

evaluating the mineral resource potential of an area, or gaining geologic knowledge to aid land development for engineering use. The following partial list of the Survey's new field projects serves to give some idea of the scope and purposes of current field investigations: Mississippi Embayment, western Tennessee—a study of water-bearing formations that are important sources of ground water; Barter Island and Mount Chamberlain areas, Alaska—a study of the effects of Arctic conditions on engineering construction, and of understanding the geology of the Arctic; barite resources of west-central Arkansas; porphyry copper deposits of the western United States; Salinas Valley, Calif.—a study of the oil and gas potential; coal resources of Washington; Sierra Nevada batholith, California—a study of the granite rocks and associated mineral deposits of this great mountain range; T-3 Ice Island, Arctic Ocean—electrical and seismic studies that are expected to provide new information on the nature and configuration of the material beneath the Arctic Ocean.

Nuclear Explosions and Isotopes from Power

The Atomic Energy Commission is undertaking studies to determine the practicability of producing both power and radioisotopes from nuclear explosions. As a first step in the studies, consideration is being given to the detonation of a small device underground in the salt-bed area known as the Solado formation in the Delaware Basin, Eddy County, New Mexico, about 25 miles southeast of Carlsbad.

The project, if carried out, would be conducted in the summer of 1959 in a 1200-foot shaft drilled into the salt beds so that heat developed by the nuclear explosion would be confined to a relatively small area. Neutrons created in the nuclear reaction would be used to produce radioisotopes. General scientific information on scaling laws, seismic effects, and geological data also would be obtained. As now planned, the yield of the explosion would be about 10 kilotons, the equivalent of 10,000 tons of high explosive.

The technical work is being conducted by the University of California Radiation Laboratory, Livermore, and the planning is under the supervision of the commission's San Francisco Operations Office. The project manager for the demonstration is James E. Reeves of the commission's Albuquerque Operations Office, and the technical director is Gerald W. Johnson, Test Division Leader, UCRL, Livermore.

The New Mexico experiment is the

second initiated under the commission's Plowshare Program to investigate important peacetime applications of nuclear explosives. As previously announced, studies are being conducted on the Alaska Coast between Cape Sepings and Point Hope to determine the practicability of excavating a harbor.

Century 21 Exposition

A world fair, emphasizing science and its relationship to the development of man, will receive the help of a group of leaders in American science.

Seventeen scientists from the academic world, industry, scientific associations, and scientific journals will go to Seattle, Washington, this month to work with exposition officials in the development of plans.

The fair, which has been in the initial planning stage since 1955, is scheduled to open in May 1961 on a 70-acre site in Seattle.

The science theme of the exposition was decided upon when officials connected with the project found that science leaders were seeking a means of putting on a fair in 1961 to give a dramatic presentation of the results of the International Geophysical Year. In addition to the IGY theme, the exposition will ask and attempt to answer the question "Where is science going during the next 100 years?"

Although the basic theme will be science, the fair, which will be called Century 21 Exposition, will also mark the centennial of the University of Washington and the admission of Alaska as a state. The commercial relationship of the city of Seattle with the nations rimming the Pacific Ocean will also be stressed by exhibitions in a Pan-Pacific section. The fair is expected to be international in character, with the Soviet Union, Italy, Japan, and other nations participating. A bill currently before the United States Congress would make the Federal Government a participant.

Maps for Disease Control

Among the scientific publications to appear in West Germany since the war is a series of atlases which trace graphically the movement of epidemic and endemic diseases throughout the world. Two volumes of this work have been published since 1945, and part 2 of volume 3 will appear shortly. Whereas volumes 1 and 2 are confined principally to Europe, North and South America, and Africa, volume 3 covers Asian countries. These atlases contain medical and scientific information on the spread and control of epidemic and endemic dis-

eases; facts about geography, history, and climate; and population surveys.

The correlation and graphic presentation of all the factors involved in the control of contagious disease is the life-work of a group of scientists and professors in the Geomedical Research Station of the Heidelberg Academy of Sciences. The studies were begun before World War I; after 1945 the U.S. Navy interested itself in the continuation and extension of the work and volume 1 of the present series was published under Navy auspices in 1952. Volumes 2 and 3 have been published by the Heidelberg Academy and the Falk Publishing House of Hamburg.

News Briefs

A special committee of the International Geophysical Year has voted for a 1-year extension of the 18-month IGY program, originally set up to end in December 1958. The extension period would be known as the "International Geophysical Cooperation of 1959." Although the committee agreed to extend the research, it still will be necessary to get the 60 participating governments to provide financial support.

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Wallops Island, Virginia, will become the Cape Canaveral of the government's new National Aeronautics and Space Administration if present plans are approved. A \$24.5-million expansion of facilities at the island has been proposed by the National Advisory Committee for Aeronautics. The island is a 3200-acre strip off the Eastern Shore where NACA has been testing rockets for 13 years.

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The first Electronic Computer Exhibition ever held in the United Kingdom will be staged in London from 28 November to 4 December. More than 40 British manufacturers are exhibiting. A symposium on the applications of computers to problems in business, industry, and science will be held with the exhibition. Also, immediately before the exhibition, 24-26 November, an associated scientific symposium on "The Mechanization of Thought Processes," organized by the National Physical Laboratory, will be held at Teddington, Middlesex, England.

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The University of Chicago has established a Graduate School of Education. Francis S. Chase, chairman of the department of education, has been appointed dean of the school. Creation of the graduate school does not replace or eliminate the existing department of education, which continues its present activities, particularly those of research and instruction for graduate students in

general areas of education. The new school will administer programs of teacher preparation leading to the Master of Arts in Teaching degree and also will be the administrative unit for a variety of interests of the department.

