



AAAS NEWS AND NOTES

edited by Tiffany Ayers

REPORTS

Panama Applies Science to Tourism and Conservation Efforts

When Panama takes over control of the Canal Zone from the United States on 31 December, it will also assume responsibility for conserving the area's natural resources while developing tourism to become a driving economic force. Panama is already looking at ways to guarantee that scientific research will play an important role in maintaining the country's rainforests, flora and fauna, and native cultures after the transition.

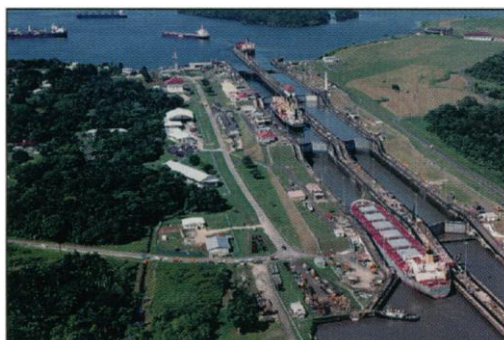
Panama's efforts to combine tourism, conservation, and research are addressed in a report to be released in June by AAAS. The report is based on a conference, held in Panama City last December, which discussed resource management and tourism projects. The conference, Heritage Tourism for the Next Millennium, was organized by the Panama Tourism Bureau; Panama's National Secretariat for Science, Technology, and Innovation; AAAS; the Smithsonian Tropical Research Institute (STRI); and the City of Knowledge, a research center located in Panama.

Leaders of the tourism and hotel industry joined prominent scientists in determining research priorities, policy guidelines, and mechanisms of a tourism-driven economy. Keynote speeches were delivered by Panamanian President Ernesto Perez Balladares, AAAS Executive Officer Richard Nicholson, renowned architect Frank Gehry, STRI Director Ira Rubinoff, and others. Several workshops were offered on such topics as natural resource management, master planning, and sharing a cultural heritage.

The conference served to launch the flagship Tourism-Conservation-Research (TCR) strategic alliance, created by the Panamanian government to integrate those key sectors of the economy in order to provide sustainable development benefits for the country. Such strategies will play an important role as Panama seeks to compensate for the estimated \$300 million in annual economic impact from the withdrawal of U.S. civilian and military forces.

"Only if sustainable resource manage-

ment is brought as a financial incentive and an employment opportunity into the tourist trade can the selling of heritage experiences meet the highest standards of product quality



Control of the Canal Zone will revert to Panama at the end of the year.

ty while catalyzing economies that will prosper on sustainability," said Hana Ayala, conference coordinator and consultant to the government of Panama.

"The TCR model makes the point that ecotourism cannot survive in the long term if it does not in fact incorporate scientific knowledge and expertise in the very planning and management of our natural resources," Nicholson said. "That is why the TCR model is so intriguing, and why it makes sense for the scientific community to support this."

Panama has a wealth of natural resources

that can be highlighted in heritage ecotourism, including rich, easily accessible tropical forests, spectacular coral reefs, and a diverse cultural heritage. Yet conference attendees agreed that any efforts in the tourism industry would have to be accompanied by scientific research to guarantee that resources are sustained. The planet is losing about 42 million acres of tropical rainforest every year, or 100 acres per minute. Half of the world's plant and animal species inhabit just 7 percent of the planet's surface, primarily in the rainforest areas of the planet.

Panama also has one of the richest heritages of scientific research anywhere in the tropics, stemming in part from the construction of the Panama Canal in 1903, which led to an influx of biologists in search for cures to malaria and yellow fever. Today STRI, located on the Barro Colorado Island, is one of the world's leading centers for basic research on the ecology, behavior, and evolution of tropical organisms.

One location where the TCR model may first be put to use is San Lorenzo/Fort Sherman. A U.S. military base used for military training for many decades, Fort Sherman will revert to Panama in June and will be transformed into a biodiverse complex that will introduce visitors to the heritage tourism experience.

