

a view to ascertaining the condition of their origin, to be conducted in the highlands of Norway and Scotland.

Dr. Charles Henry Behre, Jr., professor of economic geology at Northwestern University: Appointed to make a comparative study of certain lead-zinc deposits, for the purpose of forming generalizations about the nature and structural control of ore deposition in comparison with the lead-zinc ores in limestones in the Mississippi Valley.

Dr. Donald Keith Adams, assistant professor of psychology at Duke University: Appointed to formulate a comprehensive theory of the structure and growth of mind and its testing by application to the data and problems of child psychology.

Dr. Melville J. Herskovits, professor of anthropology, Northwestern University: Appointed to write a book on primitive economics.

SIGMA XI LECTURES AT THE UNIVERSITY OF CALIFORNIA AT LOS ANGELES

THE following public lectures have been given under the auspices of the University of California at Los Angeles Chapter of the Society of the Sigma Xi, in the academic year 1936-37, under the presidency of Dr. George E. F. Sherwood, professor of mathematics:

September 30, 1936: "Periodogram Analysis," by Dr. Dinsmore Alter, director, Griffith Observatory and Planetarium.

October 28: "Sex Determination and Fish Hybrids," by Dr. Albert W. Bellamy, associate professor of zoology, University of California at Los Angeles.

November 4: "The Use of Magnetic Methods in Chemistry," by Dr. Linus Pauling, professor of chemistry, California Institute of Technology.

December 2: "Earthquakes," by Dr. Beno Gutenberg, professor of geophysics and meteorology, California Institute of Technology.

January 6, 1937: "Genes and Hormones in Sex Determination," by Dr. Richard B. Goldschmidt, professor of zoology, University of California, Berkeley.

February 17: "Bright-Line Astronomical Spectra," by Dr. I. S. Bowen, professor of physics, California Institute of Technology.

March 3: "Recent Advances in the Chemotherapy and Serumtherapy of Hemolytic Streptococcal Infections," by Dr. Ralph R. Mellon, director, Institute of Pathology, Western Pennsylvania Hospital.

March 10: "Studies in Language Disabilities," by Dr. Grace M. Fernald, associate professor of psychology, University of California at Los Angeles.

March 19: "Transmutations of Atomic Nuclei," by Dr. Niels Bohr, professor of physics, University of Copenhagen, and Hitecock Lecturer, University of California, Berkeley, 1936-37.

March 24: "Plant Growth in Relation to Minute Amounts of Certain Chemical Elements," by Professor Dennis R. Hoagland, professor of plant nutrition, University of California, Berkeley.

April 7: "Visitors from Cosmic Space," by Dr. Frederick C. Leonard, chairman, department of astronomy, University of California at Los Angeles.

May 5: "Some Aspects of the Cosmic-Ray Problem," by Dr. Carl D. Anderson, assistant professor of physics, California Institute of Technology.

May 7: "Did Man Originate in Africa?," by Dr. Robert Broom, South African biologist and paleontologist.

SYMPOSIUM ON THE STRUCTURE OF METALLIC PHASES

A SYMPOSIUM on the structure of metallic phases has been arranged by the department of physics at Cornell University for July 1, 2 and 3. The address of welcome will be made by the president of the university, Dr. Edmund E. Day.

The symposium will deal primarily with the "co-operative phenomena" in solids. The factors determining the stability of phases will be discussed from the standpoint of thermodynamics by Dr. J. C. Slater, of the Massachusetts Institute of Technology; statistics by Dr. J. G. Kirkwood, of Cornell University, and by Dr. F. Bitter, of the Massachusetts Institute of Technology, and the quantum theory by Dr. F. Seitz, of the University of Rochester.

The phenomena which will receive special attention are the changes of structure and ferromagnetism. The first topic is divided under two headings, phase changes of the first kind, characterized by the existence of a latent heat, and those of the second kind, for which there is only a jump of the specific heat at the transformation temperature. The most commonly known phase changes, melting and allotropic transformations, are of the first kind; the experimental material will be presented by Dr. E. R. Jette, of Columbia University. The formation of superlattices, to be discussed by Dr. F. C. Nix, of the Bell Telephone Laboratories, involves generally a phase change of the second kind. In all cases, the speed of the transformation has an important bearing upon its occurrence or non-occurrence, which is seen by the often large effect of annealing, and by phenomena such as the aging of alloys which show that statistical equilibrium is frequently attained only after a very long time. Dr. R. F. Mehl, of the Carnegie Institute of Technology, will discuss these questions and their relation to the diffusion in solids. The relation of ferromagnetism to the general theory of cooperative phenomena will be discussed by Dr. Bitter, who will also show how the ferromagnetic properties of alloys can be correlated with those of the pure metals. The relation of ferromagnetism to the crystal structure and especially the dependence of the magnetization on the direction relative to the crystal axes will be discussed by Dr. L. W. McKeehan, of Yale University, and by Dr. R. M. Bozorth, of the Bell Telephone Laboratories.

An effort is being made to correlate the various reports so that those not familiar with the field may gain a clear understanding of the topics discussed.

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