versity, 1942). To work at the Western Reserve University on the relationships of the bony and fleshy noses in man and their reconstruction possibilities.

Herschel Roman (Ph.D., genetics, University of Missouri, 1942). To work at the California Institute of Technology on (1) problems of gene action; (2) the location of genes in the physical chromosome.

Arnold Hicks Sparrow (Ph.D., cytology, McGill University, 1941). To work at Harvard University on an investigation of chromosome mechanics with the aid of colchicine and x-ray-induced changes.

Luther Irwin Wade, Jr. (Ph.D., mathematics, Duke University, 1941). To work at the Institute for Advanced Study on a study of arithmetic properties of polynomials in a Galois field and related functions.

Harold Francis Weaver (Ph.D., astronomy, University of California, 1942). To work at the Yerkes Observatory on stars in galactic clusters showing anomalous K-line intensities.

Alvin Martin Weinberg (Ph.D., mathematical biophysics, University of Chicago, 1939). To work at Columbia University on the physico-mathematical aspects of nerve structure and function.

Alma Joslyn Whiffen (Ph.D., botany, University of North Carolina, 1941). To work at Harvard University on the nutrition and life histories of the Chytridiales.

THE AMERICAN ACADEMY OF ARTS AND SCIENCES

AT the annual meeting of the American Academy of Arts and Sciences, held at its house, 28 Newbury Street, Boston, on May 13, one new foreign honorary member, Lorenzo R. Parodi, of Buenos Aires, and twenty-one new fellows were elected.

Those elected in the natural and exact sciences were:

Mathematical and Physical Sciences: Wilmer Lanier Barrow, the Massachusetts Institute of Technology; Francis Birch, Harvard University; Samuel Cornette Collins, the Massachusetts Institute of Technology; Otto Struve, director, Yerkes Observatory.

Natural and Physiological Sciences: William Irving Clark, Worcester; Russell Gibson, Harvard University; Samuel Albert Levine, Harvard Medical School; William Ralph Maxon, U. S. National Museum; Hermann Joseph Muller, Amherst College.

The officers elected for 1942–1943 were:

President, Harlow Shapley; *Vice-president* for Class I, Percy W. Bridgman; *Vice-president* for Class II, S. Burt Wolbach; *Vice-president* for Class III, Sidney B. Fay; *Vice-president* for Class IV, Fred N. Robinson; *Corresponding Secretary,* Abbott P. Usher; *Recording Secretary,* Hudson Hoagland; *Treasurer,* Horace S. Ford; *Librarian,* Frederick H. Pratt; *Editor,* Robert P. Blake.

The meeting was addressed by Dr. Mark Graubard, who spoke on "Morale for a Democratic Offensive."

THE AMERICAN PHILOSOPHICAL SOCIETY

AT the annual general meeting of the American Philosophical Society held in the hall of the society in Philadelphia on April 23, 24 and 25, Dr. Edwin G. Conklin, of Princeton University, was elected president, and Dr. Frederick P. Keppel, president, retired, of the Carnegie Corporation, was elected a vice-president. Leicester B. Holland, Class IV, was elected a councilor to fill the unexpired term on the council of F. P. Keppel. *Members elected to the council* to serve for three years: Class I, C. E. Kenneth Mees; Class II, Douglas Johnson; Class III, Roland S. Morris; Class IV, Campbell Bonner.

Officers reelected were: *Vice-presidents,* William E. Lingelbach and Frank Aydelotte; *Secretaries,* W. F. G. Swann and Benjamin D. Meritt; *Curator,* Albert P. Brubaker; *Treasurer,* Fidelity-Philadelphia Trust Company.

Thirty resident members were elected. Those in the natural and exact sciences were:

Mathematical and Physical Sciences: Oliver Ellsworth Buckley, New York, N. Y.; Lee Alvin DuBridge, Rochester, N. Y.; Duncan Arthur MacInnes, New York, N. Y.; Robert Raynolds McMath, Pontiac, Mich.; Francis Dominic Murnaghan, Baltimore, Md.; Harald Malcolm Westergaard, Cambridge, Mass.; Robert Runnels Williams, Summit, N. J.

Geological and Biological Sciences: Leonard Carmichael, Medford, Mass.; Theodosius Dobzhansky, New York, N. Y.; Edward Adelbert Doisy, St. Louis, Mo.; Carl Owen Dunbar, New Haven, Conn.; Louis Otto Kunkel, Princeton, N. J.; Thomas Milton Rivers, New York, N. Y.; Lewis Hill Weed, Baltimore, Md.

