

young and adult individuals in respect to this vitamin, \$400.

To Dr. Caryl P. Haskins, Union College, Schenectady, N. Y., to aid in the construction of apparatus for studying the effects of proton bombardment of spores, \$500.

To Professor Charles E. Lane, University of Wichita, Kansas, for technical assistance and materials in a study in the relationship between the pituitary, the ovary and the estrous cycle in rats, \$300.

To Karl O. Lange, research meteorologist, Blue Hill Observatory, to aid in the construction and testing of automatic radio transmission of meteorological records to a central station, \$300.

To Professor Willem J. Luyten, department of astronomy, University of Minnesota, as an aid in securing a supervisor for student measurements in his study of the proper motions of stars in the southern hemisphere, \$500.

To Professor Hugh M. Raup, Harvard University, as a contribution toward general field expenses of a botanical survey of the southwestern part of the District of Mackenzie, contingent upon his securing necessary funds to assure the trip in the summer of 1939, \$400.

To Professor Kenneth A. Siler, department of physiology and pharmacology, University of Arkansas School of Medicine, for the purchase or construction of necessary instruments in an investigation of the blood flow of the coronary system, \$250.

AWARDS FROM THE MILTON FUND OF HARVARD UNIVERSITY

AWARDS in the sciences from the Milton Fund have been made as follows to instructors in Harvard University, to enable them to conduct research or prepare publications in the fields mentioned after their names:

Henry Asbury Christian, Hersey professor of the theory and practice of physics, for a study of the clinical medical records of the Peter Bent Brigham Hospital accumulated in the period 1913-39 under his direction as physician-in-chief.

William Dameshek, instructor in medicine, to extend previous investigations and make new ones on the etiology and treatment of certain hemolytic syndromes, with particular reference to the rôle of the spleen.

Ralph Eigel Fadum, instructor in civil engineering, for research on the stress-deformation characteristics of clays.

Knox Henderson Finley, instructor in psychiatry, for experimental studies with insulin and metrozol used in the treatment of dementia praecox, and to continue a study of the capillary beds of the hypothalamus with the aid of a cerebral blood vascular injection technique.

Alden Buchannon Greninger, assistant professor of metallurgy, for the purchase of optical equipment to aid in studies of martensite transformation in alloy systems.

Frederick Vinton Hunt, assistant professor of physics and communication engineering, to extend the results of an earlier investigation of auditorium acoustics by means of steady-state measurements.

Arthur Edwin Norton, Gordon McKay professor of applied mechanics, to continue a study of certain lubricants

at or near the condition known as "apparent solidification" due to high local pressure.

John Rock, assistant in gynecology and research associate in obstetrics, and Austin Moore Brues, associate in medicine and instructor in biochemical sciences, for a study of ovulation, fertilization, nidation and electrical potentials associated with ovulation.

Reinhold Rüdénberg, Gordon McKay professor of electrical engineering, to investigate the extinction of electric alternating-current arcs by influencing the external circuit.

Karl Sax, professor of botany, for research on the effect of x-rays and neutrons on chromosomes.

Theodore Eugene Sterne, lecturer on astrophysics, for a spare moving system for a Paschen galvanometer and for repairs to the old system.

Theodore James Blanchard Stier, assistant professor of physiology, to continue the study of carbohydrate and lipid assimilation in yeast.

Paul Anthony Vestal, instructor in botany, to obtain information and specimens of the important plants (both cultivated and native) used by the Ramah-Atarque Navajo Indians.

Robert Weston Vose, instructor in applied mechanics, for a study of the anisotropy of elasticity accompanying shear strain.

Ralph Hartley Wetmore, associate professor of botany, for studies in development and differentiation in the angiosperms.

George Bernays Wislocki, Parkman professor of anatomy, for a study of the anatomy of the manatee.

WINTER SCHOOL IN SOIL SCIENCE AT THE WAITE INSTITUTE

ACCORDING to *The Australian Journal of Science*, arrangements have been made for a Winter School for Soil Workers to be held at the Waite Agricultural Research Institute for ten days during the month of August. The school will be held under the auspices of the University of Adelaide and of the Council for Scientific and Industrial Research, and will open on August 14. Fees will not be charged, but all those attending must be accredited by their respective state departments, universities or other organizations.

It is believed that the school will be of value to soil workers, not only in the personal contacts that will be made and ideas interchanged, but that methods and procedures of established value will be brought to the notice of every one. These ends will be served by a series of lectures and demonstrations following a definite plan rather than by a conference of disconnected papers.

The lecturers and demonstrators will include Professor J. A. Prescott, C. S. Piper, Dr. A. Walkley, T. J. Marshall, C. G. Stephens, R. J. Best, T. H. Strong, J. S. Hosking and A. C. Oertel.

