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AIBS*news*

SEPTEMBER 2010/VOLUME 60 NUMBER 8

AIBS Offices Have Moved

Effective 15 August, AIBS Headquarters—including the Executive Office, the Education Office, the Publications/*BioScience* Office, and the Membership and Community Programs Office—has moved to 1900 Campus Commons Drive, Suite 200, Reston, VA 20191.

The AIBS Public Policy Office will also be relocating within Washington, DC. Details about the new location are forthcoming.

The AIBS Business Office remains at 1313 Dolley Madison Boulevard, Suite 402, McLean, VA 22101, and the AIBS Scientific Peer Advisory and Review Services Office and the AIBS IT Office remain at 1900 Campus Commons Drive, Suite 200, Reston, VA 20191.

The 1444 I Street address in Washington, DC is no longer operational. Questions? Contact Richard O'Grady, AIBS executive director, at rogrady@aibs.org.

Research Finds Alaska Harbor Seal Stocks Too Depleted for Management

The harbor seal (*Phoca vitulina*) plays a central role in the diet and culture of native Alaskan communities. Not only are seals important to Alaskan people but they are also important as predator and prey animals, and they live in a nearly unbroken sweep of coast from Dixon Entrance south of Juneau to Kuskokwim Bay in the Bering Sea.

But since the 1970s, the Alaskan harbor seal population—divided into three "stocks" for wildlife management purposes—has declined precipitously. West of the Gulf of Alaska, populations have dropped 50 to 90 percent, but the decrease is erratic; populations are relatively stable in the southeast. The causes of the decline are unknown—ideas include predation or competition from sea lions or sharks, resource competition from recently returned humpback whales, pollution, and rising temperatures.

In 2005, in response to a request by the National Marine Fisheries Service, the Southwest Fisheries Science Center and the Alaska Native Harbor Seal Commission submitted the report *The Analysis of Population Genetic Structure in Alaskan Harbor Seals (*Phoca vitulina*) as a Framework for the Identification of Management Stocks*, by O'Corry-Crowe and colleagues. AIBS SPARS (Scientific Peer Advisory and Review Services) directed its peer review.

The panel reviewed samples of 881 harbor seals from 180 sites, evaluating population subdivisions and seal dispersal patterns using mitochondrial DNA. The data indicated that the three stock units the state uses to manage marine mammal populations inappropriately group together up to 12 smaller, genetically distinct populations. The panel concluded that this approach risks the extirpation of the smaller subgroups, reducing the genetic diversity and variation among species that allows populations to adapt to environmental changes, resist certain diseases, and avoid inbreeding.

The O'Corry-Crowe report also suggested that the spatially erratic nature of the drops in harbor seal population actually reflect unrecognized subpopulation diversity. The report stated that the population declines were occurring "on similar spatial scales to the genetic findings presented," and that declines did not correspond "to currently recognized stock structure."

After the two-day review in Juneau, the three on-site SPARS peer reviewers agreed with the investigators' conclusions generally, but recognized that sample coverage in data collection had been limited. It is tremendously difficult and expensive to sample or count harbor seals: They are difficult to identify in the water, where they spend most of their time.

Because it's so hard to monitor harbor seals, researchers recognized that identification of meaningful management stocks should incorporate traditional Alaskan ecological knowledge. In fact, scientists monitoring Alaska wildlife routinely collaborate with native hunters. Since 1997, indigenous hunters, the only group legally allowed to hunt harbor seals, have provided the Alaska Native Harbor Seal Commission with biosamples of their kills. Not only do native hunters work with scientists to collect tangible biological samples but because a subsistence lifestyle requires exceptional skill and traditional knowledge of resources and the environment, native hunters are also a valuable resource for qualitative information that guides scientific inquiry.