Eight foreign members were elected as follows:

Harold Spencer Jones, Greenwich, England; Hendrik Anthony Kramers, Leiden, Netherlands; Ivan Matveitch Vinogradov, Moscow, U.S.S.R.; Octavio Méndez-Pereira, Panama City, Panama; Richard Henry Tawney, London, England; Paul van Zeeland, Brussels, Belgium; Amado Alonso, Buenos Aires, Argentina; William A. Craigie, Oxford, England.

SCIENTIFIC NOTES AND NEWS

THOSE receiving honorary degrees at the hundred and seventy-sixth anniversary of Rutgers College include Dr. Vannevar Bush, president of the Carnegie Institution of Washington, and Dr. Thomas Parran, Jr., surgeon general of the U. S. Public Health Service.

THE doctorate of science was conferred on May 19 at the commencement exercises of Brown University

on Dr. Arthur F. Buddington, of the Class of 1942, professor of geology at Princeton University.

THE Arthur Hoyt Scott Garden and Horticultural Award of a gold medal and cash prize of $1,000, which was awarded to Dr. C. Stuart Gager, director of the Brooklyn Botanic Garden, in 1941, will be presented to him on the occasion of the opening, on May 23, of a new open-air theater at Swarthmore College. Dr. Gager will make the dedication address, speaking on "Theaters, Gardens, and Horticulture." The 1942 award will be presented to Richardson Wright, editor of *House and Garden,* chairman of the board of the Horticultural Society of New York and chairman of the International Flower Show.

DR. JOSEPH A. BECKER, research physicist of the Bell Telephone Laboratories, was presented on May 3 with the Mendel Medal of Villanova College, in recognition of his contributions to the thermal emission of electrons and to the behavior of electrons at rectifying junctions.

AT the annual meeting in Cincinnati on April 15 of the American Association of Industrial Physicians and Surgeons, the W. S. Knudsen Award was presented to Dr. Clarence D. Selby, Detroit, since 1935 medical consultant to the General Motors Corporation, for "the most outstanding contribution to industrial medicine."

DR. W. V. CRUESS, head of the fruit products laboratory of the College of Agriculture of the University of California, has been awarded the first Nicholas Appert Medal of the Institute of Food Technologists. It will be presented to him on June 16 at the annual convention of the institute in Minneapolis. The medal will be awarded annually for "outstanding contributions to the development of improved food preservation methods."

THE Melchett Medal of the British Institute of Fuels for 1942 has been awarded to Dr. Arno Carl Fieldner, head of the technological branch of the U. S. Bureau of Mines in Washington.

THE Jacksonian Prize for the year 1941 of the Royal College of Surgeons, London, has been awarded to W. Bremner Highet, of the Wingfield Morris Orthopaedic Hospital, for his essay on "Injuries to Peripheral Nerves, with Especial Reference to the Late After Results." The John Tomes Prize for the years 1939–41 has been awarded to R. V. Bradlaw, for his work on the microscopical structure of the dental tissue.

THE James Alfred Ewing Medal for 1941 has been awarded to Dr. F. W. Lanchester, consulting engineer and technical adviser to various corporations, on the joint recommendation of the presidents of the Royal Society and the British Institution of Civil Engineers. The medal is awarded annually for research work in the science of engineering.

Nature reports that the following awards for the year 1941 were made on March 27, at the annual corporate meeting of the Institution of Chemical Engineers: The Osborne Reynolds Medal, for meritorious work accomplished for the advancement of the institution during the year, to Dr. A. Parker, honorary editor and recorder of the institution; the Moulton Medal (in gold), for the best chemical engineering paper of the year, read before the institution and published in the *Transactions,* to P. Parrish, for his paper, "Modern Developments in the Design of Plant for the Concentration of Sulphuric Acid"—the Junior Moulton Medal for 1941 was not awarded; the William Macnab Medal, for the best set of answers submitted in the associate-membership examination during the year, to E. W. Pates.

DR. ESMOND R. LONG, professor of pathology at the University of Pennsylvania and director of the laboratories of the Henry Phipps Institute, president of the Association for the History of Medicine; and Dr. Henry E. Sigerist, director of the Institute of the History of Medicine at the Johns Hopkins University, have been elected honorary members of the Society for the History of Medicine at Buenos Aires.

DR. ROY C. NEWTON, vice-president in charge of the Research Laboratories of Swift and Company, has been elected chairman of the Chicago Section of the American Chemical Society.

DR. WILLIAM T. CALDWELL, chairman of the department of chemistry of Temple University, has been named dean of the College of Liberal Arts.

AT Columbia University, Dr. W. Duncan Strong has been promoted to a professorship of anthropology and Dr. Arthur W. Pollister to an associate professorship of zoology. Dr. Fred S. Keller has been named assistant professor of psychology and Dr. Jerome M. B. Kellogg, assistant professor of physics.

