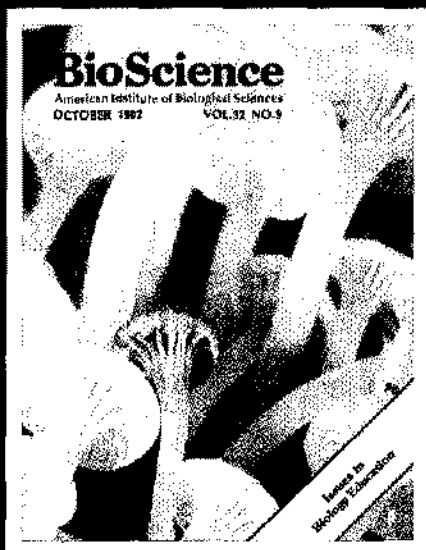
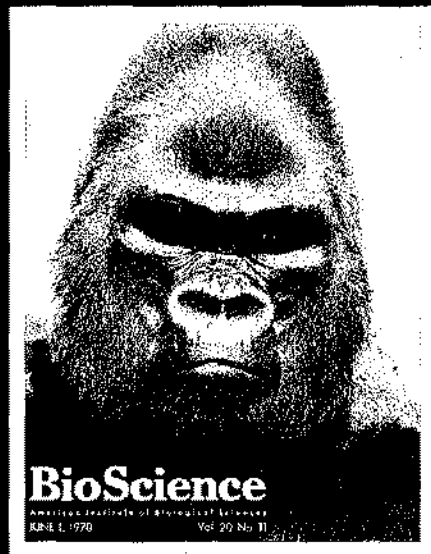
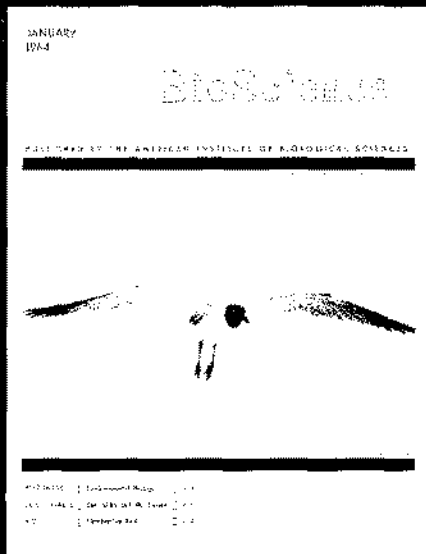

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AIBS—The First 50 Years

The first half century: a history of AIBS

A glance back at the trials, tribulations, challenges, and successes of the American Institute of Biological Sciences

During the summer of 1944, two men set sail in a small sloop on the sun-swept waters of the Great Harbor at Woods Hole, Massachusetts. One of them was zoologist Elmer Butler, who worked at the nearby Marine Biological Laboratory. The other was Detlev Bronk, a biologist and US Army Air Force pilot home on leave from the ravages of World War II's European Theater. As he would later write in a brief history of the American Institute of Biological Sciences (AIBS), he was at Woods Hole "to recapture the spirit of science" before returning to the war and the decisive episode that came to be known as the Battle of the Bulge.

As the duo cruised the deep-blue waters of the bay, sail billowing overhead and the boat rocking with the swell, Bronk began to recount how biologists had helped the US Army Air Force to develop equipment to protect airmen flying at high altitudes. This discussion reminded Butler that his sailing companion had, a few years earlier, organized the first national convocation of biologists, physicists, and engineers to foster closer relations between the physical and biological sciences. Butler asked Bronk why he had chosen the American Institute of Physics (AIP) to sponsor the event.

Bronk explained that he had had no choice but to turn to AIP, rather than to biologists, for organizational help. AIP represented all fields of physics, but no such unifying group existed for biology.

Butler went on to dun Bronk with questions about AIP, which was

founded in 1931 to solve problems associated with specialization and publishing in physics. Similar problems in biology were on Butler's mind. He knew that two organizations, the Union of American Biological Societies (UABS) and the American Biological Society (ABS), had been created in recent years to solve some of these problems but had lacked the breadth and scope to do so.

But Butler had a solution, and he now revealed it to Bronk, explaining that he had been laying plans to create a biological version of AIP, drawing together the nation's biological societies under one umbrella and pooling their efforts. In Butler's mind, the group would facilitate the publication of journals, sponsor scientific meetings, and reverse the fragmentation of biology into myriad societies and specializations.

Back on shore, Bronk and Butler retreated to the Pond House, a restaurant on Penzance Point. Over cocktails they continued their discussion and agreed that as soon as the war ended, they would seek to create a biological organization patterned after AIP.

And thus AIBS was conceived, although the gestation period would last several years.

In the beginning

Roughly a year later, the war in Europe was over, and Bronk, back in the States, was keeping his promise to help Butler to build a biological institute. Throughout the winter of 1945, Bronk and Butler gathered friends together for weekend discussions on the need to unify the biological community.

Central to this concern was a sense that biologists had received short shrift in recognition of their part in the war effort. The chairman of the National Research Council's (NRC) Division of Biology and Agriculture put it this way in *Science*: "Everyone knows the major contributions of physics to victory. But how many know that the contributions of biological science were of comparable importance? The contrast between the treatment of biologists and that of physicists by the Armed Forces was due to intelligent action by the American Institute of Physics."

Growing dissatisfaction with biology's status led UABS, headed formerly by Elmer Butler and now by one of his weekend discussants, Robert Chambers, to sponsor a joint meeting of all of the biological organizations participating in the March 1946 meeting of the American Association for the Advancement of Science (AAAS). The theme of the joint meeting was the creation of a biological institute.

Reports on the mood of that meeting differ. Some sources say that the idea of a unifying organization was met with enthusiasm, but others indicate dissension over the purpose and scope of such a group. Nevertheless, the following summer yielded real progress. At Woods Hole, Butler convened a meeting of interested biologists, who unanimously agreed to write to Robert Griggs, chairman of the NRC's Division of Biology and Agriculture, to suggest that the division lead an effort to create a unifying biological entity.

At that point, the plan ran afoul of internecine warfare: Plant scientists, concerned that they would be overwhelmed by the greater number

by Roger L. DiSilvestro

of zoologists in the biological sciences, declined to ally with animal scientists. Griggs, himself a botanist, and Bronk, now chairman of NRC, sought to defuse these concerns by inviting five plant scientists and five zoologists to meet at the National Academy of Sciences (NAS) to discuss ideas for the new organization. Called the Conference of the Committee on the Proposed Institute of American Biologists, the meeting occurred in November 1946 and proved a success.

The group outlined the types of activities in which the institute would engage, requested that NRC make the institute temporarily a part of Griggs's division, and recommended that the AAAS meeting in the following December be used to introduce the institute to various biological societies. The participants in the conference agreed to continue to meet as an organizing committee for the institute.

In the wake of the conference, the plant scientists' suspicions of the zoologists were allayed, and the officers of UABS and ABS agreed to merge their organizations into the new group. The institute was now past the stage of impromptu discussions and entering a period of formal development.

At the AAAS meeting in December 1946, Griggs and other members of the organizing committee delivered papers on the need for the new institute. The following April, representatives of 27 biological societies met at NAS in Washington, DC, to discuss the creation of the American Institute of Biological Sciences, putting an official name on the new group. The representatives helped to outline a structure for AIBS and agreed to return to their separate societies and explain to them how AIBS would work. The organization would come into existence when ten societies had signed the AIBS constitution and by-laws.

