

Mr. Curtis C. Howard, Columbus, O.
 Professor William R. Lazenby, Columbus, O.
 Dr. C. L. Mees, Terre Haute, Ind.
 Dr. T. C. Mendenhall, Ravenna, O.
 Dr. Sidney A. Norton, Columbus, O.
 Mr. D. E. Williams, Columbus, O.

In the business session the most notable action was the adoption of a constitutional amendment, suggested at the previous annual meeting, by which the date of the annual meeting is changed from Thanksgiving to March or April, the exact date to be fixed by the executive committee. By vote of the academy the next meeting will be held in the spring of 1916.

The trustees of the research fund announced a further gift by Mr. Emerson McMillin, of New York, of \$250 for the encouragement of the research work of the academy.

As a result of the suggestions contained in the address by Dr. Mendenhall, on "The Relation of the Academy to the State and to the People of the State," a committee on legislation was appointed, consisting of Dr. T. C. Mendenhall, chairman, Professor F. C. Waite and Professor Herbert Osborn.

The previous affiliation of the academy with the *Ohio Journal of Science* was continued with minor modifications; but the incoming president was instructed to appoint a committee to confer with the committee on legislation and to "investigate carefully possible ways and means whereby the academy can successfully take over the *Ohio Journal of Science* and how soon this can be done, the committee to report back to the academy at its next annual meeting." President Hubbard appointed Professor J. Warren Smith, chairman, Professor Frank Carney, Professor F. C. Waite, Professor J. S. Hine and Professor C. G. Shatzer.

Forty-one new members were elected at the meeting.

The officers and standing committees for 1915-1916 will be as follows:

President—Professor G. D. Hubbard, Oberlin College.

Vice-president for Zoology—Professor F. L. Landacre, Ohio State University.

Vice-president for Botany—Professor M. E. Stickney, Denison University.

Vice-president for Geology—Professor T. M. Hills, Ohio State University.

Vice-president for Physics—Professor L. T. More, University of Cincinnati.

Secretary—Professor E. L. Rice, Ohio Wesleyan University.

Treasurer—Professor J. S. Hine, Ohio State University.

Executive Committee, together with the president, secretary and treasurer, members *ex-officio*—Professor L. B. Walton, Kenyon College, and Professor C. G. Shatzer, Wittenberg College.

Trustees of Research Fund—Professor W. R. Lazenby, Ohio State University; Professor M. M. Metcalf, Oberlin College; Professor N. M. Fenneman, University of Cincinnati.

Publication Committee—Professor J. H. Schaffner, Ohio State University; Professor C. H. Lake, Hamilton; Professor L. B. Walton, Kenyon College.

Library Committee—Professor W. C. Mills, Ohio State University; Professor F. O. Grover, Oberlin College; Professor J. A. Culler, Miami University.

EDWARD L. RICE,
Secretary

DELAWARE, OHIO

THE TENNESSEE ACADEMY OF SCIENCE

THE sixth meeting (fourth annual meeting) of the Tennessee Academy of Science was held on November 26, 1915, at George Peabody College for Teachers, Nashville, Tenn. President W. E. Myer presided. The following papers were read and discussed:

"Why Potteries should be Established in West Tennessee," by Wilbur A. Nelson.

"Preservation of Our Forests," by R. S. Maddox.

"Cause of the Stylolitic Structure in the Tennessee Marble," by C. H. Gordon.

"Phosphate Rocks of Johnson County, Tenn.," by Olaf P. Jenkins.

"The Evolution of Mississippi River Craft as Influenced by Geographic Conditions," by Charles C. Colby.

"Recent Results in Mathematical Astronomy," by H. E. Buchanan.

"An Irrigation Slide for Prolonged Observation of Living Aquatics"; (b) "A Simple Device for Aerating Aquaria"; by Samuel M. Bain.

"Guessing as Influenced by Odd Numbers," by F. B. Dresslar.

"Nature and Origin of the Holston Marble Formation in East Tennessee," by C. H. Gordon.

"The Ordination of Sciences in Education," by R. I. Raymond.