DR. JACQUES P. GRAY, a unit director of the Michigan Community Health project of the W. K. Kellogg Foundation, has been appointed, effective on July 1, professor of preventive and public health medicine and dean of the Medical College of Virginia at Richmond. Dr. Lee E. Sutton, Jr., who has been dean for the past ten years, will continue as professor of pediatrics.

DR. W. VANN PARKER, since 1936 a member of the department of mathematics at the Louisiana State University, will succeed in the autumn as head of the department Professor S. T. Sanders, who has been a member of the faculty for forty years, and will retire, having reached the age limit of seventy years.

DR. CARL O. DUNBAR, professor of paleontology and stratigraphy at Yale University and curator of invertebrate paleontology at the Peabody Museum, has been named director of the museum. He will succeed Albert E. Parr, who has been appointed director of the American Museum of Natural History, New York. Daniel Merriman has been promoted from instructor to assistant professor of biology and will become curator of the Bingham Oceanographic Collection, a position which Mr. Parr also held.

DR. WILLIAM H. HOBBS, professor emeritus of geology at the University of Michigan, has been appointed a consultant of Far Eastern Affairs for the Office of the Coordinator of Information, Washington, D. C. The appointment is a result of his knowledge of the Japanese mandated islands of the Pacific. When carrying on geological research work in the West Pacific, Dr. Hobbs, on his trip in 1921, visited and made studies of Bonin, the Sulphurs, the Carolines, the Pelews, Yap and other Japanese mandated islands as well as Japan, North Borneo, the Macassar Straits, Java, Sumatra and Rangoon.

DR. CHARLES E. REED, assistant professor of chemical engineering at the Massachusetts Institute of Technology, has joined the staff of the Research Laboratory of the General Electric Company at Schenectady, N. Y., as consulting chemical engineer.

DR. CHARLES GALTON DARWIN, director of the National Physical Laboratory, has been named scientific adviser to the British Army Council.

PROFESSOR JAMES A. SCOTT WATSON has been appointed by the British Government to the posts of agricultural attaché on the staff of the British Ambassador to the United States and agricultural adviser to the High Commissioner for the United Kingdom in Canada. These offices have been established to secure the closest possible contacts on current and future agricultural problems of Great Britain, the United States and Canada.

A CORRESPONDENT writes: "Most unfortunately, the press and radio mentioned several times in mid-April a rumor that Dr. Carrel was being considered for a place on the Laval cabinet as Minister of Health. It is particularly regrettable that no correction was made in the press when the final cabinet was announced, and another man, Dr. Grasset, was named Minister of Health. At considerable personal sacrifice, Dr. Carrel has remained in France to do what he can to help the people in their extremity. His friends are greatly distressed at the linking of his name with the Laval government."

DR. FRANCIS PERRIN, professor of theoretical physics at the Sorbonne, Paris, now visiting professor at Columbia University, gave on May 8 the John Howard Appleton Lecture at Brown University, in conjunction with the Rhode Island Section of the American Chemical Society. He spoke on "Nuclear Energy."

UNDER an exchange lecture arrangement between the Michigan College of Mining and Technology and the University of Michigan, Professor A. K. Snelgrove, of Michigan College, head of the department of geological engineering and member of the Committee on Mining Geology of the American Institute of Mining and Metallurgical Engineers, delivered recently at Ann Arbor a series of addresses on "Geological Prospecting Criteria." Associate Professor A. J. Eardley, of the University of Michigan, discussed oil geology, Cordilleran structures and tactical and geological interpretation of aerial photographs in his lectures at Houghton.

THE usual courses in spectroscopy will not be given at the Massachusetts Institute of Technology this summer.

THE third annual meeting of the Southeastern Section of the Botanical Society of America will be held on June 12, 13 and 14 at Knoxville, Tenn., with the University of Tennessee as the host institution. The program will include trips to the TVA laboratories and tree crop nursery at Norris, the Agricultural Experiment Station of the University of Tennessee and the Great Smoky Mountains National Park. A discussion of the vegetation of the Great Smoky Mountains will be led by Dr. S. A. Cain and Dr. A. J. Sharp, of the department of botany. Dr. Cain will discuss "The Tertiary Nature of Southern Appalachian Forests," and Dr. Sharp will speak on "Highlights of the Southern Appalachian Flora." Dr. W. H. Camp, of the New York Botanical Garden, will lecture by invitation on "The Origin and Genetic Structure of Species."

