



SCIENCE-BASED DECISIONS FOR SOCIETY

PUBLIC POLICY OFFICE
2021 ANNUAL REPORT

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www.aibs.org



DIRECTOR'S MESSAGE

The American Institute of Biological Sciences is dedicated to advancing the biological sciences for the benefit of science and society. Through our public policy initiatives, we engage with policymakers to ensure that the decisions they make are based on sound science and are responsive to the needs of the scientific community. We also share policy analysis and insights with the scientific community to help them understand and influence decisions that impact biological research and education.

With the COVID-19 pandemic continuing to disrupt our lives, it is more important than ever to rely on scientific evidence to guide policy decisions. Responsible public policy promoting investments in biological research and education enable the new discoveries and the development of the skilled workforce required to address the grand challenges facing society today, including the unprecedented biodiversity loss, the climate crisis, and threats to public health and food security.

In 2021, AIBS fought to secure increased funding for federal science programs at the National Science Foundation and the Department of the Interior. We endorsed and rallied support for important legislation that would make significant new investments in NSF and will continue to advocate for these proposals in 2022. Furthermore, we continued to work with our partners to seek economic relief for the research community still reeling from the impacts of the pandemic.

AIBS continues to advocate for new investments in biodiversity-related and biodiversity-enabled research. Through the Biodiversity Collections Network (BCoN), in 2019 we launched the Extended Specimen Network – a community-informed vision for stimulating new research and education in the coming decade. We continued to remind policymakers that biological collections can be critical to better understand important societal problems, such as zoonotic diseases, and have called for significant new investments to be made to support collections-enabled research and education.

Our efforts are not limited to advocacy for funding. We worked to help inform White House initiatives to improve federal scientific integrity policies and to create a new health research agency called the ARPA-H. We urged the Administration to provide visa assistance and support to displaced Afghan scholars and advocated for policies to improve retention of international STEM talent in the United States. In the fall of 2021, AIBS organized a series of online workshops, funded by NSF, to engage the global scientific community in ongoing international policy discussions around the application of ‘access and benefit sharing’ principles to digital sequence information, which is being considered as part of the United Nations Convention on Biological Diversity.

In 2021, we strengthened our dedication to changing the culture of biology by enabling inclusive, diverse, equitable and accepting scientific environments—an endeavor we plan to continue in the years to come. Additionally, AIBS sustained its commitment to early career scientists by recognizing graduate student leaders with the Emerging Public Policy Leadership Award. We continued to provide scientists—from early career to senior scientists and program leaders—with science policy and communications training in a virtual format during the pandemic. We will offer these programs again in 2022 as we work to further increase the capacity of the biological sciences community to shape public opinion and inform policy.

This report details the work AIBS continues to do in partnership with our members and other partner organizations to advocate for biology. We encourage any organization that values scientific research and science-informed decision-making to join with us as we continue to promote an increased understanding and appreciation of all life.



Jyotsna Pandey
Public Policy Director

KEY ACCOMPLISHMENTS

- ✘ Helped 75 scientists become advocates for science.
- ✘ Endorsed and rallied support for legislation to make significant new investments in the National Science Foundation (NSF).
- ✘ Increased awareness of the needs of the biological sciences community by facilitating 64 meetings between scientists and lawmakers.
- ✘ Provided professional development training to 230 scientists.
- ✘ Provided recommendations to the White House on strengthening federal scientific integrity policies.
- ✘ Provided comments to the Biden Administration on the scientific framework for the new Advanced Research Project Agency – Health (ARPA-H).
- ✘ Called on Congress to make critical investments towards the development of an Extended Specimen Network to enable biodiversity science to inform future actions to improve public health, economic well-being, and national security.
- ✘ Urged President Biden to champion legislation endorsed by AIBS to provide \$25 billion in emergency relief funding for federal science agencies.
- ✘ Through an NSF-funded virtual workshop series, engaged the international scientific community in policy discussions about the application of access and benefit sharing principles to digital sequence information.
- ✘ Called on the Biden Administration and Congress to provide visa assistance and other support to displaced Afghan scientists.
- ✘ Expressed support for diversifying federal scientific advisory committees.
- ✘ Exhorted the Biden Administration to rescind restrictions on fetal tissue research.
- ✘ Endorsed legislation aimed at scaling up efforts to track COVID-19 variants.
- ✘ Urged lawmakers to pass legislation to create a federal initiative on the bioeconomy.
- ✘ Called on Congress to base any investigations into the origin and transmission of the COVID-19 pandemic on evidence-based research.



