

of the air and visibility. A Weather Bureau observer checks the accuracy of the aerometeorograph, fastens it to the airplane before each flight, makes the necessary meteorological observations at the earth's surface before and during the flight, and puts into usable form the records brought down by the aerometeorograph and the pilot.

At the eight army stations—Mitchel Field, Long Island, N. Y.; Selfridge Field, near Detroit, Mich.; Wright Field, Dayton, Ohio; Scott Field, Belleville, Ill.; Kelly Field, San Antonio, Tex.; Maxwell Field, Montgomery, Ala.; Barksdale Field, Shreveport, La., and Boston, Mass.—Air Corps pilots and planes, using Weather Bureau instruments, make the daily flights. Weather Bureau observers do the rest of the work. At the seven other stations—Lakehurst, N. J.; Anacostia, D. C.; Norfolk, Va.; Pensacola, Fla.; San Diego, Calif.; Pearl Harbor, Hawaii, and Seattle, Wash.—the navy provides all equipment and does all the work.

A country-wide teletype and radio communication service—nearly all operated by the Bureau of Air Commerce, U. S. Department of Commerce—make it possible to transmit airplane weather observations instantaneously to the stations where they are to be used. From two stations not yet on one of these circuits—Sault Sainte Marie and Maxwell Field—the observations are telegraphed to the nearest point on the teletype circuits. Observations taken at Pearl Harbor go by navy radio to San Francisco, where they are put on teletype circuits.

Airplane observation flights are made at about the same time all over the country—4:00 A. M., Eastern Standard Time, except when the weather is unfavorable, particularly when the ceiling (base of the clouds) is lower than 800 feet or when visibility is less than 2 miles. At each station the information compiled at the end of the flight is coded and sent out over a teletype or radio circuit, or first by telegraph, to the six district forecast centers and other stations of the Weather Bureau. Reaching these stations by 8:30 A. M., E. S. T., the data are plotted on various kinds of charts, which, in conjunction with charts of surface, pilot balloon and cloud observations, give the forecasters the information they need in making the daily weather forecasts.

#### **COLLECTIONS OF WOODS OF THE WORLD AT YALE UNIVERSITY**

PROGRESS in tropical forestry and the world-wide study of woods by the Yale Forest School is the subject of a report recently issued. The Yale wood collections now contain over 32,500 specimens, representing more than 10,400 named species of 2,548 genera and 225 families. The additions during the last two

years alone almost equalled the total number of specimens on hand a decade ago.

The principal addition made to the collections was secured as a result of the visit of Professor Samuel J. Record to Holland. This consisted of a gift from the Commercial Museum of the Colonial Institute at Amsterdam of 2,215 Javanese wood specimens collected with herbarium material by Koorders during the years 1888–1894. This material was studied for more than 30 years by Dr. Janssonius of Holland, and the results of his work were published in six volumes. Students can now examine the actual material which is described in the text.

More attention in the future will be given to increasing the number of preparations for microscopic study. Last year, cross, radial and tangential sections of 973 specimens were added to the slide collections. These collections now contain slides of 5,235 specimens. Most of the slides have been received in exchange for wood samples, many of them coming from the Forest Research Institute, the Federated Malay States, the Imperial Forestry Institute, Oxford, the Biological Laboratories, Harvard, and the botanical department of the University of Michigan.

One of Professor Record's major projects has been the study of the timbers of British Honduras. The work was begun ten years ago in cooperation with the forestry department of the colony and with the Field Museum of Natural History. He collaborated in the authorship of a volume on this subject, published this year by the museum.

For the work in timber testing, it has been found advantageous to use specimens of little known but potentially important tropical trees, as the data thus obtained are contributions to science. Professor George A. Garratt has finished a paper on the trees known in British Honduras as "Waika Chewstick." It is planned to continue this work through arrangements with logging operators in tropical America.

Other activities include the building up of the herbarium, the identification of wood samples and the supplying of information to scientific men, timber dealers, wood users and to the general public.

#### **MEETING OF THE FOUNDER SOCIETIES OF THE AMERICAN INSTITUTE OF PHYSICS**

A JOINT meeting of the American Physical Society, the Optical Society of America, the Acoustical Society of America, the Society of Rheology and the American Association of Physics Teachers will be held in New York, from October 29 to 31.

