

reau of Entomology, and a member of the Federal Horticultural Board, died on October 13.

DR. JUAN GUITERAS, professor of pathology and tropical medicine at Havana and formerly of the University of Pennsylvania, known for his work on yellow fever, died on October 28 at the age of seventy-three years.

DR. ANDREW GRAY, F.R.S., emeritus professor of natural philosophy in the University of Glasgow, died on October 10 at the age of seventy-eight years.

J. Y. BUCHANAN, F.R.S., chemist and physicist to the *Challenger* expedition and vice-president of the Conseil de Perfectionnement de l'Institut océanographique de Paris, died on October 16, aged eighty-one years.

DR. A. RICHAUD, professor of pharmacology at the University of Paris, has died, aged sixty years.

A CORRESPONDENT writes that Dr. Earle Jay Babcock, dean of the college of engineering of the University of North Dakota, whose death on September 3 has been announced in *SCIENCE*, was born June 11, 1865, at St. Charles, Minnesota, graduated from the University of Minnesota in 1889 and began work at once as a member of the faculty of the University of North Dakota. His department at first was chemistry and geology, which changed with the growth of the institution until now it is industrial chemistry, mining and metallurgy. Dr. Babcock was the first state geologist of North Dakota, from 1897 to 1902, and was acting-president of the university in 1917-18. His researches and investigations for the development of the natural resources of the state were in many different lines of chemistry and geology, but were particularly extensive in the study and research for methods of manufacture or use of natural cements, lignite coals and pottery clays.

THE forty-third annual meeting of the American Ornithologists' Union will be held in New York City from November 9 to 12. The sessions will be held in the American Museum of Natural History, 77th Street and Central Park West, and the headquarters will be at the Sherman Square Hotel, Broadway and 70th Street. Monday will be devoted to business meetings and at 8 P. M. there will be a business session for the election of officers and members. The three following days will be devoted to the presentation and discussion of scientific papers. In connection with the meetings there will be an exhibition of bird paintings at the museum, showing the work of American artists, and on Friday, following the regular sessions, an excursion to the New York Zoological Park, 185th Street and Southern Boulevard. The union now has a membership of about 1,700, including more than 100

foreign members distributed in various parts of the world.

THE following public lectures will be given on Saturday afternoons at 3:30 in the museum building of the New York Botanical Garden: November 7, "Beautiful gardens of New York State," Mrs. John W. Paris; November 14, "Seeds as carriers of disease," Dr. C. R. Orton; November 21, "Original exploration of the Yellowstone National Park," Professor John M. Coulter; November 28, "Botanical features of Ceylon," Dr. H. A. Gleason.

UNIVERSITY AND EDUCATIONAL NOTES

AN anonymous gift of \$75,000, to be used in annual divisions of \$15,000, for increasing the teaching staff in the departments of physics and of electrical engineering, has been received by the Massachusetts Institute of Technology.

THE trustees of Union College have voted to spend \$50,000 on enlarging the physics laboratory. Ludlow Melius, of New York, has given the college funds to erect a greenhouse for the department of botany.

ON October 21 the science building of the University of Richmond was completely destroyed by fire. All the apparatus and material used for laboratory work in physics, chemistry, biology and botany was lost. The biology and chemistry libraries were burned together with much irreplaceable material.

CAPTAIN RALPH EARLE was inaugurated sixth president of Worcester Polytechnic Institute on October 22. Rear Admiral William V. Pratt, U. S. N., was the principal speaker.

NEW appointments at Stanford University include those of Dr. Gilbert Morgan Smith, of the University of Wisconsin, to become professor of botany, and Dr. Charles Vincent Taylor, of the University of California, associate professor of biology.

DR. EMILE HOLMAN, associate professor of surgery in the school of medicine of Western Reserve University, has been appointed to the position of associate professor of surgery at Stanford University.

DR. W. J. M. SCOTT, instructor in surgery in the school of medicine of Western Reserve University, is leaving to take the position of assistant professor of surgery in the new Rochester University Medical School on January 1, 1926.

