AIBS works in partnership with its member organizations to represent a broad segment of the biological community.

**Member Organizations**

Founding Members, 1947: American Physiological Society • American Society for Horticultural Science • American Society of Plant Physiologists • American Society of Zoologists • Botanical Society of America • Genetics Society of America • Limnological Society of America • Mycological Society of America • Poultry Science Association of America • Society for the Development of Growth • Society of American Bacteriologists

Current Members: American Arachnological Society • American Association of Botanical Gardens and Arboreta • American Bryological and Lichenological Society • American Fern Society • American Fisheries Society • American Malacological Society • American Museum of Natural History • American Ornithologists’ Union • American Phytopathological Society • American Society for Gravitational and Space Biology • American Society for Photobiology • American Society of Agronomy • American Society of Ichthyologists and Herpetologists • American Society of Limnology and Oceanography • American Society of Mammalogists • American Society of Naturalists • American Society of Parasitologists • American Society of Plant Biologists • American Society of Plant Taxonomists • American Type Culture Collection • Animal Behavior Society • Association for Tropical Biology and Conservation • Association of College and University Biology Educators • Association of Ecosystem Research Centers • Association of Southeastern Biologists • Biological Sciences Curriculum Study • BioQUEST Curriculum Consortium • Botanical Society of America • Cell Stress Society International • Cooper Ornithological Society • Cornell Center for the Environment • Council of Science Editors • Crop Science Society of America • Ecological Society of America • Entomological Society of America • Entomological Society of Canada • Estuarine Research Federation • Freshwater Mollusk Conservation Society • The Helminthological Society of Washington • Herpetologists’ League • Human Anatomy & Physiology Society • International Association for Landscape Ecology, US Region • International Society for Ecological Modelling • Kansas (Central States) Entomological Society • Mycological Society of America • National Association of Biology Teachers • National Association of Marine Laboratories • National Museum of Natural History • National Shellfisheries Association • Natural Areas Association • Natural Science Collections Alliance • NatureServe • New York Botanical Garden • North American Benthological Society • North American Lake Management Society • Organization for Tropical Studies • Organization of Biological Field Stations • The Orthopterists’ Society • Phi Sigma Biological Sciences Honor Society • Physiological Society of America • Poultry Science Association • Radiation Research Society • Society for Conservation Biology • Society for Economic Botany • Society for In Vitro Biology • Society for Industrial Microbiology • Society for Integrative and Comparative Biology • Society for Mathematical Biology • Society for Sedimentary Geology • Society for the Study of Amphibians and Reptiles • Society for the Study of Evolution • Society of Environmental Toxicology and Chemistry • Society of Nematologists • Society of Protozoologists • Society of Systematic Biologists • Society of Wetland Scientists • Soil Science Society of America • Southern Appalachian Botanical Society • Southwestern Association of Naturalists • Torrey Botanical Society • US Federation for Culture Collections • US Society for Ecological Economics • Weed Science Society of America • Western Society of Naturalists
Society needs the benefits of the biological sciences more now than at any time in its history. Issues of great national concern—loss of sustainable environments, threats to human health and well-being, maintenance of viable and abundant food supplies, and biosecurity, among many others—can be addressed only with ever-increasing biological knowledge and the broad dissemination of that knowledge to the scientific community, the general public, policy-makers, educators, and students of all ages.

The American Institute of Biological Sciences (AIBS) is dedicated to meeting these challenges. AIBS was established as a national umbrella organization for the biological sciences in 1947 by 11 scientific societies as part of the National Academy of Sciences. An independent non-profit organization since 1954, it has grown to represent more than 80 professional societies and organizations with a combined membership exceeding 240,000 scientists and educators. Throughout its history, AIBS has been led by internationally recognized officers, board members, and a council of member organizations, who, with professional staff and volunteers, have expanded AIBS programs to better serve science and society.

