

work on projects in the Hughes laboratories and attend special lectures on the uses of science in industry. The teachers' salaries, which will be comparable to those earned on teaching assignments, will be paid by the company. Employment is for the summer only.

■ Employment of retired scientists and engineers to meet the shortage in New York City of science and mathematics teachers may be recommended by the Advisory Committee on Science Manpower, appointed by the New York City board of education. A recent survey showed a current lack of 47 full-time science teachers. They are needed to staff 235 science classes in the high schools this September.

William Jansen, superintendent of schools, pointed out that the New York State education law requires teachers to have had a minimum of eight semester hours of education courses. But, he added, if a considerable number of retired scientists and engineers under the age of 70 are interested in teaching in secondary schools, he will urge modification of the present regulations.

Interested scientists should write to Samuel Schenberg, Board of Education, 110 Livingston St., Brooklyn 1, N.Y., enclosing a brief biographical sketch of their educational qualifications and scientific and industrial experience.

■ The special training division of the Oak Ridge Institute of Nuclear Studies has announced a partial list of courses to be offered through March 1957. A basic 4-week course in the techniques of using radioisotopes will open on 6 Aug., 3 Sept., and 22 Oct. 1956, 7 Jan. and 4 Feb. 1957. Two-week courses in veterinary radiological health for members of the armed forces veterinary corps will open on 17 Sept., 1 Oct., and 3 Dec. 1956; 4 Mar. and 18 Mar. 1957. For information and application blanks write to the Special Training Division, Oak Ridge Institute of Nuclear Studies, P. O. Box 117, Oak Ridge, Tenn.

■ Massachusetts Institute of Technology and City College, New York, will each be loaned 5500 pounds of natural uranium by the U.S. Atomic Energy Commission (2500 kilograms). The metal, in the form of 8-inch rods enclosed in aluminum, will be used in subcritical assemblies in which nuclear fission can be produced but which will not sustain a chain reaction.

The facilities require no unusual safety controls, expensive shielding, or heat-removal equipment and may be used for many laboratory exercises in nuclear engineering training.

The subcritical assembly consists of an arrangement of the uranium rods in a moderator such as graphite or ordi-

nary water. When a neutron source is introduced, a neutron flux can be obtained from nuclear fissions in the arrangement, but the reaction cannot be sustained without the presence of the neutron source.

This brings to five the number of loans of this type to educational institutions. Previous recipients were New York University, the University of Florida, and Virginia Polytechnic Institute.

■ The American Dental Association has announced that all five dental schools of Canada have been given full recognition by the association's accrediting agency. For the first time, dental schools of another country will be placed on the list of accredited schools issued by the association's council on dental education. The newly accredited dental schools are at McGill University, Dalhousie University, the University of Toronto, the University of Alberta, and the University of Montreal.

Grants, Fellowships, and Awards

■ Drugs to prevent or dissolve kidney stones will be studied at Georgetown University under a grant of \$22,949 from the National Foundation for Infantile Paralysis. The group, under the direction of Martin Rubin, executive head of the chemistry department, is undertaking a systematic study of chemical agents capable of dissolving calcium salts from the urinary tract. The study will include both known agents and others of the same class to be newly synthesized. The object is to select agents that seem to offer the greatest promise for direct tests in human patients.

■ The Vanderbilt University School of Medicine has received a \$200,000 grant from the China Medical Board, a foundation established originally to support medical education and research in China.

The poliomyelitis respiratory center at Vanderbilt University Hospital will continue its work during the coming year under a grant of \$54,724.74 from the National Foundation for Infantile Paralysis.

■ The Foundations' Fund for Research in Psychiatry has been awarded a grant of \$3,682,000 by the Ford Foundation. These funds are to be expended or committed during a 5-year period for the support of a program for the development of research personnel in mental health.

This new program will be maintained concurrently with the FFRP's present program of research grants in the field of psychiatry and related sciences. The selection of fellows and the awarding of research teaching grants will be the re-

sponsibility of a professional committee, which will work closely with FFRP's board of directors. Membership of FFRP's committee on fellowships is as follows: Douglas Bond, chairman; George Engel, Robert Holt, Robert Knight, H. W. Magoun, Neal Miller, and Ralph Tyler.

A brochure describing stipends, fellowships, and research teaching grants is in preparation and will be distributed during the summer of 1956. Copies of the brochure may be requested by writing to the Foundations' Fund for Research in Psychiatry, 251 Edwards St., New Haven 11, Conn.

