success of the war which must not be handicapped or retarded in any way. . . . Without them the technical staffs of the Chemical Warfare Service would be most seriously handicapped in their developmental work."

Senate Bill 607 proposes to set up the following offices: (1) Office of Production and Supply, (2) Office of Manpower Supply, (3) Office of Scientific and Technological Mobilization, and (4) Office of Economic Stabilization. This bill carries an appropriation of $400,000,000 and provides for a director of the Office of War Mobilization and four administrators appointed by the director with the approval of the President, one administrator for each of the four offices the bill would create.

SCIENTIFIC NOTES AND NEWS

THE degree of doctor of science was conferred by the University of Rochester at its ninety-third commencement exercise on May 2 on Dr. Stanhope Bayne-Jones, professor of bacteriology and dean of the School of Medicine of Yale University, on leave as a colonel in the Army Medical Corps, and on Dr. Roger Adams, head of the department of chemistry of the University of Illinois, one of the chemists in charge of chemical warfare research.

AT the ninetieth commencement of the University of Wisconsin on May 29 an honorary degree will be conferred on Dr. Henry F. Helmholz, professor of pediatrics at the Mayo Foundation of the University of Minnesota, head of the section of pediatrics of the Mayo Clinic at Rochester, Minn.

DR. THOMAS E. FRENCH, emeritus professor of engineering drawing at the Ohio State University, has been awarded the Lamme Medal for meritorious achievement in engineering. This medal, going each year to an Ohio State alumnus who has distinguished himself in engineering, is named for its donor, the late Benjamin G. Lamme. Dr. French will receive the award at commencement on June 11.

SIR HENRY HALLETT DALE, president of the Royal Society, has been awarded the Harben Gold Medal of the Royal Institute of Public Health and Hygiene, London.

DR. CLARENCE A. HORN, of Albright College, was elected president of the Pennsylvania Academy of Science at the seventeenth annual meeting in Harrisburg on April 2 and 3. He succeeds Charles E. Mohr, director of education of the Philadelphia Academy of Natural Sciences. Dr. Homer C. Will, Juniata College, was chosen president-elect. Vice-presidents elected were Dr. Bradford Willard, Lehigh University, and Dr. LeRoy K. Henry, the Carnegie Museum. Dr. Edwin G. Conklin, president of the American Philosophical Society, and Dr. C. E. McClung, emeritus professor of zoology of the University of Pennsylvania, acting chairman of the department of zoology of Swarthmore College, were elected honorary members.

THE University of Rochester Chapter of Sigma Xi has elected Dr. E. F. Adolph, *President,* and Dr. R. W. Helmkamp, *Vice-president.* Drs. S. C. Bishop and E. A. Culler have been elected members of the *Executive Committee,* and Drs. R. Goodwin and F. Paul of the *Nominating Committee.* The other officers of the society are Drs. K. E. Mason and M. Huggins, *Executive Committee;* Drs. S. C. Madden, F. L. Haven, H. Gardner and H. Scherp, *Nominating Committee,* and Dr. Charles D. Kochakian, *Secretary-Treasurer.*

PROFESSOR VINCENT DU VIGNEAUD, head of the department of biochemistry of Cornell University Medical College, has been elected chairman of the New York Section of the American Chemical Society. He succeeds Dr. Charles N. Frey, director of research of the Fleischmann Laboratory of Standard Brands, Inc. Dr. Beverly L. Clarke, head of the analytical department of Bell Telephone Laboratories, Inc., has been chosen chairman-elect. Dr. Clarke will serve as vice-chairman until July 1, 1944, when he automatically becomes chairman. At the same meeting Professor Peter Debye, of Cornell University, delivered an address on "Reaction Rates in Solution." A discussion was led by Professor Victor K. LaMer, of Columbia University.

THE title of emeritus has been conferred by Barnard College on Dr. Henry E. Crampton, who recently retired from the chair of zoology.

DR. DOUGLAS JOHNSON, professor of physiography at Columbia University, has been named Newberry professor. He is the fourth head of the department since its foundation in 1866, his predecessors being Professors John Strong Newberry, James Furman Kemp and Charles Peter Berkey.

DR. GRANVILLE A. BENNETT, of the Harvard Medical School, has been appointed professor of pathology and bacteriology at the School of Medicine of the Tulane University of Louisiana.

BRIGADIER GENERAL JAMES STEVENS SIMMONS, A. U. S., director of the Division of Preventive Medicine of the Office of the Surgeon General, U. S. Army, has been appointed lecturer in public health on the staff of the School of Medicine of Yale University.

