

SCIENTIFIC NOTES AND NEWS

PROFESSOR JOHN J. ABEL, of the Johns Hopkins University, has been elected an honorary member of the Society of Therapeutics at Paris.

DR. FRANCIS CARTER WOOD, director of the Institute for Cancer Research at Columbia University, has been elected an honorary member of the Norwegian Society for Medical Radiology.

DR. FREDERICK J. WULLING, dean of the College of Pharmacy of the University of Minnesota, celebrated on March 10 the completion of fifty years' service to education and to pharmacy. A bibliography of his publications is being compiled by the university.

A PORTRAIT of Dr. Horace N. Mateer, since 1886 professor of biology at the College of Wooster, was recently hung in the library. The picture was painted by Merton Grenhagen, of Wisconsin.

THE State of New Jersey officially welcomed Dr. and Mrs. Albert Einstein as residents at a reception and concert on the afternoon of March 25 and at a formal dinner in the evening. Governor A. Harry Moore was the principal speaker, welcoming Dr. Einstein "as a citizen of the world." Both the reception and the dinner were for the purpose of raising money to settle German Jews in Palestine.

PROFESSOR GILBERT N. LEWIS has been appointed George Fisher Baker non-resident lecturer in chemistry at Cornell University for the summer session, from July 9 to August 17. The topics of his lectures are as follows: Isotopes—An account of the discovery of isotopic forms of an element; a study of the differences in properties of isotopic forms as determined by experiment and predicted by theory; theory and practise of isotopic separation.

DR. W. L. HOWARD, of the branch of the College of Agriculture of the University of California at Davis, has been awarded the Croix de Chevalier du Mérite agricole by the minister of agriculture of the French government. The award is in recognition of work done by Dr. Howard in diagnosing and recommending methods of prevention of oak root fungus in the walnut groves of France.

PROFESSOR WILLIAM HERBERT HOBBS, head of the department of geology of the University of Michigan since 1906, will retire at the close of the summer session after serving for twenty-eight years. Dr. Hobbs reaches the retiring age of seventy years on July 2. He may continue to give a course in glacial geology.

PROFESSOR S. W. HUNTON, who for fifty-one years has been head of the department of mathematics at Mount Allison University, Sackville, N. B., will retire at the close of the present academic year.

DR. LEE A. DUBRIDGE, assistant professor of physics at Washington University, St. Louis, has been appointed professor of physics at the University of Rochester.

RECENT changes at the University and Bellevue Hospital Medical College, New York City, include: Maurice Brodie, from instructor in bacteriology to assistant professor of bacteriology; Frank W. CoTui, from clinical professor of surgery to associate professor of experimental surgery; Charles G. Darlington, from assistant professor of pathology to lecturer on dental pathology; Julius A. Klosterman, from assistant professor of bacteriology to associate professor of bacteriology.

PROFESSOR OTFRIED FOERSTER has been placed at the head of a new institute for neurologic research at the University of Breslau. The erection of the building was made possible by a gift of \$50,000 from friends and students in America. The institute has a department of physiology and a department of cerebral anatomy and histology.

FRANK L. DUMOND has recently been appointed director of the Kent Scientific Museum at Grand Rapids, Mich. He has been acting director for the last two years.

DR. W. H. PIERRE, associate professor of agronomy in the College of Agriculture at the University of West Virginia, is aiding in directing the project that is endeavoring to control sheet erosion in the watershed of the Little Kanawha River in Wirt and Roane Counties, West Virginia. This is one of the ten soil erosion control projects which are being conducted throughout the country.

DR. ELLIOTT P. JOSLIN, clinical professor of medicine at the Harvard Medical School, gave a clinic on diabetes on February 14, before the students and faculty of the Vanderbilt School of Medicine. Dr. Joseph F. McCarthy, professor of urology at Columbia University, held a clinic on March 6.

DR. ALONZO TAYLOR, of Stanford University, returned recently from a six weeks' stay in Argentina, where he was engaged in a study of the wheat situation.

DR. WALTER H. BROWN, professor of hygiene at Stanford University, expects to leave shortly for a trip around the world during which he will make a study of municipal hygiene.

DR. JEAN DUFRENOY has returned to France after having spent fourteen months in the laboratory of plant physiology of the California Citrus Experiment Station. During his stay in America, Dr.