Recent Executive Director's Blog Entry Online at *http://blogs.aibs.org/richardogrady*

- AIBS Strategic Planning Exploring the Most Useful Role for AIBS as a Professional Association for Biology

American Institute of Biological Sciences

I N S I D E

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Recent Executive Director's Blog Entry Online at *http://blogs.aibs.org/richardogrady*

Recent Articles Online at *www.actionbioscience.org*

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Recent Articles Online at *www.actionbioscience.org*

Original articles in English

- "Extreme Environments: Is There Life in Sea Ice?" In this interview, Jody Deming, of the University of Washington, Seattle, explains her research in the Arctic region and how sea ice provides an unusual habitat for organisms. Studies of sea ice ecosystems hold promise for understanding extremophile life not only on Earth but also beyond our planet. Read the article at *www.actionbioscience.org/newfrontiers/deming.html*.

- "Light Pollution and Ecosystems," by Travis Longcore, of the University of Southern California, and Catherine Rich, of The Urban Wildlands Group in Los Angeles. Artificial light at night acts as a pollutant, with significant and adverse impacts to ecosystems. In this article, the authors provide evidence that light pollution can cause disorientation, disrupt reproduction, and change the dynamics of competition. Read the article at *www.actionbioscience.org/environment/longcore_rich.html*.

- "Urban Coyotes," by John A. Shivik, of Utah State University. In this article, Shivik examines why coyotes are increasingly seen in urban areas. Are they moving into our homes, or are we moving into theirs? Read the article at *www.actionbioscience.org/biodiversity/shivik.html*.

Spanish translation of a previously posted article

- "Clonación de Animales: La granja del viejo MacDonald ya no es lo que solía ser" [Animal Cloning: Old MacDonald's Farm Is Not What It Used To Be], by Lauren Pecorino, of the University of Greenwich, United Kingdom. In this article, Pecorino illustrates some of the benefits of animal cloning, such as biomedical research and the preservation of endangered species. Read the article in Spanish at *www.actionbioscience.org/esp/biotecnologia/pecorino.html* or in English at *www.actionbioscience.org/biotech/pecorino.html*.

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Recent Public Policy Reports Online at *www.aibs.org/public-policy-reports*

Public Policy Report for 6 July 2010

- **AIBS President-elect shares thoughts on future of biology with House subcommittee.** On 29 June, James P. Collins, AIBS president-elect and Virginia M. Ullman Professor of Natural History and the Environment at Arizona State University, testified before a House research and science education subcommittee hearing examining the future of the biological sciences. The hearing was spurred, in part, by the National Research Council's recent publication, *A New Biology for the 21st Century: Ensuring the United States Leads the Coming Biology Revolution.* Funded by the National Science Foundation, the National Institutes of Health, and the Department of Energy, the report makes recommendations for a "new biology" that can advance basic research and solve world problems in the areas of environment, energy, health, and agriculture.

- **President Obama orders risk-based security measures for select agents.** In an executive order issued on 2 July, President Obama called for major changes to the government's management and oversight of biological select agents and toxins. The National Select Agents Registry Program, which regulates the use of dangerous pathogens and toxins in research, will now be required to identify and better secure biological agents and toxins with greater risk for misuse.

- **House begins to consider FY 2011 appropriations.** Running far behind schedule, the House Appropriations Committee has

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begun work on the 12 spending bills that would fund the federal government in fiscal year 2011. Since 24 June, six proposals have advanced from subcommittees. Of interest to many in the scientific community, the measure that would appropriate funding for the National Science Foundation and several other science agencies was approved by the commerce, justice, and science appropriations subcommittee on 29 June.

- **Penn State clears climate researcher of allegations of wrongdoing.** Michael Mann, a well-known climate scientist who has been accused by climate skeptics of manipulating climate data in order to propagate the "myth" of climate change, has been cleared by his employer of charges of data manipulation. Mann was previously exonerated by Penn State University of charges of data suppression, destruction of e-mails, and misuse of confidential data.