DR. RUFUS OLDENBURGER, professor of mathematics at the Illinois Institute of Technology, has been

elected a member of the board of directors of the Geographic Society of Chicago.

DR. GEORGE W. HUNTER, III, now on leave from Wesleyan University and serving in the armed forces of the United States, has resigned as assistant professor of biology. Dr. Hunter received a commission as captain in the Sanitary Corps in April, last year. In January he was promoted to the rank of major. Since entering the service, he has been detailed to duty at the Army Medical School, Washington, D. C.

DR. BASSETT MAGUIRE, who joined the staff of the New York Botanical Garden in January as visiting curator, will become curator. He will continue his work on the floras of the Intermountain Region and of Utah and on the taxonomy of the Caryophyllaceae.

LEWIS W. WATERS, vice-president in charge of research and development for General Foods Corporation, New York City, has been appointed to the newly established position of vice-president in charge of scientific relations. Thomas M. Rector, manager of the central laboratories in Hoboken, has been named manager of research and development.

DR. DONALD W. MCKINSTRY, of the department of biochemistry of the Medical School of the West Virginia University, has joined the staff of the Biochemical Research Foundation at Newark, Delaware.

CHARLES F. BOWERS, professor of architectural engineering at Iowa State College, has been commissioned a first lieutenant in the Army Air Forces.

DR. JAMES F. CROW, of the department of zoology of Dartmouth College, has been granted leave of absence to study tropical medicine and parasitology as a fellow on the Markle Foundation, sponsored by the Association of American Medical Colleges. He will complete his work at Tulane University before the beginning of the next regular term in July, at which time he will teach tropical medicine and parasitology in the Dartmouth Medical School in addition to his regular undergraduate courses in genetics and elementary zoology.

DR. DONALD T. RIES, who has been park naturalist at Starved Rock State Park, Utica, Ill., has been granted leave of absence to serve as an entomologist in the Sanitary Corps of the army with the rank of first lieutenant. He has reported for temporary duty pending transfer at Camp Grant, Ill.

DR. A. PARKER has been appointed director of fuel research in the British Department of Scientific and Industrial Research.

DR. SEWALL WRIGHT, Ernest D. Burton distinguished service professor of zoology at the University of Chicago, will deliver from May 6 to May 20 the 1943 spring lectures of the Hitchcock Foundation at the University of California at Berkeley. The general subject of the lectures is "Gene and Organism."

DR. CARL VOEGTLIN, chief of the National Cancer Institute, Bethesda, Md., will deliver the fifth Frank Billings lecture of the Thomas Lewis Gilmer Foundation on "Chemistry of the Carcinogenesis and Tumor Growth" at a meeting of the Institute of Medicine of Chicago to be held at the Palmer House on the evening of May 28.

DR. CHARLES F. KETTERING, of the General Motors Corporation, was the dinner speaker at the two hundred and fifty-fourth meeting of the American Physical Society at the Ohio State University, on April 30 and May 1. The title of his address was "Looking Forward through Research."

PROFESSOR HARRY N. HOLMES, of Oberlin College, president of the American Chemical Society, spoke on April 28 to the section of the society at Iowa State College. The subject of his address was "Strategic Raw Materials and the National Defense."

DR. V. P. SYDENSTRICKER, professor of medicine at the School of Medicine of the University of Georgia, will deliver the eighth and last Harvey Society Lecture of the current series at the New York Academy of Medicine on May 20. He will speak on "Nutrition under Wartime Conditions."

DR. E. D. MERRILL, administrator of the Botanical Collections of Harvard University, delivered on April 19 the annual Sigma Xi lecture at the University of Oklahoma. His subject was "Plants and Civilizations." While at Norman he also conducted a symposium on the work of Rafinesque and gave a popular talk on the history and accomplishments of the Arnold Arboretum for the benefit of the university, the public and the local garden club organizations.

THE three hundred and ninety-seventh meeting of the American Mathematical Society was held at Stanford University on April 24. A session for the reading of contributed papers was held in the morning. By invitation of the program committee, Professor A. E. Taylor, of the University of California at Los Angeles, delivered an address on "Analysis in Complex Banach Spaces." A symposium on Applied Mathematics was held in the afternoon. This was organized by Professor Aristotle D. Michal, of the California Institute of Technology, who was chairman of the symposium. The program consisted of three addresses: "Theory of Suspension Bridges," by Professor S. P. Timoshenko, of Stanford University; "Some Present Non-Linear Problems of the Electrical and Aeronautical Industries," by Dr. E. G. Keller,

of the Lockheed Aircraft Corporation, Burbank, Calif., and "The Limiting Line in Mixed Subsonic and Supersonic Flows of Compressible Fluids," by Dr. Hsue-Shen Tsien, of the California Institute of Technology.

