve scientific literacy reach diverse audiences through projects that interconnect the general public, educators, and scientists. Especially noteworthy in this regard is her work heading the educational initiatives of the National Ecological Observatory Network. She encourages collaboration between scientists and educators, trains teachers to use their schoolyards for ecological investigations with students, and practices new assessment strategies to clearly connect teaching and learning.



Niles Eldredge will receive the President's Citation Award, which recognizes meritorious accomplishments by an individual (or group) in the biological sciences. Eldredge currently serves as curator in the Department of Invertebrates at the American Museum of Natural History and as an adjunct professor at the City University of New York. He has made enormous contributions to making the general public aware of the central importance of evolution and biodiversity to all of modern biology. Most recently, Eldredge launched the journal *Evolution: Education and Outreach*, and he was the driving force behind the wildly successful “Darwin” exhibit at the American Museum of Natural History (www.amnh.org/exhibitions/darwin/), which gave hundreds of thousands of visitors an in-depth understanding of the central role that evolutionary thinking plays in all of modern biology.

Kent E. Holsinger will receive the Past-President's Award, which recognizes the services of the immediate past-president

of AIBS. Holsinger is a professor in the Department of Ecology and Evolutionary Biology and an adjunct professor in the Department of Statistics at the University of Connecticut. His research encompasses three broad areas: the evolution of plant reproductive systems, the genetics of geographically structured populations, and the application of basic biological principles to conservation problems. He has served as chair of the board of directors for the Connecticut State Museum of Natural History, vice-chair for science and stewardship of The Nature Conservancy Connecticut Chapter, a member of the editorial board of *Conservation Biology*, and an officer of the Botanical Society of America. His leadership and service to AIBS go back more than a decade, with numerous board and committee appointments to cross-disciplinary projects, including the BioOne online journals initiative, the National Ecological Observatory Network, the Coalition on the Public Understanding of Science, and the Year of Science 2009.



Kenneth R. Weiss and Usha Lee McFarling will receive the Print Media Award for their series “Altered Oceans,” which appeared in the *Los Angeles Times* 30 July–3 August 2006. They traveled great distances to capture the story of the oceans' transformation in light of human activity. The series frighteningly portrays the decline of fish and mammal populations and the proliferation of more primitive species, such as algae, jellyfish, and bacteria. Weiss has been reporting on the oceans for five years for the *Los Angeles Times*. McFarling, who has reported on topics related to earth science and the space program, has recently expanded her portfolio to include the effects of global climate change, with a focus on the Arctic.

David Baron will receive the Broadcast Media Award for “Bioko's Endangered Monkeys,” originally aired 5 January 2006 on PRI's series *The World*. Baron traveled to Bioko Island, off Africa's western coast, to research how

rare primate species are being driven further toward extinction by human consumption. He is an award-winning journalist whose broadcasts and books demonstrate his passion for science and his adventurous spirit. He spent much of his career at National Public Radio, where he reported on science, medicine, technology, and the environment for *All Things Considered*. He is currently the global development editor for *The World*, a coproduction of the BBC World Service, PRI, and WGBH Boston.

AIBS, ESA Provide FY 2008 Budget Analysis

Robert Gropp, AIBS policy director, and Nadine Lynn, public affairs director of the Ecological Society of America, teamed to provide an analysis of the fiscal year (FY) 2008 budget request for biological and ecological sciences programs in the federal government.

The analysis, which appears as a chapter in *AAAS Report XXXII: Research and Development FY 2008*, offers insights into recent federal policy initiatives that affect federal funding for the biological sciences. The relatively brief analysis provides insights into the recent funding patterns and policy directions of six federal agencies that administer intramural and extramural research programs for the biological sciences: the National Science Foundation, the US Department of Agriculture, NOAA (National Oceanic and Atmospheric Administration), the Environmental Protection Agency, the Department of Energy, and the US Geological Survey. Individuals interested in keeping up to date on federal budget developments should visit the AIBS Public Policy Web site (www.aibs.org/public-policy/) or sign up to receive free, biweekly, electronic public policy reports from the AIBS Public Policy Office.

NESCent Conference to Explore Connections between Medicine and Evolution

The National Evolutionary Synthesis Center (NESCent) will host a conference, "Evolution in Contemporary Human Populations: Medical, Genetic, and Behavioral Implications," 23–26 May,

at the NESCent headquarters in Durham, North Carolina.

Organized by Stephen Stearns (Yale University), Diddahally R. Govindaraju (Boston University School of Medicine and Framingham Heart Study Genetics Laboratory), and Peter Byers (University of Washington), the conference will explore the connections between medicine and evolution and bring together leading researchers from evolutionary biology, medicine, human biology and genetics, and public health. The objective will be to find common ground among these fields and encourage communication and collaboration in addressing medical issues through evolutionary research.

For further information about the conference, contact Kristin Jenkins, NESCent education and outreach program manager (telephone: 919-668-4544; e-mail: kjenkins@nescent.org), or visit www.nescent.org.

The Scientific and Educational Uses of NEON

The Ecological Society of America (ESA) hosted a Webcast on the educational and scientific uses of the National Ecological Observatory Network (NEON) on 21 March 2007. Panelists at the event were ESA executive director Katherine McCarter, National Science Foundation (NSF) assistant director (Directorate of Biological Sciences) James P. Collins, NEON chief executive officer David Schimel, and ESA education director Jason Taylor.

