tunities for studying human embryology from the functional point of view. Already, considerable work of great practical value has been done with regard to uterine support, to the anatomic relationships of the ureter and genital ducts and to the comparative anatomy of the mandible, the central nervous system, the colon, the greater omentum, the lesser sac and the vermiform appendix. The marsupials offer an excellent field for the study of the muscular epochs, and the postural changes resulting.

MALARIA IN INDIA

STATEMENTS concerning malarial conditions in India are contained in the annual report for 1928 of the Ross Institute and Hospital for Tropical Diseases. According to the London *Times* it recalls that Sir Malcolm Watson and Major Lockwood Stevens went to India on an expedition of inquiry last November and sailed for home last April. They made an extensive tour and drew up reports which will be published later. In the meantime the Ross Institute in the present report gives a summary of their observations as follows:

Bombay was first inspected. Compared with many other places the control of malaria in Bombay Island, indeed its complete elimination, is a relatively simple task. The mosquito which carries the disease lives chiefly in tanks, wells and cisterns. A certain number of these have been closed or covered; and there is an able staff under Dr. Sandilands, the health officer of Bombay, capable of completely stamping out the disease. But there still remain a large number of breeding places, and eighteen years after the source of the danger was pointed out by Dr. C. A. Bentley, the director of public health of Bengal, the people of Bombay, and especially the mill workers, suffer severely from the disease.

Malaria is steadily spreading through many parts of Bengal. Within living memory hundreds of villages have been decimated; thousands of acres of once prosperous and highly cultivated land have been abandoned; populous towns have been reduced to the status of miserable fever-stricken villages; stately mansions have as their sole inhabitants the wild pig and the leopard; and the jungle is creeping in to reign once more over a land from which it was driven thousands of years ago. The malaria of Bengal may well be described as a great tragedy.

There is much controversy on the cause of the malaria in Western Bengal. Many hold, among them Dr. Bentley, that malaria has been increased by the embankments which have interfered with the natural flooding of the Delta. They claim that, where the land is flooded annually by the rivers of the Delta, there is a surprising immunity from malaria, and that malaria is specially intense where railways, canals, roads and embankments have killed the rivers or reduced their flow. The other view is that the malaria is due to insufficient drainage of the land. Its supporters claim that what drainage has done to banish malaria from other lands it can do for Bengal. Sir Malcolm Watson considers that there is a strong case for an independent inquiry, and he has written to the governor suggesting that this should be made.

SOIL SURVEYS APPROVED BY THE PACIFIC SCIENCE CONGRESS

PRESENTATION of the soil survey work of the U. S. Department of Agriculture by Dr. Oswald Schreiner, chief of the division of soil fertility, of the Bureau of Chemistry and Soils, and official representative of the department at the Fourth Pacific Science Congress, held this summer in Batavia and Bandoeng, Java, was followed by a resolution of the congress urging all Pacific countries to extend soil survey work as far as possible on a uniform basis somewhat comparable to the methods by which the United States has already mapped and surveyed half of its agricultural land.

According to reports from Java, received this week by Dr. Henry G. Knight, chief of the Bureau of Chemistry and Soils, Dr. Schreiner was appointed chairman of a standing committee on soils charged with the task of working out a uniform basis of classification for the soils of Pacific countries in cooperation with the International Society of Soil Science.

Following the meeting of the Fourth Pacific Science Congress at which he was chosen chairman of the soil section, Dr. Schreiner attended the Third Congress of the International Sugar-cane Technologists held at Sorabaya, Java, where he was again elected chairman of the soils section.

In addition to their appointment of a standing committee to further the work of soil survey in Pacific countries, members of congress showed much interest in the latest work of the U. S. Department of Agriculture in soil erosion prevention and in the recent findings of the Bureau of Chemistry and Soils as to the successful application of the rarer and little-known fertilizing elements to certain soil types, upon which subject Dr. Schreiner presented papers.

"No mere words can describe the absolute 'otherness' of the civilization one sees on this island. It is so different that it mystifies. It is beautiful, enchanting and altogether delightful," wrote Dr. Schreiner in a recent letter to Dr. Knight. He tells of towns and villages with strange and beautiful temples everywhere, richly carved with grotesque figures of gods and demons.

"Java has been called the jewel of the tropics," he writes, "but Bali with its tropical setting and interesting people is the real gem of these far-eastern islands; enchanting, intriguing, surpassingly beautiful, the most tropical, the most eastern of them all. The bronze statues of beautiful men and women, superb

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