

your established laws; but I have set an acorn, which when it becomes an oak, God alone knows what will be the fruit thereof."

As Mildmay's acorn has grown to a great oak and as Harvard University is now well endowed, we can only hope and, indeed, believe that the same good fortune may, in the future, attend the increase and perpetuation of the Treub Foundation.

DAVID FAIRCHILD
ELMER D. MERRILL
THOMAS BARBOUR

OFFICERS OF THE NATIONAL RESEARCH COUNCIL, 1937-1938

THE National Research Council announces the reappointment of Dr. Ludvig Hektoen, director of the John McCormick Institute for Infectious Diseases in Chicago, as chairman of the council for the year beginning on July 1, 1937.

The officers of the divisions of science and technology of the council for the coming year, among whom are several replacements, are as follows:

Physical Sciences

Luther P. Eisenhart, *chairman*; professor of mathematics and dean of the Graduate School, Princeton University.

H. A. Barton, *vice-chairman*; director of the American Institute of Physics, New York City.

Engineering and Industrial Research

Vannevar Bush, *chairman*; vice-president and dean of the School of Engineering, Massachusetts Institute of Technology.

Howard Poillon, *vice-chairman*; president of the Research Corporation, New York City.

Chemistry and Chemical Technology

Herbert R. Moody, *chairman*; professor of chemistry and director of the chemical laboratories, College of the City of New York.

Geology and Geography

Chester R. Longwell, *chairman*; Henry Barnard Davis professor of geology, Yale University.

Robert S. Platt, *vice-chairman*; associate professor of geography, University of Chicago.

Medical Sciences

Esmond R. Long, *chairman*; professor of pathology, School of Medicine, and director, Henry Phipps Institute, University of Pennsylvania.

Howard T. Karsner, *vice-chairman*; professor of pa-

thology and director of the Institute of Pathology, Western Reserve University.

Biology and Agriculture

R. E. Coker, *chairman*; professor of zoology and chairman of the Division of Natural Sciences, University of North Carolina.

E. C. Stakman, *vice-chairman*; professor of plant pathology, University of Minnesota.

Anthropology and Psychology

W. S. Hunter, *chairman*; professor of psychology, Brown University.

Carl E. Guthe, *vice-chairman*; Director of Museums, University of Michigan.

RECENT DEATHS AND MEMORIALS

MARQUIS GUGLIELMO MARCONI died on July 20 at the age of sixty-three years.

DR. JAMES RAMSAY HUNT, professor of neurology at the Columbia University School of Medicine, died on July 22. He was sixty-three years of age.

SIR CHARLES SAUNDERS, who originated the Canadian "Marquis wheat," died on July 25 at the age of seventy years.

Nature reports the death of Professor A. W. Gibb, emeritus professor of geology in the University of Aberdeen, on July 12, at the age of seventy-three years; and of Dr. A. A. Bialynicki-Birula, formerly director of the Zoological Museum of the Russian Academy of Sciences, known for his zoological work in the Arctic, aged seventy-three years.

THE Charles R. Bardeen Memorial Lecture, honoring the late dean of the Medical School of the University of Wisconsin, was presented on May 24 at the university under the auspices of the Phi Chi fraternity. Dr. Jacob Arnold Bargen, of the Mayo Clinic, gave the lecture on "Recent Advances in Studies on Intestinal Disorders in Europe and America."

A CEREMONY was held at the Franklin Institute on July 22 in memory of the late Frederic Eugene Ives, who died on May 27. His son, Dr. Herbert E. Ives, presented to the institute the original patent and other material from the Ives laboratory.

THE one hundred and fiftieth anniversary of the birth of Thomas Say, American naturalist, was observed by the Academy of Natural Sciences, Philadelphia, on July 27, when S. Davis Wilson, mayor of Philadelphia, made the commemorative address.

SCIENTIFIC NOTES AND NEWS

SIR DAVID PRAIN, for seventeen years director of the Royal Botanic Gardens at Kew, celebrated his eightieth birthday on July 11.

DR. KARL BOSCH, Nobel laureate, chairman of the I. G. Farbenindustrie, has been appointed by Bern-

hard Rust, German minister of education, president of the Kaiser Wilhelm Society for the Advancement of Science.

