

## SCIENTIFIC NOTES AND NEWS

THE presentation of the Perkin Medal of the Society of Chemical Industry to Dr. Robert E. Wilson, president of the Pan American Petroleum and Transport Company and of the American Oil Company, will take place on January 8 at a meeting of the society at the Chemists Club, New York City.

THE Katherine Berkan Judd prize of \$1,000, which is administered by the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City, has been awarded to Dr. Charles Brenton Huggins, professor of surgery at the University of Chicago, in recognition of "pioneer work resulting in marked amelioration and prolongation of life of many patients with prostatic cancer."

FOR "the greatest benefits done to practical medicine in the last four years," Dr. Thomas Addis, of the School of Medicine of Stanford University, has been awarded the Cullen Prize by the Royal College of Physicians in Edinburgh, in recognition of his work on Bright's disease. The prize was founded by the late Dr. R. H. Gunning, of Edinburgh and Rio de Janeiro, in 1886.

THE Honorary Medal of the Royal College of Surgeons of England was presented on September 30 to Viscount Nuffield.

A PORTRAIT of Dr. Nevin M. Fenneman was presented on October 23 to the University of Cincinnati by his former students and other friends. He served as professor of geology at the university from 1907 until his retirement in 1937, when he was made professor emeritus. Dr. Fenneman was for several years chairman of the Division of Geology and Geography of the National Research Council, and has been president of the Association of American Geographers and of the Geological Society of America.

THE seventieth birthday of Dr. Emanuel Libman, professor of clinical medicine at Columbia University, was celebrated by an anniversary dinner given in his honor on October 31. Dr. Morris Fishbein, editor of the *Journal* of the American Medical Association; Rabbi Stephen S. Wise, Colonel Leonard G. Rowntree and Dr. Joseph H. Pratt were among the speakers.

THE degree of doctor of science was conferred on Founders Day at Alfred University on Dr. Willis H. Carrier, of the Carrier Corporation, in recognition of his work as "a pioneer in the development of air conditioning." Dr. Carrier delivered the Founders Day address. He spoke on "Trends in Technical Education."

DR. WILLIAM M. COBLEIGH, professor of chemical engineering and dean of engineering at Montana State

College, previously head of the department of chemistry, has been appointed acting president of the college.

DR. WALTER H. BROWN, emeritus professor of hygiene and physical education at Stanford University School of Medicine, has been appointed professor and chairman of the department of hygiene at the University of California at Berkeley. He succeeds Dr. Robert T. Legge, who recently retired.

DR. CHESTER I. BLISS has been appointed lecturer in biometry at Yale University for the current academic year, with the rank of associate professor and assignment to the departments of botany and zoology of the Graduate School.

DR. CLIFFORD T. MORGAN, instructor in psychology at Harvard University, has been appointed assistant professor of psychology at the Johns Hopkins University effective on July 1, 1943.

DR. JAMES GRAHAM HARDY, professor emeritus of mathematics at Williams College, is serving as visiting professor at Reed College during the first and second semesters of the current academic year. Dr. Frank H. Hurley, Jr., of the department of chemistry of the Rice Institute, this year will fill the vacancy at Reed College caused by the appointment of Dr. Arthur F. Scott, head of the department of chemistry, to the acting presidency of the college.

BRADLEY DEWEY, president of the Dewey and Almy Chemical Company, Cambridge, Mass., has leave of absence for the duration of the war to enable him to accept the position of deputy rubber administrator offered to him by William M. Jeffers.

THOMAS H. MILLER has become chief of the Metals Economics Division of the U. S. Bureau of Mines.

DR. MORDECAI EZEKIEL, economic adviser to the Secretary of Agriculture, has been appointed executive assistant to Charles E. Wilson, vice-chairman of the War Production Board.

PROFESSOR A. H. HAUSRATH, a member of the vocational education staff of Iowa State College, has been named assistant chief of the training section of the Office for Emergency Management. His work will involve vocational guidance and personnel. Professor K. L. Clark, since 1939 a member of the department of mechanical engineering, has joined the staff of the Naval Research Laboratory at Washington.

DR. H. N. BROCKLESBY, chief chemist of the Fisheries Research Board of Canada, has been appointed a member of the scientific staff of the special products division of the Borden Company, with headquarters

in San Francisco with the Farallone Packing Company.