Survey results

Taylor described the ESA online survey of NEON science and education and summarized key results from the 450 participants who responded to the questionnaire. The majority of respondents (70%) are from academia. Prior to participating in the survey, 91% of the respondents had heard of NEON and 58% had engaged in NEON discussions at ESA, LTER, or NEON meetings, or with colleagues. A majority of respondents (72%) anticipate using data from the NEON network, and 76% said they would use data from

environmental gradients. More than 80% think that open access policies will have a positive effect on student or postdoc use of NEON data.

Respondents mentioned a number of incentives to their conducting research at NEON sites: collaboration opportunities, data accessibility and integrity, affordable housing, funding, on-site staff, facility and equipment access, and how well NEON sites and data will integrate with existing research. Barriers to conducting research at NEON sites include the cost of accessing a site and its facilities and equipment; lack of relevancy of NEON site locations and data streams to a researcher's interests; distance of a NEON site from a researcher's home institution; site overcrowding, overuse, or abundance; and data quality and data ownership issues.

Questions and answers

The survey summary was followed by questions and answers from the community. Many of the questions posed to the panel by telephone and text message echoed survey questions. On the issue of data policy, Schimel noted that NEON, Inc., was creating as open a data policy as possible, and that NEON data would be made available to researchers and educational users in near-real time via user-friendly portals. Schimel emphasized the importance of undergraduate access to NEON data for training the next generation of ecologists. He also noted that NEON partnerships with other agencies would help to drive the development of data-sharing arrangements, and that NEON data would be made readily available to a variety of partners.

In response to a question about NEON as an international entity, Collins and Schimel noted the importance of NEON to the development of GEOSS (Global Earth Observation System of Systems). Schimel also highlighted the Arctic observing partnership now forming with NEON and NSF's Office of Polar Programs, as well as opportunities for NEON collaboration with Canada, Mexico, and Caribbean partners.

A number of questions were related to the latest configuration of NEON design, including site locations and cyberinfrastructure. Schimel responded in detail, describing the sensor networks envisioned for core sites in wildland areas, research gradients, the regional and continental scale of the project, and how relocatable and mobile assets will extend the range of NEON data gathering and the capacity to respond to sudden events. Mobile labs not otherwise engaged in campaign-style operations could be used as roving teaching resources, giving high school students across the United States hands-on experience with advanced research instrumentation. (See www.neoninc.org for the research design basis for NEON relocatable systems.)

On the question of minority participation in NEON, Collins underscored the importance to NSF of broadening participation in the sciences. Schimel affirmed that same commitment for NEON, noting that while many ecological research deployments are limited to remote, pristine locations, NEON facilities will be deployed in all parts of the United States, including urban-suburban-exurban areas, creating educational and training opportunities for a variety of geographically underserved populations.

Several questions focused on the use of NEON data for education, and especially access by undergraduate users. Schimel stressed that colleagues in the science and education community are currently working on refining ideas and possibilities in these areas for NEON. He also emphasized that as a major research equipment and facilities construction program, NEON is required to be transformational, and that ecological scientists

of all generations have a retraining experience ahead of them that will enable advances in how ecological research is conducted and taught. At the end of the Webcast, Schimel invited ongoing comment from the community on NEON education and science issues, noting that now is the time for the community to contribute to the final design and effectiveness of NEON as it prepares for its NSF reviews in 2007.

Recent Articles Online at www.actionbioscience.org

Original articles in English

- “Genetic Testing to Predict Disease: Ethical, Legal, and Social Implications,” by Linda MacDonald Glenn, Alden March Bioethics Institute and College of Nursing and Health Sciences, University of Vermont
- “Looking for Ms. or Mr. Gene Right? Premarital Genetic Screening,” by Gil Siegal, chair of the Center for Health Law and Bioethics, Ono College, Israel, and visiting professor, University of Virginia Law School
- “The Amphibian Ark,” by Kevin C. Zippel, Conservation Breeding Specialist Group, World Conservation Union

Lesson for classroom activities

- “Rewilding North America,” lesson by Kristin Jenkins, National Evolutionary Synthesis Center, to accompany the interview with Connie Barlow, “Rewilding Megafauna: Lions and Camels in North America?”

Spanish translation of previously posted article

- “Los Fósiles y el Origen de las Ballena” [Fossils and the Origin of Whales], interview with Philip Gingerich, University of Michigan

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

Public Policy Report for 2 April 2007

- House adopts budget
- Major changes at Smithsonian, NMNH
- Russian Academy asserts autonomy
- Education releases data about post-secondary faculty
- ESA, C-FARE, Tri-Societies brief Capitol Hill
- USGS releases report on stream flow and nutrient delivery from the MS River to the Gulf of Mexico
- New in *BioScience*: “Transforming the Rules on Federal Regulations”
- Graduate student science policy internship
- Plan to attend: 2007 AIBS annual meeting
- From the *Federal Register*

Public Policy Report for 19 March 2007

- House committee approves four bills
- America COMPETES act introduced in Senate
- EU launches new research funding organization
- Climate change and wildlife update
- SETAC–North America issues statement about science in the classroom
- From the *Federal Register*

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