PROFESSOR ALBERT EINSTEIN has been elected an honorary member of Rho Pi Phi, pharmaceutical fra-

ternity, for "humane service to the nation." Presentation of the membership, signed and sealed in Boston, was made personally to him on July 8 at his summer home in Huntington, Long Island.

BUCKNELL UNIVERSITY has conferred the degree of doctor of engineering on Dr. Clement C. Williams, president of Lehigh University.

ON the occasion of the fortieth anniversary of his graduation from Miami University, the degree of doctor of laws was conferred on Dr. W. J. Hale, director of research of the Dow Chemical Company, Midland, Mich.

THE University of Leeds conferred on July 5 the degree of doctor of laws on Dr. John K. Jamieson, formerly professor of anatomy at Leeds, now professor of anatomy and chirurgery at the University of Dublin.

ELLSWORTH P. KILLIP, of the Division of Plants (National Herbarium), U. S. National Museum, has been authorized through an Act of Congress to accept the award of Chevalier of the French Legion of Honor recently conferred upon him by the French Government.

DR. PAUL RAMDOHR, professor of mineralogy at Berlin, has been elected a member of the Swedish Geological Society.

At a recent meeting of the Central Pennsylvania Branch of the Society of American Bacteriologists the following were elected officers for the coming year: *President*, Dr. Edward J. Pugh, Kirby Memorial Health Center, Wilkes-Barre; *Vice-president*, Dr. J. H. Brown, The Gilliland Laboratories, Marietta; *Secretary-treasurer*, Dr. M. A. Farrell, the Pennsylvania State College.

NEWLY elected officers for 1937-38 of the New England Section of the American Society of Plant Physiologists are: *chairman*, Dr. F. H. Steinmetz; *vice-chairman*, Dr. H. B. Vickery, and *secretary-treasurer*, Dr. L. H. Jones.

EFFIE JANE TAYLOR, professor of nursing and dean of the Yale University School of Nursing, has been elected president of the International Congress of Nurses, which opened in London on July 19.

DR. HARRY PARKER HAMMOND, head of the department of civil engineering at the Polytechnic Institute of Brooklyn, has been appointed dean of the School of Engineering at the Pennsylvania State College. He succeeds Dr. Robert L. Sackett, who retired on July 1.

DR. DAVID W. E. BAIRD, associate professor of medicine at the school of medicine of the University of Oregon, has been named associate dean, succeeding Dr. Myers. Dr. Baird has been medical director of the clinic and hospital.

DR. ARCHIE NORMAN SOLBERG, fellow at Columbia University, has been appointed associate professor of biology at the University of Toledo to succeed the late John M. Condryn.

THE following promotions have been made at Bard College, Columbia University: Dr. Harold Mestre, from visiting associate professor and fellow in biophysics to professor and director of studies; Dr. C. Theodore Sottery, from associate professor and fellow to professor of chemistry; Dr. C. R. Carpenter (on leave of absence with the Asiatic Primate Expedition), from lecturer and fellow in psychology to assistant professor; Dr. Francis M. Summers, from instructor and tutor in biology to assistant professor and fellow; Edward C. Fuller, from instructor and tutor in chemistry to lecturer and fellow.

DR. NOAH MORRIS, lecturer in pathological biochemistry in the University of Glasgow, has been appointed regius professor of materia medica in the University of Glasgow in place of Professor Ralph Stockman, who has resigned.

At the Museum of Science and Industry, Chicago, Dr. F. C. Brown, director of the Annual Science Exhibit of the American Association for the Advancement of Science, formerly director of the Museum of Science and Industry, New York, has been appointed curator of physics, and Dr. C. R. Moulton, of Northwestern University, curator of chemistry.

DR. IRVINE H. PAGE, associate of the Hospital of the Rockefeller Institute for Medical Research, New York, will assume charge of the research department of the Indianapolis City Hospital on September 15. He will be retained for the post by Eli Lilly and Company, which cooperates with the hospital in laboratory and research work.

DR. WILLIAM D. TURNER has been appointed research psychologist at the Institute of the Pennsylvania Hospital, Philadelphia, where he will conduct, among other projects, an investigation of psychological changes in schizophrenic patients receiving the insulin-shock treatment.

DR. VALY MENKIN, of the department of pathology of the Harvard Medical School, has received a grant of \$4,000 for two years from the International Cancer Foundation for work on the relationship to the development of experimental neoplasia of the substance leukotaxine, which he recently isolated from inflammatory exudates.

