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For further information, contact Patricia S. Curlin, program administrator, Regional Energy Seminars, at the AAAS address, 202-467-4310.

Arthur Livermore Announces Retirement

In 1963 Arthur H. Livermore took a 1-year leave of absence from Reed College to help the AAAS design the study program "Science—A Process Approach." Now, 18 years later, Livermore is retiring as head of the AAAS Office of Science Education.

During this time, Livermore has seen the Association's involvement in issues of science education grow to include a wide range of activities.

Livermore's interest in curriculum development was sparked when he served as co-director of the Chemical Bond Approach (CBA), one of the earliest efforts made at improving science curricula. The CBA conceived a prototype high school chemistry course.

"Science—A Process Approach," was originally tested in 11 school systems around the country. At last count the program had been used by approximately 7 million schoolchildren.

That study program was one of the projects guided by the AAAS Commission on Science Education (1962–1974). As deputy director of education at AAAS, Livermore worked closely with the Commission as it assessed the status and needs of science education in the United States. With funding from the National Science Foundation (NSF), the Commission was established to direct programs and develop materials designed to improve science instruction and the education of science teachers. It developed a clearinghouse on science curricula and prepared guidelines for teacher preparation in elementary and secondary science and mathematics. The Commission also passed, in 1972, a resolution urging that creationism not be taught as science in any school system. (The AAAS Board of Directors and Council also passed similar resolutions in 1972.)

Another AAAS/NSF effort to improve the quality of science teaching has been



Arthur Livermore

the Chautauqua Short Courses for Science Teachers. Since its inception in 1970, under the direction of then Education Office head John R. Mayor, Livermore has worked closely with the Chautauqua program. These courses, for college-level science teachers, are aimed at enabling participants to keep up-to-date on current research in the sciences. Livermore's involvement with the program has centered on identifying and including outstanding men and women from a broad range of scientific disciplines as Chautauqua lecturers. Approximately 3000 college teachers took Chautauqua courses during the 1980–81 academic year.

In addition to improving the teaching of science, Livermore has long been interested in making science entertaining and accessible to young people. From 1956–59 he hosted a biweekly television program, "Secrets in Science," for junior high school students in Portland, Oregon. In recent years this concern has resulted in increasing participation of junior and senior high school students at the AAAS Annual Meeting. Beginning with the Boston meeting in 1976, Youth Symposia, Conversations with Scientists, and presentations of student papers from the junior academies of science have drawn several thousand young people to the Association's meetings. He has also administered the small student research grants which the AAAS makes available through the state academies of science.

Science education at AAAS has reflected Livermore's international interests as well. He has conducted workshops and seminars on elementary and secondary school science and mathematics in Argentina, Chile, Israel, Japan, the Philippines, and West Germany.

In 1971, at the request of the U.S. Department of State, Livermore went to Penang, Malaysia, to serve as training adviser to the Regional Center for Education in Science and Mathematics. There, elementary science and mathematics educators from eight Asian countries explored the latest developments in

their fields and in teaching techniques. They then passed along these developments and techniques to other educators in their home countries.

Another international initiative was the exchange of scholars with the Znanie Society of the Soviet Union. This program, which Livermore directed from 1973 to 1980, allowed outstanding scientists to lecture at several universities in the host country. Experts from a broad range of disciplines visited between the two countries during the program.

Most recently, the Chinese have become involved in AAAS science education programs. This past spring, symposiums on microcomputers and atmospheric science were conducted in the People's Republic of China, after the Chinese had indicated their particular interest in these subjects. Livermore helped to organize the groups and served as a consultant to the China Association of Science and Technology while in Beijing and Shanghai.

Livermore has long served as the Association's resident expert on Japan. In 1965 he edited the AAAS symposium volume, *Science in Japan*. This interest has continued, and in 1979 he was co-organizer of the joint United States/Japan Seminar on Science and Society, in Honolulu.

Livermore's retirement does not signal his withdrawal from science education activities. In addition to being a consultant to the AAAS, he serves as science adviser and lecturer at the Washington (D.C.) International School, adjunct professor at the University of West Virginia, and chair of the Governmental Affairs Committee of the American Institute of Chemists.

Nomination of AAAS Fellows Invited

The AAAS Executive Office invites groups of three Fellows to nominate AAAS members for fellowship, provided that in each instance at least one of the three sponsors is not affiliated with the institution of the nominee. In order to be considered in 1982, nominations must be submitted no later than 5 March. Nomination forms should be requested from the Executive Office at the AAAS address.

A Fellow is defined as "a Member whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished." Examples of areas in which nominees may have made significant contributions

Association Records Studied

A study of the historical records of the AAAS is just under way. The survey will focus on records from the 20th century, including documents such as Council and Board minutes dating back to 1907. Earlier Association records, which predate the establishment of one central headquarters, are scattered throughout the United States and abroad.