The TCR model is described in the AAAS report, which includes recommendations on how tourism revenue supporting scientific research and conservation could be spent most effectively and how research results and economic benefits could be efficiently transferred among TCR sectors and other parts of Panama's economy. The report also includes a description of the TCR tourism routes, a package of several themat-

AWARDS

Reviewers Sought for Journalism Awards

Scientists are needed to review entries in this year's AAAS Science Journalism Awards Program, sponsored by the Whitaker Foundation. Since the program's inception in 1945, more than 300 individuals have been honored for their significant achievements in the field of science reporting. The awards are highly coveted among the science journalism community, and the winners are honored each year at the AAAS annual meeting.

Independent screening and judging committees comprised of scientists and science journalists select the winning entries. The reviewers screen radio and television reports for scientific accuracy. If you would like to volunteer, and can be in the Washington, D.C., area sometime in August or September, contact Ellen Cooper at the AAAS News and Information Office (phone 202-326-6431 or e-mail ecooper@aaas.org).

COURTESY OF THE PANAMA CANAL COMMISSION

ic routes that comprise the core of Panama's heritage tourism product. The report stresses the need to involve local communities in the TCR process from the beginning to ensure that the local communities would receive the benefits of the initiative.

A follow-up conference on TCR will be held in Panama in January 2000. For more information, contact Marina Ratchford of AAAS's Latin America & the Caribbean Program at 202-326-6490 or mratchford@aaas.org.

WORKSHOPS

AAAS Takes Proposal Writing to Armenia

AAAS recently hosted a workshop in Armenia to help scientists there improve their grant proposal writing skills. About 50 scientists attended the 2-day workshop, held on 5 to 6 May in Yerevan and sponsored by AAAS and the National Foundation of Science and Advanced Technologies of Armenia. The workshop was funded by the U.S. National Science Foundation and was held at the American University of Armenia.

Workshop attendees came from Yerevan and Gyumri, Armenia, as well as from Georgia. Liane Reif-Lehrer of TechWrite Consultants/ERIMON Associates instructed them on proposal writing, and Elizabeth Kirk of AAAS's Europe and Central Asia Program spoke to them about how to prepare oral presentations. The workshop was conducted in both English and Russian.

AAAS has conducted proposal writing workshops since 1994 in several cities, including Kiev, Tallin, Almaty, and Vladivostok. The workshops are valuable for bench scientists who are learning about the competitive funding culture.

MEETINGS

Report of the 1999 Council Meeting

M.R.C. Greenwood, AAAS president, gave highlights of the AAAS Board's actions over the last year. She reported that in response to concerns about science in the Department of State raised at the 1997 Council meeting, the Board and AAAS staff had been following the issue closely with the State Department and the National Academy of Science's (NAS's) committee charged with a study on science in the State Department. Greenwood reported that the Board met with Department of State Assistant Secretary Melinda Kimble to offer AAAS's help in these matters and to discuss opportunities for improvement. In addition, Mildred Dresselhaus, AAAS chair, wrote a letter to Secretary of State Madeline

Albright supporting the NAS study and asking for a meeting to discuss further actions. Greenwood noted the Board would continue to follow this area closely.

Greenwood said the Board met with Representative Vernon Ehlers (R-MI) of the House Science Committee and developed a response to the science policy report prepared by his task force. Input for this response had been sought from members via the AAAS Web site. She said that the Board was anxious to continue to work with Representative Ehlers to help implement some of the report's recommendations. In addition, Greenwood noted that the Board continued to monitor the status of federal R&D funding on a regular basis and was working to deal with concerns about the Office of Management and Budget's (OMB's) proposed changes to A-110 regulations on access to research data.

Greenwood informed the Council that the Board met with Federico Mayor, director-general of UNESCO, to discuss areas of possible cooperation among the two organizations. One of the outcomes was that Greenwood will be the AAAS delegate to the World Science Congress in Budapest in June 1999.

Greenwood noted that under the leadership of Mildred Dresselhaus, the Board had been working to strengthen the connection between the Board and the programmatic activities of AAAS. She said that Board members were serving as liaisons to the committees and their programs and were reporting back to the Board on a regular basis. Greenwood said that the Board had continued to work with Richard Getzinger, director of International Programs, to strengthen the international programmatic activities, and she announced the formation of a new Board-appointed advisory committee, the Advisory Committee on International Science, to provide oversight and guidance on the activities of the Directorate of International Programs.