SCIENCE POLICY

AIBS made notable contributions to research and science education policy in 2021. Our efforts focused on promoting federal investments in biological research and education, advocating for the responsible use of science in the policymaking process, advancing the policy interests of biodiversity-enabled and biodiversity-related research and education, and advocating for pandemic-related economic relief for the scientific community.

Research Funding

AIBS advocates for increased federal investments in science. Biological research and science education funding were the focus of two AIBS advocacy events and numerous online legislative action campaigns in 2021. In testimony to Congress, AIBS called for new investments in the National Science Foundation (NSF), the U.S. Geological Survey, the U.S. Fish and Wildlife Service, the Smithsonian Institution, and the Environmental Protection Agency. AIBS also endorsed legislation to double NSF's budget over five years and create a new technology directorate that supports translational research.

COVID-19 Relief

In 2021, AIBS continued to advocate for economic relief for the research community, including biological field stations. We joined other science stakeholders in urging Congress to provide emergency relief for NSF and other federal science agencies. In 2021, AIBS continued to work with the community to garner support for legislation that would provide \$25 billion in emergency supplemental funding for federal science agencies to address COVID-19 related disruptions to research. AIBS previously endorsed this legislation and has also urged President Biden to champion it.

Science in Policymaking

In 2021, AIBS provided timely input to the White House on improving federal scientific integrity policies. We also submitted comments to the White House Office of Science and Technology Policy and National Institutes of Health on the research priorities for the new Advanced Research Project Agency – Health (ARPA-H), underscoring the value of biodiversity collections, the One Health approach, and independent peer review to addressing human health issues.

Additionally, AIBS urged the Biden Administration to rescind restrictions on fetal tissue research; endorsed legislation aimed at scaling up efforts to track COVID-19 variants; called for increased federal investments in food and agricultural research programs, in particular climate-focused agricultural programs; called for increased support for microbiome research across federal science agencies; rallied the community in asking lawmakers to take bold action on climate change; called on Congress to base any investigations into the origin and transmission of the COVID-19 pandemic on evidence-based research; urged lawmakers to fund the Office of Climate Change and Health Equity within the Department of Health and Human Services; and called on lawmakers to pass legislation to create a federal initiative on the bioeconomy.

In our commitment to advance diversity and inclusion, we joined the broader scientific community in expressing support for diversifying the science advisory committees that support policy decisions across the government. AIBS also joined a coalition of science, environmental, and educational stakeholders in urging the Education Secretary to identify climate and environmental justice as a priority area for the Department of Education and create a new position to lead and coordinate the Department's climate work. We issued a statement denouncing violence against the Asian American and Pacific Islander community.

Furthermore, AIBS called for the Biden Administration and Congress to provide visa assistance and other support to displaced Afghan scientists and also urged lawmakers to create additional visas to retain international STEM talent in the US.

Biodiversity and Collections

The Biodiversity Collections Network (BCoN), a national initiative which emerged from an NSF grant to AIBS, outlined a national agenda in 2019 that leverages digital data in biodiversity collections for new uses. The report, [Extending U.S. Biodiversity Collections to Promote Research and Education](#), called for building an Extended Specimen Network—a community-informed research and education initiative to coordinate biodiversity data mobilization and integration.