- **Professional development: AIBS workshops on communicating science to the media and policymakers.** Staffed by professionals with years of experience working with scientists, lawmakers, and opinion shapers, the AIBS Public Policy Office provides public presentations and small-group training programs that help scientists and educators become effective advocates for science. Visit *www.aibs.org/public-policy/policy_training.html* for more information.

Public Policy Report for 21 June 2010

- **White House directs agencies to cut budgets in 2012.** The Office of Management and Budget has directed federal agencies to cut nonsecurity spending by 5 percent in fiscal year (FY) 2012. Federal agencies are currently preparing their FY 2012 budget proposals. The announcement comes just months after President Obama proposed a three-year freeze on nonmilitiary discretionary spending. The move is being touted by some as needed fiscal restraint that will help control a ballooning federal deficit.

- **Senate defeats bid to limit EPA's regulation of greenhouse gases.** On 10 June, the Senate blocked a measure to limit the Environmental Protection Agency's (EPA) ability to regulate pollutants that cause climate change. The resolution (S. J. Res. 26) sponsored by Senator Lisa Murkowski (R–AK) would have overturned the EPA's finding that greenhouse gases endanger human health and welfare. This "endangerment finding" has been the legal basis for the EPA's authority to regulate greenhouse gases under the Clean Air Act. Earlier this month, the EPA finalized a rule that would limit the emissions of power plants and large manufacturing facilities starting in 2011.

- **United Nations to create science policy panel on biodiversity.** Delegates to the United Nations (UN) have given a green light to a plan to establish a new international panel to review the science underpinning policy decisions on biodiversity and ecosystem services. The Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services will be charged with "bridg[ing] the gulf between the wealth of scientific knowledge—documenting accelerating declines and degradation of the natural world—and the decisive government action required to reverse these damaging trends," according to the UN Environment Programme.

- **USGS releases first detailed national map of vegetation.** The US Geological Survey has created the first national map of land-cover vegetation. According to the agency, "The GAP [Gap Analysis Program] national land cover data… is the most detailed, consistent map of vegetative associations ever available for the United States and will help facilitate the planning and management of biological diversity on a regional and national scale." To access the map, visit *www.gap.uidaho.edu/landcoverviewer.html.*

Public Policy Report for 7 June 2010

- **President Obama to nominate engineer as next NSF director.** President Barack Obama has announced his intent to nominate Subra Suresh to serve as the next director of the National Science Foundation (NSF). Arden Bement stepped down as director of the NSF at the end of May; Cora Marrett is currently the acting director. Suresh is dean of the School of Engineering at the Massachusetts Institute of Technology. Since 1993, he has held joint faculty appointments in the departments of Mechanical Engineering and Biological Engineering, as well as the Division of Health Sciences and Technology.

- **Third time is the charm: House passes COMPETES Act.** On 28 May, the House of Representatives passed the America COMPETES Reauthorization Act. The legislation aims to stimulate innovation and improve science education by increasing funding authorizations for federal agencies that support basic research. The bill was passed by a vote of 262 to 150, which marked the end of a long and politically fractious journey for the measure through the chamber. The House had twice rejected the bill in recent weeks.

- **NAS releases final recommendations on stem cell research.** The National Academy of Sciences (NAS) Human Embryonic Stem Cell Research Advisory Committee has updated its guidelines for human embryonic stem cell research to reflect the creation of research guidelines by the National Institutes of Health (NIH). The committee recommends that NIH guidelines on stem cell research should supersede NAS guidelines where there is complete overlap. In other matters that are not addressed by the NIH's guidelines, such as nonfederally

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funded research, the guidelines developed by the NAS should continue to be used. The NAS offers guidance in several areas not covered by the NIH: derivation of new stem cell lines, stem cell lines not derived from excess *in vitro* fertilization embryos, and broader research uses of stem cells.

