chemist throughout Europe, as well as in the United States. Mr. H. A. Huston, a member of one of the first classes conducted by Dr. Wiley at Purdue University, spoke of "the organizer." Mr. A. S. Mitchell, secretary of the food standards committee, gave tribute to "the pioneer."

THE College of Physicians of Philadelphia held a meeting October 23 to commemorate the anniversary of the birth of Galen, called the founder of experimental physiology. Ninety-three of the ninety-eight Galen publications, the property of the college library, were on exhibition. The meeting was addressed by Drs. William H. Welch, Charles W. Burr, Burton Chance and Giuseppe Franchini, of Bologna, Italy.

RECENT DEATHS

OLIVER PERRY HAY, retired associate of the Carnegie Institution of Washington, known for his researches in Pleistocene paleontology and as author of the "Catalog and Bibliography of the Fossil Vertebrates of North America," died on November 2 in his eighty-fourth year.

EDWARD WYLLYS HYDE, for twenty-five years professor of mathematics at the University of Cincinnati and formerly treasurer and actuary of the Columbia Life Insurance Company, has died at the age of eighty-seven years.

HENRY EMERSON TREFETHEN, associate professor of astronomy at Colby College, died suddenly on November 3. He was seventy-five years old.

DR. CHRISTIAN EIJKMAN, professor of hygiene and medicine at the University of Utrecht, to whom the Nobel Prize in medicine was awarded for his work on beriberi, died on November 5, at the age of seventy-two years.

DR. WALDEMAR MORDECAI WOLFF HAFFKINE, known for his work on Asiatic cholera, died at Lausanne, Switzerland, on October 27, at the age of seventy years. He discovered the principle and method of inoculation with attenuated virus against cholera. The Haffkine method of inoculation has been generally adopted throughout India and the government plague research laboratory founded by Dr. Haffkine has issued many thousands of doses to various tropical countries.

SCIENTIFIC EVENTS

THE FRENCH PUBLIC HEALTH SERVICE

RECENT mortality statistics for France are reported in the *Journal* of the American Medical Association to have caused deep regret. The birth rate in France had risen, whereas it was declining elsewhere in Europe. The mortality had begun to drop down somewhat and the whole country was pleased over the fact, when suddenly it began to rise again. From 675,110 in 1928, it rose to 741,104 in 1929, or 70,000 deaths more, in which the deaths of the new-born played but an insignificant part. The increase concerns chiefly the adults. The correspondent writes: "The condition can be due only to the inadequate nature of the public health service, in spite of all the exertions made in this direction. It is becoming more and more clear that the law of 1902 in regard to public hygiene, a law recognized by all as inadequate and which there is constant talk of amending, although nothing is done, is the true cause of this sad state of affairs. The fundamental weakness of the present law, to which frequent attention has been called, is that it leaves to the mayors of the communes the task of applying the hygienic measures that are needed. Unfortunately, however, the authority and influence of the mayor in the majority of the rural communes are entirely inadequate to the needs of the situation. Furthermore, the mayor, being dependent on the voters for his reelection, is not inclined to punish vigorously infractions of the health regulations. Then, again, though the mayor may be honest in his endeavors, many of the communes are too poor to carry out the hygienic measures that are needed; for example, for the installation of a modern water system; or for the care of the indigent or of the mentally ill who have to be transported to the hospitals of the neighboring city. It is in such situations as this that government aid appears to be indicated. But it would require the expenditure of immense sums throughout France if the government were to attempt to do everything for the poorer communes that considerations of health might dictate. However, considerable sums have been appropriated by the government during the past two years to aid the communes, either in the form of subventions or in the form of loans at a low rate of interest, more particularly for the installation of water systems. Hygienic undertakings, which are the next thing in order after the introduction of a water system, may be aided to the extent of 800,000 francs ($32,000) in place of 400,000 francs ($16,000), as formerly. From the foregoing, it would appear unfortunate that improvement in the public health service, on which the lowering of the mortality depends, is a question of finance."

