edited by S. L. BYRAND

Parks and Students Benefit from New Program

Exactly 125 years ago on 1 March 1872, Yellowstone became the world's first national park. Known then as Wonderland, it attracted the curious, many of whom immediately set about experimenting with the thermal features by tossing umbrellas into geysers to watch them explode out and by testing which hot springs were best for boiling eggs and which were better suited for washing clothes. Today, far more judicious investigations are needed if the National Park Service (NPS) is to fulfill its dual mandate of providing lands such as Yellowstone for the public's enjoyment while preserving them for future generations. That's no easy task considering that more than 3 million visitors will tour just Yellowstone this year.

"Critical to our efforts is state-of-the-art scientific knowledge," says Michael Soukup, associate director for Natural Resource Stewardship and Science for the NPS, which manages more than 370 national parks, battlefields, monuments, historic sites, seashores, and wilderness areas. "We want the best and brightest graduate students to conduct their research in the National Park System."

To encourage those students, a new annual scholarship competition, the National Parks Science Scholars Program, will fund four doctoral candidates to use sites in the National Park System as outdoor laboratories for innovative and pertinent studies. While it is hoped that the program will expand to include Master's students in subsequent years, the 1997 competition is limited to the proposed dissertations of Ph.D. candidates. One scholarship will be given for each of the following broad areas: biological, physical, social, and cultural sciences. The winners will be known as Canon Environmental Legacy Scholars, with their individual scholarships of $25,000 per year, for up to 3 years, being provided through Canon U.S.A.'s Clean Earth Campaign.

Collaborating in the project with Canon U.S.A., Inc., are three other organizations: the NPS, which picks the annual list of topics for consideration; the National Park Foundation, chartered by Congress to assist the NPS and which will award the scholarships; and AAAS, which selects the winners.

"We are pleased to be a partner," says Shirley Malcom, director of the AAAS Education and Human Resources programs. "We are able to support our interests in career development and exploration for young scientists as well as the AAAS mission to encourage science in the service of humankind. Our national parks represent a tremendous opportunity to learn and to teach about science."

KARL BYRAND

Like clockwork. Crowds gather at Yellowstone to marvel at Old Faithful's on-time performances.

Under Malcom's direction, AAAS will convene panels of scientific experts to evaluate the entries on the basis of the students' capacity to complete the research and of the proposals' scientific merit and significance to park management, in particular how they address the research questions posed by the NPS.

The program should help not only to develop the next generation of scientists but also to protect the natural and cultural heritage of the United States, according to Gary Machlis, chief social scientist for the NPS and director of the National Parks Science Scholars Program. Says Machlis, "The positive impact on the parks can be magnified many, many times over as these young scientists work in innovative ways on the problems facing the park system in the next century."

In Bozeman, which lies in the Yellowstone ecosystem, Robert J. Swenson—vice president for research, creativity, and technology transfer at Montana State University—is excited by the potential benefits this program has for students, the park system, and research in general. "Preserving pristine ecosystems while providing them for public enjoyment may be an impossible mission. But in striving for this goal, it is essential that high-quality science and scholarly work drive the management decisions. This scholars' program places the emphasis appropriately—supporting outstanding graduate scholars who will be the next generation's decision-makers."

The deadline for the 1997 competition is 15 June, with winners being announced by 15 August. For an application and guidelines, contact Gary Machlis by writing the National Parks Science Scholars Program, U.S. Department of the Interior, National Park Service, Post Office Box 37127 (MIB 3127), Washington, DC 20013–7127; or calling 202-208-5391; or e-mailing gmachlis@uidaho.edu

1996 AAAS Science Journalism Awards

The Whitaker Foundation sponsors these annual AAAS awards, which were established in 1945 to encourage and recognize outstanding writing in the sciences, engineering, and mathematics.

■ **Newspapers with a circulation more than 100,000:** The winner was **Curt Suplee** for three unrelated articles in *The Washington Post*: "New State of Matter Heralded as Physics' 'Holy Grail'" (14 July 1995), "Inside the Indivisible: Quarks Collide with Theories" (19 February 1996), and "Taming Anti-Atoms: A Matter of Degrees" (13 May 1996).

■ **Newspapers with a circulation less than 100,000:** Reporter **Eric Scigliano** won for two unrelated articles in the *Seattle Weekly*: "Salmon Saviors" (13 December 1995) and "Holy Cedar" (8 May 1996), which both clearly communicated the science of biodiversity to the general reader.

■ **Magazines:** The award went to **J. Madeleine Nash** for her *Time* article "Evolution's Big Bang" (4 December 1995), in which she brought this scientific mystery alive with her clear and compelling explanations.

■ **Television:** Using an imaginative approach to tackle a controversial subject and explain the conflict between science and law, **Jon Palfreman** of WGBH-TV's *Frontline* won for his script "Breast Implants on Trial," which aired on PBS (27 February 1996).

■ **Radio:** For writing an engaging, well-paced, and balanced script about a timely topic that comprised chemical, biological, and medical information, **Andrea de Leon** was honored for her broadcast "How Safe Is Mother's Milk?" that aired on National Public Radio (17 May 1996).

Top Scientists and Engineers Receive Honors

Selecting across the scientific and engineering communities, AAAS presented its 1996–97 awards at the annual meeting in Seattle on 15 February. The recipients, though diverse in their backgrounds and goals, all share a commitment to excellence and a proficiency for innovative problem-solving.