By the end of winter 1947, the Botanical Society of America, American Society for Horticultural Science, American Society of Plant Physiologists, American Society of



A man with an idea: Elmer Butler conceived the original plan for the American Institute of Biological Sciences.

Zoologists, American Physiological Society, Genetics Society of America, Limnological Society of America, Mycological Society of America, Poultry Science Association of America, Society for the Development of Growth, and Society of American Bacteriologists had all become charter members of AIBS. With this ratification of the constitution, AIBS became formally established.

The governing board met officially for the first time on 20 February 1948 at NAS. Ralph Cleland, a member of the organizing committee, was elected chairman, and Elmer Butler, vice chairman. Initially, AIBS was to be harbored within NRC, a temporary arrangement that would give the new group office space and staff support until membership was strong enough to finance operations.

That February day ended much as had the day on the sloop, with the participants talking over drinks and food, this time at Washington, DC's, exclusive Cosmos Club. They hoped that AIBS would lead to greater interdisciplinary cooperation among the various biological specializations and that the group would become the founders' heritage to those who, as Bronk wrote in his history, "be-

lieve that knowledge cannot be contained within boundaries."

Growing in strength and scope

Of course, AIBS was founded to break down the boundaries that lay between the various biological societies, and initially it seemed to score some success in that direction. Within five years, the group included 23 scientific societies representing some 28,000 members. AIBS also included 13 "associate groups," which were commercial organizations that wished to support the biological sciences through AIBS and its programs. Associates included Abbott Laboratories; Hoffman-La Roche, Inc.; Lilly Research Laboratories; Monsanto Chemical Company; and publishers John Wiley & Sons, Inc., and W. B. Saunders.

The programs that these groups supported show how AIBS, even in its earliest years, was trying to fulfill the vision that Butler had outlined during his boat ride with Bronk in 1944. AIBS in the late 1940s had initiated publication of a newsletter that in 1951 became the *AIBS Bulletin*, a magazine published five times a year. The magazine featured subjects of general interest to biologists, including research reports, advice on publishing, and a listing of biologists in search of work.

AIBS also planned meetings for its member societies and for other groups on request. It maintained a mailing service for member and affiliate societies and operated a placement service. By the mid-1950s, AIBS was publishing a "Handbook of Biological Data," offering biologists a set of tabular data comparable to that available for chemists and physicists.

The group also produced the *BioSciences Newsletter*, a summary of biological progress in the United States. The publication was distributed abroad by the Department of State. AIBS provided research advice and review to the Office of Naval Research and also set up committees to study problems involved in the publication of scientific journals.

In addition, AIBS set up a committee to work with the Selective Service. Still smarting from what they believed was a lack of appreciation for biologists during World War II, AIBS officials sought to ensure that in the future, biologists would be credited on par with physicists and chemists when it came to matters of national interest. Thus, AIBS won for biology students the same draft deferments available to students in other scientific fields. "It may fairly be claimed that every young biologist who has profited in the postwar years by obtaining deferment of military service until completion of his graduate studies owes an immeasurable personal obligation to the AIBS," wrote H. Bentley Glass, chairman of the governing board, in the October 1954 issue of *AIBS Bulletin*. "And not only the student but also his professor, who thus was able to avoid the inefficiency, disappointment, and loss occasioned by the interruption of student training and the disruption of the education program."

Moreover, when Congress was putting together the bill to form the National Science Foundation (NSF), early drafts included biology only as an adjunct to the medical sciences. AIBS helped to persuade Congress to include biology as a separate division of NSF. "Again it may fairly be said that every biologist who has received from NSF a grant in aid of research, and all the many more students and technicians who have indirectly been assisted or supported thereby, are greatly indebted to the AIBS," Glass wrote.

AIBS flourished during the late 1950s, thanks initially to actions taken not in the United States, but in the Soviet Union: On 4 October 1957, the Soviets launched Sputnik I, making the USSR the first nation in space. Aside from marking the dawn of the Space Age, Sputnik inspired a concern in the United States about the nation's status as a technological leader. Virtually overnight, federal support for the sciences expanded. In 1957, federal funding of the life

sciences stood at only \$30 million yearly. Six years later, it stood at \$185 million a year and climbing.

AIBS benefited from this largesse but also, in the end, suffered from it. Money flowed in from grants and contracts, allowing AIBS to charge adherent societies minimal dues. But grants were an unstable source of money, so AIBS was building its house on sand. Nevertheless, its officials during the Golden Era felt se-

AIBS was founded to break down the boundaries that lay between the various biological societies

cure enough to achieve an early AIBS milestone: independence of NRC in 1954.

On its own

The idea of linking AIBS to NRC had been Bronk's. He had intended to use NRC as an incubator in which AIBS would grow strong before taking off on its own, and his plan worked precisely as he had hoped. "The debt of gratitude owed to the National Research Council for its aid and support during the infancy of AIBS can never be adequately repaid," Glass wrote in the *AIBS Bulletin* in an article announcing the split with NRC. Then he made a point that would become a recurring theme in the years ahead: "It scarcely needs to be emphasized that in its new independent role, the AIBS will more than ever require the devoted support of its member societies and of individual biologists, both in regard to finances and in regard to the formulation and execution of policies."

No upwelling of member support occurred as AIBS became a self-sufficient group. Nevertheless, thanks

to grants, the organization forged ahead with new projects. For example, in the late 1950s the institute received grants from the Fund for the Advancement of Education and the Atomic Energy Commission to produce educational science films. Working with Calvin Productions and McGraw-Hill Book Company, AIBS created filmed science courses consisting of 120 lecture demonstration films, each 30 minutes long. Laboratory guides and teachers' manuals supplemented the films. The series covered subjects ranging from cell biology and genetics to ecology and plant diversity.

One product of the 1950s and 1960s, the *AIBS Bulletin*, throws a revealing light on how the group reflected its times. One associate member, the American Tobacco Company, ran a full-page advertisement on the back cover of every issue of the publication, lauding some aspect of the tobacco industry. AIBS annual meetings featured the traditional "Biologists' Smoker," where "one can meet all of *his* [emphasis added] colleagues" and take advantage of free refreshments and cigarettes. Women were rare on the roster of members, and not one member of the AIBS organizing committee was a woman. When *AIBS Bulletin* ran an article on the characteristics of the undergraduate biology student, the article was titled "Marks of an Academic Man."

AIBS followed the innovative trends of science and politics. The October 1962 issue of the *AIBS Bulletin*, for example, was devoted to space travel, one of the key endeavors of the Kennedy Administration. AIBS worked closely with the National Aeronautics and Space Administration (NASA) during this time, offering advice on various biological issues of space travel. That new scientific pursuit engendered some strange text in the magazine. In August 1964, the publication ran an article on the problems of space flight, including a discussion of how to dispose of astronauts who died in space,

an event the writer considered inevitable. One possibility: render the bodies into a condition suitable for addition to the food supply of surviving space travelers.

A different time indeed. But as a popular folksinger of the era pointed out in his lyrics, the times they were a'changing. One symbol of the changing times was a letter in the August 1963 issue of the *AIBS Bulletin* that protested the advertisements of the American Tobacco Company that had graced the back cover of every issue since 1951. "It reflects an irresponsible attitude on the part of biologists in this country to continue to publish advertisements of this sort, in the face of evidence of the dangers of smoking tobacco," wrote Ralph Lewin of the University of California-San Diego.

A vice president of the American Tobacco Company responded in the letters column that research had failed to substantiate any health threats from smoking. Nevertheless, the AIBS governing board, sensing a shift in public opinion, stopped the ads the following January.

