

living birds and fish contrasted with colorless animals, an electric eel with explanation of how its electricity is generated and used, an insect group and a battery of motion picture projectors showing a series of zoological films. At the exit is a room devoted to information concerning the society, its activities and its objectives. The enterprise is financed by a group of trustees of the society, and is administered by a separate corporation formed for the purpose.

#### THE AWARD OF GUGGENHEIM FELLOWSHIPS

THE John Simon Guggenheim Memorial Foundation has announced the award of sixty-nine fellowships amounting to \$150,000. The recipients were chosen from among more than a thousand applicants.

The fellowships are granted to scholars, artists and scientific workers who by their previous work have shown themselves to possess unusual ability. Men and women, married and unmarried, of all races and creeds, who are citizens or permanent residents of the United States, are eligible on equal terms. The fellows are usually of ages between twenty-five and forty years. This year their average age is thirty-six years. They may work anywhere in the world where their work can best be done. Forty-three of the fellows just appointed intend to work abroad in whole or in part. The stipends are usually \$2,500 a year.

The fellows chosen are resident in twenty-two states, only five of which are in the East. They were born in twenty-four states and eight foreign countries. Fourteen of the fellows are not college-trained. Forty-seven are members of the faculties of colleges and universities, and twenty-two are free-lance scholars and artists. The University of Wisconsin leads with four members of its faculty. The Johns Hopkins University and the Universities of Missouri and California have three each. Purdue University, Sarah Lawrence College, Cornell University, Columbia University and the University of Chicago have two each.

Fellowships awarded in the sciences are:

DR. LAWRENCE R. BLINKS, professor of biology, Stanford University, for investigations of the relations of metabolism to the bio-electric properties of large plant cells.

DR. MAURICE EWING, assistant professor of physics, Lehigh University, his second fellowship, for deep-sea investigations by gravitational and seismic methods.

DR. ISIDORE GERSH, instructor in anatomy, the Johns Hopkins Medical School, for studies of the intracellular distribution of certain organic compounds.

DR. HENRY N. HARKINS, instructor in surgery, Medical School of the University of Chicago, for research into the nature and causes of surgical shock.

DR. LOUIS GEORGE HENYEU, instructor in astronomy, Yerkes Observatory, University of Chicago, to study the theory of the formation of stellar absorption lines.

DR. EARL MARTIN HILDEBRAND, assistant professor of plant pathology, Cornell University, for research on the modes of transmission of certain new virus diseases of fruit plants, with chief emphasis on determining how they are spread by insect carriers.

DR. HUBERT M. JAMES, professor of physics, Purdue University, to make a study of the application of wave mechanics to the computation of intensities in band spectra.

DR. CHARLES W. JONES, assistant professor of English, Cornell University, to study European scientific manuscripts of the eighth to twelfth centuries as preparation for the writing of a history of the physical sciences as they were known in the early Middle Ages.

DR. LELAND S. MCCLUNG, instructor in research medicine, Hooper Foundation for Medical Research, University of California, for studies of certain disease-producing and food-spoiling bacteria.

DR. ALFRED GEORGE MARSHAK, physiologist, formerly associated with the Deaconess Hospital in Boston, for investigations of the mechanism of chromosome division, especially the nature of the chromosome structure as revealed by response to neutron bombardment in the cyclotron at the University of California.

DR. ROSE C. L. MOONEY, associate professor of physics, Newcomb College and Tulane University, for research into the structure of crystals by methods of x-ray analysis.

DR. EARLE HAMLET MYERS, instructor in zoology, Compton Junior College, California, to continue his studies of the life cycles of the Foraminifera, with special reference to the role of these organisms in the sea and their significance in geological formations.

DR. GREGORY PINCUS, visiting professor of experimental zoology, Clark University, for the continuation of his investigations of the developmental physiology of mammalian eggs and embryos.

DR. HILDA FLORENCE ROSENE, assistant professor of zoology, University of Texas, for investigations of the forces and structures involved in the absorption and transport of water by plants.

ADRIAAN JOSEPH VAN ROSSEM, curator of the Dicky Collections, to study the ornithological collections of Europe.

DR. EMIL L. SMITH, instructor in biophysics, Columbia University, for a study of the kinetics and mechanism of photosynthesis.

DR. HAROLD R. SNYDER, instructor in organic chemistry, University of Illinois, for a study of the configuration of nitrogen in organic compounds.

DR. CHESTER STOCK, professor of paleontology, California Institute of Technology, for a vertebrate paleontological reconnaissance of Mexico.

DR. ROBERT C. TRYON, associate professor of psychology, University of California, to write a book on the inheritance of ability to learn, based upon data derived from a series of experiments on the ability of successive generations of rats to learn their way through complicated mazes.

