DONALD MATTHEWS, forester of the Tropical Plant Research Foundation of Washington, D. C., has left for Trinidad and other points in the Caribbean region to study problems of reforestation and rate of tree growth. Mr. William Crosby, associate forester of the foundation, is conducting similar studies in Porto Rico and Cuba.

DR. J. M. ALDRICH, curator of insects at the Smithsonian Institution, has left for Guatemala to make a collection of Central American flies which parasitize other injurious creatures.

CARLOS E. CHARDON, commissioner of agriculture and labor in the Government's Cabinet in Porto Rico, has been granted a three months' leave of absence and has gone to Colombia at the request of that government to organize a department of agriculture and establish an agricultural experiment station. Mr. Chardon is initiating a fungous survey of Colombia and plans to lead a mycological expedition into the interior of that country in the near future.

PROFESSOR JOHANNES WALTHER, of Halle, will be the guest of the geological department of the Johns Hopkins University, during the months of February and March of next year as visiting professor on the Speyer Foundation.

PROFESSOR KARL HERZFELD, of the University of Munich, will give a course of lectures on selected topics in kinetic theory during the summer session at the University of Michigan, from June 21 to August 13.

DR. WILLIAM E. WICKENDEN, of New York, director of research for the Society for the Promotion of Engineering Education, gave the commencement address at Lafayette College, on June 7.

DR. CHARLES P. BERKEY, of the department of geology, of Columbia University, recently gave a lecture at the University of North Carolina, at Princeton University and at Rutgers College, on the "Explorations of the Third Asiatic Expedition during 1925 in Central Asia."

DR. HEBER CURTIS, director of the Allegheny Observatory, addressed the Sigma Xi Alumni Association of the University of Pittsburgh at the last meeting. His topic was "The Astronomical Results and Problems of the Recent Solar Eclipse."

DR. GEORGE R. LYMAN, dean of the West Virginia College of Agriculture at Morgantown and previously pathologist in the Bureau of Plant Industry at Washington, D. C., died on June 7, aged fifty-five years.

PROFESSOR SAMUEL HOMER WOODBRIDGE, president of the Sanitary Engineering Company and for many years lecturer on heating and ventilation at the Massachusetts Institute of Technology, died on June 7.

DR. CHARLES B. DUNLAP, for twenty-four years chief assistant in the New York Psychiatric Institute on Ward's Island, died on June 7 at the age of sixty-four years.

THE death is announced, at the age of sixty years, of Benjamin E. Carter, associate professor of mathematics at Colby College.

DR. H. B. GUPPY, F.R.S., distinguished for his work on plant dispersion and coral-reef formation in the Pacific, died on April 23 at the age of seventy-one years.

SIR FREDERICK MOTT, the well-known British neurologist, died in Birmingham on June 8 at the age of seventy-two years.

THE Upsilon Chapter of the Phi Sigma Biological Society was installed in Miami University, Oxford, Ohio, on May 7, Dr. H. J. Van Cleave, of the department of zoology, University of Illinois, acting as installing officer on behalf of the council. Phi Chapter was installed in the University of New Hampshire on May 21, by Dr. Carl L. Wilson, department of biology, Dartmouth College.

THE city of Wiesbaden has appropriated 100,000 marks for the erection and equipment and 50,000 marks annually for the support of an institute for scientific research in balneology and metabolism.

UNIVERSITY AND EDUCATIONAL NOTES

BY the will of Mrs. Ellen Mills Borne, Columbia University receives $300,000, on the death of her brother, to found a chair in medical and surgical research, in memory of her husband, John E. Borne.

GIFTS amounting to $450,000 were announced at the recent commencement of Vassar College.

LELAND RUSSELL VAN WERT, for the past six years a member of the faculty of the Harvard Engineering School, has been named assistant professor in metallurgy at the Carnegie Institute of Technology. The appointment is announced as a further step in the reorganization of the Department of Mining and Metallurgical Engineering, Professor James Aston, former metallurgical engineer with the A. M. Byers Company, having been placed in charge of the department several months ago subsequent to the death of Professor Fred Crabtree and the recent resignation of Professor F. F. McIntosh.

DR. HORACE S. UHLER has been appointed associate professor of physics in the Sheffield Scientific School of Yale University.