DR. O. A. NELSON, of the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture, has been appointed a member of the technical staff of Battelle Memorial Institute, Columbus.

DR. BYRON N. COOPER and Dr. William R. Brown have joined the staff of the Virginia Geological Survey. Dr. Brown is engaged in studies of the mineral resources of piedmont Virginia, especially those useful to war industries. Dr. Cooper is in charge of studies on the stratigraphy, structure and non-metallic mineral resources in the southern half of the Appalachian Valley in Virginia. Dr. Raymond S. Edmundson, for some years a staff geologist, is in charge of similar studies in the northern half of the valley.

IN furtherance of the effort to conserve quinine and seek for supplies of cinchona bark from tropical America, Norman Taylor, the director of Cinchona Products Institute, of New York, will make a survey of plantations and wild sources of bark. The trip, which includes the region from southern Mexico to Bolivia, has been authorized by the Board of Commissioners for the Netherlands East Indies.

DR. WILLIAM BRADLEY, lecturer in tinctorial chemistry and dyestuffs in the Manchester College of Technology, has joined the scientific staff of the British Drug Houses Ltd.

DR. CURT P. RICHTER, associate professor of psychobiology at the Johns Hopkins University, will deliver the second Harvey Society Lecture of the current series at the New York Academy of Medicine on November 19. He will speak on "Total Homeostasis."

THE Linsly R. Williams Memorial Lecture, the first of this year's series of Laity Lectures of the New York Academy of Medicine, was given on November 12 by Dr. R. R. Williams, chemical director of the Bell Telephone Laboratories. The title of the lecture was "Nature and Man."

DR. ALFRED BLALOCK, professor of surgery at the Johns Hopkins University School of Medicine, will deliver the annual Lower Lecture before the Academy of Medicine, Cleveland, on November 20. He will speak on "Surgical Shock." The lecture is made possible by a fund donated by Dr. William E. Lower, Cleveland, an honorary member and a former president of the academy.

DR. C. E. K. MEES, director of research of the Eastman Kodak Company, spoke on November 13 on "The Application of Scientific Research to Industry" before a general seminar in chemistry sponsored by the department of chemistry of Fordham University.

THE American Ethnological Society will celebrate its centenary on November 14 at the American Museum of Natural History. Dr. William Duncan Strong, director of the Ethnogeographic Board, is chairman. "Culture-contact" will be the subject of a symposium in which the subjects and speakers are as follows: (1) *Oceania*, Dr. Raymond Kennedy, professor of sociology, Yale University, and Dr. Margaret Mead, Division of Anthropology and Psychology, National Research Council; (2) *South America*, Dr. Julian H. Steward, Bureau of American Ethnology, Smithsonian Institution, and Dr. Ruth Benedict, professor of anthropology, Columbia University; (3) *North America*, Dr. Clyde Kluckhohn, professor of anthropology, Harvard University, and Dr. Ralph Linton, professor of anthropology, Columbia University. Professor A. Irving Hallowell, Professor Frank Tannenbaum and Dr. John Whiting will take part in the discussions.

THE annual meeting of the American Association of Petroleum Geologists will be held at Fort Worth, Texas, on April 7, 8 and 9. All meetings, including committees, research and business meetings, will be limited to these three days.

THE Congress of American-Soviet Friendship held a program of panel discussions at the Hotel New Yorker on November 7 and 8. The first session on Saturday afternoon was devoted to "Science, Exploration and the War." The moderator was Earl P. Hanson, engineer and explorer. Members of the panel were: Vilhjalmur Stefansson, Arctic explorer; Dr. Aleš Hrdlička, curator, U. S. National Museum; Dr. Donald H. Menzel, professor of astrophysics, Harvard University; Dr. Mordecai Ezekiel, economic adviser, U. S. Department of Agriculture; and Dr. W. Horsley Gantt, director of the Pavlov Institute, the Johns Hopkins University. Other panels were: "Public Health and Wartime Medicine," moderator, Dr. Henry E. Sigerist, director of the Institute of the History of Medicine, the Johns Hopkins University; "The Role of Women and Child Care in Wartime," moderator, Miss Mary Gilson, consultant, Manpower Commission; "The Arts in Wartime in the Soviet Union and in the United States," moderator, Dr. Robert K. Speer, professor of education, New York University; "Civilian Defense and Morale," moderator, Arthur Upham Pope; "Production for War Needs and the Role of Trade Unions," moderator, the Honorable Stanley Isaacs; "The Soviet Peoples and Their Allies," moderator, Professor Henry Pratt Fairchild, New York University.

