

The last morning will be devoted to a general coordination and summary of all the papers presented, with Dr. Slater leading the discussion.

The program has been arranged so as to provide ample time for discussion periods both formal and informal. Opportunity for social gatherings will be available. Arrangements will be made for housing those in attendance, including families, in one of the university dormitories for the nights of June 30, July 1 and 2. There will be a registration fee of one dollar for those attending the meetings of the symposium. Further information can be obtained by addressing Dr. R. C. Gibbs, Rockefeller Hall, Ithaca, N. Y.

IN HONOR OF DR. L. O. HOWARD

THE eightieth birthday of Dr. L. O. Howard, which occurs on June 11, was celebrated by Washington entomologists on May 27. Dr. F. C. Bishopp, entomologist of the Bureau of Entomology and Plant Quarantine, and Dr. W. R. Walton, senior entomologist, read a biographical sketch. Other speakers included Dr. Lee A. Strong, chief of the bureau; A. L. Quaintance, formerly assistant chief; A. D. Hopkins, formerly chief of the Forest Insect Division, and N. E. McAdoo, president of the Entomological Society of Washington.

Dr. Howard became chief of the Bureau of Entomology in 1894, having been connected with it since his graduation from Cornell University in 1877. He was head of the bureau until his retirement in 1927, and for four years longer was principal entomologist. He was permanent secretary of the American Association for the Advancement of Science from 1898 to 1919, and president of the association in 1920. In

reference to Dr. Howard's scientific work a correspondent writes:

As early as 1888, Dr. Howard achieved international renown because of his notable studies of parasitic hymenoptera (wasp-like insects). Subsequently, insect parasites have been used as an important means of controlling insect pests.

Dr. Howard is famous also for his studies of mosquitoes, which began in 1892, several years before the discovery that mosquitoes transmit malaria, yellow fever and other diseases. When certain mosquito species were identified as disease carriers, Dr. Howard was ready to recommend control measures, particularly the use of kerosene.

The common housefly also attracted Dr. Howard's attention in the field of medical entomology. His book, "The Housefly—Disease Carrier," published in 1911, is largely responsible for the world crusade against the housefly during the last 25 years.

His recommendations for boll-weevil eradication, if followed when this insect was first discovered in Texas, would have saved the South millions of dollars later. In New England, the gipsy moth campaign; in the East Central States, the corn borer control operations, and along the Atlantic Coast, the Japanese beetle warfare, are but a few examples of the efforts to eradicate insect pests which began while Dr. Howard was chief of the Bureau of Entomology.

He wrote a book in 1931 called "The Insect Menace," which awakened wide-spread interest in the dramatic warfare that exists between mankind and the insect world. While optimistic as to the ultimate ability of human beings to retain supremacy over their insect enemies, Dr. Howard in this book focused attention on the need for ever-vigilant measures and a sufficient force of trained entomologists to maintain the continual large-scale control operations necessitated by change in agricultural practices.

SCIENTIFIC NOTES AND NEWS

DR. WILLIAM PRATT GRAHAM, professor of electrical engineering, dean of the College of Applied Science and vice-chancellor of Syracuse University, was elected chancellor on May 29. He had been acting chancellor since the resignation last July of Chancellor Charles Wesley Flint, who is now a bishop of the Methodist Episcopal Church in Atlanta.

At an informal meeting of the Division of Geological Sciences of Harvard University, on May 24, a collection of studies in mineralogy was presented to Professor Charles Palache as a token of personal regard and an appreciation of his outstanding and still-continuing service to mineralogy. The presentation volume, which forms the current issue of the *American Mineralogist*, contains thirty-five papers by American and European mineralogists and a list of Professor Palache's writings. The short speeches of congratula-

tion emphasized Dr. Palache's eminence as investigator and teacher, collector and curator, and his constant encouragement to every form of mineralogical study.

A GOOD-WILL dinner in honor of Dr. Rodney H. True, who becomes professor emeritus at the close of the academic year, was given by members of the department of botany of the University of Pennsylvania on the evening of May 21 at the Valley Green Inn, near Chestnut Hill. Those present were Dr. H. Lamar Crosby, dean of the Graduate School, and Dr. Paul H. Mussler, dean of the College of Arts and Sciences, as guests, and Drs. D. Walter Steckbeck, Irwin Boeshore, William Seifriz, John M. Fogg, Harlan H. York, Conway Zirkle, Edgar T. Wherry, Wesley G. Hutchinson and John K. Edwards.