In 2021, BCoN expanded its steering committee to include representatives from living, federal, and paleontological collections in addition to natural history museums and herbaria. The steering committee partnered with authors of the National Academies' [report on biological collections](#) to publish a Viewpoint article in *BioScience* laying out the necessary steps needed to develop an implementation plan for the Extended Specimen Network.

AIBS, Natural Science Collections (NSC) Alliance, and the Society for the Preservation of Natural History Collections—the founding members of BCoN—joined forces in highlighting to lawmakers the value of mobilizing biodiversity specimens and data in spurring new scientific discoveries. The letter urged critical investments towards the rapid development of an Extended Specimen Network to enable biodiversity science to inform and guide future actions to improve public health, economic well-being, and national security.

Through BCoN, AIBS partnered with the Global Biodiversity Information Facility, DiSSCo, Atlas of Living Australia, iDigBio, NSC Alliance, and other international groups to organize a two-phase global consultation in 2021 to engage the wider collections community on aligning the Extended Specimen concept proposed by BCoN with the Digital Specimen concept proposed by DiSSCo in Europe. Results from this consultation will guide global coordination towards an integrated digital data infrastructure.

International Policies Governing Biodiversity Research

AIBS received a grant from NSF to organize a series of international workshops exploring the impacts of regulating digital sequence information (DSI), such as genetic sequence data, on

international biodiversity science and conservation. The goal of the series was to increase awareness of and engagement from scientists in ongoing international policy discussions, where parties to the United Nations Convention on Biological Diversity (CBD) and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization are considering whether the access and benefit sharing framework should be expanded to include DSI, in addition to the physical biological resources they were set up to address.

The series was conducted online in the fall of 2021 in partnership with the USA Nagoya Protocol Action Group and 18 different scientific professional associations and societies, including several AIBS member societies and organizations. The virtual workshops focused on six separate themes, each featuring a team of transboundary, international scientists who have engaged in international research collaborations. Topics included applied ecology and infectious disease; crop research and improvement; macrosystems and international long term ecological research; phylogenetics, genome evolution, taxonomy; livestock research and, vertebrate genetic rescue; and anthropology, ethnobiology and paleobiology. The series featured 16 speakers from Brazil, Mexico, Argentina, Ivory Coast, UK, China, Germany, and US. In total, more than 1,100 individuals from over 30 countries registered for these events and more than 500 individuals attended live. [Recordings](#) of these sessions have been made available to the public as an online educational resource.

Other Highlights

The 2021 meeting of the AIBS Council of Member Societies and Organizations, funded by NSF, focused on Enabling Scientific Societies to Support Inclusive, Diverse, Equitable, and Accepting (IDEA) Scientific Environments. The two-day virtual conference provided a forum for leaders of scientific societies to engage in shared learning, discussion, and reflection about multiple topics related to IDEA scientific environments. The meeting provided participants with the knowledge, resources, and tools needed to develop action plans and move forward in a collaborative manner to change the culture of biology.

The Association of Ecosystem Research Centers has worked with AIBS for many years to plan a science briefing for congressional policymakers in conjunction with their annual meeting. The 2021 briefing, “Integrating Environmental Data Across Spatial Scales,” was held virtually as a result of the COVID-19 pandemic. The briefing explored how constant innovations in data science and spatial modeling are being integrated into high level questions regarding ecosystem services and disservices in the Anthropocene.



OUTREACH AND TRAINING

Meetings with Lawmakers

Each year, AIBS offers scientists opportunities to meet with their elected officials in Washington, DC, and in their home state.

After canceling our annual *Congressional Visits Day* in 2020 as a result of the COVID-19 pandemic, AIBS organized a *Virtual Advocacy Event* in April 2021, where biologists from across the nation met with their federal lawmakers virtually through the Zoom platform. The scientists also participated in a supplemental two-day online science communications and advocacy training program to prepare for their meetings. Overall, AIBS facilitated 43 virtual congressional meetings for the participants with lawmakers from 16 states to discuss funding for biological research programs.