- **Plan finalized for digitization of biological collections.** The biological collections community has finalized a strategic plan to digitize and mobilize images and data associated with biological research collections. The 10-year national effort is the product of two workshops held at the National Evolutionary Synthesis Center in 2010, as well as surveys of 291 federal and approximately 600 federally supported collections.

Public Policy Report for 24 May 2010

- **House fails twice to pass COMPETES Act.** The House of Representatives has failed twice in the past two weeks to pass legislation that would reauthorize the America COMPETES Act. The legislation, which proponents contend would stimulate innovation and improve science education by increasing funding authorizations for federal agencies that support basic research, was first brought to the House floor on 13 May. After consideration of more than 50 amendments, Science Committee Ranking Member Ralph Hall (R–TX) moved to send the bill (HR 5116) back to the Science Committee. Hall's motion to recommit the legislation included instructions to cut $47.5 billion in authorizations over the next five years for the National Science Foundation, Department of Energy Office of Science, and National Institute of Standards and Technology, and to completely eliminate funding for the Advanced Research Projects Agency for Energy. Additionally, Hall wanted to ban the use of funds to pay the salaries of federal employees who have been disciplined for viewing pornography at work.

- **Senators Kerry, Lieberman release long-awaited climate bill.** After months of closed door negotiations, Senators John Kerry (D–MA) and Joseph Lieberman (I–CT) finally released a draft of their climate change mitigation legislation on 12 May. The release of the draft bill was considered a victory in itself by some, after the loss of cocollaborator Senator Lindsey Graham (R–SC) last month over Graham's concerns about the Senate's time line for addressing climate and immigration reform legislation.

- **Inspector General finds DOI lacks scientific integrity policy.** A new report issued by the Inspector General (IG) for the US Department of the Interior (DOI) finds that the department has failed to implement a comprehensive policy regarding scientific integrity. The IG found that the DOI violated a decade-old requirement from the Office of Science and Technology Policy to implement a scientific integrity policy to address scientific misconduct.

- **National Lab Day launches.** On 12 May, K–12 students in classrooms across the county connected with scientists and other professionals to engage in hands-on learning through the National Lab Day initiative. The event also drew participation from a number of scientists serving in the Obama administration, including Office of Science and Technology Policy Director John Holdren and NOAA Administrator Jane Lubchenco.

- **AIBS recognizes excellence in science and education.** AIBS recognized excellence in science and science education during an awards ceremony and lecture at the National Academies' Keck Center in Washington, DC, on 18 May. Each year, AIBS recognizes scientists, educators, and organizations for their leadership and contributions to science and education. Award categories are Distinguished Scientist, Outstanding Service, Education, and the President's Citation. Nominations for the various AIBS awards are reviewed and approved by the AIBS Awards Committee and Board of Directors.

Public Policy Report for 10 May 2010

- **House Science Committee passes COMPETES Act.** After a marathon daylong session during which nearly 60 amendments were considered, the House Committee on Science and Technology approved a reauthorization of the American COMPETES Act (HR 5116) on 28 April. The committee ultimately passed a version of the bill by a 29-8 vote.

- **House appropriations chairman to retire.** Representative David Obey (D–WI), chair of the House Committee on Appropriations, announced on 5 May that he will not seek reelection to a 22nd term this fall.

- **Senate confirms environmental chemist for new ocean policy post.** Larry Robinson, professor at the Environmental Sciences Institute at Florida A&M University, was confirmed by the Senate on 6 May as assistant secretary for conservation and management at the Department of Commerce. The new post, created by NOAA administrator Jane Lubchenco, will oversee NOAA's environmental policy.

- **House resolutions recognize NSF, science education.** The House of Representatives has approved two resolutions related to the nation's scientific enterprise. One of the resolutions celebrates the 60th anniversary of the National Science Foundation; the other recognizes National Lab Day, a joint effort between educators and scientists that aims to enhance inquiry-based learning in the classroom. The resolutions passed with overwhelming majorities.

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