

necessarily numerous on the floor of an open woods like our Arboretum. The necessity therefore of protecting the superficial parts of the root system, even of a deep-rooted tree like blue gum is perfectly obvious from the foregoing description.

One more conclusion can be drawn from these observations. The Monterey cypress above referred to, was growing at no great distance from the eucalyptus trees but was in no wise impoverished by its more rapidly growing neighbor. There is a general impression, based no doubt on a certain amount of accurate observation, that the eucalyptus is a bad neighbor and that trees, shrubs, and herbaceous plants set too close to eucalyptus trees will suffer for lack of water. The above observation shows that if the plants set near eucalyptus have the habit of sending their roots lower than the superficial part of the root system of the eucalyptus, such results will not follow.

Therefore, it would seem to be possible, notwithstanding general belief to the contrary, to plant trees and shrubs fairly close to eucalyptus providing they can get along with the amount of light which the growing eucalyptus will keep from reaching the surface of the soil. This may make possible the fuller utilization of areas of soil already carrying a certain number of eucalyptus trees.

JAMES McMURPHY,  
GEORGE J. PEIRCE

STANFORD UNIVERSITY,  
November 1, 1919

## THE MATHEMATICAL ASSOCIATION OF AMERICA

THE fourth annual meeting of the association was held at Columbia University on Thursday and Friday, January 1 and 2, 1920. A joint dinner with the American Mathematical Society occurred on Wednesday evening. About 150 were in attendance at the various sessions.

The general topic for all sessions was "Mathematics in Relation to the Allied Sciences." The program was as follows:

"Mathematics for the physiologist and physician," Dr. Horatio B. Williams, assistant professor of physiology, College of Physicians and Surgeons.

"The regular solids and the types of crystal symmetry," Dr. Paul L. Saurel, professor of mathematics, College of the City of New York.

"The mathematics of physical chemistry," Professor George B. Pegram, dean of the school of mines, engineering and chemistry, Columbia University.

"The mathematics of biometry," Dr. Lowell J. Reed, associate professor of biometry and vital statistics, Johns Hopkins University.

"An experiment in the conduct of freshman mathematics courses," Dr. F. B. Weley, professor of mathematics, Denison University.

Preliminary report of the National Committee of Mathematical Requirements, Dr. John W. Young, professor of mathematics, Dartmouth College.

"Mathematics for students of physics," Dr. Leigh Page, assistant professor of physics, Yale University.

At the business meeting the election to membership by the council of 73 persons and two institutions was announced. The treasurer's report showed receipts of \$4,728 on 1919 business, expenditures (up to December 15, 1919) of \$4,317, and an estimated final balance of \$2,050 for the end of the year 1919.

The result of the election of officers was as follows:

*President:* David Eugene Smith, Columbia University.

*Vice-presidents:* Helen A. Merrill, Wellesley College, and E. J. Wilczynski, University of Chicago.

*Additional members of the Council* (to serve until January, 1923): R. D. Carmichael, University of Illinois; E. R. Hedrick, University of Missouri; H. E. Slaught, University of Chicago, and J. W. Young, Dartmouth College.

To fill the vacancies caused by the election of Professor Wilczynski to a vice-presidency and the reappointment of Professor Slaught as manager of the *Monthly*, the council appointed as members of the council E. L. Dodd, University of Texas, and Oswald Veblen, Princeton University.

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## SCIENCE

A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science

Published every Friday by

## THE SCIENCE PRESS

LANCASTER, PA.

GARRISON, N. Y.

NEW YORK, N. Y.

Entered in the post-office at Lancaster, Pa., as second class matter