nish through the United States Weather Bureau, the telegraph companies, the Associated Press and Science Service, daily or 10-day mean values of the solar constant of radiation for use in weather forecasting, beginning on January 1. For the purpose of studying the solar constant of radiation, the Smithsonian Institution has established observatories on the top of the Andes Mountains in Chile and on Table Mountain, California. It is from these stations that the institution proposes to broadcast through the agencies named, if they wish the information, the values of radiation.

IN consideration of the excessive use of laurel, ground pine and holly for Christmas decorations, the Brooklyn Botanic Garden held an exhibit from December 8 to 23, the purpose of which was to show cultivated plant materials which should prove satisfactory as substitutes for the wild plants above mentioned.

ACCORDING to the *American Medical Journal*, a research section has been established by the U. S. Veterans' Bureau, and Dr. Philip B. Matz has reported to the central office for duty as chief. The purpose of the section is to study available medical data, the results accomplished, the developments of new policies, and the investigation of standards in medical centers for improvement of clinical work and the furtherance of research. The chief will be responsible for the study of the clinical material in the hospitals and outpatient departments of the bureau, with particular reference to the results of treatment. He will survey the records kept in the central office and in the field to determine their adequacy for the purpose of investigation. Certain laboratories of the bureau will be designated as research laboratories, which in addition to caring for the routine of the institutions concerned will engage in broader work to be assigned from time to time. These laboratories will also be distributing centers for culture mediums, standardized solutions, Wassermann reagents, typhoid and other cultures and various agglutinating serums.

THE International Institute of Intellectual Cooperation, of the League of Nations, has according to the London *Times* settled into the offices which have been provided for it in Paris by the French government. It occupies a large suite of rooms in the southern end of the Palais Royal, overlooking the gardens, a suite which includes a fine range of galleries. The Director of the Institute is M. Julien Luchaire, who has at present a staff of about forty persons working under him on the task of establishing a clearing house of information from all countries, which will be of use in guiding students in their researches.

UNIVERSITY AND EDUCATIONAL NOTES

PRINCETON UNIVERSITY has received a gift of $1,000,000 from the General Education Board for increases in equipment and facilities for advanced teaching and research in the physical and biological sciences. This endowment is conditional on Princeton's raising an additional $2,000,000 for the same purpose.

THE board of trustees of Johns Hopkins University has approved the plan to abolish the undergraduate school at the university. To become effective the plan must now be approved by the State Legislature.

RAWSON LABORATORY, a $600,000 six-story building, was dedicated on December 17 as a part of the Rush Medical College of the University of Chicago.

IT is reported that the Rockefeller Foundation, of New York, has offered to establish reciprocal research scholarships, somewhat similar to the Rhodes scholarships, between American and Australian universities. Professor Copeland, of Melbourne University, has been invited to the United States to arrange the details of the plan, and the university council has granted a leave to him.

DR. PARKE REXFORD KOLBE, formerly president of the Municipal University of Akron, will be installed as the new president of the Brooklyn Polytechnic Institute on January 13.

DR. ERWIN RUDOLPH SCHMIDT, of the staff of the Augustana Hospital, has been appointed professor of surgery at the University of Wisconsin and surgeon of the Wisconsin General Hospital, to take the place of Dr. Carl A. Hedblom, who recently resigned to accept a similar position at the University of Illinois.

DR. FREDERICK HOWARD FALLS, professor of obstetrics and gynecology at the University of Iowa, has accepted an appointment to head similar work at the University of Illinois in the medical school in Chicago.

PROFESSOR H. WILDON CARR, of London, is serving as visiting professor of philosophy at the University of Southern California during the current academic year.

DR. HENRY STEPHEN, senior lecturer in chemistry at the University of Manchester, has been appointed to the chair of chemistry in the University of the Witwatersrand, Johannesburg.

PROFESSOR H. A. BROUWER, of the Technical Institute at Delft, Holland, has been appointed professor

of geology at the University of Utrecht. Dr. Brouwer will not leave the chair of geology at Delft, but will go to Utrecht to give his courses.