This meeting, held at the time of the fifth anniversary of the American Institute of Physics, will consist partly of the regular papers of the separate societies and partly of sessions in which all the societies

will participate jointly. The joint sessions will emphasize the application of physics in the industrial world of to-day. Leaders in various fields have been invited to take part in symposia concerned with the training of physicists for industry and with the applications of physics in industry. While abounding in technical value, these symposia will be addressed to all who are interested in science, whether or not they are specialists in the fields discussed. Every effort is being made to arrange a program of exceptional interest.

The headquarters will be at the Hotel Pennsylvania, and all the meetings will be held at the hotel. Non-scientists as well as engineers and chemists are cordially invited to attend this meeting.

On Thursday morning Dean Homer L. Dodge will speak on the training of physicists for industry from the point of view of the educator, while Dr. A. R. Olpin, of Kendall Mills, will speak from the point of view of the industrialist.

The speakers for the symposium on "Physics in Industry," which will be held on Thursday afternoon and Friday morning, are Messrs. E. C. Sullivan, Zay Jeffries, Paul D. Foote, J. P. Den Hartog, John E. Burchard, O. E. Buckley, Clark B. Millikan and Joseph Slepian. The papers will cover many phases of applied physics. The individual societies are also planning feature programs which will be announced in the near future.

On Friday evening a large joint dinner meeting of all the societies will be held. As a special entertainment feature, John Mulholland, president of the Society of American Magicians, will perform.

#### RECENT DEATHS

DR. EDWIN OAKES JORDAN, professor emeritus of bacteriology at the University of Chicago, died on September 2 at the age of seventy years.

DR. BERNARD SMITH, director of the British Geological Survey and Museum of Practical Geology, London, died on August 19 at the age of fifty-five years. Dr. Smith joined the Geological Survey in 1906; in 1931 he was appointed assistant to the director, Sir John Flett, and in July, 1935, he succeeded him as director. Dr. Smith was awarded the Bigsby medal of the Geological Society in 1927 and was elected fellow of the Royal Society in 1923.

WILLIAM RINTOUL, for ten years manager of the research organization of Imperial Chemical Industries, Ltd., died on August 25 at the age of sixty-six years.

PROFESSOR BENJAMIN GEORGE CORMACK, emeritus professor of botany at the Anderson College of Medicine, Glasgow, died on August 12 at the age of seventy years.

PROFESSOR JULIUS TANDLER, head of the Russian Health Institute, Moscow, previously federal minister of health in Vienna and professor of anatomy at the University of Vienna, died on August 26. He was sixty-two years old. Dr. Tandler attended the first International Hospital Congress at Atlantic City in 1929. He returned to the United States last year and lectured at the Columbia-Presbyterian Medical Center and at Mount Sinai Hospital.

DR. LUIGI DEVOTO, professor of pathology in the University of Pavia, an authority on occupational diseases, died on July 20, aged seventy-two years.

THE recent death is announced of the geologist, Dr. Krishna Kumar Mathur, principal of the Science College, Benares Hindu University.

## SCIENTIFIC NOTES AND NEWS

DR. T. WAYLAND VAUGHAN, who recently retired as director of the Scripps Institution of Oceanography, La Jolla, will make his home in Washington, D. C., where he will continue his oceanographic work in connection with the U. S. Geological Survey and the U. S. National Museum. Before going to La Jolla in 1925, Dr. Vaughan had been senior geologist in the survey and associate in marine sediments at the museum.

PROFESSOR WILLIAM ERNEST CASTLE, who joined the faculty of Harvard University in 1897 as instructor in zoology, becoming professor in 1908, and who retired with the title emeritus last spring, has joined the faculty of the University of California,

where he plans to continue his work on genetics. He is expected to take up his residence at Berkeley next month.

AFTER serving as head of the department of zoology at Oberlin College for twenty-three years, Professor Robert A. Budington has requested that that office be transferred to Dr. Charles G. Rogers, professor of comparative physiology in the department. In other respects Dr. Budington will continue in the same relation as hitherto to the program of zoological instruction.

*Nature* reports that at the annual summer Conference of Advisory Plant Pathologists at the University of Leeds, Dr. Geo. H. Pethybridge, mycologist to