THE Special Libraries Association will meet as part of the second Wartime Conference at the Hotel Pennsylvania, New York, from June 22 to 24. The science-technology group of the association, representing engineering, chemical, rubber, utilities and aeronautical libraries, both institutional and belonging to various firms, will hold its annual meeting at that time.

THE Laboratory of Applied Physiology of Yale University, under the direction of Professor Howard W. Haggard, announces the establishment of a new research unit to be known as the School of Alcohol Studies. This unit will be devoted to social, statistical, educational and juridical studies relating to the problems of alcohol. Professor E. M. Jellinek is director of the school. He will conduct an annual summer session in alcohol education designed for the needs of those engaged in activities in which thorough knowledge of the facts about alcohol problems will be of particular usefulness. The first summer session will be held from July 8 to August 16. A number of fellowships are available. For particulars, address the School of Alcohol Studies, Yale University, New Haven, Conn.

DR. W. W. CHARTERS, of the War Manpower Commission, announces that short summer courses in sanitary engineering are to be given at Alabama Polytechnic Institute, George Washington University, the University of Michigan, the University of Texas, the Polytechnic Institute of Brooklyn, the University of Southern California and Oregon State College.

As reported in *The Times*, London, Sir Andrew Duncan, British Minister of Supply, stated in reply to Major Lyons (Leicester), that the object of the committee set up to report on penicillin was to insure that all available information regarding clinical and chemical trials and methods of production was collected and exchanged, and that everything possible was done to promote the most rapid development. The committee consisted of Arthur Mortimer, Deputy Director of Medical Supplies, Ministry of Supply (*chairman*); and Professor A. Fleming, St. Mary's Hospital; Professor H. W. Florey, School of Pathology, University of Oxford; Professor H. Raistrick, London School of Hygiene; Sir Robert Robinson, the Dyson Perrins Laboratory, University of Oxford; Dr. C. R. Harrington, Medical Research Council; Dr. A. N. Drury, Medical Research Council; Dr. V. D. Allison, Ministry of Health; Professor I. M. Heilbron, University of Cambridge, and Lieutenant-Colonel Sir Russell Wilkinson, military medical adviser, Ministry of Supply, together with representatives of firms engaged in production of penicillin.

DISCUSSION

THE FORMATION OF MOSS PEAT BENEATH TRANSLUCENT PEBBLES IN SEMI-ARID REGIONS OF THE GREAT PLAINS

ON a field trip with the late Dr. F. A. Hayes[1] and Mr. G. A. Avery[2] in the semi-arid Northern Great Plain, in western South Dakota in May, 1941, it was observed that a growth of moss and algae and an accumulation of moss peat, varying from a thin film to about one fourth inch in thickness occur beneath translucent quartz and chalcedony pebbles and small stones which are embedded in the surface of well-drained soils. Such an accumulation was not found beneath opaque pebbles and stones. The discovery provides further evidence that stone fragments on the surface of the soil help to conserve moisture by checking evaporation.

We made a general study of the area in the vicinity where the peat phenomenon was first observed in order to confirm my first impression that the peat occurs only beneath pebbles that freely transmit light. Samples of the moss and peat and of the pebbles under which they were found were collected for further study and for presentation to the Botany and the Conservation and Survey Divisions of the University of Nebraska. During the past year observations of the phenomenon have been extended, by the writer and others, to much of the Northern Great Plains.

The first requisite for the growth of moss and the formation of peat, as already indicated, is the presence of translucent pebbles. These must be in firm contact with, and slightly embedded in the soil and their surfaces must be exposed to sunlight. Short-grass cover or thin stands of grass in semi-arid regions apparently furnish the most favorable habitat for the growth of mosses and for the development of peat. The phenomena gradually becomes less noticeable, under natural conditions, in passing into arid regions on the one hand and into subhumid and humid regions on the other. In arid regions, because of the lack of sufficient moisture to support peat-producing plants,

[1] F. A. Hayes was senior soil scientist, Division of Soil Survey, Bureau of Plant Industry, U. S. Department of Agriculture and professor of soil science, Conservation and Survey Division, University of Nebraska.

[2] G. A. Avery is associate soil technologist, Soil Conservation Service, U. S. Department of Agriculture.