THE BRITISH NATIONAL PHYSICAL LABORATORY

THE report of the National Physical Laboratory for 1929, summarized by *The British Medical Journal*, contains a detailed account of the many investiga-

tions on which that institution is continually engaged. These cover the fields of general physics, radiology, acoustics, optics, electrical standards and measurements, wireless, metrology, aerodynamics and metallurgy. During last year the physics department of the laboratory was engaged on the measurement of several grams of radium purchased by the National Radium Trust for distribution by the Radium Commission to the centers authorized to receive it. This work has involved the testing of the platinum containers for leakage as well as the determination of the radium content. An instrument has been designed at the laboratory for the rapid visual identification, with the minimum of handling, of the large numbers of radium needles, tubes and applicators which come to Teddington for testing. There was noted during the year a marked increase in the number of tests on feebly active preparations, such as radio-active waters, ores, luminous compounds and the like. In X-ray measurement the workers in the department have been establishing the international unit of radiation, the "Roentgen," or "*r*" unit, which was adopted at the Stockholm conference in 1928, and measuring the pastille dose in this unit. Investigation into certain problems relating to the energetics of X-rays has been started, and the construction of a constant voltage generator for this purpose is well advanced. Among the problems which it is proposed to examine is the variation of X-ray output with tube voltage, anticathode material, and the angle which the X-rays make with the target surface and with the exciting cathode rays. The testing of protective materials and the inspection of X-ray equipment and hospital installations in accordance with the recommendations for X-ray and radium protection have been continued. Some interesting work has also been done on sound, a line of research to which little attention was paid until recent years. The production, reception and analysis of sound and speech, and their reproduction, transmission and magnification for broadcasting, telephony and similar purposes, have brought many problems to the laboratory. Experiments are in progress for the Aeronautical Research Committee with the object of reducing the noise of the flight of aeroplanes. High speed in an aeroplane contributes much to noisiness; an increase in 100 feet per second in speed multiplies the sound tenfold. The noise in the cabin of an aeroplane is stated to be one thousand times that in an express train. A portable noise-measuring instrument has been devised for preliminary work, and a number of measurements of air-screw noises have been made. Street noises, in particular the noise due to motor horns, are also being investigated. On the subject of glare—a parallel infliction—the laboratory is working on the effects of colored light sources, and on the problem of vision under night-driving conditions. Another useful side of the National Physical Laboratory's work is temperature research undertaken for the Food Investigation Board, including a study of distant-reading thermometer outfits. An electric resistance thermometer designed at the laboratory for cold storage work has been patented. A refrigerating railway truck, built for one of the railway companies, has been the subject of test. The truck is provided with a small methyl chloride refrigerating plant driven from the axle. A number of investigations have been made on long-distance journeys, which have shown that the plant is capable of cooling the truck and its cargo sufficiently rapidly, and also that the rate of temperature rise when the plant is not in operation is sufficiently slow. One part of the routine work of the laboratory is the testing of clinical thermometers. More than ten thousand of these were tested last year, and the demand for individual certificates showing the actual corrections at various points of the scale has increased by thirty per cent., as compared with the number issued in the pervious year.

THE WALTER RATHBONE BACON SCHOLARSHIP OF THE SMITHSONIAN INSTITUTION

UNDER the terms of the will of the late Virginia Purdy Bacon, of New York, the Smithsonian Institution some years since was bequeathed the sum of $50,000 to establish a traveling scholarship as a memorial to her husband, Walter Rathbone Bacon, for the study of the fauna of countries other than the United States. The amount available is the interest on the capital invested (about $3,000 a year), the incumbent to hold the scholarship not less than two years.

Applications for this scholarship, addressed to the secretary of the Smithsonian Institution, should be submitted not later than January 31, 1931. The application should contain a detailed plan for the proposed study, including a statement as to the faunal problems involved, the reasons why it should be undertaken, the benefits that are expected to accrue, the length of time considered necessary for the carrying out of the project, the estimated cost and the scientific and physical qualifications of the applicant to undertake the project.

The scholarship will be awarded for a term of two years. If at the expiration of the term it is desired to extend the time, the incumbent shall make application a sufficient time in advance, accompanied by a statement as to the necessity for such extension.

All collections, photographs, records and equipment become the property of the institution.