AIBS programs meet critical needs by
- promoting biological research nationally and internationally
- improving formal and informal biological science education for all ages and professions
- helping train the next generation of biologists, especially those from underrepresented groups
- disseminating up-to-date biological science to a broad audience
- providing information about biological science to policy-makers for better-informed decisions
- contributing scientific and management support to governmental and private research and education programs

AIBS activities must continue to grow if the biological science community is to foster coordinated and creative solutions to the challenges facing human societies everywhere.
Discoveries in the biological sciences affect the daily lives of all citizens. Humanity’s well-being is dependent upon knowledge in the medical, agricultural, and environmental sciences. Although scientific advances hold great promise for improving human welfare and conserving and restoring our environment, new challenges arise constantly. Meeting these challenges requires the continued growth of biological knowledge and its successful dissemination so that scientists, decision-makers, students, and the public at large can make informed choices.

The improvement of biological science literacy continues to be an underlying objective of all AIBS activities.

AIBS disseminates knowledge about the biological sciences through its journal, BioScience, the AIBS Web site, and other print and electronic communications. Notable among the latter is ActionBioscience.org, AIBS’s bilingual Web site (English and Spanish), providing K-16 teachers with free articles, lesson plans, and other resources on current topics in biology.

AIBS hosts symposia with special program content for teachers and the general public. Recent topics include bioethics, biodiversity, invasive species, and evolutionary biology. Plenary lectures from the symposia are made freely available online.
Providing Biological Science Education Resources

Early AIBS programs to improve biology education created the Biological Sciences Curriculum Study (BSCS), a non-profit organization that develops curricula and textbooks for schools and colleges. AIBS today also works on curricular recommendations for undergraduate biology with the National Research Council, authors of the 2003 report, Bio2010.

The AIBS publication, Review of Biological Instructional Materials for Secondary Schools, evaluates how well current textbooks meet the National Science Education Standards and provides a blueprint for improving instructional materials.

The AIBS journal, BioScience, is a favorite among teachers for classroom use. It carries many articles focusing on education and has a regular column, Eye on Education, that reports on advances in education and innovative teaching activities.

Developing Young Biologists

AIBS believes that love for the natural world and the desire to learn more about it is best nourished in our young. Thus, AIBS seeks to encourage the intellectual development of young biologists, including those in underrepresented groups, and helps direct them on career paths in biology. The AIBS Web site supplies basic information on careers and provides links to additional resources.

AIBS maintains student chapters to serve the intellectual and professional interests of students in the biological sciences. Through their individual and collective activities, chapter members are ambassadors for their chapter, biology department, and college or university, and for AIBS.
AIBS plays a unique role in promoting the integration of fundamental and applied biological sciences and transmitting that knowledge to researchers, decision-makers, educators, and the lay public. Through its internationally acclaimed journal, *BioScience*, AIBS publishes synthetic reviews and research reports within the environmental, agricultural, and organismal biological sciences.

In recent years scientific contributions to *BioScience* have reported analyses of—and solutions for—many of the most pressing problems facing this nation and the world at large, including combatting environmental degradation, improving resource management tools, advancing and sustaining agroecosystems, addressing the impacts of global change, and facing the challenges of bioterrorism and biosecurity.

**Environmental Science and Natural Resource Management**

A major research theme of the scientists and member organizations who belong to AIBS is the application of fundamental environmental science to managing our natural resources. Their research findings, published in *BioScience*, are necessary reading for resource scientists and managers everywhere.

AIBS brings to the scientific community, as well as to those who shape environmental management and policy, critical research data and interpretations of issues such as deforestation; human impacts on terrestrial, freshwater, and marine ecosystems; and the efficacy of management alternatives.
The Science of Agroecosystems

Agricultural ecosystems provide food, fiber, and shelter for the world’s population, yet at the same time agricultural, forestry, and fisheries practices are the primary activities leading to the loss of biological diversity, soil ecosystems, and wildland habitats. Maintaining the productivity of agroecosystems while conserving our natural environment is one of the world’s most pressing problems. Many AIBS member organizations are deeply involved with developing the science that underpins solutions to this global challenge.

