RECENT DEATHS

DR. ALVAH HUNT DOTY, health officer of the Port of New York from 1895 to 1912, died on May 27 at the age of seventy-nine years.

DR. HERBERT CARL KASSNER, associate professor of analytical chemistry at the College of Pharmacy of Columbia University and a consultant in pharmaceutical chemistry, died on May 14. He was thirty-five years old.

DR. GEORGE F. STROHAVER, S.J., head of the department of chemistry and dean of the college of Arts and Sciences at Georgetown University, died on May 18. He was forty-eight years old.

LOUIS M. POTTER, general sales manager and vice-president of the Spencer Lens Company, died on April 26 while attending a meeting of the Book Committee of the Methodist Book Concern in Cincinnati. Mr. Potter had been associated with the Spencer Lens Company for more than twenty-five years.

PROFESSOR JAMES YOUNG SIMPSON, lecturer on natural science in the University of Edinburgh, died on May 21. He was sixty years old. Dr. Simpson delivered the Terry Lectures at Yale University in 1929.

Nature reports the death of Dr. Angel Gallardo, formerly Argentine Minister for Foreign Affairs, rector of the University of Buenos Aires since 1932, and president of the Academy of Sciences in Buenos Aires since 1927, aged sixty-six years.

SCIENTIFIC EVENTS

WORK IN PHYSICS OF THE BRITISH NATIONAL LABORATORY

THE annual report of the British National Physical Laboratory at Teddington has been issued. In a summary printed in the London *Times* it is recalled that the laboratory has grown in the course of 34 years to a large institution occupying 14 buildings in grounds of 50 acres. The staff of over 600 is engaged on the most varied research and test work in most branches of physics and engineering, and an exhaustive account of the work done in 1933 is given.

Some of the most valuable features of the laboratory, according to the *Times*, are its wind tunnels for aerodynamic research. The highest wind-speed available hitherto has been about 75 miles an hour, but in 1933 a tunnel with a wind-speed of 140 miles an hour was brought into use, and a similar tunnel is being constructed. These new tunnels are of the open jet type, *i.e.*, an object can be thrust from the surrounding still air into the center of the wind-stream. The air speed attainable in the new tunnels will be of great value in view of the constantly increasing speed of aircraft.

During the year the Radio Research Station at Slough has become part of the laboratory. The station equipped and took part in the Polar Year radio expedition which, under Professor E. V. Appleton, undertook ionospheric observations at Tromsö, in the north of Norway.

In the course of the year the department of physics investigated the method of reducing sound transmission between two rooms by a partition composed of two layers of material with an intervening air space. It was found that unless such a double panel was properly designed it might transmit more sound than one of its panels used alone.

The department of electricity is responsible for the maintenance of the ultimate electrical standards, a task involving great accuracy as on it depend charges running into many millions of pounds. Similarly the department of metrology is charged with the maintenance of the standards of length and mass. During the year it completed the task of measuring the yard and meter in terms of the wave-lengths of red cadmium light. The ideal of a standard of length which is an invariable physical constant has thus been realized. Over 16,000 taximeters used in London taxicabs were tested at the laboratory during the year owing to the increased initial fare.

The department of engineering made tests of cylinders for gas-propelled road vehicles. The department of metallurgy continued its research on dental amalgams with the object of finding a filling which will not expand with time.

The department of aerodynamics has carried out work on the spinning of aeroplanes, and the hope is confidently expressed that the difficulties in designing aeroplanes free from spinning troubles will soon disappear. There was a large increase in the number of ship models tested in the ship tanks for industrial firms during the year. Important results are said to have been made in the design of the smaller coast vessels.

THE DUTCH ELM DISEASE

IN less than a year the number of elm trees in this country found to have been infected with the Dutch elm disease has jumped from 10 to 1,480. During the last winter, scouts of the U. S. Department of Agriculture discovered more diseased elms than they found last summer, largely because systematic scouting did not begin until about September when a public works allotment was made available.

The area in which infection is most menacing in-

eludes the territory within a radius of 30 to 35 miles of New York harbor. How many more than 1,480 elms are infected will be brought out by further scouting by the Bureau of Entomology this spring and summer. Most of the diseased trees were found in New Jersey. In New York infected trees so far number more than 200. Only two have been discovered in Connecticut. More than 400,000 elms have been examined. When infection is found, the tree is destroyed.