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The Atomic Energy Commission has established an Office of Hearing Examiner to conduct assigned hearings. The new office has been set up to fill the commission's requirement for hearings and to keep pace with the growth of the regulatory functions of the commission. The office will be directly responsible to the commissioners. Samuel W. Jensch has been appointed hearing examiner.

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Abstracts of the 319 papers presented at the International Congress of Radiation Research held in Burlington, Vt., 10-16 August, are included in the July 1958 issue of *Radiation Research*, which is the official organ of the Radiation Research Society, published by Academic Press Inc., New York.

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Some 70 nuclear scientists and engineers from nearly 25 countries who are graduates of the International School of Nuclear Science and Engineering at the Argonne National Laboratory will hold an alumni reunion at Geneva, Switzerland, on 6 September during the second United Nations International Conference on the Peaceful Uses of Atomic Energy. This is probably the first alumni reunion of any school or any training program which is totally international in character. Basic support for the alumni day has been provided by the University of Chicago, which operates Argonne under contract with the Atomic Energy Commission.

Grants, Fellowships and Awards

Conservation. The National Wildlife Federation and its state affiliates offer a number of scholarships and fellowships for work in conservation or conservation education. Activities that might be considered appropriate include: teacher training, radio and television, scouting and conservation, curricular problems, farmer-sportsmen relationships, conservation workshop techniques, textbook development, journalism, and state programs. An applicant need not necessarily be enrolled at an institution of higher learning if his project has merit in the cause of conservation. Application blanks, which must be submitted by 1 November, may be obtained from: Executive Director National Wildlife Federation, 232 Carroll Street, N.W., Washington 12, D.C.

General. The American Association of University Women has announced 40 fellowships open to women in 1959-60.

They are offered (i) to women who already hold the doctorate and (ii) to women who have completed all requirements for the doctorate except the dissertation. These fellowships are unrestricted as to field and place of study, except that one is specified as postdoctoral in the field of physics, chemistry, or biology. The stipends range from \$2000 to \$4000. Application forms may be obtained from the Director, AAUW Fellowship Program, 1634 I St., NW, Washington 6, D.C. The application deadline is 1 December, and successful candidates will be notified by 1 March 1959.

Geographic field research. The National Academy of Sciences-National Research Council will conduct, in 1959, under the financial sponsorship of the Office of Naval Research, its fourth annual program of geographical field research in foreign areas.

The objective of the program is to strengthen American Geography by stimulating greater participation by young Americans in field research in areas outside of the English-speaking areas of North America. Support will be made available not only to young geographers but also to young scientists in related fields, such as geomorphology, climatology, ecology, and pedology.

The program is designed primarily for graduate students who wish to conduct field research in connection with their doctoral dissertations, but persons who have received the doctorate within the last few years are also eligible.

The extent of financial assistance will vary according to the needs involved. The intent is to provide adequately for travel, field, and living expenses. Usually no stipend is provided. A preference will be shown for field investigations of at least 6 months duration, preferably a year or more.

Applications for support of field work which is to be initiated before 1 April 1960 must be submitted prior to 1 December 1958. Applications and requests for further information should be addressed to Foreign Field Research Program, Division of Earth Sciences, 2101 Constitution Ave., Washington 25, D.C.

Scientists in the News

KEITH GLENNAN, president of Case Institute of Technology and former member of the Atomic Energy Commission, has been nominated by President Eisenhower to head the National Aeronautics and Space Administration. HUGH L. DRYDEN has been named as deputy administrator. Dryden is director of the National Advisory Committee for Aeronautics, which will be the nucleus of the new civilian space agency.

Six prominent scientists will give a series of evening lectures at the second United Nations International Conference on the Peaceful Uses of Atomic Energy, which will begin on 1 September in Geneva. The lectures are open to the public. They will be given on three evenings during the 2-week conference, with two speakers scheduled for each evening.

On 5 September the first lecture will be delivered by HOMI BHABHA of India, who was president of the first International Conference in 1955. He will speak on the role of nuclear power in the underdeveloped countries. On the same evening J. E. TAMM of the U.S.S.R. will speak on recent developments in the field of fundamental physics. On 10 September GLENN T. SEABORG of the United States will give a lecture on recent developments in the field of the transplutonic elements. This will be followed by a lecture by V. A. ENGELHARDT of the Soviet Union on the implications of atomic energy in the field of biology. The last set of evening lectures will be given on 12 September. LLOYD V. BERKNER of the United States will speak on international collaboration in science, and JOHN COCKROFT of the United Kingdom will give a survey of the conference in a lecture on trends in the development of peaceful uses of atomic energy.

WALTER A. MACLINN, chairman of the department of food science at the Agricultural Experiment Station, Rutgers University, has resigned to become director of the Refrigeration Research Foundation, Colorado Springs, Colo. His new responsibilities will include the stimulation and encouragement of refrigeration research in university and other laboratories.

JOHN S. BOYCE, professor emeritus of forest pathology at Yale University, has been named director of the Bartlett School of Tree Surgery, Stamford, Conn. He succeeds the late Sherman P. Hollister, professor emeritus of horticulture at the University of Connecticut.

STANLEY S. BALLARD, research physicist at the Scripps Institution of Oceanography of the University of California, has accepted the position of professor of physics and chairman of the department of physics at the University of Florida in Gainesville, effective this fall. He will continue his activities as vice president for meetings of the Optical Society of America and executive secretary of the Armed Forces-National Research Council Committee on Vision.

WILLIAM F. MEGGERS, chief of the spectroscopy section of the National Bureau of Standards, retired on 31 July after 44 years of continuous service with