ship of many new species that he discovered. He published also numerous entertaining and scientifically valuable papers upon plant geography, especially that of Hispaniola, and he wrote an admirable monograph of the tropical American *Vernonieae*. Botanical science will be vastly poorer for loss of other contributions that it hoped to receive from his pen.

It is a strange coincidence that Urban and Ekman, the two men who have contributed most to knowledge of the Antillean flora, should have ended their labor only a week apart. Ekman's life work was one which all botanists may envy, but very few may equal. He was a brilliant member of that long line of Swedish botanists who have made such eminent contributions to natural science.

PAUL C. STANDLEY
FIELD MUSEUM OF NATURAL HISTORY

RECENT DEATHS

DR. PIERRE A. FISH, dean of the College of Veterinary Medicine at Cornell University since 1929, when he succeeded the late Dr. Veranus A. Moore, died on February 19. He was sixty-six years old on February 17.

DR. JOHN CONRAD HEMMETER, from 1903 to 1922 professor of physiology and clinical medicine at the University of Maryland, died on February 25 at the age of sixty-seven years.

PHILIP P. QUAYLE, physicist for the Phillips Cartridge Company, and formerly a member of the staff of the Bureau of Standards, died suddenly at Lebanon, Ohio, on February 21. Mr. Quayle was a recognized authority on ballistics and had written the article on Spark Photography for the new edition of the "Encyclopaedia Britannica."

THE REVEREND CHARLES DOUGLAS PERCY DAVIES, of Kemerton Grange, Tewkesbury, president of the British Astronomical Association from 1924 to 1926, died on February 5.

SCIENTIFIC EVENTS

INSTITUTION FOR SURGICAL BIOLOGICAL RESEARCH AT DOWNE

THE London *Times* states that the Council of the Royal College of Surgeons has accepted an offer from Mr. George Buckston Browne, F.R.C.S., to build and endow an Institution of Surgical Biological Research upon a 13-acre estate at Downe, Kent, which he proposes to present to the college for this purpose. At a council meeting on February 12 it was resolved that the council expressing its deep sense of Mr. Buckston Browne's great liberality, should undertake on behalf of the college to be responsible for the proposed institution, subject to an approved settlement under a deed of trust.

The estate concerned lies 16 miles from Charing Cross, adjoining the western side of Darwin's old home, "Down House," which was presented, with its 23 acres of ground, to the British Association two years ago by the same benefactor. Mr. Buckston Browne has announced his willingness to endow the new estate with an initial sum of £50,000, and to add further gifts or legacies until his total benefaction to the research institution (including the cost of the land) reaches the amount of £100,000.

In his letter to Lord Moynihan, president of the Royal College of Surgeons, and the members of the council, Mr. Buckston Browne states his belief that those who have added or are adding to the science and art of surgery are the greatest of all benefactors of the human race and the domesticated animal kingdom. He expresses, therefore, a wish to form an institution in which surgeons, and particularly young surgeons, will have full opportunity for carrying out their investigations.

The ultimate size and design of the building to be erected, and the form of equipment, service and staff are not laid down by Mr. Buckston Browne, but for the needs of the present laboratory workers, and of those surgeons who are now seeking an opportunity for testing inferences drawn from the clinical observation of certain diseases, he proposes the following initial provisions:

(1) Three or four laboratories where investigations can be made under the best conditions, or where living animals can be closely observed and cared for.
(2) Houses for animals.
(3) Accommodation for a chief attendant, skilled in laboratory methods.
(4) Accommodation for a stockman, who will look after and feed the animals.
(5) Hotel accommodation for those who may wish to carry on continuous work in the institution.

OBSERVATIONS FOR THE DETERMINATION OF LONGITUDES

A PUBLICATION has been issued by the United States Coast and Geodetic Survey concerning observations for the determination of longitudes made simultaneously in 1926 by some 30 countries. The author, Clarence H. Swick, chief of the Section of Gravity and Astronomy, gives information about a world-wide longitude net of 40 basic stations determined in 1926.