AIBS publishes and disseminates new knowledge on critical issues such as agricultural sustainability, biocontrol of pests, environmental consequences of pesticides and herbicides, sustained productivity of our forests and fisheries, and protection of the abundance and quality of our water resources.

Human Well-Being in the Environment

Humans have been a part of Earth’s ecosystems for millennia. With the invention of agriculture, and later of advanced industrial technologies, humans have come to dominate and transform the very ecosystems that serve as our life support. Maintaining the ecological integrity of human societies within their environments is of particular concern to the scientific organizations and scientists who make up AIBS.

The science of human ecology is a recurrent theme in the pages of *BioScience*, including biodiversity in urban ecosystems, the link between environmental degradation and emergent diseases, the future of indigenous cultures, the human transport of invasive species, and our ethical relationship to other life on the planet. A scientific understanding of how societies have transformed and interacted with the biosphere is crucial for developing knowledge that advances human well-being and minimizes impacts on natural ecosystems.
Biosecurity
Confronting Threats to the Environment and Society

The emerging field of biosecurity is concerned with a broad variety of threats to natural and managed ecosystems, including invasive species, the potential impacts of genetically modified organisms on the environment, or the use of organisms as bio-weapons against people, agriculture, and other natural resources.

AIBS was an early leader in discussing the scientific research and policy implications of biosecurity, and that role has expanded as the field has become more important in our daily lives. The biological knowledge and technologies surrounding biosecurity issues are becoming more sophisticated, and researchers and policy-makers increasingly rely on the pages of BioScience to keep them informed.

BioScience
Understanding Scientific Discovery

Since 1964, AIBS’s publishing operations and staff have produced its premier journal, BioScience. This award-winning monthly publication, available by print and online subscription as well as on newsstands, provides its thousands of individual and library readers around the world with timely and authoritative peer-reviewed overviews of current research in biology, accompanied by essays and discussion sections on education, public policy, history, and the conceptual underpinnings of the biological sciences.

Renowned for its editorial standards and the accessibility of its writing, with a citation half-life of more than 10 years, BioScience also publishes collections of in-depth synthetic analyses of key research and policy topics. Drawing on the best scientific expertise, these special sections supply critical perspectives from different viewpoints, thus giving scholars, policy-makers, and educators an overview of current thinking and analysis not available elsewhere.

Topics of recent special sections include:
- Global Movement of Invasive Plants and Fungi
- Climate Change and Forest Ecosystems
- Agricultural Bioterrorism
- Dam Removal and River Restoration
- Tropical Island Streams
- Remote Sensing
Integrative and Organismal Biology

AIBS fosters integration across the discipline-based sciences of organismal biology, including ecology, evolutionary biology, population biology, systematics, behavior, and physiology. The interface of these disciplines with the chemical and physical sciences, and with cross-cutting research areas in biology such as molecular, genomic, and developmental biology have helped establish interdisciplinary approaches that are often collectively termed biocomplexity science. These fields of fundamental research provide the underpinnings for a multitude of applied research. AIBS seeks to advance these interdisciplinary approaches to understand the natural world and solve society’s most pressing problems.

The BioOne Consortium
Making Biological Knowledge Available to the World

AIBS has a long-standing commitment to making biological knowledge available to the widest possible audience. AIBS collaborated in the formation of an innovative consortium of scientific societies, libraries, and the private sector to provide cost-effective access to scientific articles in the biological, ecological, and environmental sciences. The result of this collaboration, BioOne, allows cross-linked Web-based access to more than 70 high-impact journals online—including the AIBS journal, BioScience—thus enabling non-profit scientific societies to disseminate their information worldwide. BioOne also participates in the World Health Organization’s HINARI program, which provides public institutions in more than 53 developing countries with free or nearly free access to major scientific journals. BioOne represents a new way for libraries and scientific societies to work together to advance scientific scholarship.
AIBS fosters communication between the biological science and public policy communities. At a time when biology figures so prominently in governmental actions, from public health to the environment, it is more important than ever that policy decisions be made with the best scientific knowledge available. Biologists and policy-makers alike must understand each other’s needs and realize how current and pending policies can benefit from the sharing of scientific information with decision-makers at all levels of government.

