

financed for the academy, the first being that to Guadalupe Island last November. A third expedition chiefly in the interest of the academy was that of Captain G. Allan Hancock's cruiser *Valero III*, to the Galapagos Islands last winter (December to February), with Mr. Alvin Seale and Dr. Leo George Hertlein on board representing the academy.

AWARDS OF THE ELIZABETH THOMPSON SCIENCE FUND

PREVIOUS awards from the Elizabeth Thompson Science Fund have been reported in *SCIENCE*, November 25, 1931, and earlier. Since the last report the following awards have been made:

At the Meeting of February 25, 1932

- No. 305 to E. D. Merrill, New York Botanical Garden, \$50 to obtain translations of Japanese literature published in Japanese characters, and with Japanese titles, necessary for the preparation of an exhaustive bibliography covering the botanical literature pertaining to Eastern Asia.
- No. 306 to W. J. Hamilton, Jr., Zoological Laboratory, Cornell University, \$100 toward expenses in making observations on long-tailed shrews of the genus *Sorex*.
- No. 307 to K. K. Landes, University of Kansas, \$200 for aid in the study of pegmatite mineral deposits in Colorado and New Mexico.
- No. 308 to Carroll Lane Fenton, West Liberty, Iowa, \$300 for aid in undertaking the study of a certain group of fossils already described long since but needing a careful re-study to fit them into the whole system of corals.
- No. 309 to G. H. Burrows, University of Vermont, \$100 for aid in purchasing chemicals and minor pieces of apparatus to be used in the determination of equilibria among reactions of organic chemistry.

The Trustees of the Elizabeth Thompson Science Fund meet ordinarily during the last ten days of the months of February, May and November. Applications for grants should be sent well in advance of the meeting to the secretary of the fund, Dr. Edwin B. Wilson, 55 Van Dyke St., Boston, Massachusetts.

GEOPHYSICAL RESEARCH AT HARVARD UNIVERSITY

AN account is given in the *Harvard Alumni Bulletin* of a project for geophysical research undertaken by the university which will concentrate at the start on data of basic value in seismology, in particular the study of the properties of certain rocks and rock minerals under very high pressures and at high temperatures. The investigation will continue for five years.

The plan is made possible by a gift of \$50,000 from the Rockefeller Foundation, \$10,000 each year, contingent on the raising of an equal amount from friends of the Harvard departments concerned. The necessary amount for the first year has been obtained from the latter source, and a substantial amount pledged for the other four years.

The work will be administered by the division of geology, under the guidance of an inter-departmental committee consisting of Professor R. A. Daly, of the division of geology, chairman, and Professors P. W. Bridgman, of the physics department, L. C. Graton, of the Engineering School, Harlow Shapley, of the Astronomical Observatory, and D. H. McLaughlin, of the division of geology.

In acknowledging the gift, the committee said: "The opportunity to undertake work in this important field, which is made possible for a period of five years by the generosity of a small group of loyal friends of the university and by the encouraging and stimulating assistance of the Rockefeller Foundation, is a gift of very real value to Harvard."

To accomplish the difficult task of combining high pressures with high temperatures, apparatus is now being designed by Professor Bridgman, under whose direction the research on the elastic properties of rocks and the effects of high temperature and pressure will be carried out. Field measurements of the velocity of seismic waves in rocks of different types are already under way by means of artificially-produced earthquakes of small scale, in carefully selected localities where geologic details are accurately known.

Research will later be undertaken for an improvement of the records of distant earthquakes and in the methods of interpretation thereof.

SCIENTIFIC NOTES AND NEWS

THE fiftieth anniversary of the announcement by Robert Koch before the Berlin Physiological Society on March 24, 1882, of the cultivation of the tubercle bacillus, was celebrated on March 24 at the Rockefeller Institute for Medical Research in New York. The speakers were Dr. Theobald Smith, Dr. Karl Landsteiner and Dr. Simon Flexner.

DR. R. A. DALY, of Harvard University, has been awarded the Hayden Memorial Gold Medal for 1932 of the Academy of Natural Sciences of Philadelphia in recognition of his studies of igneous rocks, the constitution of the earth and other geological researches. The presentation will be made at a meeting of the academy this month.

THE John Scott award for achievement in science, given by the City of Philadelphia, was presented on March 10 to Marchese Guglielmo Marconi, inventor of wireless telegraphy, by Ambassador John W. Garrett.

THE honorary degree of LL.D. will be conferred on May 11 by the University of Manchester on Lord Rutherford and on Sir James Jeans.

