tinued to be a student with his students. As a lecturer, he always had a wealth of material to present and he was original in the saying. He took a leading interest in all matters pertaining to a scientific forestry and through his many publications revealed his unqualified devotion to the subject.

In addition to the many shorter publications he wrote and edited, Professor Roth was also the author of "Cypress," "The Annual Ring," "Timber Physics," "Uses of Wood," "Grazing in Forest Reserves," "First Book of Forestry," and the texts "Forest Regulation," "Forest Valuation." A revision of these texts was made soon after his retirement from the university.

His notable contributions brought him in touch with prominent men in all branches of science. In 1910 he attended the International Forestry Congress and represented the United States at Brussels. His service rendered while serving with the Michigan State Forestry Commission, the old Public Domain Commission, and later with the Conservation Commission are well known to the friends of state conservation and forestry. He was singly recognized in being selected as the honorary member, on the continent, of the Canadian Forest Engineers. In 1923 the honorary degree of LL.D. was presented to him by Marquette University.

Professor Roth was admired for his recognized ability; his friends and particularly his students will always remember him for his individual geniality. To Professor Roth we owe our appreciation for his stimulating influence in a scientific study of the American forests and forest conditions; for his initial accomplishments in forestry for the Lake States; and for his attainments in national affairs and splendid service to the entire country for his part in shaping past and future American forest policies.

DOW V. BAXTER

DEPARTMENT OF BOTANY,
UNIVERSITY OF WISCONSIN

SCIENTIFIC EVENTS

AWARDS FROM THE MILTON FUND AT HARVARD UNIVERSITY

ANNOUNCEMENT is made at Harvard University of twenty-eight awards to professors in the university in accordance with the provisions of the Milton Fund for research. As noted in SCIENCE for October 3, 1924, this legacy, yielding an annual income of about $50,000, becomes available to the university in 1924. The awards include the following for scientific work:

PERCY W. BRIDGMAN, professor of physics, for two years, to enable him to continue the services of an assistant to do the routine work of setting up apparatus and making observations in connection with his various researches on the effects of high pressure.

CHARLES THOMAS BRUES, assistant professor of economic entomology, to enable investigations to be continued on the distribution and relationships of the parasitic Hymenoptera. These insects play an important rôle in regulating the abundance of injurious insect pests, and the biological control of insect pests by this method has made rapid strides during the past two decades and bids fair to be of very great importance in the future.

EMORY LEON CHAFFEE, associate professor of physics, for two years, to pay for the services of a trained assistant and to purchase the necessary supplies to continue a research on the electrical response of the eye resulting from the stimulation of light. Work on this problem is already under way, having been assisted by a former grant from the Milton Fund.

JAMES BRYANT CONANT, associate professor of chemistry, for two years, to pay the salary of an assistant chemist and for the purpose of chemicals and apparatus to enable Professor Conant to continue his study of the irreversible oxidation of organic compounds. The purpose of the investigation is to obtain quantitative information in regard to the oxidation of organic compounds in solution at room temperature.

WILLIAM JOHN CROZIER, associate professor of general physiology, to pay the salary of a qualified assistant and for the purchase of supplies to enable an investigation to be made of the temperature characteristics of vital processes as an aid to their chemical interpretation.

SAMUEL RANDALL DETWILER, assistant professor of zoology, for a substitute teacher and for technical assistance to permit of the continuation of the research concerning nervous development in vertebrate animals, in an effort to obtain a clearer understanding of their behavior.

EDWARD WALDO FORBES, lecturer on fine arts and director of the William Hayes Fogg Art Museums, to be used to further a study of paintings by X-rays. The work is being undertaken with the cooperation of the Museum of Minneapolis, and has been assisted by a former grant from the Milton Fund.

GEORGE SHANNON FORBES, associate professor of chemistry, to purchase essential parts for the construction of apparatus to be used in special photochemical investigations. Particularly, this apparatus will be used to determine with precision the relation between photochemical reaction velocity, concentrations of reactants, wave length, intensity of light, etc. The photolysis of uranyl oxalate is finding a rapidly increasing use for the measurement of light intensity among photochemists, biologists and industrialists.

LOUIS CARY GRATON, professor of mining geology, to construct a machine for the preparation of highly perfect polished surfaces on opaque minerals and ores intended for microscopical investigation.

GRINNELL JONES, associate professor of chemistry, to permit him to continue with his researches connected with the electrical conductivity of solutions.