DR. OTTO LAPORTE, Ph.D. (Munich), who has been for the past two years at the Bureau of Standards,

as a fellow of the International Education Board, has accepted appointment as instructor in physics in the University of Michigan for the year 1926–27.

DR. I. S. FALK has been promoted to the rank of associate professor in the department of hygiene and bacteriology of the University of Chicago.

DISCUSSION

AN OUTDOOR OPTICAL EXPERIMENT

DISTANT landscapes, even in the clearest weather, are seen through a blue "haze" which is doubtless due to light scattered by the molecules of air. This effect is unusually conspicuous and remarkably beautiful in the Grand Canyon and the adjacent country. During a conversation with friends at the observatory it occurred to the writer that this blue light should be partially polarized and should therefore show variations when observed through a Nicol prism. Observations made on a trip to the Canyon and the Painted Desert show that this effect is remarkably conspicuous. As the Nicol is rotated the blue haze is alternately intensified and very greatly diminished. In the position of the greatest extinction the details of the distant landscape become much more conspicuous, while the sky between them is greatly darkened. The color scheme is strikingly changed, distant objects appearing more nearly in their true colors, while the whole landscape takes on a singular appearance, much resembling that which is observed a few minutes before or after totality during a solar eclipse, when the light, coming from the sun's limb, is deficient in the blue rays.

This polarization effect is at a maximum 90° from the azimuth of the sun (as might be expected) and is inconspicuous under the sun or opposite it, unless the sun is high in the sky. Distant clouds show it, as well as distant mountains, and have the advantage of being available from all stations. They are usually brighter than the sky in all positions of the Nicol, but most conspicuous when it is set for maximum transmission. A small wisp of cloud observed over the Grand Canyon appeared, however, bright on a dark sky when observed with maximum extinction, and dark on a bright sky with maximum transmission. This cloud was probably low in the atmosphere, so that the unpolarized light reflected from it, when diminished to half by the interposition of the Nicol, was less than the principal polarized component of the light scattered by the air behind it, but greater than the component polarized in the perpendicular direction. With the unaided eye, this cloud was just discernible, mainly by its color.

In general, it appeared that all details visible with the polarizing device could also be seen, though more faintly, with the unaided eye; but in some cases, among distant clouds, the Nicol prism seemed to show more than could otherwise be seen. This use of a familiar optical appliance must have been suggested before—perhaps many times—but it appears to be little enough known to justify this note. The effect under favorable circumstances is conspicuous enough to be of interest to the least informed spectator. In intimating the true colors of distant objects, and in detecting faint clouds, it may be of some value to the serious observer, and it should be of use to teachers of optics as affording a simple and striking demonstration experiment.

HENRY NORRIS RUSSELL

LOWELL OBSERVATORY

SEISMIC WAVE VELOCITY AND DENSITIES OF CRUSTAL MATERIALS

IN "A Seismological Note" in the issue of SCIENCE for March 19, 1926, Dr. Perry Byerly draws the conclusion that "the increased velocity of seismic waves beneath the Pacific can not be cited as an evidence of greater density beneath oceans than beneath continents."

It is true that certain writers have been guilty of incomplete statement when they have cited the increase of velocity in question as a proof of increased density. For it is well known that in general an increase in velocity from medium to medium may be accompanied either by an increase in density or by a decrease in density, or indeed by no change in density at all.

But in the case under consideration we are not dealing with elastic media in general, but with the crustal materials of the earth. Nor are we dependent solely upon the general considerations of elastic theory, for we have at hand experimental data of unquestionable reliability on the properties of a considerable range of typical crustal materials. I wish to point out on the basis of these data that an increase of velocity of seismic waves traversing a given portion of the earth's crust is indeed rather good evidence of greater density in that portion.

Adams and Williamson have shown[1] *that if typical crustal materials be arranged in the order of increasing velocities of seismic waves they will then also be in the order of increasing densities.* The only considerable exceptions are the heavy iron minerals pallasite and siderite, which are probably important only at considerable depths. Omitting pallasite and siderite from the list, as we pass from granite to dunite an increase in velocity of the P-waves from 5.6 to 7.3 and

[1] L. H. Adams and E. D. Williamson, "The Composition of the Earth's Interior," Smithsonian Report for 1923, page 250.