At Cleveland and Cincinnati, where the first infected trees were found in 1930, it is hoped there are now no more cases of the disease. Only one infected elm was found last year and only nine in four years.

Not every sick elm has the Dutch elm disease, but elms with wilting, yellow or brown leaves, accompanied by brown streaks in the young wood, are under suspicion. If any elm has any of these symptoms, twigs which show the brown streaks should be sent at once to the newly established Dutch Elm Disease Laboratory, Room 207, Postoffice Building, Morristown, N. J. Small branches approximately ⅜ inch in diameter and 6 inches long make a satisfactory sample. A statement of the exact location of the tree should accompany each sample.

If a clean cut is made across a twig affected with the Dutch elm disease, a brownish discoloration will be seen in the sapwood. In general the discolored tissue does not form a completely closed circle, but is made up of numerous small, brown dots. If the bark is peeled away and the sapwood exposed, the discoloration is evident as a series of short, brown streaks.

An insect, the smaller European bark beetle, probably spreads the disease from tree to tree but there may be other important ways of spreading it. If it were possible to eradicate either all the infected trees or all the bark beetles, the spread of infection might cease. The bark beetle, carrying spores of the disease, feeds preferably in the crotches of tender elm twigs. The fungus, as it grows, travels up and down the tree, probably reducing the sap flow through the affected parts. Eventually it kills the tree.

Once the tree is infected and begins to die, it forms a perfect nest for eggs of the beetles. The female, followed by the male, burrows under the bark for an inch or more, leaving dozens of eggs. The young beetles emerge contaminated with spores, and, feeding upon other parts of the tree or other trees, complete the cycle of infection.

Tree surgeons, park superintendents and tree lovers everywhere can help in combating this menace to America's finest shade trees by being on the lookout all summer for the wilting, yellow or brown leaves, accompanied by brown streaks in the young wood.

FOURTH FIELD CONFERENCE OF PENNSYLVANIA GEOLOGISTS

THE fourth Field Conference of Pennsylvania geologists was held at Pittsburgh on May 25, 26 and 27. About 75 geologists attended. Most of those present were from Pennsylvania, but representatives from New York, New Jersey and West Virginia also came. The University of Pittsburgh, the Carnegie Institute of Technology and the Gulf Companies acted as hosts to the conference, ably represented by the local committee consisting of Henry Leighton, *chairman,* M. G. Gulley, *secretary,* R. W. Clark, I. P. Tolmachoff, C. R. Fettke, W. A. Copeland and B. Perkins.

Following registration at the Carnegie Museum on the morning of May 25, parties were conducted through the museum by Messrs. Tolmachoff and Burke. In the afternoon a choice of either one of two field trips was offered. The first of these, led by R. E. Sherrill, visited localities in and about Pittsburgh. Many important physiographic features were observed, including "the Allegheny peneplane" and the abandoned and present valleys of the Monongahela River. Sections in the Conemaugh formation at and near Brilliant were visited, where not only the stratigraphic succession but some interesting structural features thought to be of landslide origin were observed. The other Friday afternoon excursion, under W. A. Copeland, consisted of a trip through one of the larger bituminous coal mines of the Pittsburgh district.

General trips for the entire conference were held on Saturday and Sunday. The Saturday trip, under C. R. Fettke, toured the area immediately west and northwest of Pittsburgh, during which representative strata of practically the entire Pennsylvanian system were seen. Of particular interest were the thin, fossiliferous, marine limestones which appear in this section. The party crossed the northeastern end of the McDonald oil pool, and the largest coal stripping operation in western Pennsylvania which is run by the Harmon Creek Coal Company, was observed south of Florence. Certain physiographic features were also pointed out. On the Sunday trip, which was led by Henry Leighton, various observations were made going south from Pittsburgh to Uniontown. At Uniontown the party turned east to examine the well-known section exposed along the National Pike where it crosses the Chestnut Ridge anticline. Here are exposed beds assigned to the Allegheny, Pottsville, Mauch Chunk, Greenbrier, Pocono, Loyalhanna and Chemung. Important structural features are also observable. Fossil collecting was indulged in at a large quarry in the Loyalhanna limestone on the east