More than 100 scientists, including graduate students, senior researchers, and educators, from 19 states registered to participate in the *12th Annual Biological Sciences Congressional District Visits* event. This grassroots advocacy event encourages scientists across the nation, to showcase for federal and state lawmakers the people, facilities, and equipment required to

conduct scientific research. In 2021, participating scientists met with their elected officials at the local district office, virtually, or invited them to visit their research facility. In addition to helping schedule district meetings with lawmakers, AIBS policy staff provided online training and one-on-one support to prepare participants for their meetings. The event was made possible by AIBS, with support from event sponsors American Society of Plant Taxonomists, Botanical Society of America, Harvard Museum of Comparative Zoology, Helminthological Society of Washington, NSC Alliance, Organization of Biological Field Stations, and Society for the Study of Evolution.

Notable Meetings Facilitated by AIBS in 2021:

- Virtual Advocacy Event participants met with Senator Mike Braun (R-IN) and Representatives Joe Morelle (D-NY) and Trey Hollingsworth (R-IN) to discuss funding for biological research.
- Representative Ed Case (D-HI) visited the Harold L. Lyon Arboretum and learned about the importance of botanical research and how it applies to watershed and flood management, genetics, and conservation.
- Representative Melanie Stansbury's (D-NM) staff received a tour of the Museum of Southwestern Biology at the University of New Mexico, where scientists discussed the connection between zoonotic pathogens and key biodiversity infrastructure.
- Members of the Biodiversity Collections Network Steering Committee met with staff from the House Committee on Science, Space and Technology to discuss provisions for biodiversity collections in NSF reauthorization legislation.
- Scientists participated in virtual meetings with the offices of Senators Richard Shelby (R-AL), Tommy Tuberville (R-AL), Sherrod Brown (D-OH), Rob Portman (R-OH), Alex Padilla (D-CA), Chuck Schumer (D-NY), Debbie Stabenow (D-MI), Gary Peters (D-MI), Amy Klobuchar (D-MN), Ron Johnson (R-WI), Josh Hawley (R-MO), Marsha Blackburn (R-TN), Roy Blunt (R-MO), Roger Wicker (R-MS), Todd Young (R-IN), Ben Lujan (D-NM), John Cornyn (R-TX), Ted Cruz (R-TX), Jeff Merkley (D-OR), and Ed Markey (D-MA) and Representatives Mike Quigley (D-IL), Rick Crawford (R-AR), Ann Kirkpatrick (D-AZ), Raul Grijalva (D-AZ), Seth Moulton (D-MA), Don Bacon (R-NE), Pete Aguilar (D-CA), Frank Pallone (D-NJ), Fred Upton (R-MI), Ilhan Omar (D-MN), and Gary Palmer (R-AL), among others.
- In total, 64 meetings were facilitated by AIBS in 2021.

Policy and Communications Training for Scientists

AIBS successfully converted its communications and advocacy training program to an online version at the start of the pandemic. In 2021, we offered three virtual communications workshops that trained 75 scientists. Our current course offerings include a science communications boot camp, an online course to improve writing skills, a training on enabling interdisciplinary and team science, and a boot camp on employment acquisition skills. Most of these programs are typically offered in Washington, DC and around the country on university campuses and at scientific meetings, and are now also offered online. Overall, 230 scientists participated in AIBS professional development programs in 2021.

Emerging Public Policy Leadership Award

AIBS recognized two graduate students in the biological sciences for their achievements in science policy. The Emerging Public Policy Leadership Award was presented to Shyla Cooks, a master's student in bioscience and health policy at Rice University in Houston, Texas, and Karl Palmquist, doctoral student at the Rockefeller University in New York City, New York. The 2020 award winners received online communications and advocacy training and will receive an expense-paid trip to Washington, DC to participate in meetings with their congressional delegation once it is safe to travel in the future. They also received a one-year subscription to the journal *BioScience*.