January 1964 saw more than the disappearance of tobacco ads from the *AIBS Bulletin*. It also saw the disappearance of the bimonthly bulletin itself, to be replaced with the new, larger, monthly *BioScience* magazine. *BioScience* would be less of a publication offering professional advice and services to biologists and more of a science journal. The president of AIBS, Paul Kramer, expressed his hopes for the new magazine in an editorial in the first issue: "The increased frequency of publication of *BioScience* will increase its attractiveness to subscribers and libraries, broadening circulation and increasing the audience to which it carries its message. Furthermore, the quality of advertising should increase markedly, which would provide the readership with a wider range of information."

The change in magazines occurred as AIBS was becoming more sophisticated in its goals and its means for

Money flowed in from grants, but the grants were an unstable funding source: AIBS was building its house on sand

achieving them. But *BioScience* also arrived in a time of trouble for AIBS. The group now had some 85,000 members affiliated with it through its adherent societies, but so far the "devoted support" that AIBS needed from individual members had not been forthcoming. And, to make matters worse, AIBS was coming under scrutiny for possible misuse of funds. Soon, the organization would be engaged in a financial struggle for its very life.

Challenge and jeopardy

So much money was flowing from federal coffers in the years immediately following Sputnik that obtaining grant and contract support was practically automatic. This mercurial rise in government spending paralleled the rise of AIBS during the late 1950s and into the 1960s. AIBS contract and grant disbursements soared from approximately \$150,000 in 1957 to \$3 million in 1962, the bulk of it from federal sources. AIBS grew to a staff of more than 80 by 1962. The group depended on federal grants to meet its overhead on many projects and to help fund such programs as the film series.

AIBS officials were not entirely pleased with this financial arrangement. The president and the deputy executive director announced in the June 1962 *AIBS Bulletin* that the governing board had voted the previous month to find ways to broaden the AIBS financial base through individual membership. The two officials complained that AIBS, through

its 49 adherent societies, represented more than 85,000 biologists but that "this fact is not reflected in financial support from the same group." The societies contributed only 50 cents to AIBS for every member on their rosters, entitling their members to all of the services that AIBS offered, including magazine subscriptions. The lack of support from individual biologists seemed destined to continue: A December 1962 drive for new individual members, with annual dues set at \$5, resulted in only 1524 new members by the following April.

The AIBS officials were not alone in viewing the institute's financial affairs with dismay. NSF, as the federal government's granting agency to the sciences, audited AIBS books late in 1962, and the auditors complained to the NSF comptroller that deductions for overhead were too large, books were poorly kept, and some programs were being improperly funded with money granted for other purposes. NSF promptly froze AIBS assets pending further investigation.

Meetings between AIBS and NSF representatives soon proved to everyone's satisfaction that no fraud had occurred and that no one was attempting to cover up improper use of funds. Although AIBS officials were perhaps guilty of poor financial management, their records accurately reflected the group's financial position at the time of the NSF audit.

One key issue involved AIBS use of NSF grants to finance the film series without seeking permission from the funding agency. In effect, AIBS was pooling its grants and using them as a general fund. Such pooling was not allowed under NSF rules. In fact, however, other scientific societies were doing the same thing, so the AIBS problem stimulated many groups to monitor cash flow more carefully.

As soon as AIBS concluded a payback agreement with NSF for the misused funds, the organization took steps to ensure that the executive committee would be kept informed of fiscal operations. In a very short

time, AIBS regained the full confidence of granting agencies and has continued to receive grants and contracts during the past three decades and more since the financial debacle of 1962.

However, the strain of having to pay back nearly \$500,000 to NSF—a process that stretched out over more than a decade—crippled AIBS and for a time caused officials to fear that the group would disintegrate. To help stave off collapse, AIBS was forced to make immediate changes. By June 1964, Secretary-Treasurer Robert Krauss could report that staff had been halved and various programs dropped or transferred to other entities. Under a tough austerity program, rent was cut by 39%, supply costs by 50%, and telephone expenses by 75%.

The most important fundamental change was the governing board's decision to base finances on dues from individual members rather than on funds from adherent societies. As of mid-1963, membership in an adherent society no longer brought automatic membership in AIBS. Dues for individual members were set at \$10.

Aftermath

By 1974, AIBS was on the verge of closing its debt to NSF. However, although AIBS tallied some 12,000 individual members, their dues were not enough to meet overhead. AIBS still depended on grants and contracts for the bulk of its income.

The majority of grants were used for assembling advisory boards, panels, symposia, workshops, visiting teams, and other activities that brought a flow of biological expertise to the government or that helped to make biologists aware of governmental problems associated with national goals. "Thousands of biologists have participated in such meetings, and much of the national biological policy has been delineated during these sessions," Krauss wrote in an April 1974 *BioScience* update on AIBS activities.

With palpable pride, Krauss added, "It is worth mentioning that since the reorganization in 1962, the federal auditing agencies that have watched AIBS books very closely have given operations a clean bill of health. It is of special credit to the management of the AIBS...that not a single disallowance of expenses has been claimed by the Federal Government since 1963."

Despite the downturn of the 1960s, the organization continued to blossom with plans and programs. In the 1970s, the group worked with senators Robert Packwood (R-Oregon) and Edward Kennedy (D-Massachusetts) on improvements in population control, sought better representation of biology on the NSF board, doubled the size of *BioScience*, added a staff writer to cover Washington issues specifically, and helped to shape federal laws that prohibited phosphate detergents and that controlled freshwater pollution.

In 1966, AIBS created the Office of Biological Education (OBE). The forerunner of this body, called the Education Committee, spawned the Biological Sciences Curriculum Study, which was assigned to monitor and assess secondary and middle school biological curricula, and the Commission on Undergraduate Education in the Biological Sciences (CUEBS), which provided the same service to colleges. OBE was an umbrella group designed to liaison with the other two groups to evaluate biological education from preschool to adulthood.

OBE also monitored the educational activities of AIBS and its adherent societies and provided leadership and follow-through in the development of programs to meet the educational needs of the American biological community. In this capacity, OBE in 1967 produced the AIBS "Directory of BioScience Departments in the United States and Canada," a widely used reference that reduced communication problems in the biological community by helping biologists to locate one another.

Another OBE project, the Visiting Biologists Program, provided speakers who could address biological issues for high school and college students, offering students a chance to meet biologists distinguished in various fields of the life sciences. In 1968, the Visiting Biologists Program, funded by NSF and the Atomic Energy Commission, scheduled 150 visits to schools. In subsequent years, AIBS joined with NASA to create a speakers bureau of space biologists.

The AIBS Consultants Bureau, created under CUEBS in 1964 and funded by NSF, provided biologists to university biology departments seeking an outside expert who could review and critique their programs. By drawing on the views of outsiders, these departments gained valuable, unbiased insights into the effectiveness of their instructional activities. The bureau shared expenses with the client universities.

OBE also provided career guidance to aspiring biologists by distributing 60,000 copies of "Careers in Biology" in the late 1960s. AIBS at that time was receiving and responding to approximately 125 letters per week asking for career information. As part of its outreach to students, AIBS in January 1968 chartered its first student chapter. By August of the following year, AIBS had signed up 28 student chapters. By mid-1970, the institute boasted 47 of the youth groups and had launched the *Student Chapter Newsletter*.