ANNOUNCEMENT has been made by the Finney-Howell Research Foundation that all applications for fellowships for next year must be filed in the office

of the foundation, 1211 Cathedral Street, Baltimore, by January 1. Applications received after that date can not be considered for 1943 awards, which will be made the first of March, 1943. This foundation was provided for in the will of the late Dr. George Walker, of Baltimore, for the support of "research work into the cause or causes and the treatment of cancer." The will directed that the surplus income from the assets of the foundation together with the principal sum should be expended within a period of ten years to support a number of fellowships in cancer research, each with an annual stipend of two thousand dollars, "in such universities, laboratories and other institutions, wherever situated, as may be approved by the Board of Directors." Fellowships carrying an annual stipend of \$2,000 are awarded for the period of one year, with the possibility of renewal up to three years. Special grants of limited sums may be made to support the work carried on under a fellowship.

ORIGINAL specimens of some of the crude stone tools of the "Peking man" and casts of others have been placed on display in a new exhibit devoted to China's Old Stone Age in the department of anthropology at Field Museum of Natural History, Chicago. The exhibit shows typical stone tools from six Paleolithic sites in China, and explains their presumed chronological sequences; there is also a series of pho-

tographs to show the various methods of use of the stone tools.

*Nature* states that on the invitation of the president and council of the Royal Astronomical Society, the British Astronomical Association is to be accommodated in future in the rooms of the former at Burlington House, London. Negotiations have been proceeding for some months and the final arrangements were completed in time for the British Astronomical Association to hold its first meeting in the new premises on September 30. A large part of the proceedings was devoted to a survey of the history of the association since it was founded in 1890, special mention being made of its founder, Edward Walter Maunder. A number of members spoke about the progress of the association during the fifty-two years of its existence and about the influence of many of its past members in shaping its policy and assisting with its remarkable development. It is worth noticing that the present international crisis has not affected its membership adversely—an indication of the interest which the amateur possesses in various astronomical branches. The new premises provide more adequate accommodation for the library and in other ways supply greater facilities for the members to whom the change has given considerable satisfaction.

## DISCUSSION

### CATALYSIS AS A BIOLOGICAL FACTOR

IF we apply to biology the extensive knowledge of catalysts and their influence, reinforced as it is by wide experience in the use of catalysts in large-scale organic and inorganic chemical industry, we envisage a factor capable of giving a rational explanation of many obscure and diverse biological processes.

Even before Berzelius coined the word "catalysis" over a century ago (1836), the specificity of action of catalysts had been known, appearing later in Emil Fischer's analogy that enzyme and substrate are related as lock and key. Since specificity, as well as time, is of the essence of all biological happenings, the text-book notion that catalysts merely speed up reactions which would occur spontaneously over indefinite time, has been superseded by the view that catalysts are also *directors* of chemical change, and therefore directors of those biochemical changes which underlie all morphology, physiology and function.

Much of the success attending the industrial use of catalysts is due to recognition and control of the fact that very small changes in the structure or composition of a catalyst may result in great and permanent change in the quantity and chemical nature of

the chemical output. To give a concrete case, Sir Gilbert T. Morgan found that a certain concentration of carbon monoxide and hydrogen passed at certain temperature and pressure over a catalyst composed of equimolecular proportions of chromium oxide and manganese oxide gave an effluent containing 80½ per cent. methanol. On adding 15 per cent. rubidium to the catalyst, the effluent under like operative conditions contained only 46 per cent. methanol; but large percentages of higher branching chain alcohols appeared. Where cobalt was added to the catalyst, the formation of higher straight chain alcohols was favored. Since enormous outputs of chemical substances may be determined by small amounts of catalysts prepared in laboratory secrecy and used in factory isolation, the patent literature fails fully to reflect the use of tiny amounts of "promoters," added to catalysts to make them direct the formation of wanted compounds.

While the importance and specificity of catalysts, especially enzymes, as directors of biochemical change had long been recognized,<sup>1</sup> the collateral importance

<sup>1</sup> L. T. Troland, *Monist*, January, 1914; *Cleveland Med. Jour.*, 15: 377-89, 1916; *Am. Nat.*, 15: 321-5, 1917. J.