PROFESSOR RALPH S. HOSMER, head of the Department of Forestry in the New York State College of Agriculture, has been elected a fellow of the Society of American Foresters. Professor Hosmer is one of thirteen men chosen for this honor since the society was founded in 1900.

THE Sultan of Morocco has conferred the title of Officer of the Order of Ouissam Alouite upon Professor Robert W. Hodgson, of the division of sub-tropical horticulture in the College of Agriculture of the University of California. The honor was conferred on Professor Hodgson at the request of the French authorities in recognition of his studies of citrus growing in the protectorate.

SIR GEORGE BUCKSTON BROWNE, donor of Down House and of the Royal College of Surgeons Research Farm, Kent, has been elected a member of the Athenaeum Club for distinguished service.

LORD DAWSON of Penn, president of the Royal College of Physicians, and Sir Henry S. Wellcome, founder of the Wellcome Research Institution, have been elected honorary fellows of the Royal College of Surgeons.

THE Cameron Prize for additions to practical therapeutics has been awarded to Dr. Edward Mellanby, professor of pharmacology in the University of Sheffield.

THE progress medal of the Royal Photographic Society of Great Britain has been awarded to Dr. Lüppo-Cramer, head of the photochemical laboratory of the Gelatin Works at Schweinfurt, Germany.

Industrial and Engineering Chemistry reports that at a meeting of the council of the Muslim Association for the Advancement of Science held at Aligarh, India, on December 2, 1931, Mr. H. W. Blood Ryan, controlling editor of *The Chemical News*, London, was appointed vice-president and honorary foreign secretary for Europe in recognition of his work for the advancement of international science. Dr. Ryan was also nominated to a newly established foundation research chair in physical chemistry.

DR. J. BEN ROBINSON, dean of Baltimore College of Dental Surgery, University of Maryland, has been

elected president of the American Association of Dental Schools.

It is reported in *Nature* that at the annual general meeting of the Geological Society of London, held on February 19, the following officers were elected: *President*, Sir Thomas Holland; *Vice-presidents*, Professor E. J. Garwood, Mr. J. F. N. Green, Mr. W. Campbell Smith, Dr. H. H. Thomas, and Professor W. W. Watts; *Secretaries*, Professor W. T. Gordon and Professor P. G. H. Boswell; *Foreign Secretary*, Sir Arthur Smith Woodward; *Treasurer*, Mr. F. N. Ashcroft.

DR. JOHN ARCHIBALD VENN, Gilbey lecturer in agriculture in the University of Cambridge and junior fellow and bursar of Queens College, the son of the late president of Gonville and Caius College, has been elected president of the Queens College, in place of the late Reverend T. C. Fitzpatrick.

THE chair of medicine at the College of France, vacated by the retirement of Professor D'Arsonval, has been filled by the appointment of Professor Nicolle, of Tunis.

DR. J. E. DUERDEN, after serving for twenty-seven years, has retired from the professorship of zoology at Rhodes University College, Grahamstown, South Africa, and also from the directorship of Wool Research for the Union. His future address will be: Wool Research Association, Torridon, Headingly, Leeds, England.

PROFESSOR C. J. CURTMAN, of the College of the City of New York, and Professor Ingo W. D. Hackh, of the College of Physicians and Surgeons of San Francisco, have been appointed members of the editorial board of *The Chemical News*, London.

THE object of the expedition to Peru of Mr. Carl O. Erlanson and Dr. Howard MacMillan was incorrectly stated in a recent issue of *SCIENCE*. Their object is to study the wild relatives of the cultivated potato in Peru and Chile and to bring back plant material for the possible breeding of disease-resistant strains of the cultivated potato. The expedition is a continuation of the work started the year before last in Mexico and is part of the Department of Agriculture's general breeding program for potato improvement.

DR. WILLIAM B. CASTLE, assistant professor of medicine at the Harvard Medical School, has returned to Boston from Porto Rico where he carried on studies on anemia.

ON March 11, Dr. Joseph Colt Bloodgood, clinical professor of surgery at the Johns Hopkins University School of Medicine, gave a clinic on cancer of the breast at the Duke Hospital, Durham, N. C. On the same date Dr. George R. Minot, professor of medi-

cine at the Harvard Medical School, and director of the Thorndike Memorial Laboratory at Boston City Hospital, lectured before the Durham-Orange County Medical Society, at the Duke Hospital, on "The Treatment of Anemia." He also gave a clinic at the hospital the following morning.