■ The department of medicine of the Johns Hopkins Hospital and School of Medicine has entered into a contract with the Army Chemical Corps, Fort Detrick, Md., to conduct a broad program of laboratory and clinical investigation in the field of infectious disease.

The initial contract calls for a total of \$267,330 to finance the research program for 2 years. However, the program will not be limited to the terms contained in this first agreement. Both funds and time will be increased and extended as the progress and findings of the studies may require. The program will be carried out under the direction of Ivan L. Bennett, Jr., associate professor of medicine and chief of the biological division of the Hopkins institutions.

■ Twelve research grants have been made recently by Eli Lilly and Company. The grants support one fellowship in bacteriology and projects including a study of drugs in leprosy; translations of Russian medical literature; carbohydrate metabolism studies; three programs on organic synthesis; programs on chemistry of natural products; connective tissue regeneration; blood coagulant mechanism; research on glucagon and insulin; and a study of acute rheumatic diseases.

■ Thirty-one research grants in 15 areas of study have been awarded by the Arctic Institute of North America for investigations in arctic science in 1956. This is an increase of nine over the number of projects sponsored last year and brings to more than 200 the field studies conducted by this organization to date.

Financial support is provided by the Office of Naval Research of the U.S. Navy, by the Sir Frederick Banting Fund, which is administered by the National Research Council of Canada, and by industrial and individual contributors. The grants-in-aid program is part of the institute's over-all effort to advance scientific understanding of northern North America through field and library research, publication, and the integration of research interests concerned with this area.

■ The American Association of University Women is offering 30 national fellowships for women for 1957-58. Ranging from \$2000 to \$4000, the fellowships are for graduate and postdoctoral research. Also available for 1957-58 are a number of international fellowships for American women with stipends ranging from \$1500 to \$2000.

■ The U.S. Fish and Wildlife Service has recently granted three research contracts for the study of problems in the shrimp, sponge, and tuna industries. Two of the projects will be conducted by the Marine Laboratory of the University of Miami. One, under a \$19,900 contract, is an investigation of the causes and prevention of "black spot" on shrimp. The other, under a \$12,000 renewal of a contract negotiated last year, is an investigation of Florida commercial sponges. The third project will be concerned with study of the tropical Pacific Ocean for the benefit of the tuna industry and will be conducted by the Scripps Institution of Oceanography under a \$35,000 contract.

■ The U.S. Atomic Energy Commission has awarded 32 unclassified physical research contracts to universities and private research institutions. Eleven are new contracts, and the remainder are renewals of contracts that have been in force. The contracts were let as part of the commission's continuing policy of utilizing private research laboratories in conducting research related to atomic energy. Generally, the contracts are for a term of 1 year, and the institutions participate with the commission in defraying the costs of the research.

In the Laboratories

■ The new Southern California laboratories of Stanford Research Institute, a nonprofit public-service organization associated with Stanford University, have been formally opened. The South Pasadena buildings provide more than 38,000 feet of laboratory and office space for a staff of more than 100, which will conduct research in the three main divisions of the institute—physical sciences, economics, and engineering.

■ A new method of measuring the deflection of road surfaces under the stress of moving loads has been developed at Ohio State University's Engineering Experiment Station by Robert F. Baker of Ohio State and Robert D. Turpin, now of the University of Texas.

Strips of tape applied to the highway are photographed stereoscopically both before and during the passage of a loaded vehicle. The minute differences in the images are then measured at Perkins

Observatory, near Delaware, Ohio, on a Gaertner measuring engine, which is accurate to 2 or 3 microns, and the deflections in the highway surface are calculated.

■ Armour Research Foundation of the Illinois Institute of Technology has been awarded two contracts totaling \$63,575 to investigate the use of power lines and telephone systems as civil defense warning signal systems in event of enemy attack.

New Journals

Agricultural Marketing (successor to *Marketing Activities*), vol. 1, No. 1, July 1956. Milton Hoffman, Ed. (acting). Agricultural Marketing Service, U.S. Department of Agriculture (order from Supt. of Documents, GPO, Washington 25, D.C.). Monthly. \$1.50 per year; 15¢ per copy.

Annales d'Histochimie, vol. 1, No. 1, Jan.-Mar. 1956. Société Française d'Histochimie, 45 rue des Saint-Pères, Paris, France. Quarterly. F.3000 per year.

