in form and bearing, amid old and crumbling temple walls, with a background of palms and other tropical plants and wonderfully terraced rice fields, make this island a paradise for artists and all who love the beautiful."

Dr. Schreiner has supervision of extensive field tests with fertilizers in various soils of this country and is making a special study of agricultural conditions and fertilizing practices in the growing of tropical crops such as tea, coffee, rubber and sugar-cane, with a view to applying his information to the soils of the southern United States.

THE PHILIPPINE RESEARCH INSTITUTE

SYSTEMATIC scientific research in the Far East is planned by the organization of the Philippine Research Institute. L. O. Colbert, director of coast surveys of the Philippine Islands, has been elected director and treasurer of the institute. The director of the Coast and Geodetic Survey, R. S. Patton, in a statement made to the *U. S. Daily,* said that the new organization is not connected with the Philippine government but will have the cooperation of the insular administration.

"The institute's stated purposes," Captain Patton said, "are four-fold. First, it is designed to provide a center for pure research in the natural sciences in the Far East. Second, it is to carry on scientific investigations and experiments in the fields of biology, chemistry, physics, mathematics and other natural sciences. This will be with a view to aiding applied science in the alleviation of disease and in assisting in economic and industrial development of the Philippines, through research in pure science. Third, it is proposed, through advances in pure science, to stimulate interest along more practical lines in economic and industrial development in the Far East. Fourth, it is proposed through this organization to advance the training of Filipino scientists in experimental methods and to create more wide-spread interest in the fundamental scientific problems of the Philippine Islands.

"The institute has been promised the assistance of the government in the use of certain facilities.

"It is understood that funds will become available shortly from expected donations. These are to be used for the establishment of fellowships for pure scientific research along lines to be laid down by the directors of the new organization.

"The institute will seek money primarily for the encouragement of research in pure science. It will, however, handle funds for the encouragement of any investigation which might be desired by the donors of funds.

"With the establishment of a definite institution for the encouragement of scientific research and for the handling of funds for this purpose, it is hoped that more systematic and greater efforts along research lines may be developed. It is hoped, moreover, that the Filipinos may be given more incentive along research lines than is at present possible with the limited funds available for government institutions."

THE BERMUDA OCEANOGRAPHIC EXPEDITION

THIS expedition is the twelfth of the department of tropical research of the New York Zoological Society, and has been in the field for four months. It will remain until November 1. The director is Dr. William Beebe and the headquarters are on Nonsuch Island, Bermuda. The objects are two-fold: to make as thorough as possible a résumé of the shore fishes of Bermuda with notes on their life histories, and to study the deep-sea life of a definite, few cubic miles of open ocean. Success in both these fields has been so pronounced that it has been decided to continue the work through another year.

A sea-going tug, the smaller winch of the *Arcturus* and two and a half miles of quarter-inch cable are used in the deep-sea work. In this oceanographic phase of the expedition, three hundred and fifty net hauls have been made up to July 31. These have been confined to an eight-mile radius, five miles south of Nonsuch, and from the surface to fourteen hundred fathoms. This has yielded an astonishing harvest of abyssmal life. About two hundred species of true deep-sea and pelagic fish have been taken, representing 13 orders and 52 families.

Although separated by only five to eight miles of water, the trenchant differences between Bermuda shore fish and those from the ocean depths are far beyond expectation. One phase of this may be illustrated by the relative number of genera in six orders:

	Deep-sea genera	Shore-fish genera
Isospondyli	30	6
Iniomi	11	2
Pediculati	16	2
Percomorphi	5	62
Jugulares	2	10
Plectognathi	2	12

Checked records have been made with a newly designed pressure gauge down to 1,600 pounds to the square inch, and living specimens have been taken in

baited traps and on radium hooks at considerable depths. Next to the actual collecting, photographing and painting of living and recently dead deep-sea fish, important work is being done in the laboratory in clearing and staining such rare forms as *Opisthoproctus, Lasiognathus* and *Derichthys.*

Success has been had in the use of ice for keeping abyssmal fish alive. It has proved much more effective than pressure. Dr. and Mrs. C. J. Fish spent a month at the station studying plankton and larval fish, and Professor E. Newton Harvey worked on the luminescence of living fish and shrimps for several weeks. Among other visitors have been Dr. Henry Fairfield Osborn and Professor E. L. Mark.