THE Association for the Study of Internal Secretions announces the establishment of the Ciba Award to recognize the accomplishment of an investigator not more than thirty-five years of age in the field of endocrinology. Work cited may be either in the field of preclinical or clinical endocrinology. The award is for $1,200. If the recipient should choose to use the award toward further study in a laboratory other than that in which he is at present working, it will be increased to $1,800. The option is left entirely to the recipient. Choice of the recipient is in the hands of the committee of awards of the association, composed of five members.

THE Office of Psychological Personnel has been established by the American Psychological Association under the auspices of the Division of Anthropol-

ogy and Psychology of the National Research Council, to be concerned with the maximum, effective utilization of psychologists in the war effort. This office is continuing and extending the work begun last year by the Subcommittee on the Listing of Personnel in Psychology, of which Dr. Steuart Henderson Britt is chairman. Dr. Britt is now serving as executive director of the Office of Psychological Personnel and may be addressed at the National Research Council, 2101 Constitution Avenue, Washington, D. C.

A NATIONAL Registry of Rare Chemicals has been established by the Armour Research Foundation. Information on chemicals too rare to be listed in the catalogues of regular chemical supply houses will be filed with the registry and indexed according to name, location and amount available. Dr. Martin H. Heeren, chairman of chemical engineering research, has been appointed director. Chemicals to be found in the catalogues of supply houses are not included, but all those not available through regular channels will be listed. The file will be regarded as confidential and will not be open to general inspection. Specific inquiries will be answered by the registry. In transactions in which the owner of the chemical wishes to remain anonymous to prevent the disclosure of commercial secrets, the registry will act as intermediary.

DISCUSSION

GRAVEL OUTWASH NEAR CHILLICOTHE, OHIO

THE occurrence of Illinoian gravel at two markedly distinct levels on the border of the Scioto Valley, near Chillicothe, Ohio, though known for many years, seems not to have been given a satisfactory interpretation. There are quite extensive deposits of the gravel directly east of Chillicothe at an altitude of 800 to 860 feet, or 200 to 250 feet above the flood plain of the Scioto River. Directly south of these deposits on ground only 700 to 740 feet there is a sheet of glacial gravel showing a similar degree of weathering. They both are regarded as an Illinoian outwash by the several geologists who have observed them. They were noted by M. R. Campbell in 1918 in a description of the country around Camp Sherman printed on the back of the Camp Sherman map, and the suggestion made that two lobes of the Illinoian ice sheet, one occupying the Scioto Valley and the other Walnut Creek, met and enclosed between them the ground carrying the high gravel deposits. The lobes then became separated and exposed the ground to the south where the lower deposits are located. This interpretation was cited by J. E. Hyde in his report on the Camp Sherman Quadrangle.[1] But he decided that it was not to be accounted for by such localized conditions, as the deposit extends far up Walnut Creek. He noted that the upper limits of these gravels are nearly identical with Illinoian gravels on Paint Creek and its tributaries west of the Scioto Valley, and likely to have been determined by wide-spread common condition. He also found the lower set of gravels to have a distribution far down the Scioto Valley. But he failed to find a satisfactory explanation of the occurrence of the two sets of deposits at such markedly different levels.

The Cincinnati ice blockade of the Ohio River in the Illinoian stage of glaciation has been pretty fully established in the geological literature for more than fifty years. The ponding that it is assumed to have produced above the site of the ice dam has also been under discussion from the first. In 1890 the Beech Flats of northwestern Pike County, only 25 to 30 miles southwest from Chillicothe, were found by G. F. Wright to carry silt deposits at a level similar to the highest gravel deposits under discussion, and were interpreted by him to be due to the ponding by the Cincinnati ice dam.[2] It therefore seems natural to look to this ice blockade of the Ohio for the explanation of the features under consideration. It seems very probable that we have in the higher set of gravel deposits a close relation to the giving way of the ice dam. That they fill a space of fully 50 feet in altitude, and are of gravel with some interbedding of silt, seems a natural condition attending the breaking of the blockade, with some fluctuation in the height of the ponding. An interval of some years may have been involved in the complete clearing of the blockade. The lower set of deposits in the Scioto Valley probably dates from the practical disappearance of the obstruction of the Ohio River in the vicinity of Cincinnati. The distribution of the gravel far down the Scioto shows a free drainage, inconsistent with the presence of an obstruction in the Ohio valley. It is a matter of especial interest that we seem to have in these two sets of deposits decisive evidence that the Illinoian ice held possession of the Scioto Valley as far down as Chillicothe after the blockade of the Ohio had been lifted.

A few words seem pertinent as to the pre-Illinoian trenching of the Scioto Valley. Well records presented by Professor Hyde in his report on the Camp Sherman area show the bedrock in Chillicothe and

[1] *Bull.* 23, Geol. Survey of Ohio.

[2] *Bull.* 58, U. S. Geol. Survey, pp. 92–96. 1890.