IN recognition of his completion of twenty-five years of teaching service in food and colloid chemistry at

Columbia University, the former and present doctoral research students of Professor Arthur W. Thomas gave him and Mrs. Thomas a surprise dinner party at the Columbia University Faculty Club on May 22. He was presented with a cap, gown and academic hood in token of their esteem.

DR. WILMER KRUSEN, president of the Philadelphia College of Pharmacy and Science, was the guest of honor at a dinner given for him on May 26 by the alumni association. Dr. Krusen has been president of the college since 1927. For eight years he was director of public health of Philadelphia.

THE University of Pennsylvania on June 9 will confer its doctorate of science on Dr. Florence Rena Sabin, member of the Rockefeller Institute for Medical Research, and on Dr. Lightner Witmer, professor of psychology and founder of the psychological clinic at the university.

THE Michigan College of Mines and Technology at the annual class-day ceremonies on June 4 will confer the degree of doctor of science on Dr. Alexander G. Ruthven, president of the University of Michigan, formerly professor of zoology. The degree of doctor of engineering will be conferred on William L. Honnold, mining engineer, chief aid to Mr. Hoover in Belgium during the war. Dr. Ruthven will be the principal speaker.

THE Holley Medal of the American Society of Mechanical Engineers was presented to Henry Ford at a banquet given on May 20 during the annual convention of the society in Detroit.

ELLIS LOVEJOY, Columbus, research director for the Edward Orton Ceramic Foundation, and Edgar C. Bain, New York City, assistant to the vice-president of the U. S. Steel Corporation, have been awarded by the Ohio State University Benjamin G. Lamme Medals for outstanding achievement in engineering.

THE annual award of the Cyrus Hall McCormick Gold Medal of the American Society of Agricultural Engineers for "outstanding achievement in agricultural engineering" has been made to Professor Chester O. Reed, of the Ohio State University. The presentation will be made at the annual meeting of the society at the University of Illinois.

OFFICERS of the Geological Society of America have been nominated by the council as follows: *President*, Arthur L. Day, Washington, D. C.; *Past President*, Charles Palache, Cambridge, Mass.; *Vice-presidents*, T. Wayland Vaughan, Washington, D. C.; Warren J. Mead, Cambridge, Mass.; Joseph A. Cushman, Sharon, Mass.; N. L. Bowen, Washington, D. C.; *Secretary*, Charles P. Berkey, New York, N. Y.; *Treasurer*, Edward B. Mathews, Baltimore, Md. Additional coun-

cilors nominated are: Morley E. Wilson, Ottawa, 1938; John B. Reeside, Jr., Washington, D. C.; Henry A. Buehler, Rolla, Mo., and Elias H. Sellards, Austin, Texas, 1938-1940. Stephen R. Capps, Washington, D. C., was nominated representative on the National Research Council from July 1, 1938, to June 30, 1941.

PROFESSOR C. H. BEST, of the University of Toronto, was elected on May 25 president of the Canadian Physiological Society at its third annual meeting, which was held in London, Ontario. Professor G. H. Ettinger, of Queen's University, Kingston, was named secretary, and Professor E. M. Watson, of the University of Western Ontario, London, treasurer. Councilors elected were: Antonio Barbeau, Montreal University; Romeo Blanchett, Laval University; J. B. Collip, McGill University; George Hunter, University of Alberta; H. Wasteneys, University of Toronto, and E. G. Young, Dalhousie University.

IRVING G. REIMANN, curator of geology at the Buffalo Museum of Science, was elected president of the New York State Geological Association, and Professor William P. Alexander, assistant curator of education in charge of adult activities, was made secretary, at the annual meeting held in Syracuse, N. Y., on May 8 and 9. The association will hold its annual meeting in 1938 at Buffalo with trips to Eighteen-Mile Creek and Niagara Gorge.

DR. NORMAN L. BOWEN, petrologist at the Geophysical Laboratory of the Carnegie Institution of Washington, D. C., has been appointed first Charles L. Hutchinson distinguished service professor in the department of geology of the University of Chicago. Professor Bowen will succeed Dr. Albert Johannsen, who has reached the age of retirement after having served for twenty-eight years as professor of petrology. The Charles L. Hutchinson professorship has been established by the Board of Trustees in recognition of the interest taken by the late Mr. Hutchinson in the university, of which he was for many years a trustee and treasurer, and of Mrs. Frances K. Hutchinson.

DR. P. H. EMMETT, who since 1926 has been engaged in research at the Fixed Nitrogen Research Laboratory at the U. S. Department of Agriculture, Washington, has been appointed to the chair of chemical and gas engineering in the School of Engineering of the Johns Hopkins University. He succeeds Dr. Wilbert J. Huff, who resigned recently.