Dufrenoy represented France at the June, 1933, meeting of the American Association for the Advancement of Science at the Century of Progress Exposition. He is returning to his position as director of the Southwest Station for Plant Pathology at Bordeaux.

EDWIN B. NEWTON, of the chemical research staff of the B. F. Goodrich Company, expects to leave shortly for Singapore to engage in studies of latex and crude rubber preparation in the Far East.

DR. GONZALES MERINO, chief entomologist and plant quarantine officer of the Philippine Islands, is on a trip around the world to visit various entomological research institutions.

DR. JOHN WISHART, of the School of Agriculture at the University of Cambridge, plans to visit the United States in July and August, on his way to China, where he will lecture and advise regarding experimental plant breeding at the University of Nanking.

DR. ESMOND R. LONG, director, Henry Phipps Institute, University of Pennsylvania, who sailed for Puerto Rico on February 22, will give a series of lectures at the School of Tropical Medicine. He will also join in a tuberculin survey started in February in two of the important industries of the island—needle workers and tobacco strippers.

THE last Fenton Foundation lecture of the 1933-1934 series at the University of Buffalo was delivered on March 16, by Professor George B. Pegram, of Columbia University. His subject was "Modern Alchemy." Dr. Pegram spoke before the Sigma Xi Club on the following day on "Some New Developments in Nuclear Physics."

DR. HUGH S. TAYLOR, David B. Jones professor of chemistry at Princeton University, gave a series of lectures during March at the Wagner Free Institute of Science on "Chemistry and Industrial Progress as Exemplified in the Study of Hydrogen and Oxygen."

THE William Potter Memorial Lecture of Jefferson Medical College was delivered by Dr. Charles R. Stockard, professor of anatomy, Cornell University Medical College, New York, on March 1. His subject was "The Genetic Basis and the Internal Secretions in Growth Types and Body Form."

DR. DOUGLAS JOHNSON, professor of physiography at Columbia University, delivered a course of lectures at the Rice Institute, Houston, Texas, from March 13 to 16, on the "Evolution of the Grand Canyon District," "Scenery of the Atlantic Shoreline" and "A Physiographic Traverse of the United States." While in Houston he also addressed a luncheon gathering of the Houston Geological Society on "Recent Geo-

morphic Researches in the Yellowstone Park-Big Horn Basin Region" and delivered the annual Phi Beta Kappa address at Rice Institute, on the subject "Muddy Thinking."

DR. CHARLES N. FREY, director of the Fleischmann Laboratories, read a paper on March 2 on "Some Modern Fermentation Processes and their Application" at the meeting of the Lehigh Valley Section of the American Chemical Society held in the Chandler Chemical Laboratory of Lehigh University.

THE International Geographical Congress will be held in Warsaw, Poland, from August 23 to 31, under the presidency of Dr. Isaiah Bowman.

THE twenty-second annual meeting of the Eugenics Research Association will be held at the American Museum of Natural History in New York City on Saturday, June 2, at 10 A. M. The board suggests that the 1934 meeting give special emphasis to researches on race integrity. It will, however, be appropriate to report any first-hand studies in the field of eugenics which have been carried out during the year.

THE Eleventh Colloid Symposium will be held at the University of Wisconsin, from June 14 to 16. Originally scheduled for last year but postponed because of economic conditions then prevalent, this meeting of the symposium will in a sense mark the tenth anniversary of its founding. Professor Harry B. Weiser, of Rice Institute, Houston, Texas, is in charge of the program of papers to be presented, and Professor J. H. Mathews, of the University of Wisconsin, who was responsible for the first symposium, held in Madison in June, 1923, is general chairman in charge of local arrangements.

A CONVENTION of the college and high-school teachers of biology of Maryland, said to be the first ever held in the state, met at Western Maryland College on March 17. The subject before the conference was "A Decade of Progress in General Biology," and papers were presented as follows: Summarizing the recent advances in the knowledge of amoeba, Professor S. O. Mast, the Johns Hopkins University; diatoms, P. S. Conger, Carnegie Institution; the blue crab, Professor R. V. Truitt, University of Maryland; genetics, Professor R. E. Cleland, Goucher College, and economic entomology, Professor E. N. Cory, University of Maryland. Various matters of practical concern to teachers were also discussed, such as improved equipment and aims and problems of the introductory biology course. Professor W. H. Longley, Goucher College, gave the evening lecture, using as his subject "Mere Natural History." The convention was sponsored by Western Maryland College's chapter of Beta Beta Beta, Professor L. M. Bertholf, counselor. The seventy-five delegates present voted

to hold a similar convention next year, and accepted the invitation of the Maryland Academy of Sciences to convene in its building in Baltimore.