At the national level, AIBS represents the interests of biology through direct involvement with scientists and policy-makers, public advocacy, coalition building, and outreach programs. AIBS and its member organizations are involved with national policy decisions—and the international ramifications—affecting support for biological research and education, the improvement of biological infrastructure and human resources, and the use of biological knowledge to promote society’s well-being.

Helping Scientists Participate in Public Policy

As highly trained individuals, scientists have a special civic responsibility to participate in public policy decisions. Scientists can become engaged in public policy issues when they have information that is relevant, timely, and specific as to how their scientific expertise can be of use to policy-makers. AIBS is the acknowledged leader in providing biological scientists with public policy information and news. Through the AIBS Public Policy Office, member organizations as well as the broader biological community stay current on policy events with AIBS’s biweekly Public Policy Reports, the AIBS Federal Register Resource, and the monthly Washington Watch column. Action alerts and sign-on letters issued by the AIBS Public Policy Office allow biologists to act on current policy developments with contact information and suggested talking points.

Another vital function performed by AIBS is the expert support provided to members of the AIBS community when they come to Washington, such as for a meeting with their elected representatives, for AIBS’s annual Congressional Visits Day, or to give congressional testimony.
Training Scientists for Public Policy

Biologists learn about the policy process through hands-on training sessions conducted by AIBS public policy staff at scientific conferences. Students interested in policy careers earn recognition through the AIBS Emerging Public Policy Leader Award and gain experience through work at AIBS headquarters as policy assistants. Tools such as the *AIBS Congressional Handbook* and tips on responding to *Federal Register* notices make it easier for biologists to make their expertise heard and influence public policy.

Bridging the Gap between Science and Policy

AIBS staff meet frequently with policy leaders from the executive and legislative branches of the U.S. government, as well as with representatives of foreign governments. AIBS brings up-to-date biological science to policy-makers through AIBS reports, public roundtables at the National Press Club, briefings and “Biology Classrooms” on Capitol Hill, and other activities where leading scientists speak about current issues in the biological sciences. AIBS regularly features senior policy-makers as speakers at the AIBS Annual meeting, AIBS Council meeting, and special symposia.

Building Coalitions

AIBS builds and participates in coalitions, thereby unifying and strengthening the influence of scientists on policy decision-making. Coalitions include the Biological and Ecological Sciences Coalition—cofounded by AIBS—the Science, Engineering, and Technology Working Group, the Coalition for National Science Funding, and the USGS Coalition. AIBS staff meet with these groups and keep AIBS member organizations and biologists informed of important policy developments affecting research activity, funding, education, and workforce issues in the biological sciences.
Since its founding in the 1940s, AIBS has provided dedicated service and expertise to governmental agencies, charitable foundations, scientific societies, and the public. This service to America’s decision-makers and business leaders takes many forms, from conducting scientific peer review for federal research programs; organizing workshops for the National Science Foundation; producing briefings, reports, and analyses; and providing organizational support for meetings of all kinds.

AIBS Science Office

The AIBS Science Office works with the research community on issues of national scale and cross-disciplinary nature. Current activities involve distributed research and information networks and biological research facilities and infrastructure.

