

DR. E. H. GRIFFITHS, physicist and formerly principal and professor of experimental philosophy at the University College of South Wales, died at Cambridge on March 3, at the age of eighty years.

THE death is announced on February 29 at the age of eighty-one years of Dr. George Claridge Druce, curator of the Fielding Herbarium of the University of Oxford.

DR. ADAM SCHWAPPACH, formerly director of the Eberswalde Forest Experiment Station at Eberswalde, Germany, died on February 9, at the age of eighty-one years.

PROFESSOR A. OPPERMAN, director of the Danish Forest Experiment Station at Springforbi, Denmark, died on November 15, at the age of seventy-two years.

SCIENTIFIC EVENTS

INVESTIGATIONS OF LOCUSTS

THE French Committee for Locust Research, consisting of entomologists and chiefs of plant protection services in all the French African Colonies, has agreed to recognize the Imperial Institute of Entomology in London, according to the *London Times*, as the international center for the collection of data on the appearance and movements of locust swarms. This decision follows on the locust conference which was held recently in Rome to discuss methods of international cooperation in locust research, which was attended by British, French and Italian representatives. The Italian delegates agreed to recognize the Imperial Institute of Entomology as the international center for research, but the French delegates were unable to commit themselves without referring the matter to their locust research committee, which has now endorsed the decision of the Rome meeting.

As a result of this resolution, the Imperial Institute of Entomology will in future receive automatically all the information on locusts available in the French African possessions. This is being regularly transmitted by local authorities to the Algiers Regional Station. French entomologists will also cooperate in the locust investigations in the Timbuctoo area, which British entomologists from Nigeria hope to undertake. This area is strongly suspected to be one of the original sources of the present locust outbreak in Africa.

A general scheme of locust research, which aims at discovering the locusts' permanent breeding areas, is now in operation and is directed from the Imperial Institute of Entomology. This is financed partly by the British African Colonies and partly by the Empire Marketing Board, but, owing to the need for economy, the funds available have recently been reduced by half. Two locust research officers have been appointed. One is now in Uganda advising the government on problems of locust control, and particularly on the failure of poison bait. The other is studying the conditions under which locusts are breeding in the Sudan. Information on the movements of locusts is now being received from 16 empire and 25 foreign countries by the Imperial Institute of Entomology and analyzed there in order to trace the origin of locust swarms, the routes of their invasions, and the probable causes of the outbreaks.

THE FIELD MUSEUM OF NATURAL HISTORY

THE annual report has appeared of Mr. Stephen C. Sims, director of the Field Museum of Natural History, Chicago. He states that despite the economic depression, which naturally has had serious effect upon the museum's finances as upon those of practically all similar institutions, so far as the public is concerned, the museum's services have been maintained with practically no curtailment.

All forms of educational work for both children and adults, such as the public lectures on science and travel, guide-lecture tours, etc., have been carried on as usual. The activities of the unit of the museum organization known as the James Nelson and Anna Louise Raymond Foundation, consisting of entertainments for children, extension lectures in the schools, and other forms of direct contact work between museum instructors and more than 300,000 children, have been increased. Likewise the circulation of some 1,300 traveling exhibits in about 400 schools has been continued without interruption.

Work on the installation of new exhibits and the reinstallation of older exhibits proceeded as usual. The scope of expeditions, however, was reduced and it was in this branch of activity that a large part of the necessary economies were effected. However there were sixteen expeditions in operation, both in America and foreign countries, though most of these were on a smaller scale than those of previous years.

Details of contributions of both funds and exhibition material and lists of the institution's 5,341 members are contained in the report.

The number of visitors during 1931 was 1,515,540, exceeding all previous records. Adding the numbers of children reached by activities conducted outside the museum by the Raymond Foundation and the Harris Extension, the total number of persons directly reached by the museum's educational influence

was more than 2,240,000. Use of the museum library by students and by the public in general increased; more than 93,000 natural history books and pamphlets are now available on its shelves. A new and greatly improved cafeteria was built and opened to the public in the museum building. Reports are included of the Field Museum-Oxford University Joint Expedition to Mesopotamia which is excavating on the site of the City of Kish; the Suydam Cutting zoological expedition to Sikkim, India; a zoological expedition to Indo-China conducted for the museum by Mr. George F. Ryan and Mr. George G. Carey, Jr.; a zoological expedition to central Africa conducted by Captain Harold A. White and Major John Coats; the Marshall Field Zoological Expedition to China; the Third Marshall Field Archeological Expedition to British Honduras excavating ancient Maya sites, and the Field Museum Archeological Expedition to the Southwest excavating prehistoric Indian ruins in Colorado.