PROFESSOR HANS RADEMACHER, of the University of Hamburg, has been appointed professor of mathematics at the University of Breslau.

DISCUSSION AND CORRESPONDENCE

PROJECTION OF ULTRA-VIOLET LINES

RECENTLY, when attempting without quartz lenses or prisms to demonstrate the existence of ultra-violet lines in the spectrum of mercury, I projected the image of a slit in front of a "Laboratory Standard" mercury vapor lamp onto a "day-light screen" (Trans-Lux), using only a flint prism and a single crown lens. I expected to use a fluorescent screen to pick up the ultra-violet lines but found that the trans-lux screen showed these lines up, though not brightly. The lines were easily visible at a distance of five feet.

I could only convince myself that these were ultra-violet lines by these arguments: (1) the lines were not at all the correct color for the violet end of the spectrum; (2) they were not due to stray light; (3) when falling on anthracene they produced fluorescence, even when the slit was covered with an ultra-violet wave-filter.

Perhaps a more powerful source of light, with proper lenses and prism, would bring these lines out strongly enough for a large lecture room, especially when the wave-filter cuts off the visible spectrum.

PAUL F. GAEHR
WELLS COLLEGE

INFLUENCE OF AIR AND SUNSHINE ON THE GROWTH OF TREES

A CASE came under my observation this past summer that will furnish an example of some value to teachers of botany and crop production of the advantage of ample air and sunlight for growing plants.

Mr. A. L. Rogers, of Waterville, Washington, in order to study past variations in climate in that locality, made a section of a forest tree for the purpose of studying the thickness of the annual growth rings and correlating variations in this thickness with known variations in rainfall for the past thirty-three years—the records of rainfall being available for that period. I recently had the opportunity of examining the section. Assuming that a ring of growth has been made each year, the tree was a seedling in the year 1820. Up to, and including the year 1898, the average thickness of the annual rings was approximately one sixteenth of an inch. Beginning with the year 1899, and extending to 1924, when the tree was cut, the rings had an average thickness of approximately three sixteenths of an inch. I suggested to Mr. Rogers that the region must have been logged off in the winter of 1898–9; that previous to that time the tree had been closely surrounded by other trees and thus was unable to secure the necessary air and sunshine for maximum growth; that after the logging off, the rate of growth of the tree had been about tripled.

Investigation revealed that this suggestion was in accordance with the facts. Several stumps, much decayed, were found in the immediate vicinity of the tree, and the date of the logging off operations proved to be the date suggested by the change in rate of growth of the tree.

Additional moisture available to the tree after the logging operations may also have been a factor in the increased rate of growth.

W. J. SPILLMAN
U. S. DEPARTMENT OF AGRICULTURE

AN UNUSUAL STRAIN OF SERRATIA MARCESCENS BIZIO

A STRAIN of *Serratia marcescens* which, so far as we have any knowledge, has been kept in the laboratory of the department of botany of Wellesley College for at least four years, has developed characteristics unusual for this species. It seems worth while to make a brief note of these variations.

The following culture reactions were obtained with this organism: agar streak varying from white to pink and red, taking on a very bright color and metallic luster with age, *the pigment sinking into the agar,* in some instances for several millimeters; *pigment formed at 35° C.–37° C., soluble in water* and alcohol, slightly soluble in chloroform; gelatin liquefied rapidly, the medium becoming red; nutrient broth turbid after two days, then becoming *red throughout* and showing a thin pellicle; no gas in *dextrose,* sucrose or lactose broths after two weeks, dextrose and sucrose acid; the reaction in lactose broth was rather peculiar and necessitated more extended experimentation which can not be reported at this time; indol not produced; nitrates reduced to nitrites; potato agar showing a very luxuriant, rose-colored growth; growth on starch agar as on nutrient agar and the color bright red; 30 per cent. peptone agar, producing a very light pink growth; litmus-milk acid and coagulated with little or no peptonization. The form is Gram negative, and motile with peritrichous flagella. The italics indicate the deviations from the description given in Bergey's Manual.[1]

[1] Bergey's "Manual of Determinative Bacteriology," Williams and Wilkins, Baltimore, 1923.