Other phases of interest have been the tropic birds, fifty-five occupied nests being located on the island, and the young and old birds banded for reference next year. One effect of the absence of enemies on land birds is the reduced number of eggs deposited by catbirds, bluebirds, cardinals and English sparrows.

The scientific staff at present consists of William Beebe, John Tee-Van, G. Hollister and W. Merriam, besides R. Whitelaw, photographer, and Helen Tee-Van, L. Miller and E. Bostelmann, artists.

SCIENTIFIC NOTES AND NEWS

PROFESSOR HARVEY CUSHING, Moseley professor of surgery at Harvard University and surgeon-in-chief of the Peter Bent Brigham Hospital, and M. Cantacuzène, director of the Pasteur Institute of Bucharest, have been elected foreign members of the Paris Academy of Medicine.

THE Royal Medico-Psychological Association at its annual meeting on July 10 and 11 elected as honorary members Professor Ivan Pavlov, of Leningrad; Sir Charles Sherrington, of Oxford, and Professor Eugenio Tanzi, of Florence.

WE learn from *Nature* that Professor Pierre Termier, directeur des Services de la Carte Géologique de France, Paris, has been elected a foreign member of the Geological Society, London, in addition to the election of three Americans already recorded in SCIENCE. Foreign correspondents have been elected as follows: Professor Othenio Abel, of Vienna; Dr. Clarence N. Fenner, of Washington, D. C.; Professor Olaf Holtedahl, of Oslo, Norway; Dr. Rudolf Staub, of Berne, Switzerland; Dr. V. K. Ting, of Peking, China, and Professor Carl Wiman, of Upsala, Sweden.

THE honorary degree of doctor of agriculture was conferred upon Assistant Secretary R. W. Dunlap by Rhode Island State College during the commencement exercises. Mr. Dunlap delivered an address, his subject being "The United States Department of Agriculture and the Land-Grant Colleges."

THE doctorate of science has been conferred by Tufts College on Dr. William Rice, dean of the dental school.

THE following appointments recently made by the Secretary of State for the British Colonies in the Colonial Agricultural Services are reported in *Nature:* Mr. W. H. Edwards, lecturer in entomology and zoology at the College of Agriculture and acting botanist and mycologist, Mauritius, to be entomologist, Jamaica; Mr. S. M. Gilbert, superintendent of agriculture, Nigeria, to be assistant director of agriculture, Trinidad; Mr. A. Pitcairn, district agricultural officer, Tanganyika, to be assistant director of agriculture, Cypress; Mr. J. R. Mackie, superintendent of agriculture, Nigeria, to be deputy assistant director of agriculture, Nigeria; Dr. R. H. Le Pelley, to be assistant entomologist, Kenya; Lieutenant J. Eaden, to be assistant manager, Experimental Fruit Farm, Sierra Leone; Mr. H. E. Green, to be inspector of plants and produce, Agricultural Department, Gold Coast, and Mr. E. Lawrence, to be district agricultural officer, Nyasaland.

THE *Journal* of the Washington Academy of Sciences announces the following appointments in the U. S. Geological Survey: Roland W. Brown, paleobotanist to succeed F. H. Knowlton, deceased. Armand J. Eardley, David A. Andrews, William G. Pierce, Alonzo W. Quinn, Thomas A. Hendricks, Harold E. Thomas and Frank S. Parker, junior geologists in the section of geology of fuels; Marland P. Billings, assistant geologist in the same section. Howard A. Powers, junior geologist in the section of volcanology. Eugene Callaghan and Ian Campbell, junior geologists in the section of metalliferous deposits, and Quentin D. Singewald, assistant geologist in the same section.

DR. S. L. MADORSKY, Du Pont fellow in the University of Chicago, has been appointed associate chemist at the fixed nitrogen research laboratory of the bureau of chemistry and soils of the U. S. Department of Agriculture.

LAWRENCE T. CLARK has been appointed head of the laboratories of Parke, Davis and Co., succeeding E. M. Houghton, who retired on May 1 after serving for thirty-four years. Walter E. King has been appointed assistant director of the laboratories and of