

recommendations; and while not prepared to approve in all respects the details, especially in the syllabus on dynamics, as shown by the full and free discussion at this meeting, yet we heartily endorse the spirit of the report and thank the officers of the Society for the Promotion of Engineering Education, who have shown their friendly cooperation in offering to publish these syllabi in their official *Bulletin*, for the purpose of drawing out further criticisms and suggestions either in printed papers or in written communications to the chairman of the committee.

The further report of this committee is to be presented at the next meeting of the Society for the Promotion of Engineering Education in June, 1911. The present meeting was organized, as was the original meeting in Chicago in 1907, by the Chicago Section of the American Mathematical Society.

Other papers read before the Chicago Section at the Minneapolis meetings, aside from those in astronomy for which joint sessions were held with Section A, were as follows:

"On the Use of the Co-sets of a Group," Professor G. A. Miller, University of Illinois.

"Congruential Theory of Functions of Several Variables," Professor L. E. Dickson, University of Chicago.

"Generalizations of Theorems on Linear Algebras," Professor L. E. Dickson.

"On Primitive Roots of Ideals," Professor Jacob Westlund, Purdue University.

"The Problem of Defining the Set of Real Numbers," Dr. A. B. Frizell, University of Kansas.

"A Historical Note on the Newton-Raphson Method of Approximations," Professor Florian Cajori, Colorado College.

"One Parameter Families and Nets of Plane Curves," Professor E. J. Wilczynski, University of Chicago.

"Circular Numbers for a Plane Curve," Dr. Horace T. Burgess, University of Wisconsin.

"Rational Anharmonic Curves upon a Quadric," Dr. Horace T. Burgess.

"The Applications of Matrices to Cubic Forms," Dr. Horace T. Burgess.

"Envelopes of One Parameter Families of Plane Curves," Professor Walter J. Risley, James Millikin University, and Professor W. E. MacDonald, Canton College, China.

"A Reduction of Two Power Series in Many Variables to Two Equivalent Polynomials," Dr. W. D. MacMillan, University of Chicago.

"The Path of Light in a Medium Homogeneous in Concentric Spherical Layers," Dr. Harris F. MacNeish, Yale University.

"The Curves of Equal Action for Elliptical Coordinates," Professor Kurt Laves, University of Chicago.

"Robert of Chester's Translation of the Algebra of Al-Khowarazmi," Professor L. C. Karpinski, University of Michigan.

"Hindu Numerals in the Kitab al Fihrist," Professor L. C. Karpinski.

"Ruled Surfaces and Planed Hypersurfaces in Four-Dimensional Space," Dr. Arthur Ranum, Cornell University.

"Transformation Groups and Substitutions of an Infinite Degree," Dr. L. I. Neikirk, University of Illinois.

"Use of Quaternions in Differential Geometry," Professor J. B. Shaw, University of Illinois.

"On Plane Quintic Curves," Dr. H. L. Slobin, University of Minnesota.

"On the Construction of a Certain Class of Periodic Solutions of the Problem of Three Bodies," Professor F. R. Mouton, University of Chicago.

"Curves on Quintic Scrolls," Professor Frank B. Williams, Clark College.

The next meeting of the Chicago Section will be in Chicago on Friday and Saturday, April 28 and 29, 1911.

H. E. SLAUGHT,
Secretary of the Section

THE AMERICAN PHYTOPATHOLOGICAL SOCIETY

THE second annual meeting of the American Phytopathological Society was held in affiliation with the American Association for the Advancement of Science at Minneapolis, Minn., December 28-30, 1910. The attendance was not as large as at the Boston meeting, but an excellent program of twenty-eight papers was presented. A joint session with Section G of the American Association and the Botanical Society of America was held at the Minnesota Agricultural College on Thursday, December 29, and other sessions at the University.

The society wishes to express its appreciation and gratitude to the local committee and especially to Dr. F. E. Clements for the excellent rooms and facilities provided.

The constitution of the society, drafted and approved by the council, was adopted. The following officers were elected:

President—Professor A. D. Selby, Ohio Agricultural Experiment Station, Wooster, Ohio.

Vice-president—Dr. R. A. Harper, University of Wisconsin, Madison, Wis.

Secretary-treasurer—Dr. C. L. Shear, U. S. Department of Agriculture.