Another key AIBS program in the 1960s and 1970s was the Bio-Instrumentation Advisory Council (BIAC), which evaluated scientific equipment and worked with OBE to develop curricula for training biological technicians. "The technician in biology is becoming more and more difficult to find," wrote Elwood Ehrle, associate director of OBE in the August 1969 *BioScience*. "The need runs... anywhere biologists are at work. OBE/BIAC are presently seeking funds to mount a large-scale effort to meet this demand."

The 1970s marked a time of social ferment and the fruition of social and political movements begun in the 1960s. These elements were reflected in AIBS, as revealed in *BioScience*. Readers could spot changes even in the magazine's advertisements: Some of the models in lab coats were women. Moreover, women appeared with increasing frequency on AIBS committees and rosters.

Perhaps the surest signals of a new age were announcements by *BioScience* editors that the magazine would become more proactive, seeking to spread the word, and the alarm, about environmental degradation. In a December 1969 editorial that made reference to the dangers of pollution, population growth, and DDT, head of publications Robert Leisner declared, "It is becoming increasingly clear during the past year that a definite shift has occurred in the major emphasis in biology. Evidence from the scientific literature and the news media support this change from molecular biology to ecology with all its many ramifications.... Effective communication of the problems to the enlightened public is obligatory and a prime responsibility of scientific publications—especially those such as *BioScience*."

In the following issue, editor Francis Williamson repeated that AIBS and *BioScience* would attempt to take a leadership role in developing the nation's environmental agenda. "How else can we counter such philosophies as the 'economic rightness' of a perpetually expanding economy that has as an inherent characteristic the creation of disorder and the loss of stability."

This new emphasis on environmental issues was marked in *BioScience* by a surge in the use of terms such as biosphere and ecosystem, which had made little or no appearance in earlier issues. The magazine began to feature thoughtful essays on conservation issues by writers such as Russell Peterson, chairman of the Council on Environmental Quality and later president of the National

Audubon Society, and Senator Edmund Muskie (D-Maine).

The magazine featured profiles of politicians who played important roles in environmental issues, such as a 1971 article on Senator Packwood, then the nation's youngest senator and a backer of population control. And the December 1971 issue of *BioScience* carried an article in which all the major presidential candidates—including Edward Kennedy, Spiro Agnew, and George Wallace—offered statements of their positions on the environment.

As early as 1971, AIBS was taking a proactive stand on ecological issues. In February of that year, the organization announced in *BioScience* that it was undertaking a survey of US natural areas suitable for ecosystem research. AIBS also ran editorials in *BioScience* urging the protection of wild lands, such as the Big Thicket of Texas. AIBS played a role in developing the Flora North America Program, the first attempt ever to create a comprehensive electronic data bank on a continent's organisms, in this case higher plants.

If the early 1970s constituted a time of growth and vigor for AIBS, the late 1970s were a time of attrition. The 1979 annual report shows only four main areas of endeavor—publications, government relations, meetings, and special programs. Gone were such notable programs as OBE.

In part, this attrition occurred because the governing board believed that AIBS had become too sprawling in its endeavors and that some of its programs did not do enough to support the adherent societies directly. Consequently, AIBS began, in today's parlance, to outsource some programs. For example, the Council of Biology Editors (CBE), which attempts to standardize journal style and help biologists with writing and other feats of publication, began life in AIBS in the late 1950s. In 1960, CBE published the first edition of the *AIBS Style Manual*, designed to show scientists how to write consistent with standard editorial practices.

CBE fulfilled an important role for AIBS, one outlined by Butler as he rode the waves of Woods Hole with Bronk—facilitation of scientific publication. Nevertheless, CBE was outsourced in the 1970s. It is now an independent group headquartered in Northbrook, Illinois.

Other programs disappeared because they were scheduled to do so. CUEBS, for example, was slated as a temporary panel that, when finished assessing college biology courses, would shut down. The group did exactly that at the end of the 1970–1971 school year. Such movements and divestments have streamlined AIBS into the present era.

AIBS today and tomorrow

Today, AIBS has honed itself down to three core programs—Scientific Peer Advisory and Review Services (SPARS), publications, and meetings. All continue to reflect the vision for AIBS that Bronk and Butler outlined during their sail more than half a century ago.

SPARS is a new name, adopted last April, for Special Science Programs (SSP), which dates functionally to the earliest days of AIBS. SSP was established to administer AIBS grant and contract projects. The program maintains a roster of experts who are willing to serve on advisory committees and peer-review panels. Over the years, the program has worked with NASA, the Atomic Energy Commission, and the Office of Naval Research (ONR), as well as other government and military agencies. It has provided peer review and advice for programs ranging from NASA's Search for Extraterrestrial Life Program to the development of shark repellents. SPARS continues this tradition and in fact still works with ONR, one of the earliest AIBS research clients. SPARS has provided peer review for more than 100 research projects since 1994, including federal breast cancer research and defense against chemical and biological weapons.

The publications department also dates to AIBS beginnings and was set up to assist other AIBS departments in their publishing needs and to publish a periodical providing a broad range of information of interest to biologists. That periodical, *BioScience*, is the department's most familiar product, but the department also produces updates to the AIBS careers brochure and creates posters for the annual meeting.

The annual meetings department also dates to AIBS's first year. Troubled by specialization that led to the fragmentation and compartmentalization of biology, the founders of AIBS thought that the annual meeting would serve as a countervailing force that would bring biologists together under one umbrella for an interdisciplinary exchange of information. And so it has, beginning in 1948 and continuing to this year's meeting in Montréal, Canada, which involved seven member organizations and was attended by more than 1300 biologists. The meetings department has sponsored 48 consecutive annual meetings for AIBS. In addition, the department arranges meetings for other groups as requested.

Although AIBS no longer includes a government relations department to monitor federal activities and maintain contacts with congressional committees, federal liaison continues through such projects as the Washington Watch column in *BioScience*, which reports on salient developments in the nation's capital. Moreover, AIBS influence in Washington persists through funding of biologists who win Congressional Science Fellowships, allowing them to work on Capitol Hill for a year, helping to shape national scientific policy.

In addition, says Frances James, AIBS president and a biologist at Florida State University, this year AIBS—jointly with the National Center for Ecological Analysis and Synthesis in Santa Barbara, California—

funded a review of federal habitat conservation plans established for the protection of endangered species. More than 400 of these plans, which feature cooperative management with private landowners, have been accepted by the Clinton Administration, but few have ever been subject to scientific review.

James also points out that AIBS has revived publication of a membership directory, a project that disappeared years ago. The directory, she says, will help members to maintain better contact with one another and will lead to a more facile exchange of ideas and information.

In 1991, AIBS set goals and objectives for the final decade of the twentieth century. These goals, built on the framework of the program areas, are understanding and preserving biodiversity through research, legislation, and education; serving as a national representative for biologists by providing information to members and to the federal government; enhancing biological education and research by advising schools on curricula; and enhancing interaction among biology professional societies, a continuation of Butler's desire to unify the biological sciences.

These goals help to set the course for AIBS as a new institute president, Gary Barrett of the University of Georgia's Institute of Ecology, steps up to the helm. Barrett espouses an innovative vision of where AIBS should be going. His discussions with Executive Director Richard O'Grady and other board members, Barrett says, indicate that AIBS needs to strengthen its mission regarding education. The board is now appointing a committee to begin shaping a stronger educational role.

Another objective for the near future, says Barrett, is to invite several of the newer biological societies, such as those for restoration ecology, conservation biology, ecosystem health, and landscape ecology, to become member societies. Thus,

AIBS continues to work against the isolation that can arise among biologists as new specializations further fragment the biological sciences. "We need a true federation of biologists, including societies whose mission is to address research, educational, and service needs ranging from molecular biology to landscape and global issues" Barrett says, echoing the founders of AIBS and their desire for biological unity. "Otherwise, we won't speak with a strong and united voice, as do groups representing the physical, chemical, and medical professions."

