

Answering Challenges to Biological Research and Education

Author: HOLSINGER, KENT E.

Source: BioScience, 56(1): 3

Published By: American Institute of Biological Sciences

URL: https://doi.org/10.1641/0006-

3568(2006)056[0003:ACTBRA]2.0.CO;2

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

PUBLISHER Richard T. O'Grady

EDITOR IN CHIEF Timothy M. Beardsley

SENIOR EDITOR Donna Daniels Verdier

PRODUCTION MANAGER / ART DIRECTOR

PUBLICATIONS ASSISTANT Jennifer A. Williams

Editors: Eve on Education: Susan Musante (educationoffice@aibs.org); Feature articles: Cathy Lundmark (features@aibs.org); Washington Watch: Robert E. Gropp (publicpolicy@aibs.org).

Editorial Associate: Barbara J. Orton.

Editorial Board: Agriculture: Sonny Ramaswamy; Animal Behavior: Janice Moore; Animal Development: Paula Mabee; Botany: Gregory J. Anderson; Cell Biology: Randy Wayne; Ecology: Scott Collins, Daniel Simberloff; Ecotoxicology: Judith S. Weis; Education: Gordon E. Uno; Environmental Policy: Gordon Brown, J. Michael Scott; Evolutionary Biology: James Mallet; Genetics and Evolution: Martin Tracey; History and Philosophy: Richard M. Burian; Invertebrate Biology: Kirk Fitzhugh; Landscape Ecology: Monica Turner; Microbiology: Edna S. Kaneshiro; Molecular Biology: David Hillis; Molecular Evolution and Genomics: David Rand; Neurobiology Cole Gilbert; Plant Development: Cynthia S. Jones Policy Forum: Eric A. Fischer; Population Biology: Ben Pierce; Professional Biologist: Jean Wyld; Sensing and Computation: Geoffrey M. Henebry; Statistics: E. Barry Moser; Vertebrate Biology: Harvey B. Lillywhite. Editorial Correspondence: 1444 I Street, NW, Suite 200, Washington, DC 20005; telephone: 202-628-1500; fax: 202-628-1509; e-mail: bioscience@aibs.org. Instructions for preparing a manuscript for BioScience can be found at www.aibs.org/bioscience/resources/Info _for_contribs. pdf.

Advertising: For information on both display and line classified advertisements and deadlines, contact John Rasanen, American Geological Institute; telephone: 703-379-2480, ext. 224; fax: 703-379-7563; e-mail: jrasanen@aibs.org.

BioScience (ISSN 0006-3568) is published monthly by the American Institute of Biological Sciences. To subscribe, call 1-800-992-2427, ext. 29. Individual membership: sustaining, \$90/yr; individual, \$70/yr; family, \$90/yr (includes \$36 for BioScience); emeritus, \$50/vr; K-12 teacher/administrator, \$45/vr (includes \$22 for BioScience); graduate and postdoctoral students, \$40/yr (includes \$21 for BioScience); undergrad uate and K-12 students, \$20/yr (includes \$15 for BioScience); lifetime, \$1400 (one-time fee) Institutional subscriptions: domestic, \$280/yr; foreign, \$336/yr. Single copies: \$14 plus shipping and handling for up to 20 copies; volume discounts available for more than 20 (call 1-800-992-2427, ext. 29). Subscription renewal month is shown in the four-digit year-month code in the upper right corner of the mailing label.

© 2006 American Institute of Biological Sciences. All rights reserved. Periodical postage paid at Washington, DC, and additional mailing offices

POSTMASTER: Send address changes to BioScience Circulation, AIBS, 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101. Printed in USA. AIBS authorizes photocopying for internal or personal use, provided the appropriate fee is paid directly to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923; telephone: 978-750-8400; fax: 978-750-4744; Web site: www.copyright.com. To photocopy articles for classroom use, request authorization, subject to conditions thereof, from the Academic Permissions Service at CCC, Each copy must say "@ [year] by the American Institute of Biological Sciences." Statements and opinions expressed in BioScience are those of the author(s) and do not necessarily reflect the official positions of the American Institute of Biological Sciences, the editors, the publisher, or the institutions with which the authors are affiliated. The editors, publisher, and AIBS disclaim any responsibility or liability for such material.

BioScience

Organisms from Molecules to the Environment

American Institute of Biological Sciences

Answering Challenges to Biological Research and Education

n 2 November 2005, President Bush asked Congress for \$7.1 billion to prepare the United States for a global epidemic of influenza. On 6 November, Olivia Judson, writing in the New York Times, reminded us that because flu viruses evolve very rapidly, "we can use our knowledge of evolutionary processes in powerful and practical ways, potentially saving the lives of tens of millions of people." Never has it been clearer that understanding biology is essential to improve human health and welfare.

Yet a few days later, on 8 November, the Kansas State Board of Education voted to adopt curriculum standards suggesting that intelligent design be taught as a scientific alternative to evolution. Fortunately, voters in Dover, Pennsylvania, were wiser. On the same day, they voted to remove eight school board members who had instructed ninthgrade biology teachers to read a statement about intelligent design in biology classes, replacing them with members opposed to that statement.

As the only professional society representing all biologists, AIBS plays a pivotal role in ensuring that public policy is informed by the best available biological knowledge. On the day the Kansas board issued its decision, for example, AIBS released a statement (www.aibs.org/position-statements/051108_kansas_board_of_.html) expressing its concern. In addition to issuing statements, AIBS staff work with a host of scientific societies and meet regularly with policymakers—agency personnel, congressional staff, senators, and representatives—to find ways to improve the quality of science teaching and to build a scientifically literate populace.

In early November, as the events noted above were unfolding, House and Senate conferees voted to increase the appropriation to the National Science Foundation (NSF) to \$5.65 billion, a \$180 million boost over the fiscal year 2005 level. While increased funding for NSF is welcome news, the total appropriation for fiscal year 2006 is 20 percent less than what the president requested from Congress to prepare the nation for a single disease. Yet some of the greatest threats to human health and well-being come from the enormous impacts humans impose on the global ecosystem, and NSF supplies about 65 percent of extramural funds for research aimed at understanding ecosystems and meeting the challenges facing them (see www.aaas.org/spp/rd/ 04pch19.htm).

AIBS is in the forefront of multisociety efforts to boost funding for basic research in biology. AIBS staff lead informal coalitions, such as the Biological and Ecological Sciences Coalition, and are in direct contact with legislators and senior congressional staff to ensure that biology has a seat at the table when decisions are made about funding for research and education.

But for AIBS to remain effective, we must be our members' voice. That means we must hear from you. We must know what issues matter to you and what challenges you face, whether in finding ways to convey the wonder and fascination of biology more effectively in the classroom; in communicating the results of your research to policymakers or to the general public; in ensuring that people of many cultural, ethnic, and religious backgrounds choose careers in biology; or in enhancing funding for biological education and research. AIBS is your society. Let us hear from you.

> KENT E. HOLSINGER President, AIBS