THE John and Mary R. Markle Foundation has made a grant of \$10,000 to Dr. H. P. Smith, of the department of pathology of the State University of Iowa, for research on blood clotting and the bleeding tendency.

THE Kentucky Academy of Science recently awarded a research grant to Dr. John B. Loefer, of Berea College, for the purchase of new equipment for investigations on the biochemistry of protozoa.

THE third university fellowship of 1937 for advanced study in radio broadcasting with the National Broadcasting Company has been awarded by the General Education Board to H. M. Partridge, program director of the New York University Radio Committee. The appointment is for three months, ending on October 1.

A GRANT of two thousand dollars has been awarded by Cinchona Products Institute, Inc., of New York to Dr. J. P. Sanders, of Caspiana, La., for research on malaria.

A SERIES of free public lectures on consecutive Monday evenings by members of the staff has been inaugurated at the Scripps Institution of the University of California. The lectures are in non-technical language and will describe the past and present activities of the Scripps Institution. Members of the staff who will speak include Dr. H. U. Sverdrup, director; Dr. F. B. Sumner, Dr. R. H. Fleming, Dr. C. E. ZoBell, Dr. M. W. Johnson and Dr. D. L. Fox.

THE regular summer meeting of the Pennsylvania Academy of Science will be held at Wellsboro, on August 14 and 15. Field trips will include areas of geologic, physiographic, botanic and zoologic interest. Further information can be obtained from the secretary, Dr. V. Earl Light, Lebanon Valley College, Annville, Pa.

THE American Public Health Association will hold its annual meeting in New York City from October 5 to 8. Speakers at the opening general session include Dr. Parran, Mayor LaGuardia, Governor Lehman and Dr. Farrand. Dr. McCormack, president-elect of the association, will speak at the dinner. There will be special sessions on mental hygiene, the hygiene of housing and on the advancement of public health. Among the subjects chosen for joint sessions are nutritional problems with the Sections of Child Hygiene and Nutrition; water-borne diseases with the Sections of Public Health Engineering and Epidemiology; the crippled child, with the Sections on Child Hygiene and Public Health Nursing, and syphilis in industry with the Sections on Industrial Hygiene and Public Health Nursing. The American Association of School Physicians, the National Organization for Public Health Nursing, the Federation of Sewage Works Operators and several other allied national groups will join with the American Public Health Association in a series of scientific sessions. Inquiries should be addressed to the American Public Health Association, 50 West 50th Street, New York City.

ESTABLISHMENT of an annual award for research in surgery of \$1,500 was announced at a recent meeting in New York City of the executive council of the United States Chapter of the International College of Surgeons. The council in addition will award a gold medal and scroll of honor. Winners will be selected on the basis of original papers submitted to a committee of the International College of Surgeons in Geneva. The first awards will be made at the meeting of the International College in 1938. Their purpose is "to stimulate original research in all major branches of surgery."

BY the will of George F. Baker, Jr., who died on May 30, leaving an estate worth in the neighborhood of \$100,000,000, a trust fund of \$15,000,000 is established. His trustees and executors are instructed to devote the net income of the charity trust to corporations organized exclusively for religious, charitable, scientific, literary or educational purposes.

THE appraisal of the bequest of \$1,000,000 made to Duke University in the will of Mrs. Benjamin N. Duke shows that the amount will be reduced to \$420,052 after payment of federal and state inheritance taxes.

THROUGH the adjudication of the estate of the late Miss Frances T. Kinsey, the University of Pennsylvania has been awarded approximately \$200,000 to establish and maintain the "Kinsey-Thomas Foundation for the Study and Treatment of Diseases of the Digestive System." Dr. T. Grier Miller, professor of medicine at the Medical School, will have charge of the foundation.