As AIBS's new executive director, O'Grady has outlined plans that support Barrett's proposals and will help to carry AIBS into the future. O'Grady wants to begin scheduling roundtable discussions on biological issues, devoting the discussions to the science behind such subjects as cloning. Panelled by experts in each subject, the roundtables will be held in Washington, DC, with the press and government officials invited to attend. O'Grady also proposes to provide more advice on scientific issues to K-12 teachers and would like to establish AIBS as an accreditor of school textbooks for students below the college level.

"Clearly," says Barrett, "as AIBS's first 50 years draw to a close, "we find ourselves in a period of transition. But it is a transition of promise. The organization is in good financial shape, and the board of directors is prepared to examine the AIBS mission and adapt it to the future. We want to see the organization grow and become a stronger voice for the biological sciences. With the support of biologists, we can succeed in a way that will do justice to the advances of the first 50 years and to the individuals whose commitment to the biological sciences made those first 50 years possible." □

Roger L. DiSilvestro is features editor and publications archaeologist for *BioScience*.

AIBS presidents revisit the past

1954–1956: The early days of AIBS

Not many current AIBS members are likely to recall that I was the first president of AIBS (1954–1956). Before that time, AIBS simply had a chairman of its governing board. As its chairman in 1953, I became responsible for the severance of AIBS from the National Academy of Sciences (NAS), which for some years had given AIBS its sheltering services (office space, financial services, and general management), while leaving it with little or no real independence. Frank Campbell, then the managing director of AIBS, felt strongly that AIBS could never achieve its major goal of serving as a national voice for all biologists while tied to the apron strings of NAS. Whatever grants or contracts it received in those early days of funding for science by government agencies were subject to fiscal administration by NAS. Neither the pursuit of funding nor the choice of worthy enterprises could be undertaken independently of NAS restrictions, and NAS took much of the funds for “overhead.”

After thinking over the issues as thoroughly as I could and after consulting with the board of directors, I undertook, to the chagrin and opposition of Detlev Bronk (at that time, the president of NAS) to sever our ties with that organization, with due expressions of gratitude to NAS. I often wondered, in later years, whether Bronk, who had been a good friend and sponsor of mine at The Johns Hopkins University, the American Association for the Advancement of Science, and NAS itself, ever fully forgave me for my presumption.

Anyway, AIBS got off to a good start. One of its first actions was to revise its constitution, and I became its president. The member biological societies at that time were fully representative of the spectrum from molecular biology and genetics through the physiological, morphological, developmental, microbiological, ecological, zoological, and plant sciences. Without going into wearisome details, however, the first six of these sectors gradually withdrew, over some years, leaving mainly the ecological and plant sciences, together with some general societies such as the American Naturalists and the Conference of Biological Editors. This loss of AIBS’s representative character seems to me deplorable for an organization that had hoped to speak for all biologists on matters of national scientific policy and the general health of the biological sciences.

AIBS got
off to a
good start

In the late fifties, I had assumed almost full editorial responsibility for the publication *Quarterly Review of Biology* (QRB), although B. H. Willier, also at The Johns Hopkins University, remained titular editor. The growing mountain of work involved in processing the hundreds of biological books obtained for review proved too much for the single part-time editorial assistant allowed us by the journal’s owner, the Williams & Wilkins Co., of Baltimore, Maryland. We applied for additional editorial help and were flatly turned down. QRB, we were told, was a financial loss to the publisher, and no added financial support could be granted. In my desperation, a solution occurred to me: Why not offer to take QRB, for the sum of \$1 to cover all debts and assets, to AIBS? To my surprise, Williams & Wilkins Co. agreed, and at

about the close of my term as president of AIBS, QRB was lodged for management, promotion, and mailing, in Washington, DC. My recompense for the coup was the allowance of one additional editorial assistant to help index and mail the flood of books out to reviewers.

The mixed successes and failures of AIBS over the past half-century offer us, I believe, ground for reflection and resolve as we enter the new century.

BENTLEY GLASS
1066 8th St.
Boulder, CO 80302

1973: Building credibility

The history of AIBS not only reveals the organization’s dedication to understanding the science of life, but also exhibits parallels with the history of concomitant human social and political institutions. AIBS was conceived to maintain and enhance biology, to cope with subtle strategies that were affecting science funding, and to improve lay comprehension of biology. All were gigantic tasks and unlikely to be completed quickly, if ever. Ranging from molecules, cellular biochemistry, and physiology to genetics, ecology, and geophysics, biology called for integration and synthesis. The problem facing AIBS governing boards, in 1973 and now, was how to approach realistically the lofty goal of unity but still serve a rapidly growing family of subdisciplines and their constituencies.

Subdisciplinary societies are essential to nurture evolving fields and to press for excellence in investigation and discovery. However, both the newborn and the mature stars in the biological galaxy are often heir to common human frailties. They tend to become parochial, elitist, suspicious, and intolerant of their sister disciplines. An umbrella institute, like AIBS, risks a compounding of hostility to almost any issue in which consensus is necessary. Consequently, the officers and board of AIBS constantly search for a philosophical glue that appeals to the majority and that can eliminate conflict. Finding such a glue has been, and always will be, the organization's main challenge. Against such a background, the year 1973 was perhaps a microcosm of the history of AIBS since it was founded.

AIBS was recovering in 1973 from its preoccupation with fiscal integrity. Finances were difficult but had been brought under control. It was time to concentrate debate on programs and initiatives that could be so valuable that they would command the support of the biological community and earn the respect of society as well. In 1973, much of the constructive debate and discussion in the board and executive committee meetings—apart from the usual review of budgets and finances—dealt with public responsibilities, education, and the growing importance of ecology. A few words about each may be helpful.

- **Public responsibilities.** A number of informal meetings were arranged between members of the House and the Senate and the leadership of AIBS. One session with Vice President Gerald Ford, held in concert with officers of the American Institute of Physics (AIP) and the American Chemical Society (ACS), focused on the need for the White House to reestablish the position of Presidential Science Advisor, which President Nixon had allowed to lapse. Other discussions with Congress dealt with bills designed to restructure the priorities for the National Science Foundation (NSF). One representative seemed to agree that basic science should receive priority attention from Congress, considering that other governmental agencies, such as the Department of Agriculture and National Institutes of Health, were created to deal with the applied sciences. AIBS also made other valuable contacts with officials of federal and state agencies.

AIBS had recognized for some years that it must create a liaison with both congressional and executive branches of government. The institute accepted the responsibility for keeping the membership informed of the effects on changing policies in government on their sciences and their livelihood. Missing were staff resources similar to those amply available to the extensive public affairs offices of AIP, ACS, and other umbrella scientific organizations. It was clear that AIBS had an overriding need to improve its responses to biological issues being discussed in the political arena. Federal policies were increasingly determining the future of the sciences. Biology could not be effective without an

increased presence and skilled persuasion in stating its views to both legislative and executive powers.

Member society presidents also realized that AIBS must play an increased role in influencing public policy. Therefore, the executive committee in December earmarked \$40,000 of the 1974 budget to seek and employ a full-time associate director of public affairs. Also, the committee ordered more complete coverage of public affairs issues in the AIBS journal *BioScience*. These actions were pivotal in charting the role of AIBS for the years ahead. AIBS staff still would need to operate on a thin budget, but biology clearly had begun to catch up with its sister sciences in providing an effective liaison with the government in Washington and in the capitals of the states, in which AIBS state public affairs representatives were also beginning to make their presence felt.