The Coast and Geodetic Survey, representing the United States, took part in this project by making the observations at 2 of the 40 stations—one near Honolulu and the other near Manila. The publication includes a description of the instruments, some of which are illustrated, and the methods employed at these two stations, together with complete details of the observations and a summary of results.

Many of the stations of the network are at astronomical observatories where elaborate equipment, such as precision clocks and large astronomical instruments, was available. The Honolulu and Manila stations of the Coast and Geodetic Survey were strictly field stations where portable equipment had to be used, and where many formidable difficulties were encountered.

For many years the determination of longitude, especially at sea, was a very serious problem. Near the beginning of the nineteenth century, prizes amounting to many thousands of pounds in value were offered by British organizations to any one who could devise more accurate methods than the ones then available.

The invention of the chronometer was the first great step in the solution of the problem, as it enabled the mariner to carry the time of his home port quite accurately and to compare this time with his time determined at sea. The difference in the two times gives the difference in longitude.

The next great improvement in longitude determination which, however, could be used only on land, resulted from the invention of the electric telegraph, which gave a means for the direct comparison of the times between some known point and a new point.

The last great advance in longitude methods came with the advent of the radio. The radio made possible a very precise comparison of times over both land and sea and was at once adopted for practically all longitude work. This was the method used for the international longitude net in 1926.

THE OHIO ACADEMY OF SCIENCE

THE forty-first annual meeting of the Ohio Academy of Science has been arranged as a joint meeting with the Indiana Academy of Science and the Kentucky Academy of Science. It will be held at Miami University on April 2, 3 and 4.

The program will conform in the main to the following outline, the details of which will be announced later:

THURSDAY, APRIL 2:

Afternoon—Short field trip to points of local interest for those who arrive in time and care to go.

Evening—An informal gathering probably with a short address on some subject of general interest, followed by a social hour for acquaintance sake.

FRIDAY, APRIL 3:

Forenoon—Short business session, Ohio Academy of Science, followed by a general scientific session with three 30-minute addresses by the presidents of the three academies. Demonstrations.

Afternoon—Sectional meetings.

Evening—Banquet, popular address, social hour.

SATURDAY, APRIL 4:

Forenoon—Short business session, Ohio Academy, followed by sectional meetings, beginning at 9:30.

Afternoon—Sectional meetings and another field trip if desired by a sufficient number.

The membership of the program committee is as follows:

Secretary: William H. Alexander, Columbus, *chairman.*
Zoology: Wencel J. Kostir, Ohio State University, Columbus.
Botany: J. Hobart Hoskins, University of Cincinnati, Cincinnati.
Geology: Frank J. Wright, Denison University, Granville.
Medical Sciences: Charles G. Rogers, Oberlin College, Oberlin.
Psychology: James P. Porter, Ohio University, Athens.
Physical Sciences: L. W. Taylor, Oberlin College, Oberlin.

Assisted by

N. E. Pearson, *chairman,* Program Committee, Indiana Academy of Science.
Alfred M. Peter, secretary, Kentucky Academy of Science.

THE YALE OCEANOGRAPHIC EXPEDITION TO THE BAHAMA ISLANDS

A STUDY of the physics and chemistry of the ocean, and the effect of various environmental factors upon deep sea life will be made by an expedition undertaken under the auspices of the Bingham Oceanographic Foundation of Peabody Museum, Yale University, to explore the water around the Bahama Islands. Plans of the expedition, of which Gifford C. Ewing, Yale '26, of New York, is sponsor and director, have been announced by Dr. Albert E. Parr, curator of the Bingham Oceanographic Collection.

The expedition has sailed for the Bahama waters on Mr. Ewing's schooner *Abenaki,* a 50-foot gaff-rigged Alden schooner, equipped with an auxiliary 50 h. p. gasoline engine giving it a speed of eight knots under power. For the purposes of the expedition a specially designed winch with 7,000 feet of 5/32 inch steel aircraft cable on a drum was installed, taking its hoisting power by chain drive directly from the main engine of the boat. By means of this winch and wire it will be possible for the expedition to carry on observations of the physics and chemistry of the ocean down to a depth of 1,000 fathoms, and an intensive study will be made by the modern method of