DR. CHARLES W. BALLARD, professor of materia medica in the College of Pharmacy, Columbia University, has been named acting dean of the college to take the place of Dean Henry V. Army, whose retirement becomes effective on July 1.

DR. L. H. TIFFANY, professor of botany at the Ohio State University, has been appointed chairman of the department of botany at Northwestern University.

THE Morris Arboretum of the University of Pennsylvania has appointed F. R. Fosberg, of the department of botany of the University of Hawaii, to a Morris Arboretum fellowship for the coming school year. Mr. Fosberg will carry on his investigations at the arboretum and at the department of botany of the University of Pennsylvania.

DR. WILLIAM R. FOOTE, of the New Haven Hospital, has been awarded the William Harvey Cushing memorial fellowship at Yale University.

Nature prints a list of professors who have left Germany on account of the political situation who are working at the University of Istanbul. Among these are: Professor H. Winsterstein, physiology; Professor M. Brauner, botany; Professor M. Dember, physicist; Professor M. von Mises, mathematics, and nearly thirty others, most of whom have been appointed to chairs. Professor M. Freundlich, who is at present professor of astronomy, leaves at the end of the academic year for the University of Prague, and Professor F. Dessauer, professor of röntgenology, is going to the University of Fribourg, Switzerland.

DR. IRVIN STEWART, vice-chairman of the Federal Communications Division, has been appointed chairman of a Committee on Scientific Aids to Learning, appointed by the National Research Council. The official announcement states that "the purpose of the committee is to canvass, and to report to the council, the extent to which and the means by which certain methods, data, materials and products of science are and may be applied to learning." Members of the committee include: Dr. James B. Conant, president of Harvard University, *chairman*; Vannevar Bush, dean of the School of Engineering, Massachusetts Institute of Technology; L. D. Coffman, president of the University of Minnesota; Frank B. Jewett, president of the Bell Telephone Laboratories; Ben D. Wood, associate professor of collegiate educational research, Teachers College, Columbia University; Bethuel M. Webster, of New York, *secretary*, and Ludvig Hektoen, chairman of the National Research Council, member *ex-officio*.

MEMBERS of the Consulting Board of Cancer Research of Columbia University have been appointed as follows: Dr. Thomas Hunt Morgan, of the California Institute of Technology; Dr. William J. Mayo, of the Mayo Clinic, Rochester, Minn.; Dr. George H. Semken, consulting surgeon at Knickerbocker Hospital and the Presbyterian Medical Center; Dr. Paul M. Giesy, professor of chemistry at Newark College of

Engineering; Professor Ernest O. Lawrence, of the University of California; and the following members of the faculty of Columbia University: Dr. George B. Pegram, Dr. Edmund B. Wilson, Dr. Gary N. Calkins, Dr. Henry C. Sherman, Dr. Marston T. Bogert, Dr. Bergen Davis and Dr. Eugene H. Pool.

DR. GEORGE W. MCCOY, honorary vice-president of the American Mission to Lepers and for twenty-one years director of the National Institute of Health, will make a study of the leprosy problem in the United States and island possessions for the United States Public Health Service.

DR. F. F. MCKENZIE, cooperative investigator for the University of Missouri in the U. S. Department of Agriculture, has leave of absence. He expects to sail for Europe on July 31 to act as investigator for the department in Norway, Sweden, Denmark, Belgium, France and England.

A PALEONTOLOGICAL expedition, which will spend several months collecting fossil vertebrates in Colorado for the Field Museum of Natural History, left Chicago on May 15. The first members of the party to leave were Bryan Patterson, assistant curator of paleontology, and James H. Quinn, assistant. Elmer S. Riggs, curator of paleontology, will join them a few weeks hence.

FRANK TOSE, chief of exhibits in the California Academy of Sciences, San Francisco, has been selected by the Carnegie Corporation of New York to represent it on a trip to Australia and New Zealand for the purpose of introducing there the latest methods of preparation of natural history habitat groups in the public museums. Mr. Tose has been given leave of absence by the academy for eight months, and will sail for Sydney on June 22.

DR. LEE R. DICE, retiring president of the Michigan Academy of Science and director of the laboratory of vertebrate genetics at the University of Michigan, was guest at a special convocation held for major students and staff members of the Wayne University department of biology. Dr. Dice described a technicolor film on the "Variation in Color and Behavior in Mice, with Special Reference to Those of a Genetic Nature."

DR. CARL GUSTAV JUNG, professor of analytic psychology at the Federal Polytechnical University at Zurich, Switzerland, has been appointed Dwight H. Terry lecturer for 1937-38 at Yale University. He will deliver the lectures next October.