In December the Board met in a retreat format at the NAS Beckman Center in Irvine. Greenwood said that as part of that retreat they met with Chancellor Ralph Cicerone and postdoctoral and graduate students. Those discussions centered on the concerns of young scientists and the role AAAS might play in addressing some of those concerns through its programs and activities.

Greenwood announced that Floyd Bloom, the current

editor-in-chief of *Science*, had decided not to seek a second term and would step down in 2000. She thanked Bloom for his outstanding leadership in contributing to the vision of *Science* and in bringing the journal into the electronic age. She said that the Board was creating a search committee and suggestions for candidates to be considered by this committee would be welcome.

Executive Officer's Report

Richard Nicholson, AAAS executive officer, gave a brief state of the association report. He noted that the new headquarters building had been financed with tax-exempt bonds and that the insurer of those bonds required that AAAS maintain \$16 million in liquid reserves. As a result of this requirement, the Board had approved budgets aimed at building up the association's reserves. He noted that in 1998 AAAS had added more than \$3.5 million to its reserves as a result of controlled expenses and greater-than-anticipated advertising revenues. Nicholson said that in response to requests from librarians, a decision had been made to sell site licenses to libraries for *Science* Online. He cautioned that there was a slight risk that this move might erode the number of individual memberships and that initial results would be looked at carefully.

Nicholson said that the 150th anniversary celebrations had been successful and noted that a number of people had worked hard to make it happen. He mentioned the history exhibit, which had been displayed at the

AD HOC TASK FORCE ON FELLOWS' SUGGESTIONS FOR CHANGES TO AAAS BYLAWS REGARDING FELLOWSHIP

ARTICLE I. Membership and Affiliation. Section 2. Fellows—A Member whose efforts on behalf of the advancement of science and its applications are scientifically or socially distinguished may, by virtue of such meritorious contribution, be elected a Fellow by the Council. The Executive Officer shall annually present to the Council a slate of nominees for such election. Nominations may be made by the Steering Groups of the Section Committees (see Bylaw Article III, Section 3); by the Executive Officer; and by any three Fellows, provided that at least one of the three is not affiliated with the institution of the nominee.

To be included on the slate, a nomination—whatever its source—must have the approval of a majority of the members of the Steering Group of the Section Committee to which the nomination has been referred and must have no more than two members opposed. However, if the Steering Group of the Section Committee fails to approve a nomination by three Fellows or by the Executive Officer, the nominator(s) may appeal to the Committee on Council Affairs for review and possible reversal of that action. The number of nominees on the slate may not exceed 0.5 percent of the membership of the association. The number of persons nominated annually by the Steering Group of a Section Committee may not exceed 0.4 percent of the membership who are enrolled in the corresponding Electorate as their primary Electorate.

Approved by the AAAS Council on 24 January 1999.

Philadelphia meeting before moving to the exhibit area of AAAS headquarters; the series of essays on science and society that had run in *Science*; and Mildred Dresselhaus's presidential speech, which had presented an excellent overview of AAAS and where it was going. He also mentioned the series of lectures which culminated in September on Founders Day with an informal meeting between high school science and technology students and Stephen Jay Gould, AAAS president-elect, and an evening lecture given by Gould at the Baird Auditorium of the Smithsonian Institution and attended by many local AAAS members.

Report of Ad Hoc Task Force on Fellows

Betsy Clark, chair of the Ad Hoc Task Force on Fellows, reported on the deliberations and recommendations of the task force that had been formed by the Council to review the current procedures for nomination and election of fellows. She said that her group reviewed the procedures to ensure that rigorous standards were being maintained. Clark presented the task force's recommended changes to the bylaws aimed at establishing a high threshold for fellowship (see the box on page 1547). She also discussed recommendations for procedural changes aimed at broadening the pool of potential candidates and introduction of a requirement to provide more complete information on each nominee. The group recommended that the Committee on Council Affairs (CCA) serve as the final arbitrator for challenged nominations. The task force also recommended that a subset of the task force be formed to review the current quota system for the sections and the potential impact of the recommended changes. The Council voted to approve the suggested procedural changes and the revisions to the bylaws.

Briefing on the Courts Demonstration Project

Mark Frankel of the Directorate of Science and Policy Programs briefed the Council on a new demonstration project. This project grew out of decisions giving federal judges the authority to appoint scientific experts to help them determine the quality of the scientific arguments being presented in their courts. AAAS will help the courts to identify the needed experts who will be employed by the courts as their expert witnesses.