Members of Council—Dr. G. P. Clinton, Connecticut Agricultural Experiment Station, New Haven, Conn., one year; Dr. Erwin F. Smith, U. S. Department of Agriculture, two years. The two *ex officio* members of the council are Dr. F. L. Stevens, retiring president, and Dr. L. R. Jones, chairman of board of editors of *Phytopathology*.

The following editorial board for the new journal *Phytopathology* was elected:

Editors—L. R. Jones, C. L. Shear, H. H. Whetzel.

Associate Editors—G. P. Clinton, E. M. Freeman, H. T. Gussow, F. D. Heald, Haven Metcalf, W. A. Orton, W. M. Scott, A. D. Selby, Erwin F. Smith, Ralph E. Smith, F. L. Stevens and Roland Thaxter, with Donald Reddick as business manager.

The society elected thirty-seven new members.

The next annual meeting will be held at Washington, D. C., in affiliation with the American Association for the Advancement of Science.

The following committee on legislation concerning plant diseases was appointed: Mel T. Cook, F. L. Stevens, F. C. Stewart, H. T. Gussow and A. D. Selby, *ex officio*. The committee on names of plant diseases presented a report and was continued.

The following papers were presented:

"Tannin in Relation to the Enzymes of the Plant Cell," Mel T. Cook.

"The Persistence of *Bacillus amylovorus* in Pruned Apple Twigs," H. R. Fulton. (Read by C. L. Shear.)

"The Industrial Fellowship in Plant Pathology," H. H. Whetzel.

"*Sclerotium rhizoides* Auersw. on *Calamagrostis*," A. B. Stout.

"The Relation of Temperature to Spore Germination and Infection with *Cystopus*," I. E. Melhus.

"The Rusts of White and Red Clover," Frank D. Kern. (Read by title.)

"Black Leg or *Phoma* Wilt of Cabbage, a New Trouble to the United States caused by *Phoma oleracea* Sacc.," Thos. F. Manns. (Read by A. D. Selby.)

"The *Fusarium* Blight and Rot of Potato; Field Experiments in Prevention," Thos. F. Manns. (Read by A. D. Selby.)

"The White Pine Blister Rust," Perley Spaulding. (Read by Haven Metcalf.)

"A Study of some Anthracnoses and their Relations to a Sweet Pea Disease," J. J. Taubenhau. (Read by Mel T. Cook.)

"The Ascogenous Form of the Fungus causing Dead-arm of the Grape," C. L. Shear.

"Further Notes on the Bark Disease of the Chestnut," Haven Metcalf and J. Franklin Collins.

"Necrosis and Crown Gall Diseases of Grapes in New York," D. Reddick.

"Peach Leaf-curl in Nursery Stock," V. B. Stewart. (Read by D. Reddick.)

"Some Laboratory and Field Studies on Fungicidal Values," E. Wallace, F. M. Blodgett and Lex R. Hesler. (Read by H. H. Whetzel.)

"Varietal Resistance of Beans to Anthracnose," M. F. Barrus. (Read by H. H. Whetzel.)

"A Preliminary Report upon the Effects of Arsenical Compounds upon Apple Trees," B. D. Swingle. (Read by C. L. Shear.)

"Results of Cotton Anthracnose Work for 1910," H. W. Barre.

"Notes on some Diseases of Trees in our National Forests, II.," George Grant Hedgecock. (Read by title.)

"A New Fruit Spot of Apple," W. M. Scott. (Read by C. L. Shear.)

"Contribution to our Knowledge of the Mine Fungi of the United States," C. J. Humphrey.

"A Bacterial Disease of Bananas and Plantains," James Birch Rorer. (Read by Erwin F. Smith.)

"The Leaf Spot of Sugar Beets," C. O. Townsend. (Read by title.)

"Notes on Hypertrophied Structures," Mel T. Cook.

"The Grand Rapids Tomato Disease," Erwin F. Smith.

"Crown Gall of Plants," Erwin F. Smith.

"Cereal Smut Spore Germination," E. C. Stakman. (Read by title.)

"Alfalfa Rust and Timothy Rust in Iowa," L. H. Pammel.

Abstracts of these papers will appear in the April number of *Phytopathology*, the new journal of the society, and some of the papers will be published later in the same journal.

C. L. SHEAR,
Secretary