- **Education.** The education of new biologists and retraining of mature professionals had been given priority early in the history of the organization, when the major concern had been development of graduate school curricula. AIBS was also involved with communication to the lay public of the tenets of biology in secondary schools. An AIBS education group, which issued a report in the spring of 1973, recognized that its purview should emphasize both liberal and specialized training but should also include a large number of ancillary topics, such as manpower needs and social issues.

AIBS was especially outspoken in its efforts to eliminate the teaching of creation science in the public schools. The AIBS Board in 1973 endorsed a statement of the executive committee that deplored the presentation of religious beliefs about creation as if they were part of the body of scientific knowledge. Ironically, even in 1997 this problem persists. In a time when humankind is being bombarded by the media about the supernatural, UFOs, aliens, and mysticism, the need for citizens to know the difference between entertainment and truth is crucial.

Further actions that were taken in 1973 continued the tradition in education by initiating or supporting activities such as the development of methods to evaluate the knowledge of practicing biologists; production of a directory of biological departments in colleges and universities; improvement of the cadre of scientific manpower with competence to deal with urgent biological problems; preparation of biotechnical teaching modules on videotape; revision of the AIBS career guidance brochure; continued growth of student chapters of AIBS; development of a new program to assist universities by supplying consultants to develop plans for construction of new facilities for biological education and research; and continued provision of peer-review panels to federal agencies.

Although AIBS could use its expertise to improve education, the group's thin budget limited what it could attempt. It is noteworthy that the strength of AIBS, and the respect in which it was held, had commanded financial support from a variety of sources, allowing the group to perform a multitude of services that bore directly

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on the welfare of both biological science and biologists. Such outside support, in the form of grants, extended the influence of AIBS well beyond the resources provided by the limited income derived from dues.

• **Ecology.** Along with public responsibilities and education, the third theme that permeated much of the discussion in 1973 was the growing awareness of ecological insights that were increasingly in conflict with policies and practices of governments worldwide. Since the publication of *Silent Spring*, the public view of biology as an amusing luxury of a few was shifting to one of alarm at the speed with which humankind was changing the world.

Most of the member societies of AIBS, such as the Ecological Society of America, had either a clear ecological orientation or were basic to ecology itself. Literally, the continuance of life on the planet demanded the best biological science that could be created.

In 1973, AIBS responded in many ways to the increasing importance of ecological conflicts. A specific example was concern with management of the Panama

Canal and the various threats imposed by increasing its traffic. The possibility of turning Gatun Lake into a saltwater lagoon instead of a freshwater barrier to the intermixing of marine species of the Atlantic and Pacific Oceans was put before the executive committee. AIBS was asked by the Smithsonian Institution to condemn the plan as ecologically irresponsible. Because much more research was necessary to understand and predict the consequences of such action, AIBS postponed a response until more science could be made available. This response relied, in part, on the advice of members of an AIBS group sent previously to examine an opportunity to establish a new marine station on properties being vacated by the US military in the Canal Zone. The procurement of this site proved instrumental in establishing a research laboratory on the Atlantic side of the canal, later turned over to the Smithsonian Institution to administer. From it, much more has been learned about the impact of the canal on the environment.

Another AIBS project in 1973 was an evaluation of the flora of North America, begun primarily under the aegis of the Smithsonian Institution. The flora project was to be a computerized taxonomy of the total flora of North America. Significant funding had already been made available to provide for systems analysis and the generation of programs that would allow for the inclusion of data already at hand and for new data to come. The flora project would serve as an invaluable inventory and database for studies on continental ecosystems. In spite of initial funding by several government agencies, the project was terminated, apparently because of management conflicts.

Biology, with many routes to understanding life on this planet, is positioned to revolutionize ancient philosophies and to lead to rational approaches to the gravest problems that threaten the survival of all species—including humankind. AIBS is not only poised to help in resolving parochial scientific views but should

strive for resolution of the many biology-rooted problems facing the nation and the world. Together, biologists can advance their disciplines rapidly and, at the same time, provide hope to all peoples facing overwhelming threats to their existence.

ROBERT W. KRAUSS
Riverbend Farm
P.O. Box 291
Denton, MD 21629

1979: A time of transition

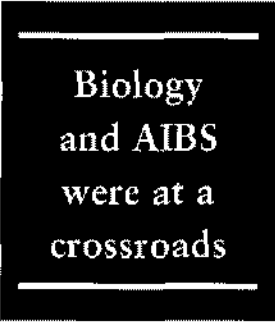
The late 1970s were a period of considerable change in the biological landscape. A few years earlier had seen the resignation of the nation's president and a weakening of that office. Now biology and AIBS were at a crossroads. Molecular biology and biotechnology were coming of age, the green revolution had taken hold,

environmental concerns were real, there was a leveling of employment opportunities, and competition for funding traditional biology was of increasing concern. AIBS had limited resources, and issues on curriculum dynamics, government relations, and public responsibilities had to be addressed. Moreover, for AIBS, accountability, especially concerning budgeting and money management, was essential because whether we liked it or not, these influenced the programs and policies of AIBS. Times at AIBS could, perhaps, be

best described as in turmoil.

My presidency in 1979 was a period of transition for AIBS. In retrospect, Paul Pearson, who preceded me as president, was a fine mentor and realist who set things in motion for addressing serious issues confronting not only AIBS, but also all of biology, in a changing era. In lighter moments, we discussed intercollegiate football and how we were learning to use Washington's new Metro system. Bea Sweeny, my successor as President of AIBS, was also a joy, and I have pleasant memories of her spending weekends with us in Blacksburg before returning to Santa Barbara. That the three of us, plus George Gries (AIBS President in 1977), worked harmoniously and could laugh was essential during this period of change. I would be remiss in not acknowledging that, during that period, excellent support was needed and received from the AIBS staff (especially Don Beem). This support was essential because changes were occurring in the management style at AIBS.

People who are elected second vice president of an organization must pay strict attention to matters because in the near future everything will be on their shoulders. At the March 1977 meeting of the AIBS Board of Directors, some board members with inflated egos began pontificating on the importance of their discipline, their educational philosophies, and why AIBS should be simply a society of individual members. My concerns, as second president-elect, were more mun-



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dane: I wondered why the board meeting in which the annual budget was acted on was held in March, one-third of the way through the fiscal year. My thought was either to change the fiscal year or to have the board meeting in late November or early December. I also wondered why the board meetings were devoted mainly to hearing from outside speakers rather than to addressing what was going on at AIBS. I was also concerned that the management style needed to be changed so that less policy was determined by the executive director. That is, I felt that the board and executive committee should establish policy that is implemented by the executive director.

Between the December 1977 and August 1978 meetings of the executive committee, several issues were addressed. The executive committee, on a four-to-two vote, recommended that AIBS schedule the annual meeting only in states that had ratified the Equal Rights Amendment. This recommendation was not taken lightly by the board, and only after much discussion did they support the recommendation by a vote of 22 to 12. Because of philosophical and ethical reasons, we also decided (not without argument) that certain stocks held by AIBS would be liquidated. Don Beem was doing a splendid job of serving as acting executive director of AIBS and a search for a permanent executive director was under way. Paul Pearson was the leader and, as his successor, I was involved in the search in every way. Most, if not all, of the decisions were mutually agreed on by Paul and myself and supported by the executive committee.