CALIFORNIA ACADEMY OF SCIENCES EXPEDITION TO REVILLAGIGEDO ARCHIPELAGO

THE director of the museum and of the Steinhart Aquarium of the California Academy of Sciences, Dr. Barton Warren Evermann, writes that, on the evening of March 10, the *Zaca* passed out through the Golden Gate to enter on a protracted cruise among the Revillagigedos and other islands off the Pacific Coast of Mexico, Central America and Ecuador, in the interest of the California Academy of Sciences. The *Zaca* is the private yacht of Mr. Templeton Crocker, of San Francisco, who is deeply interested in the scientific and educational activities of the academy of whose board of trustees his father, the late Colonel Fred Crocker, was president for many years. The expedition will be known as the Templeton Crocker 1932 Expedition of the California Academy of Sciences. Among those on board besides Mr. Crocker are the following: Captain Garland Rotch, commanding officer; Dr. Albert E. Larsen, ship's doctor; Harry S. Swarth, ornithologist and mammalogist, naturalist-in-charge; John Thomas Howell, assistant curator of the academy herbarium, botanist; H. Walton Clark, assistant curator of the department of fishes, aquatic zoologist and ichthyologist; Robert J. Lanier, assistant superintendent of the Steinhart Aquarium of the California Academy of Sciences, fishery expert; Toshio Asaeda, artist and official photographer, and Maurice Sheppard Willows, Mr. Crocker's secretary, entomologist.

Mr. Swarth recently completed a technical report (Occasional Paper No. 18, California Academy of Sciences) on the land birds of the Galapagos Islands, based upon a critical study of the large collection of

8,691 specimens of birds collected on the 1905-1906 expedition of the California Academy of Sciences to the Galapagos Islands, and the material from those islands in the British Museum and in that at Tring. On the present expedition he will pay special attention to the habits, life histories and ecological relations of the various species. Dr. Larsen will pay special attention to the intestinal and other parasites of the elephant seal and other mammals. Messrs. Clark and Lanier will collect the fishes and other aquatic species. They hope to bring back several large tanks of live tropical fishes for the Steinhart Aquarium, and large series of specimens preserved in alcohol of the fishes, mollusks and crustaceans found in the various regions visited. They will also make complete collections of all obtainable species of marine algae which will be turned over to Drs. Setchell and Gardner, of the University of California, for study and report.

Mr. Howell will study the flora of the various islands and goes prepared to make large and valuable additions to the academy's herbarium already rich in materials from these islands. Mr. Willows will pay special attention to the Lepidoptera, Hemiptera and Coleoptera, groups not well represented in museums in collections from any of these islands. Mr. Asaeda, who was artist and photographer of the recent expedition which Mr. Zane Grey made to tropical islands in the Pacific, is not only a high class artist but also an expert color photographer. He has had much experience in painting fishes and other aquatic animals in life colors.

Mr. Crocker and Captain Rotch also are skilled in moving picture photography. On a short visit to Guadalupe Island last November for the academy, they obtained very interesting reels depicting life of the wonderful elephant seal herd found there.

The present expedition is made possible by Mr. Templeton Crocker because of his interest in the California Academy of Sciences and his desire to assist scientific research through the academy's research departments.

It goes equipped for collecting in all fields of vertebrate zoology and in botany, and will cover the fauna and flora of both land and sea as fully as possible. Specially constructed electrically-lighted traps that can be let down to a depth of one thousand feet will be used for capturing deep sea fishes that, it is hoped, may be attracted by the light. Special dredges that may be dragged on the bottom or at intermediate depths, have been provided. Provision has been made also for regulating the water in the live tanks so that fishes and other species intended for the aquarium can be brought back alive.

This is the second expedition Mr. Crocker has