DR. EDMUND V. COWDRY, of Washington University, St. Louis, delivered the annual address of the Kappa Chapter of Phi Sigma Society at the Univer-

sity of Kansas on May 13. His subject was "How Living Cells Manage Their Social Problems."

DR. J. S. L. BROWNE, of the Royal Victoria Hospital, Montreal, on April 26 lectured to the students and staff of the hospital of Duke University on "Studies of Sex Endocrine Physiology of the Female," and on May 3 Dr. David M. Davis, professor of urology at Jefferson Medical College, Philadelphia, lectured on "Chronic Prostatitis."

A CHAPTER of Sigma Xi was installed at the Oregon State College in May, with Dr. W. F. Durand, of Stanford University, national president of the society, acting as installing officer. Seventy-six faculty men and women became charter members. An all-school convocation, called to honor the Sigma Xi chapter, was addressed by Dr. Durand. His subject was "Power and Civilization." The installation ceremony was followed by a banquet, at which Dr. Linus Pauling, an alumnus of the college, and now head of the chemistry division of the California Institute of Technology, was the principal speaker. He spoke on "Hemoglobin and Magnetism." Dr. W. E. Milne, professor of mathematics, was toastmaster for the banquet, and Dr. F. M. Hunter, chancellor of the Oregon System of Higher Education, was a guest. Officers

elected by the chapter are: F. O. McMillan, *president*; Dr. Don C. Mote, *vice-president*; W. E. Lawrence, *secretary*, and Dr. D. E. Bullis, *treasurer*.

THE program for the Symposium on Colloid Chemistry to be given at the University of Minnesota, Minneapolis, Minn., on June 10 and 11, and at Rochester, Minn., on June 12 has been completed and is being printed for distribution. Twenty-two papers will be presented at the University of Minnesota on June 10 and 11, and eight papers will be given at Plummer Hall of the Mayo Foundation at Rochester, Minn., on June 12. Professor Herbert Freundlich, of University College, London, will open the sessions at Minneapolis as well as those at Rochester. Dorothy Jordon Lloyd, of the British Leather Manufacturers' Research Association, will give the second paper at the first meeting of the symposium. The program of the first day will be largely devoted to problems related to bio-colloids, while the papers of the second day will concern themselves with subjects of general interest to colloid chemists. The meeting at Rochester will be of principal interest to those concerned with the colloid problems of physiology and medicine. While at the Mayo Clinic an opportunity will be offered to visit the laboratories and to learn something of the researches in progress.

DISCUSSION

THE VOLUME OF ENTOMOLOGICAL LITERATURE

WITHOUT meaning to suggest that research in entomology should be in the least abated, it seems timely to direct attention to the volume of literature already published concerning insects. What will be said here about entomological matter doubtlessly applies equally to other aspects of biological science. The *Zoological Record* and the *Review of Applied Entomology* were the sources of the data concerning the number of articles discussed below. Through the kindness of Dr. S. A. Neave and W. L. Sclater, who direct the preparation of these two aids, it was learned that their contents are not duplicated to exceed 10 per cent. On this basis, the number of separate entomological items published between 1913 and 1934, for which period both *Record* and *Review* are available, was not less than 100,935, or an average of 4,588 per year. Adding to this figure the titles cited in the *Record* alone for the years 1864 to 1912, the period preceding the advent of the *Review*, we have a total of about 175,000 articles and books, with an average yearly output for the 70 years from 1864 to 1934 of about 2,500 separately published items.

To this total should be added several hundred ar-

ticles listed in the several volumes of the International Catalogue of Scientific Literature for 1904 and 1905 that seem not to have been included in the *Zoological Records* for those years. The final total of papers and books already put out by our force of workers is therefore truly overwhelming.

It is true that a considerable body of the published matter, and in particular that of the earlier years, has been absorbed in later publications dealing with the same subjects. Progressive digests have been provided in an inadequate number of revisional taxonomic papers, in bulletins concerning important harmful species, in books on economic entomology and in general texts. Most entomological books are designed largely for classwork. While these books contain useful digests, they do not presume to exhaust the accumulated knowledge concerning the species or features treated. On the other hand, there is a phase of insect literature which has not received even the abridged treatment accorded the outstanding economic species, and has suffered almost complete neglect from book writers. Reference is made here to the field of insect bionomics, with particular reference to the habits and developments of groups not primarily economic. Many thousands of published articles pertaining more or less to the bionomics of scavengers, weed-eaters, predators