With much of the "housekeeping" accomplished, the December 1978 executive committee meeting set the stage for my presidency. Art Gentile was introduced as the new executive director, effective February 1979. This meant that Don Beem could return full time to head special science programs. To my delight, Paul Pearson and Forest Stearns agreed to serve as liaisons from the executive committee to the education and public responsibility committees, respectively, and John Behnke would continue as editor of *BioScience*. Although I was quite comfortable in assuming the presidency of AIBS, there was the upcoming traditional March board meeting where action would be needed to address structural changes, including changing the date of the board meeting to late November or early December. To "ruin the holiday season" and spend more time on AIBS business matters rather than having an update on the "Washington Scene" was troublesome to some long-time board members. Considerable discussion was generated, and the meeting could best be described as not one of harmony. Structure was put in place and, although wounded, I was confident that with a new executive director, a positive attitude by staff, and the support of the executive committee, what Paul Pearson had started could be completed.

The annual AIBS meeting in August 1979 at Oklahoma State University was a delight. The theme, "Mid-America Grasslands: Prairie to Dust Bowl to Present," addressed our depleting water supply. Manuscripts submitted to *BioScience* were increasing, special science

programs were on the rise, and the budget was on course. I felt confident in stating to the executive committee that the December board meeting would be devoted to AIBS business with the only "outsider" being Congressman George Brown (Chairman of the House Subcommittee on Science Research and Technology) who would speak to the board at a dinner session on the role of biologists on science policy in the government. That board meeting, the second over which I presided, differed considerably from the earlier one. There was much harmony and feeling that we had turned the corner. It was with relief that I turned the reins over to Bea Sweeny, and the 1970s were but a blip in the history of AIBS.

PAUL B. SIEGEL

*Animal and Poultry Sciences Department
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061-0306*

1990: Population biology and AIBS

My presidency of AIBS was a great personal pleasure and a professional failure. I enjoyed enormously my interactions with other board members, with the AIBS staff, and with members at annual meetings. I wish that I could report as positively on my success in attaining my goals for AIBS itself.

I agreed to run for the presidency of AIBS in a bar. I was haranguing several colleagues about the need to start a new "umbrella" organization for population biology (ecology, evolution, behavior, and systematics) to promote our disciplines in the eyes of government, funding agencies, and the general public. We needed (and still need) a rough equivalent of the American Medical Association or the Trial Lawyers Association—that is, an organization with a national presence and sufficient funding to carry out significant lobbying and public education campaigns.

My basic idea was to persuade population biologists to put their money where their mouths were. For instance, full professors making \$80,000 annually might pay several hundred dollars annually in dues. Depending on the size of the organization, a fund might be established of more than \$1 million to spend each year to call attention to the results of research in population biology and to the need for much more support for them. At the time, I was particularly impressed by the success of two public education efforts—the nuclear winter meetings of 1983 and the biodiversity meetings of 1987. The need and the potential for a new organization to promote the importance of issues such as avoiding the development of antibiotic and pesticide resistance or preserving ecosystem services, and, in the process, to promote our disciplines seemed enormous. Well-publicized events on such topics could have become annual events in Washington, DC.

Wiser (or more sober) heads were present, and all said the same thing: Why start a new organization when a

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it happen

fine one, with a superb journal, already existed—AIBS. “Why don’t you let us nominate you for AIBS presidency, and if you win you can try to move the organization into the umbrella role,” they said. How could I refuse (there may be a temperance lesson in there somewhere)?

To make a long story short, I ran for the AIBS presidency and won. That is, I won in the sense of having three years of contact with a fine group of people (as president-elect, president, and past-president). But I totally lost in my efforts to persuade population biologists to unite and become an effective political force. I proved inadequate to the task, but all is not lost. The opportunity still exists—and I hope that AIBS will somehow make it happen.

PAUL R. EHRLICH
Department of Biology
Stanford University
Stanford, CA 94305

1991: Public communication

I had the pleasure of serving as president of AIBS in 1991, which was a very active period for federal legislation affecting natural resources. For example, this was the beginning of the discussions on the definition of wetlands and on the forthcoming reauthorization of the Endangered Species Act. It was also a time when discussions about “ecosystem management” were being formulated, and federal agencies were deciding what was meant by the term and how it should be approached as a form of everyday management.

AIBS has always had the responsibility of assisting in translating the best scientific information into the public forum. In this time of active debate on crucial issues, 1991–1992 was important. As a result, much of the year was spent in orchestrating ways that scientists from all the affiliated organizations could participate in Congressional hearings and in filing materials with legislative staff members. At the same time, *BioScience* was winning awards for its excellence as a scientific publication. So, this was a really exciting time for AIBS as it served as communicator, both among the wide array of scientific disciplines within AIBS and as it provided information and judgments on national topics of interest to biologists.

Another topic of interest at that time was the use of biological material in high school and college laboratories. In general, public school teacher organizations and college teachers supported policies that recognized the concerns about biological material, but they argued both that teachers needed the license to teach as they thought best and that in some cases, there were no substitutes for working on preserved biological material. AIBS approved a policy reflecting these views, largely to be used as guidelines for school and college administrators. Interestingly, some community colleges

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effective voice
for biology

seemed to face the issue with the most intensity. In the intervening years, the alternative approaches to actual biological materials have improved dramatically in quality and realism. Today, AIBS might take a somewhat different stance on the issue.

Perhaps the most significant step AIBS took that year was to more clearly identify its objectives and program domain. Because the organization includes so many biologists and potentially addresses such a wide array of topics, there is always the danger that AIBS will not remain focused on issues of highest priority. Therefore, we developed a summary of program goals in four areas: to preserve biodiversity; to support scientific research in the broadest sense; to provide information on which to base public policy and management of biological resources; and to support biology teaching. Despite the apparent separation of these four topics, there was a strong emphasis on the integration among them. It was recognized, for example, that the topic of “biodiversity” was an integrating rubric, including subcellular- to landscape-level processes and involving teaching, research, and public policy.

Over the years, AIBS has served two very important functions. First, through *BioScience* and its annual meetings, AIBS has served as a mechanism for communication among a broad spectrum of biologists. It has been a nonintrusive yet effective communication bridge between and among many professional societies. Second, because its headquarters are located in Washington, DC, and because AIBS includes so many biological disciplines, it has been an effective voice for biology in the legislative and decision-making arena. Both of these remain important functions today, and are, in fact, more important today than ever.

PAUL G. RISSER
Office of the President
Oregon State University
Corvallis, OR 97331-2128

1992: Voyage to diversity

The 1992 AIBS Annual Meeting was held in Hawaii, with the opening plenary speech given by Hampton L. Carson. I remember looking down from the Sheraton at the tiny pink Royal Hawaiian, which had seemed like the only hotel when I visited in 1959, but 33 years later was virtually lost among the towers lining Waikiki. What a metaphor Hawaii was, and is, for the impact of people on the environment and biological diversity. How appropriate a venue for AIBS, in the wake of the Earth Summit in Rio de Janeiro, as the institute embraced its new mission—one that was oriented around biodiversity and sustainable development.

The meeting met around the theme of voyagers. Voyagers representing propagules for the extraordinary evolutionary radiation in the Hawaiian archipelago.

Voyagers as human society explores how to live sustainable on this planet with its wonderfully diverse biology. Voyagers bound together as AIBS, the only association that draws together scientists around the common theme of biological diversity. Honolulu was where we met to discuss these issues and topics as scientists and where, as AIBS, we began to reorganize to address them more effectively.