The National Historical Publications and Records Commission has awarded the AAAS a grant to hire a consultant to investigate Association records. The grant was made on the recommendation of the District of Columbia Historic Records Advisory Board.

Richard Lytle, archivist of the Smithsonian Institution, has agreed to serve as consultant to the project. Lytle is an expert on science archives and is experienced with records surveys, especially those records relating to 20th-century science agencies. He will assess the collections now at AAAS headquarters and recommend courses of action to preserve them.

The survey will be conducted with the help of an in-house committee made up of Michele Aldrich (Office of Opportunities in Science), Catherine Borras (Executive Office), William Engelman (Office of Administration), Hans Nussbaum (Office of the Comptroller), and Joseph Walton (Office of Administration). Alan Leviton, executive director of the Pacific Division of the AAAS, will assist in surveying the records of that part of the Association.

A progress report on the archives project will be presented at the business meeting of Section L (History and Philosophy of Science), 5 January 1982, during the AAAS Annual Meeting in Washington, D.C. All interested persons are welcome to attend this meeting. Inquiries or suggestions for the project may be sent to Michele Aldrich at the AAAS address.

are research; teaching; technology; services to professional societies; administration in academia, industry, government, and other institutions; and communicating and interpreting science to the public.

Responsibility for reviewing and approving fellowship nominations is assigned to the Nominating Committees of the 21 Section Committees. Each Nominating Committee consists of the four Section officers (Retiring Chairperson, Chairperson, Chairperson-Elect, and Secretary) and four members-at-large. An affirmative vote of at least five of the eight members is required for approval, but sponsors of a rejected nomination may appeal to the Committee on Council Affairs for possible reversal of the Nominating Committee's decision.

Nominations are also subject to challenge by any member of the AAAS Council, upon receipt of a preliminary list of nominees in late summer. A challenged nomination, if not withdrawn by its sponsors, will be reviewed by the Committee on Council Affairs; the Committee may either put it on the slate to be presented to the Council for possible election at the 1983 Annual Meeting in Detroit or defer its presentation for 1 year. Following their election, new Fellows will receive fellowship certificates;

a list of their names will be published in the Proceedings Issue of *Science*.

A *Directory of AAAS Fellows* is available from the AAAS Product Sales Office, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. The price to AAAS members is \$5.40 prepaid.

Alaska Division Holds Annual Meeting

"Life Sciences in the Service of Alaska" formed the theme of the 32nd AAAS-Alaska Division's Alaska Science Conference, 25-27 August in Fairbanks.

The plenary session, which opened the conference, centered on the importance of the life sciences in the North and reviewed the current status of health, ecological, and agricultural studies in Alaska. Participants in 29 technical sessions reviewed the current work in these areas and, in an afternoon of informal workshops, outlined research needs for the next 5 to 10 years. At the Division's annual business meeting discussion centered on the need for developing a United States and Alaskan Arctic science policy.

The conference, which was hosted by

the University of Alaska's Institute of Arctic Biology, attracted some 350 registrants and included participants from Canada, England, France, Japan, the People's Republic of China, and Saudi Arabia.

Three special lectures were included to attract public participation. "Studies of Native History as a Contribution to Alaska's Future," was presented by Ernest Burch, Jr., of the Smithsonian Institution, and a special lecture in agriculture on "The Further Frontiers" was given by Sylvan Wittwer of Michigan State University's Agricultural Experiment Station. Knut Schmidt-Nielsen of Duke University's Zoology Department presented the first annual Irving/Scholar Memorial Lecture, entitled "Physiology and the Challenge to the Environment." This lecture, sponsored by the University's Institute of Arctic Biology, will be given annually in memory of Lawrence Irving and Per Scholar, two distinguished scientists in environmental physiology.

The 1982 meeting of the AAAS-Alaska Division will be hosted by the Institute for Marine Science in Fairbanks.

ERICH H. FOLLMANN
*Institute of Arctic Biology and
Conference Organizing Chairman*

AAAS Travelers

AAAS has been invited to send a representative to the 69th session of the Indian Science Congress Association, to be held at Mysore, 3-8 January, 1982. The theme will be "Basic Research as an Integral Component of a Self-Reliant Base of Science and Technology (Its Role, Relevance, Support, and Areas of Thrust)."

AAAS members who plan to be in the area at that time and/or who know of colleagues on sabbatical in the region who might be able to attend should contact Denise Weiner, Office of International Science, at the AAAS address, before 20 November 1981. Please include a curriculum vitae. No travel funds are available; however, partial support (per diem only) will be provided.

For more information about the activities and publications described in AAAS News, write to the appropriate office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, unless otherwise indicated.