DR. MAXWELL J. DORSEY, head of the department of pomology at West Virginia University, has gone

to the University of Illinois to be professor of pomology and chief of the department there.

APPOINTMENTS have been made to the directing board of the Buenos Aires Medical School as follows: Drs. Castex, Tamini, Speroni, Acuna and Elizalde, by the professors; Drs. Ivanissevich and Usolenghi, by the students.

DISCUSSION AND CORRESPONDENCE

PHOTOGRAPHY OF SHADOW BANDS

As numerous inquiries and press notices have appeared concerning the photography of shadow bands at the eclipse of January 24, 1925, some statement as to the method employed at Middletown by the members of our party may be of interest to readers of SCIENCE.

The success of the undertaking was due primarily to the special method and camera devised and provided by Professor A. E. Douglass, of the University of Arizona, at whose instigation this part of the program was carried out.

The camera consisted of a 13-inch concave mirror and film carrier with focal plane shutter so placed as to operate about six inches outside the focus. The mirror was directed to the sun and a series of exposures made on the out-of-focus image of the slender crescent for a few minutes before and immediately following totality. The method is identical to that used by Professor Douglass in the photography of artificial shadow bands as explained by him at the Washington meeting of the American Association, December, 1924, but so far as known has never before been used at any previous total eclipse.

The most satisfactory exposure was made about five seconds from totality. It shows the bands as atmospheric Schlieren sufficiently distinct for enlargement and reproduction. Measures of the photograph when reduced give for the distance between adjacent bands 2.5 inches, in close agreement with estimates from visual observations. The camera was set up and operated by Mr. D. W. Mann, mechanic at the Jefferson Physical Laboratory, to whose skill much credit is due.

It is of further interest to remark that in contrast to the conspicuous display of shadow bands at Middletown, Conn., Mr. R. F. Field, of the Department of Physics at Harvard, reported no shadow bands whatever visible in open country some twenty miles south of Providence, R. I. This emphasizes the local and atmospheric character of the phenomenon which so far as is known has eluded all attempts at photography until the last eclipse.

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SMITHSONIAN WEATHER FORECASTS

IN SCIENCE for October 2, 1925, Dr. C. G. Abbot, acting secretary of the Smithsonian Institution, comments adversely concerning a recent review of Smithsonian Publications on "Forecasting Weather." Dr. Abbot says three papers were reviewed; but he is in error, for four papers were included and their titles and serial numbers given. He enters a disclaimer regarding long-range forecasts, adding that "no person connected in any way with the Smithsonian has ventured any such excessively long-range forecasts or knows of any method of making them." It was far from the reviewer's mind to discredit work done by Abbot and Clayton, and I am sorry if injustice has been done to these gentlemen through any text of mine. During the spring and summer, however, we received forecasts from a high official source in New York and were told and our informant so believed that these were forecasts of the weather for New York City, based upon Smithsonian work. Dr. Abbot has stated that for more than a year "definite forecasts of New York temperatures, three, four and five days in advance; average weekly temperature departures forecast two days before the beginning of each; and average monthly temperature departures forecasts two days before the beginning of each month" were made and forwarded daily to the Smithsonian Institution. Our mistake was natural.

His chief objection to the review, however, is that in work of this nature there should be no humor. In my opinion he is unduly sensitive and has taken certain pleasantries about the "unhappy lot of the forecaster" (the heading of the article to which he objects) as applicable to himself. It was not so meant. For example, in speaking of a state of mind bordering on what the Scotch call "feckless indecision" we mentioned that a peace-loving community had served up to them recently the following official forecast:

WEEK-END FORECAST FOR E. AND S. E. ENGLAND.—*Indications are now less definite for unsettled weather though they are not yet definitely favorable for settled fair weather.*

Now it was the people of London, not the citizens of Washington, who had to bear up under this infiction. Surely Dr. Abbot will permit us to see the humor of the situation.

There is an old, old story, which I may be forgiven for repeating here, of the New England farmer who returned from a visit to Boston and proudly showed his wife a barometer. "Well, what good is it,