DR. A. C. IVY, professor of physiology and pharmacology, Northwestern University Medical School, Chicago, will deliver the annual Gorgas Medical Society Lecture at the School of Medicine, University of Alabama, on May 7. Dr. Ivy's subject will be "The Physiological Aspects of the Etiology, Symptoms and Treatment of Peptic Ulcer."

DR. DAVID I. MACHT, clinical lecturer at the Johns Hopkins University, was the speaker at a meeting of the Johns Hopkins Chapter of Sigma Xi, held at the School of Hygiene and Public Health on March 21. His subject was "Contributions to Phytopharmacology, or the Applications of Plant Physiology to Medical and Chemical Problems."

THE Sixth Annual Priestley Lectures of the Pennsylvania State College will be given from April 13 to 19 by Dr. Victor K. LaMer, associate professor of chemistry, Columbia University. The subject of the lectures will be "The Physical Chemistry of Solutions."

DR. W. V. BINGHAM on March 18 delivered an Aldred Lecture at the Massachusetts Institute of Technology, the subject being "Adventures in Industrial Psychology."

THE Romanes Lecture for 1932 at the University of Oxford will be delivered by Lord Moynihan on June 1. His subject will be "The Advance of Medicine."

SIR OLIVER LODGE on March 17 delivered the Founders Oration at the University of London. He spoke on "Changes in the Scientific Outlook."

THE executive committee of the American Association for the Advancement of Science will hold its regular spring meeting at the Cosmos Club in Washington on Sunday, April 24, with a morning and an afternoon session. Business to come before the committee at this meeting should be sent to the permanent secretary, Dr. Charles F. Roos, Smithsonian Institution Building, Washington, D. C.

THE fifth International Congress of Entomology will be held in Paris from July 16 to 22, under the presidency of Dr. Paul Marchal, member of the institute and professor at the National Institute of Agronomy.

THE twelfth Congress of Industrial Chemistry will be held at Prague, from September 25 to October 1,

under the auspices of the French Society of Chemical Industry and the Chemical Societies of Czechoslovakia. The organization committee in Prague cordially invites all American chemists and technologists who are interested to attend, to present papers and to take part in the functions and discussions. Those desirous of attending may write direct to the Organization Committee, Stepánská 37, Prague II, C. S. R., or to Dr. Jerome Alexander, Secretary American Section, Society of Chemical Industry, 50 East 41st Street, New York City.

THE second Congress of the International Society of Orthopaedic Surgery will be held in London at the Royal Society of Medicine on July 19, 20, 21 and 22, 1933, under the presidency of Professor Nové-Josserand of Lyons.

IN addition to a full year's work in undergraduate courses in inorganic, organic, analytical and physical chemistry, during the eight weeks beginning on June 27, the University of Pittsburgh will offer graduate courses in chemical microscopy, under Dr. E. V. Hjort; quantitative organic microanalysis, under Dr. W. Baldwin; biochemistry and physiological chemistry, under Dr. C. G. King, and modern chemical theories, under Dr. A. L. Robinson. These graduate courses will also begin on June 27, and may be arranged according to the needs of the individual student.

THE department of geography of the College of the City of Detroit is announcing two study field courses for this summer. A course in the geography of Europe, under the direction of Dr. S. Van Valkenburg, is planned for eight weeks beginning on June 18. France, Northern Italy, Switzerland, Belgium and Holland will be visited. The second party, conducted by Dr. Bert Hudgins, will travel by bus, the itinerary including Niagara Falls, New York, Atlantic City, the Shenandoah Valley and the Bluegrass region of Kentucky.

DR. WM. D. REEVE, professor of mathematics at Teachers College, Columbia University, will offer a series of special lectures at the University of Nebraska from June 13 to 24 on methods of teaching mathematics in junior and senior high schools. Dr. Reeve will continue the series of special lectures which was begun last summer by Professor Charles Swain Thomas, of Harvard University, and Dr. W. L. Carr, of Teachers College, Columbia University.

DR. G. W. CONREY, of the Ohio Agricultural Experiment Station and the Ohio State University, gave a lecture on February 15 before the department of geology and geography of Oberlin College on "The Geology of Soils." On March 16 Dr. Walter H.

Bucher, of the University of Cincinnati, spoke to a similar audience on the "Life of Cincinnati Seas." The third and last lecture in the series will be given on April 25, by Dr. Frank Van Horn, of the Case School of Applied Science, Cleveland, on "The Diamond and Gold Mines of South Africa."