Infrastructure for Biology at Regional to Continental Scales

With support from the National Science Foundation, the AIBS Science Office manages IBRCS, a project that explores the infrastructure required for biological studies at broad spatial and temporal scales. A current focus of IBRCS is the National Ecological Observatory Network (NEON), a major NSF initiative to facilitate large-scale experimentation, long-term observation, and scientific synthesis that can only be conducted on a network of nationwide infrastructure and research sites. IBRCS develops recommendations for NEON configurations to study, among other topics, the six major challenges that the National Research Council has identified as top NEON priorities: biodiversity, biogeochemical cycles, climate change, ecology and evolution of infectious diseases, invasive species, and land and habitat use.
For more than 40 years, the AIBS Scientific Peer Advisory and Review Services division (SPARS) has provided crucial independent support services for the research efforts of the U.S. government, including the U.S. Army Medical Research and Materiel Command, the Office of Naval Research, the National Aeronautics and Space Administration, the National Science Foundation, and the Environmental Protection Agency, as well as many private foundations and other clients, including the Doris Duke Charitable Foundation, the Flight Attendant Medical Research Institute, and the National Council for Science and the Environment.

SPARS scientific, IT, project, and meetings management skills are deployed for both open-bidding and small-business set-aside contracts to: (1) review research proposals submitted to clients for funding; (2) monitor the progress of ongoing programs; (3) review private and state institutions, such as education and training programs; and (4) conduct preaward site visits. SPARS provides clients with turn-key operations for database services, RFP and LOI management, proposal tracking, evaluation criteria, and scoring methods—all conducted online as required by the client—plus panel-member recruitment, meetings services, critique writing and editing, and quality-control protocols. SPARS also conducts mail reviews of annual and final reports to help clients monitor a wide variety of ongoing research projects in a cost-effective manner.

AIBS SPARS: Unmatched in Peer Review

In the last few years alone, AIBS SPARS projects have involved several thousand research proposals, over 1,000 reviewers, and more than 100 AIBS organized panel meetings for research proposals in the following areas: Animal Laboratory Models • Aquaculture • Biomaterials • Bone Health • Bovine Spongiform Encephalopathy (Mad Cow Disease) • Breast Cancer • Brucellosis • Cardiopulmonary, Developmental, and Reproductive Physiology • Cell and Tissue Biology • Chemical Oceanography • Chemotherapy • Clinical Trials • Data Mining, Knowledge Harvesting, and Expert Systems • Developmental Biology • Environmental Quality, Remediation, and Toxicology • Epidemiology • Exobiology and Extreme Environments • Health Care Delivery • HIV/AIDS • Immunology • Infectious Diseases • Marine Biotechnology • Medicinal Chemistry • Molecular Biology • Molecular Genetics • Neuroscience • Nutrition and Metabolism • Parasitic Diseases • Pharmaceutical Development • Physical Oceanography • Plague • Plant Biology • Polio • Pregnancy and Endocrinology • Radiation Biology • Remote Sensing • Salmon Restoration • Sustainable Forestry • Technology Transfer • Viruses • Zoonoses
AIBS plays a pivotal role in bridging science and society to forge solutions to regional, national, and global challenges concerning food supplies, clean air, clean water, public health, and scientific literacy. AIBS is one of the most important professional organizations for science that seeks to advance economic and educational opportunities for the improvement of living standards.

Knowledge about modern biology is essential for citizens to make informed choices about their health and well-being, appreciate the importance of a healthy environment in their lives, understand the benefits and challenges presented by biotechnology, and comprehend the widening arena of biosecurity. Whereas the need for education in the biological sciences has never been greater, ensuring that modern biological thinking reaches students of all ages in all countries still faces many obstacles. Few goals of AIBS are more important.

AIBS is uniquely situated to represent biological science and professional interests at the national level. With its member organizations, AIBS lends a unified voice for environmental, organismal, and integrative biology, and through its coalitions with other organizations, AIBS has secured a base of influence at the national and international levels.

AIBS was born of a vision shared by leading biologists of the day—that fostering a more dynamic and relevant biology is essential for improving societal well-being. They understood, moreover, that this vision could be realized only through collaboration across the biological sciences. AIBS still adheres to that objective, which becomes ever more important as the biological sciences grow and assume a vital role in society.