The following subjects have been chosen as likely to be of general interest. In most cases an introductory lecture will be followed by a practical demonstration:

climatology and soil classification, soil survey, texture, structure, color and water relationships of soils; minor elements in relation to plant growth; methods for the determination of trace elements, including chemical, spectrographic and polarographic methods; soil acidity and lime requirement, including use of the glass electrode; the conductivity method for the determination of soluble salts and the electrometric method for the determination of soluble chlorides; wet and dry combustion methods for the determination of soil carbon; soil-rhizobium relations; a one-day excursion through the country near Adelaide, with examination of several soil profiles.

Dr. A. Walkley, of the Waite Institute, is secretary to the school.

THE FIELD PROGRAM OF THE NATIONAL MUSEUM OF CANADA

Six parties have been placed in the field this year by the National Museum of Canada, according to an announcement made by the Mines and Geology Branch of the Department of Mines and Resources, Ottawa. The program includes biological investigations in British Columbia and New Brunswick; botanical studies in Ontario; ethnological researches in British Columbia and the Prairie Provinces, and archeological work in Ontario and Quebec. The work is directed toward the gathering of new information on Canadian fauna and flora and native races, and the acquiring of new specimens for the National Museum.

C. M. Barbeau will make ethnological studies of the Indians of the northern coast of British Columbia, in a resumption of work first undertaken many years ago.

J. D. Leechman will collect anthropological specimens from the tribes of Indians of the Prairie Provinces.

W. J. Wintenberg will make excavations of prehistoric village sites at Tadoussac and Chicoutimi, Quebec, and at Dunnville and Port Maitland, Ontario. Last year he established the site of the Mission of St. Ignace II, the scene of the martyrdom of Fathers Bréboeuf and Lalemant.

H. M. Laing will continue the biological survey along the Pacific coast of British Columbia which has been in progress for some years.

T. M. C. Taylor will make a botanical survey in the vicinity of Heron Bay on the north shore of Lake Superior, Ontario.

W. E. Godfrey will collect zoological specimens and record wild-life observations in the western part of New Brunswick.

SYMPOSIUM ON GROWTH AND DEVELOPMENT

A SYMPOSIUM on "Growth and Development" will be held from August 7 to 11, sponsored by the editors

of *Growth*, at Truro Central School, North Truro, Mass.

The announcement of the objects of the symposium reads:

Biologists are finding themselves increasingly perplexed by the lack of an adequate conceptual framework with which to guide their own investigations and to bring the results of many specialized studies into a more coherent and meaningful relationship. There is an especially acute need for bridging the gap between genetics and embryology and examining the implications of highly diverse findings of experimental biology for an understanding of growth and development. The editors of *Growth* have therefore decided to inaugurate a Conference on Growth and Development at which discussions of these theoretical issues will be held in the hope of achieving some clarification and unification of thinking in these areas. Grants towards the cost of the conference have been received from the Macy and Rockefeller Foundations. Each session will be opened by a presentation of one paper, the discussion of which will be initiated by a designated leader for that topic, and during the course of the conference moving pictures related to growth and development will be shown. It is hoped that the last day of the conference may see some efforts at generalizing and synthesizing the outcome of the previous days' discussions. It is planned to issue proceedings of the conference, at least in summary form, as a supplement to *Growth*. It is expected that a society will be formed by persons interested in growth during the period of the conference.

The sessions will last from 9:30 in the morning to 3 o'clock in the afternoon, excepting on Friday, when there will be only a morning session.

The program follows:

August 7—"Cell Division and Differentiation," W. H. Lewis and P. W. Gregory.

August 8—"Genes and Development," Curt Stern and C. H. Waddington.

August 9—"Chemical Factors," J. Needham.

August 10—"Regeneration," O. E. Schotte; "Organization," E. W. Sinnott.

August 11—"Concept of Organism," J. H. Woodger.

Discussion Leaders—L. G. Barth, H. S. Burr, L. B. Clark, A. B. Dawson, O. Glaser, H. S. Greene, V. Hamburger, L. Rapkine, K. V. Thimann, Paul Weiss.

Members of the program committee are N. J. Berrill, C. B. Davenport and D. M. Whitaker. Those interested should write to Dr. Philip White, Rockefeller Institute for Medical Research, Princeton, N. J., or to Dr. F. S. Hammett, Provincetown, Mass., for specific invitation and for further information.

SUMMER MEETINGS OF MATHEMATICIANS

THE summer meeting and colloquium of the American Mathematical Society and the twenty-second summer meeting of the Mathematical Association of