A SERIES of three lectures on bio-electric processes will be delivered at the University of Texas, April 12, 13 and 14, by Dr. E. J. Lund, professor of zoology at that institution. Dr. Lund was named graduate research lecturer for 1931-32. The titles of the lectures are "A New Mechanism for Cell Correlation in Living Organisms," "Control of Current Life Processes by Electric Currents" and "How Does the Living Cell Generate Electrical Energy?"

THE following resolution was recently approved at a meeting of the Board of Overseers of Harvard University: "The faculty of the Bussey Institution having ceased to exist, and there being a desire to retain the degree of master in forestry, voted that the Faculty of Arts and Sciences shall hereafter administer that degree."

TWENTY Columbia professors have become staff members of the New York Post-Graduate Medical School by appointment of the university's trustees. The school has been affiliated with Columbia since last July 1. Those appointed were: Dr. Cameron Bailey, T. Drysdale Buchanan, Dr. John A. Killian, Dr. George Miller MacKee, Dr. Walter T. Dannreuther, Dr. Duncan MacPherson, Dr. Herman O. Mosenthal, Dr. Michael Osnato, Dr. Byron Stookey, Dr. Martin Cohen, Dr. Harold S. Vaughan, Dr. Fred H. Albee, Dr. Warren C. McFarland, Dr. Ward J. MacNeal, Dr. Roger H. Dennett, Dr. Philip R. Lehrman, Dr. William H. Meyer, Dr. John F. Erdmann, Dr. John J. Moorhead, Dr. Joseph F. McCarthy. The school's monthly enrolments since the affiliation with Columbia have totaled 980, as compared with 794 for the nine months preceding the union. Dr. Edward H. Hume is director of the school, and the administrative board, composed of staff members and a group of Columbia officials, now includes Dr. Alan R. Anderson as secretary.

SCIENCE SERVICE reports that the U. S. submarine S-48, carrying a staff of scientists and apparatus designed for measuring the force of gravity under water, arrived at Miami on March 23, ending a cruise among the West Indies begun on February 7. The leaders of the expedition are Dr. Richard M. Field, of Princeton University, and Dr. F. A. Vening Meinesz, of the University of Utrecht and the Netherlands Geodetic Commission. Dr. Meinesz is the inventor of the gravity-measuring pendulum apparatus. "This is the first time we were able to obtain real

data which has a bearing on earthquakes," Dr. Field stated. "Dr. Meinesz has developed a specially constructed pendulum to determine gravitation. Once this was determined we were able to speculate as to the character of rock formations, columns of rocks of different kinds having certain gravity. With this certain gravity we can tell what kind of rock should be there and knowing that determine the topography of the sea floor and how it was produced. It will be three months before the field data and preliminary calculations which we have made are computed. From the isostatic reduction of these we can find if certain blocks are in or out of balance and whether they should go up or down." With Dr. Meinesz' apparatus in the submarine, 55 dives were made to approximately 70 feet under the surface. Soundings were made every fifteen minutes coincidentally with the gravitation tests. Four dives were made between Nassau and Miami. Fifty-one dives were made in 33 days from February 7. The cruise made a total of 4,000 miles in three loops. The first was southward of Jamaica and around the west end of Cuba. The second around the Caicos bank through Caicos and Turks Island passage. The third was from Guantanamo through the Bahamas to Nassau and Miami.

THE Universities of Virginia and Michigan are cooperating in an investigation of the chemistry and pharmacology of morphine, with the object of removing the dangerous characteristics of this drug. The research is being carried out under the auspices of the National Research Council through its Drug Addiction Committee. It is now announced that the Rockefeller Foundation will finance the work for three more years. With the funds originally available the committee mapped out a three-year program. At the half-way mark in this program Dr. Charles W. Edmunds and Dr. Nathan B. Eddy, in immediate charge of the work, report satisfactory progress. Nearly one hundred new morphine derivatives and closely related substances have been prepared at the University of Virginia and examined at the University of Michigan. Reports on the chemistry of these substances have appeared from time to time in *The American Journal of Chemistry*, and *The Journal of Pharmacology* will publish shortly two papers on some of the pharmacological results. On the basis of these results the Rockefeller Foundation has taken over the financial responsibility for the work and has granted to the National Research Council funds for its continuance for an additional three-year period. The sum granted not only will provide for the extension of the work to January 1, 1936, but will allow some increase in the yearly budget, so that the investigation can be carried out more vigorously.