British Chemical Engineering, vol. 1, No. 1, May 1956. William E. Dick, Ed. Heywood and Co., Ltd., Drury House, Russell St., Drury Lane, London, W.C. 2. Monthly. \$6 per year.

Bulletin of the Florida State Museum, Biological Sciences, vol. 1, No. 2. William J. Riemer, Ed. Florida State Museum, Seagle Bldg., Gainesville, Fla. Irregular.

Bulletin of the Fund for the Republic, May 1956. Fund for the Republic, 60 E. 42 St., New York, N.Y. Available on request.

Chromatographic Methods, vol. 1, No. 1, Jan. 1956. H. Reeve Angel and Co., 52 Duane St., New York 7, N.Y.

GeoTimes (successor to the *Geological Newsletter*). Robert C. Stephenson, Ed. American Geological Institute, 2101 Constitution Ave., NW, Washington 25, D.C. Monthly. \$2 per year.

Journal of Fluid Mechanics, vol. 1, pt. 1, May 1956. G. K. Batchelor, Ed. Taylor and Francis, Ltd., Red Lion Court, Fleet St., London, E.C. 4. \$16.50 per year; \$3 per part. U.S. agent, Academic Press, New York.

Journal of the Textile Machinery Society of Japan (English Edition), vol. 1, No. 2. Nov. 1955. Kiyohisa Fujino, Ed. Textile Machinery Society of Japan, 28, 2-Bancho, Namba-Shinchi, Minami-ku, Osaka, Japan. Semiannual. \$1.50 per copy.

Mada (Science), vol. 1, No. 1, Jan. 1956. S. Hestrin and E. Katchalski, Eds. Weizmann Science Press, 33 King George Ave., Jerusalem, Israel. Quarterly. \$5.50 per year; \$1.50 per copy.

Nematologica, vol. 1, No. 1, Jan. 1956.

J. H. Schuurmans Stekhoven, Ed. E. J. Brill, Leiden, Netherlands. Quarterly. \$7.50.

Nickelore, vol. 1, No. 3. Anthony Toback, Ed. International Nickel Co., 67 Wall St., New York, N.Y.

Revue Française d'Etudes Cliniques et Biologiques, vol. 1, No. 1. Jan. 1956. Editions Médicales Flammarion, 22 rue de Vaugirard, Paris, France. 10 issues per year. F.6000.

Technical Digests, vol. 1, No. 1. Jan. 1956. European Productivity Agency, 3 rue André-Pascal, Paris, France (order from OEEC Mission Publications Office, 2000 P St., NW, Washington, D.C.) Monthly. \$24 per year.

Transactions of Chinese Association for the Advancement of Science, vol. 1, No. 1, Dec. 1955. S. M. Lee, Ed. National Taiwan Science, Museum, Taipei, Taiwan. Annual.

Your Radiologist, spring 1956. Hugh N. Jones, Ed. American College of Radiology, 20 N. Wacker Dr., Chicago, Ill. Quarterly.

Miscellaneous

■ The United States "Atoms for Peace" exhibit that was shown at the International Conference on the Peaceful Uses of Atomic Energy in Geneva, 1955, is now open to the public at Chicago's Museum of Science and Industry. Assembled by the U.S. Atomic Energy Commission in cooperation with private American companies and organizations, the exhibit includes models of five American atomic electric power plants, radiation detection instruments, and many atomic materials.

■ The department of botany of the University of Cincinnati has acquired a collection of 1450 specimens of European liverworts collected by the late Victor Schiffner of Austria. Only two or three duplicate sets of Schiffner's collections exist in the United States.

■ Among the articles in the August issue of *The Scientific Monthly* are "Proto-genetics from Adam to Athens," L. P. Coonen; "Caste and the Jajmani system in a north Indian village," Oscar Lewis and Victor Barnouw; "Technical information—too much or too little?" Saul Herner; "Geomagnetic program of the International Geophysical Year," E. O. Hulburt; "Herman von Helmholtz: nineteenth-century polymorph," Howard Gruber and Valmai Gruber; and "Photosynthetic nitrogen fixation by blue-green algae," M. B. Allen.

In the "Association affairs" section there is information about the 123rd meeting of the AAAS to be held in New York, 26-31 Dec. Eight books are reviewed in this issue.