THOMAS LOVEJOY
*International Center
Smithsonian Institution
Washington, DC 20560*

1993: Multidisciplinarity in organismal biology

AIBS is truly a multidisciplinary organization, and this becomes very apparent when working with the board of directors or with the AIBS council. Just as many societies make up AIBS, many disciplines are represented in administrative matters of the board. Even when I was president, I worked closely with the cast of presidents (the president-elect and the past president), who represented several scientific disciplines. We all learned much of each other's research and the urgency of some issues that needed to be brought before policymakers. I was always impressed, as I looked around the table at a board meeting, by the breadth of the disciplines that were represented, ranging from global change to developmental biology of algae, from environmental toxicology to animal science. Yet, when I listened to the scientists, we all focused clearly on the need for biologists to be unified in many policy arenas.

Thinking about it, it was amazing; agricultural societies working with conservation societies, tropical biology societies working with the weed science societies—all finding common issues that needed to be emphasized, such as biodiversity, ethics, and education. There was a friendly, connected feeling of interdisciplinarity, instead of the pushing of one's own interests that sometimes exists around discussions of individual disciplines. This is not to say that conversations were never heated, but decisions seemed to be made in a timely manner, because many issues were on the table. When societies chose not to belong to AIBS, the issue of territoriality rather than unity always seemed to be the reason. We (the board and the immediate presidential cast) often pondered the success of the physicists or the chemists in uniting on policy matters, whereas the various scientific societies representing a single discipline of biology always needed an immediate and tangible success rather than representation of all biology. That was always disappointing.

The ability to bring this multi-disciplinarity and our representation of diverse organismal biology to effective

use in Washington was seen in many ways: Congressional Science Fellows sponsored by AIBS; *BioScience* appearing on legislators' desks when we visited their offices; the AIBS President's testimony in Congress on NSF or other agency appropriation bills; and, particularly, the fast response, in the form of briefings, that we could give to Congressional members and staffers on important scientific topics. An example was a briefing on ecosystem management that was held at the Smithsonian Institution under the sponsorship of AIBS, the Ecological Society of America, and the Association of Ecosystem Research Centers. In two to three weeks of planning, speakers from universities and agencies were selected who could translate hard science into policy needs. The meeting was not advertised widely so that it could be a "learning" opportunity. More than 100 participants attended the day-long briefing, including the Secretary of Interior, the Chair of the House Natural Resources Committee, and numerous staffers. Another example was the Workshop on Biodiversity and Commodity Production that AIBS facilitated, which brought the conservation societies and the research and development commodity organizations together.

This cross-society linkage could be much stronger and more effective, but only if scientific societies recognize that there is no other organization that represents organismal biology. With the urgency of the environmental problems we all face, there is no time better than the present to pay your dues to the only organismal biology society umbrella we have—AIBS.

DIANA WALL FRECKMAN
*Natural Resource Ecology Laboratory
and College of Natural Resources
Colorado State University
Fort Collins, CO 80523-1499*

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biology

1994: A broader base

Biology does not speak with a single voice in the United States. More than other natural sciences, biology is split into many subdisciplines, each of which more or less goes it alone when it comes to strategic planning and priority setting. There are umbrella organizations that represent the sciences as a whole, such as the American Association for the Advancement of Science, but biology itself is quite fragmented. This fragmentation even extends to the international level, where there are a great number of scientific unions in the biological sciences but few in the physical sciences. This fragmentation does not serve us well because science policymakers often want to hear from "the community" on funding priorities—but from the biological community the voices are many and often discordant. AIBS attempts to serve as a unified voice for biology, but in recent times the center of gravity in the organization has

been organismal and environmental biology; AIBS has been working to broaden this base, both in terms of its journal and in terms of policy.

As with most professional organizations, the officers of AIBS serve only one year, so their impact is not great. The continuity of these organizations thus comes from the professional staff. During my year as president, AIBS was in the midst of a major reorganization, and a new executive director, Clifford Gabriel, had just come on board and was working hard, and successfully, to streamline operations. There was a fine staff that had a long-term memory of the operation of the organization and its strengths and weaknesses to give guidance to us all. Julie Miller was doing her magic on the outstanding journal *BioScience*, Donna Haegele was ably doing the extremely difficult job of organizing the large annual meetings, and Donald Beam was keeping the complex contracts program going under difficult times.

My main effort was to give some overarching theme to the annual meeting. The annual meetings are primarily a vehicle for the contributing societies to hold their own professional meetings. I promoted the idea that AIBS should also have a special event at the meeting that would have a cross-cutting theme that would represent the unity of biology, rather than the specialization. The theme that was chosen was "Science and Biodiversity Policy." A three-day symposium covered this theme and extended from basic science to education and national policy in the biodiversity area. A special issue of *BioScience* resulted from this effort.

Because rewards in science for individuals come principally from solitary efforts within a given discipline, there is not much attention to using the power of the biology as a whole to serve society. AIBS is certainly attempting to do this and deserves all of our support.

HAL MOONEY
Department of Biology
Stanford University
Stanford, CA 94305

1997: Alive and well

AIBS proudly celebrates its 50th anniversary in 1997. Although it has changed with the times, its overall objectives have remained the same. Its mission for the 1990s includes providing the biological sciences community with national representation on public issues of biological interest and promoting biological education, research, and interactions among all biologists. Recognizing that social objectives can often benefit from biological input, AIBS offers scientific information as society wrestles with issues of sustainable resource use.

At age 50,
AIBS is alive
and well

These lofty goals meet reality daily in our offices. Many members of the 42 AIBS member organizations, as well as its individual members, contribute to its projects, which include a congressional fellowship (the current fellow is the only Ph.D. ecologist working as a legislative assistant on Capitol Hill); the scientific review of research proposals submitted to the federal government (the Scientific Peer Advisory and Review Services department of AIBS has recently managed the review of projects on breast cancer, Gulf war illnesses, thermal physiology, radiobiology, and marine biotechnology); and the production of our 1997 membership directory.

A few highlights from 1997: The meetings department ran an outstanding annual meeting in Montréal this past August, at which more than 1300 attendees could choose from among over 130 scientific sessions conducted by eight AIBS member societies. The meetings department continues to look for new ways to serve its member societies, for example, by planning and handling registration for individual societies. The publications department continues its special effort to bridge the gap between organismal and molecular biology in *BioScience*, which will now be produced 12 rather than 11 times per year. In the Institute for Scientific Information's 1996 Journal Citation Report, *BioScience* was ranked fifth of 53 multidisciplinary biology journals in the frequency with which its articles were cited; it was surpassed only by *Nature*, *Science*, *FASEB Journal*, and *Proceedings of the National Academy of Sciences*.

Last spring, AIBS joined a coalition of scientists, engineers, and mathematicians to support increased federal support for science. We continue to regularly respond to requests from federal agencies for biological information. A major new initiative, cosponsored with the National Center for Ecological Analysis and Synthesis in Santa Barbara, California, and headed by Peter Kareiva of the University of Washington, will compile information on the Habitat Conservation Plans (HCPs) developed under the Endangered Species Act. After two workshops this fall, it will evaluate the likelihood of the effectiveness of HCPs.

The 50th anniversary year of AIBS saw the appointment of a new executive director, Richard O'Grady, who joined AIBS in July. He brings to AIBS scientific expertise in systematics and developmental biology and broad experience in education and business, particularly as a scientific editor and publisher. We look forward to his input as the institute moves into its second 50 years. Clearly, at age 50, AIBS is alive and well.

FRANCES C. JAMES
Department of Biological Science
Florida State University
Tallahassee, FL 32306