DR. MELVILLE L. WOLFROM, associate professor of chemistry, the Ohio State University, for studies of the general methods of investigating the organic structure of

natural products as carried on in several European laboratories.

DR. OSCAR ZARISKI, professor of mathematics, the Johns Hopkins University, to conduct researches in the theory of algebraic varieties from the standpoint of modern algebra.

#### THE ABRAHAM FLEXNER LECTURES AT THE MEDICAL SCHOOL AT VANDER- BILT UNIVERSITY

DR. ALBERT SZENT-GYÖRGYI, director of the Institute for Medical Chemistry and professor of medical chemistry at the Royal Hungarian Franz Joseph University at Szeged, Hungary, and winner of the 1937 Nobel prize in physiology and medicine, is the Abraham Flexner Lecturer at the Vanderbilt Medical School this year, having arrived at the school on March 4 for a two-month period.

Dr. Szent-Györgyi has visited the United States twice before, first about 1930 as guest of the Mayo Clinic, and in 1935 he returned as a visiting lecturer at the Harvard Medical School.

He has been an active contributor to scientific literature for about twenty years. In his earlier studies he was interested in physico-chemical problems in biology, such as the phenomena of agglutination, cataphoresis and the effect of electrolytes on albumin, and such biochemical problems as the estimation of free fatty acids in blood.

In 1932 he was able to identify vitamin C, the anti-scorbutic acid responsible for the elimination and pre-

vention of the condition known as "scurvy," by the use of hexuronic acid (ascorbic acid) derived from adrenal cortex and from cabbage. In 1933 he prepared large quantities of ascorbic acid from paprika, and obtained a crystalline monoacetone derivative. He has also been interested in the wide-spread sub-clinical vitamin C deficiency in man.

Dr. Szent-Györgyi delivered the following lectures during March: "General Principles of Biological Oxidation," "Respiration of Muscle," "Fermentation and Some Problems of Intermediary Metabolism," "Vegetable Respiration" and "On Vitamins, Health and Disease." During April he will remain at the Medical School as visiting professor of biochemistry.

The Abraham Flexner lectureship was established in 1927 by the brother of Abraham Flexner, Bernard Flexner, who wrote to the chancellor of Vanderbilt University in establishing the endowment: "It is in my mind to set aside certain securities for the medical department of Vanderbilt University. I would like these securities to be held in trust as the 'Abraham Flexner Lectureship,' the accumulated income to be used at intervals of two years or more as an honorarium to be given to some American or foreigner, highly distinguished in the field of the medical sciences; the lecturer to be in residence for the purpose of contact with faculty and students during a period of approximately two months, and to give a series of lectures, the number and character of which shall be determined by the lecturer himself and the university."

## SCIENTIFIC NOTES AND NEWS

THE annual meeting of the National Academy of Sciences will be held in Washington on April 24, 25 and 26. As has already been announced, the first lecture in America under the Pilgrim Trust will be given by Sir William Bragg on the evening of Monday, April 24. The sessions for the reading of scientific papers will be held on Monday morning and afternoon, on Tuesday morning and perhaps on Tuesday afternoon. The annual dinner, at which medals and awards are presented, will be on Tuesday evening. Arrangements have been made to visit the Supreme Court of the United States late on Monday afternoon.

THE American Philosophical Society will hold a general meeting in the hall of the society in Independence Square, Philadelphia, on April 20, 21 and 22. Sessions for the presentation of papers will be held on Thursday, April 20, on Friday afternoon and on Saturday morning. There will be an executive session on Friday morning and an open forum for members only on Saturday afternoon. The R. A. F. Penrose, Jr., memorial lecture will be given on Friday evening by Eduard Benes, formerly presi-

dent of Czecho-Slovakia. The lecture will be followed by a reception. The annual dinner will be on Saturday evening.

THE honorary degree of doctor of humane letters was conferred by Bridgewater College, his alma mater, upon Dr. William T. Sanger, president of the Medical College of Virginia, Richmond, on April 3 when he made the Founders Day address. The honorary doctorate of laws will be conferred upon him at the commencement exercises of the University of Richmond.

ON the occasion of the retirement of Herbert B. Brooks from the National Bureau of Standards on February 1, his colleagues assembled a collection of his published papers and prepared a biographical note "as a mark of their appreciation of him as a skillful engineer, an inspiring friend, and a wise counselor."

A TESTIMONIAL dinner in honor of Dr. Robert L. Swain, secretary-treasurer of the Maryland Board of Pharmacy, was given on March 29 in Baltimore. Dr. Swain recently resigned the position of deputy food