Help Support Student Opportunities

AIBS would like to provide more education and training opportunities to biology students. We particularly want to expand our highly successful Emerging Public Policy Leadership Award program to ensure that more early career professionals may benefit from the program in the future. As of 2021, AIBS is more than half way to its goal of raising \$75,000. To fully fund the program, we need the support of our members and friends. Please consider donating to AIBS to help us ensure more biology graduate students have an opportunity to gain the knowledge and skills they need to develop careers that allow them to successfully work at the nexus of science and public policy.

Please consider making a tax-deductible donation today by visiting
<https://www.aibs.org/were-stronger-together/>

AIBS Legislative Action Center

Grassroots activists use the AIBS Legislative Action Center to advocate for science policy. In 2021, researchers wrote to their members of Congress to ask for increased funding for the biological sciences and economic aid for the scientific community impacted by the COVID-19 pandemic. The center also offers summaries of legislation of interest to the biological sciences community and other resources for researchers to engage in the development of the nation's science policy.

The Legislative Action Center is made possible by financial contributions from the Society for the Study of Evolution and the Botanical Society of America.

Publications and Information Dissemination

AIBS policy staff report on science policy developments through several outlets, including the bi-weekly AIBS Public Policy Report and the Washington Watch column in the AIBS journal *BioScience*. [Start your free subscription.](#)

Leadership in Biology Webinars

The Public Policy Office organized two webinars for AIBS members in 2021. One webinar featured a joint discussion with the Biodiversity Collections Network and the National Academies of Sciences, Engineering, and Medicine on the future of biological collections. The other webinar involved program directors from the National Science Foundation briefing the community about changes to collections-related funding opportunities at the agency. Recordings of AIBS webinars and other programs can be viewed on our [YouTube channel](#).

Photo Contest

The AIBS Faces of Biology Photo Contest continues to draw strong participation from members of the biological sciences community. In 2021, the contest was co-sponsored by the American Institute of Biological Sciences and the Society for Integrative and Comparative Biology. The contest encourages researchers, educators, and students to showcase biological research in its many forms and settings. The photos are used to help the public and policymakers better understand the value of biological research and education.

The winners of the 2021 contest included photos depicting environmental science majors at Georgia Gwinnett College in Lawrenceville, Georgia learning how to seine net and mark-and-recapture sunfish in a local pond (below), a wildlife biologist demonstrating how to “scope” a gopher tortoise burrow, and a bird biologist surveying a high-elevation site on a volcanic mountain in Hawaii for rare seabirds with her conservation detection dog. The first-place winner will be featured on the cover of an upcoming issue of *BioScience* and received \$250. [Learn more](#) about the contest and past winners on the AIBS website.



Faces of Biology photo contest first place winner: Christopher Brown

GET INVOLVED

If you have a minute...

- Join the [AIBS Legislative Action Center](#)
- Subscribe to the [Public Policy Report](#)
- Follow us on [Twitter](#)

If you have 15 minutes...

- Read an [AIBS position statement](#) on research funding, scientific integrity, climate change, and more
- Delve into science policy by reading an editorial, Feature article, or Washington Watch column from [BioScience](#)
- Support science advocacy through a small [donation to AIBS](#)

If you have 30 minutes...

- Learn about [federal investments](#) in science and the budget process
- Listen to a [BioScience Talks](#) podcast exploring a timely science topic

If you have a day...

- Participate in the [AIBS Congressional Visits Day](#) in Washington, DC
- Participate in the [Biological Sciences Congressional District Visits](#) event
- Coordinate a [professional development workshop](#)

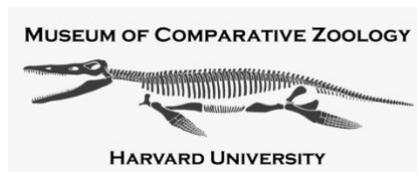
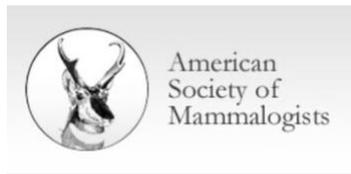
Student Opportunities

- Apply for the [Emerging Public Policy Leadership Award](#)



SUPPORTING ORGANIZATIONS

The following organizations sponsored AIBS science policy initiatives in 2021.