ARTHUR B. LAMB, Sheldon Emery professor of organic

chemistry and director of the chemical laboratory, for a competent assistant and for the purchase of minerals, chemicals, etc., in a research into the absorbent qualities of certain crystalline substances. It is expected that this work will throw considerable light on the dimensions of molecules of various gases as well as to provide a means of separating certain gases hitherto impossible of separation.

KIRTLEY F. MATHER, associate professor of physiography, to pay the salaries of a draftsman, stenographer and statistician, whose assistance is necessary for the completion of a treatise concerning the "Physiography of South America." Professor Mather has already made several trips to South America and has collected a large amount of material, which forms the subject matter of his course Geography 7—Physiography of South America. The applicant is planning to put the material into final shape for publication during the current year.

WILLIAM HENRY PICKERING, assistant professor of astronomy, *emeritus*, to defray expenses incurred in making computations and drawings in connection with Professor Pickering's researches on Mars and the Moon. During the next two years the southern hemisphere of the planet Mars will be turned toward the earth, and the work will consist largely of making astronomical observations during this period. The work will go toward the construction of a table and map similar to that now in the hands of Professor Shapley for publication in the *Annals* of the observatory.

HARLOW SHAPLEY, Paine professor of practical astronomy and director of the Harvard College Observatory, for two years, to defray expenses connected with making extensive researches which lie in the province of the variable stars. Particularly, the grant is to cover the expense of an investigation of the variability, absolute magnitudes and parallaxes of stars throughout the whole length of the Milky Way, in order to determine the distance and structure of various parts of the galactic system and thus to throw some light on its origin and growth.

WILLIAM HENRY WESTON, JR., assistant professor of botany, to complete an intensive comparative study of a group of parasitic fungi which cause the several downy mildew diseases of important food crops. Professor Weston began this work eight years ago and during this time eight papers have been published on the various phases covered. A comprehensive collection of representatives of all known fungi from various parts of the world has been made. The grant will be used for paying for the part-time services of two well-trained graduate students.

EDWIN BIDWELL WILSON, professor of vital statistics, to pay for the extra clerical assistance needed to conduct a general statistical investigation on all stars for which a large amount of material is available, in accordance with biometric methods involving partial correlation.

CONGRESSIONAL LEGISLATION ON AGRICULTURAL MATTERS

AMONG bills touching on agriculture which have been introduced in Congress are the following:

A supplemental estimate of $185,000 for the Department of Agriculture for the fiscal year 1927, to continue the research work of the fixed-nitrogen research laboratory under the Bureau of Soils, has been transmitted to the senate from the president, with an accompanying letter from the director of the Bureau of the Budget. The agricultural appropriation bill, carrying a total of $129,370,468, has been reported to the senate with amendments, by the Committee on Appropriations.

Representative Edwards, of Georgia, has introduced a bill (H. R. 9692) directing the Secretary of Agriculture to cooperate with the various cotton-producing states in investigating the "brown wilt" and other diseases of the cotton plant.

Establishment and maintenance of a forest experiment station in Porto Rico is provided for in a bill (H. R. 9595) which has been introduced by Mr. Davila, of Porto Rico.

The senate has also passed a resolution (S. Res. 146) requesting the Tariff Commission to investigate the cost of producing cream and milk, etc., at home and in competing countries.

A bill (S. 1250) amending the act authorizing donations of public lands to states and territories that provide colleges for the benefit of agriculture and the mechanical arts has been passed by the senate. It provides that income from the sale of such lands must be devoted to agricultural and industrial education.

Another bill (S. 1462) passed by the senate permits an exchange of land for the improvement of the Medicine Bow National Forest.

The first urgent deficiency bill (H. R. 8722), with amendments providing additional amounts for forest fire weather-warning surveys and for fighting and preventing forest fires, has been passed by the senate. All items in the bill affecting the Department of Agriculture have been agreed upon by the two houses.

Representative Haugen, of Iowa, has introduced a bill (H. R. 9458) to authorize the grazing of livestock on national forests, to provide for the establishment of grazing districts on the public lands of the United States and Alaska, and to regulate their beneficial use by livestock, and for other purposes.

Senator Harreld, of Oklahoma, has introduced a bill (S. 3260) "to authorize the Secretary of the Interior and the Secretary of War to lease lands for game-preserve and game-propagation purposes to state departments or other organizations under state or federal control."

THE EVOLUTION OF MAN

THE following minute has been adopted by the Council of the American Anthropological Association:

In view of the dogmatic objections raised against the theory of evolution the council of the American Anthropological Association have thought it advisable to formulate the present position of scientific inquiry.

The plants and animals belonging to early periods of the earth's history show that the forms have not remained the same for any length of time. The changes that have occurred are of such character that we are compelled to