Memorial Sketches of Deceased Members: (a) "Dr. William L. Dudley," by L. C. Glenn; (b)

"Dr. James A. Lyon," by J. I. D. Hinds; (c) "Mr. James H. Baird," by S. Cecil Ewing.

Annual address of the president: "The Probable Origin of the American Indian," by W. E. Myer.

The election of officers for the ensuing year resulted as follows:

President, Samuel M. Bain, University of Tennessee, Knoxville, Tenn.

Vice-president, Samuel M. Barton, University of the South, Sewanee, Tenn.

Secretary, Roscoe Nunn, U. S. Weather Bureau, 1235 Stahlman Building, Nashville, Tenn.

Treasurer, Archibald Belcher, Middle Tennessee State Normal School, Murfreesboro, Tenn.

Editor, A. H. Purdue, State Geological Survey, Nashville, Tenn.

The president appointed as members of the executive committee, J. I. D. Hinds, Castle Heights School, Lebanon, Tenn., and F. B. Dresslar, George Peabody College for Teachers, Nashville, Tenn.

ROSCOE NUNN,
Secretary

NASHVILLE, TENN.

SOCIETIES AND ACADEMIES

THE BOTANICAL SOCIETY OF WASHINGTON

THE one hundred and sixth regular meeting of the Botanical Society of Washington was held in the assembly hall of the Cosmos Club at 8 P.M., October 5, 1915. Thirty members and two guests were present. The following scientific program was given:

Some Recent Investigations in Sugar-beet Breeding (with lantern): MR. F. J. PRITCHARD.

The speaker presented a large number of tables and figures based upon ten years' experiments in sugar-beet breeding from which the following conclusions were drawn: Differences in the size, total sugar content and percentage of sugar of individual beet roots show no evidence of inheritance. There is no correlation between percentage or quantity of sugar of roots of ordinary sizes and their yield of seed, nor between their yield of seed and the average percentage of sugar in their progeny. Fluctuations in percentage and yield of sugar of beet families planted in progeny rows in alternation with check rows greatly exceed their real differences. The discontinuance of selection for one generation caused no deterioration, but some apparent gain in percentage of sugar. No

improvement was obtained in yield or percentage of sugar from continuous selection. Both the good and the poor families transmitted average qualities. Fluctuations in percentage and yield of sugar are caused chiefly by irregularities of the soil. The nutritive conditions which favor the production of a large root cause a large tonnage of beets, but a low percentage of sugar. Even with a uniform stand certain rows and certain parts of the field produce a relatively small root and consequently a high percentage of sugar, while neighboring areas produce a large root and a low percentage of sugar. As the fluctuations in percentage and yield of sugar are large, they obscure real differences between varieties or families but real differences may be distinguished by planting each variety or family a large number of times.

Notes on Plant Parasitic Nematodes (with lantern): MR. L. P. BYARS.

After a few introductory remarks concerning the general characteristics of the three groups of nematodes—the free living, animal parasitic, and plant parasitic—the speaker indicated some of the more important anatomical and life-history features of species belonging to the last group. Emphasis was laid on the economic importance of and present distribution of *Tylenchus dipsaci*, the bulb and stem-infesting nematode; *Tylenchus tritici*, a nematode living in wheat kernels; *Aphelenchus armerodis*, the violet bud organism; and *Heterodera radiculicola*, the gall-forming nematode, all of which are parasites introduced into this country. Illustrations and drawings were used to show the speaker's method of growing *Heterodera radiculicola* in pure culture, and to indicate the effect of this parasite on its host.

The First Washington Botanical Society: MR. P. L. RICKER.

While collecting material for the bibliography and biography in the forthcoming *Flora of Washington* I first learned¹ of the existence of a Washington Botanical Society organized on March 13, 1817, with thirteen charter members, consisting of John Boyle, W. A. Bradley, Dr. John A. Brerton, Samuel Elliot, Jr., William Elliot, J. W. Hand, Dr. Henry Huntt, Maj. James Kearney, Rev. Dr. James Laurie, Dr. Alexander McWilliams, J. M. Moore, John Underwood and George Watterson. Subsequently six additional mem-

¹ Coville, Frederick V., "Early Botanical Activity in the District of Columbia." *Records of the Columbia Historical Society*, 5: 176-194. 1901.