NATURAL
SCIENCE
COLLECTIONS
ALLIANCE



The Society for
Integrative &
Comparative
Biology



SOCIETY for the STUDY of EVOLUTION



Society of Systematic Biologists

How to Contribute

Financial support from individuals and organizations makes it possible for AIBS to serve the biological sciences community and to help advance a common agenda. Consider making a contribution to AIBS. Please visit [our website](#) to make a secure online donation.

ABOUT AIBS

The American Institute of Biological Sciences is the national scientific organization dedicated to advancing the biological sciences to promote an increased understanding of all life. Our mission is to promote the use of scientific information to inform decision making and advance biology for the benefit of science and society.

AIBS initiatives are unified by a commitment to promoting informed decision-making. Our strategic priorities include:

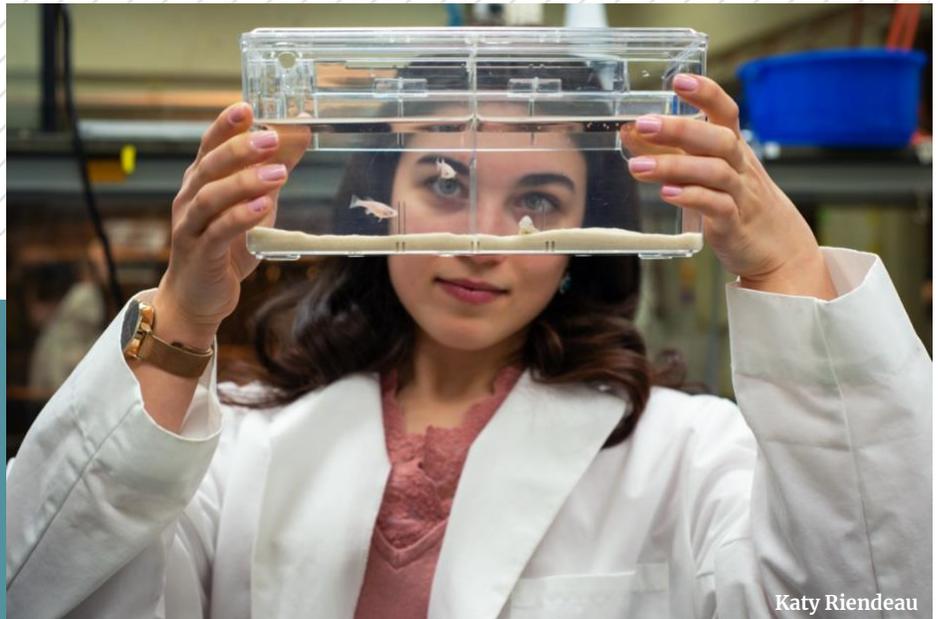
- **Publications and Communications** including reliable reports, analyses, and the peer-reviewed journal *BioScience*, which is a forum for integrating the life sciences and educating the public about biological sciences.
- **Scientific Peer Advisory and Review Services** for research proposals and programs sponsored by funding organizations, including the federal government, state agencies, private research foundations, and other non-government organizations, and to educate the community about the science of peer review.
- **Community Programs** that advance the field and profession of biology while promoting and providing leadership, with a particular emphasis on public policy and advocacy, education and professional development, as well as public awareness of science.

AIBS works with any stakeholder that advances the broad field and profession of biology. Organizations partner with us on initiatives, work with us to identify and communicate matters of common concern, and help connect us to their communities for idea and information exchange – particularly regarding public policy, education, public understanding of science, and matters of professional concern.

AIBS has member societies and organizations that support our work financially. AIBS provides services to a wide variety of scientific funding groups that include government agencies, industry, private research foundations, and other non-governmental organizations.



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