THE University of Wisconsin will receive \$400,000 for the establishment of a cancer research center from the estate of the late Jennie Bowman, of Wisconsin Dells. The entire amount is expected to become available in the autumn.

THE residue of the estate of the late Charles H. Morse, of New York City, is left to Wesleyan University to establish a fund in memory of his mother to be known as the Persis C. Thorndike Fund. The fund is expected to be in excess of a million dollars.

MRS. M. THERESA B. HOPKINS, daughter-in-law of Mark Hopkins, formerly president of Williams College, has given an estate of 1,800 acres to the college as a memorial to her husband. Situated in the northeast hill section of the town, the estate includes the Hopkins residence and several other buildings. It is assessed at about \$100,000.

A GIFT of \$80,000 to establish and maintain a psychiatric unit at the Massachusetts General Hospital, to be operated in conjunction with the Harvard Medical School, has been made by the Rockefeller Foundation. The unit will be under the direction of Dr. Stanley

Cobb, professor of neuropathology at the university. Dr. Tracy Jackson Putnam, assistant professor of neurological surgery, has been appointed the first incumbent of a newly established chair of neurology. He is also in charge of the neurological unit at the hospital. There will be close cooperation between the Massachusetts General Hospital and the recently organized McLean Hospital in Waverley, Mass., where the most difficult brain and nerve cases are now treated. At the Boston Psychopathic Hospital Harvard investigators and teachers have long been studying mental diseases under the guidance of Professor C. Macfie Campbell. To his department there will now be added clinics to supply important incipient cases. Of the \$80,000 given by the Rockefeller Foundation, which is to finance the first year's work, \$42,000 goes to the Harvard Medical School for the expenses of carrying out the psychiatric work and \$38,000 is given to the Massachusetts General Hospital. The project will be started next September.

THE department of physiology and pharmacology of the University of Nebraska has received a grant of \$1,800 from the Frederick Stearns Company for investigation under the direction of Drs. A. Ross McIntyre, professor of pharmacology, and Ernest L. MacQuiddy, of the department of internal medicine.

DISCUSSION

DEFINITIONS OF THE MATHEMATICAL TERM GROUP

THE term "group" with an apparently technical mathematical meaning appears in the literature of various scientific subjects and hence it may be noteworthy that those who now seek a satisfactory definition thereof are apt to encounter unexpected difficulties even in some of the most frequently consulted mathematical works of reference. A brief consideration of some of these difficulties may be of interest not only to those who have been perturbed by them but also to others who wish to clarify their conceptions as regards terms which are said to play an increasingly important rôle in the development of mathematics. The mathematical literature has been greatly enriched during recent decades by the publication of several special mathematical encyclopedias. While no such work has yet appeared in the English language each of the three other principal mathematical languages of the world, *viz.*, German, French and Italian, embodies now at least the beginnings of such a work under the following titles respectively: "Encyklopädie der Mathematischen Wissenschaften," 1898-, "Encyclopédie des Sciences Mathématiques," 1904-, "Enciclopedia delle Matematiche Elementari," 1930-.

While each of these works contains at least one explicit definition of the technical term group none of these definitions is entirely satisfactory as regards the use of this term when the number of the elements is not restricted, as may be seen from what follows: The definition which appears on page 218, volume 1, of the first of these encyclopedias implies not only that the infinite system of the natural numbers 1, 2, 3, . . . constitutes a group as regards multiplication, and hence that the inverse of an operator of a given group does not necessarily appear therein, but also that the infinite system of the natural numbers which exceed an arbitrary given one of them constitutes a group with respect to the same operation, and hence that a group does not necessarily involve the identity. On page 652 of the same volume the term closed group is used with a still wider meaning. Even those who are only slightly acquainted with the literature of this subject realize that it is often assumed that a given group contains both the inverse of each of its operators and also the identity operator. In fact, these assumptions are sometimes explicitly embodied in definitions of the technical term group.

In the third and most recent of the three encyclopedias noted above it is explicitly stated that the natural numbers constitute a group when they are