1996 AAAS Philip Hauge Abelson Prize

The father of heavy ion science **D. Allan Bromley** was honored for his extraordinary record of service to science and to the United States, including his contributions to the field of nuclear physics, his work for the Bush Administration, and his leadership in national and international science communities. Now Sterling Professor of the Sciences and Dean of Engineering at Yale, he is responsible for rebuilding that university's engineering program.

1996 Award for International Scientific Cooperation

Adviser to the U.S. National Research Council and the National Academy of Engineering, **Philip W. Hemily** was recognized for contributions for more than 40 years to scientific research and engineering development through his work with numerous international associations. He currently advises organizations that want to strengthen international collaborative relations in scientific research and education.

1996 Award for Public Understanding of Science and Technology

Alan J. Friedman, director of the New York Hall of Science, was honored for revitalizing that center through innovative exhibits and programs, including the Science Career Ladder that has inspired hundreds of young people to pursue careers in science and education. He executed the growth of the museum from its three-person staff and annual budget of $300,000 in 1984 to its current staff of 110 and $5-million budget, creating a positive experience for the many students, teachers, and families who come to learn the wonders of science. **Frank Oppenheimer**, who contributed to the progress of science through his work on the Manhattan Project and his definitive experiments to determine the nature of cosmic rays, was honored posthumously for his creation of The Exploratorium, a unique and popular science museum in San Francisco that relies on his respect for invention and play.

1996 AAAS Mentor Award

Given for showing in less than 10 years great leadership in increasing the participation of students who are underrepresented (women of all racial and ethnic groups; African American, American Indian, and Hispanic men; or people with disabilities) in science and engineering, this year's award went to **Derrick K. Rollins**, a professor of chemical engineering at Iowa State University, for the dedication he has shown in mentoring his students.

1996 Mentor Award for Lifetime Achievement

William M. Jackson, professor of chemistry and director of the Minority Undergraduate Research Participation in the Mathematical and Physical Sciences Program at University of California, Davis, and **Joseph G. Gall**, of the Department of Embryology at Carnegie Institution of Washington, were both honored for their long-standing commitment to mentoring and fostering diversity. Jackson mentored 15 Ph.D. chemists from underrepresented groups and cofounded the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers. Gall mentored 30 female students who have become full professors at MIT, Yale, and other top universities; several are department chairs and laboratory directors; three are members of the National Academy of Sciences.

1997 Scientific Freedom and Responsibility Award

At great personal sacrifice, **Salim Kheirbek** defended the right of scientists and engineers to form professional associations independent of the state. In 1980, at a meeting of the Syrian Engineers Association, he demanded an end to martial law in Syria; his colleagues added their voices to the petition. In retaliation, the Syrian government disbanded the organization and arrested Kheirbek and hundreds of other scientists and engineers. After serving a dozen years, Kheirbek was the only prisoner who refused to accept freedom at the price of having to affirm loyalty to the Assad regime. Eventually released, he maintained his moral courage by fighting for his reinstatement to the state-owned airline SyrianAir and for the salary denied him during his imprisonment; the Syrian government recently met his demands.

1995–96 AAAS Newcomb Cleveland Prize

This year, two sets of authors earned this prize, given for a paper in *Science* that provides a fundamental contribution to basic knowledge or a technical achievement of far-reaching consequence: **M. H. Anderson, J. R. Ensher, M. R. Matthews, C. E. Wieman**, and **E. A. Cornell** of the University of Colorado and the National Institute of Standards and Technology for their report "Observation of Bose-Einstein Condensation in a Dilute Atomic Vapor," which appeared in the 14 July 1995 issue (their experiment was also *Science*'s 1995 Molecule of the Year for its potential to advance the technological implementation of atomic lasers); **Yu Feng, Christopher C. Broder, Paul E. Kennedy**, and **Edward A. Berger** of the National Institute of Allergy and Infectious Diseases for their report "HIV-1 Entry Cofactor: Functional cDNA Cloning of a Seven-Transmembrane, G Protein–Coupled Receptor," published in the 10 May 1996 issue—this research opened a new window for the development of antiviral therapies.

Endowments to Enhance Science Education

Fifteen colleges and universities have been awarded grants for their biology and chemistry undergrad research programs through the Merck/AAAS Undergraduate Science Research Program (USRP). Each will receive $20,000 this year and will be eligible for another annual grant of $20,000 for the following 2 years if they demonstrate satisfactory progress toward their stated objectives. This marks the second award cycle for the Merck/AAAS program, which is administered by AAAS and sponsored by The Merck Company Foundation; in 1994, 15 other undergraduate institutions each gained $15,000 annually for 3 years.

The specific goals of the Merck/AAAS USRP are to encourage undergraduate educational programs that foster an understanding of the correlation between biology and chemistry, that promote cross-disciplinary cooperation among the faculty mentors, and that provide research experiences to inspire students to pursue graduate work at the interface between biology and chemistry. Recognizing that partnerships in education between academia and industry can be mutually beneficial, the program also incorporates the Merck Lecture Series: Merck scientists discuss their work with students and faculty and acquaint themselves with the schools' approaches to science education.

The 1997 award recipients are as follows: Bates College, Bucknell University, Canisius College, Colby College, Franklin and Marshall College, Haverford College, Hobart and William Smith Colleges, Roanoke College, St. Lawrence University, Swarthmore College, Union College, Ursinus College, Washington College, West Chester University, and Williams College.