AAAS will involve its affiliates in this project and will set up a scientific selection panel to aid in the identification of qualified scientists. At the end of the demonstration project, the efforts will be evaluated by the Federal Judiciary Center.

Briefing on AAAS Fellowship Programs

AAAS administers a number of fellowship programs aimed at bringing scientists into the policy or media arena. Some of these programs have been in existence for a num-

ber of years and some have recently been introduced. Shirley Malcom, director of Education and Human Resources, described the Mass Media Fellowships, a 10-week summer program that places graduate-level scientists with an interest in journalism at a variety of media sites throughout the country. She also described the National Parks Fellowships, a program that is funded through a partnership between Canon USA and the National Parks Service and administered by AAAS. These fellowships in the biological, physical, social, and cultural sciences provide up to 3 years of support at \$25,000 for research on questions of critical interest to the National Parks. Albert Teich, director of Science and Policy Programs, described the policy fellowships run by AAAS: the Congressional Science and Engineering Fellowships, which place fellows in congressional offices; the Diplomacy Fellows Program, which places fellows in the State Department and the U.S. Agency for International Development; the Executive Branch Fellows Program, which places fellows throughout the Executive Branch; and the Environmental Protection Agency (EPA) Fellows Program, which funds researchers whose work is aimed at problems of interest to the EPA. Teich also described the Revelle Fellowship in Global Stewardship, the newest of the AAAS policy fellowships. This fellowship is named in honor of Roger Revelle, past AAAS president and former director of the Scripps Institution of Oceanography, and focuses on environmental policy.

Actions Brought Forward by the Committee on Council Affairs

The Council approved the following organizations for affiliation with AAAS: the American Crystallographic Association, the American Educational Research Association, the Psychonomic Society, and the Weed Science Society of America. Stephen Jay Gould, CCA chair and AAAS president-elect, explained that legislation in one of last year's congressional omnibus bills contains a requirement that all data produced under federal awards be available to the public through the Freedom of Information Act. OMB has now been charged with drafting the necessary federal regulations. The Council passed a resolution expressing concern for the possible impact on the conduct of research of these proposed regulations (see the box on the left).

RESOLUTION

Expressing Concern About Legislation Opening All Federally Funded Research Awards to Freedom of Information Act (FOIA) Demands.

Whereas the Congress in 1998 passed legislation requiring that all data produced under federal awards be made available to the public through the procedures established under the Freedom of Information Act (HR 4328, directing amendment of Section —.36 of OMB Circular A-110); and

Whereas this provision was not subjected to public hearings or debate, and now risks causing serious unintended consequences; and

Whereas draft regulations implementing this provision by the Office of Management and Budget are believed to be imminent; and

Whereas the implementation of this legislation would create a sweeping new precedent for extending the scope of FOIA to materials that have never before been considered government records, including, potentially, the entire files and notes of researchers receiving federal funding; and

Whereas this mandate may have the effect of requiring premature disclosure of research data and results, disrupting the processes of analysis, interpretation, and peer review that normally and properly precede such public disclosure; and

Whereas this mandate may also raise serious threats to the privacy of human subjects in federally funded research projects, and may even undermine the participation of these subjects in research necessary to reach scientifically valid conclusions; and

Whereas this mandate also raises serious threats to the protection of proprietary and national security information and to the intellectual property rights of those who conduct such research, and may subject them to FOIA demands both from competitors and from other self-interested parties; and

Whereas this mandate thus also imposes significant uncompensated burdens of cost and effort on all recipients of federal research grants, including universities, hospitals, and other nonprofit scientific research organizations; and

Whereas the American Association for the Advancement of Science supports the public disclosure of scientific data that form the evidentiary basis for scientific findings and regulatory decisions, at the appropriate time and with appropriate safeguards for the concerns identified above; and

Whereas the American Association for the Advancement of Science stands ready to provide advice and counsel as necessary to support appropriate public disclosures of scientific data produced under federal awards;

Be it therefore resolved that the Council urges that the leadership of the American Association for the Advancement of Science bring these concerns in a timely fashion to the attention of the Congress and the Administration.

Approved by the AAAS Council on 24 January 1999.