A BOTANICAL garden and arboretum, devoted to the study of wild native plants growing in northern Indiana, were dedicated on June 12 by Huntington College, Indiana. Dr. Ernst A. Bessey, professor of botany at the Michigan State College, gave the dedication address. Botanists and representatives from several colleges and universities in the state were present. The garden, which comprises about three and a half acres of gently sloping land, includes at this time more than 300 species of plants, arranged in family groups as far as possible and each species is labeled with both scientific and common names. It is planned to devote one section entirely to native grasses. The arboretum comprises about forty acres of broken and picturesque land, now well wooded with many of the trees and shrubs native to the territory. Others will be planted until it is complete. The development of this garden and arboretum, which is the only project of its kind in the state and one of few in the United States, is the work of Fred A. Loew, professor of botany, and has been named after him. Professor Loew

received his training under the late Dr. William James Beal, of Michigan. In his address, Dr. Bessey briefly outlined the history of botanical gardens throughout early and modern times and stressed their value to colleges and schools of to-day. He pointed out that

not only is such a garden of value to the school, but it becomes a center of interest for all persons of the community as it preserves many types of vegetation, flowers and trees which have or may become practically extinct.

DISCUSSION

MICROCLIMATIC STUDIES IN OKLAHOMA AND OHIO

IN October, 1935, the Soil Conservation Service, in cooperation with the Weather Bureau and with funds supplied by the Works Progress Administration, established 200 weather stations spaced about three miles apart throughout Blaine, Kingfisher and Logan Counties in Oklahoma. Each was supplied with a rain gage, anemometer, wind vane, psychrometer and thermometers, and was operated by a farmer from the relief rolls.

The results obtained were of sufficient value to justify the establishment, in March, 1937, of a similar microclimatic study in the Muskingum Valley in Ohio by the Soil Conservation Service in cooperation with the Weather Bureau and the Muskingum Watershed Conservancy District, with funds supplied by the Ohio Works Progress Administration. Here 500 weather stations, each including a self-recording rain gage in addition to the instruments supplied in Oklahoma, were spaced approximately four miles apart in the 8,000 square miles of the watershed.

At both projects the records obtained by the observers are mailed to headquarters daily and are used in the preparation of detailed climatic maps, the most significant of which are those of rainfall. Those for the Oklahoma Climatic Center show the rainfall distribution for every fifteen-minute interval and the accumulation of rainfall by fifteen-minute intervals for each storm. In Ohio similar maps are prepared for half-hour intervals. Distribution maps of temperature, relative humidity, fog, dust and wind velocity and direction are prepared to help explain the rainstorms and to permit their classification into types. Supplementary maps show the rainfall accumulation for each day on which rainfall occurred and the daily accumulations for each month as well as for the entire year.

More than a year of records had accumulated in Oklahoma before the Ohio project was established. The maps prepared from the Oklahoma records revealed many facts that have a fundamental bearing on climatology and meteorology.

The battery of rain gages is regarded as a single instrument for obtaining simultaneous samples in different parts of rainstorms in sufficient number to determine their characteristics. During the course of the

study a large number of storms have been sampled in this manner. Rainstorms are subject to the same kind of observation and classification as other phenomena, and through the analysis of those observed a beginning on a taxonomy of rainstorms has been made. It has been found that rainstorms have characteristics of size, shape, internal structure, distribution of intensity and migration patterns.

Ignorance of the morphology of rainstorms has prevented the interpretation of the precipitation records of a single station in terms of the storm that produced it. Hence, in the past, much emphasis has been placed on detailed statistical treatment of precipitation records of single stations and very little on the areal distribution and characteristics of individual storms.

Two types of rainstorms, distinctive as to form, internal structure and behavior pattern, have been recognized. One type, of comparatively short duration and high intensities (the cold front type), is especially significant in the production of gully and sheet erosion and occasional local floods. The other type, of long duration and lower intensities, but ordinarily bringing larger amounts of rainfall (the warm front type), is significant in stimulating mass or gravity movements of soil, such as slumping, field slides and caving of gully walls and heads, and is invariably the cause of major floods.

The Ohio study is especially important because it covers an entire drainage area which is one of the outstanding flood control laboratories in the country. A forty-million dollar flood control and water conservation project is now being constructed cooperatively by the Federal Government, the State of Ohio and the Muskingum Watershed Conservancy District. The operation of the project will be of continuing value to all three of these agencies.

The Muskingum watershed offers an ideal location for such a study, since the Muskingum Watershed Conservancy District, in cooperation with the U. S. Geological Survey and the Soil Conservation Service, operates more than thirty stream-gaging stations and will as soon as they are constructed be operating fourteen flood control dams and reservoirs, and since the Soil Conservation Service has already established in the center of the area an extremely detailed study of rainfall and runoff and of the influence of agronomic practices on runoff.