ments were made for a similar series of talks originating in New England to be given from Westinghouse Stations WBZ at Springfield, Mass., and WBZA at Boston under the auspices of the Burgess Radio Nature League in cooperation with the Smithsonian Institution.

THE American Medical Association is to publish a journal on pathology to be known as the *Archives of Pathology and Laboratory Medicine,* beginning with January, 1926. The editorial board for this new journal has not been made public.

MORE than 4,000 specimens of the minerals of rarer metals gathered by Frank L. Hess, during eighteen years' service with the U. S. Geological Survey, have been turned over to the U. S. National Museum. These specimens will form an important addition to the collection.

THE late Miss Lilian Suzette Gibbs, of Teneriffe, Wales, a well-known botanist, has left to the trustees of the British Museum (Natural History Botanical Department) her collections of plants and books and papers connected therewith, and to the University of London such a sum as will produce a net annual income of £150 for a studentship in cancer research, either on the physiological or the chemical side, to be called "The Laura de Saliceto Studentship" in memory of her mother.

THE *Riforma Medica* states that the Argentine government has donated 10,000 liras to the Grassi Institute at Rome for study of parasitic diseases.

AT Yale University funds have been provided for the promotion of two pieces of research in the school of medicine. A grant from the Henry B. Loomis Fund will be used by Dr. Dudley J. Morton, instructor in surgery, for an investigation of the mechanics of the human foot and its disorders, and a gift of $5,000 from Mrs. Philip J. Goodhart and her son, Howard L. Goodhart, Yale, '05, of New York City, provides for the further investigation of a scarlet fever antitoxin by Dr. Francis G. Blake, chairman of the department of internal medicine.

THE governing board of the University of Michigan has recently accepted the management of the Menominee County Agricultural School, located at Menominee in the Upper Peninsula. It is the plan of the board to continue the present course of study, which is of a secondary type, and to add such other courses in agriculture and home economics as will extend the service of the institution to that portion of the state. For the next two years $75,000 has been appropriated by the state to operate the school. Karl Knaus, formerly county agent leader in Kansas, has been appointed superintendent.

UNIVERSITY AND EDUCATIONAL NOTES

ASA CANDLER has made an additional gift of $300,000 to Emory University, Atlanta, Ga., bringing the total amount of his gifts to the institution up to $7,000,000.

THE University of Wisconsin has decided to lengthen its course in pharmacy from two to three years. This is in conformity with the recommendation of the American Conference of Pharmaceutical Faculties, in which thirty-four leading universities hold membership.

HENRY O. LINEBERGER, president of the North Carolina State Dental Society, is chairman of a committee of five dentists, comprising S. J. Betts, Hillsboro; Isaac H. Davis, Oxford; G. L. Hooper, Duke; J. H. Judd, Fayetteville, designated by the dental profession to endeavor to secure the erection and maintenance of a first-class college of dental medicine and surgery in North Carolina.

PROFESSOR W. O. HOTCHKISS, state geologist of Wisconsin, has announced his acceptance of the presidency of the Michigan School of Mines at Houghton, Mich.

DR. JOHN W. BURKE has been appointed professor of ophthalmology in the Georgetown University Medical School to succeed Dr. William H. Wilmer, who recently went to the Johns Hopkins Medical School.

PROFESSOR FREDERICK WOOD, of Lake Forest College, has been appointed professor of mathematics at Wesleyan College, Macon, Ga.

C. C. HAMILTON, associate entomologist at the University of Maryland, has been appointed associate professor of entomology at Rutgers University.

DR. W. H. PYLE, of the University of Missouri, has gone to Teachers' College, Detroit, to carry on research and teaching on the psychology of learning.

CHAS. W. RODEWALD, formerly an instructor in the department of chemistry at the University of Nebraska, has been appointed assistant professor of chemistry at Washington University, St. Louis.

DR. WILLIAM W. GRAVES, for a number of years chairman of the department of neurology at the St. Louis University School of Medicine, has been appointed director of the department; Drs. Louis Rassieur and Max W. Myer have been advanced from the rank of associate professors of surgery to professors of surgery.

DR. PERCY BRIGL, first assistant in the institute of

physiological chemistry at the University of Tübingen, has been appointed professor and director of the institute of agricultural chemistry at the Agricultural High School at Hohenheim.

DR. FELIX HAFFNER, of Munich, has been appointed professor of pharmacology at the University of Königsberg to take the place of Professor H. Wieland, who has retired.

DISCUSSION AND CORRESPONDENCE

SOLAR VARIATION AND THE WEATHER

IN the New York *Times'* issue of July 26, Dr. McAdie, director of Blue Hill Meteorological Observatory, reviews three papers by Messrs. Clayton, Hoxmark and Abbot recently published by the Smithsonian Institution. Like many others, for instance, Floyd W. Parsons in the *Saturday Evening Post* of July 25, Dr. McAdie appears to understand that persons connected with the Smithsonian Institution have predicted cool or disastrous summers for 1925, 1926 and 1927.

This is not the case. 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. This mistake arises from confusing with us Mr. Herbert Janvrin Browne and perhaps others who have no connection at all with the Smithsonian Institution, though they claim to make use of some of our results. We disclaim all responsibility for their forecasts.

The story we told in the three articles referred to was mainly twice told, once by their texts, and again by their illustrations, but yet Dr. McAdie does not appear to have grasped it. Certainly he has not clarified it for his readers, and therefore I venture to do so. Perhaps Dr. McAdie, as they say, failed to see the forest because it was obscured by the trees.

What we told is essentially this: Measurements by the Smithsonian Institution of the sun's rays available to warm the earth have been going on for twenty years. Since 1918 they have been made on every possible day at our Chile observatory, and since 1920 have also been made at our Arizona observatory. Prior to that, and from their inauguration in 1905, they were made, during part of the year only, at Mount Wilson, California. The duplicate daily results since 1920 agree within one half per cent., and combine to indicate decided variability of the sun.

Some authorities still doubt the adequacy of our proof of the sun's variability. In the paper by Abbot, their objections are discussed, and many confirmatory evidences tending to support the view of the variability of the sun are given.

If the sun varies, the earth's weather ought to vary, too. Mr. Clayton has examined this question for more than ten years, first while official forecaster of Argentina, and since 1923 privately, with financial support by Mr. John A. Roebling, and working in cooperation with the Smithsonian Institution.

As early as 1917, Clayton appeared to find definite relations between the solar changes reported by the Smithsonian Institution and weather changes in all parts of the world. He reduced these relations to a system of weekly forecasting which was adopted officially in Argentina in December, 1918, and is still used there.

Hoxmark, who succeeded Clayton as Argentine official forecaster, gives in his paper the degree of success in making definite forecasts of temperature and rainfall for Buenos Aires each week since he assumed charge in 1922. He employs the much-used mathematical method of correlations in comparing the predictions with the events, because it is independent of personal bias. One does not see why Dr. McAdie should make fun of so sensible a procedure. The Argentine official weekly forecasts, while by no means perfect, are in the right direction by far the most of the time, and are *sold*, not given away, to satisfied customers.

Clayton's paper reports his recent studies of the weather of the United States in its relations to the apparent solar changes. Having found clear evidences of many such relations, he has reduced his results to a system of forecasting of temperatures for the city of New York. To make a rigid test, he had, for over a year, forwarded daily to the Smithsonian Institution definite forecasts of daily New York temperatures three, four and five days in advance, average weekly temperature departures forecasted two days before the beginning of each week, and average monthly temperature departures forecasted two days before the beginning of each month.

The Smithsonian Institution has compared these forecasts with the events for a period exceeding one year, and finds by mathematical methods, altogether without opportunity for personal bias, that a real foreknowledge by Mr. Clayton is exhibited.

It is true that the correlations are not high. The relations between solar variation and the weather are highly complicated. Much more work and study are required to make them clearer. Moreover, the accuracy and fullness of the solar data are still not adequate to the purpose. Fortunately the National Geographic Society has recently financed the installation of a third solar observatory to be located in the eastern hemisphere and to cooperate with the two in Chile and Arizona. If further studies by Clayton and others seem to warrant going on with this new departure in weather forecasting, it is to be hoped